

Manifolds with Mechanical Cartridges

Designation	Description	Code	Data sheet	Pages
Relief, direct acting (guided) poppet type	VSAN-08A-C / VSBN-08A-C	OR01KXYZW	RE 18330-01	1219
Relief, direct acting guided poppet type	VSBN-10A-C	OR02KXYZW	RE 18330-02	1223
Relief, direct acting poppet type differential area	VSDN-08A-C	OR12KXYZW	RE 18330-10	1227
Relief, direct acting poppet type differential area	VSDN-10A-C	OR13KXYZW	RE 18330-11	1231
Relief, bi-directional direct acting poppet type differential area	VSNG-10A-C	OR03KXYZW	RE 18330-03	1235
Relief, pilot operated spool type	VSPN-C	OR04KXYZW	RE 18330-04	1239
Relief, pilot operated poppet type	VSPC-10A-C	OR05KXYZW	RE 18330-05	1243
Relief, pilot operated spool type external drain	VSPY-10A-C / VSPY-12A-C	OR06KXYZW	RE 18330-06	1247
Pressure reducing and relieving, direct acting spool type	VRPR-C	OR08KXYZW	RE 18330-08	1251
Pressure reducing, pilot operated spool type	VRPP-C	OR07KXYZW	RE 18330-07	1255
Pressure reducing and relieving, pilot operated spool type	VRPX-10A-C	OR09KXYZW	RE 18330-09	1259
Check poppet type	VUCN-08A-C	OU01K00YZW	RE 18330-40	1263
Check poppet type	VUCN-C	OU02K00YZW	RE 18330-41	1267
Pilot operated check, pilot to open	VSON-C	OY01KXYZW	RE 18330-70	1271

Manifolds with Mechanical Cartridges

Designation	Description	Code	Data sheet	Pages
Dual pilot operated check	VSO-DE-C	2Y01KXYZW	RE 18330-71	1275
Counterbalance, standard poppet type	VBSN-C	OY02KXYZW	RE 18330-72	1279
Dual counterbalance, standard poppet type	VBSN-DE-C	2Y02KXYZW	RE 18330-73	1283
Counterbalance, relief compensated poppet type	VBSP-C	OY03KXYZW	RE 18330-74	1287
Dual counterbalance, relief compensated poppet type	VBSP-DE-C	2Y03KXYZW	RE 18330-75	1291
Counterbalance, vented guided poppet type	VBST-C	OY04KXYZW	RE 18330-76	1295
Dual counterbalance, vented guided poppet type	VBST-DE-C	2Y04KXYZW	RE 18330-77	1299
Flow control, restrictor	ST-C-06-C	ON01KXY00W	RE 18331-01	1303
Flow control, restrictor	ST-C-C	ON02KXY00W	RE 18331-02	1307
Needle restrictor, free reverse flow	STVU-08A	ON03KXY00W	RE 18331-03	1311
Needle restrictor, free reverse flow	STVU-10A	ON09KXY00W	RE 18331-04	1315
Flow control, 2-way pressure compensated fully adjustable	VRFB-10A-C / VRFE-12A-C	ON05KXYZW	RE 18331-05	1319
Flow control, 3-way pressure compensated combination type partially adjustable	VRFC-10A-C	ON10KXYZW	RE 18331-10	1323
Flow control, 3-way pressure compensated combination type fully adjustable	VRFD-10A-C / VRFD-12A-C	ON06KXYZW	RE 18331-06	1327

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Manifolds with Mechanical Cartridges

Designation	Description	Code	Data sheet	Pages
Flow divider	DSDN-C	ON07K00YZW	RE 18331-07	1331
Flow divider and combiner	DRFN-C	ON08K00YZW	RE 18331-08	1335
Logic element, flow and pressure control, with internal pilot	VLSP-C	OU09K00YZW	RE 18330-46	1339
Logic element, pressure compensator with static load sense	VRLA-S-C	OU06K00YZW	RE 18330-43	1343
Logic element, pressure compensator with dynamic load sense	VRLA-D-C	OU05K00YZW	RE 18330-42	1347
Directional spool type, direct acting external pilot, external vent	VDS-D-C	OU07K00YZW	RE 18330-44	1351
Directional spool type, direct acting external pilot, internal vent	VDSH-C	OU08K00YZW	RE 18330-45	1355
Relief, direct acting guided poppet type special cavity	VSC-30	051301XYZ	RE 18331-40	1359
Relief, direct acting guided poppet type special cavity	VSC-80	051302XYZ	RE 18331-41	1363
Relief, direct acting poppet type differential area special cavity	VSDC-350	051204XYZ	RE 18331-43	1367
Relief, direct acting poppet type pressure compensated special cavity	VSC-30-CC	OR1027XYZ	RE 18331-44	1371

Relief, direct acting (guided) poppet type

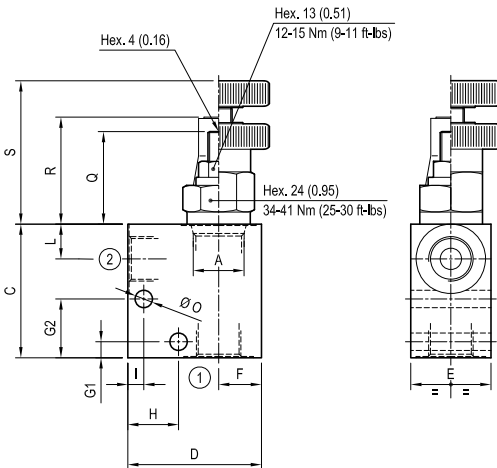
Common cavity

Cartridge style in manifold

VSAN-08A-C / VSBN-08A-C

OR.01 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 20 l/min	(5 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

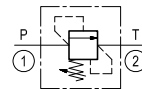
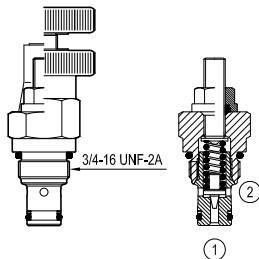


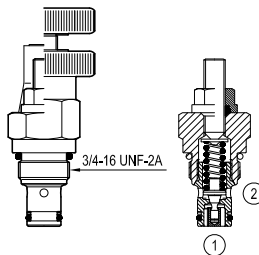
Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G1	G2	H	I	L	O	Q	R	S
SIZE	09	G 1/4	up to 20 (5)	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)	35.5 (1.4)	40 (1.58)	54 (2.13)
	08	02		G 3/8	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)			

Cartridge style



K = 48
Especially suited for pilot or thermal relief applications.
SIZE 08




K = 49
Designed to provide enhanced stability at all flows and pressures.
SIZE 08

Table "K"

		K					
CARTRIDGE CODE	04	11	48	X	56	Z	VSAN-08A
	04	11	49	X	56	Z	VSBN-08A

Table "X"

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw	 Ordering code X=03 11.04.23.002 X=73 11.04.23.004
	Handknob and locknut	
	O-Ring seal on adjust screw	

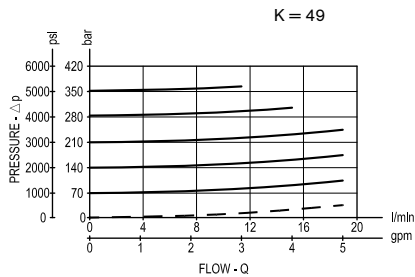
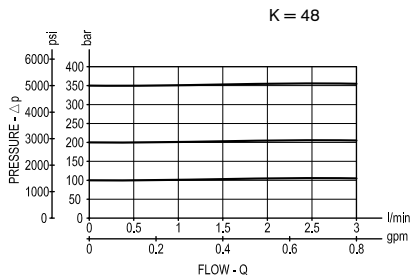
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-2N**
For other details see data sheet RE 18318-01 and RE 18318-04

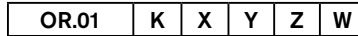
Table "Z"

Z	SPRINGS															
	K=48 type			K=49 type												
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 1 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)										
X=03	05			10-70 (145-1000)	26 (375)	50 (725)										
	10	35-140 (500-2000)	48 (696)	100 (1450)	35-140 (500-2000)	50 (725)	100 (1450)									
	20	105-210 (1500-3000)	88 (1276)	200 (2900)	105-210 (1500-3000)	79 (1145)	200 (2900)									
X=04	35	140-420 (2000-6000)	140 (2030)	350 (5000)	175-350 (2500-5000)	170 (2465)	350 (5000)									
	10															
	20															
X=73	35	35-350 (500-5000)	68 (986)	350 (5000)	35-350 (500-5000)	72 (1044)	200 (2900)									

Performance graphs



Ordering code



Manifold with relief direct acting (guided) poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0148030210S0	R934001560
OR0148030220S0	R934001148
OR0148030235S0	R934001590
OR014803091000	R934001013
OR014803093500	R934003314
OR0149030210S0	R934001607
OR0149030220S0	R934001616
OR0149030235S0	R934001629
OR014903020500	R934003368
OR014903090500	R934003367
OR014904023500	R934003496

Type	Material number

Further types available by request

Relief, direct acting guided poppet type

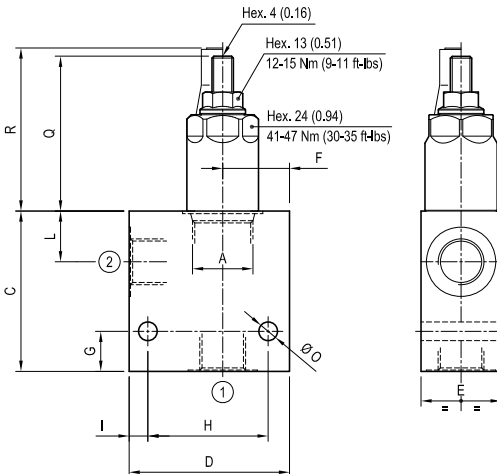
Common cavity

Cartridge style in manifold

VSBN-10A-C

OR.02 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 50 l/min	(13 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

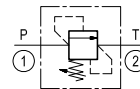


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)														
				C	D	E	F	G	H	I	L	M	N	O	Q	R		
SIZE 08																		
SIZE 10	03	G 1/2	50 (13)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.3)	19 (0.75)			7.5 (0.30)		58 (2.28)	61 (2.4)	
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.3)	20 (0.79)			9 (0.35)				
SIZE 12																		
SIZE 16																		
SIZE 20																		

Cartridge style

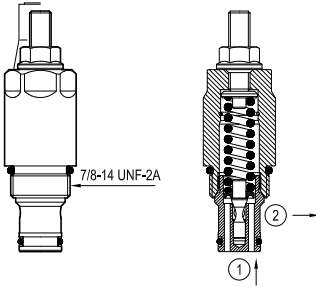


Table "K"

		K					
CARTRIDGE CODE	04	11	55	X	85	Z	VSBN-10A

Table "X"

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw	
		Ordering code 11.04.23.002

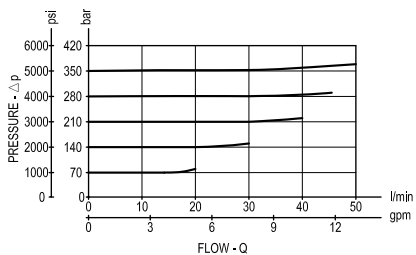
CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-2N
For other details see data sheet RE 18318-05

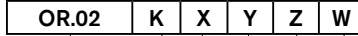
Table "Z"

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
05				5-70 (75-1000)	16 (232)	50 (725)									
10				35-140 (500-2000)	24 (348)	100 (1450)									
20				105-210 (1500-3000)	54 (783)	200 (2900)									
35				175-350 (2500-5000)	84 (1218)	350 (5000)									

Performance graph



Ordering code



Manifold with relief direct acting guided poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0255030420S0	R934001548
OR0255030435S0	R934001157
OR025503030500	R934003776
OR025503032000	R934003777

Type	Material number

Further types available by request

Relief, direct acting poppet type differential area

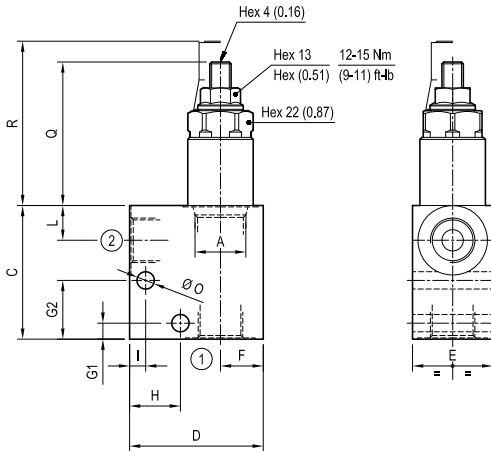
Common cavity

Cartridge style in manifold

VSDN-08A-C

OR.12 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 50 l/min	(13 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

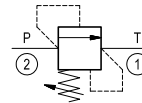
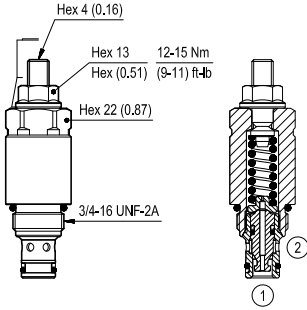


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)											
				C	D	E	F	G1	G2	H	I	L	O	Q	R
SIZE 09		G 1/4	50 (13)	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)	53.5 (2.11)	61 (2.4)
SIZE 08		G 3/8		50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)		
SIZE 10															
SIZE 12															
SIZE 16															
SIZE 20															

Cartridge style





SIZE 08

Table “K”

			K				
CARTRIDGE CODE	04	15	22	X	56	Z	VSDN-08A

Table “X”

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw 	
		Ordering code 11.04.23.002

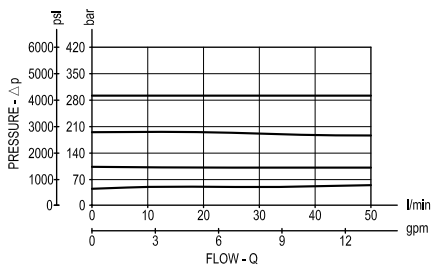
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-2N**
For other details see data sheet RE 18318-02

Table “Z”

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
10	35-140 (500-2000)	32 (464)	100 (1450)												
20	105-210 (1500-3000)	76 (1102)	200 (2900)												
35	175-315 (2500-4500)	118 (1711)	300 (4350)												

Performance graphs



Ordering code

OR.12	K	X	Y	Z	W
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Manifold with relief direct acting poppet type differential area

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR1222030210S0	R934003525
OR1222030220S0	R934003526
OR1222030235S0	R934003527

Type	Material number

Further types available by request

Relief, direct acting poppet type differential area

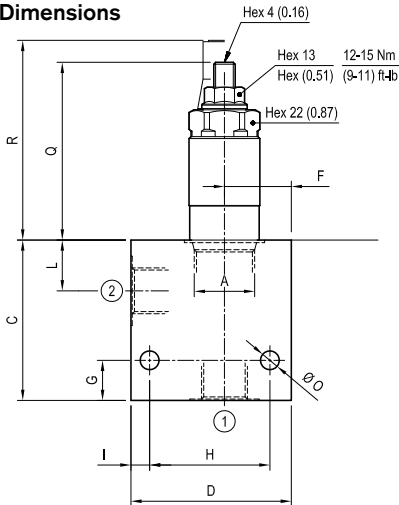
Common cavity

Cartridge style in manifold

VSDN-10A-C

OR.13 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 120 l/min	(32 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

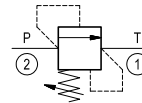
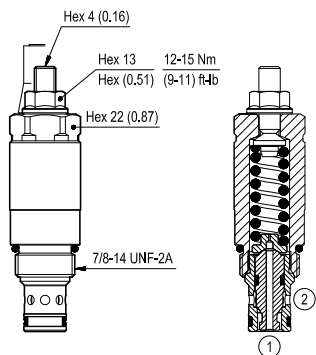


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08		1 - 2															
SIZE 10	03	G 1/2	120 (32)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.3)	19 (0.75)			7.5 (0.30)			
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.3)	20 (0.79)			9 (0.30)	66 (2.6)	74 (2.9)	
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style



SIZE 10

Table "K"

CARTRIDGE CODE	K						
	04	15	23	X	85	Z	VSDN-10A

Table "X"

X	ADJUSTMENTS		OPTIONS
03	Leakproof hex. socket screw		
			Ordering code 11.04.23.002

CARTRIDGE TECHNICAL DATA

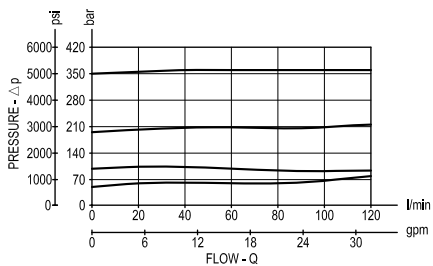
Common cavity: CA-10A-2N

For other details see data sheet RE 18318-03

Table "Z"

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
10				35-140 (500-2000)	46 (667)	100 (1450)									
35				100-350 (1450-5000)	86 (1247)	350 (5000)									

Performance graphs



Ordering code

OR.13	K	X	Y	Z	W
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Manifold with relief direct acting poppet type differential area

Cartridge style - Common cavity (see table K on page 2)

Cartridge style - Adjustments (see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR1323030410S0	R934003528
OR1323030435S0	R934003529

Type	Material number

Further types available by request

Relief, bi-directional direct acting poppet type differential area

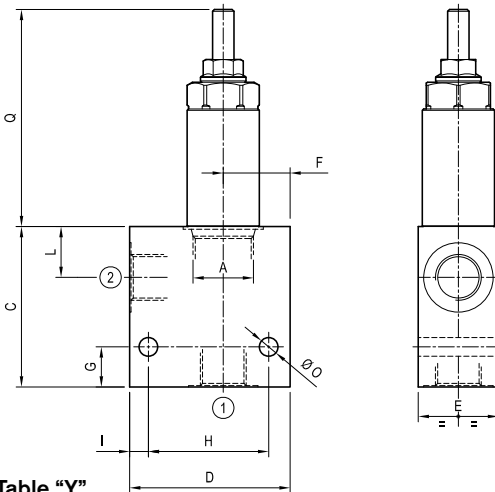
Common cavity

Cartridge style in manifold

VSNG-10A-C

OR.03 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 56 l/min	(15 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

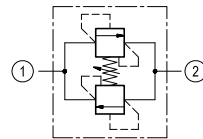
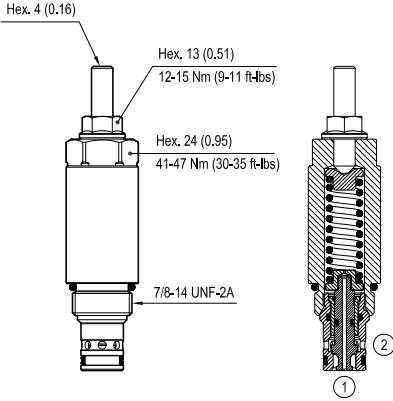


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08																	
SIZE 10	03	G 1/2	56 (15)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.30)	19 (0.75)			7 (0.28)			
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.30)	20 (0.79)			9 (0.35)		81 (3.19)	
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style



SIZE 10

Table “K”

			K				
CARTRIDGE CODE	04	11	59	X	85	Z	VSNG-10A

Table “X”

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	

[mm (inches)]

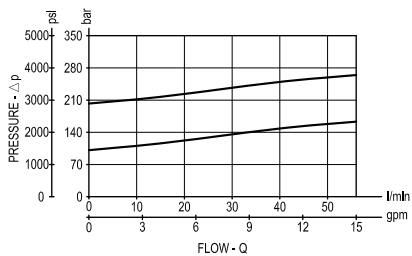
CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-2N
For other details see data sheet RE 18318-07

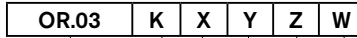
Table “Z”

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
10				30-100 (450-1450)	13.5 (196)	100 (1450)									
20				100-240 (1450-3500)	31 (450)	200 (2900)									

Performance graph



Ordering code



Manifold with relief bi-directional direct acting poppet type differential area

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs

(see table Z on page 2)

Manifold style - Dimensions and port sizes

(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0359030320S0	R934003476

Type	Material number

Further types available by request

Relief, pilot operated spool type

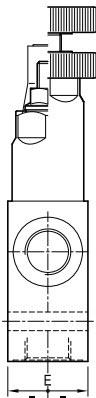
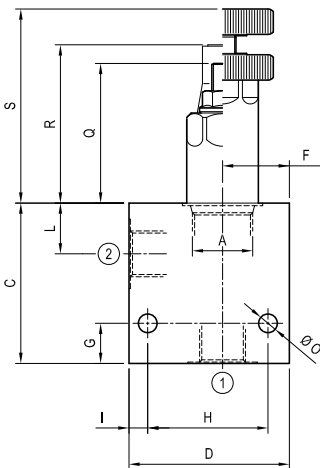
Common cavity

Cartridge style in manifold

VSPN-C

OR.04 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 300 l/min	(79 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

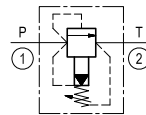


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	O	Q	R	S	
SIZE 08																	
SIZE 10	03	G 1/2	120 (32)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.3)	19 (0.75)		7.5 (0.30)				
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.3)	20 (0.79)		7.5 (0.30)	48 (1.89)	60 (2.36)	74 (2.91)	
SIZE 12	04	G 3/4	200 (53)	75 (2.95)	80 (3.15)	40 (1.58)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)		9 (0.35)	42.5 (1.67)	48 (1.89)		
	05	G 1		75 (2.95)	80 (3.15)	50 (1.97)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)		9 (0.35)				
SIZE 16	04	G 3/4	300 (79)	80 (3.15)	80 (3.15)	50 (1.97)	32 (1.26)	22 (0.87)	60 (2.36)	10 (0.39)	26 (1.02)		9 (0.35)	65.5 (2.58)	70.5 (2.78)	68 (2.68)	
	05	G 1		80 (3.15)	90 (3.54)	50 (1.97)	37 (1.46)	22 (0.87)	60 (2.36)	20 (0.79)	26 (1.02)		9 (0.35)				
SIZE 20																	

Cartridge style

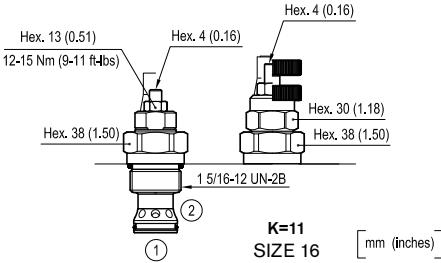
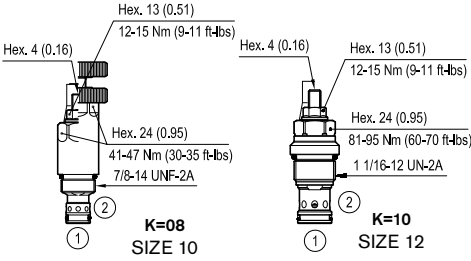






Table "K"

		K					
CARTRIDGE CODE	04	12	08	X	85	Z	VSPN-10A
	04	12	10	X	57	Z	VSPN-12A
	04	12	11	X	27	Z	VSPN-16A

Table "X"

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw	
04	Handknob and locknut (only for K=08 and K=11 types)	
73	O-Ring seal on adjust screw (only for K=11 type)	
		 Ordering code X=03 11.04.23.002 X=73 11.04.23.004

CARTRIDGE TECHNICAL DATA

Int. leakage ave.:
200 bar (2900 psi) - 200 cm³/min (12 in³/min) - for K=08 type

Int. leakage ave.:
200 bar (2900 psi) - 350 cm³/min (21 in³/min)
for K=10 and K=11 type

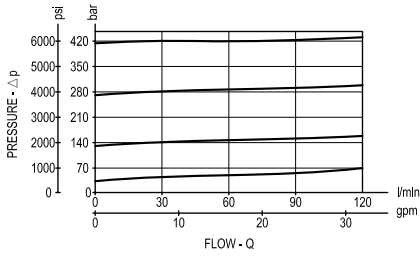
Common cavity: **CA-10A-2N / CA-12A-2N / CA-16A-2N**
For other details see data sheet RE 18318-08, RE 18318-09 and RE 18318-10

Table "Z"

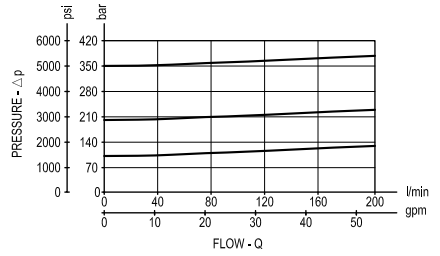
Z		SPRINGS															
		SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20			
		Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	
X=03	10				35-140 (500-2000)	48 (696)	100 (1450)	35-140 (500-2000)	48 (696)	100 (1450)	35-140 (500-2000)	48 (696)	100 (1450)				
	20				70-280 (1000-4000)	88 (1276)	200 (2900)	70-280 (1000-4000)	88 (1276)	200 (2900)	70-80 (1000-4000)	88 (1276)	200 (2900)				
	35				140-420 (2000-6000)	140 (2030)	350 (5000)	140-420 (2000-6000)	140 (2030)	350 (5000)	140-420 (2000-6000)	140 (2030)	350 (5000)				
X=04	35				35-350 (500-5000)	68 (986)	350 (5000)				35-350 (500-5000)	66 (957)	350 (5000)				
	35										35-350 (500-5000)	66 (957)	350 (5000)				
X=73	35										35-350 (500-5000)	66 (957)	350 (5000)				

Performance graphs

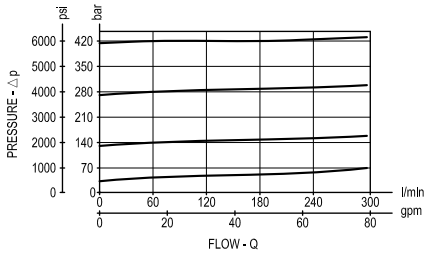
SIZE 10



SIZE 12



SIZE 16



Ordering code

OR.04	K	X	Y	Z	W
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Manifold with relief pilot operated spool type cartridge

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0408030410S0	R934001483
OR0408030420S0	R934001484
OR0408030435S0	R934000784
OR0410030510S0	R934001517
OR0410030520S0	R934001527
OR0410030535S0	R934001546
OR0411030510S0	R934003570
OR0411030520S0	R934003571
OR0411030535S0	R934003572
OR0111040535S0	R934003842

Type	Material number

Further types available by request

Relief, pilot operated poppet type

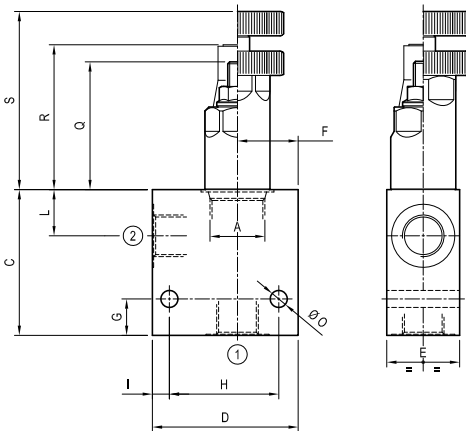
Common cavity

Cartridge style in manifold

VSPC-10A-C

OR.05 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 80 l/min	(21 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

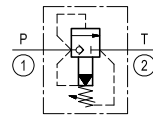
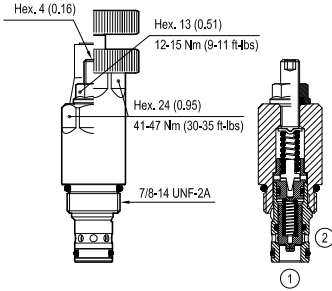


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
		P - T			C	D	E	F	G	H	I	L	M	O	Q	R	S
SIZE 08																	
SIZE 10	03	G 1/2		80 (21)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.30)	19 (0.75)		7 (0.28)	53 (2.09)	60 (2.36)	74 (2.91)
	04	G 3/4			60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.30)	20 (0.79)		9 (0.35)			
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style





SIZE 10

Table "K"

			K				
CARTRIDGE CODE	04	12	09	X	85	Z	VSPC-10A

Table "X"

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw	
04	Handknob and locknut	
		Ordering code 11.04.23.002

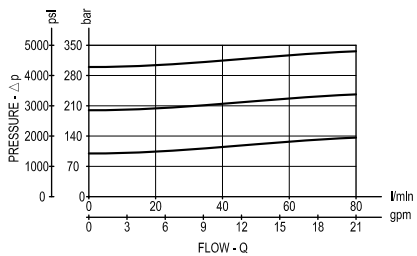
CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-2N
For other details see data sheet RE 18318-11

Table "Z"

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
X=03	10			35-140 (500-2000)	48 (696)	100 (1450)									
	20			70-280 (1000-4000)	88 (1276)	200 (2900)									
	35			140-350 (2000-5000)	140 (2030)	350 (5000)									
X=04	35			35-350 (500-5000)	68 (986)	350 (5000)									

Performance graph



Ordering code

OR.05	K	X	Y	Z	W
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Manifold with relief pilot operated poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0509030410S0	R934001475
OR0509030420S0	R934001477
OR0509030435S0	R934000927

Type	Material number

Further types available by request

Relief, pilot operated spool type external drain

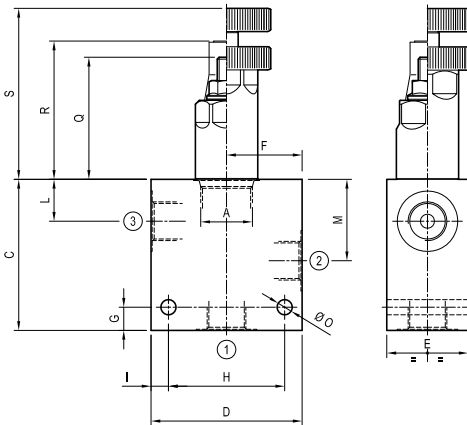
Common cavity

Cartridge style in manifold

VSPY-10A-C / VSPY-12A-C

OR.06 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 200 l/min	(53 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

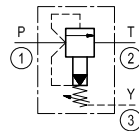
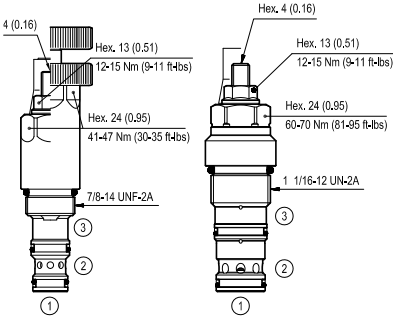


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	O	Q	R	S	
SIZE 08		1 - 2 - 3															
SIZE 10	02	G 3/8	120 (32)	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)	6.5 (0.26)	53 (2.09)	60 (2.36)	74 (2.91)	
	03	G 1/2		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	50 (1.97)	10 (0.39)	18 (0.71)	35 (1.38)	6.5 (0.26)				
SIZE 12	03	G 1/2	200 (53)	80 (3.15)	75 (2.95)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)	9 (0.35)	46.5 (1.83)	53.5 (2.11)		
	04	G 3/4		90 (3.54)	75 (2.95)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)	9 (0.35)				
SIZE 16																	
SIZE 20																	

Cartridge style



SIZE 10



SIZE 12

[mm (Inches)]

Table “K”

		K					
CARTRIDGE CODE	04	13	05	X	85	Z	VSPY-10A
	04	13	07	X	57	Z	VSPY-12A

Table “X”

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw	
04	Handknob and locknut (only for K=05 type)	

Ordering code 11.04.23.002

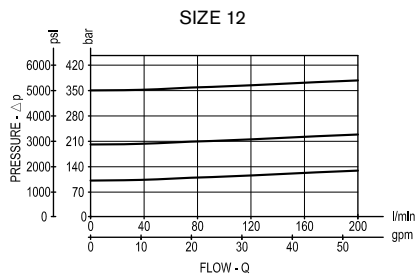
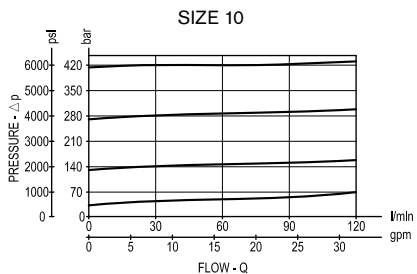
CARTRIDGE TECHNICAL DATA

Int. leakage ave.: 200 bar (2900 psi) - 200 cm ³ /min (12 in ³ /min) for K=05
Int. leakage ave.: 200 bar (2900 psi) - 350 cm ³ /min (21 in ³ /min) for K=07
Common cavity: CA-10A-3N / CA-12A-3C For other details see data sheet RE 18318-12 and RE 18318-13

Table “Z”

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
X=03	10			35-140 (500-2000)	48 (696)	100 (1450)	35-140 (500-2000)	48 (696)	100 (1450)						
	20			70-280 (1000-4000)	88 (1276)	200 (2900)	70-280 (1000-4000)	88 (1276)	200 (2900)						
	35			140-420 (2000-6000)	140 (2030)	350 (5000)	140-420 (2000-6000)	140 (2030)	350 (5000)						
X=04	35			35-350 (500-5000)	68 (986)	350 (5000)									

Performance graphs



Ordering code

OR.06	K	X	Y	Z	W
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Manifold with relief pilot operated spool type external drain

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0605030310S0	R934001492
OR0605030320S0	R934001506
OR0605030335S0	R934001507
OR0607030410S0	R934001508
OR0607030420S0	R934001509
OR0607030435S0	R934001516

Type	Material number

Further types available by request

Pressure reducing and relieving, direct acting spool type

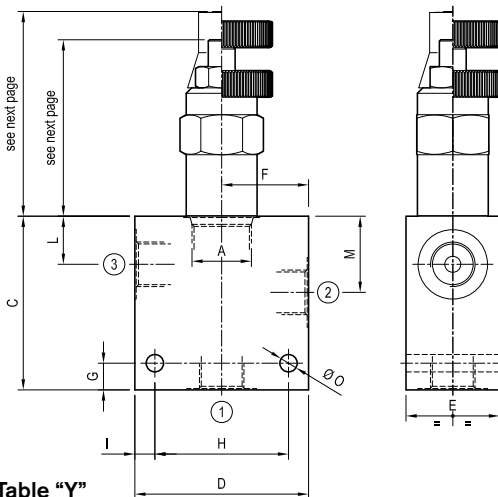
Common cavity

Cartridge style in manifold

VRPR-C

OR.08 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 30 l/min	(8 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

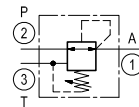


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G	H	I	L	M	N	O	Q	R
SIZE 08	09	G 1/4	8 (2)	65 (2.56)	60 (2.36)	30 (1.18)	30 (1.18)	10 (0.39)	40 (1.58)	10 (0.39)	15 (0.59)	28.5 (1.12)		6.5 (0.26)		
		02		G 3/8	65 (2.56)	60 (2.36)	30 (1.18)	30 (1.18)	10 (0.39)	40 (1.58)	10 (0.39)	15 (0.59)	28.5 (1.12)		6.5 (0.26)	
SIZE 10	09	G 1/4	30 (8)	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)		6.5 (0.26)		
		02		G 3/8	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)		6.5 (0.26)	
SIZE 12																
SIZE 16																
SIZE 20																

Cartridge style

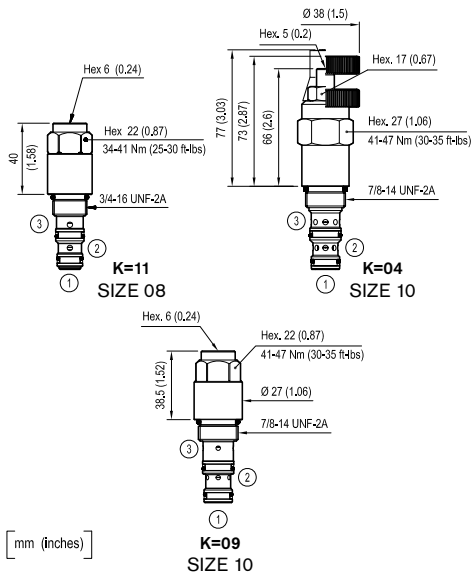





Table “K”

CARTRIDGE CODE	K					
	04	95	11	83	56	Z
04	95	04	X	85	Z	VRPR-10A
04	95	09	83	85	Z	VRPR-10A-8

Table “X”

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw (only for K=04)	
04	Handknob and locknut (only for K=04)	
83	Factory preset, adjustable (for K=09 and K=11)	



only for K=04
Ordering code
11.04.23.004

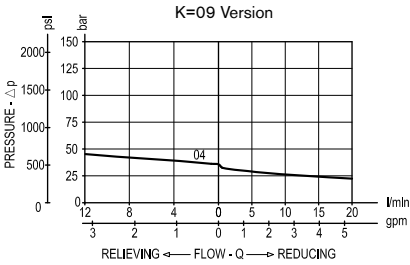
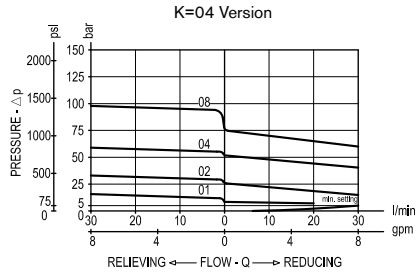
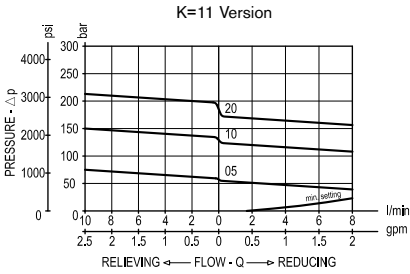
CARTRIDGE TECHNICAL DATA

Int. leakage ave.: 100 cm ³ /min (6 in ³ /min) - for K=11 type
Int. leakage ave.: 50 cm ³ /min (3 in ³ /min) - for K=04 type
Int. leakage ave.: 130 cm ³ /min (8 in ³ /min) - for K=09 type
Common cavity: CA-08A-3N / CA-10A-3N
For other details see data sheet RE 18318-52, RE 18318-53 and RE18318-54

Table “Z”

Z	SPRINGS													
	SIZE 08			SIZE 10 (K=04 type)			SIZE 10 (K=09 type)			SIZE 16			SIZE 20	
	Fixed setting bar (psi) (reduc. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Fixed setting bar (psi) (reduc. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)			
01			2-14 (30-200)	2 (29)	8-10 (115-145)									
02			2-25 (30-350)	3 (44)	7-10 (100-145)									
04			10-50 (145-725)	7 (102)	35-40 (500-580)			35 (500)						
05		35 (500)												
06								60 (870)						
08			28-80 (400-1160)	14 (203)	45-50 (650-725)									
10		70 (1000)						90 (1305)						
20		150 (2200)												

Performance graphs



Ordering code

OR.08	K	X	Y	Z	W
--------------	----------	----------	----------	----------	----------

Manifold with pressure reducing and relieving, direct acting spool type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs

(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0804030202S0	R934000627
OR0804030204S0	R934001152
OR0804030208S0	R934000630
OR080403020200	R934003315
OR0804030902S0	R934000825
OR080404020200	R934003393
OR0811830220S0	R934001153

Type	Material number

Further types available by request

RE 18330-07/07.12
Replaces: RE 18330/04.10

Pressure reducing, pilot operated spool type

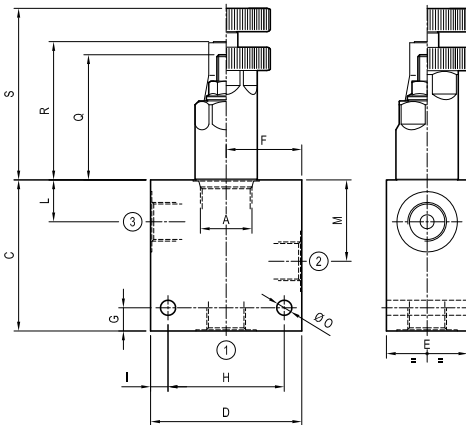
Common cavity

Cartridge style in manifold

VRPP-C

OR.07 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 100 l/min	(26 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

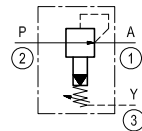
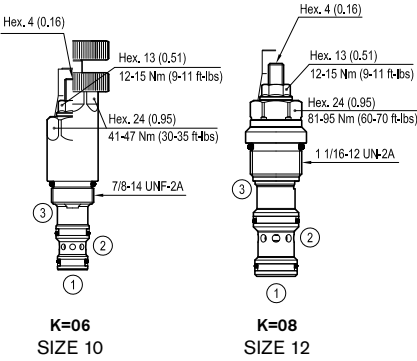


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	O	Q	R	S	
SIZE 08		1 - 2 - 3															
SIZE 10	02	G 3/8	60 (16)	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)	6.5 (0.26)	53 (2.1)	60 (2.36)	74 (2.91)	
	03	G 1/2		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	50 (1.97)	10 (0.39)	18 (0.71)	35 (1.38)	6.5 (0.26)				
SIZE 12	03	G 1/2	100 (26)	100 (3.94)	80 (3.15)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	12.5 (0.49)	29 (1.14)	54 (2.13)	7 (0.28)	42 (1.65)	49 (1.93)		
	04	G 3/4		100 (3.94)	80 (3.15)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	12.5 (0.49)	29 (1.14)	54 (2.13)	7 (0.28)				
SIZE 16																	
SIZE 20																	

Cartridge style






[mm (inches)]

Table “K”

		K					
CARTRIDGE CODE	04	93	06	X	85	Z	VRPP-10A
	04	93	08	X	57	Z	VRPP-12A

Table “X”

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw 	
04	Handknob and locknut (only for K=06 type) 	Ordering code 11.04.23.002

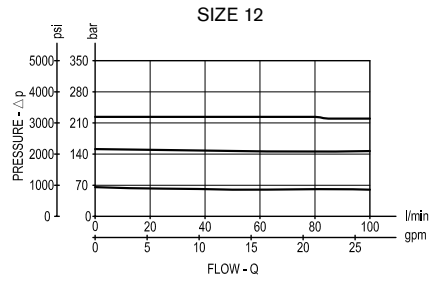
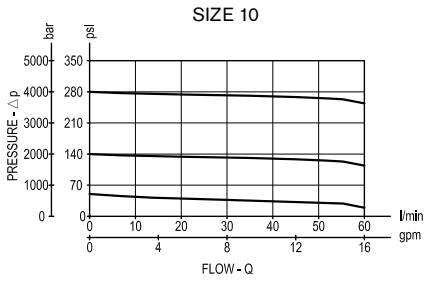
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-10A-3N / CA-12A-3N**
For other details see data sheet RE 18318-50 and RE 18318-51

Table “Z”

Z	SPRINGS															
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20			
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)	
X=03	10			10-140 (145-2000)	48 (696)	100 (1450)	10-140 (145-2000)	48 (696)	100 (1450)							
	20			70-280 (1000-4000)	88 (1276)	200 (2900)	70-280 (1000-4000)	88 (1276)	200 (2900)							
	35						140-350 (2000-5000)	140 (2030)	280 (4000)							
X=04	35			35-350 (500-5000)	68 (986)	350 (5000)										

Performance graphs



Ordering code

OR.07	K	X	Y	Z	W
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Manifold with pressure reducing, pilot operated spool type

Cartridge style - Common cavity (see table K on page 2)

Cartridge style - Adjustments (see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0706030310S0	R934001661
OR0706030320S0	R934002152
OR0708030410S0	R934002297
OR0708030420S0	R934002303
OR0708030435S0	R934002535

Type	Material number

Further types available by request

Pressure reducing and relieving, pilot operated spool type

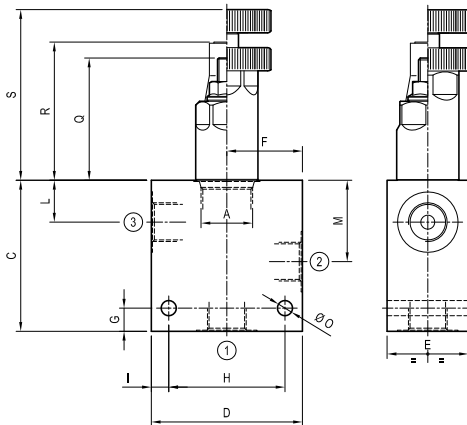
Common cavity

Cartridge style in manifold

VRPX-10A-C

OR.09 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 60 l/min	(16 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

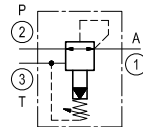


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	O	Q	R	S	
SIZE 08		1 - 2 - 3															
SIZE 10	02	G 3/8	60 (16)	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)	6.5 (0.26)	53 (2.09)	60 (2.36)	74 (2.91)	
	03	G 1/2		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	50 (1.97)	10 (0.39)	18 (0.71)	35 (1.38)	6.5 (0.26)				
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style

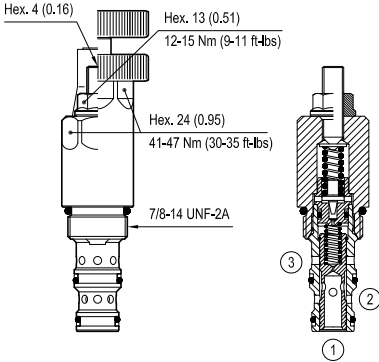






Table "K"

			K				
CARTRIDGE CODE	04	93	07	X	85	Z	VRPX-10A

Table "X"

X	ADJUSTMENTS	OPTIONS
03	Leakproof hex. socket screw 	
04	Handknob and locknut 	 Ordering code 11.04.23.002

SIZE 10

[mm (inches)]

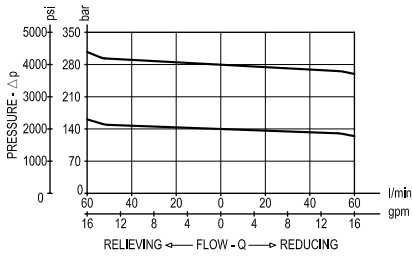
CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-3N
For other details see data sheet RE 18318-56

Table "Z"

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (re d u c. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (re d u c. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (re d u c. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (re d u c. mode)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) (re d u c. mode)
X=03	05			25-100 (360-1450)	31 (450)	50 (725)									
	10			35-140 (500-2000)	48 (696)	100 (1450)									
	20			70-280 (1000-4000)	88 (1276)	200 (2900)									
X=04	35			35-350 (500-5000)	68 (986)	350 (5000)									

Performance graph



Ordering code

OR.09	K	X	Y	Z	W
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Manifold with pressure reducing and relieving, pilot operated spool type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR0907030310S0	R934000752
OR0907030320S0	R934000631

Type	Material number

Further types available by request

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
integrated-circuits@oilcontrol.com
www.boschrexroth.com

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The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

Subject to change.

Check poppet type

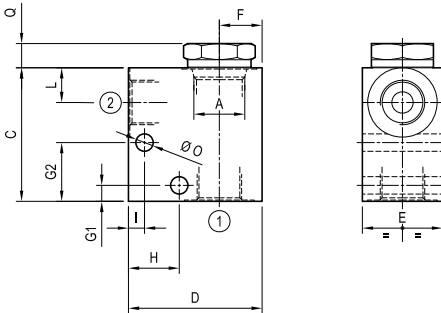
Common cavity

Cartridge style in manifold

VUCN-08A-C

OU.01 - K - 00 - Y - Z - W

Dimensions



Technical data

Max flow:	up to 50 l/min	(13 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

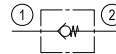
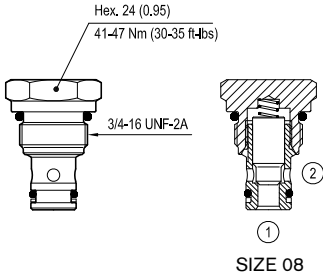


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G1	G2	H	I	L	M	O	Q	R
SIZE 08	09	G 1/4	up to 50 (13)	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)		6.5 (0.26)	9 (0.35)	
	02	G 3/8		50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)		6.5 (0.26)		
SIZE 10																
SIZE 12																
SIZE 16																
SIZE 20																

Cartridge style



[mm (inches)]

Table "K"

			K				
CARTRIDGE CODE	04	31	20	00	56	Z	VUCN-08A

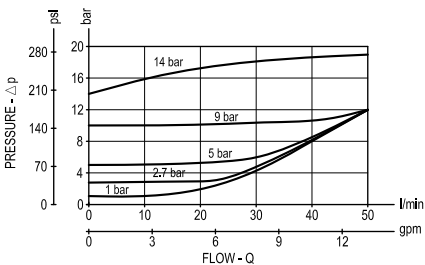
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-2N**
 For other details see data sheet RE 18318-89

Table "Z"

Z	SPRINGS									
	SIZE 08		SIZE 10		SIZE 12		SIZE 16		SIZE 20	
	Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)	
A0	0.3 (4.5)									
00	1 (15)									
03	2.7 (39)									
05	5 (75)									
06	6 (87)									
09	9 (131)									
14	14 (200)									

Performance graph



Ordering code

OU.01	K	00	Y	Z	W
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Manifold with check poppet type

Cartridge style - Common cavity
(see table K on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU0120000200S0	R934000856
OU0120000909S0	R934004224
OU0120000914S0	R934004225

Type	Material number

Further types available by request

Check poppet type

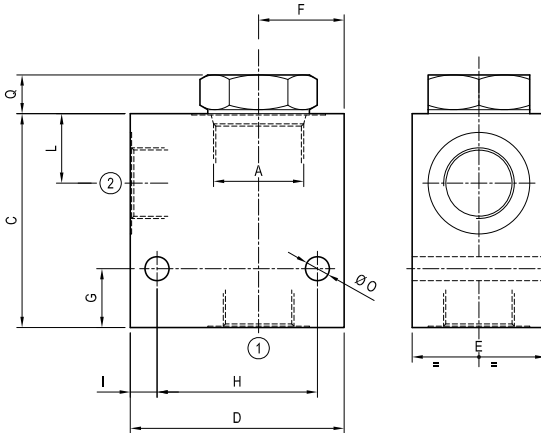
Common cavity

Cartridge style in manifold

VUCN-C

OU.02 - K - 00 - Y - Z - W

Dimensions



Technical data

Max flow:	up to 360 l/min	(95 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

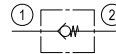


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
		1 - 2			C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08																		
SIZE 10	03	G 1/2		up to 80 (21)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.30)	19 (0.75)			7 (0.28)		8 (0.32)	
	04	G 3/4			60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.30)	20 (0.79)			9 (0.35)			
SIZE 12	04	G 3/4		up to 120 (32)	75 (2.95)	80 (3.15)	40 (1.58)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)		10 (0.39)	
	05	G 1			75 (2.95)	80 (3.15)	50 (1.97)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)			
SIZE 16	04	G 3/4		up to 200 (53)	80 (3.15)	80 (3.15)	50 (1.97)	32 (1.26)	22 (0.87)	60 (2.36)	10 (0.39)	26 (1.02)			9 (0.35)		15 (0.59)	
	05	G 1			80 (3.15)	90 (3.54)	50 (1.97)	37 (1.46)	22 (0.87)	60 (2.36)	20 (0.79)	26 (1.02)			9 (0.35)			
SIZE 20	05	G 1		up to 360 (95)	100 (3.94)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	32 (1.26)			11 (0.43)		16 (0.63)	
	06	G 1-1/4			100 (3.94)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	32 (1.26)			11 (0.43)			

Cartridge style

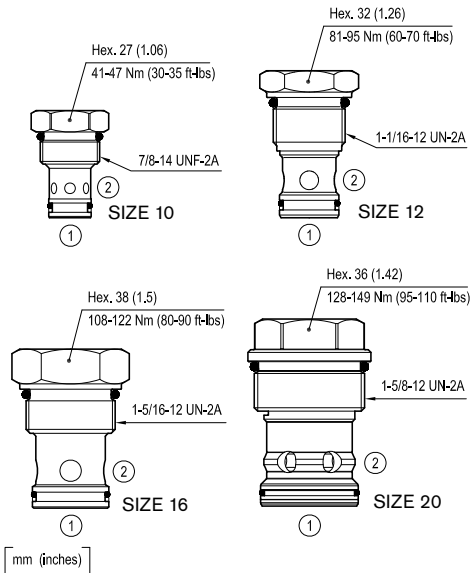


Table “K”

				K			
CARTRIDGE CODE	04	31	23	00	85	Z	VUCN-10A
	04	31	28	00	57	Z	VUCN-12A
	04	31	25	00	27	Z	VUCN-16A
	04	31	32	00	58	Z	VUCN-20A

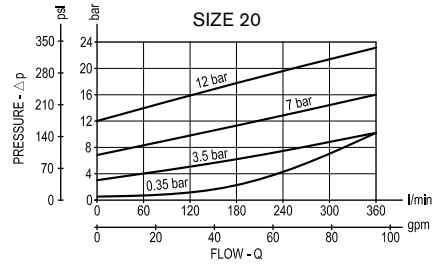
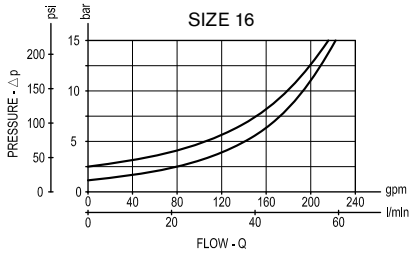
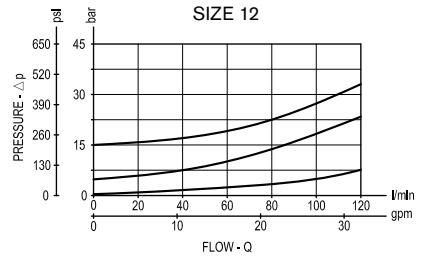
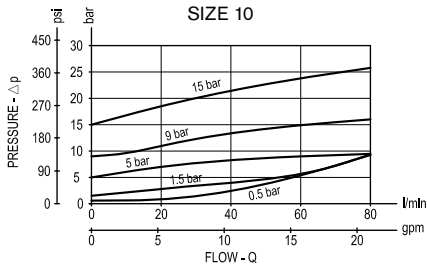
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-10A-2N / CA-12A-2N / CA-16A-2N / CA-20A-2N**
 For other details see data sheet RE 18318-90, RE 18318-91, RE 18318-92 and RE 18318-93

Table “Z”

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Cracking pressure bar(psi)			Cracking pressure bar(psi)			Cracking pressure bar(psi)			Cracking pressure bar(psi)			Cracking pressure bar(psi)		
A0										0,35 (5,1)					
00				0,5 (7)			1 (15)			1 (15)			0,35 (5)		
01				1,4 (20)											
02										2 (30)					
03													3,5 (51)		
04										3,5 (51)					
05				5 (75)			5 (75)								
07													7 (102)		
08							8 (116)								
09				9 (131)											
12													12 (174)		
15				15 (220)			15 (220)								

Performance graphs



Ordering code

OU.02	K	00	Y	Z	W
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Manifold with check poppet type

Cartridge style - Common cavity
(see table K on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU0223000400S0	R934001458
OU0228000500S0	R934001461
OU0225000500S0	R934001468
OU0232000500S0	R934000946

Type	Material number

Further types available by request

Pilot operated check, pilot to open

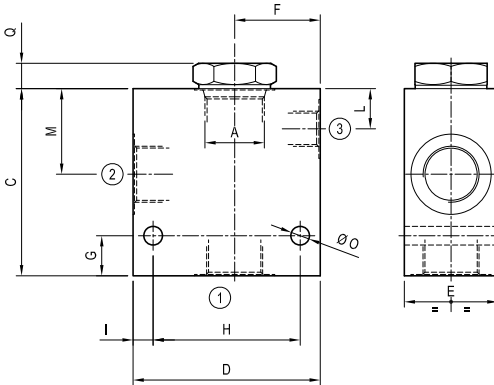
Common cavity

Cartridge style in manifold

VSON-C

OY.01 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 200 l/min	(53 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

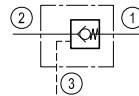


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
		1 - 2	3		C	D	E	F	G	H	I	L	M	N	O	Q	R
SIZE 08	09	G 1/4	G 1/4	30 (8)	60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)		
	02	G 3/8	G 1/4		60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)	9 (0.35)	
SIZE 10	02	G 3/8	G 1/4	60 (16)	70 (2.76)	60 (2.36)	35 (1.38)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)		10 (0.39)
	03	G 1/2	G 1/4		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	55 (2.17)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)		10 (0.39)
SIZE 12	03	G 1/2	G 1/4	120 (32)	80 (3.15)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)		18 (0.71)
	04	G 3/4	G 1/4		90 (3.54)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)		18 (0.71)
SIZE 16	04	G 3/4	G 1/4	200 (53)	90 (3.54)	80 (3.15)	50 (1.97)	38 (1.50)	22 (0.87)	60 (2.36)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)		17 (0.67)
	05	G 1	G 1/4		90 (3.54)	90 (3.54)	50 (1.97)	40 (1.58)	22 (0.87)	70 (2.76)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)		17 (0.67)
SIZE 20																	

Cartridge style

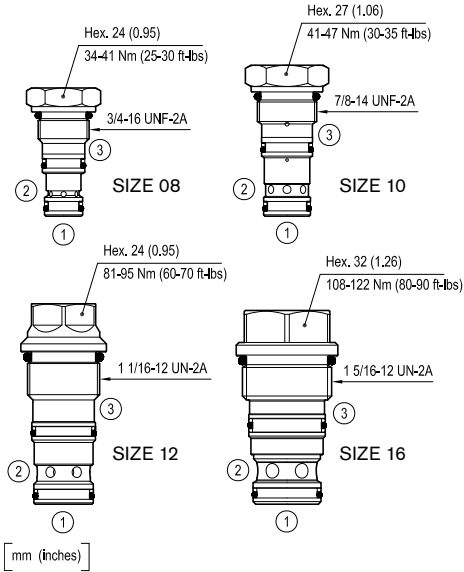


Table "K"

		K					
CARTRIDGE CODE	04	33	06	X	56	Z	VSON-08A
	04	33	05	X	85	Z	VSON-10A
	04	33	07	X	57	Z	VSON-12A
	04	33	08	X	27	Z	VSON-16A

Table "X"

X	O-RING ON PILOT PISTON
00	No O-Ring
10	With O-Ring

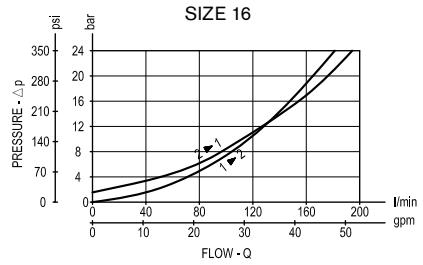
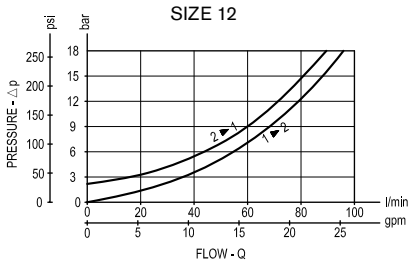
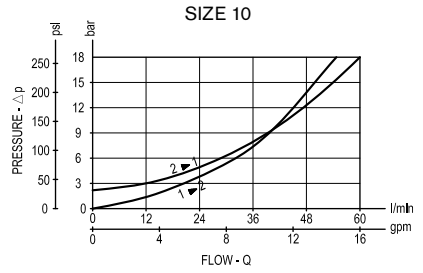
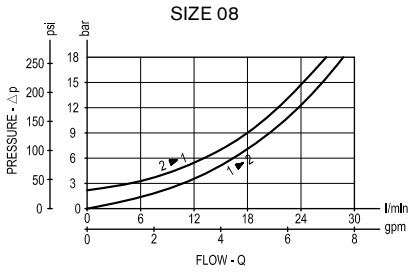
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C**
 For other details see data sheet RE 18319-30, RE 18319-31, RE 18319-32 and RE 18319-33.

Table "Z"

Z	SPRINGS											
	SIZE 08		SIZE 10		SIZE 12		SIZE 16		SIZE 20			
	Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)			
00	2 (30)		2 (30)		2 (30)		1.5 (22)					
05	5 (75)											

Performance graphs



Ordering code

OY.01	K	X	Y	Z	W
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Manifold with pilot operated check, pilot to open

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - O-Ring on pilot piston
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OY0106100200S0	R934000621
OY0105100300S0	R934000618
OY0107000400S0	R934001440
OY0108000500S0	R934000931

Type	Material number

Further types available by request

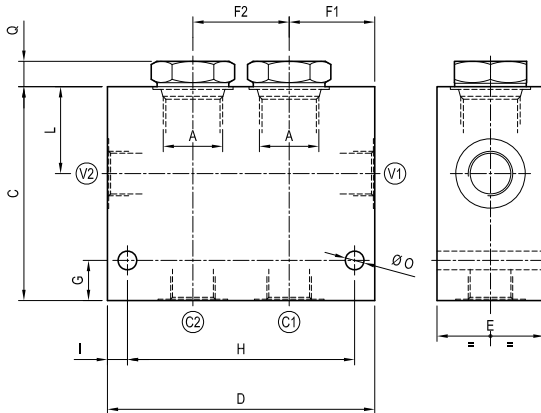
Dual pilot operated check

Double common cavity
Cartridge style in manifold

VSO-DE-C

2Y.01 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 200 l/min	(53 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

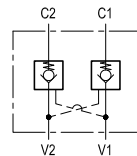


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)											
				C	D	E	F1	F2	G	H	I	L	M	O	Q
SIZE 08	02	G 3/8	30 (8)	60 (2.36)	90 (3.54)	30 (1.18)	27 (1.06)	36 (1.42)	15 (0.59)	75 (2.95)	7.5 (0.3)	27.5 (1.08)	7 (0.28)	9 (0.35)	
				80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.30)	32.5 (1.28)	7 (0.28)	10 (0.39)	
SIZE 10	03	G 1/2	60 (16)	90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)	7 (0.28)	18 (0.71)	
				90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)	7 (0.28)	17 (0.67)	
SIZE 12	03	G 1/2	120 (32)	90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)	7 (0.28)	17 (0.67)	
				90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)	7 (0.28)	17 (0.67)	
SIZE 16	05	G 1	200 (53)	90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)	9 (0.35)	17 (0.67)	
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)	9 (0.35)	17 (0.67)	
SIZE 20															

Cartridge style

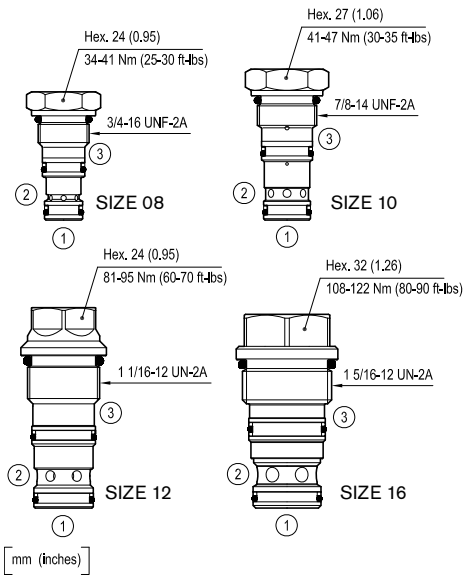


Table “K”

		K					
CARTRIDGE CODE	04	33	06	X	56	Z	VSON-08A
	04	33	05	X	85	Z	VSON-10A
	04	33	07	X	57	Z	VSON-12A
	04	33	08	X	27	Z	VSON-16A

Table “X”

X	O-RING ON PILOT PISTON
00	No O-Ring
10	With O-Ring

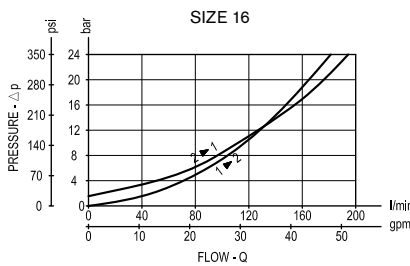
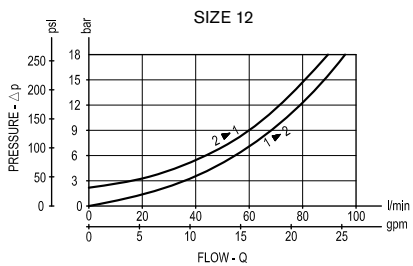
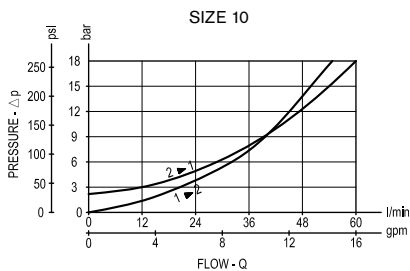
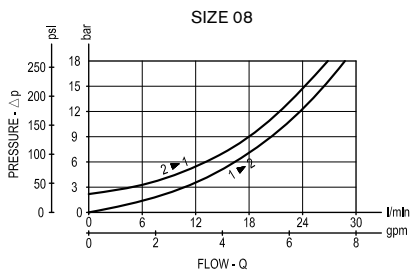
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C**
 For other details see data sheet RE 18319-30, RE 18319-31, RE 18319-32 and RE 18319-33.

Table “Z”

Z	SPRINGS									
	SIZE 08		SIZE 10		SIZE 12		SIZE 16		SIZE 20	
	Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)		Cracking pressure bar(psi)	
00	2 (30)		2 (30)		2 (30)		1,5 (22)			
05	5 (75)									

Performance graphs



Ordering code

2Y.01	K	X	Y	Z	W
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Manifold with dual pilot operated check

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - O-Ring on pilot piston
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 2)

Preferred types (readily available)

Type	Material number
2Y0106000200S0	R934001443
2Y0105000300S0	R934001445
2Y0107000400S0	R934001447
2Y0108000500S0	R934001449
2Y0105100300S0	R934000620
2Y0106100200S0	R934000619

Type	Material number

Further types available by request

Bosch Rexroth Oil Control S.p.A.
 Via Leonardo da Vinci 5
 P.O. Box no. 5
 41015 Nonantola – Modena, Italy
 Tel. +39 059 887 611
 Fax +39 059 547 848
 integrated-circuits@oilcontrol.com
 www.boschrexroth.com

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 Subject to change.

Counterbalance, standard poppet type

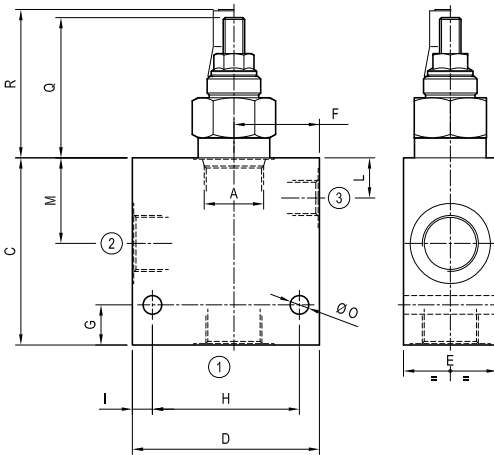
Common cavity

Cartridge style in manifold

VBSN-C

OY.02 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

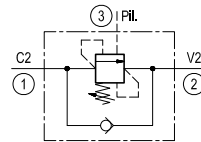
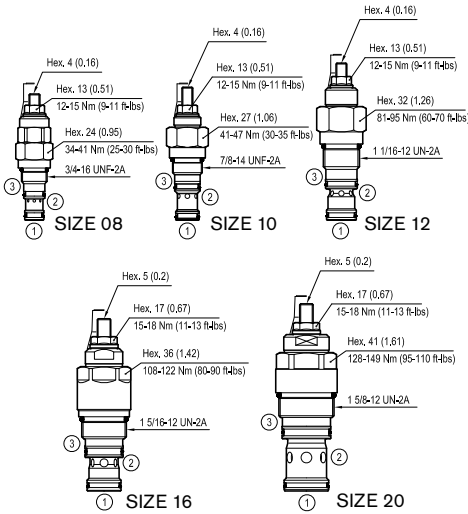


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
		1 - 2	3		C	D	E	F	G	H	I	L	M	N	O	Q	R
SIZE 08	09	G 1/4	G 1/4	30 (8)	60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)	55 (2.17)	64 (2.52)
	02	G 3/8	G 1/4		60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)		
SIZE 10	02	G 3/8	G 1/4	60 (16)	70 (2.76)	60 (2.36)	35 (1.38)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)	53 (2.09)	59 (2.32)
	03	G 1/2	G 1/4		70 (2.76)	70 (2.76)	35 (1.38)	32 (1.26)	15 (0.59)	55 (2.17)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)		
SIZE 12	03	G 1/2	G 1/4	120 (32)	80 (3.15)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)	61 (2.4)	67 (2.64)
	04	G 3/4	G 1/4		90 (3.54)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)		
SIZE 16	04	G 3/4	G 1/4	200 (53)	90 (3.54)	80 (3.15)	50 (1.97)	38 (1.50)	22 (0.87)	60 (2.36)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)	73 (2.87)	80 (3.15)
	05	G 1	G 1/4		90 (3.54)	90 (3.54)	50 (1.97)	40 (1.58)	22 (0.87)	70 (2.76)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)		
SIZE 20	05	G 1	G 1/4	320 (85)	110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
	06	G 1 1/4	G 1/4		110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)		

Cartridge style




[mm (inches)]

Table "K"

		K					
CARTRIDGE CODE	04	52	20	X	56	Z	VBSN-08AA
	04	52	31	X	85	Z	VBSN-10A
	04	52	28	X	57	Z	VBSN-12A
	04	52	29	X	27	Z	VBSN-16A
	04	52	25	X	58	Z	VBSN-20A

Table "X"

X	PILOT RATIO		OPTIONS
03	4 : 1	3:1 only for K=31 version	 Ordering code K=20,31,28 11.04.23.002 K=29,25 11.04.23.004
10	8 : 1		
33	4 : 1	With sealed pilot (only for K=20 version)	

CARTRIDGE TECHNICAL DATA

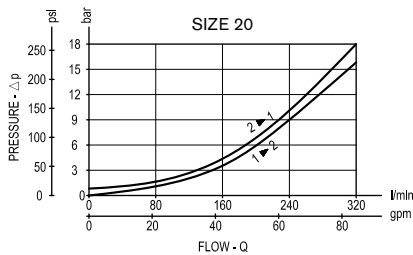
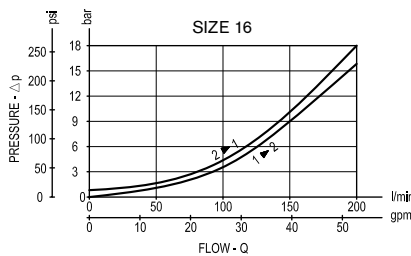
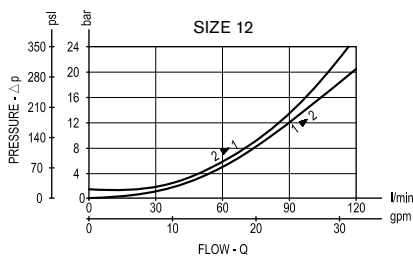
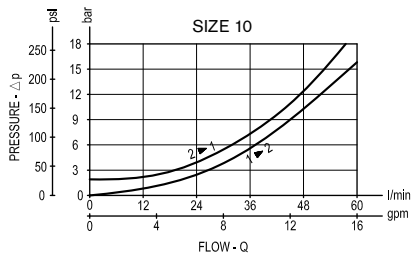
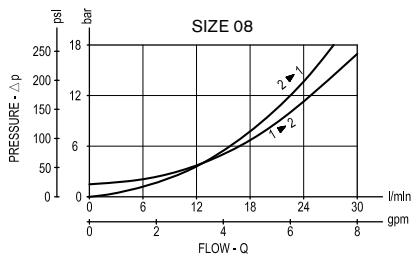
Common cavity: CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C

For other details see data sheet RE 18320-01, RE 18320-02, RE 18320-03, RE 18320-04 and RE 18320-05

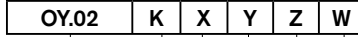
Table "Z"

Z	SPRINGS															
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20			
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	
X=03	15	70-150 (1000-2200)	72.5 (1051)	150 (2200)												
	20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	135 (1958)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)
	35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	196 (2842)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)
X=10	20			70-210 (1000-3000)	52 (754)	200 (2900)	70-210 (1000-3000)	42 (609)	200 (2900)	70-210 (1000-3000)	39 (566)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	
	35			140-350 (2000-5000)	89 (1291)	350 (5000)	140-350 (2000-5000)	67 (972)	350 (5000)							
	40									140-420 (2000-6000)	135 (1958)	350 (5000)	140-420 (2000-6000)	135 (1958)	350 (5000)	
X=33	20	100-210 (1450-3000)	109 (1581)	200 (2900)												

Performance graphs



Ordering code



Manifold with counterbalance, standard poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

- = 00 Aluminium manifold
- = S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OY0220030220S0	R934001402
OY0220030235S0	R934001403
OY0231030320S0	R934001404
OY0231030335S0	R934001405
OY0228030420S0	R934001406
OY0228030435S0	R934001407
OY0229030520S0	R934001408
OY0229030535S0	R934001409
OY0225030620S0	R934001413
OY0225030635S0	R934001414
OY022503063500	R934000949
OY022803032000	R934003852
OY0228030320S0	R934003359

Type	Material number

Further types available by request

Dual counterbalance, standard poppet type

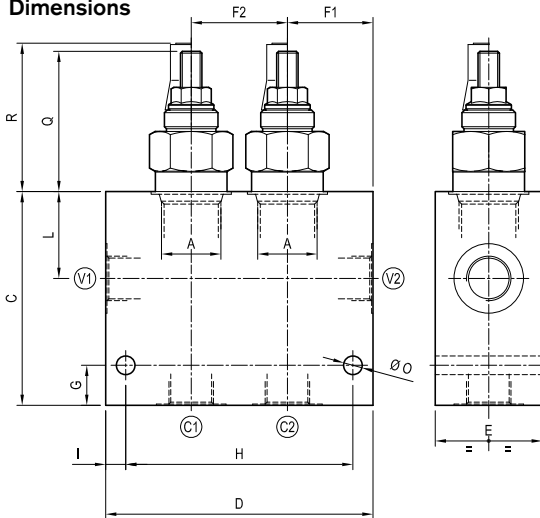
Double common cavity

Cartridge style in manifold

VBSN-DE-C

2Y.02 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

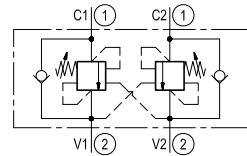
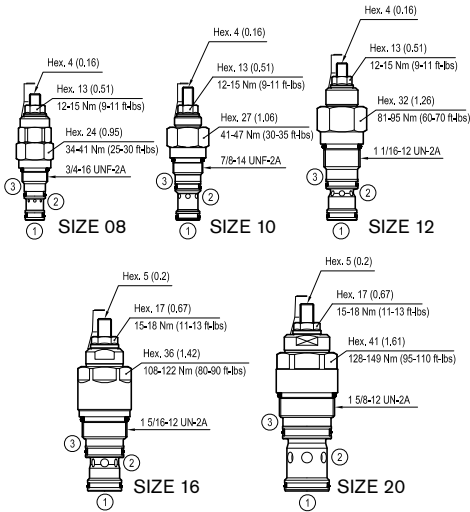


Table "Y"

Cavity	Y	PORT SIZE V1-V2-C1-C2	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F1	F2	G	H	I	L	M	O	Q	R
SIZE 08	02	G 3/8	30 (8)	60 (2.36)	90 (3.54)	30 (1.18)	27 (1.06)	36 (1.42)	15 (0.59)	75 (2.95)	7.5 (0.3)	27.5 (1.08)		7 (0.28)	55 (2.17)	64 (2.52)
SIZE 10	02	G 3/8	60 (16)	80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.30)	32.5 (1.28)		7 (0.28)	53 (2.09)	59 (2.32)
				80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.30)	32.5 (1.28)		7 (0.28)		
SIZE 12	03	G 1/2	120 (32)	90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)		7 (0.28)	61 (2.4)	67 (2.64)
				90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)		7 (0.28)		
SIZE 16	04	G 3/4	200 (53)	90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)		8 (0.35)	73 (2.87)	80 (3.15)
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)		8 (0.35)		
SIZE 20	05	G 1	320 (85)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)		
SIZE 20	06	G 1 1/4	320 (85)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)		

Cartridge style




[mm (inches)]

Table "K"

CARTRIDGE CODE	K		X	56	Z	VBSN-08AA
	04	52				
04	52	20	X	56	Z	VBSN-08AA
04	52	31	X	85	Z	VBSN-10A
04	52	28	X	57	Z	VBSN-12A
04	52	29	X	27	Z	VBSN-16A
04	52	25	X	58	Z	VBSN-20A

Table "X"

X	PILOT RATIO	OPTIONS
03	4 : 1 3:1 only for K=31 version	 Ordering code K=20,31,28 11.04.23.002 K=29,25 11.04.23.004
10	8 : 1	
33	4 : 1 With sealed pilot (only for K=20 version)	

CARTRIDGE TECHNICAL DATA

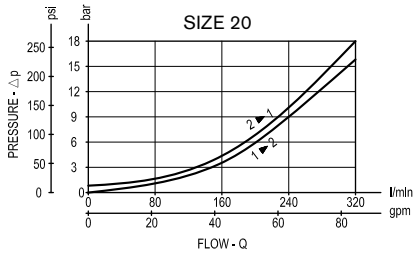
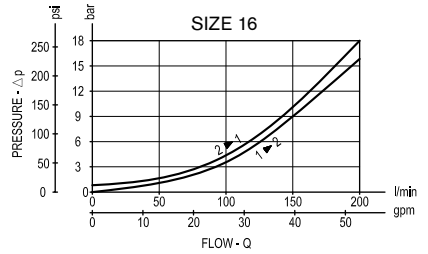
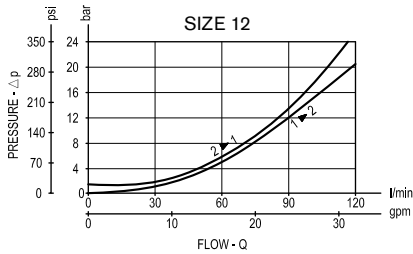
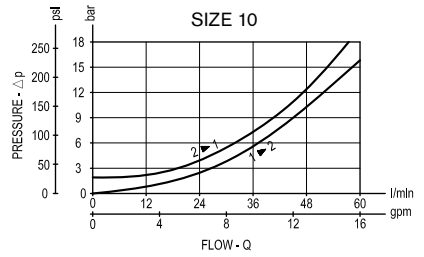
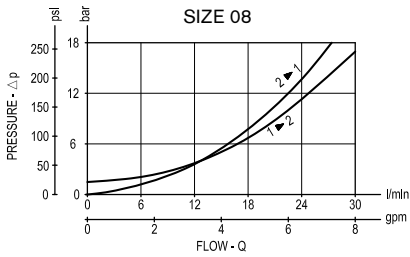
Common cavity: CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C

For other details see data sheet RE 18320-01, RE 18320-02, RE 18320-03, RE 18320-04 and RE 18320-05

Table "Z"

Z	SPRINGS															
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20			
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	
X=03	15	70-150 (1000-2200)	72,5 (1051)	150 (2200)												
	20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	135 (1958)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)
	35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	196 (2842)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)
X=10	20			70-210 (1000-3000)	52 (754)	200 (2900)	70-210 (1000-3000)	42 (609)	200 (2900)	70-210 (1000-3000)	39 (566)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	
	35			140-350 (2000-5000)	89 (1291)	350 (5000)	140-350 (2000-5000)	67 (972)	350 (5000)							
	40															
X=33	20	100-210 (1450-3000)	109 (1581)	200 (2900)												

Performance graphs



Ordering code

2Y.02	K	X	Y	Z	W
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Manifold with dual counterbalance, standard poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
2Y0220030220S0	R934001415
2Y0220030235S0	R934001416
2Y0231030320S0	R934001426
2Y0231030335S0	R934001428
2Y0228030420S0	R934001432
2Y0228030435S0	R934001435
2Y0229030520S0	R934001436
2Y0229030535S0	R934003341
2Y0225030620S0	R934001439
2Y0225030635S0	R934003340
2Y022003022000	R934000653
2Y0225100640S0	R934003365
2Y022803032000	R934000656
2Y022803042000	R934000658
2Y0228100435S0	R934003490

Type	Material number
2Y0229100540S0	R934000807
2Y023103022000	R934000726
2Y0231030235S0	R934000876
2Y023103032000	R934000725
2Y0231100335S0	R934003491

Further types available by request

Counterbalance, relief compensated, poppet type

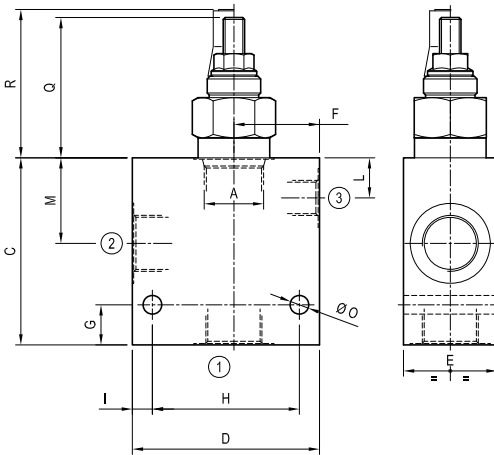
Common cavity

Cartridge style in manifold

VBSP-C

OY.03 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

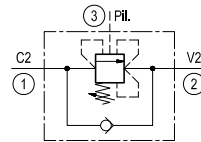
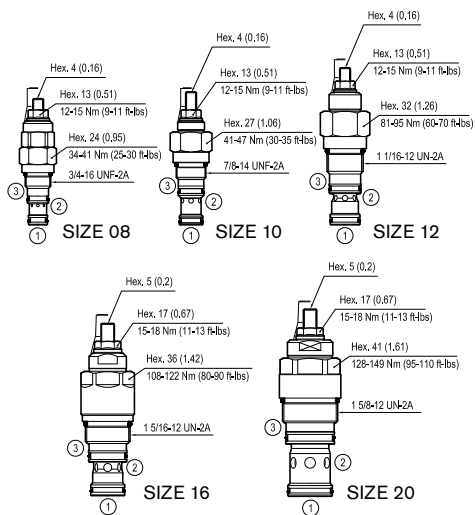


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
		1 - 2	3		C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08	09	G 1/4	G 1/4	30 (8)	60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)	55 (2.17)	64 (2.52)	
	02	G 3/8	G 1/4		60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)			
SIZE 10	02	G 3/8	G 1/4	60 (16)	70 (2.76)	60 (2.36)	35 (1.38)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)	53 (2.09)	59 (2.32)	
	03	G 1/2	G 1/4		70 (2.76)	70 (2.76)	35 (1.38)	32 (1.26)	15 (0.59)	55 (2.17)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)			
SIZE 12	03	G 1/2	G 1/4	120 (32)	80 (3.15)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		7 (0.28)	61 (2.4)	67 (2.64)	
	04	G 3/4	G 1/4		90 (3.54)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)			
SIZE 16	04	G 3/4	G 1/4	200 (53)	90 (3.54)	80 (3.15)	50 (1.97)	38 (1.50)	22 (0.87)	60 (2.36)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)	73 (2.87)	80 (3.15)	
	05	G 1	G 1/4		90 (3.54)	90 (3.54)	50 (1.97)	40 (1.58)	22 (0.87)	70 (2.76)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)			
SIZE 20	05	G 1	G 1/4	320 (85)	110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)	
	06	G 1 1/4	G 1/4		110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)			

Cartridge style




[mm (inches)]

Table "K"

		K					
CARTRIDGE CODE	04	54	04	X	56	Z	VBSP-08AA
	04	54	09	X	85	Z	VBSP-10A
	04	54	08	X	57	Z	VBSP-12A
	04	54	10	X	27	Z	VBSP-16A
	04	54	13	X	58	Z	VBSP-20A

Table "X"

X	PILOT RATIO	OPTIONS
03	4 : 1 3:1 only for K=09 version	 Ordering code K=04,09,08 11.04.23.002 K=10,13 11.04.23.004

CARTRIDGE TECHNICAL DATA

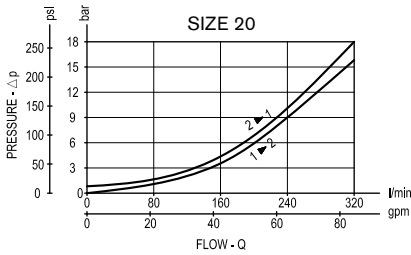
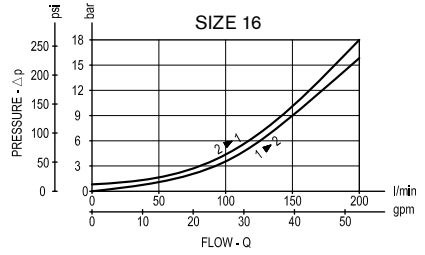
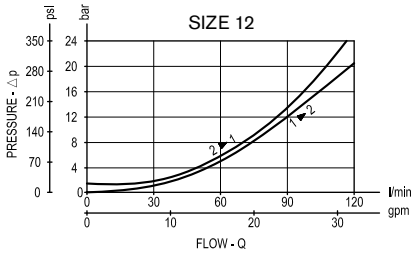
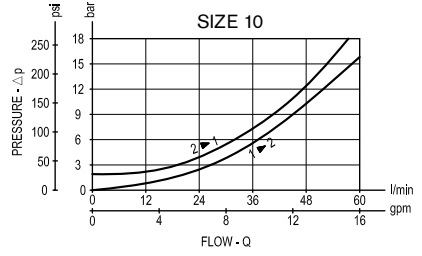
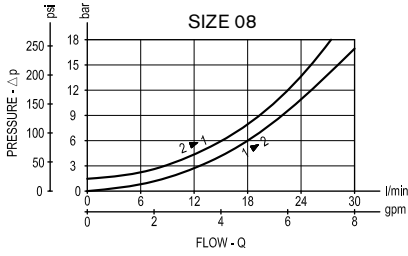
Common cavity: CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C

For other details see data sheet RE 18320-06, RE 18320-07, RE 18320-08, RE 18320-09 and RE 18320-10

Table "Z"

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	135 (1958)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)
35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	196 (2842)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)

Performance graphs



Ordering code

OY.03	K	X	Y	Z	W
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Manifold with counterbalance, relief compensated, poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OY0304030220S0	R934001351
OY0304030235S0	R934001356
OY0309030320S0	R934001363
OY0309030335S0	R934001367
OY0308030420S0	R934001368
OY0308030435S0	R934001396
OY0310030520S0	R934001399
OY0310030535S0	R934001398
OY0313030620S0	R934001400
OY0313030635S0	R934001401

Type	Material number

Further types available by request

Dual counterbalance, relief compensated, poppet type

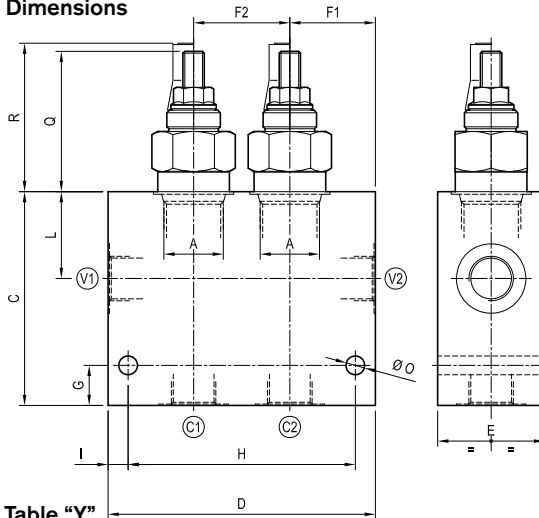
Double common cavity

Cartridge style in manifold

VBSP-DE-C

2Y.03 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

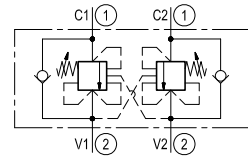
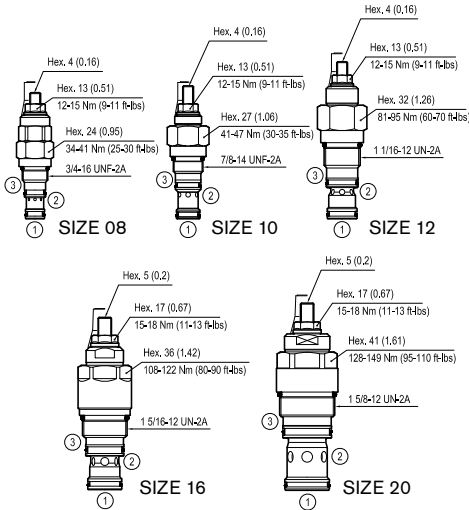


Table "Y"

Cavity	Y	PORT SIZE V1-V2-C1-C2	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F1	F2	G	H	I	L	M	O	Q	R
SIZE 08	02	G 3/8	30 (8)	60 (2.36)	90 (3.54)	30 (1.18)	27 (1.06)	36 (1.42)	15 (0.59)	75 (2.95)	7.5 (0.3)	27.5 (1.08)		7 (0.28)	55 (2.17)	64 (2.52)
				80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.3)	32.5 (1.28)	7 (0.28)	53 (2.09)	59 (2.32)	
SIZE 10	03	G 1/2	60 (16)	80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.3)	32.5 (1.28)		7 (0.28)	61 (2.4)	67 (2.64)
				90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)	7 (0.28)	73 (2.87)	80 (3.15)	
SIZE 12	04	G 3/4	120 (32)	90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)		7 (0.28)	73 (2.87)	80 (3.15)
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)	9 (0.35)	73 (2.87)	80 (3.15)	
SIZE 16	05	G 1	200 (53)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)	9 (0.35)	73 (2.87)	80 (3.15)	
SIZE 20	06	G 1 1/4	320 (85)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)	9 (0.35)	73 (2.87)	80 (3.15)	

Cartridge style




[mm (inches)]

Table "K"

CARTRIDGE CODE	K						
	04	54					
04	54	04	X	56	Z	VBSP-08AA	
04	54	09	X	85	Z	VBSP-10A	
04	54	08	X	57	Z	VBSP-12A	
04	54	10	X	27	Z	VBSP-16A	
04	54	13	X	58	Z	VBSP-20A	

Table "X"

X	PILOT RATIO		OPTIONS
03	4 : 1	3:1 only for K=09 version	 <p>Ordering code</p> <p>K=04,09,08 11.04.23.002</p> <p>K=10,13 11.04.23.004</p>

CARTRIDGE TECHNICAL DATA

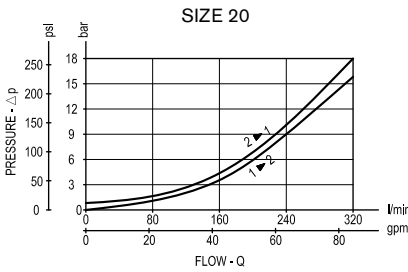
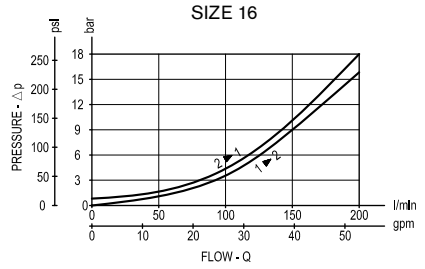
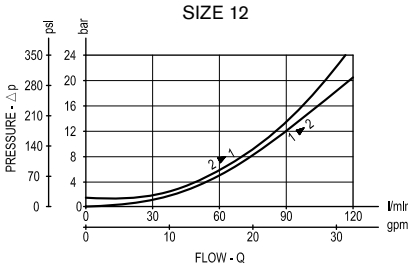
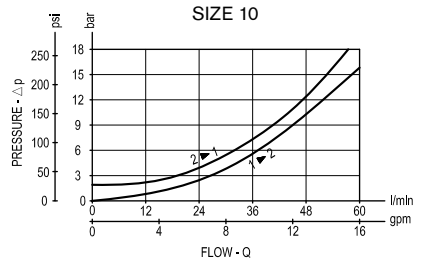
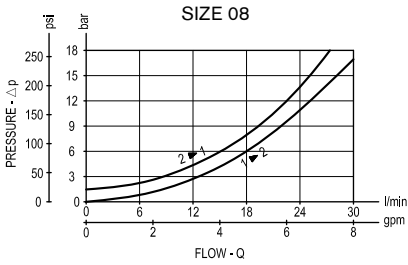
Common cavity: CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C

For other details see data sheet RE 18320-06, RE 18320-07, RE 18320-08, RE 18320-09 and RE 18320-10

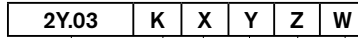
Table "Z"

Z	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	135 (1958)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)	70-210 (1000-3000)	70 (1015)	200 (2900)
35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	196 (2842)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)	140-350 (2000-5000)	108 (1566)	350 (5000)

Performance graphs



Ordering code



Manifold with dual counterbalance, relief compensated, poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
2Y0304030220S0	R934001325
2Y0304030235S0	R934001326
2Y0309030320S0	R934001328
2Y0309030335S0	R934001329
2Y0308030420S0	R934001332
2Y0308030435S0	R934001333
2Y0310030520S0	R934001335
2Y0310030535S0	R934001336
2Y0313030620S0	R934001344
2Y0313030635S0	R934001346
2Y030803032000	R934003938
2Y030903032000	R934003843

Type	Material number

Further types available by request

Counterbalance, vented guided poppet type

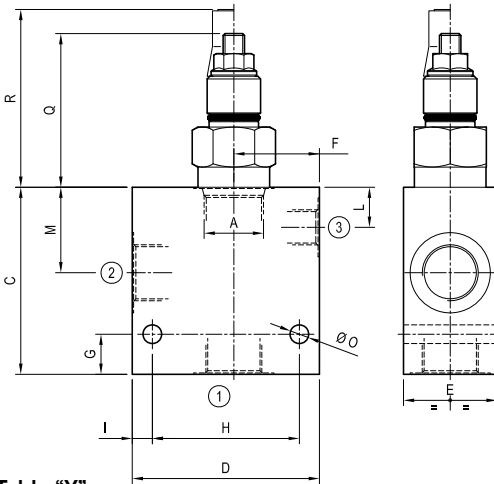
Common cavity

Cartridge style in manifold

VBST-C

OY.04 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

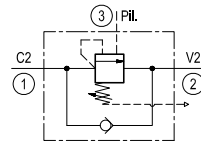
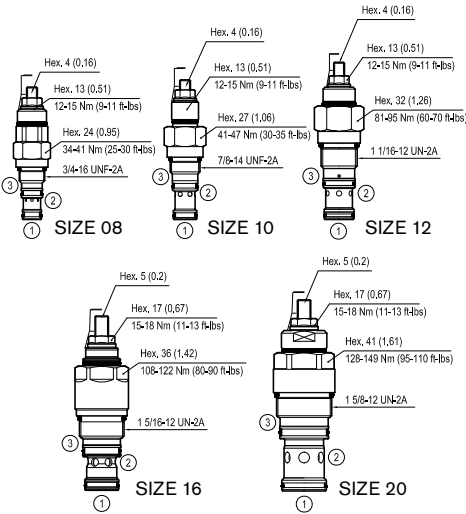


Table "Y"

Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
		1 - 2	3		C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08	09	G 1/4	G 1/4	30 (8)	60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)	60 (2.36)	69 (2.72)	
	02	G 3/8	G 1/4		60 (2.36)	60 (2.36)	30 (1.18)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.3)	13 (0.51)	27 (1.06)		7 (0.28)			
SIZE 10	02	G 3/8	G 1/4	60 (16)	70 (2.76)	60 (2.36)	35 (1.38)	30 (1.18)	15 (0.59)	45 (1.77)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)	59 (2.32)	67 (2.64)	
	03	G 1/2	G 1/4		70 (2.76)	70 (2.76)	35 (1.38)	32 (1.26)	15 (0.59)	55 (2.17)	7.5 (0.30)	15 (0.59)	32 (1.26)		7 (0.28)			
SIZE 12	03	G 1/2	G 1/4	120 (32)	80 (3.15)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		7 (0.28)	61 (2.4)	67 (2.64)	
	04	G 3/4	G 1/4		90 (3.54)	75 (2.95)	40 (1.58)	35 (1.38)	15 (0.59)	55 (2.17)	10 (0.39)	24 (0.95)	42 (1.65)		9 (0.35)			
SIZE 16	04	G 3/4	G 1/4	200 (53)	90 (3.54)	80 (3.15)	50 (1.97)	38 (1.50)	22 (0.87)	60 (2.36)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)	75 (2.95)	80 (3.15)	
	05	G 1	G 1/4		90 (3.54)	90 (3.54)	50 (1.97)	40 (1.58)	22 (0.87)	70 (2.76)	10 (0.39)	18.5 (0.73)	39 (1.54)		9 (0.35)			
SIZE 20	05	G 1	G 1/4	320 (85)	110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)	69 (2.72)	75.5 (2.97)	
	06	G 1 1/4	G 1/4		110 (4.33)	100 (3.94)	60 (2.36)	45 (1.77)	25 (0.98)	75 (2.95)	12.5 (0.49)	21 (0.83)	51 (2.01)		11 (0.43)			

Cartridge style




[mm (inches)]

Table “K”

		K					
CARTRIDGE CODE	04	59	08	X	56	Z	VBST-08AA
	04	59	16	X	85	Z	VBST-10A
	04	59	26	X	57	Z	VBST-12A
	04	59	27	X	27	Z	VBST-16A
	04	59	18	X	58	Z	VBST-20A

Table “X”

X	PILOT RATIO		OPTIONS
03	4 : 1	3:1 only for K=16 version	 Ordering code K=08,16,26 11.04.23.002 K=27,18 11.04.23.004

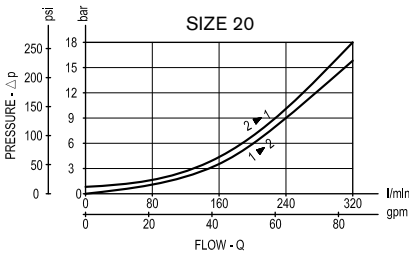
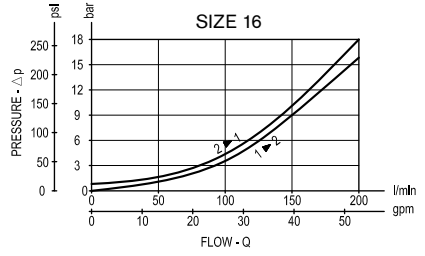
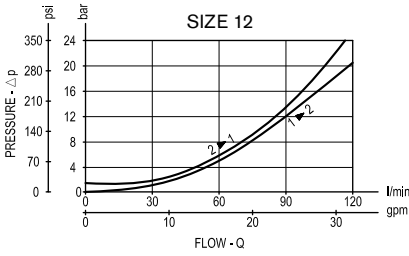
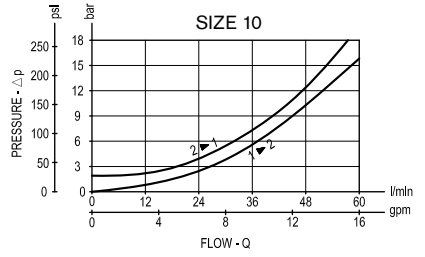
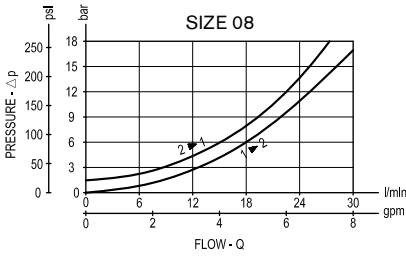
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C**
 For other details see data sheet RE 18320-11, RE 18320-12, RE 18320-13, RE 18320-14 and RE 18320-15.

Table “Z”

Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	95 (1378)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)				70-210 (1000-3000)	95 (1378)	200 (2900)
35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	129 (1871)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	83,5 (1210)	350 (5000)	140-350 (2000-5000)	129 (1871)	350 (5000)

Performance graphs



Ordering code

OY.04	K	X	Y	Z	W
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Manifold with counterbalance, vented guided poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

- = 00 Aluminium manifold
- = S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OY0408030220S0	R934001303
OY0408030235S0	R934001304
OY0416030320S0	R934001306
OY0416030335S0	R934001307
OY0426030420S0	R934001308
OY0426030435S0	R934001309
OY0427030535S0	R934001311
OY0418030620S0	R934001322
OY0418030635S0	R934001323

Type	Material number

Further types available by request

Dual counterbalance, vented guided poppet type

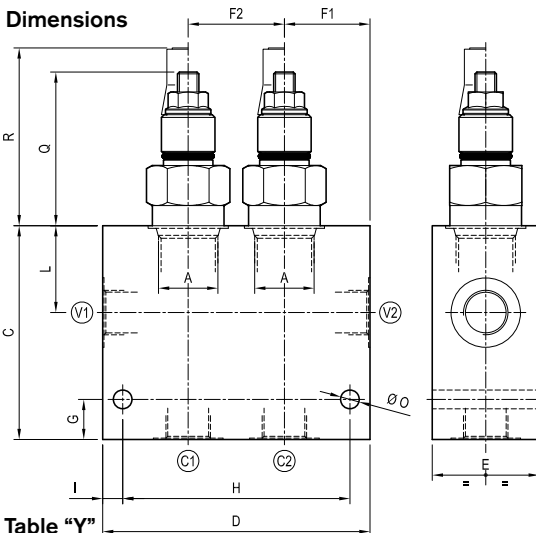
Double common cavity

Cartridge style in manifold

VBST-DE-C

2Y.04 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 320 l/min	(85 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

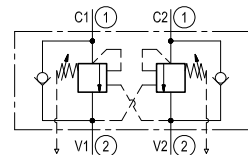
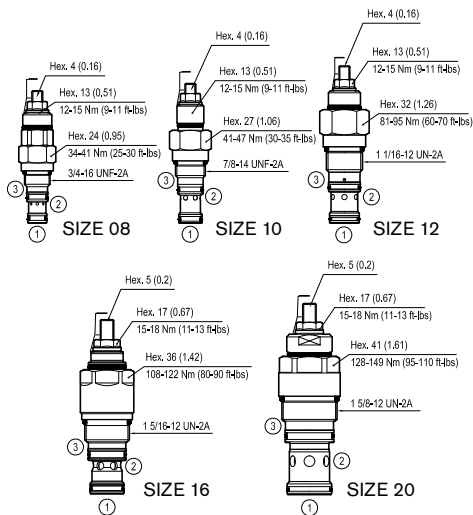


Table "Y"

Cavity	Y	PORT SIZE V1-V2-C1-C2	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F1	F2	G	H	I	L	M	O	Q	R
SIZE 08	02	G 3/8	30 (8)	60 (2.36)	90 (3.54)	30 (1.18)	27 (1.06)	36 (1.42)	15 (0.59)	75 (2.95)	7.5 (0.3)	27.5 (1.08)		7 (0.28)	55 (2.17)	64 (2.52)
				80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.3)	32.5 (1.28)		7 (0.28)	53 (2.09)	59 (2.32)
SIZE 10	02	G 3/8	60 (16)	80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.3)	32.5 (1.28)		7 (0.28)	53 (2.09)	59 (2.32)
				80 (3.15)	100 (3.94)	40 (1.58)	32 (1.26)	36 (1.42)	15 (0.59)	85 (3.35)	7.5 (0.3)	32.5 (1.28)		7 (0.28)	53 (2.09)	59 (2.32)
SIZE 12	03	G 1/2	120 (32)	90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)		7 (0.28)	61 (2.4)	67 (2.64)
				90 (3.54)	125 (4.92)	50 (1.97)	40 (1.58)	45 (1.77)	15 (0.59)	105 (4.13)	10 (0.39)	41.5 (1.63)		7 (0.28)	61 (2.4)	67 (2.64)
SIZE 16	04	G 3/4	200 (53)	90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)		9 (0.35)	73 (2.87)	80 (3.15)
				90 (3.54)	145 (5.71)	50 (1.97)	45 (1.77)	55 (2.17)	22 (0.87)	125 (4.92)	10 (0.39)	38.5 (1.52)		9 (0.35)	73 (2.87)	80 (3.15)
SIZE 20	05	G 1	320 (85)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
SIZE 20	06	G 1 1/4	320 (85)	120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)
				120 (4.72)	175 (6.89)	60 (2.36)	55 (2.17)	65 (2.56)	25 (0.98)	150 (5.91)	12.5 (0.49)	51 (2.01)		11 (0.43)	65 (2.56)	72.5 (2.85)

Cartridge style




[mm (inches)]

Table "K"

		K					
CARTRIDGE CODE	04	59	08	X	56	Z	VBST-08AA
	04	59	16	X	85	Z	VBST-10A
	04	59	26	X	57	Z	VBST-12A
	04	59	27	X	27	Z	VBST-16A
	04	59	18	X	58	Z	VBST-20A

Table "X"

X	PILOT RATIO	OPTIONS
03	4 : 1 3:1 only for K=16 version	 Ordering code K=08,16,26 11.04.23.002 K=27,18 11.04.23.004

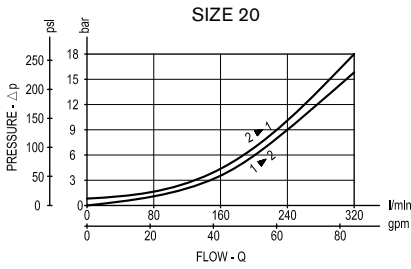
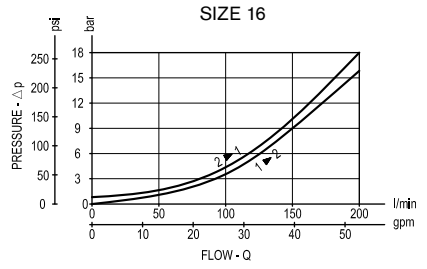
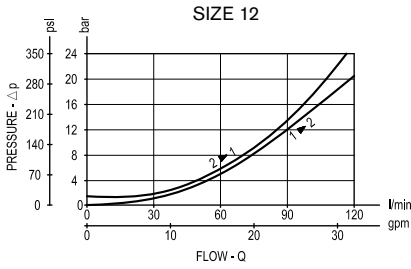
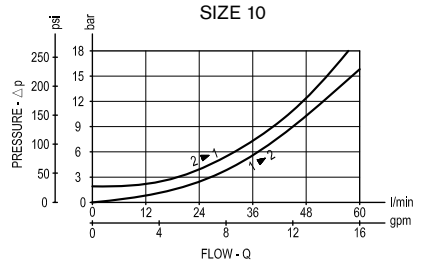
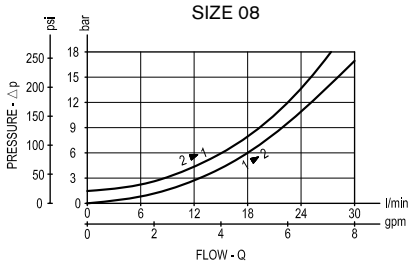
CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-3C / CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C**
 For other details see data sheet RE 18320-11, RE 18320-12, RE 18320-13, RE 18320-14 and RE 18320-15.

Table "Z"

Z	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Adj. press. range bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)
20	100-210 (1450-3000)	109 (1581)	200 (2900)	70-210 (1000-3000)	95 (1378)	200 (2900)	70-210 (1000-3000)	50 (725)	200 (2900)				70-210 (1000-3000)	95 (1378)	200 (2900)
35	200-350 (2900-5000)	137 (1987)	350 (5000)	140-350 (2000-5000)	129 (1871)	350 (5000)	140-350 (2000-5000)	159 (2306)	350 (5000)	140-350 (2000-5000)	83,5 (1210)	350 (5000)	140-350 (2000-5000)	129 (1871)	350 (5000)

Performance graphs



Ordering code

2Y.04	K	X	Y	Z	W
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Manifold with double counterbalance, vented guided poppet type

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Pilot ratio
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
2Y0408030220S0	R934001290
2Y0408030235S0	R934001291
2Y0416030320S0	R934001292
2Y0416030335S0	R934001293
2Y0426030420S0	R934001294
2Y0426030435S0	R934001295
2Y0427030535S0	R934001297
2Y0418030620S0	R934001298
2Y0418030635S0	R934001300
2Y0427030520S0	R934001296

Type	Material number

Further types available by request

Flow control, restrictor

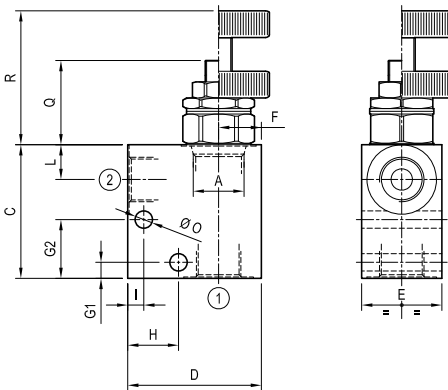
Common cavity

Cartridge style in manifold

ST-C-06-C

ON.01 - K - X - Y - 00 - W

Dimensions



Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

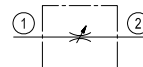
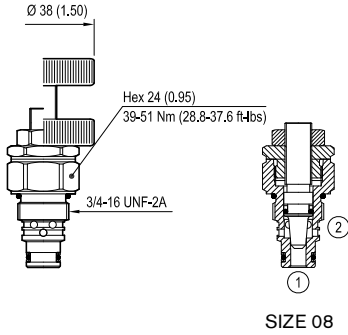


Table "Y"

Cavity	Y	PORT SIZE	Rated Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G1	G2	H	I	L	O	Q	R	
A		1 - 2		50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)			
SIZE 08	09	G 1/4	up to 40 (11)	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)	32 (1.26)	51 (2.00)	
SIZE 10	02	G 3/8														
SIZE 12																
SIZE 16																
SIZE 20																

Cartridge style



SIZE 08

[mm (inches)]

Table "K"

					K		
CARTRIDGE CODE	OD	21	01	X	56	00	ST-C-06-C

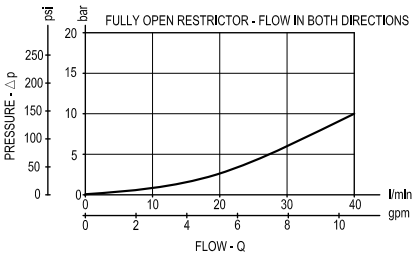
Table "X"

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-2N**
 For other details see data sheet RE 18321-26

Performance graph



Ordering code

ON.01	K	X	Y	00	W
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Manifold with flow control, restrictor

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0156030200S0	R934001279
ON0156040200S0	R934001280

Type	Material number

Further types available by request

Flow control, restrictor

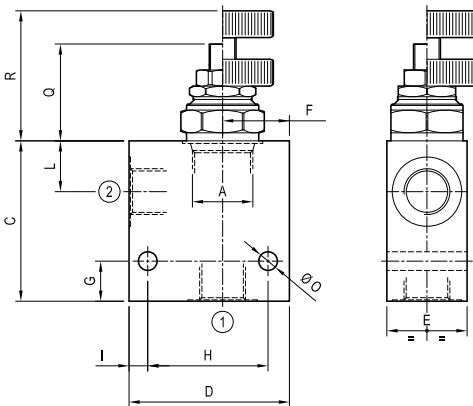
Common cavity

Cartridge style in manifold

ST-C-C

ON.02 - K - X - Y - 00 - W

Dimensions



Technical data

Max flow:	up to 150 l/min	(39 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85



Table "Y"

Cavity	Y	PORT SIZE	Rated Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08																	
SIZE 10	03	G 1/2	up to 70 (19)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.30)	19 (0.75)			7 (0.28)	38 (1.5)	50 (1.97)	
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.30)	20 (0.79)			9 (0.35)			
SIZE 12	04	G 3/4	up to 150 (39)	75 (2.95)	80 (3.15)	40 (1.58)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)	34 (1.34)	44 (1.73)	
	05	G 1		75 (2.95)	80 (3.15)	50 (1.97)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)			
SIZE 16	04	G 3/4	up to 150 (39)	80 (3.15)	80 (3.15)	50 (1.97)	32 (1.26)	22 (0.87)	60 (2.36)	10 (0.39)	26 (1.02)			9 (0.35)	33 (1.3)	43 (1.69)	
	05	G 1		80 (3.15)	90 (3.54)	50 (1.97)	37 (1.46)	22 (0.87)	60 (2.36)	20 (0.79)	26 (1.02)			9 (0.35)			
SIZE 20																	

Cartridge style

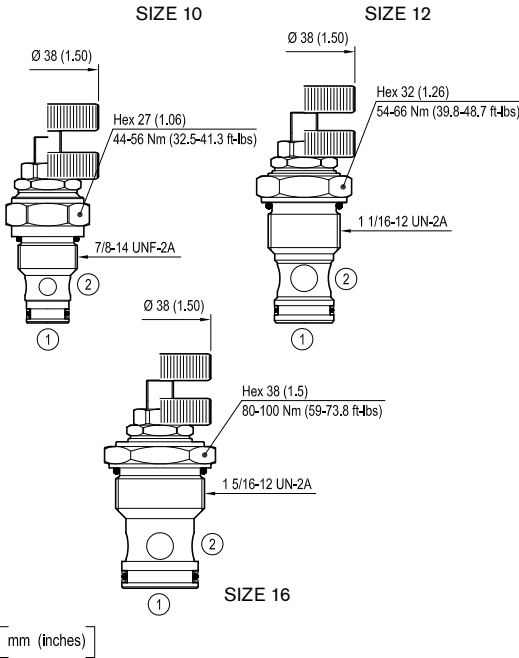


Table "K"

							K
CARTRIDGE CODE	OD	21	01	X	36	00	ST-C-10A
	OD	21	01	X	89	00	ST-C-12A
	OD	21	01	X	75	00	ST-C-16A

Table "X"

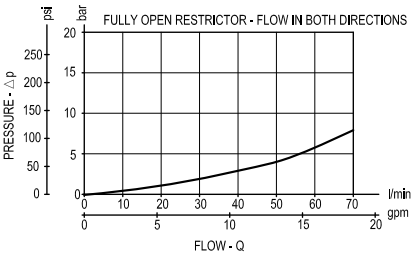
X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

CARTRIDGE TECHNICAL DATA

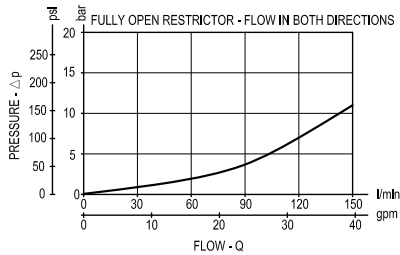
Common cavity: **CA-10A-2N / CA-12A-2N / CA-16A-2N**
 For other details see data sheet RE 18321-27, RE 18321-28, and RE 18321-29

Performance graphs

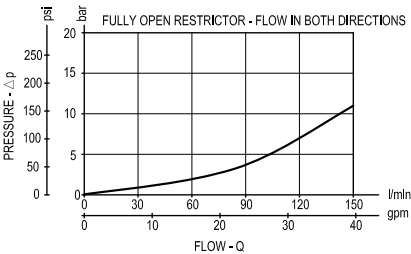
SIZE 10



SIZE 12



SIZE 16



Ordering code

ON.02	K	X	Y	00	W
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Manifold with flow control, restrictor

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number	Type	Material number
ON0236030400S0	R934001281		
ON0236040400S0	R934001283		
ON0289030500S0	R934001284		
ON0289040500S0	R934001285		
ON0275030500S0	R934001070		
ON0275040500S0	R934001286		

Further types available by request

RE 18331-03/07.10 1/4
Replaces: RE 00199/11.07

Needle restrictor, free reverse flow

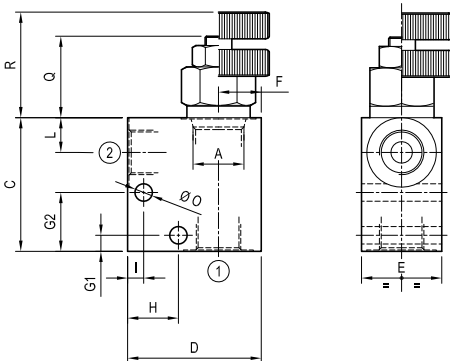
Common cavity

Cartridge style in manifold

STVU-08A

ON.03 - K - X - Y - 00 - W

Dimensions



Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

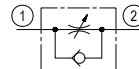


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G1	G2	H	I	L	O	Q	R	
A		1 - 2		50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)			
SIZE 09		G 1/4	up to 40 (11)	50 (1.97)	50 (1.97)	30 (1.18)	16 (0.63)	6 (0.24)	22 (0.87)	19 (0.75)	6 (0.24)	13 (0.51)	6.5 (0.26)	31 (1.22)	40 (1.58)	
SIZE 08		G 3/8														
SIZE 10																
SIZE 12																
SIZE 16																
SIZE 20																

Cartridge style

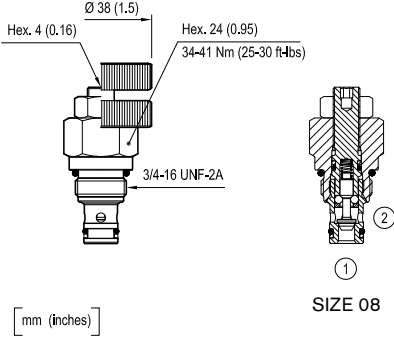


Table "K"

			K				
CARTRIDGE CODE	04	01	03	X	56	00	STVU-08A

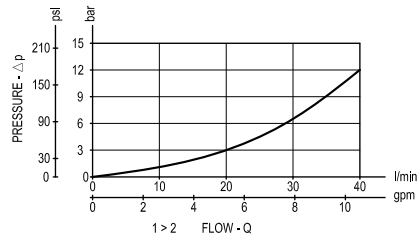
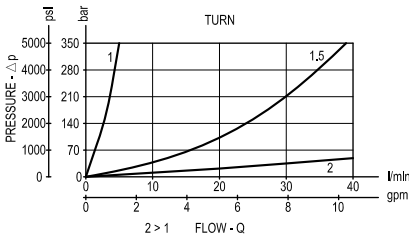
Table "X"

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

CARTRIDGE TECHNICAL DATA

Common cavity: **CA-08A-2N**
 For other details see data sheet RE 18321-10

Performance graphs



Ordering code

ON.03	K	X	Y	00	W
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Manifold with needle restrictor, free reverse flow

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0303030200S0	R934003576
ON0302030200S0	R934001288

Type	Material number

Further types available by request

Needle restrictor, free reverse flow

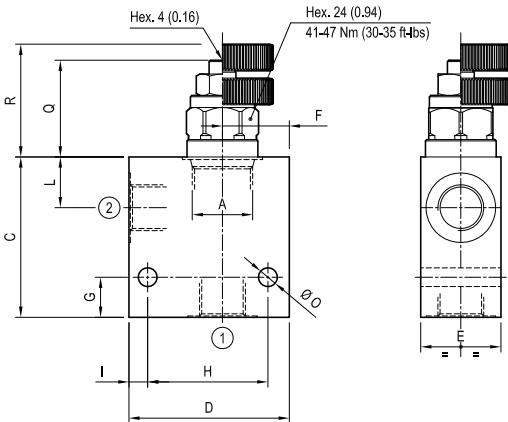
Common cavity

Cartridge style in manifold

STVU-10A

ON.09 - K - X - Y - 00 - W

Dimensions



Technical data

Max flow:	up to 80 l/min	(22 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

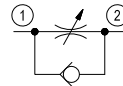
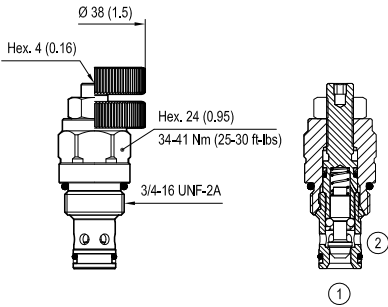


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G1	G2	H	I	L	O	Q	R		
SIZE 08																	
SIZE 10	03	G 1/2	80 (22)	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.3)	19 (0.75)				7.5 (0.30)		
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.3)	20 (0.79)				9 (0.30)	37 (1.46)	43 (1.69)
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style



[mm (inches)]

SIZE 10

Table "K"

			K				
CARTRIDGE CODE	04	01	05	X	85	00	STVU-10A

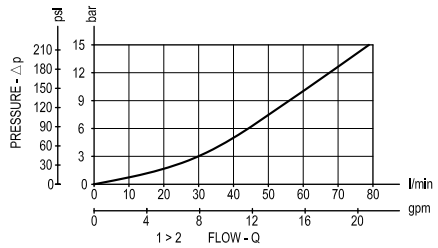
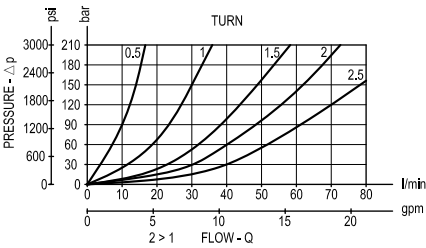
Table "X"

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

CARTRIDGE TECHNICAL DATA

Common cavity: **CA-10A-2N**
 For other details see data sheet RE 18321-11

Performance graphs



Ordering code

ON.09	K	X	Y	00	W
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**Manifold with needle restrictor,
free reverse flow**

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number	Type	Material number
ON0905030400S0	R934003577		

Further types available by request

Flow control, 2-way pressure compensated fully adjustable

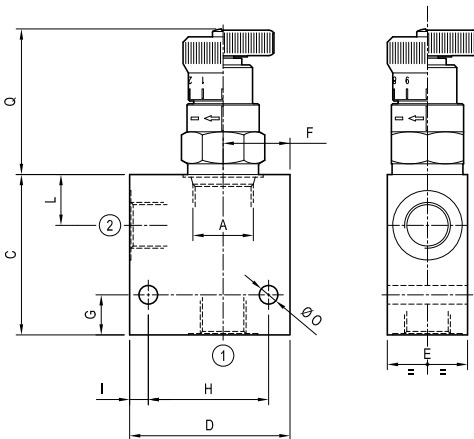
Common cavity

Cartridge style in manifold

VRFB-10A-C / VRFE-12A-C

ON.05 - K - X - Y - Z - W

Dimensions



Technical data

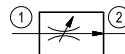
Flow: adjustable (see table "Z" and performance graph)

Max operating pressure
for **steel** body: 350 bar (5000 psi)

Max operating pressure
for **aluminium** body: 210 bar (3000 psi)

To order only manifold see data sheet RE 18325-85

K=02 type



K=01 type

(free reverse flow)

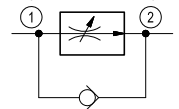


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G	H	I	L	O	Q	R		
SIZE 08																
SIZE 10	03	G 1/2	see table "Z"	60 (2.36)	60 (2.36)	35 (1.38)	25 (0.98)	15 (0.59)	45 (1.77)	7.5 (0.30)	19 (0.75)			7 (0.28)	55 (2.17)	
	04	G 3/4		60 (2.36)	70 (2.76)	40 (1.58)	30 (1.18)	15 (0.59)	55 (2.17)	7.5 (0.30)	20 (0.79)			9 (0.35)		
SIZE 12	04	G 3/4	see table "Z"	75 (2.95)	80 (3.15)	40 (1.58)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)	47.5 (1.87)	
	05	G 1		75 (2.95)	80 (3.15)	50 (1.97)	35 (1.38)	20 (0.79)	60 (2.36)	10 (0.39)	26.5 (1.04)			9 (0.35)		
SIZE 16																
SIZE 20																

Cartridge style

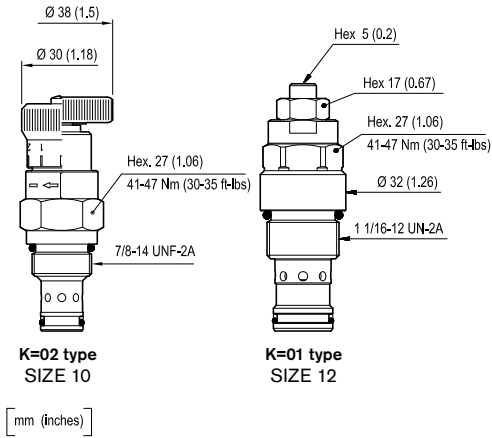


Table "K"

		K					
CARTRIDGE CODE	04	02	02	X	85	Z	VRFB-10A
	04	07	01	X	57	Z	VRFE-12A

Table "X"

X	ADJUSTMENTS	
40	Calibrated handknob (only for K=02)	
04	Handknob (only for K=02)	
03	Leakproof hex. socket screw (only for K=01)	

CARTRIDGE TECHNICAL DATA

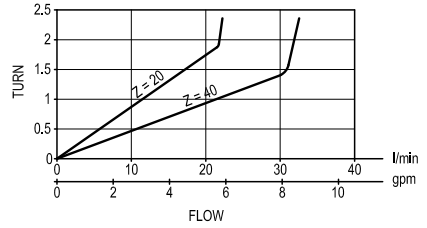
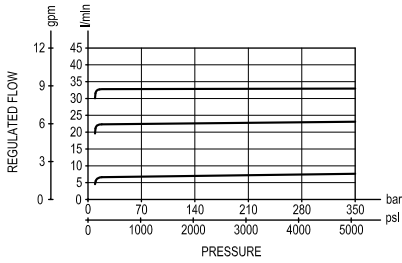
Common cavity: CA-10A-2N, CA-12A-2N
 For other details see data sheet RE 18321-16 and RE 18321-30

Table "Z"

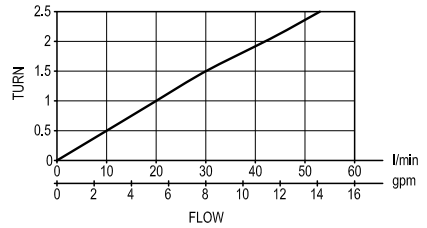
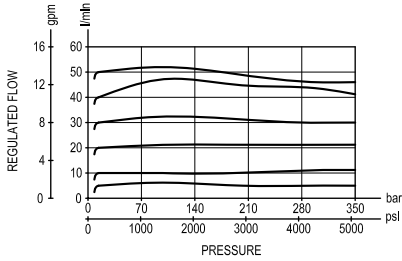
Z	REGULATED FLOW RANGE				
	SIZE 08	SIZE 10	SIZE 12	SIZE 16	SIZE 20
	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)
20		0.1-20 (0.03-5.28)			
40		0.2-30 (0.05-7.93)			
50			1-50 (0.26-13.2)		

Performance graphs

K = 02 type



K = 01 type



Ordering code

ON.05	K	X	Y	Z	W
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Manifold with flow control, 2-way pressure compensated fully adjustable

Cartridge style - Common cavity (see table K on page 2)

Cartridge style - Adjustments (see table X on page 2)

Manifold material

= **00** Aluminium manifold

= **S0** Steel manifold

Settings - Regulated flow range (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0502400320S0	R934000625
ON0502400340S0	R934000622
ON0501030450S0	R934003575
ON050204034000	R934003778

Type	Material number

Further types available by request

RE 18331-10/07.11
Replaces: RE 18331-10/12.10

Flow control, 3-way pressure compensated combination type partially adjustable

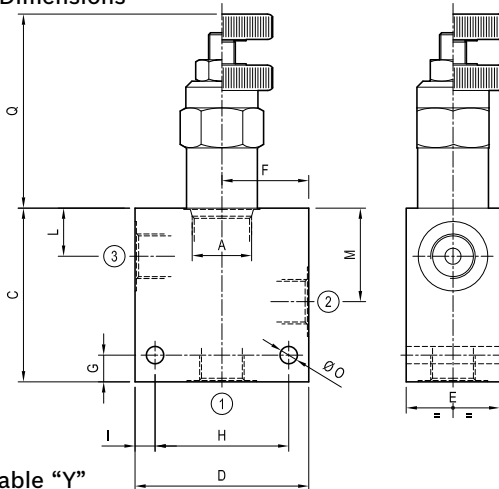
Common cavity

Cartridge style in manifold

VRFC-10A - C

ON.10 - K - X - Y - Z - W

Dimensions



Technical data

Flow: adjustable (see table "Z" and performance graph)

Max operating pressure for steel body: 350 bar (5000 psi)

Max operating pressure for aluminium body: 210 bar (3000 psi)

To order only manifold see data sheet RE 18325-85

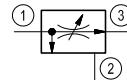


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	O	Q			
SIZE 08		1-2-3															
SIZE 10	09	G 1/4	see table "Z"	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.3)	18 (0.71)	35 (1.38)	6.5 (0.26)				
	02	G 3/8		65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.3)	18 (0.71)	35 (1.38)	6.5 (0.26)	73 (2.87)			
	03	G 1/2		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	50 (1.97)	10 (0.39)	18 (0.71)	35 (1.38)	6.5 (0.26)				
SIZE 12																	
SIZE 16																	
SIZE 20																	

Cartridge style

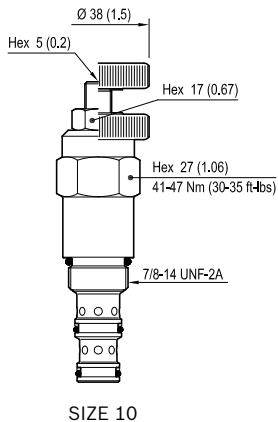


Table “K”

			K				
CARTRIDGE CODE	04	04	01	X	85	Z	VRFC-10A

Table “X”

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob	

[mm (inches)]

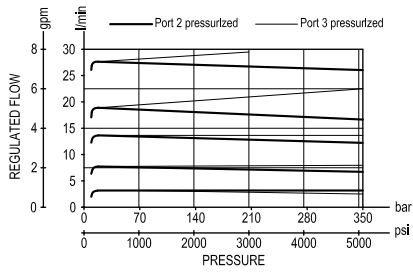
CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-3N
For other details see data sheet RE 18321-17

Table “Z”

Z	REGULATED FLOW RANGE				
	SIZE 08 l/min (gpm)	SIZE 10 l/min (gpm)	SIZE 12 l/min (gpm)	SIZE 16 l/min (gpm)	SIZE 20 l/min (gpm)
02		1.5-2.5 (0.4-0.66)			
04		3-4.2 (0.79-1.11)			
06		4-5.8 (1.06-1.53)			
08		5.5-7.8 (1.45-2.06)			
09		6.5-9.5 (1.72-2.51)			
11		7.5-11 (1.98-2.91)			
14		9.5-14 (2.51-3.70)			
20		13-20 (3.44-5.28)			
26		19-26 (5.02-6.87)			

Performance graphs



Ordering code

ON.10	K	X	Y	Z	W
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Manifold with flow control,
3-way pressure compensated
combination type
partially adjustable

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Regulated flow range
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON1001030204S0	R934004139
ON1001030211S0	R934004140
ON1001030226S0	R934004095
ON100103031100	R934004299
ON100103032000	R934004300

Type	Material number

Further types available by request

Flow control, 3-way pressure compensated combination type fully adjustable

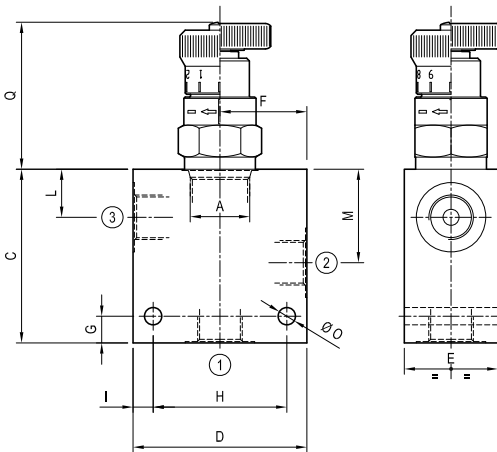
Common cavity

Cartridge style in manifold

VRFD-10A / VRFD-12A - C

ON.06 - K - X - Y - Z - W

Dimensions



Technical data

Flow: adjustable (see table "Z" and performance graph)

Max operating pressure
for **steel** body: 350 bar (5000 psi)

Max operating pressure
for **aluminium** body: 210 bar (3000 psi)

To order only manifold see data sheet RE 18325-85

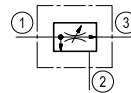
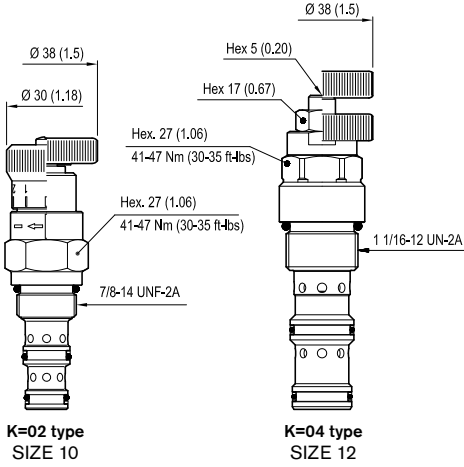


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
				C	D	E	F	G	H	I	L	M	O	Q		
SIZE 08		1 - 2 - 3														
SIZE 10	09	G 1/4	see table "Z"	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.3)	18 (0.71)	35 (1.38)	6.5 (0.26)	55 (2.17)		
	02	G 3/8		65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.3)	18 (0.71)	35 (1.38)	6.5 (0.26)			
SIZE 12	03	G 1/2	see table "Z"	100 (3.94)	80 (3.15)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	12.5 (0.49)	29 (1.14)	54 (2.13)	7 (0.28)	56.5 (2.22)		
	04	G 3/4		100 (3.94)	80 (3.15)	40 (1.58)	40 (1.58)	15 (0.59)	55 (2.17)	12.5 (0.49)	29 (1.14)	54 (2.13)	7 (0.28)			
SIZE 16																
SIZE 20																

Cartridge style



mm (inches)

Table "K"

CARTRIDGE CODE	K					
	04	04	02	X	85	Z
04	04	04	X	57	Z	VRFD-12A

Table "X"

X	ADJUSTMENTS	
40	Calibrated handknob (only for K=02)	
04	Handknob	
03	Leakproof hex. socket screw (only for K=04)	

CARTRIDGE TECHNICAL DATA

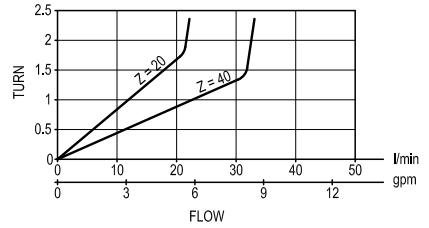
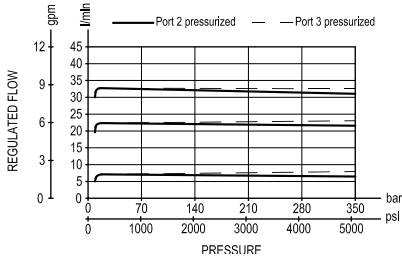
Common cavity: CA-10A-3N, CA-12A-3N
For other details see data sheet RE 18321-20
and RE 18321-21

Table "Z"

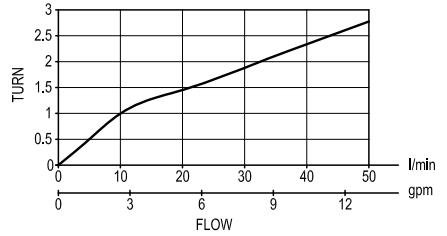
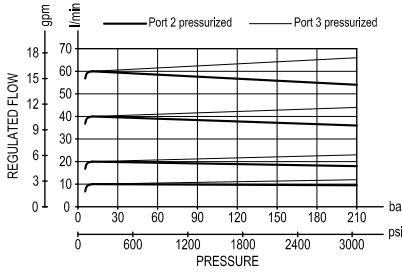
Z	REGULATED FLOW RANGE				
	SIZE 08 l/min (gpm)	SIZE 10 l/min (gpm)	SIZE 12 l/min (gpm)	SIZE 16 l/min (gpm)	SIZE 20 l/min (gpm)
20		0.1-20 (0.03-5.28)			
40		0.2-30 (0.05-7.93)			
50			2-50 (0.6-13.2)		

Performance graphs

SIZE 10



SIZE 12



Ordering code

ON.06	K	X	Y	Z	W
-------	---	---	---	---	---

**Manifold with flow control,
3-way pressure compensated
combination type fully adjustable**

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Regulated flow range
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0602040220S0	R934001276
ON0602040240S0	R934001277
ON0604040450S0	R934003540
ON060204022000	R934003779

Type	Material number

Further types available by request

Flow divider

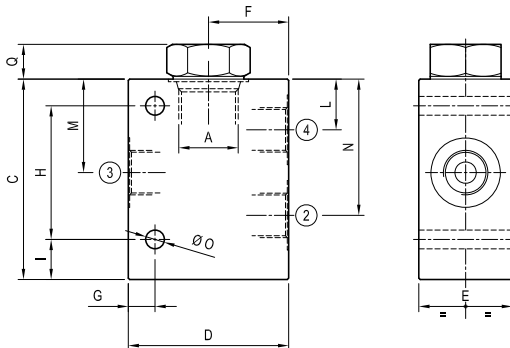
Common cavity

Cartridge style in manifold

DSDN-C

ON.07 - K - 00 - Y - Z - W

Dimensions



Technical data

Range of rated total flow: see table "Z"

Max operating pressure
for **steel** body: 350 bar (5000 psi)

Max operating pressure
for **aluminium** body: 210 bar (3000 psi)

To order only manifold see data sheet RE 18325-85

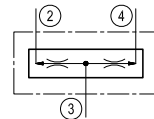


Table "Y"

Cavity	Y	PORT SIZE	Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q		
SIZE 08		2 - 3 - 4															
SIZE 10	02	G 3/8	see table "Z"	75 (2.95)	70 (2.95)	35 (1.38)	35 (1.38)	10 (0.39)	50 (1.97)	15 (0.59)	19 (0.75)	35 (1.38)	51 (2.01)	7 (0.28)	14 (0.55)		
	03	G 1/2		75 (2.95)	70 (2.95)	35 (1.38)	35 (1.38)	10 (0.39)	50 (1.97)	15 (0.59)	19 (0.75)	35 (1.38)	51 (2.01)	7 (0.28)			
SIZE 12																	
SIZE 16	04	G 3/4	see table "Z"	120 (4.72)	90 (3.54)	50 (1.97)	45 (1.77)	15 (0.59)	80 (3.15)	20 (0.79)	26 (1.02)	54.5 (2.15)	83 (3.27)	9 (0.35)	15 (0.59)		
	05	G 1		120 (4.72)	100 (3.94)	50 (1.97)	50 (1.97)	15 (0.59)	80 (3.15)	20 (0.79)	26 (1.02)	54.5 (2.15)	83 (3.27)	9 (0.35)			
SIZE 20																	

Cartridge style

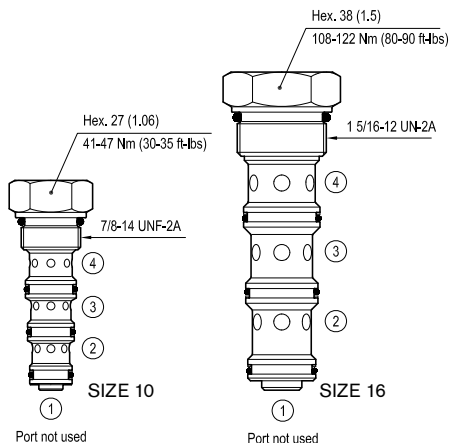


Table “K”

		K					
CARTRIDGE CODE	04	05	04	00	85	Z	DSDN-10A
	04	05	03	00	27	Z	DSDN-16A

CARTRIDGE TECHNICAL DATA

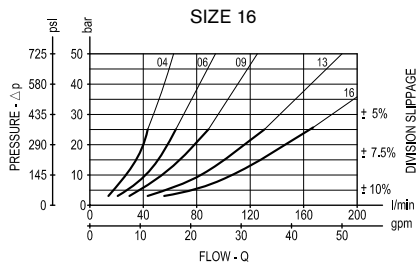
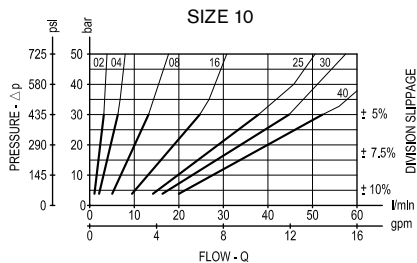
Common cavity: **CA-10A-4N / CA-16A-4N**
 For other details see data sheet RE 18321-22 and RE18321-23

[mm (inches)]

Table “Z”

Z	RANGE OF RATED TOTAL FLOW				
	SIZE 08	SIZE 10	SIZE 12	SIZE 16	SIZE 20
	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)
02		1-3 (0.26-0.79)			
04		2-6 (0.53-1.59)		15-44 (3.96-11.63)	
06				22-66 (5.81-17.44)	
08		5-13 (1.32-3.44)			
09				30-88 (7.93-23.25)	
13				44-132 (11.63-34.88)	
16		9-24 (2.38-6.34)		55-165 (14.53-43.59)	
25		14-37 (3.70-9.78)			
30		16-44 (4.23-11.63)			
40		20-54 (5.28-14.27)			

Performance graphs



Ordering code

ON.07	K	00	Y	Z	W
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Manifold with flow divider

Cartridge style - Common cavity
(see table K on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Range of rated total flow
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0704000204S0	R934001260
ON0704000216S0	R934001261
ON0704000330S0	R934001262
ON0703000406S0	R934001263
ON0703000413S0	R934001264
ON0703000516S0	R934001265
ON070400020400	R934001111

Type	Material number

Further types available by request

Flow divider and combiner

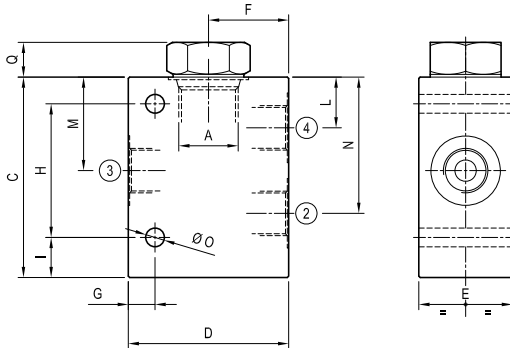
Common cavity

Cartridge style in manifold

DRFN-C

ON.08 - K - 00 - Y - Z - W

Dimensions



Technical data

Range of rated total flow: see table "Z"		
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

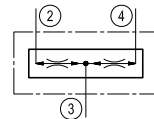


Table "Y"

Cavity	Y	PORT SIZE	Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08		2 - 3 - 4															
SIZE 10	02	G 3/8	see table "Z"	75 (2.95)	70 (2.76)	35 (1.38)	30 (1.18)	10 (0.39)	50 (1.97)	15 (0.59)	19 (0.75)	35 (1.38)	51 (2.01)	7 (0.28)	14 (0.55)		
	03	G 1/2		75 (2.95)	70 (2.76)	35 (1.38)	30 (1.18)	10 (0.39)	50 (1.97)	15 (0.59)	19 (0.75)	35 (1.38)	51 (2.01)	7 (0.28)			
SIZE 12																	
SIZE 16	04	G 3/4	see table "Z"	120 (4.72)	90 (3.54)	50 (1.97)	45 (1.77)	15 (0.59)	80 (3.15)	20 (0.79)	26 (1.02)	54.5 (2.15)	83 (3.27)	9 (0.35)	15 (0.59)		
	05	G 1		120 (4.72)	100 (3.94)	50 (1.97)	50 (1.97)	15 (0.59)	80 (3.15)	20 (0.79)	26 (1.02)	54.5 (2.15)	83 (3.27)	9 (0.35)			
SIZE 20																	

Cartridge style

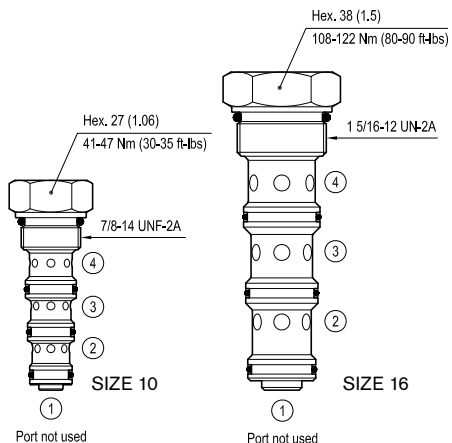


Table “K”

		K					
CARTRIDGE CODE	04	05	01	00	85	Z	DRFN-10A
	04	05	02	00	27	Z	DRFN-16A

CARTRIDGE TECHNICAL DATA

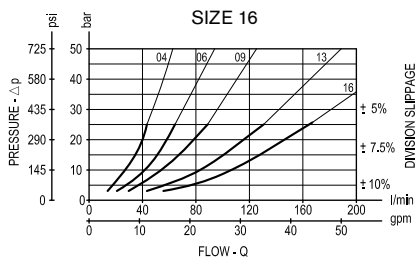
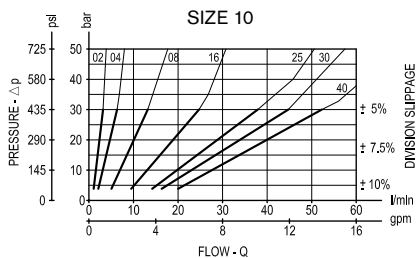
Common cavity: **CA-10A-4N / CA-16A-4N**
 For other details see data sheet RE 18321-24 and RE 18321-25

[mm (inches)]

Table “Z”

Z	RANGE OF RATED TOTAL FLOW				
	SIZE 08	SIZE 10	SIZE 12	SIZE 16	SIZE 20
	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)	l/min (gpm)
02		1-3 (0.26-0.79)			
04		2-6 (0.53-1.59)		15-44 (3.96-11.63)	
06				22-66 (5.81-17.44)	
08		5-13 (1.32-3.44)			
09				30-80 (7.93-21.14)	
13				44-132 (11.63-34.88)	
16		9-24 (2.38-6.34)		55-165 (14.53-43.59)	
25		14-37 (3.70-9.78)			
30		16-44 (4.23-11.63)			
40		20-54 (5.28-14.27)			
50		25-60 (6.61-15.85)			

Performance graphs



Ordering code

ON.08	K	00	Y	Z	W
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Manifold with flow divider and combiner

Cartridge style - Common cavity (see table K on page 2)

Manifold material

= 00	Aluminium manifold
= S0	Steel manifold

Settings - Range of rated total flow (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
ON0801000204S0	R934001267
ON0801000216S0	R934001268
ON0801000330S0	R934001269
ON0802000406S0	R934001271
ON0802000413S0	R934001272
ON0802000516S0	R934001273

Type	Material number

Further types available by request

Logic element, flow and pressure control, with internal pilot

Common cavity

Cartridge style in manifold

VLSP-C

OU.09 - K - X - Y - Z - W

Dimensions

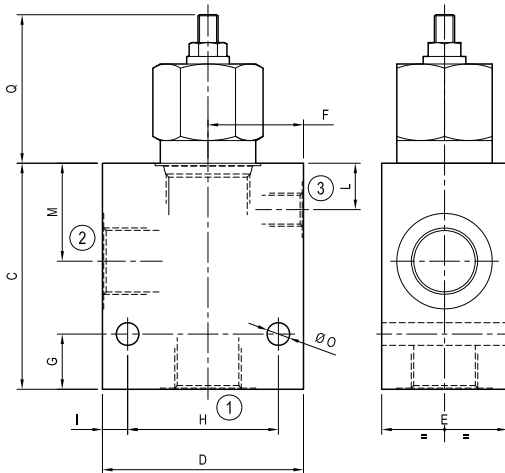
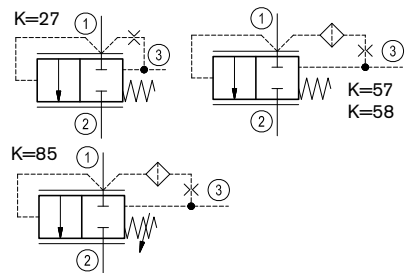


Table "Y"

Technical data

Max flow:	up to 360 l/min	(43 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85



Cavity	Y	PORT SIZE		Max Flow l/min (gpm)	DIMENSIONS mm (Inches)												
		1 - 2	3		C	D	E	F	G	H	I	L	M	N	O	Q	R
SIZE 08																	
SIZE 10	02	G 3/8	G 1/4	60 (16)	70 (2,76)	60 (2,36)	35 (1,38)	30 (1,18)	15 (0,59)	45 (1,77)	7,5 (0,30)	15 (0,59)	32 (1,26)	7 (0,28)			37 (1,46)
	03	G 1/2	G 1/4		70 (2,76)	70 (2,76)	35 (1,38)	32 (1,26)	15 (0,59)	55 (2,17)	7,5 (0,30)	15 (0,59)	32 (1,26)	7 (0,28)			
SIZE 12	03	G 1/2	G 1/4	120 (32)	80 (3,15)	75 (2,95)	40 (1,58)	35 (1,38)	15 (0,59)	55 (2,17)	10 (0,39)	24 (0,95)	42 (1,65)	9 (0,35)			20 (0,79)
	04	G 3/4	G 1/4		90 (3,54)	75 (2,95)	40 (1,58)	35 (1,38)	15 (0,59)	55 (2,17)	10 (0,39)	24 (0,95)	42 (1,65)	9 (0,35)			
SIZE 16	04	G 3/4	G 1/4	200 (53)	90 (3,54)	80 (3,15)	50 (1,97)	38 (1,50)	22 (0,87)	60 (2,36)	10 (0,39)	18,5 (0,73)	39 (1,54)	9 (0,35)			59 (2,32)
	05	G 1	G 1/4		90 (3,54)	90 (3,54)	50 (1,97)	40 (1,58)	22 (0,87)	70 (2,76)	10 (0,39)	18,5 (0,73)	39 (1,54)	9 (0,35)			
SIZE 20	05	G 1	G 1/4	360 (95)	110 (4,33)	100 (3,94)	60 (2,36)	45 (1,77)	25 (0,98)	75 (2,95)	12,5 (0,49)	21 (0,83)	51 (2,01)	11 (0,43)			31 (1,22)
	06	G 1 1/4	G 1/4		110 (4,33)	100 (3,94)	60 (2,36)	45 (1,77)	25 (0,98)	75 (2,95)	12,5 (0,49)	21 (0,83)	51 (2,01)	11 (0,43)			

Cartridge style

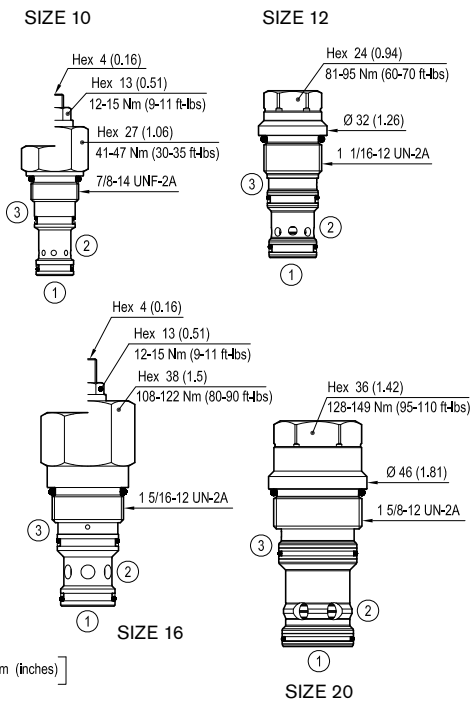


Table "K"

					K		
CARTRIDGE CODE	04	84	03	X	85	Z	VLSP-10A
	04	84	03	X	57	Z	VLSP-12A
	04	84	03	X	27	Z	VLSP-16A
	04	84	03	X	58	Z	VLSP-20A

Table "X"

X	ADJUSTMENTS	
00	Fixed setting	
03	Leakproof hex. socket screw (only for K=85 and K=27)	

CARTRIDGE TECHNICAL DATA

Int. leakage ave.:
 200 bar (2900 psi) - 200 cm³/min (12 in³/min)
 for K=27 and K=58 type

Int. leakage ave.:
 200 bar (2900 psi) - 50 cm³/min (3 in³/min)
 for K=85 type

Int. leakage ave.:
 200 bar (2900 psi) - 350 cm³/min (21 in³/min)
 for K=57 type

Common cavity: **CA-10A-3C / CA-12A-3C / CA-16A-3C / CA-20A-3C.**

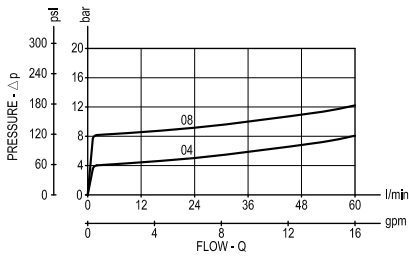
For other details see data sheets RE 18321-64, RE 18321-65, RE 18321-66 and RE 18321-67.

Table "Z"

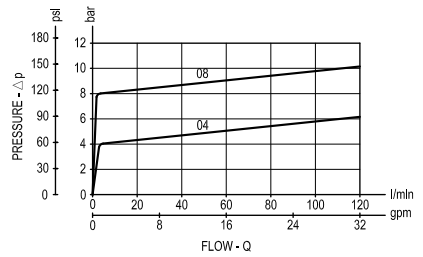
Z		SPRINGS												
		SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20
		Bias spring bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Bias spring bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Bias spring bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	Bias spring bar(psi)	Pres. increase bar/turn (psi/turn)	Std. setting 5 l/min bar (psi)	
X=00	04			4 ± 20% (60 ± 20%)			4 ± 20% (60 ± 20%)			4 ± 20% (60 ± 20%)				
	05										5,5 (80)			
	08			8 ± 15% (115 ± 15%)			8 ± 15% (115 ± 15%)			8 ± 15% (115 ± 15%)				
	11						11 ± 15% (160 ± 15%)						11 (160)	
	12									12 ± 10% (175 ± 10%)				
X=03	00			2-8 (30-115)	1 (15)	4 (60)				4-12 (60-175)	1,5 (22)	4 (60)		

Performance graphs

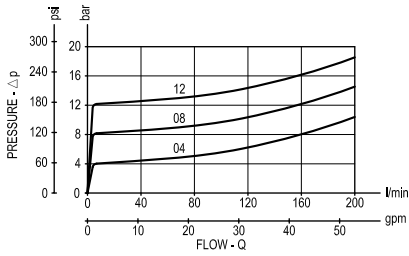
SIZE 10



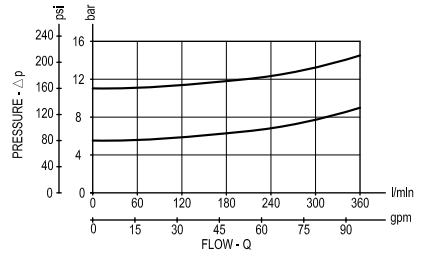
SIZE 12



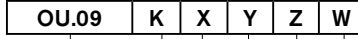
SIZE 16



SIZE 20



Ordering code



Logic element, flow and pressure control, with internal pilot.

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU0985030300S0	R934000948

Type	Material number

Further types available by request

Logic element, pressure compensator, with static load sense

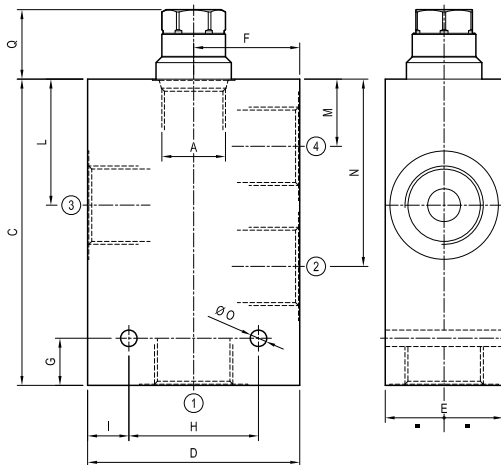
Common cavity

Cartridge style in manifold

VRLA-S-C

OU.06 - K - 00 - Y - Z - W

Dimensions



Technical data

Max inlet flow:	up to 230 l/min	(60 gpm)
Max priority flow:	up to 170 l/min	(45 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

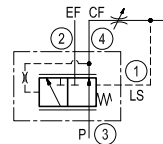


Table "Y"

Cavity	Y	PORT SIZE	Inlet Flow l/min (gpm)	Priority Flow l/min (gpm)	DIMENSIONS mm (Inches)													
					C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08		1 - 2 - 3 - 4																
SIZE 09	02	G 1/4	45 (12)	40 (11)	80 (3.15)	65 (2.56)	35 (1.38)	32,5 (1.28)	10 (0.39)	50 (1.97)	7,5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	6,5 (0.26)	36,5 (1,44)		
					80 (3.15)	65 (2.56)	35 (1.38)	32,5 (1.28)	10 (0.39)	50 (1.97)	7,5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	6,5 (0.26)			
SIZE 12	05	G 1	100 (26)	80 (21)	125 (4.92)	80 (3.15)	40 (1.58)	40 (1.58)	20 (0.79)	55 (2.17)	12,5 (0.49)	53,5 (2.11)	28,5 (1.12)	79,5 (3.13)	7 (0.28)	29 (1.14)		
					130 (5.12)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	55 (2.17)	17,5 (0.69)	53,5 (2.11)	28,5 (1.12)	79,5 (3.13)	7 (0.28)			
SIZE 16	05	G 1	160 (42)	140 (37)	130 (5.12)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	60 (2.36)	15 (0.59)	54,5 (2.15)	26 (1.02)	83 (3.27)	10,5 (0.41)	31,5 (1.24)		
					130 (5.12)	100 (3.94)	50 (1.97)	50 (1.97)	20 (0.79)	60 (2.36)	20 (0.79)	54,5 (2.15)	26 (1.02)	83 (3.27)	10,5 (0.41)			
SIZE 20	06	G1 1/4	230 (60)	170 (45)	175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)	50 (1.97)		
					175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)			

Cartridge style

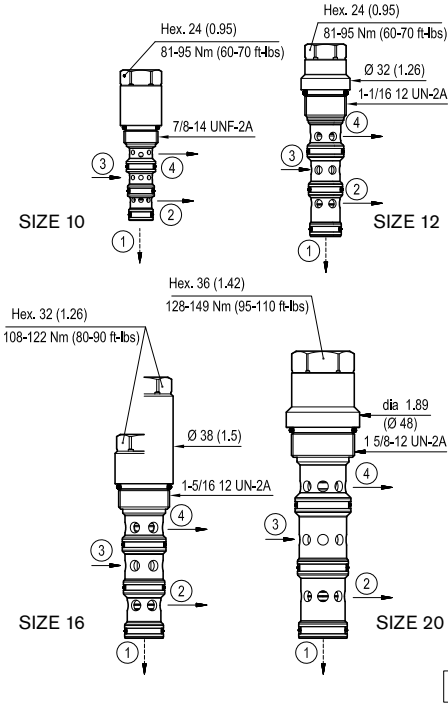


Table "K"

					K		
CARTRIDGE CODE	04	84	09	00	85	Z	VRLA-10A-S
	04	84	09	00	57	Z	VRLA-12A-S
	04	84	09	00	27	Z	VRLA-16A-S
	04	84	09	00	58	Z	VRLA-20A-S

CARTRIDGE TECHNICAL DATA

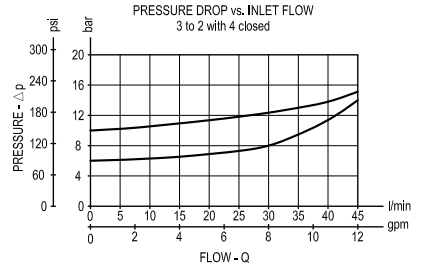
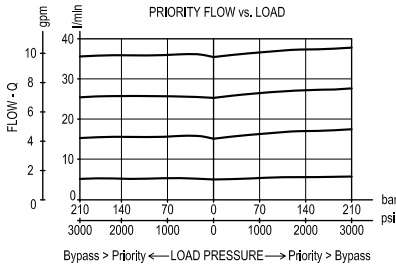
Common cavity: **CA-10A-4N / CA-12A-4N / CA-16A-4N / CA-20A-4N**
 For other details see data sheet RE 18321-86, RE 18321-87, RE 18321-88 and RE 18321-89

Table "Z"

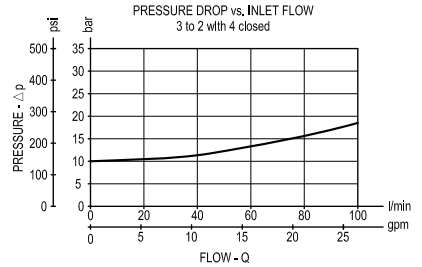
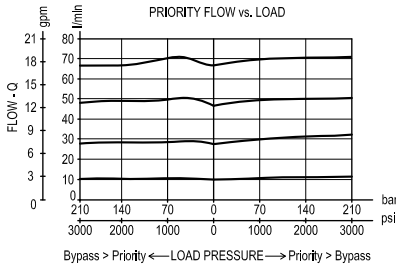
Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Bias spring bar(psi)			Bias spring bar(psi)			Bias spring bar(psi)			Bias spring bar(psi)			Bias spring bar(psi)		
05				5,5±20% (80)±20%						5,5±20% (80)±20%					
10				10±15% (145)±15%			10±15% (145)±15%								
11										11±15% (160)±15%					
12													12±15% (175)±15%		
22										22±15% (320)±15%					

Performance graphs

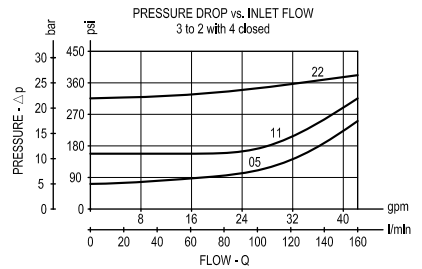
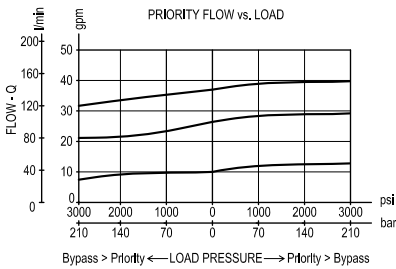
SIZE 10



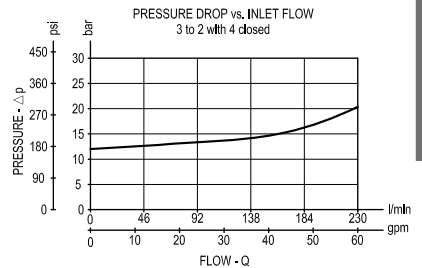
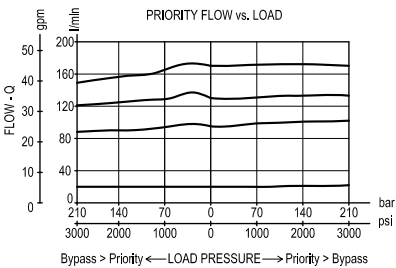
SIZE 12



SIZE 16



SIZE 20



Ordering code

OU.06	K	00	Y	Z	W
-------	---	----	---	---	---

Manifold with logic element, pressure compensator, with static load sense

Cartridge style - Common cavity (see table K on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs

(see table Z on page 2)

Manifold style - Dimensions and port sizes

(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU065700041000	R934001471
OU062700051100	R934001473
OU065800051200	R934001474
OU068500021000	R934003573

Type	Material number

Further types available by request

Logic element, pressure compensator, with dynamic load sense

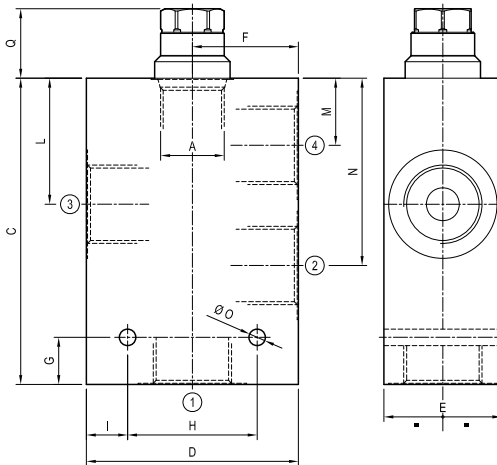
Common cavity

Cartridge style in manifold

VRLA-D-C

OU.05 - K - X - Y - Z - W

Dimensions



Technical data

Max inlet flow:	up to 230 l/min	(60 gpm)
Max priority flow:	up to 170 l/min	(45 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

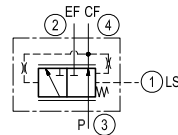


Table "Y"

Cavity	Y	PORT SIZE	Inlet Flow l/min (gpm)	Priority Flow l/min (gpm)	DIMENSIONS mm (Inches)												
					C	D	E	F	G	H	I	L	M	N	O	Q	R
SIZE 08		1 - 2 - 3 - 4															
SIZE 09	09	G 1/4	45 (12)	40 (11)	80 (3.15)	65 (2.56)	35 (1.38)	32,5 (1.28)	10 (0.39)	50 (1.97)	7,5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	6,5 (0.26)	36,5 (1,44)	
					80 (3.15)	65 (2.56)	35 (1.38)	32,5 (1.28)	10 (0.39)	50 (1.97)	7,5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	6,5 (0.26)		
SIZE 10	02	G 3/8	100 (26)	80 (21)	125 (4.92)	80 (3.15)	40 (1.58)	40 (1.58)	20 (0.79)	55 (2.17)	12,5 (0.49)	53,5 (2.11)	28,5 (1.12)	79,5 (3.13)	7 (0.28)	30 (1.18)	
					130 (5.12)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	55 (2.17)	17,5 (0.69)	53,5 (2.11)	28,5 (1.12)	79,5 (3.13)	7 (0.28)		
SIZE 12	04	G 3/4	160 (42)	140 (37)	130 (5.12)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	60 (2.36)	15 (0.59)	54,5 (2.15)	26 (1.02)	83 (3.27)	10,5 (0.41)	up to 70 (2.76)	
					130 (5.12)	100 (3.94)	50 (1.97)	50 (1.97)	20 (0.79)	60 (2.36)	20 (0.79)	54,5 (2.15)	26 (1.02)	83 (3.27)	10,5 (0.41)		
SIZE 16	05	G 1	230 (60)	170 (45)	175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)	50 (1.97)	
					175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)		
SIZE 20	06	G1 1/4			175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)		
					175 (6.89)	120 (4.72)	60 (2.36)	60 (2.36)	18 (0.71)	75 (2.95)	22,5 (0.89)	72,5 (2.85)	32 (1.26)	114,5 (4.51)	11 (0.43)		

Cartridge style

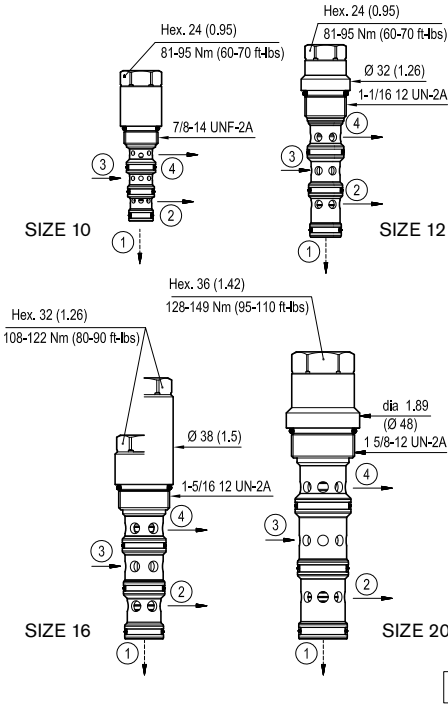


Table “K”

CARTRIDGE CODE	K					
	04	84	10	X	85	Z
04	84	10	X	85	Z	VRLA-10A-D
04	84	10	X	57	Z	VRLA-12A-D
04	84	10	X	27	Z	VRLA-16A-D
04	84	10	X	58	Z	VRLA-20A-D

X	LS Orifice Diameter mm (inches)
05	0.5 (0.02)
06	0.6 (0.02) only for SIZE 10 and 16
07	0.7 (0.03) only for SIZE 12
08	0.8 (0.03) only for SIZE 10, 16 and 20
09	0.9 (0.04) only for SIZE 10
10	1 (0.04) only for SIZE 12, 16 and 20

CARTRIDGE TECHNICAL DATA	
Common cavity: CA-10A-4N / CA-12A-4N / CA-16A-4N / CA-20A-4N	
For other details see data sheet RE 18321-90, RE 18321-83, RE 18321-84 and RE 18321-85	

[mm (inches)]

Table “Z”

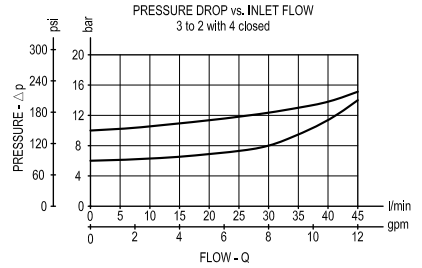
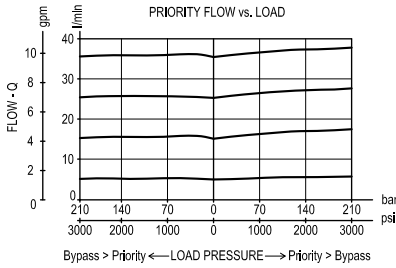
Z	SPRINGS											
	SIZE 08		SIZE 10		SIZE 12		SIZE 16		SIZE 20			
	Bias spring bar(psi)		Bias spring bar(psi)		Bias spring bar(psi)		Bias spring bar(psi)		Bias spring bar(psi)		Bias spring bar(psi)	
05			*5,5±20% (80)±20%				5,5±20% (80)±20%					
10			**10±15% (145)±15%		10±15% (145)±15%							
11							11±15% (160)±15%					
12											12±15% (175)±15%	
22							22±15% (320)±15%					

* only for X=06 and X=09 versions

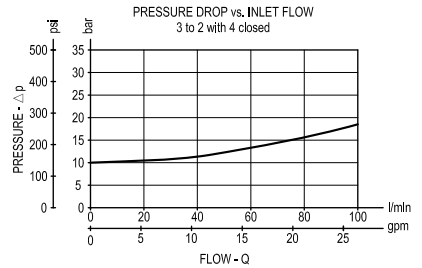
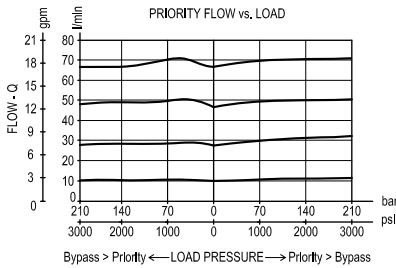
** only for X=05 and X=08 versions

Performance graphs

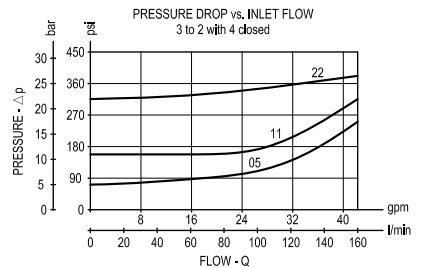
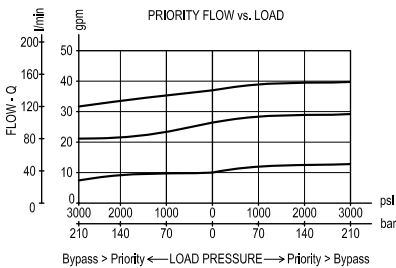
SIZE 10



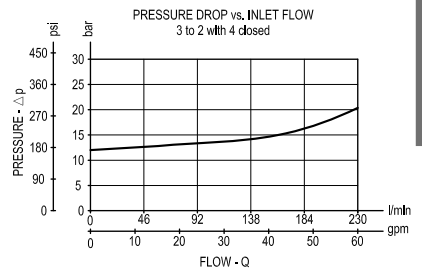
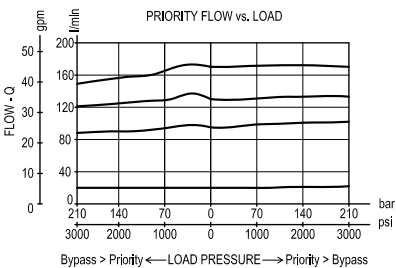
SIZE 12



SIZE 16



SIZE 20



Ordering code

OU.05	K	X	Y	Z	W
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Manifold with logic element, pressure compensator, with dynamic load sense

Cartridge style - Common cavity
(see table K on page 2)

Cartridge style - LS Orifice Diameter
(see table X on page 2)

Manifold material

= **00** Aluminium manifold

= **S0** Steel manifold

Settings - Springs
(see table Z on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU055707041000	R934003338
OU052708051100	R934001469
OU055808051200	R934000926
OU058508021000	R934003574
OU0557070410S0	R934003633

Type	Material number

Further types available by request

Directional spool type, direct acting external pilot, external vent

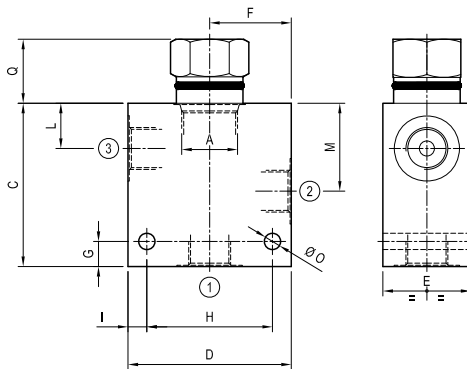
Common cavity

Cartridge style in manifold

VDS-D-C

OU.07 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 160 l/min	(43 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

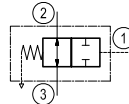
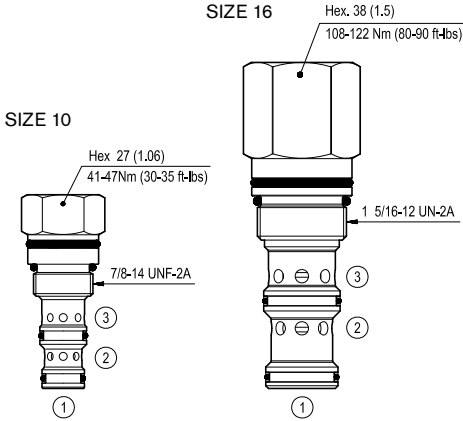


Table "Y"

Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08		1 - 2 - 3															
SIZE 10	02	G 3/8	50 (13)	65 (2.56)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	18 (0.71)	35 (1.38)		6.5 (0.26)		25.5 (1)	
	03	G 1/2		70 (2.76)	70 (2.76)	35 (1.38)	35 (1.38)	15 (0.59)	50 (1.97)	10 (0.39)	18 (0.71)	35 (1.38)		6.5 (0.26)			
SIZE 12																	
SIZE 16	04	G 3/4	160 (4)	100 (3.94)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	60 (2.36)	15 (0.59)	26 (1.02)	54.5 (2.15)		10.5 (0.41)		49.5 (1.95)	
	05	G 1		105 (4.13)	100 (3.94)	50 (1.97)	50 (1.97)	20 (0.79)	60 (2.36)	20 (0.79)	26 (1.02)	54.5 (2.15)		10.5 (0.41)			
SIZE 20																	

Cartridge style



[mm (inches)]

Table “K”

					K		
CARTRIDGE CODE	04	77	22	X	85	Z	VDSD-10A
	04	77	22	X	27	Z	VDSD-16A

Table “X”

X	O-Ring on pilot piston	
00	No O-Ring	
10	With O-Ring	

CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-3N / CA-16A-3N

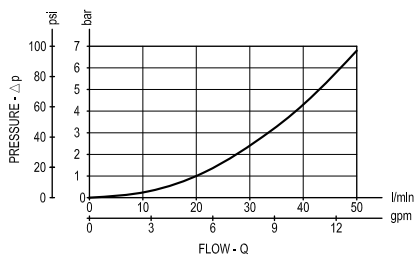
For other details see data sheet RE 18320-79 and RE 18320-80

Table “Z”

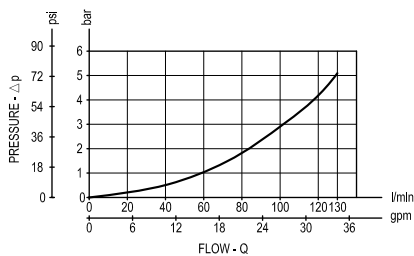
Z	SPRINGS											
	SIZE 08		SIZE 10			SIZE 12		SIZE 16			SIZE 20	
	Setting pressure bar(psi)		Setting pressure bar(psi)			Setting pressure bar(psi)		Setting pressure bar(psi)			Setting pressure bar(psi)	
05			5.5 ±20% (80 ±20%)					5 ±20% (73 ±20%)				
11			11.5 ±10% (167 ±10%)					11 ±10% (160 ±10%)				

Performance graphs

SIZE 10



SIZE 16



Ordering code

OU.07	K	X	Y	Z	W
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Manifold with directional spool type, direct acting external pilot, external vent.

Cartridge style - Common cavity (see table K on page 2)

Cartridge style - O-Ring on pilot piston (see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU0727000505S0	R934003578
OU0785000205S0	R934003339

Type	Material number

Further types available by request

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The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

Subject to change.

Directional spool type, direct acting external pilot, internal vent

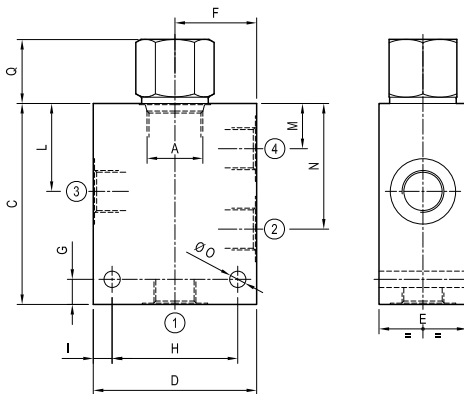
Common cavity

Cartridge style in manifold

VDSH-C

OU.08 - K - X - Y - Z - W

Dimensions



Technical data

Max flow:	up to 160 l/min	(43 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

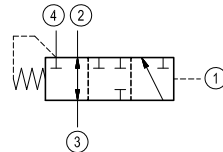
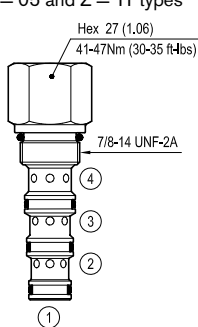


Table "Y"

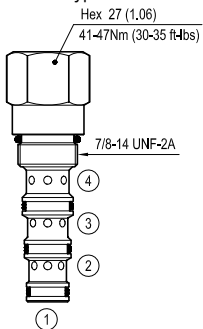
Cavity	Y	PORT SIZE	Max Flow l/min (gpm)	DIMENSIONS mm (Inches)													
				C	D	E	F	G	H	I	L	M	N	O	Q	R	
SIZE 08		1 - 2 - 3 - 4															
SIZE 10	09	G 1/4	40 (11)	80 (3.15)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	7.5 (0.30)	31 (1.22) max.		
	02	G 3/8		80 (3.15)	65 (2.56)	35 (1.38)	32.5 (1.28)	10 (0.39)	50 (1.97)	7.5 (0.30)	35 (1.38)	18 (0.71)	50 (1.97)	7.5 (0.30)			
SIZE 12																	
SIZE 16	04	G 3/4	160 (43)	130 (5.12)	90 (3.54)	50 (1.97)	45 (1.77)	20 (0.79)	60 (2.36)	15 (0.59)	54.5 (2.15)	26 (1.02)	83 (3.27)	10.5 (0.41)	50 (1.97)		
	05	G 1		130 (5.12)	100 (3.94)	50 (1.97)	50 (1.97)	20 (0.79)	60 (2.36)	20 (0.79)	54.5 (2.15)	26 (1.02)	83 (3.27)	10.5 (0.41)			
SIZE 20																	

Cartridge style

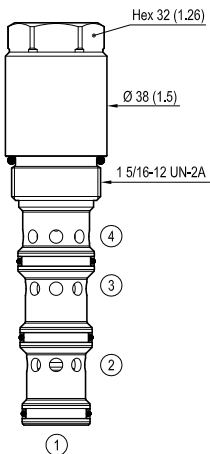
SIZE 10
Z = 05 and Z = 11 types



SIZE 10
Z = 35 type



SIZE 16



(mm) Inches

Table "K"

					K		
CARTRIDGE CODE	04	77	25	X	85	Z	VDSH-10A
	04	77	25	X	27	Z	VDSH-16A

Table "X"

X	Adjustments	
00	Fixed setting	

CARTRIDGE TECHNICAL DATA

Common cavity: CA-10A-4N / CA-16A-4N

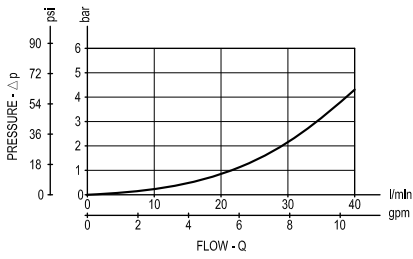
For other details see data sheet RE 18320-75 and RE 18320-85

Table "Z"

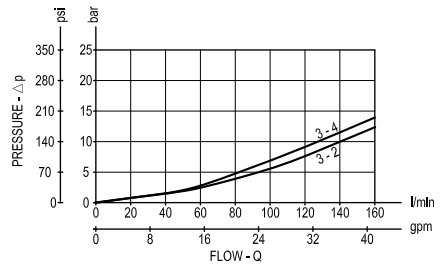
Z	SPRINGS														
	SIZE 08			SIZE 10			SIZE 12			SIZE 16			SIZE 20		
	Setting pressure bar(ksi)			Setting pressure bar(ksi)			Setting pressure bar(ksi)			Setting pressure bar(ksi)			Setting pressure bar(ksi)		
05				5.5 ±20% (80 ±20%)						5 ±20% (73 ±20%)					
11				11.5 ±10% (167 ±10%)						11 ±10% (160 ±10%)					
35				35 ±10% (508 ±10%)											

Performance graphs

SIZE 10



SIZE 16



Ordering code

OU.08	K	X	Y	Z	W
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Manifold with directional spool type, direct acting external pilot, internal vent.

Cartridge style - Common cavity (see table K on page 2)

Cartridge style - O-Ring on pilot piston (see table X on page 2)

Manifold material

= 00 Aluminium manifold

= S0 Steel manifold

Settings - Springs (see table Z on page 2)

Manifold style - Dimensions and port sizes (see table Y on page 1)

Preferred types (readily available)

Type	Material number
OU0827000505S0	R934003579
OU088500020500	R934000385

Type	Material number

Further types available by request

Relief, direct acting guided poppet type

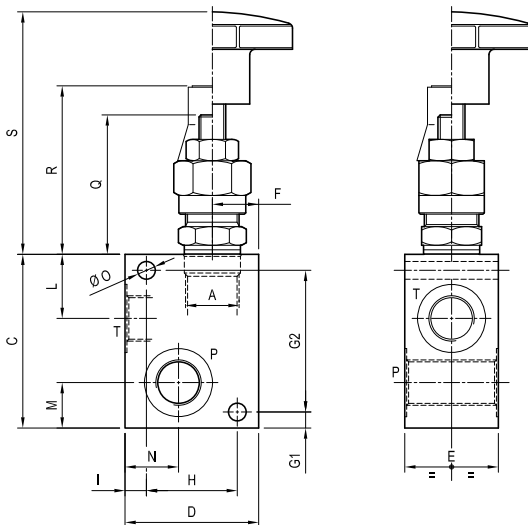
Special cavity

Cartridge style in manifold

VSC-30

05.13.01 - X - Y - Z

Dimensions



Technical data

Max flow: up to 30 l/min (8 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

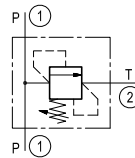
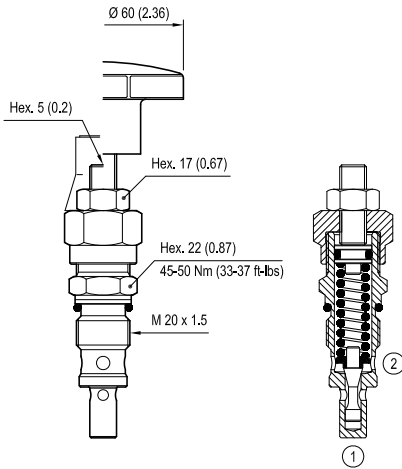


Table "Y"

Special Cavity	Y	PORT SIZE	DIMENSIONS mm (Inches)														
			P - T	C	D	E	F	G1	G2	H	I	L	M	N	O	Q	R
008	09	G 1/4	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	22 (0.87)	6.5 (0.26)	51 (2.01)	61 (2.40)	89 (3.50)
	02	G 3/8	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	20 (0.79)	6.5 (0.26)	51 (2.01)	61 (2.40)	89 (3.50)
	03	G 1/2	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	18 (0.71)	6.5 (0.26)	51 (2.01)	61 (2.40)	89 (3.50)

Cartridge style



Cartridge code: 04.11.18 - X - 99 - Z

[mm (inches)]

Table "X"

X			ADJUSTMENTS	
03	Leakproof hex. socket screw			

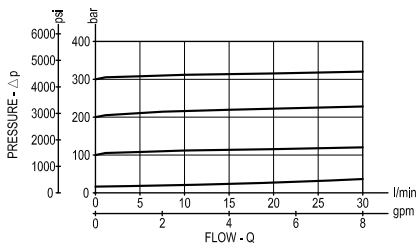
OPTIONS		
Ordering code	Description	
11.04.23.003		Tamper resistant cap

CARTRIDGE TECHNICAL DATA	
Special cavity: 008	
For other details see data sheet RE 18318-23	

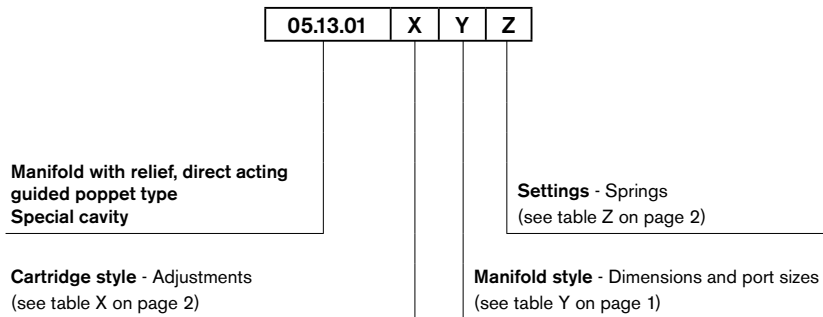
Table "Z"

Z	SPRINGS			
	Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min	
05	5-50 (75-725)	12 (174)	50 (725)	
10	30-100 (435-1450)	24 (348)	100 (1450)	
20	50-210 (725-3000)	47 (682)	200 (2900)	
35	100-350 (1450-5000)	82 (1189)	350 (5000)	

Performance graph



Ordering code



Preferred types (readily available)

Type	Material number	Type	Material number
051301030905000	R930001280	051301040235000	R930001290
051301030910000	R930001281	051301040305000	R930001291
051301030920000	R930001282	051301040320000	R930001292
051301030935000	R930001283	051301040335000	R930001293
051301030205000	R930001263		
051301030210000	R930001264		
051301030220000	R930001266		
051301030235000	R930001269		
051301030305000	R930001271		
051301030310000	R930001274		
051301030320000	R930001275		
051301030335000	R930001278		
051301040205000	R930001287		
051301040210000	R930001288		
051301040220000	R930001289		

Further types available by request

Relief, direct acting guided poppet type

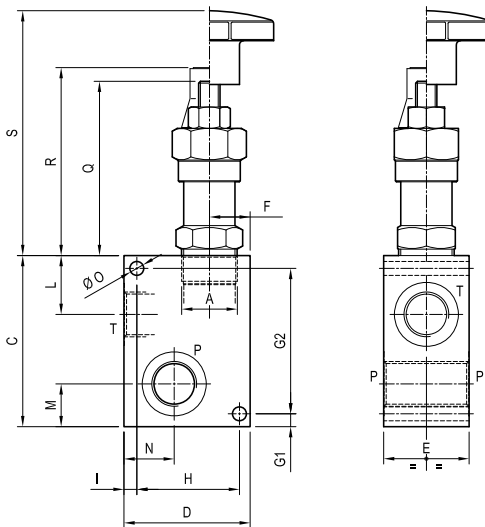
Special cavity

Cartridge style in manifold

VSC-80

05.13.02 - X - Y - Z

Dimensions



Technical data

Max flow: up to 80 l/min (21 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

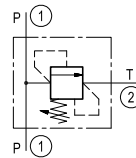


Table "Y"

Special Cavity	Y	PORT SIZE	DIMENSIONS mm (Inches)														
			P - T	C	D	E	F	G1	G2	H	I	L	M	N	O	Q	R
009	03	G 1/2	80 (3.15)	60 (2.36)	40 (1.58)	19 (0.75)	6 (0.24)	68 (2.68)	48 (1.89)	5 (0.20)	27.5 (1.08)	20 (0.79)	23.5 (0.93)	6.5 (0.26)	83 (3.27)	88 (3.47)	118 (4.65)
	04	G 3/4	80 (3.15)	60 (2.36)	40 (1.58)	19 (0.75)	6 (0.24)	68 (2.68)	48 (1.89)	5 (0.20)	27.5 (1.08)	22 (0.87)	21 (0.83)	6.5 (0.26)	83 (3.27)	88 (3.47)	118 (4.65)

Cartridge style

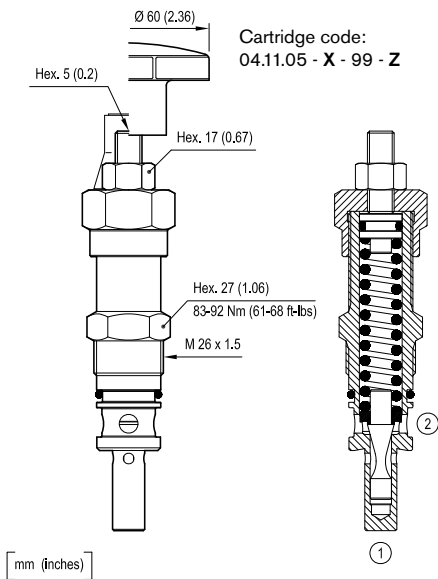


Table “X”

X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

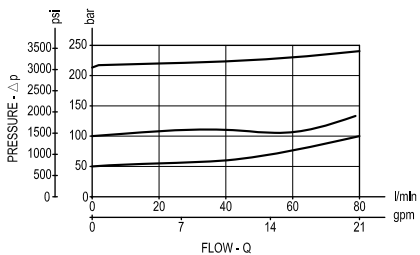
OPTIONS		
Ordering code	Description	
11.04.23.003		Tamper resistant cap

CARTRIDGE TECHNICAL DATA
Special cavity: 009 For other details see data sheet RE 18318-25

Table “Z”

Z	SPRINGS			
	Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min	
05	5-50 (75-725)	6 (87)	50 (725)	
10	30-100 (435-1450)	12 (174)	100 (1450)	
20	80-250 (1160-3600)	27 (392)	200 (2900)	

Performance graph



Ordering code

05.13.02	X	Y	Z
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**Manifold with relief, direct acting
guided poppet type
Special cavity**

Settings - Springs
(see table Z on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
051302030305000	R930001296
051302030310000	R930001297
051302030320000	R930001298
051302030405000	R930001299
051302030410000	R930001300
051302030420000	R930001301
051302040310000	R930001304
051302040320000	R930001305
051302040410000	R930001306
051302040420000	R930001307

Type	Material number

Further types available by request

Relief, direct acting poppet type, differential area

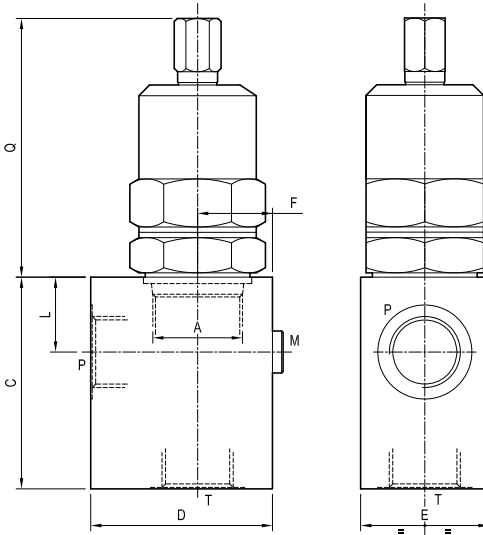
Special cavity

Cartridge style in manifold

VSDC-350

05.12.04 - X - Y - Z

Dimensions



Technical data

Max flow: up to 350 l/min (93 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

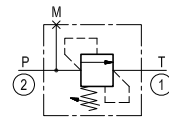


Table "Y"

Special Cavity	Y	PORT SIZE		DIMENSIONS mm (Inches)														
		P-T	M	C	D	E	F	G	H	I	L	M	N	O	Q	R	S	
004	05	G 1	G 1/4	99 (3.90)	85 (3.35)	60 (2.36)	35 (1.38)					35 (1.38)					121 (4.76)	
	06	G 1 1/4	G 1/4	99 (3.90)	85 (3.35)	60 (2.36)	35 (1.38)					35 (1.38)					121 (4.76)	

Cartridge style

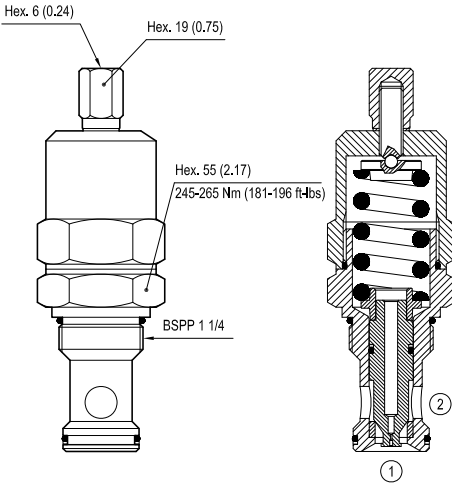


Table "X"

X	ADJUSTMENTS	
03	Leakproof inner hex. socket screw	

[mm (inches)] Cartridge code: 04.15.04 - X - 99 - Z

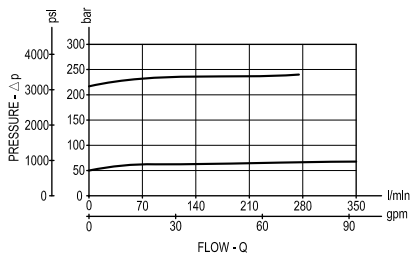
CARTRIDGE TECHNICAL DATA

Special cavity: 004
For other details see data sheet RE 18318-22

Table "Z"

Z	SPRINGS			
	Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min	
05	15-50 (220-725)	9 (131)	50 (725)	
20	80-210 (1160-3000)	37 (537)	200 (2900)	

Performance graph



Ordering code

05.12.04	X	Y	Z
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Manifold with relief, direct acting poppet type, differential area Special cavity

Settings - Springs
(see table Z on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
051204030505000	R93000252
051204030520000	R930001259
051204030605000	R930001260
051204030620000	R930001261

Type	Material number

Further types available by request

Relief, direct acting poppet type, pressure compensated

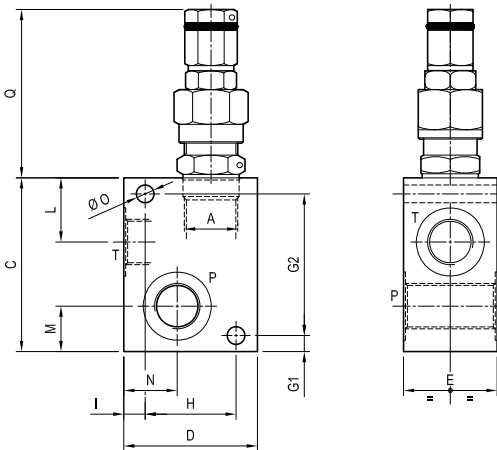
Special cavity

Cartridge style in manifold

VSC-30-CC

OR.10.27 - X - Y - Z

Dimensions



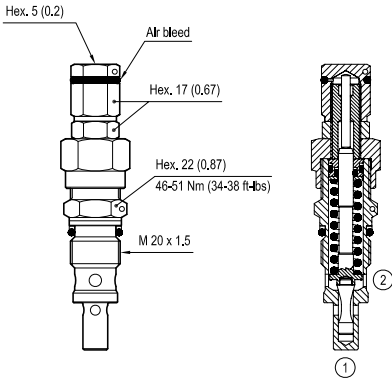
Technical data

Max flow:	up to 30 l/min	(8 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

Table "Y"

Special Cavity	Y	PORT SIZE	DIMENSIONS mm (Inches)														
			P-T	C	D	E	F	G1	G2	H	I	L	M	N	O	Q	R
008	09	G 1/4	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	22 (0.87)	6.5 (0.26)	63 (2.48)		
	02	G 3/8	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	20 (0.79)	6.5 (0.26)	63 (2.48)		
	03	G 1/2	65 (2.56)	50 (1.97)	35 (1.38)	18 (0.71)	6 (0.24)	53 (2.09)	34 (1.34)	8 (0.32)	24 (0.95)	17 (0.67)	18 (0.71)	6.5 (0.26)	63 (2.48)		

Cartridge style



Cartridge code: 04.11.27 - X - 99 - Z

[mm (Inches)]

Table "X"

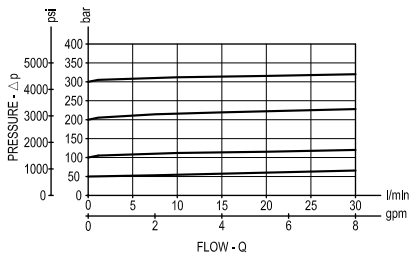
X	ADJUSTMENTS	
03	Leakproof inner hex. socket screw	

CARTRIDGE TECHNICAL DATA	
Special cavity: 008	
For other details see data sheet RE 18318-26	

Table "Z"

Z	SPRINGS				
	Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min		
05	5-50 (75-725)	11 (160)	50 (725)		
10	30-100 (435-1450)	23 (334)	100 (1450)		
20	50-210 (725-3000)	47 (682)	200 (2900)		
35	100-350 (1450-5000)	82 (1189)	350 (5000)		

Performance graph



Ordering code

OR.10.27	X	Y	Z
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Manifold with relief, direct acting poppet type, pressure compensated
Special cavity

Settings - Springs
(see table Z on page 2)

Cartridge style - Adjustments
(see table X on page 2)

Manifold style - Dimensions and port sizes
(see table Y on page 1)

Preferred types (readily available)

Type	Material number
OR102703022000	R934003317
OR102703030500	R934003931

Type	Material number

Further types available by request

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
integrated-circuits@oilcontrol.com
www.boschrexroth.com

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Subject to change.

Manifolds with Solenoid Cartridges

Designation	Description	Code	Data sheet	Pages
Solenoid operated valves, 2-way 2-positions	VED-CS-7A/8I-06	OS11K18YZW	RE 18331-70	1377
Solenoid operated valves, 2-way 2-positions	VEI-CS-8A/8I-06	OS15K18YZW	RE 18331-71	1381
Solenoid operated valves, 2-way 2-positions	VEI-CS-8A-10A	OS15K36YZW	RE 18331-72	1385
Solenoid operated valves, 2-way 2-positions	VEI-CS-8A-12A	OS15K89YZW	RE 18331-73	1389
Solenoid operated valves, 2-way 2-positions	VEI-CS-7A/8A-16A	OS15K75YZW	RE 18331-74	1393
Solenoid operated valves, 3-way 2-positions	VED-CS-8I-32-06	OS13K51YZW	RE 18331-75	1397
Solenoid operated valves, 3-way 2-positions	VED-CS-7I-32-06	OS13K77YZW	RE 18331-76	1401
Solenoid operated valves, 4-way 2-positions	VED-CS-8I-42-06	OS14K58YZW	RE 18331-77	1405
Solenoid operated valves, 4-way 2-positions	VED-CS-7I-42-09	OS14K78YZW	RE 18331-78	1409
Solenoid operated valves, 4-way 3-positions	VED-CS-8I-43-06	OS14K58YZW	RE 18331-79	1413
Solenoid operated valves, 4-way 3-positions	VED-CS-7I-43-09	OS14K78YZW	RE 18331-80	1417
Solenoid operated valves, 2-way 2-positions special cavity	VEI-CS-8A-06	OS15K19YZW	RE 18331-81	1421
Solenoid operated valves, 2-way 2-positions special cavity	VEI-CS-8A-09	OS15K17YZW	RE 18331-82	1425
Solenoid operated valves, 2-way 2-positions special cavity	VEI-CS-7A/8A-12	OS15K21YZW	RE 18331-83	1429

Solenoid operated valves

2-way 2-positions

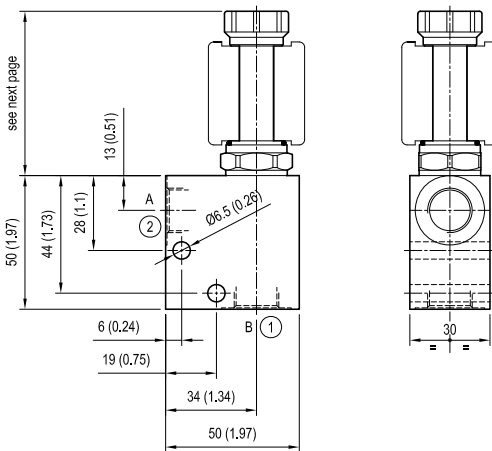
Common cavity size 08

Cartridge style in manifold

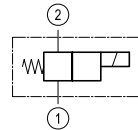
VED-CS-7A/8I-06

OS.11 - K - 18 - Y - Z - W

Dimensions



[mm (inches)]



Cartridge schemes

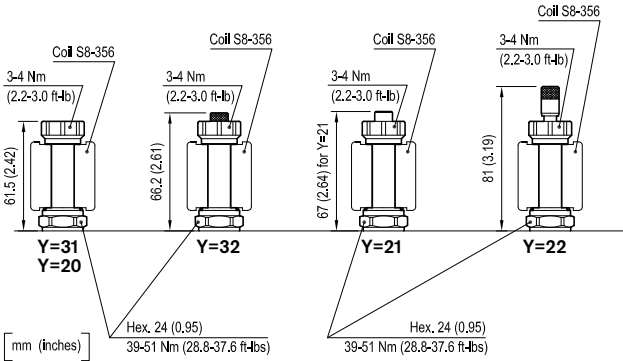
monodirectional type	bidirectional type

Technical data

Max flow:	up to 1,5 l/min	(0,4 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

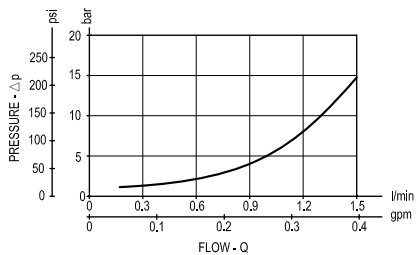


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

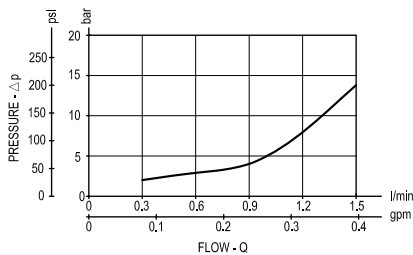
OS11	- K -		18	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.		Rated Flow		Ports size 1-2		Material		monodir.	bidir.
				1.5 l/min (0.4 gpm)		G 1/4	G 3/8	Aluminium	Steel		
OD11		01	18	31		09	02	00	S0		
OD11		01	18	32		09	02	00	S0		
OD11		02	18	20		09	02	00	S0		
OD11		02	18	21		09	02	00	S0		
OD11		02	18	22		09	02	00	S0		
CARTRIDGE CODE											

Performance graphs

K = 01



K = 02



Ordering code

OS.11	K	18	Y	Z	W
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Manifold with solenoid operated valve, 2-way 2-positions

Cartridge scheme (see page 1 and 2)

- = 01 Bidirectional
- = 02

Common cavity Size 08

Manifold material

- = 00 Aluminium
- = S0 Steel

Port sizes (see table on page 2)

- = 09 G 1/4
- = 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS110118310200	R934002748
OS110218200900	R934002750

Type	Material number

Further types available by request

Solenoid operated valves

2-way 2-positions

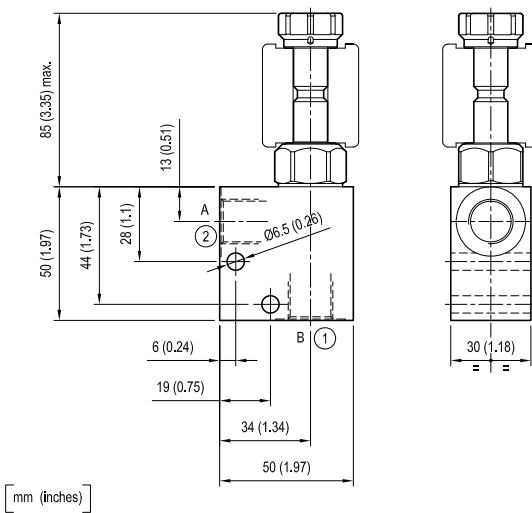
Common cavity size 08

Cartridge style in manifold

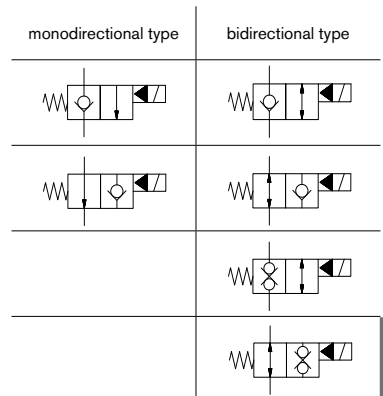
VEI-CS-8A/8I-06

OS.15 - K - 18 - Y - Z - W

Dimensions



Cartridge schemes

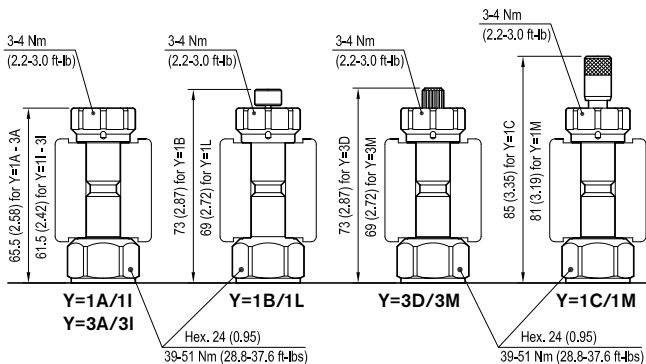


Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

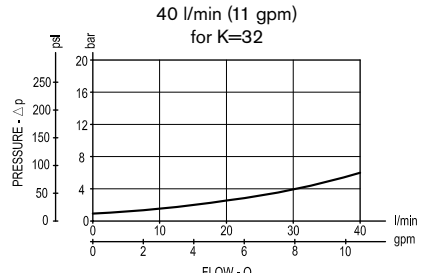
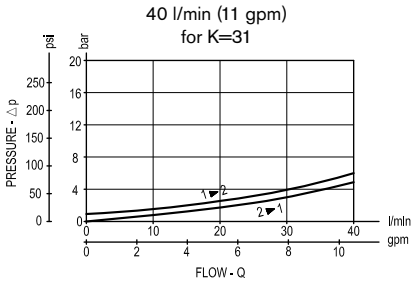
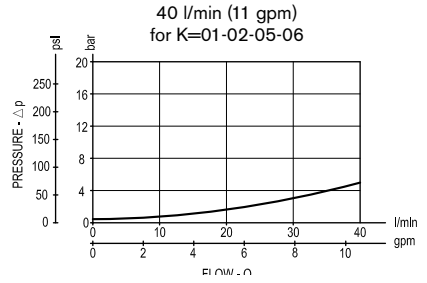
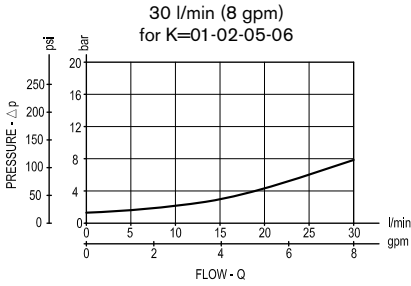


[mm (inches)]

CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

OS15	- K -		18	- Y -		- Z -		- W -		CARTRIDGE SCHEME		
	monodir.	bidir.		Rated Flow		Ports size 1-2		Material		monodir.	bidir.	
				30 l/min (8 gpm)	40 l/min (11 gpm)	G 1/4	G 3/8	Aluminium	Steel			
CARTRIDGE CODE	OD15	01	05	18	3I	3A	09	02	00	S0		
	OD15	01	05	18	3M	3D	09	02	00	S0		
	OD15	02	06	18	1I	1A	09	02	00	S0		
	OD15	02	06	18	1L	1B	09	02	00	S0		
	OD15	02	06	18	1M	1C	09	02	00	S0		
	OD15		31	18		3A	09	02	00	S0		
	OD15		31	18		3D	09	02	00	S0		
	OD15		32	18		1A	09	02	00	S0		
	OD15		32	18		1B	09	02	00	S0		
	OD15		32	18		1C	09	02	00	S0		

Performance graphs



Ordering code

OS.15	K	18	Y	Z	W
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Manifold with solenoid operated valve, 2-way 2-positions

Cartridge scheme (see page 1 and 2)

= 01	Monodirectional
= 02	
= 05	Bidirectional
= 06	
= 31	
= 32	

Common cavity Size 08

Manifold material

= 00	Aluminium
= S0	Steel

Port sizes (see table on page 2)

= 09	G 1/4
= 02	G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS1501183I0200	R934002825
OS1501183I0900	R934002826
OS1501183M0200	R934002830
OS1502181C0200	R934002835
OS1502181C0900	R934002836
OS1502181C09S0	R934002837
OS1502181I0200	R934002838
OS1502181I02S0	R934000418
OS1502181I0900	R934002839
OS1502181L0200	R934002842
OS1502181M0200	R934002844
OS1505183A0200	R934002868
OS1505183A0900	R934002872
OS1505183D0200	R934002876

Type	Material number
OS1505183D09S0	R934000727
OS1505183I0200	R934002878
OS1505183I0900	R934002881
OS1505183M0200	R934003480
OS1516181A0200	R934002922
OS1506181A0900	R934002925
OS1506181B0200	R934002927
OS1506181C0200	R934002929
OS1506181C0900	R934002934
OS1506181I0900	R934002937
OS1531183A0200	R934002972
OS1531183A0900	R934002976
OS1532181A0200	R901132028
OS1532181A0900	R934002998

Further types available by request

Solenoid operated valves

2-way 2-positions

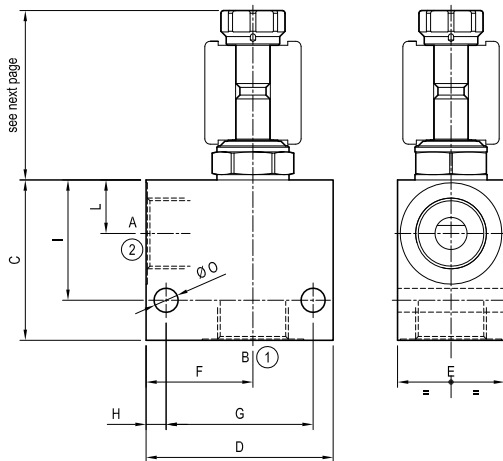
Common cavity size 10

Cartridge style in manifold

VEI-CS-8A-10A

OS.15 - K - 36 - Y - Z - W

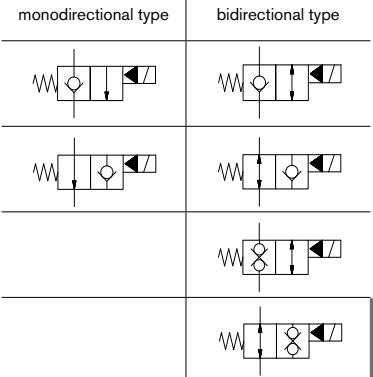
Dimensions



[mm (inches)]

A - B	C	D	E	F	G	H	I	L			O
G 1/2	60 (2.36)	60 (2.36)	35 (1.38)	35 (1.38)	45 (1.77)	7.5 (0.3)	45 (1.77)	19 (0.75)			7.5 (0.3)
G 3/4	60 (2.36)	70 (2.76)	40 (1.58)	40 (1.58)	55 (2.17)	7.5 (0.3)	45 (1.77)	20 (0.79)			9 (0.35)

Cartridge schemes

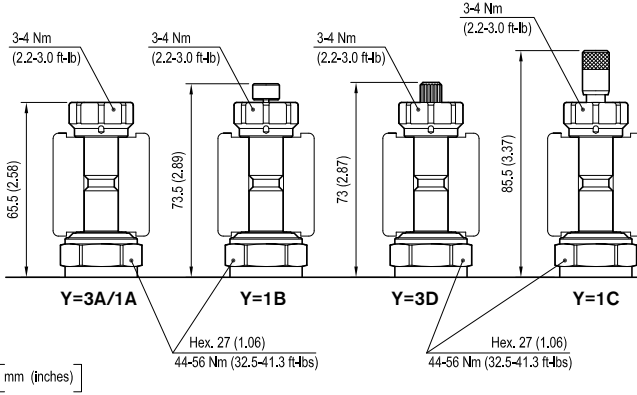


Technical data

Max flow:	up to 70 l/min	(19 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

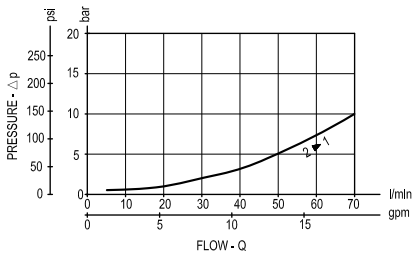


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-10A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

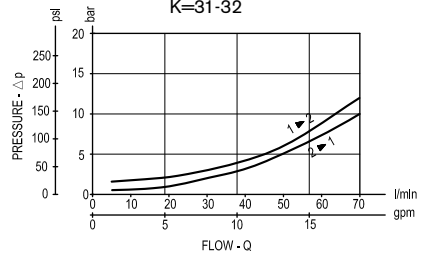
OS15	- K -		36	- Y - Rated Flow 70 l/min (19 gpm)	- Z - Ports size 1-2 G 1/2 G 3/4		- W - Material Aluminium Steel		CARTRIDGE SCHEME	
	monodir.	bidir.			Aluminium	Steel	monodir.	bidir.		
OD15	01	05	36	3A	03	04	00	S0		
OD15	01	05	36	3D	03	04	00	S0		
OD15	02	06	36	1A	03	04	00	S0		
OD15	02	06	36	1B	03	04	00	S0		
OD15	02	06	36	1C	03	04	00	S0		
OD15		31	36	3A	03	04	00	S0		
OD15		31	36	3D	03	04	00	S0		
OD15		32	36	1A	03	04	00	S0		
OD15		32	36	1B	03	04	00	S0		
OD15		32	36	1C	03	04	00	S0		

Performance graphs

K=01-02



K=05-06
K=31-32



Ordering code

OS.15	K	36	Y	Z	W
-------	---	----	---	---	---

Manifold with solenoid operated valves, 2-way 2-positions

Cartridge scheme (see page 1 and 2)

= 01	Monodirectional
= 02	
= 05	
= 06	Bidirectional
= 31	
= 32	

Common cavity Size 10

Manifold material

= 00	Aluminium
= S0	Steel

Port sizes (see table on page 2)

= 03	G 1/2
= 04	G 3/4

See table on page 2

Preferred types (readily available)

Type	Material number
OS1502361B0300	R934003362
OS1502361B03S0	R934000379
OS1505363A0400	R934000617
OS1505363D03S0	R934000614
OS1505363D04S0	R934000593
OS1506361A0300	R901137967
OS1506361B0300	R901137969
OS1506361B03S0	R934000588
OS1506361B04S0	R934000589
OS1531363A03S0	R934001194
OS1531363D03S0	R934000436
OS1531363D04S0	R934000567
OS1532361B03S0	R934000583
OS1532361B04S0	R934000585

Type	Material number

Further types available by request

Solenoid operated valves

2-way 2-positions

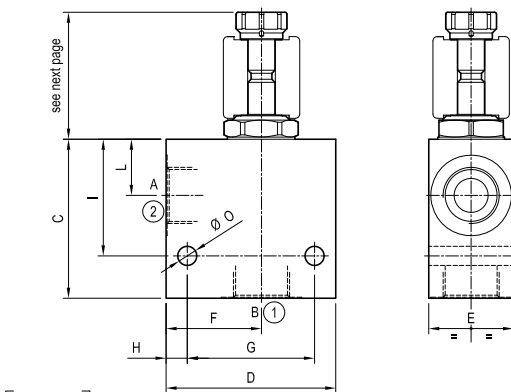
Common cavity size 12

Cartridge style in manifold

VEI-CS-8A-12A

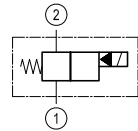
OS.15 - K - 89 - Y - Z - W

Dimensions

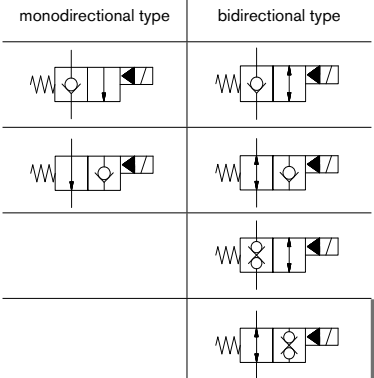


[mm (inches)]

A - B	C	D	E	F	G	H	I	L	O
G 3/4	75 (2.95)	80 (3.15)	40 (1.58)	45 (1.77)	60 (2.36)	10 (0.39)	55 (2.17)	26.5 (1.04)	9 (0.35)
G 1	75 (2.95)	80 (3.15)	50 (1.97)	45 (1.77)	60 (2.36)	10 (0.39)	55 (2.17)	26.5 (1.04)	9 (0.35)



Cartridge schemes

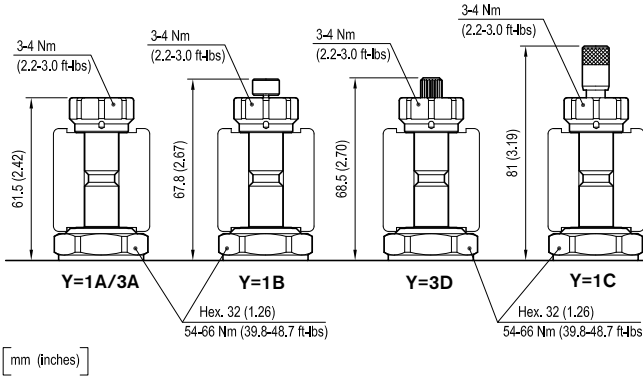


Technical data

Max flow:	up to 150 l/min	(40 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

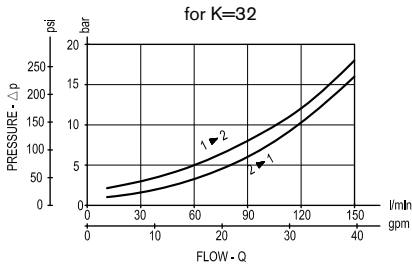
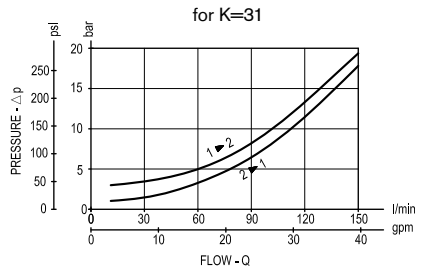
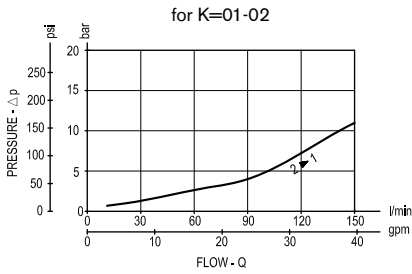


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-12A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

[mm (inches)]

CARTRIDGE CODE	OS15		- K -		89	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.	monodir.	bidir.		Rated Flow	Ports size 1-2		Material		monodir.	bidir.	
					150 l/min (40 gpm)	G 3/4	G 1	Aluminium	Steel				
OD15	01	05	89	3A	04	05	00	S0					
OD15	01	05	89	3D	04	05	00	S0					
OD15	02	06	89	1A	04	05	00	S0					
OD15	02	06	89	1B	04	05	00	S0					
OD15	02	06	89	1C	04	05	00	S0					
OD15		31	89	3A	04	05	00	S0					
OD15		31	89	3D	04	05	00	S0					
OD15		32	89	1A	04	05	00	S0					
OD15		32	89	1B	04	05	00	S0					
OD15		32	89	1C	04	05	00	S0					

Performance graphs



Ordering code

OS.15	K	89	Y	Z	W
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Manifold with solenoid operated valve, 2-way 2-positions

Cartridge scheme (see page 1 and 2)

= 01	Monodirectional
= 02	
= 05	Bidirectional
= 06	
= 31	
= 32	

Common cavity Size 12

Manifold material

= 00	Aluminium
= S0	Steel

Port sizes (see table on page 2)

= 04	G 3/4
= 05	G 1

See table on page 2

Preferred types (readily available)

Type	Material number
OS1505893D05S0	R934000599
OS1506891B05S0	R934000590
OS1531893D05S0	R934000571
OS1532891B05S0	R934000586

Type	Material number

Further types available by request

Solenoid operated valves

2-way 2-positions

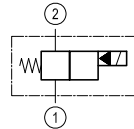
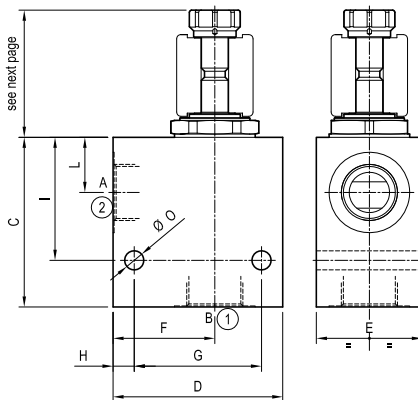
Common cavity size 16

Cartridge style in manifold

VEI-CS-7A/8A-16A

OS.15 - K - 75 - Y - Z - W

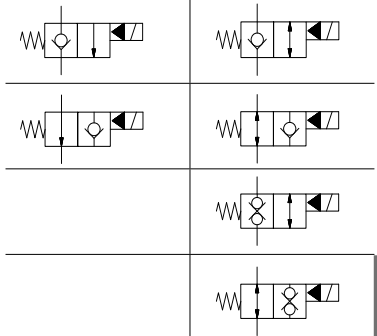
Dimensions



Cartridge schemes

monodirectional type

bidirectional type



[mm (inches)]

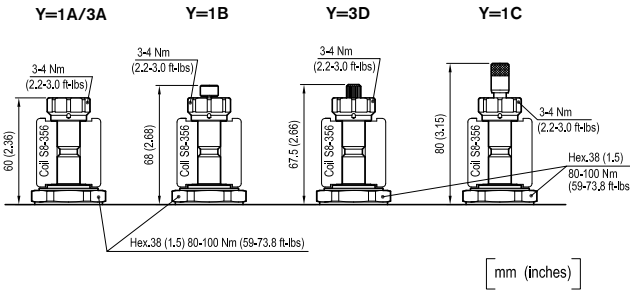
A - B	C	D	E	F	G	H	I	L	O
G 3/4	80 (3.15)	80 (3.15)	50 (1.97)	48 (1.89)	60 (2.36)	10 (0.39)	58 (2.28)	26 (1.02)	9 (0.35)
G 1	80 (3.15)	90 (3.54)	50 (1.97)	53 (2.09)	60 (2.36)	20 (0.79)	58 (2.28)	26 (1.02)	9 (0.35)

Technical data

Max flow:	up to 150 l/min	(40 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

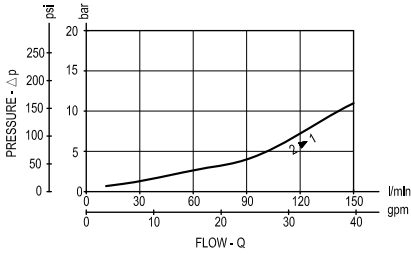


CARTRIDGE TECHNICAL DATA
Common cavity: CA-16A-2N
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : must be ordered separately (see data sheets RE 18325-90)
Mounting position: unrestricted

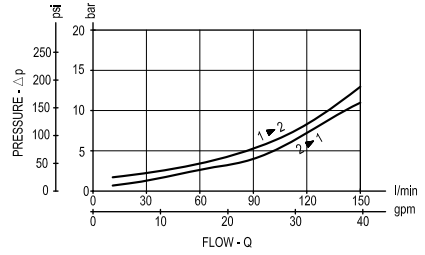
CARTRIDGE CODE	OS15		- K -		75	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.	Rated Flow			Ports size 1-2		Material		monodir.	bidir.		
			150 l/min (40 gpm)		G 3/4	G 1	Aluminium	Steel					
OD15	01	05	75	3A	04	05	00	S0					
OD15	01	05	75	3D	04	05	00	S0					
OD15	02	06	75	1A	04	05	00	S0					
OD15	02	06	75	1B	04	05	00	S0					
OD15	02	06	75	1C	04	05	00	S0					
OD15		31	75	3A	04	05	00	S0					
OD15		31	75	3D	04	05	00	S0					
OD15		32	75	1A	04	05	00	S0					
OD15		32	75	1B	04	05	00	S0					
OD15		32	75	1C	04	05	00	S0					

Performance graphs

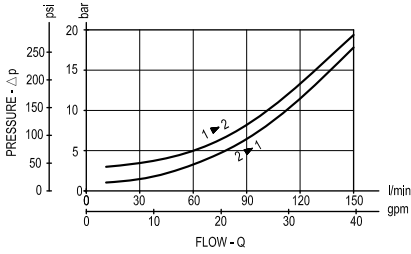
for K=01-02



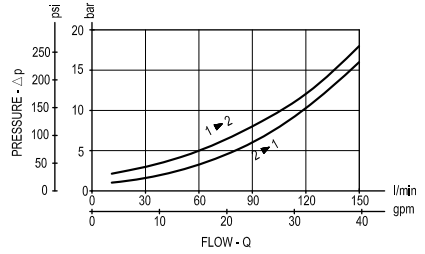
for K=05 / Y=3A-3D
for K=06 / Y=1A-1B-1C



for K=31 / Y=3A-3D



for K=32 / Y=1A-1B-1C



Ordering code

OS.15	K	75	Y	Z	W
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Manifold with solenoid operated valve, 2-way 2-positions

Cartridge scheme (see page 1 and 2)

= 01	Monodirectional
= 02	
= 05	
= 06	Bidirectional
= 31	
= 32	

Common cavity Size 16

Manifold material

= 00	Aluminium
= S0	Steel

Port sizes (see table on page 2)

= 04	G 3/4
= 05	G 1

See table on page 2

Preferred types (readily available)

Type	Material number
OS1531753A0500	R934003386

Type	Material number

Further types available by request

Solenoid operated valves

3-way 2-positions

Common cavity size 08

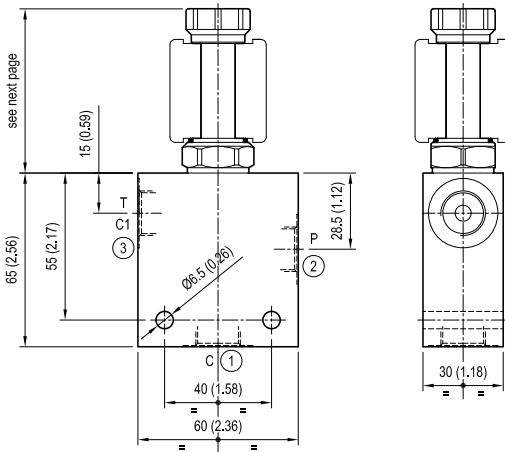
Cartridge style in manifold

VED-CS-8I-32-06

OS.13 - K - 51 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



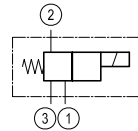
[mm (inches)]

Technical data

Max flow: up to 10 l/min (3 gpm)

Max operating pressure: 210 bar (3000 psi)

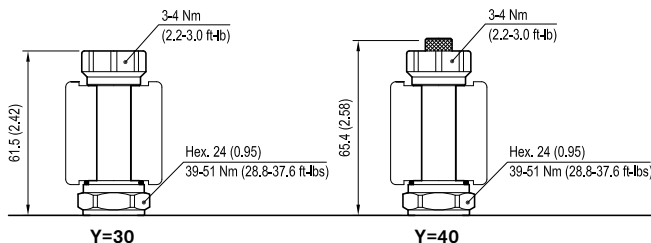
Standard manifolds in high strength **aluminium**.
To order only manifold see data sheet RE 18325-85



Cartridge schemes

monodirectional type	bidirectional type

Dimensions

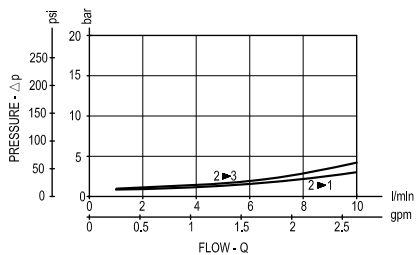


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-3N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	

[mm (inches)]

OS13	- K -		51	- Y - Rated Flow 10 l/min (3 gpm)	- Z - Ports size 1-2-3		- W - Material		CARTRIDGE SCHEME	
	monodir.	bidir.			G 1/4	G 3/8	Aluminium		monodir.	bidir.
CARTRIDGE CODE	OD13	10	51	30	09	02	00			
	OD13	10	51	40	09	02	00			
	OD13	11	51	30	09	02	00			
	OD13	11	51	40	09	02	00			
	OD13	20	51	30	09	02	00			
	OD13	20	51	40	09	02	00			
	OD13	30	51	30	09	02	00			
	OD13	30	51	40	09	02	00			

Performance graph



Ordering code

OS.13	K	51	Y	Z	W
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Manifold with solenoid operated valve, 3-way 2-positions

Cartridge scheme (see page 1 and 2)

= 10

= 11

= 20

= 30

Bidirectional

Common cavity Size 08

Manifold material

= 00 Aluminium

Port sizes (see table on page 2)

= 09 G 1/4

= 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS131051300200	R934002763
OS131051300900	R934002765
OS131051400200	R934002767
OS131051400900	R934002768
OS131151400900	R934001324
OS132051300200	R934002776
OS132051300900	R934002777
OS132051400200	R934002779
OS132051400900	R934002781
OS133051300200	R934002785
OS133051300900	R934002787
OS133051400900	R934002792

Type	Material number

Further types available by request

Solenoid operated valves

3-way 2-positions

Common cavity size 10

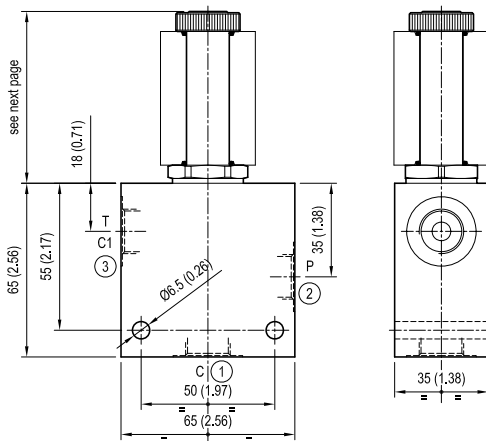
Cartridge style in manifold

VED-CS-71-32-09

OS.13 - K - 77 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



[mm (inches)]

Cartridge schemes

monodirectional type	bidirectional type

Technical data

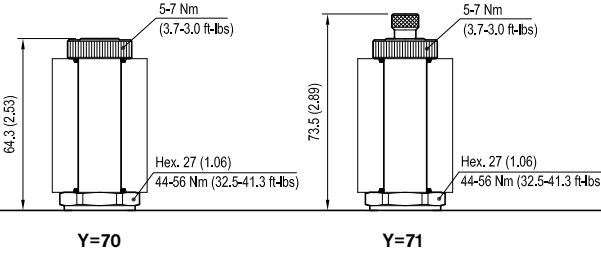
Max flow: up to 20 l/min (6 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

To order only manifold see data sheet RE 18325-85

Dimensions

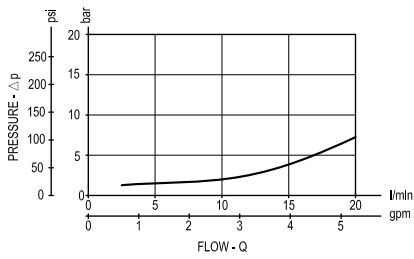


CARTRIDGE TECHNICAL DATA
Common cavity: CA-10A-3N
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : S7 must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted

[mm (inches)]

OS13	- K -		77	- Y - Rated Flow 20 l/min (6 gpm)	- Z - Ports size 1-2-3 G 1/4 G 3/8		- W - Material Aluminium		CARTRIDGE SCHEME	
	monodir.	bidir.			monodir.	bidir.				
CARTRIDGE CODE	OD13	10	77	70	09	02	00			
	OD13	10	77	71	09	02	00			
	OD13	11	77	70	09	02	00			
	OD13	11	77	71	09	02	00			
	OD13	20	77	70	09	02	00			
	OD13	20	77	71	09	02	00			
	OD13	30	77	70	09	02	00			
	OD13	30	77	71	09	02	00			

Performance graph



Ordering code

OS.13	K	77	Y	Z	W
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Manifold with solenoid operated valve, 3-way 2-positions

Cartridge scheme (see page 1 and 2)

- = 10
- = 11 Bidirectional
- = 20
- = 30

Common cavity Size 10

Manifold material

- = 00 Aluminium

Port sizes (see table on page 2)

- = 09 G 1/4
- = 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS131077700200	R934002769
OS131077710200	R934002773
OS132077700200	R934002783
OS132077700900	R934002784
OS133077700200	R934002794

Type	Material number

Further types available by request

Solenoid operated valves

4-way 2-positions

Common cavity size 08

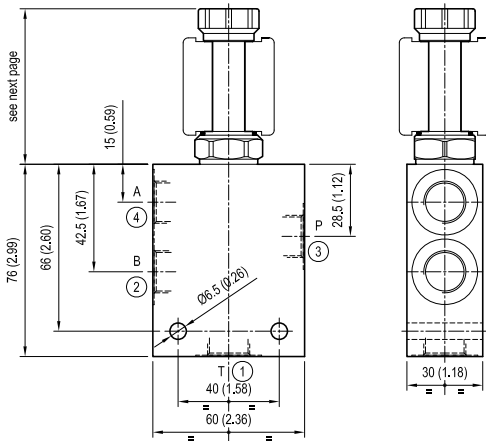
Cartridge style in manifold

VED-CS-8I-42-06

OS.14 - K - 58 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



[mm (inches)]

Cartridge schemes

monidirectional type	bidirectional type

Technical data

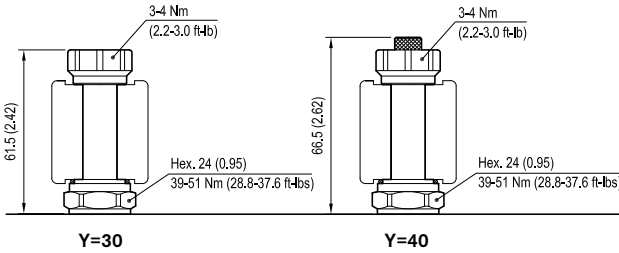
Max flow: up to 10 l/min (3 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

To order only manifold see data sheet RE 18325-85

Dimensions

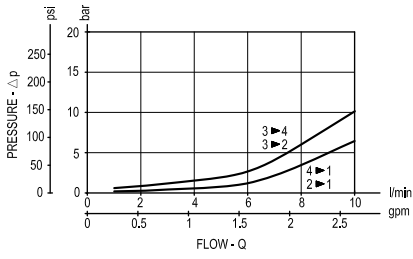


CARTRIDGE TECHNICAL DATA
Common cavity: CA-08A-4N
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : S8-356 must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted

[mm (inches)]

OS14	- K -		58	- Y - Rated Flow 10 l/min (3 gpm)	- Z - Ports size 1-2- 3-4		- W - Material		CARTRIDGE SCHEME	
	monodir.	bidir.			G 1/4	G 3/8	Aluminium		monodir.	bidir.
OD14		40	58	30	09	02	00			
OD14		40	58	40	09	02	00			
OD14		41	58	30	09	02	00			
OD14		41	58	40	09	02	00			
CARTRIDGE CODE										

Performance graph



Solenoid operated valves

4-way 2-positions

Common cavity size 10

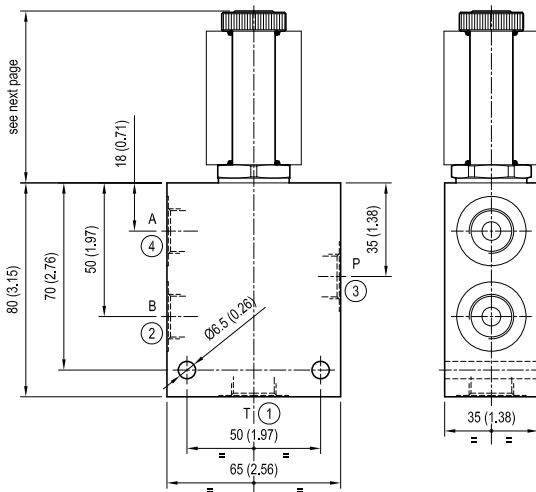
Cartridge style in manifold

VED-CS-71-42-09

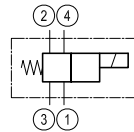
OS.14 - K - 78 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



[mm (inches)]



Cartridge schemes

monodirectional type	bidirectional type

Technical data

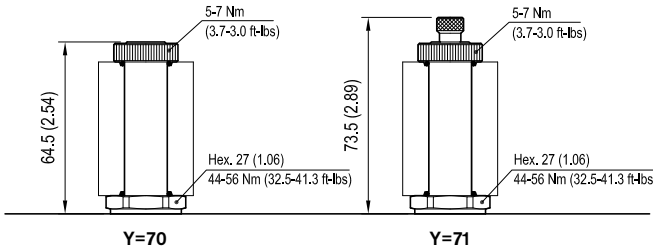
Max flow: up to 20 l/min (6 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

To order only manifold see data sheet RE 18325-85

Dimensions

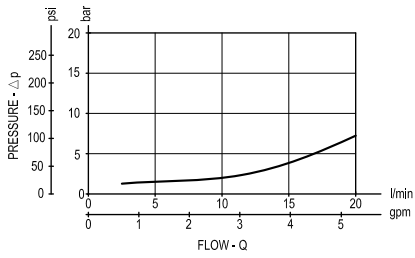


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-10A-4N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S7 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	

[mm (inches)]

OS14	- K -		78	- Y - Rated Flow 20 l/min (6 gpm)	- Z - Ports size 1-2- 3-4		- W - Material		CARTRIDGE SCHEME	
	monodir.	bidir.			G 1/4	G 3/8	Aluminium		monodir.	bidir.
OD14	40	78	70	09	02	00				
OD14	40	78	71	09	02	00				
OD14	41	78	70	09	02	00				
OD14	41	78	71	09	02	00				
CARTRIDGE CODE										

Performance graph



Solenoid operated valves

4-way 3-positions

Common cavity size 08

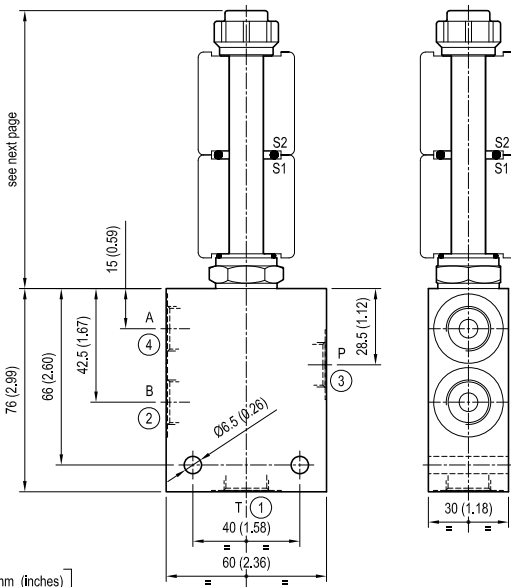
Cartridge style in manifold

VED-CS-8I-43-06

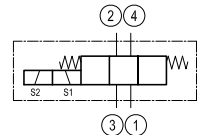
OS.14 - K - 58 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



[mm (inches)]



Cartridge schemes

monodirectional type	bidirectional type

Technical data

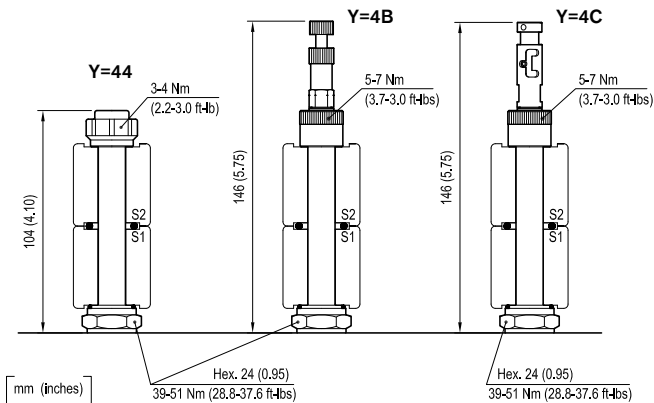
Max flow: up to 10 l/min (3 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

To order only manifold see data sheet RE 18325-85

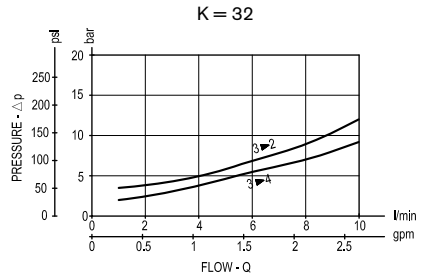
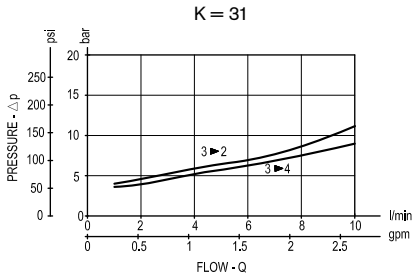
Dimensions



CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-4N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : n°2 coils S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	

OS14	- K -		58	- Y - Rated Flow 10 l/min (3 gpm)	- Z - Ports size 1-2-3-4 G 1/4 G 3/8		- W - Material Aluminium		CARTRIDGE SCHEME	
	monodir.	bidir.			Aluminium		monodir.	bidir.		
OD14		31	58	44	09	02	00			
OD14		31	58	4B	09	02	00			
OD14		31	58	4C	09	02	00			
OD14		32	58	44	09	02	00			
OD14		32	58	4B	09	02	00			
OD14		32	58	4C	09	02	00			
CARTRIDGE CODE										

Performance graphs



Ordering code

OS.14	K	58	Y	Z	W
-------	---	----	---	---	---

Manifold with solenoid operated valve, 4-way 3-positions

Cartridge scheme (see page 1 and 2)

= 31 Bidirectional
= 32

Common cavity size 08

Manifold material

= 00 Aluminium

Port sizes (see table on page 2)

= 09 G 1/4
= 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS143158440200	R934002796
OS143158440900	R934002797

Type	Material number

Further types available by request

Solenoid operated valves

4-way 3-positions

Common cavity size 10

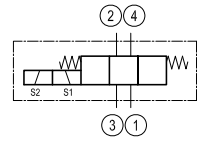
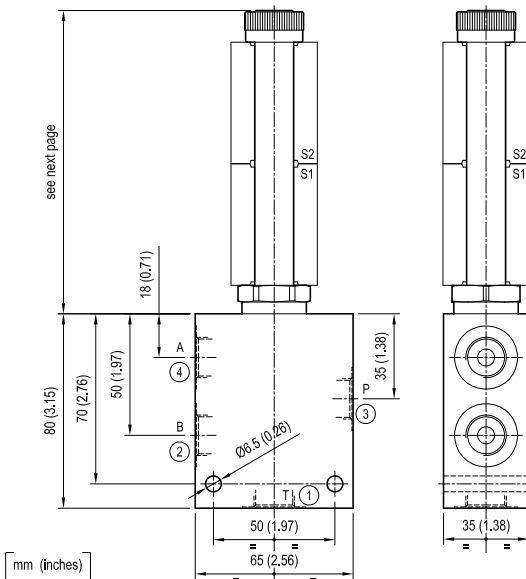
Cartridge style in manifold

VED-CS-71-43-09

OS.14 - K - 78 - Y - Z - W

Dimensions

IMPORTANT NOTE: current data sheet refers to the VED series cartridge valves; by December 2010 a new data sheet will be published with reference to the new VEDS series of direct acting solenoid cartridge valves.



Cartridge schemes

monodirectional type	bidirectional type

Technical data

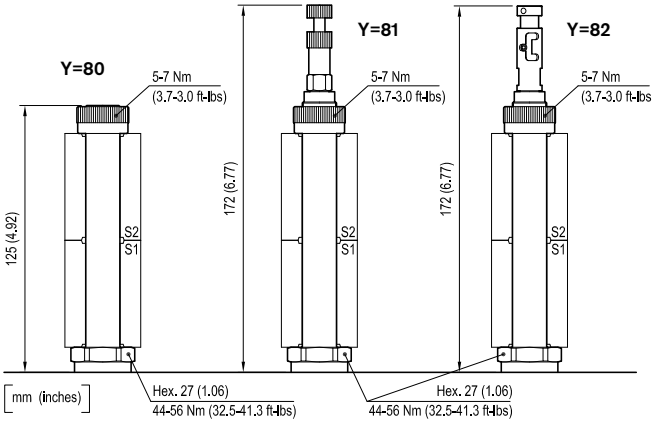
Max flow: up to 20 l/min (6 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

To order only manifold see data sheet RE 18325-85

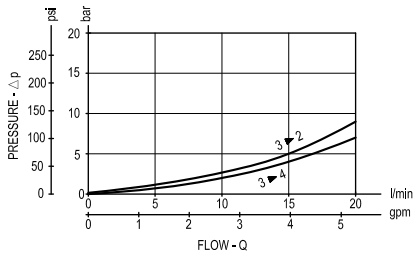
Dimensions



CARTRIDGE TECHNICAL DATA	
Common cavity: CA-10A-4N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : n°2 coils S7 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	

OS14	- K -		78	Y Rated Flow 20 l/min (5 gpm)	- Z - Ports size 1-2-3-4		- W - Material		CARTRIDGE SCHEME	
	monodir.	bidir.			G 1/4	G 3/8	Aluminium		monodir.	bidir.
OD14	31	78	80	09	02	00				
OD14	31	78	81	09	02	00				
OD14	31	78	82	09	02	00				
OD14	32	78	80	09	02	00				
OD14	32	78	81	09	02	00				
OD14	32	78	82	09	02	00				
CARTRIDGE CODE										

Performance graph



Ordering code

OS.14	K	78	Y	Z	W
--------------	----------	-----------	----------	----------	----------

Manifold with solenoid operated valve, 4-way 3-positions

Cartridge scheme (see page 1 and 2)

- = 31 Bidirectional
- = 32

Common cavity size 10

Manifold material

= 00 Aluminium

Port sizes (see table on page 2)

- = 09 G 1/4
- = 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OS143278800200	R934001147

Type	Material number

Further types available by request

Solenoid operated valves

2-way 2-positions

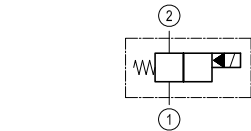
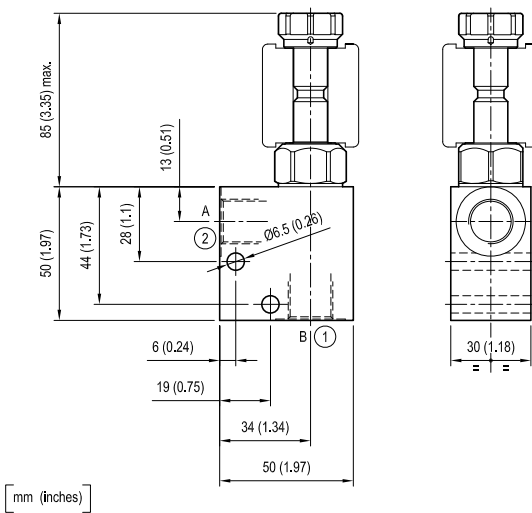
Special cavity

Cartridge style in manifold

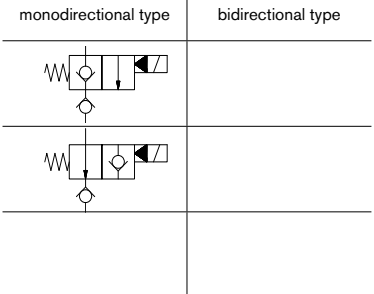
VEI-CS-8A-06

OS.15 - K - 19 - Y - Z - W

Dimensions



Cartridge schemes

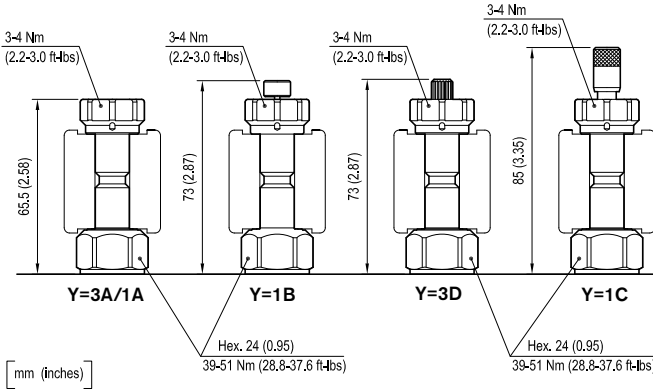


Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

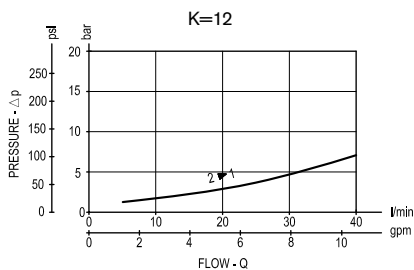
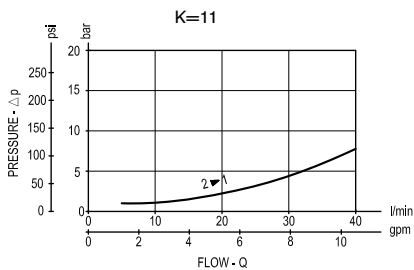
Dimensions



CARTRIDGE TECHNICAL DATA	
Special cavity: 019-E	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE 18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

OS15	- K -		19	- Y - Rated Flow 40 l/min (11 gpm)	- Z - Ports size 1-2		- W - Material		CARTRIDGE SCHEME	
	monodir.	bidir.			G 1/4	G 3/8	Aluminium	Steel	monodir.	bidir.
OD15	11		19	3A	09	02	00	S0		
OD15	11		19	3D	09	02	00	S0		
OD15	12		19	1A	09	02	00	S0		
OD15	12		19	1B	09	02	00	S0		
OD15	12		19	1C	09	02	00	S0		

Performance graphs



Solenoid operated valves

2-way 2-positions

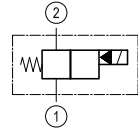
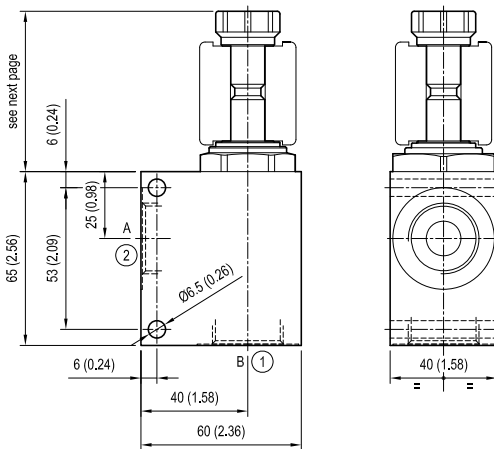
Special cavity

Cartridge style in manifold

VEI-CS-8A-09

OS.15 - K - 17 - Y - Z - W

Dimensions



Cartridge schemes

monidirectional type	bidirectional type

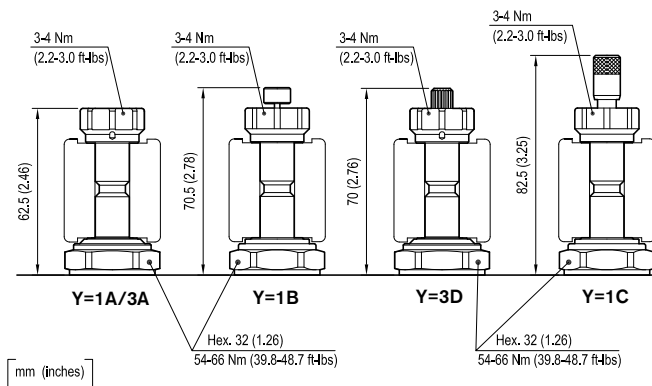
[mm (inches)]

Technical data

Max flow:	up to 70 l/min	(19 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions



CARTRIDGE TECHNICAL DATA

Special cavity: **017-E**

Filtration: 25 µm nominal or better

Minimum voltage required: 90% of nominal value

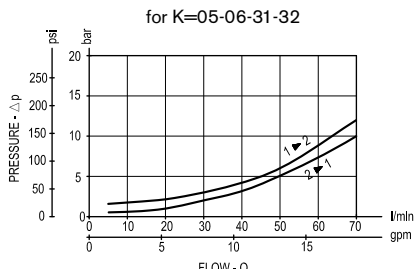
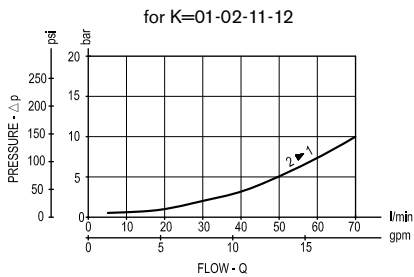
Coil : S8-356 **must be ordered separately** see data sheet RE 18325-90

Mounting position: unrestricted

For other details see cartridge data sheet

OS15	- K -		17	- Y - Rated Flow 70 l/min (19 gpm)	- Z - Ports size 1-2 G 1/2 G 3/4		- W - Material Aluminium Steel		CARTRIDGE SCHEME		
	monodir.	bidir.			G 1/2	G 3/4	Aluminium	Steel	monodir.	bidir.	
CARTRIDGE CODE	OD15	01	05	17	3A	03	04	00	S0		
	OD15	01	05	17	3D	03	04	00	S0		
	OD15	02	06	17	1A	03	04	00	S0		
	OD15	02	06	17	1B	03	04	00	S0		
	OD15	02	06	17	1C	03	04	00	S0		
	OD15	11		17	3A	03	04	00	S0		
	OD15	11		17	3D	03	04	00	S0		
	OD15	12		17	1A	03	04	00	S0		
	OD15	12		17	1B	03	04	00	S0		
	OD15	12		17	1C	03	04	00	S0		
	OD15		31	17	3A	03	04	00	S0		
	OD15		31	17	3D	03	04	00	S0		
	OD15		32	17	1A	03	04	00	S0		
	OD15		32	17	1B	03	04	00	S0		
	OD15		32	17	1C	03	04	00	S0		

Performance graphs



Solenoid operated valves

2-way 2-positions

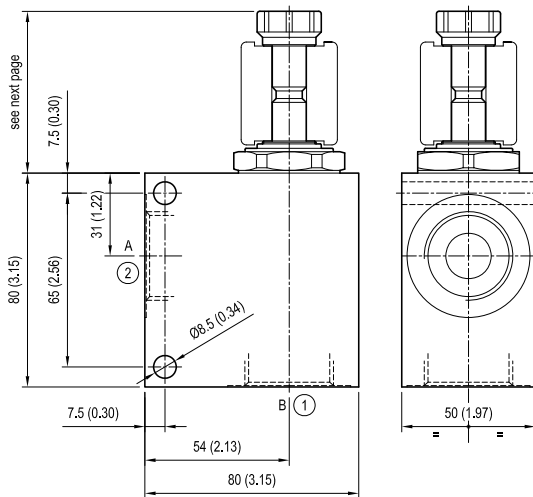
Special cavity

Cartridge style in manifold

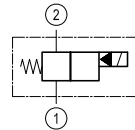
VEI-CS-7A/8A-12

OS.15 - K - 21 - Y - Z - W

Dimensions



[mm (inches)]



Cartridge schemes

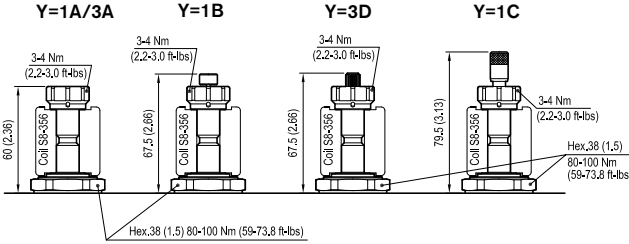
monodirectional type	bidirectional type

Technical data

Max flow:	up to 150 l/min	(40 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions



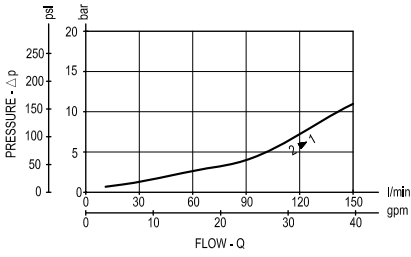
[mm (inches)]

CARTRIDGE TECHNICAL DATA
Special cavity: 021-E
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted
For other details see cartridge data sheet

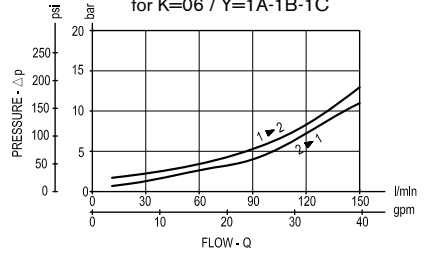
CARTRIDGE CODE	OS15		- K -		21	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.	Rated Flow			Ports size 1-2		Material		monodir.	bidir.		
			150 l/min (40 gpm)		G 3/4	G 1	Aluminium	Steel					
OD15	01	05	21	3A	04	05	00	S0					
OD15	01	05	21	3D	04	05	00	S0					
OD15	02	06	21	1A	04	05	00	S0					
OD15	02	06	21	1B	04	05	00	S0					
OD15	02	06	21	1C	04	05	00	S0					
OD15	11		21	3A	04	05	00	S0					
OD15	11		21	3D	04	05	00	S0					
OD15	12		21	1A	04	05	00	S0					
OD15	12		21	1B	04	05	00	S0					
OD15	12		21	1C	04	05	00	S0					
OD15		31	21	3A	04	05	00	S0					
OD15		31	21	3D	04	05	00	S0					
OD15		32	21	1A	04	05	00	S0					
OD15		32	21	1B	04	05	00	S0					
OD15		32	21	1C	04	05	00	S0					

Performance graphs

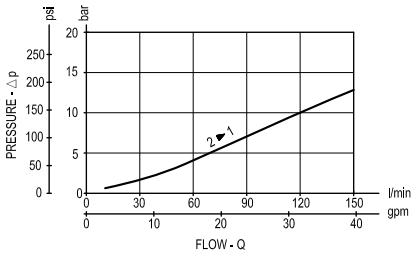
for K=01-02



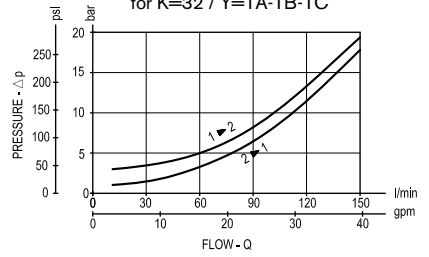
for K=05 / Y=3A-3D
for K=06 / Y=1A-1B-1C



for K=11-12



for K=31 / Y=3A-3D
for K=32 / Y=1A-1B-1C



Manifolds with Emergency By-Pass Screw and Solenoid Cartridges

Designation	Description	Code	Data sheet	Pages
Solenoid operated valves, 2-way 2-positions normally closed	VED-CE-7A/8I-06	OE11K18YZW	RE 18332-10	1435
Solenoid operated valves, 2-way 2-positions normally closed	VEI-CE-8A/8I-06	OE15K18YZW	RE 18332-11	1439
Solenoid operated valves, 2-way 2-positions	VEI-CN-8A/8I-06	OE17K18YZW	RE 18332-12	1443
Solenoid operated valves, 2-way 2-positions normally closed special cavity	VEI-CE-8A-12	OE15K21YZW	RE 18332-13	1447
Solenoid operated valves, 2-way 2-positions normally closed special cavity	VEI-CE-8A-09	OE15K17YZW	RE 18332-14	1451

Solenoid operated valves

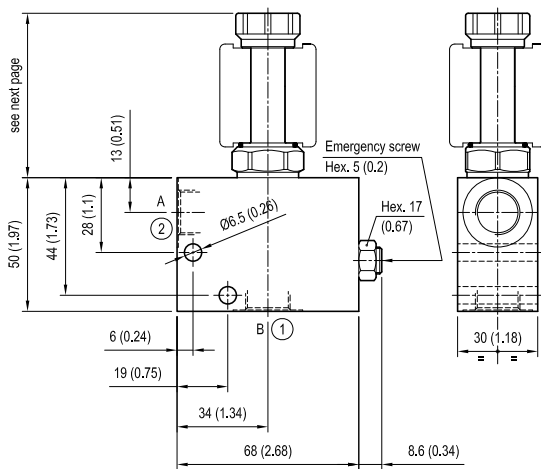
2-way 2-positions, normally closed

Common cavity size 08
in emergency manifold

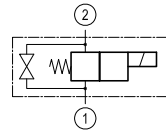
VED-CE-7A/8I-06

OE.11 - K - 18 - Y - Z - W

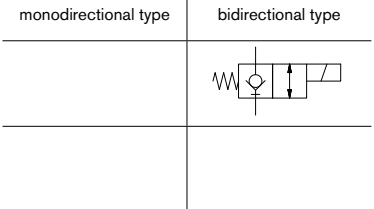
Dimensions



[mm (inches)]



Cartridge schemes

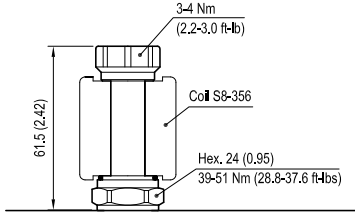


Technical data

Max flow:	up to 1,5 l/min	(0,4 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

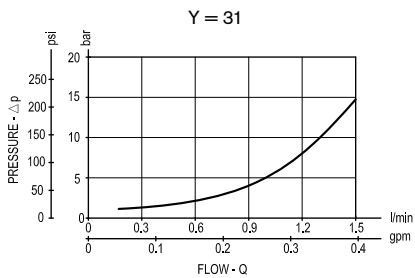


[mm (inches)]

CARTRIDGE TECHNICAL DATA
Common cavity: CA-08A-2N
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted

	OE11	- K -		18	- Y -			- Z -		- W -		CARTRIDGE SCHEME	
		monodir.	bidir.		Rated Flow			Ports size 1-2		Material		monodir.	bidir.
					1.5 l/min (0.4 gpm)	15 l/min (4 gpm)	25 l/min (7 gpm)	G 1/4	G 3/8	Aluminium	Steel		
	OD11		01	18	31			09	02	00	S0		
CARTRIDGE CODE													

Performance graph



Solenoid operated valves

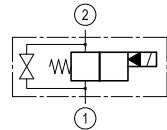
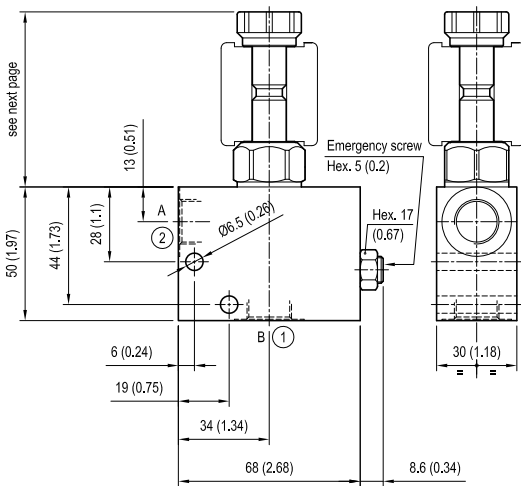
2-way 2-positions, normally closed

Common cavity size 08
in emergency manifold

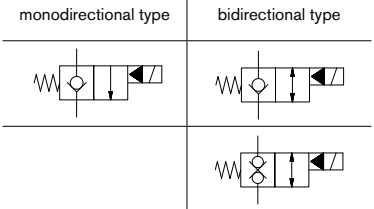
VEI-CE-8A/8I-06

OE.15 - K - 18 - Y - Z - W

Dimensions



Cartridge schemes



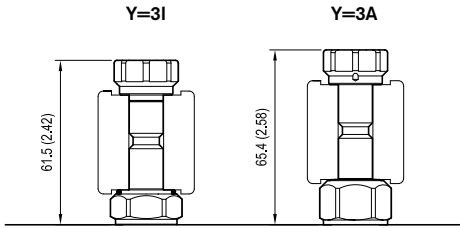
[mm (inches)]

Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

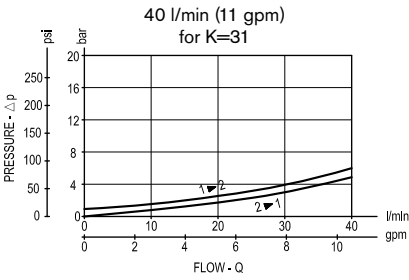
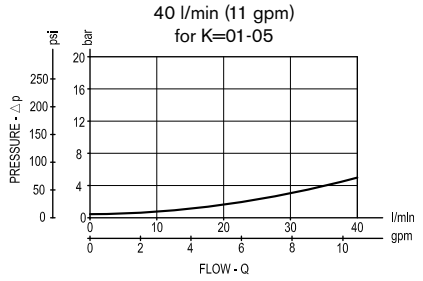
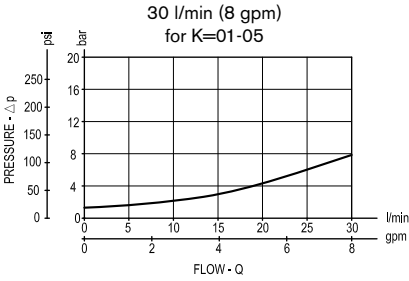


[mm (inches)]

CARTRIDGE TECHNICAL DATA
Common cavity: CA-08A-2N
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : S8-356 must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted
For other details see cartridge data sheet

OE15	- K -		18	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.		Rated Flow		Ports size		Material		monodir.	bidir.
				30 l/min (8 gpm)	40 l/min (11 gpm)	G 1/4	G 3/8	Aluminium	Steel		
OD15	01	05	18	3I	3A	09	02	00	S0		
OD15		31	18		3A	09	02	00	S0		

Performance graph



Ordering code

OE.15	K	18	Y	Z	W
-------	---	----	---	---	---

Solenoid operated valve,
2-way 2-positions, normally closed
in emergency manifold

Cartridge scheme (see page 1 and 2)

= 01 Monodirectional

= 05 Bidirectional

= 31

Common cavity size 08

Manifold material

= 00 Aluminium

= S0 Steel

Port sizes (see table on page 2)

= 09 G 1/4

= 02 G 3/8

See table on page 2

Preferred types (readily available)

Type	Material number
OE1501183A0200	R934001571
OE1501183I0200	R934001572
OE1501183I0900	R934001573

Type	Material number

Further types available by request

Solenoid operated valves

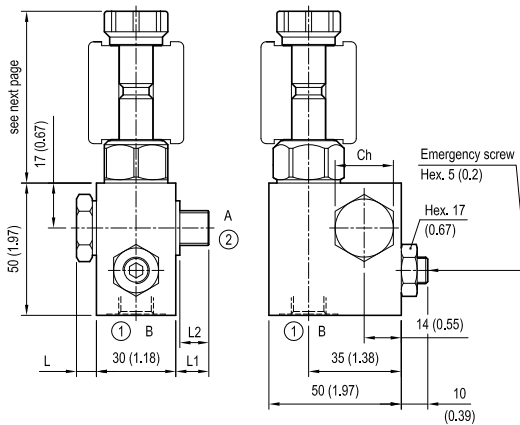
2-way 2-positions

Common cavity size 08
in emergency manifold

VEI-CN-8A/8I-06

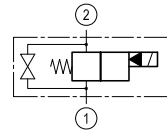
OE.17 - K - 18 - Y - Z - W

Dimensions



[mm (inches)]

7.5 (0.3)	14 (0.55)	10.9 (0.43)	22 (0.87)			G 1/4	30 (22)
8.5 (0.34)	15 (0.59)	11.9 (0.47)	22 (0.87)			G 3/8	60 (44)
L	L1	L2	Ch			Ports Size	Tightening Torque Nm (ft-lb)



Cartridge schemes

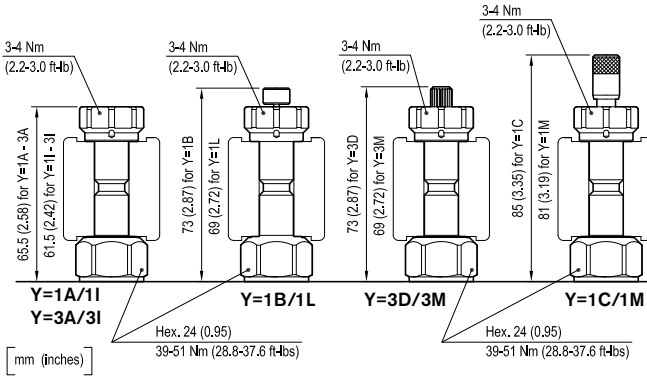
monidirectional type	bidirectional type

Technical data

Max flow:	up to 40 l/min	(11 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

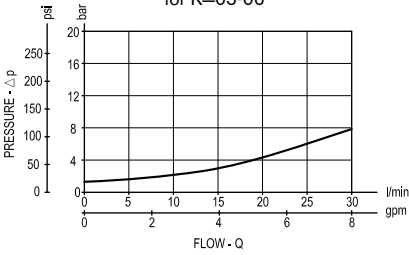


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately see data sheet RE18325-90	
Mounting position: unrestricted	
For other details see cartridge data sheet	

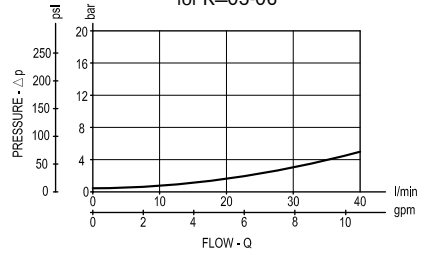
OE17	- K -		18	- Y -		- Z -		- W -		CARTRIDGE SCHEME	
	monodir.	bidir.		Rated Flow		Ports size 1-2		Material		monodir.	bidir.
				30 l/min (8 gpm)	40 l/min (11 gpm)	G 1/4	G 3/8	Aluminium	Steel		
CARTRIDGE CODE	OD15	05	18	3I	3A	09	02	00	S0		
	OD15	05	18	3M	3D	09	02	00	S0		
	OD15	06	18	1I	1A	09	02	00	S0		
	OD15	06	18	1L	1B	09	02	00	S0		
	OD15	06	18	1M	1C	09	02	00	S0		
	OD15	31	18		3A	09	02	00	S0		
	OD15	31	18		3D	09	02	00	S0		
	OD15	32	18		1A	09	02	00	S0		
	OD15	32	18		1B	09	02	00	S0		
	OD15	32	18		1C	09	02	00	S0		

Performance graphs

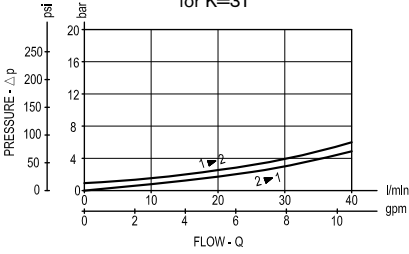
30 l/min (8 gpm)
for K=05-06



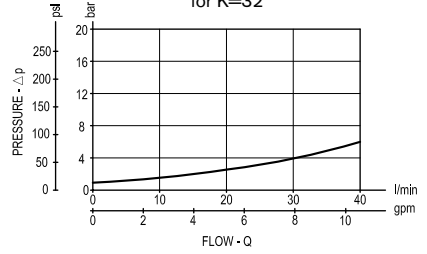
40 l/min (11 gpm)
for K=05-06



40 l/min (11 gpm)
for K=31



40 l/min (11 gpm)
for K=32



Ordering code

OE.17	K	18	Y	Z	W
--------------	----------	-----------	----------	----------	----------

Solenoid operated valves,
2-way 2-positions
in emergency manifold

Cartridge scheme (see page 1 and 2)

- | | |
|------|---------------|
| = 05 | |
| = 06 | Bidirectional |
| = 31 | |
| = 32 | |

Common cavity Size 08

Manifold material

- | | |
|------|-----------|
| = 00 | Aluminium |
| = S0 | Steel |

Port sizes (see table on page 2)

- | | |
|------|-------|
| = 09 | G 1/4 |
| = 02 | G 3/8 |

See table on page 2

Preferred types (readily available)

Type	Material number
OE1705183A0200	R934001669
OE1705183A0900	R934001670
OE1705183I0200	R934001672
OE1731183A0200	R934001674
OE1732181A0200	R934001676

Type	Material number

Further types available by request

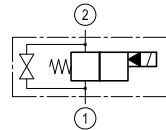
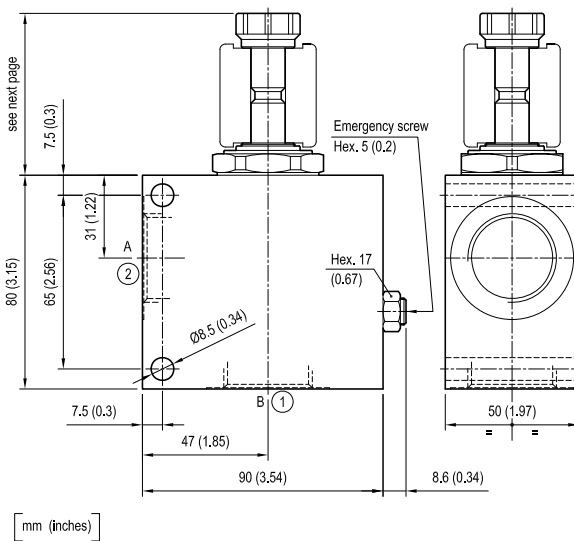
Solenoid operated valves 2-way 2-positions, normally closed

Special cavity
in emergency manifold

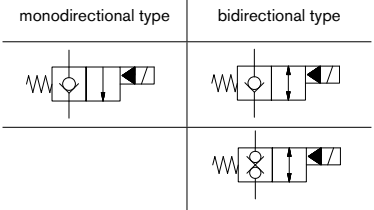
VEI-CE-8A-12

OE.15 - K - 21 - Y - Z - W

Dimensions



Cartridge schemes

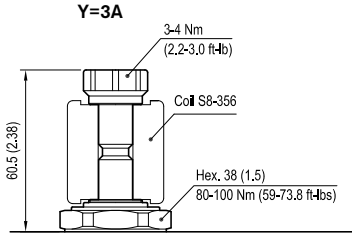


Technical data

Max flow:	up to 150 l/min	(40 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions



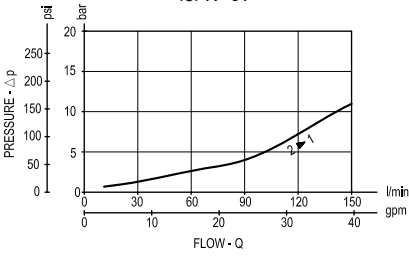
[mm (inches)]

CARTRIDGE TECHNICAL DATA
Special cavity: 021-E
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted
For other details see cartridge data sheet

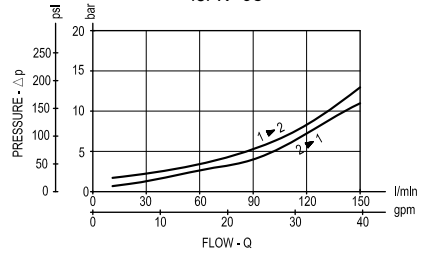
CARTRIDGE CODE	OE15	- K -		21	- Y - Rated Flow 150 l/min (40 gpm)	- Z - Ports size 1-2		- W - Material		CARTRIDGE SCHEME	
		monodir.	bidir.			G 3/4	G 1	Aluminium	Steel	monodir.	bidir.
	OD15	01	05	21	3A	04	05	00	S0		
	OD15		31	21	3A	04	05	00	S0		

Performance graphs

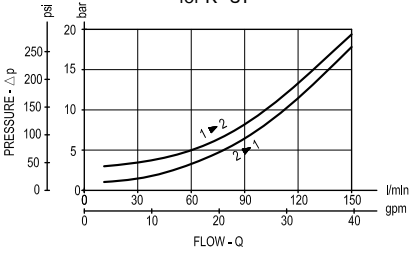
for K=01



for K=05



for K=31

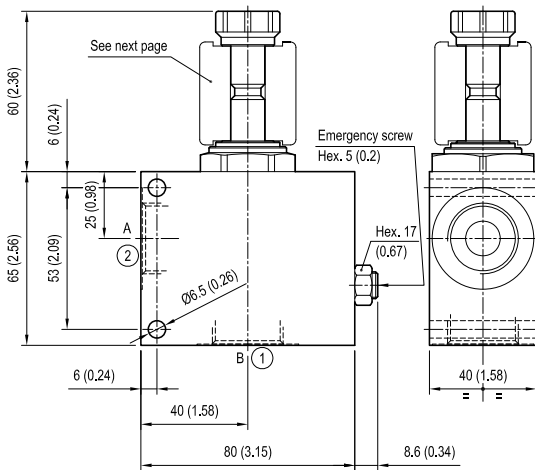


Solenoid operated valves
2-way 2-positions, normally closed
Special cavity
in emergency manifold

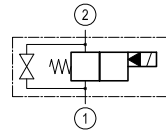
VEI-CE-8A-09

OE.15 - K - 17 - Y - Z - W

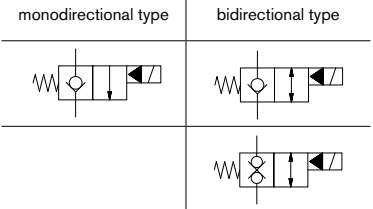
Dimensions



[mm (inches)]



Cartridge schemes

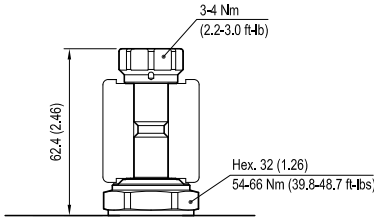


Technical data

Max flow:	up to 70 l/min	(19 gpm)
Max operating pressure for steel body:	350 bar	(5000 psi)
Max operating pressure for aluminium body:	210 bar	(3000 psi)

To order only manifold see data sheet RE 18325-85

Dimensions

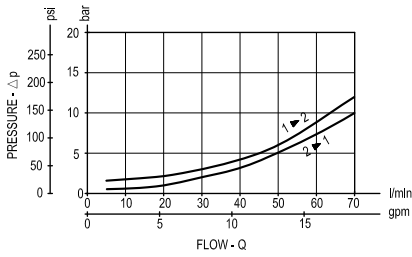


[mm (inches)]

CARTRIDGE TECHNICAL DATA
Special cavity: 017-E
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil : S8-356 must be ordered separately see data sheet RE 18325-90
Mounting position: unrestricted
For other details see cartridge data sheet

CARTRIDGE CODE	OE15	- K -		17	- Y - Rated Flow 70 l/min (19 gpm)	- Z - Ports size 1-2		- W - Material		CARTRIDGE SCHEME	
		monodir.	bidir.			G 1/2	G 3/4	Aluminium	Steel	monodir.	bidir.
	OD15	01	05	17	3A	03	04	00	S0		
	OD15		31	17	3A	03	04	00	S0		

Performance graph



Standard Multi-Function Manifolds

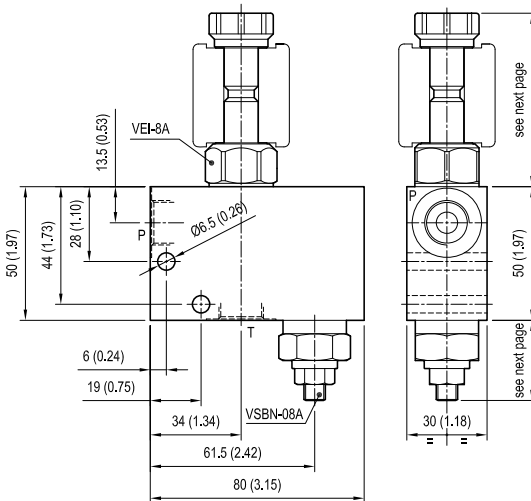
Designation	Description	Code	Data sheet	Pages
Relief valve with solenoid by-pass	VEI8A-VSBN-08A	OLKYZW00_19_20_VSBN	RE 18332-40	1457
Relief valve with solenoid by-pass	VEI8A-VS30	OLKYZW00_19_20_VS30	RE 18332-41	1461
Solenoid operated ventable relief valve	VSP-19-VEI8A	OLKYZW00_27_28	RE 18332-42	1465
Solenoid operated ventable relief valve	VSP-25-VEI8A	OLKYZW00_29_30	RE 18332-43	1469
Standard integrated circuits for single-acting cylinder	VEI8A-VU-VS-ST-06	OLKYZW00_51_52_ST-06	RE 18332-44	1473
Standard integrated circuits for single-acting cylinder	VEI-VCDCBL-8A-06	OL17K18YZW	RE 18332-45	1477

Standard integrated circuits relief valve with solenoid by-pass

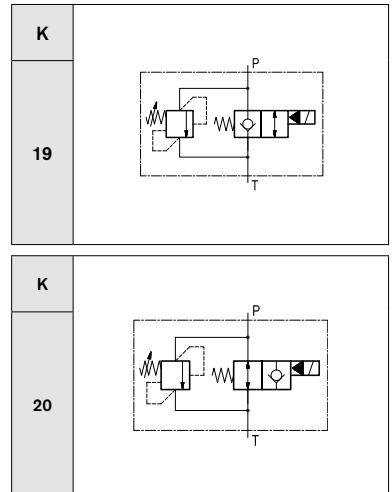
VEI8A-VSBN-08A

OL - K - Y - Z - W - 00

Dimensions



[mm (inches)]



Technical data

Max flow: up to 20 l/min (5 gpm)

Max operating pressure: 210 bar (3000 psi)

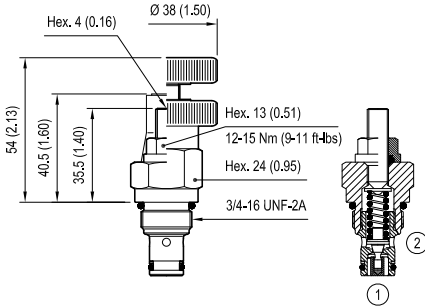
Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 0.5 kg (1.1 lbs)

These integrated circuit contains one relief valve type VSBN-08A operating from P to T and one solenoid valve type VEI-8A (see next page).

VSBN-08A Cartridge valve (code 04.11.49.X.56.Z)



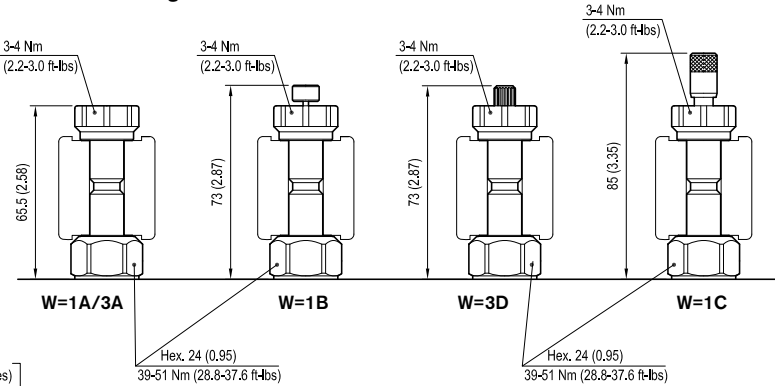
[mm (inches)]

Z		VSBN-08A SETTING		
		Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	04	35-140 (500-2000)	50 (725)	100 (1450)
	07	105-210 (1500-3000)	79 (1145)	200 (2900)
	10	175-350 (2500-5000)	170 (2465)	350 (5000)
	08	35-350 (500-5000)	72 (1044)	200 (2900)

ADJUSTMENTS	OPTIONS
Leakproof hex. socket screw	 Ordering code 11.04.23.002
Handknob and locknut	

VSBN-08A TECHNICAL DATA
See table "Z", for other details see data sheet RE 18318-04

VEI-8A Solenoid cartridge valve (code OD.15.K.18...)

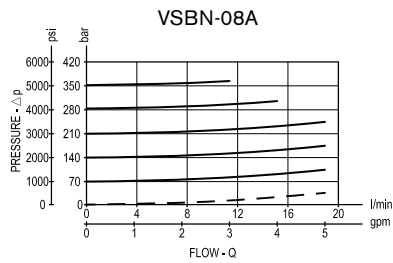
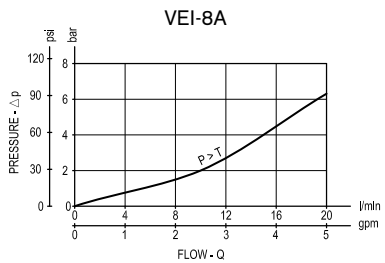


[mm (inches)]

W	MANUAL OVERRIDE OPTIONS	
	K = 19	K = 20
1A	/	No override
1B	/	Push style
1C	/	Push and twist style
3A	No override	/
3D	Knob style	/

VEI-8A TECHNICAL DATA		
Internal leakage:	max. 1cm ³ /min	(0.06 inch ³ /min)
Filtration:	25 µm nominal or better	
Minimum voltage required:	90% of nominal value	
Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)	
For other details see cartridge data sheet		

Performance graphs



Ordering code

OL	K	Y	Z	W	00
-----------	----------	----------	----------	----------	-----------

Solenoid operated valves
standard integrated circuits
relief valve with solenoid by-pass

Hydraulic schemes (see page 1)

Port sizes	P - T	
= 09	G 1/4	
= 02	G 3/8	

Manual override options
(see table on page 2)

VSBN-80A setting
(see table on page 2)

Preferred types (readily available)

Type	Material number
OL1909043A0000	R934002544
OL1909073A0000	R934002545
OL1909103A0000	R934002546
OL1902043A0000	R934002529
OL1902073A0000	R934002530
OL1902073D0000	R934003301
OL1902103A0000	R934002532
OL2009041A0000	R934002560
OL2009041B0000	R934002561
OL2009071A0000	R934002563
OL2009071C0000	R934002565
OL2009101A0000	R934002567
OL2002041A0000	R934002547
OL2002041B0000	R934002548
OL2002071A0000	R934002549

Type	Material number
OL2002071C0000	R934002550
OL2002101A0000	R934002551

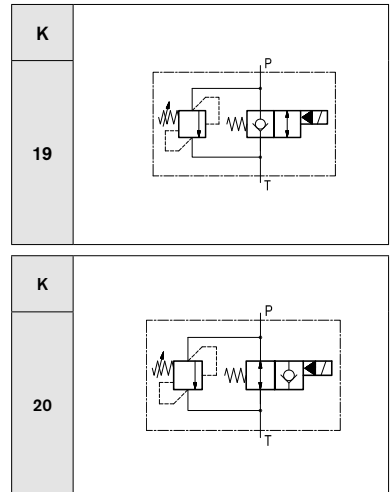
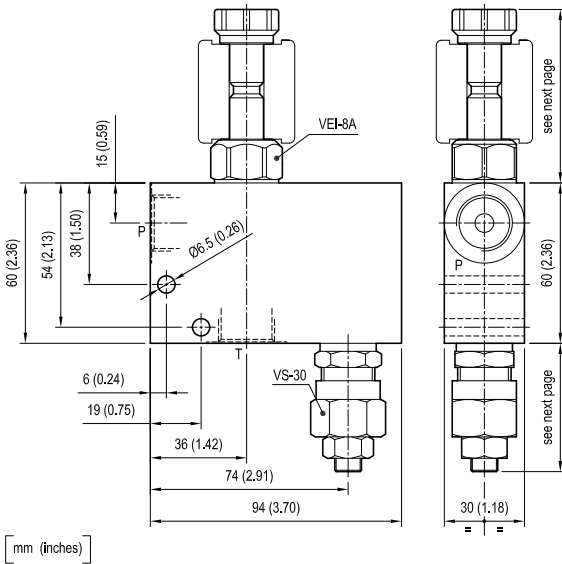
Further types available by request

Standard integrated circuits relief valve with solenoid by-pass

VEI8A-VS30

OL - K - Y - Z - W - 00

Dimensions



Technical data

Max flow: up to 30 l/min (8 gpm)

Max operating pressure: 210 bar (3000 psi)

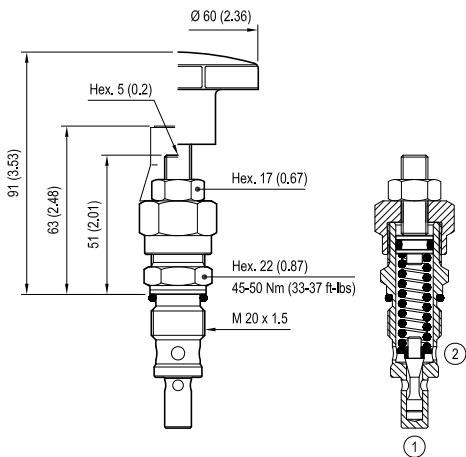
Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 0.65 kg (1.4 lbs)

These integrated circuit contains one relief valve type VS-30 operating from P to T and one solenoid valve type VEI-8A (see next page).

VS-30 Cartridge valve (code 04.11.18.X.99.Z)



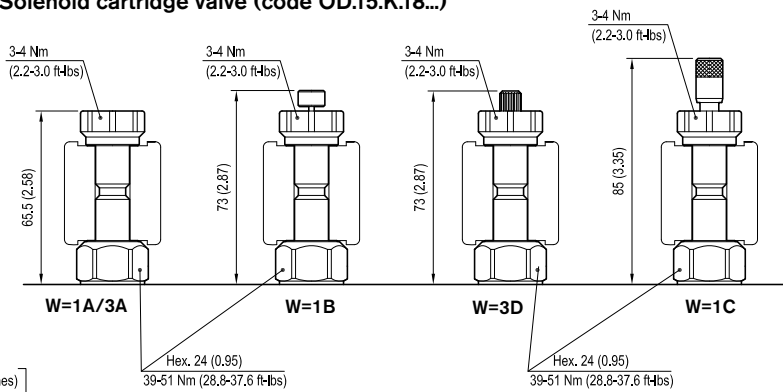
[mm (inches)]

Z	VS-30 SETTING		
	Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	04	30-100 (435-1450)	24 (348)
	07	50-210 (725-3000)	47 (682)
	10	100-350 (1450-5000)	82 (1189)
	05	30-100 (435-1450)	24 (348)
	08	50-210 (725-3000)	47 (682)
	11	100-350 (1450-5000)	82 (1189)

ADJUSTMENTS	OPTIONS
Leakproof hex. socket screw	 Tamper resistant cap 11.04.23.003
Handknob and locknut	

VS-30 TECHNICAL DATA
See table "Z", for other details see data sheet RE 18318-23

VEI-8A Solenoid cartridge valve (code OD.15.K.18...)

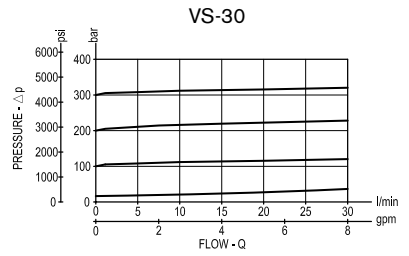
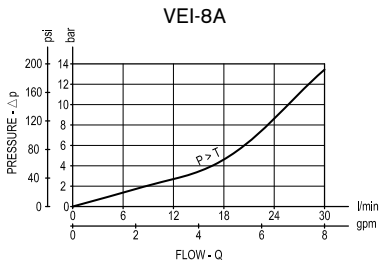


[mm (inches)]

W	MANUAL OVERRIDE OPTIONS	
	K = 19	K = 20
1A	/	No override
1B	/	Push style
1C	/	Push and twist style
3A	No override	/
3D	Knob style	/

VEI-8A TECHNICAL DATA	
Internal leakage:	max. 1cm ³ /min (0.06 inch ³ /min)
Filtration:	25 μ m nominal or better
Minimum voltage required:	90% of nominal value
Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)
For other details see cartridge data sheet	

Performance graphs



Ordering code

OL	K	Y	Z	W	00
-----------	----------	----------	----------	----------	-----------

Solenoid operated valves
standard integrated circuits
relief valve with solenoid by-pass

Hydraulic schemes (see page 1)

Manual override options
(see table on page 2)

Port sizes	P - T
= 03	G 1/2

VS-30 setting
(see table on page 2)

Preferred types (readily available)

Type	Material number
OL1903043A0000	R934002533
OL1903073A0000	R901208390
OL1903103A0000	R934002538
OL1903113D0000	R934002543
OL2003041A0000	R934002552
OL2003071A0000	R934002554
OL2003071B0000	R934002555
OL2003071C0000	R934002556
OL2003081B0000	R934002557
OL2003101A0000	R934002558
OL2003101C0000	R934002559

Type	Material number

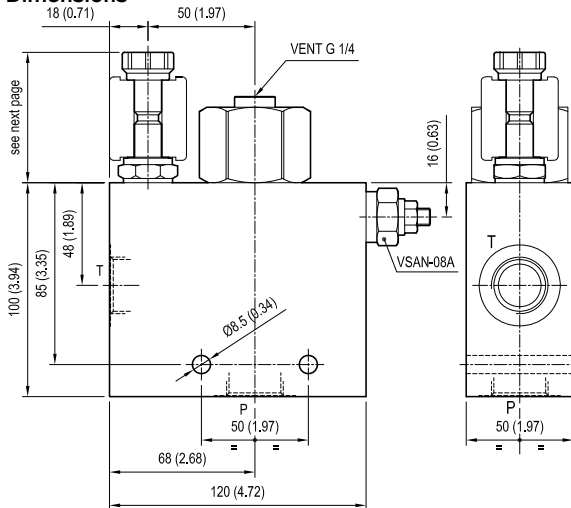
Further types available by request

Standard integrated circuits solenoid operated ventable relief valve

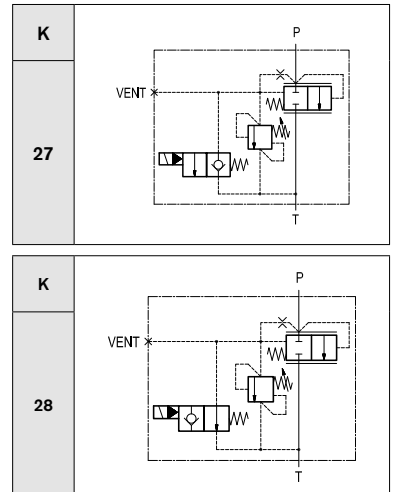
VSP-19-VEI8A

OL - K - Y - Z - W - 00

Dimensions



[mm (inches)]



Technical data

Max flow: up to 200 l/min (53 gpm)

Max operating pressure: 210 bar (3000 psi)

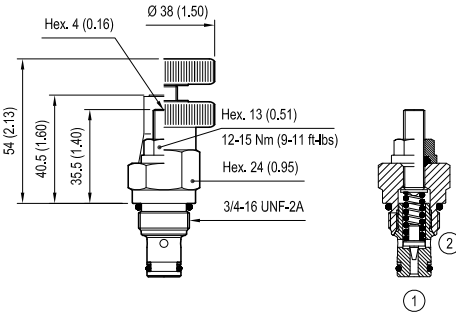
Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 1.3 kg (2.9 lbs)

These integrated circuit contains one relief valve type VSAN-08A operating from P to T and one solenoid valve type VEI-8A (see next page).

VSAN-08A Cartridge valve (code 04.11.48.X.56.Z)



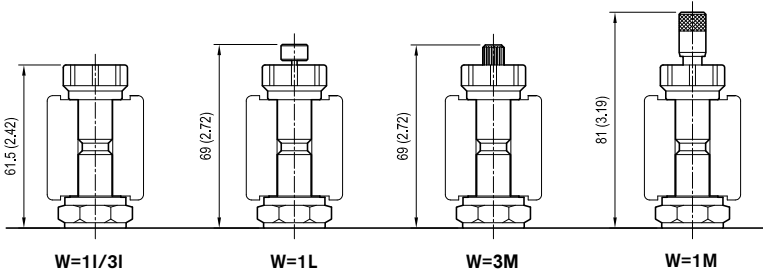
Z		VSAN-08A SETTING		
		Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	01	35-140 (500-2000)	48 (696)	100 (1450)
	04	105-210 (1500-3000)	88 (1276)	200 (2900)
	07	140-420 (2000-6000)	140 (2030)	350 (5000)
	08	35-350 (500-5000)	68 (986)	350 (5000)

ADJUSTMENTS	OPTIONS
Leakproof hex. socket screw	 Ordering code 11.04.23.002
Handknob and locknut	

VSAN-08A TECHNICAL DATA
See table "Z", for other details see data sheet RE 18318-01

[mm (inches)]

VEI-8A Solenoid cartridge valve (code OD.15.K.18...)

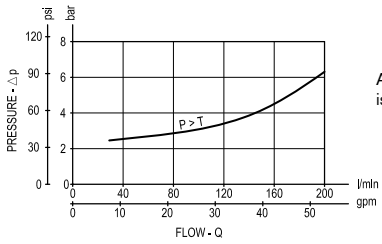


[mm (inches)]

W	MANUAL OVERRIDE OPTIONS	
	K = 27	K = 28
1I	/	No override
1L	/	Push style
1M	/	Push and twist style
3I	No override	/
3M	Knob style	/

VEI-8A TECHNICAL DATA	
Internal leakage:	100 cm ³ /min (0.06 inch ³ /min)
Filtration:	25 µm nominal or better
Minimum voltage required:	90% of nominal value
Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)
For other details see cartridge data sheet	

Performance graph



A pressure of approximately 2 bar (29 psi) is required to open the main poppet.

Ordering code

OL	K	Y	Z	W	00
----	---	---	---	---	----

Solenoid operated valves
 standard integrated circuits
 solenoid operated ventable
 relief valve

Hydraulic schemes (see page 1)

Manual override options
 (see table on page 2)

Port sizes	P - T
= 04	G 3/4
= 05	G 1

VSAN-80A setting
 (see table on page 2)

Preferred types (readily available)

Type	Material number
OL2704073I00S0	R934001289
OL2804011I0000	R934002573
OL2804041I0000	R934002578
OL2804041L0000	R934002579
OL2804041M0000	R934003303
OL2804071I0000	R934002586
OL2804071M0000	R934002588
OL2805011L0000	R934002590
OL2805041I0000	R934002594
OL2805041L0000	R934002595
OL2805041M0000	R934002596
OL2805071I0000	R934002600
OL2805081L0000	R934002601

Type	Material number
OL2805071A0000	R934002599

Further types available by request

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 integrated-circuits@oilcontrol.com
 www.boschrexroth.com

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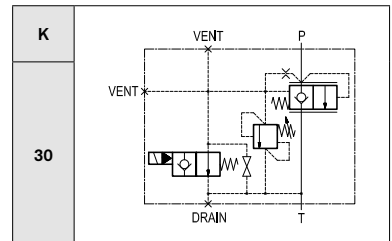
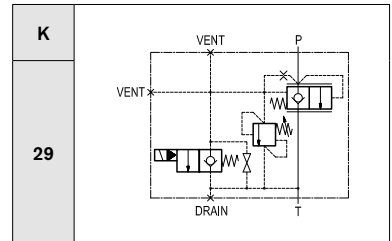
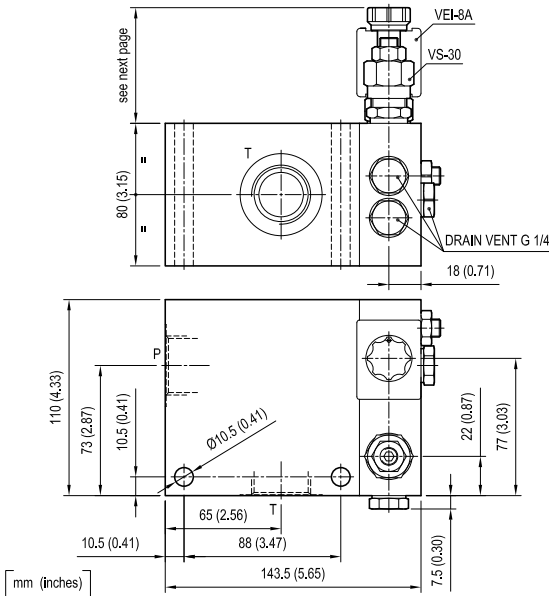
Subject to change.

Standard integrated circuits solenoid operated ventable relief valve

VSP-25-VEI8A

OL - K - Y - Z - W - 00

Dimensions



Technical data

Max flow: up to 300 l/min (80 gpm)

Max operating pressure: 210 bar (3000 psi)

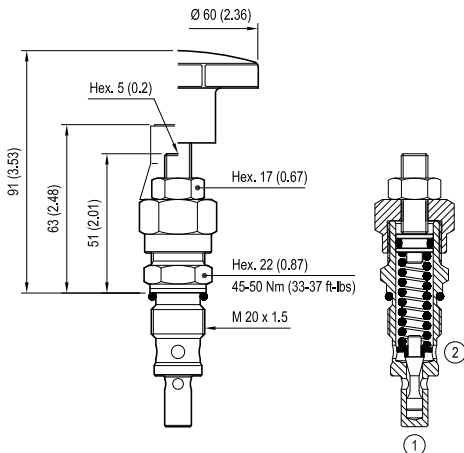
Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 3.2 kg (7.1 lbs)

These integrated circuit contains one relief valve type VS-30 operating from P to T and one solenoid valve type VEI-8A (see next page).

VS30 Cartridge valve (code 04.11.18.X.99.Z)



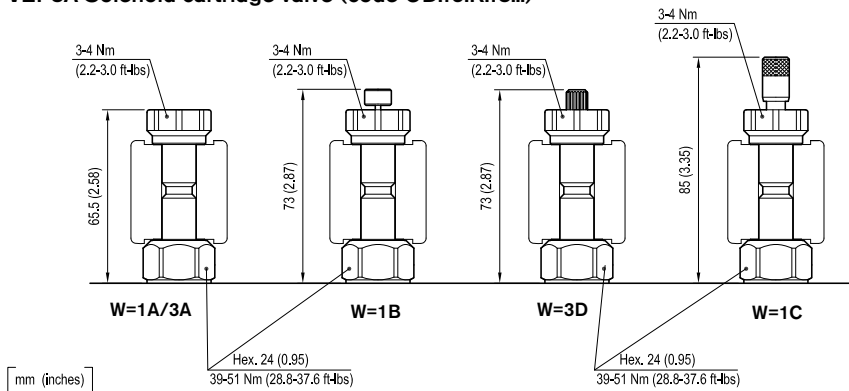
[mm (inches)]

Z		VS-30 SETTING		
		Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	01	5-50 (75-725)	12 (174)	50 (725)
	04	30-100 (435-1450)	24 (348)	100 (1450)
	07	50-210 (725-3000)	47 (682)	200 (2900)
	10	100-350 (1450-5000)	82 (1189)	350 (5000)
	02	5-50 (75-725)	12 (174)	50 (725)
	05	30-100 (435-1450)	24 (348)	100 (1450)
	08	50-210 (725-3000)	47 (682)	200 (2900)
	11	100-350 (1450-5000)	82 (1189)	350 (5000)

ADJUSTMENTS		OPTIONS
Leakproof hex. socket screw		 Tamper resistant cap 11.04.23.003
Handknob and locknut		

VS-30 TECHNICAL DATA
See table "Z", for other details see data sheet RE 18318-23

VEI-8A Solenoid cartridge valve (code OD.15.K.18...)

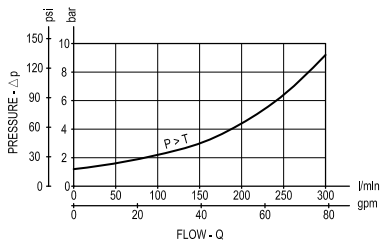


[mm (inches)]

W	MANUAL OVERRIDE OPTIONS	
	K = 29	K = 30
1A	/	No override
1B	/	Push style
1C	/	Push and twist style
3A	No override	/
3D	Knob style	/

VEI-8A TECHNICAL DATA		
Internal leakage:	max. 1cm ³ /min	(0.06 inch ³ /min)
Filtration:	25 μ m nominal or better	
Minimum voltage required:	90% of nominal value	
Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)	
For other details see cartridge data sheet		

Performance graph



Ordering code

OL	K	Y	Z	W	00
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Solenoid operated valves
standard integrated circuits
solenoid operated ventable
relief valve

Hydraulic schemes (see page 1)

Manual override options
(see table on page 2)

Port sizes	P - T	
= 05	G 1	
= 06	G 1-1/4	

VS-30 setting
(see table on page 2)

Preferred types (readily available)

Type	Material number
OL2906073A0000	R934002602
OL3006071A0000	R934002604
OL3006071B0000	R934002605
OL3006101A0000	R934002607
OL3006101B0000	R934002608

Type	Material number

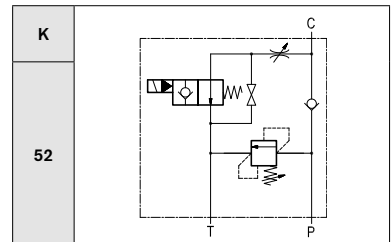
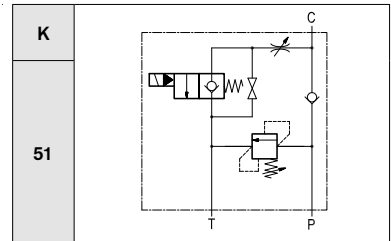
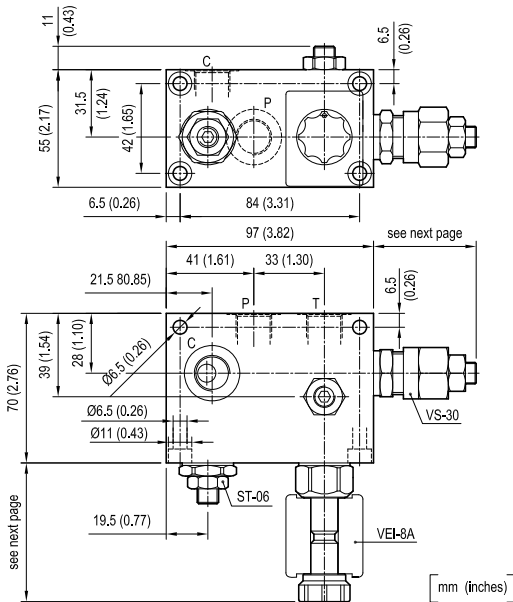
Further types available by request

Standard integrated circuits for single-acting cylinder

VEI8A-VU-VS-ST-06

OL - K - Y - Z - W - 00

Dimensions



Technical data

Max flow: up to 25 l/min (7 gpm)

Max operating pressure: 210 bar (3000 psi)

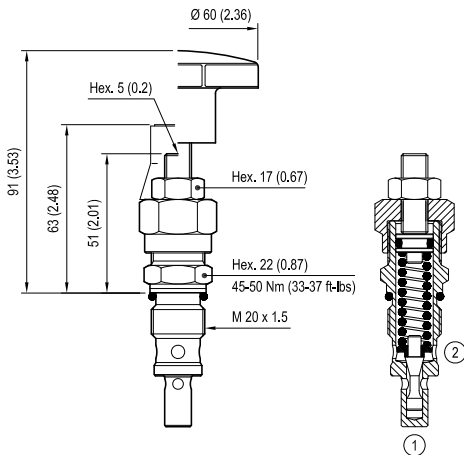
Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 1.3 kg (2.9 lbs)

These integrated circuit contains one relief valve type VS-30 operating from P to T and one solenoid valve type VEI-8A (see next page).

VS30 Cartridge valve (code 04.11.18.X.99.Z)



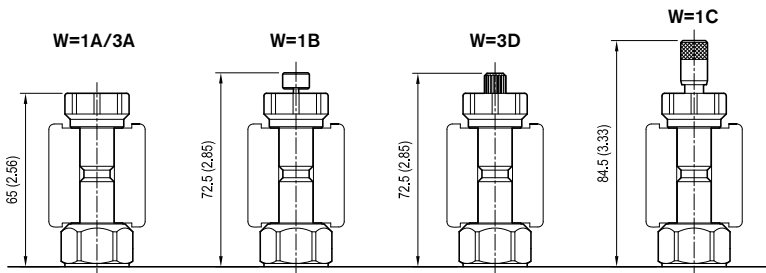
[mm (inches)]

Z	VS-30 SETTING		
	Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	04 30-100 (435-1450)	24 (348)	100 (1450)
	07 50-210 (725-3000)	47 (682)	200 (2900)
	10 100-350 (1450-5000)	82 (1189)	350 (5000)
	05 30-100 (435-1450)	24 (348)	100 (1450)
	08 50-210 (725-3000)	47 (682)	200 (2900)
	11 100-350 (1450-5000)	82 (1189)	350 (5000)

ADJUSTMENTS	OPTIONS
Leakproof hex. socket screw	 Tamper resistant cap 11.04.23.003
Handknob and locknut	

VS-30 TECHNICAL DATA
See table "Z", for other details see data sheet RE 18318-23

VEI-8A Solenoid cartridge valve (code OD.15.K.18...)

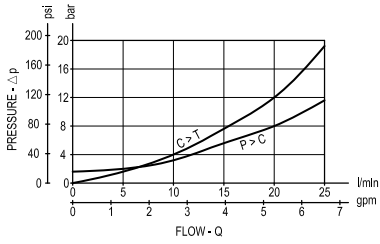


[mm (inches)]

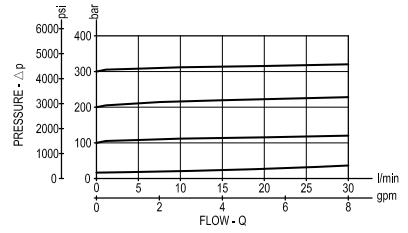
W	MANUAL OVERRIDE OPTIONS	
	K = 51	K = 52
1A	/	No override
1B	/	Push style
1C	/	Push and twist style
3A	No override	/
3D	Knob style	/

VEI-8A TECHNICAL DATA
Internal leakage: max. 1cm ³ /min (0.06 inch ³ /min)
Filtration: 25 µm nominal or better
Minimum voltage required: 90% of nominal value
Coil: S8-356 (must be ordered separately) (see data sheet RE 18325-90)
For other details see cartridge data sheet

Performance graphs



VS-30



Ordering code

OL	K	Y	Z	W	00
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Solenoid operated valves
standard integrated circuits
for single-acting cylinder

Hydraulic schemes (see page 1)

Manual override options
(see table on page 2)

Port sizes	P - T - C	
= 09	G 1/4	
= 02	G 3/8	
= 03	G 1/2	

VS-30 setting
(see table on page 2)

Preferred types (readily available)

Type	Material number
OL5109043A0000	R934002639
OL5109073A0000	R934003305
OL5109103A0000	R934003306
OL5102043A0000	R934002611
OL5102073A0000	R934002612
OL5102073D0000	R934003793
OL5102083A0000	R934000442
OL5102103A0000	R934000505
OL5103043A0000	R934002619
OL5103073A0000	R934002620
OL5103073B0000	R934002623
OL5103073D0000	R934002625
OL5103103A0000	R934002627
OL5103103B0000	R934002628
OL5103103D0000	R934003304

Type	Material number
OL5202071A0000	R934002640
OL5202101A0000	R934002641
OL5203071A0000	R934002642
OL5203071B0000	R934002643

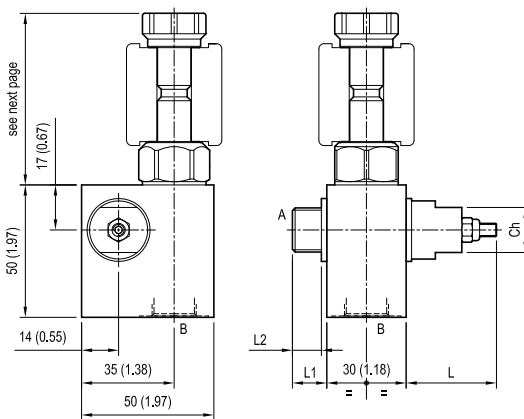
Further types available by request

Standard integrated circuits for single acting cylinder

VEI-VCDCBL-8A-06

OL.17 - K - 18 - Y - Z - W

Dimensions



[mm (inches)]

30.2 (1.19)	12.5 (0.49)	11 (0.43)	14 (0.55)			G 1/4	30 (22)
33.6 (1.32)	12.5 (0.49)	12 (0.47)	17 (0.67)			G 3/8	60 (44)
L	L1	L2	Ch			Ports Size	Tightening Torque Nm (ft-lb)

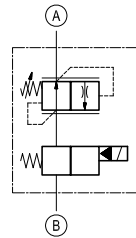
Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

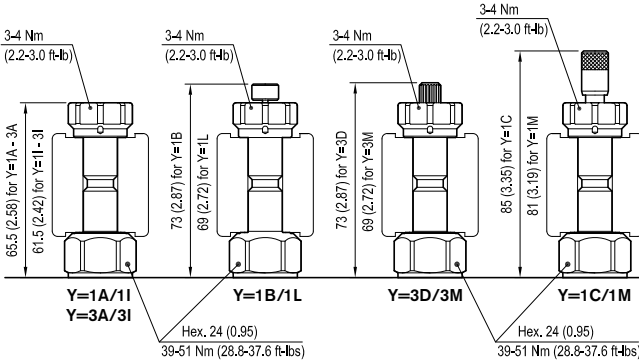
For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.



Cartridge schemes

monodirectional type	bidirectional type

Cartridge style

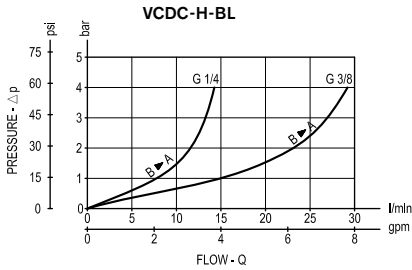
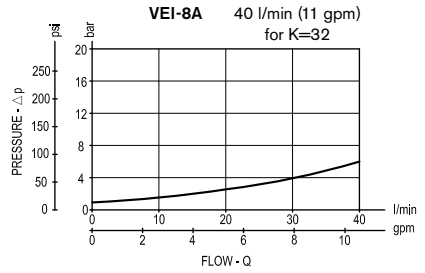
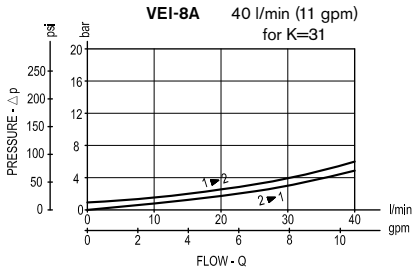
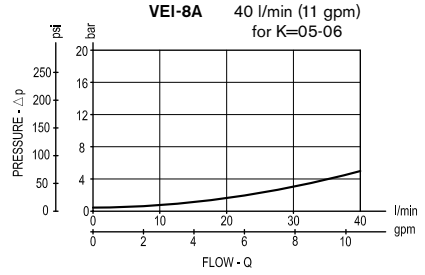
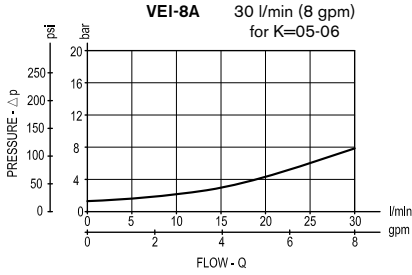


[mm (inches)]

CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately (see data sheet RE 18325-90)	
Mounting position: unrestricted	
For other details see cartridge data sheet	

CARTRIDGE CODE	OL17		- K -		18	- Y -		- Z -		CARTRIDGE SCHEME	- W -	REGULATED FLOW RANGE A > B l/min (gpm/min)	
	monodir.	bidir.	30 l/min (8 gpm)	40 l/min (11 gpm)		G 1/4	G 3/8	G 1/4	G 3/8				
	bidir.												
OD15		05	18	3I	3A	09	02			02	1-1.6 (0.26-0.42)	/	
OD15		05	18	3M	3D	09	02			03	1.6-2.5 (0.42-0.66)	2-10 (0.53-2.64)	
OD15		06	18	1I	1A	09	02			04	2.5-4 (0.66-1.06)	10-16 (2.64-4.23)	
OD15		06	18	1L	1B	09	02			05	4-6.3 (1.06-1.67)	16-25 (4.23-6.61)	
OD15		06	18	1M	1C	09	02			06	6.3-10 (1.67-2.64)	/	
OD15		31	18		3A	09	02						
OD15		31	18		3D	09	02						
OD15		32	18		1A	09	02						
OD15		32	18		1B	09	02						
OD15		32	18		1C	09	02						

Performance graphs



Ordering code

OL17	K	18	Y	Z	W
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Standard integrated circuits for single acting cylinder

Regulated flow range
(see table on page 2)

Cartridge scheme (see page 1 and 2)

Port sizes (see table on page 2)

- = 05
- = 06 Bidirectional
- = 31
- = 32

- = 09 G 1/4
- = 02 G 3/8

Solenoid valve
common cavity Size 08

Rated flow (see table on page 2)

Preferred types (readily available)

Type	Material number
OL1731183D0204	R934003391

Type	Material number

Further types available by request

Sandwich Valve Modules

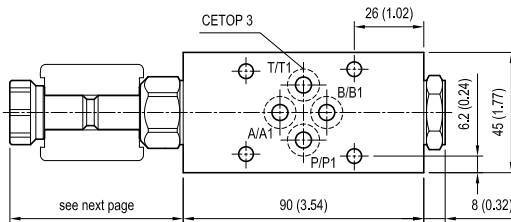
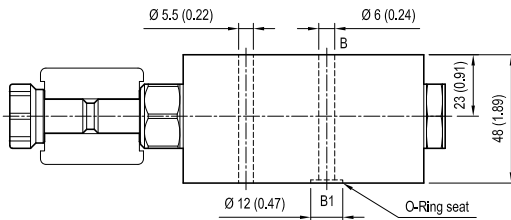
Designation	Description	Code	Data sheet	Pages
Module with solenoid valve	EM-VEI8A/8I-CETOP 3-A	OP14K1829Y	RE 18332-70	1483
Module with solenoid valve	EM-VEI8A/8I-CETOP 3-B	OP16K1829Y	RE 18332-71	1487
Module with solenoid valve	EM-VEI8A/8I-CETOP 3-A/B	OP15K1829Y	RE 18332-72	1491
Relief valve module	EM-VS30-CETOP 3	OP0101X29Z	RE 18332-73	1495
Module with relief and solenoid by-pass	EM-VEI8A/8I-VSBN-CETOP 3	OP35KX29Y	RE 18332-74	1499
Relief valve module	EM-VSBN-08A-CETOP 3	OP0201X29Z	RE 18332-75	1503
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-P1	OP63KX29Y	RE 18332-76	1507
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-A1	OP61KX29Y	RE 18332-77	1511
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-A	OP65KX29Y	RE 18332-78	1515
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-B1	OP62KX29Y	RE 18332-79	1519
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-B	OP64KX29Y	RE 18332-80	1523
Module with solenoid valve and flow restrictor	EM-VEI8A/8I-ST-CETOP 3-T	OP60KX29Y	RE 18332-81	1527

Sandwich valves, module with solenoid valve

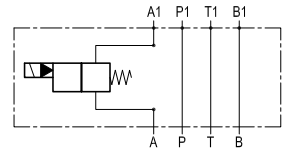
EM-VEI8A/8I-CETOP3-A

OP . 14 - K - 18 - 29 - Y

Dimensions



[mm (inches)]



Cartridge schemes

monodirectional type	bidirectional type

Technical data

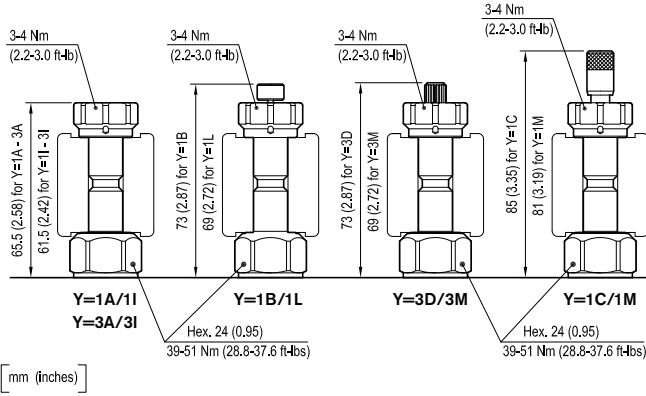
Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Dimensions



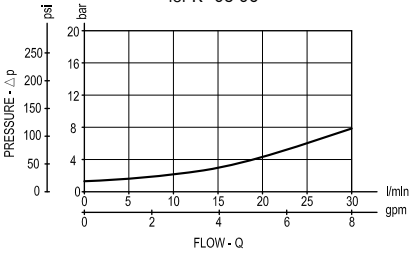
CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately (see data sheets RE 18325-90)	
Mounting position: unrestricted	
For other details see cartridge data sheet	

[mm (inches)]

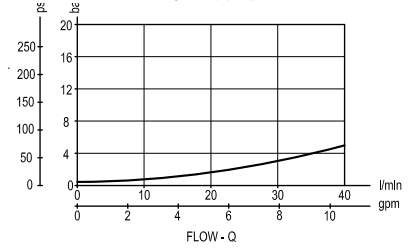
CARTRIDGE CODE	OP14	- K -		18	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15		05	18	29	3I	3A		
	OD15		05	18	29	3M	3D		
	OD15		06	18	29	1I	1A		
	OD15		06	18	29	1L	1B		
	OD15		06	18	29	1M	1C		
	OD15		31	18	29		3A		
	OD15		31	18	29		3D		
	OD15		32	18	29		1A		
	OD15		32	18	29		1B		
	OD15		32	18	29		1C		

Performance graphs

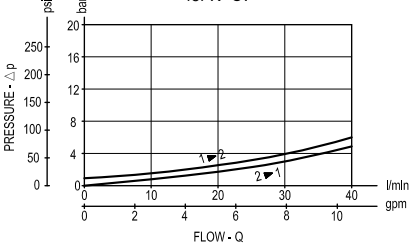
30 l/min (8 gpm)
for K=05-06



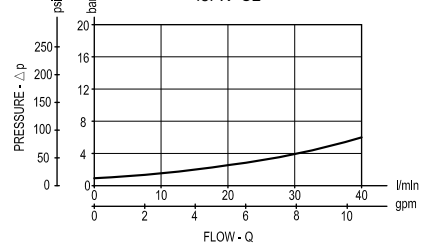
40 l/min (11 gpm)
for K=05-06



40 l/min (11 gpm)
for K=31



40 l/min (11 gpm)
for K=32



Ordering code

OP14	K	18	29	Y
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**Sandwich valves
module with solenoid valve**

Cartridge scheme (see page 1 and 2)

- = 05
- = 06 Bidirectional
- = 31
- = 32

Rated flow (see table on page 2)

Common cavity Size 08

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP140518293A00	R934002682
OP140518293D00	R934002684
OP140618291B00	R934002686
OP143118293A00	R934002687
OP143118293B00	R934002688
OP143118293C00	R934002689
OP143218291A00	R934002690

Type	Material number

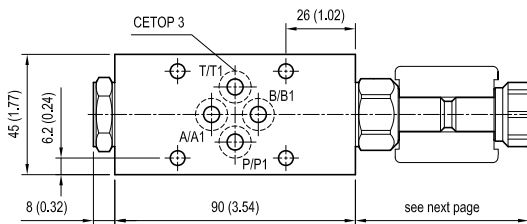
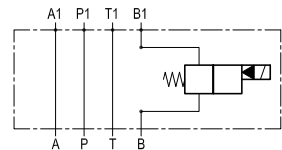
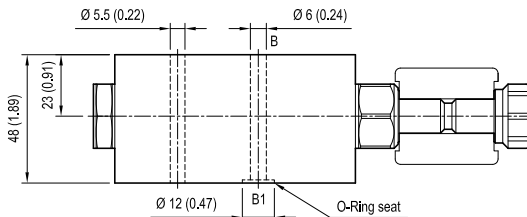
Further types available by request

Sandwich valves, module with solenoid valve

EM-VEI8A/8I-CETOP 3-B

OP:16 - K - 18 - 29 - Y

Dimensions



Cartridge schemes

monodirectional type	bidirectional type

[mm (inches)]

Technical data

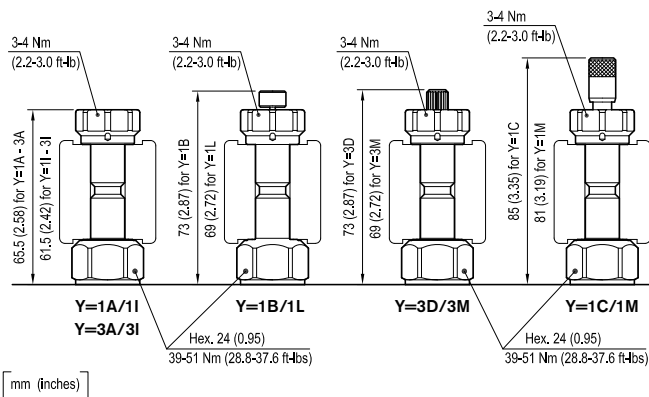
Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

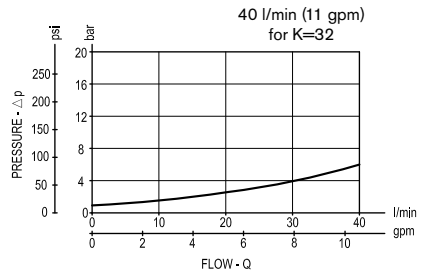
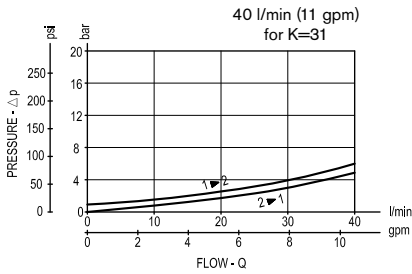
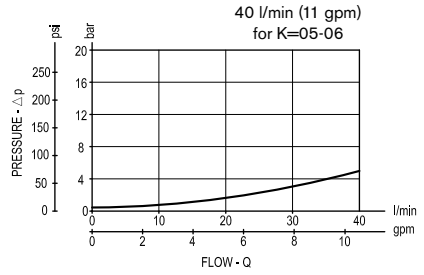
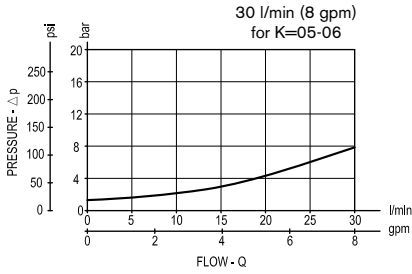
Dimensions



CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : must be ordered separately (see data sheets RE 18325-90)	
Mounting position: unrestricted	
For other details see cartridge data sheet	

CARTRIDGE CODE	OP16	- K -		18	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15		05	18	29	3I	3A		
	OD15		05	18	29	3M	3D		
	OD15		06	18	29	1I	1A		
	OD15		06	18	29	1L	1B		
	OD15		06	18	29	1M	1C		
	OD15		31	18	29		3A		
	OD15		31	18	29		3D		
	OD15		32	18	29		1A		
	OD15		32	18	29		1B		
	OD15		32	18	29		1C		

Performance graphs



Ordering code

OP16	K	18	29	Y
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**Sandwich valves
module with solenoid valve**

Cartridge scheme (see page 1 and 2)

- = 05
- = 06 Bidirectional
- = 31
- = 32

Common cavity Size 08

Rated flow (see table on page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP160518293A00	R934002701
OP160618291A00	R934003475
OP163118293A00	R934002702
OP163118293D00	R934003312
OP163218291A00	R934002704
OP163218291B00	R934003313

Type	Material number

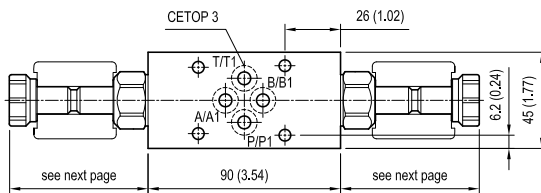
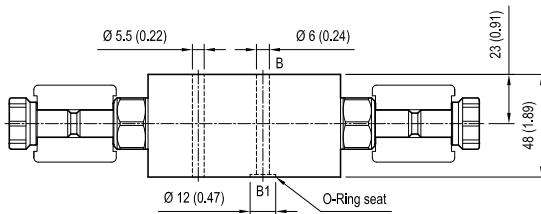
Further types available by request

Sandwich valves, module with solenoid valve

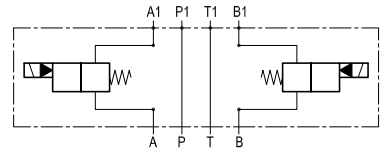
EM-VEI8A/8I-CETOP 3-A/B

OP . 15 - K - 18 - 29 - Y

Dimensions



[mm (inches)]



Cartridge schemes

monodirectional type	bidirectional type

Technical data

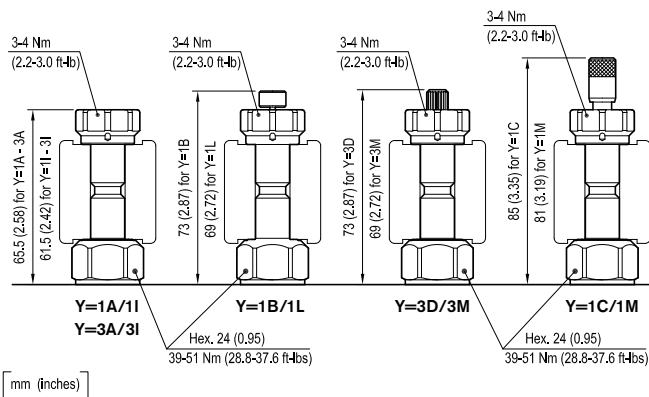
Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Dimensions

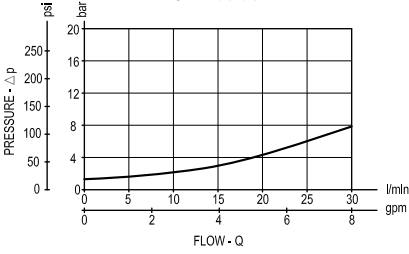


CARTRIDGE TECHNICAL DATA	
Common cavity: CA-08A-2N	
Filtration: 25 µm nominal or better	
Minimum voltage required: 90% of nominal value	
Coil : S8-356 must be ordered separately (see data sheets RE 18325-90)	
Mounting position: unrestricted	
For other details see cartridge data sheet	

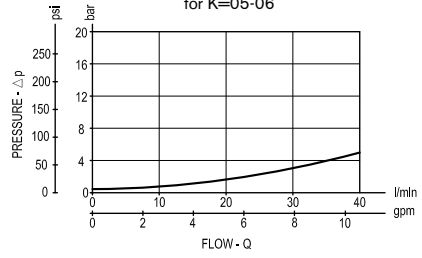
CARTRIDGE CODE	OP14	- K -		18	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15		05	18	29	3I	3A		
	OD15		05	18	29	3M	3D		
	OD15		06	18	29	1I	1A		
	OD15		06	18	29	1L	1B		
	OD15		06	18	29	1M	1C		
	OD15		31	18	29		3A		
	OD15		31	18	29		3D		
	OD15		32	18	29		1A		
	OD15		32	18	29		1B		
	OD15		32	18	29		1C		

Performance graphs

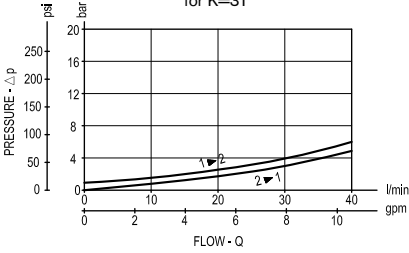
30 l/min (8 gpm)
for K=05-06



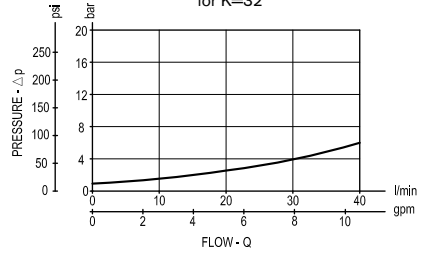
40 l/min (11 gpm)
for K=05-06



40 l/min (11 gpm)
for K=31



40 l/min (11 gpm)
for K=32



Ordering code

OP15	K	18	29	Y
------	---	----	----	---

**Sandwich valves
module with solenoid valve**

Cartridge scheme (see page 1 and 2)

= 05

= 06

= 31 Bidirectional

= 32

Rated flow (see table on page 2)

Common cavity Size 08

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP150518293A00	R934002694
OP150518293D00	R934003310
OP150618291A00	R934002695
OP153118293A00	R934002696
OP153118293D00	R934003311
OP153218291A00	R934002697
OP153218291B00	R934002698

Type	Material number

Further types available by request

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
integrated-circuits@oilcontrol.com
www.boschrexroth.com

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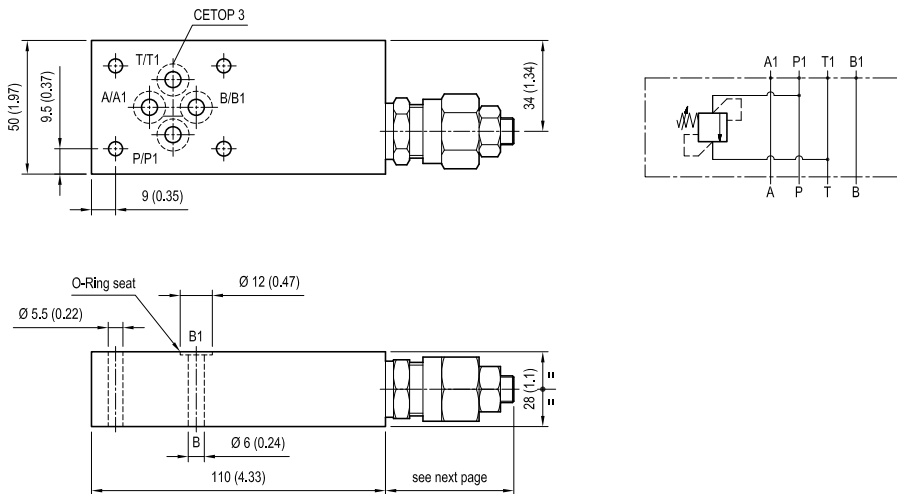
The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.
Subject to change.

Sandwich valves, relief valve module

EM-VS30-CETOP 3

OP.01.01 - X - 29 - Z

Dimensions



[mm (inches)]

Technical data

Max flow: up to 30 l/min (8 gpm)

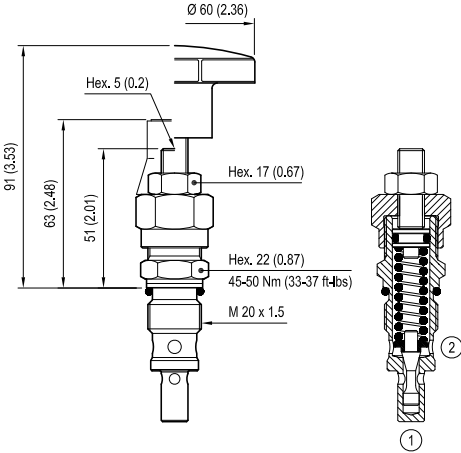
Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

Weight: 0.53 kg (1.17 lbs)

VS-30 code 04.11.18-X-99-Z



X	VS-30 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

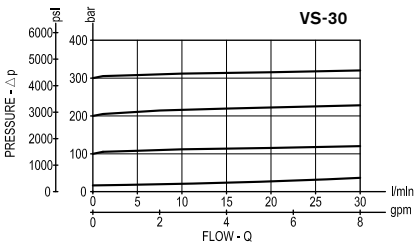
OPTIONS	
Ordering code	Description
11.04.23.003	Tamper resistant cap

For other details see data sheet RE 18318-23

[mm (inches)]

Z	SPRINGS			
	Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min	
05	5-50 (75-725)	12 (174)	50 (725)	
10	30-100 (435-1450)	24 (348)	100 (1450)	
20	50-210 (725-3000)	47 (682)	200 (2900)	
35	100-350 (1450-5000)	82 (1189)	350 (5000)	

Performance graph



Ordering code

OP.01.01	X	29	Z
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Sandwich valves relief valve module

Cartridge adjustments (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Springs (see table on page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number	Type	Material number
OP0101032910	R934002666		
OP0101032920	R934002667		
OP0101032935	R934002668		
OP0101042910	R934003308		

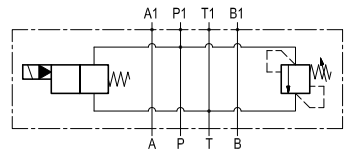
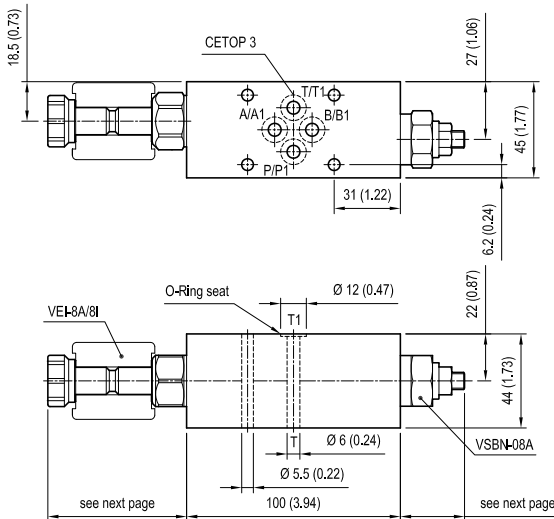
Further types available by request

Sandwich valves, module with relief valve and solenoid by-pass

EM-VEI8A/8I-VSBN-CETOP 3

OP.35 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 20 l/min (5 gpm)

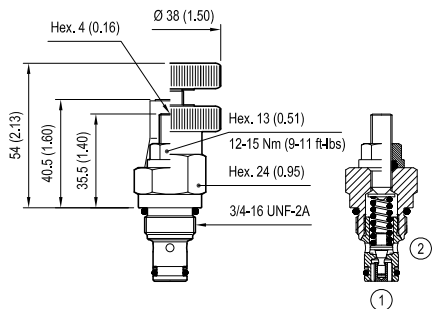
Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

[mm (inches)]

CARTRIDGE CODE	OP35	- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15	01		see next page	18	3I	3A		
	OD15	01			18	3M	3D		
	OD15	02			18	1I	1A		
	OD15	02			18	1L	1B		
	OD15	02			18	1M	1C		
	OD15	02			18				

VSBN-08A code 04.11.49-X-56-Z



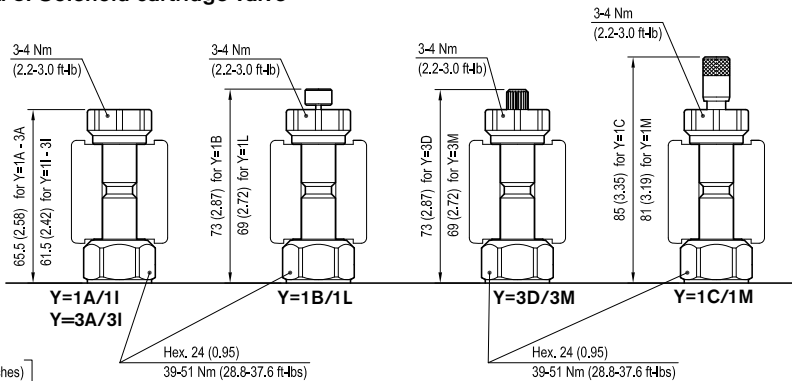
X	VSBN-08A SETTING		
	Adj. pressure range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting bar (psi) (Q=5 l/min)
	04 35-140 (500-2000)	50 (725)	100 (1450)
	07 105-210 (1500-3000)	79 (1145)	200 (2900)
	10 175-350 (2500-5000)	170 (2465)	350 (5000)
	08 35-350 (500-5000)	72 (1044)	200 (2900)

ADJUSTMENTS		OPTIONS
Leakproof hex. socket screw		 Ordering code 11.04.23.002
Handknob and locknut		

For other details see data sheet RE 18318-04

[mm (inches)]

VEI-8A/8I Solenoid cartridge valve

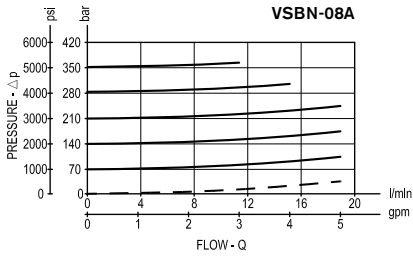
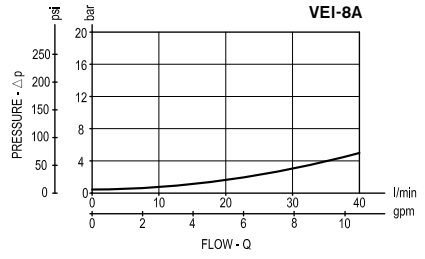
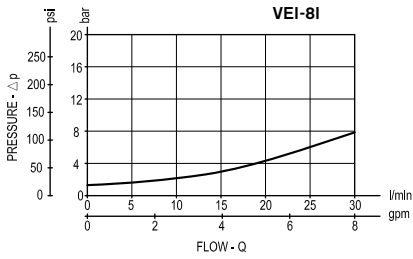


[mm (inches)]

Y	MANUAL OVERRIDE OPTIONS	
	K = 01	K = 02
1A/1I	/	No override
1B/1L	/	Push style
1C/1M	/	Push and twist style
3A/3I	No override	/
3D/3M	Knob style	/

VEI-8A TECHNICAL DATA		
Internal leakage:	max. 1cm ³ /min	(0.06 inch ³ /min)
Filtration:	25 µm nominal or better	
Minimum voltage required:	90% of nominal value	
Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)	
For other details see cartridge data sheets		

Performance graphs



Ordering code

OP.35	K	X	29	Y
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Sandwich valves
module with relief valve
and solenoid by-pass

Solenoid cartridge scheme
(see table on page 1)

VSBN-08A setting (see table on page 2)

Manual override options
(see table on page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP350110293A00	R934002715
OP350204291A00	R934002716
OP350207291A00	R934002717
OP350207291C00	R934002718
OP350210291A00	R934002719

Type	Material number

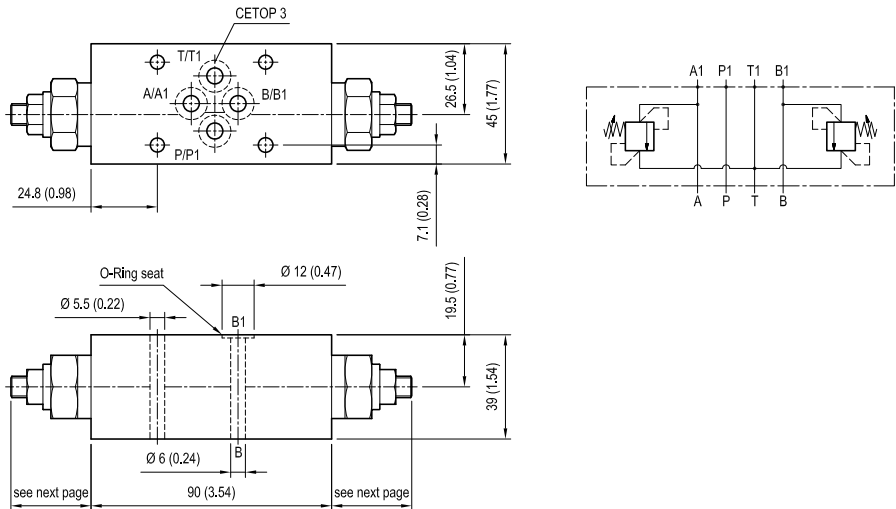
Further types available by request

Sandwich valves, relief valve module

EM-VSBN-08A-CETOP 3

OP.02.01 - X - 29 - Z

Dimensions



[mm (inches)]

Technical data

Max flow: up to 20 l/min (5 gpm)



Max operating pressure: 210 bar (3000 psi)


Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

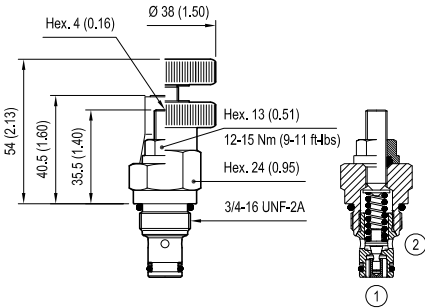
Weight: 0.53 kg (1.17 lbs)

VSBN-08A code 04.11.49-X-56-Z



X	VSBN-08A ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

OPTIONS	
Ordering code	Description
11.04.23.002	 Tamper resistant cap

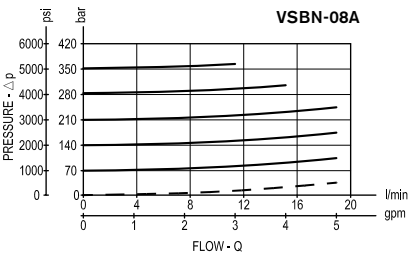
For other details see data sheet RE 18318-04



[mm (inches)]

Z		SPRINGS		
		Adjust pressure range bar (psi)	Pressure increase bar (psi)	Standard setting bar (psi) Q = 5 l/min
	04	10-70 (145-1000)	26 (375)	50 (725)
	10	35-140 (500-2000)	50 (725)	100 (1450)
	20	105-210 (1500-3000)	79 (1145)	200 (2900)
	35	175-350 (2500-5000)	170 (2465)	350 (5000)
	35	35-350 (500-5000)	72 (1044)	200 (2900)

Performance graph



Ordering code

OP.02.01	X	29	Z
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Sandwich valves
relief valve module

Cartridge adjustments (see page 2)

= 03	Leakproof hex. socket screw
= 04	Handknob and locknut

Springs (see table on page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP0201032910	R934002674
OP0201032920	R934002675
OP0201032935	R934002676

Type	Material number

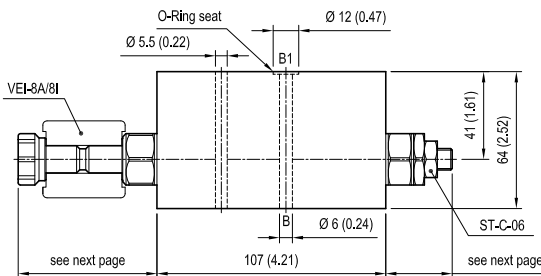
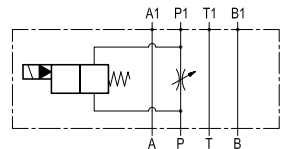
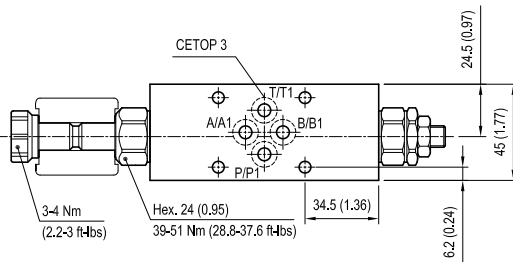
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-P1

OP . 63 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

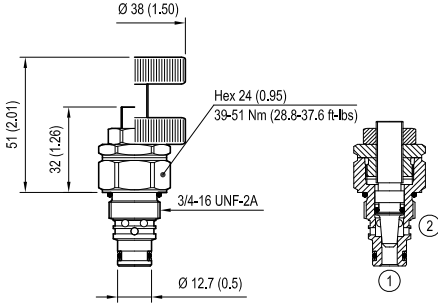
Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

[mm (inches)]

OP63		- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow			
						30 l/min (8 gpm)	40 l/min (11 gpm)	monodir.	bidir.
CARTRIDGE CODE	OD15	01		see next page	18	3I	3A		
	OD15	01			18	3M	3D		
	OD15	02			18	1I	1A		
	OD15	02			18	1L	1B		
	OD15	02			18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z



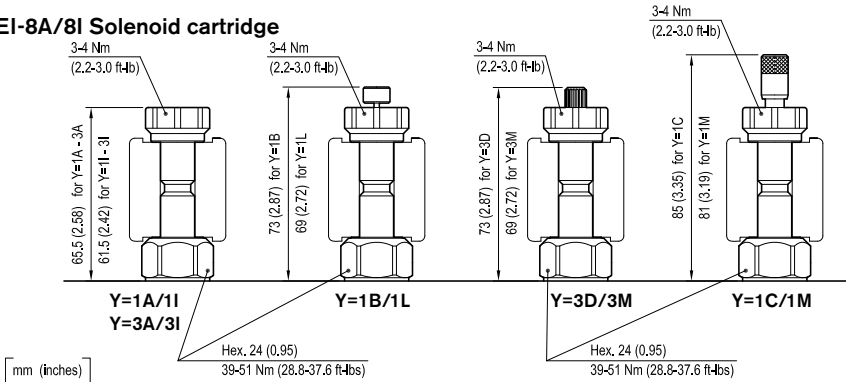
[mm (inches)]

Table "X"

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

VEI-8A/8I Solenoid cartridge

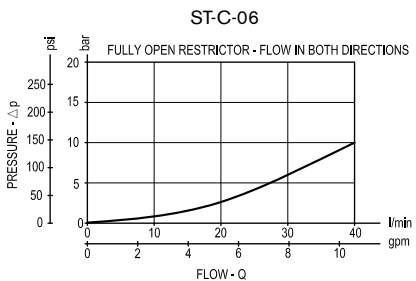
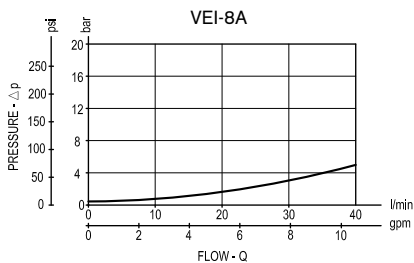
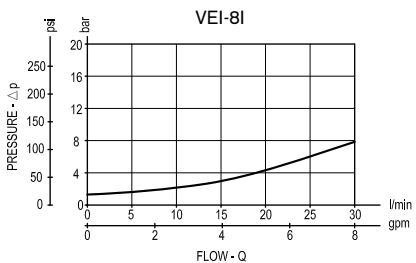


[mm (inches)]

Table "Y"

Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA
	K = 01	K = 02	
1A/1I	/	No override	Internal leakage: max. 1cm ³ /min (0.06 inch ³ /min)
1B/1L	/	Push style	Filtration: 25 µm nominal or better
1C/1M	/	Push and twist style	Minimum voltage required: 90% of nominal value
3A/3I	No override	/	Coil: S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3D/3M	Knob style	/	For other details see cartridge data sheet

Performance graph



Ordering code

OP.63	K	X	29	Y
--------------	----------	----------	-----------	----------

**Sandwich valves
module with solenoid valve
and flow restrictor**

Cartridge scheme (see page 1)

- = 01 Monodirectional
- = 02

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options
(see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP630103293A00	R934002733
OP630104293A00	R934002734
OP630203291A00	R934002735
OP630204291A00	R934003392

Type	Material number

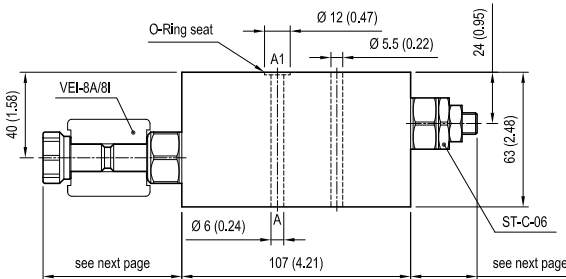
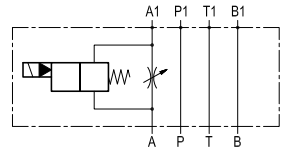
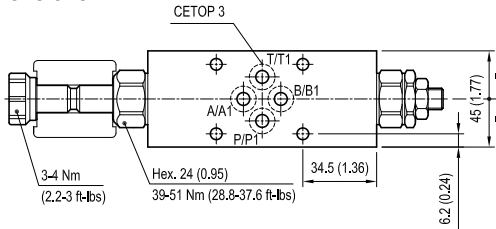
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-A1

OP . 61 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

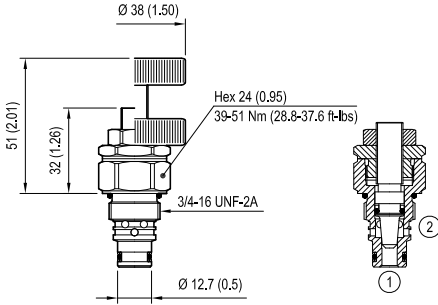
Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

Note: meter-in control

[mm (inches)]

CARTRIDGE CODE	OP61	- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15		05	see next page	18	3I	3A		
	OD15		05		18	3M	3D		
	OD15		06		18	1I	1A		
	OD15		06		18	1L	1B		
	OD15		06		18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z



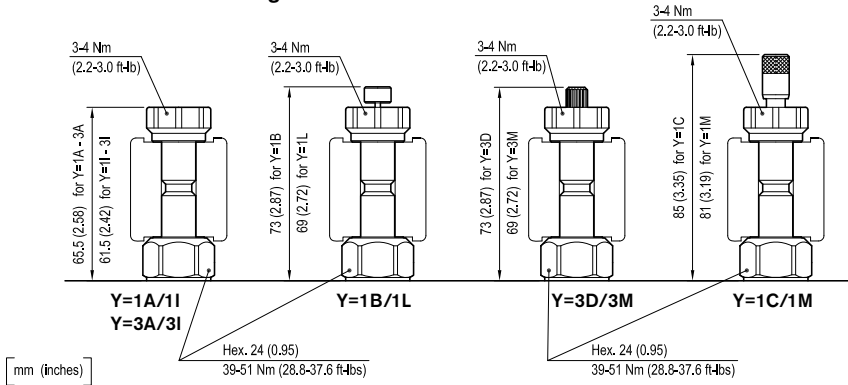
[mm (inches)]

Table "X"

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

VEI-8A/8I Solenoid cartridge

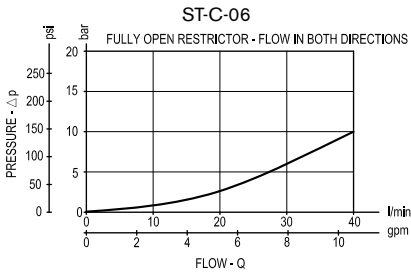
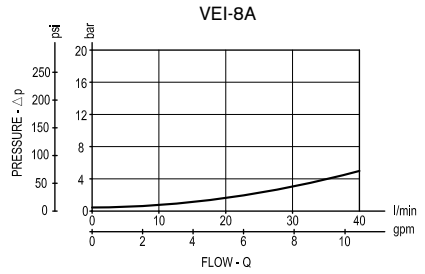
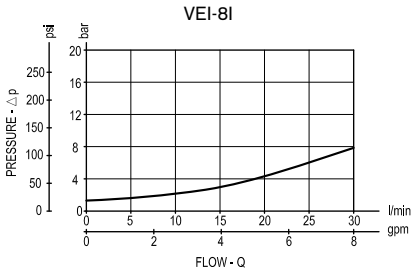


[mm (inches)]

Table "Y"

Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA	
	K = 05	K = 06	Internal leakage:	max. 1cm ³ /min (0.06 inch ³ /min)
1A/1I	/	No override	Filtration:	25 µm nominal or better
1B/1L	/	Push style	Minimum voltage required:	90% of nominal value
1C/1M	/	Push and twist style	Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3A/3I	No override	/	For other details see cartridge data sheet	
3D/3M	Knob style	/		

Performance graphs



Ordering code

OP.61	K	X	29	Y
-------	---	---	----	---

Sandwich valves
module with solenoid valve
and flow restrictor

Cartridge scheme (see page 1)

- = 05
- = 06 bidirectional

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options
(see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP610503293A00	R934002726
OP610503293B00	R934002727
OP610603291A00	R934002728

Type	Material number

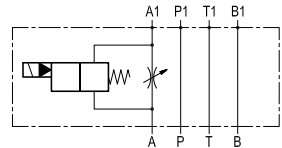
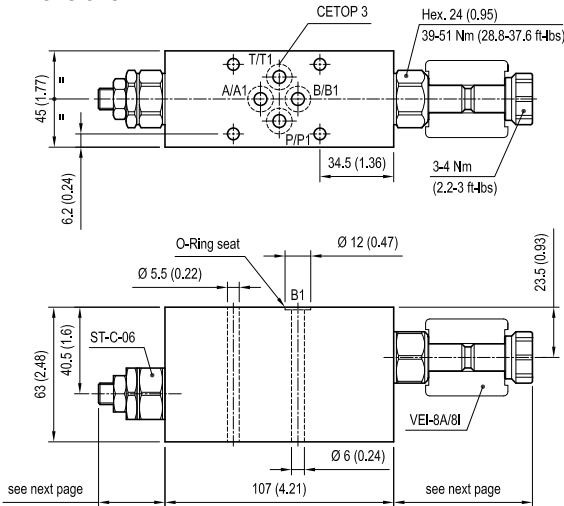
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-A

OP . 65 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

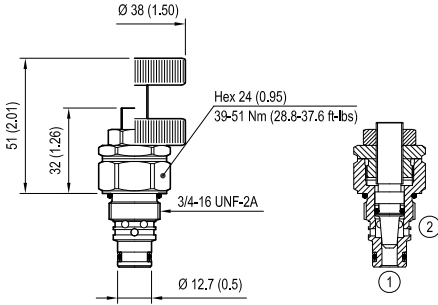
Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

Note: meter-out control

[mm (inches)]

OP65		- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
CARTRIDGE CODE	OD15		05	see next page	18	3I	3A		
	OD15		05		18	3M	3D		
	OD15		06		18	1I	1A		
	OD15		06		18	1L	1B		
	OD15		06		18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z



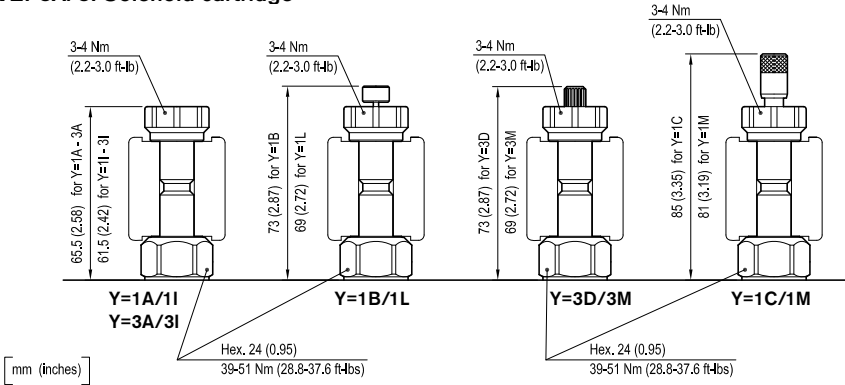
[mm (inches)]

Table “X”

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

VEI-8A/8I Solenoid cartridge

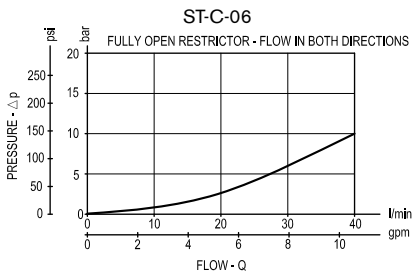
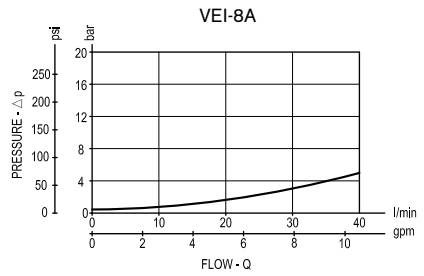
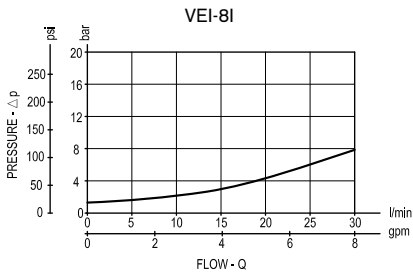


[mm (inches)]

Table “Y”

Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA
	K = 05	K = 06	
1A/1I	/	No override	Internal leakage: max. 1cm ³ /min (0.06 inch ³ /min)
1B/1L	/	Push style	Filtration: 25 µm nominal or better
1C/1M	/	Push and twist style	Minimum voltage required: 90% of nominal value
3A/3I	No override	/	Coil: S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3D/3M	Knob style	/	For other details see cartridge data sheet

Performance graphs



Ordering code

OP.65	K	X	29	Y
-------	---	---	----	---

Sandwich valves
module with solenoid valve
and flow restrictor

Cartridge scheme (see page 1)

- = 05 bidirectional
- = 06

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options
(see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP650503293A00	R934002743

Type	Material number

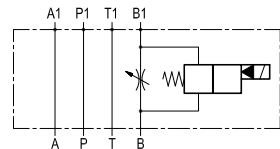
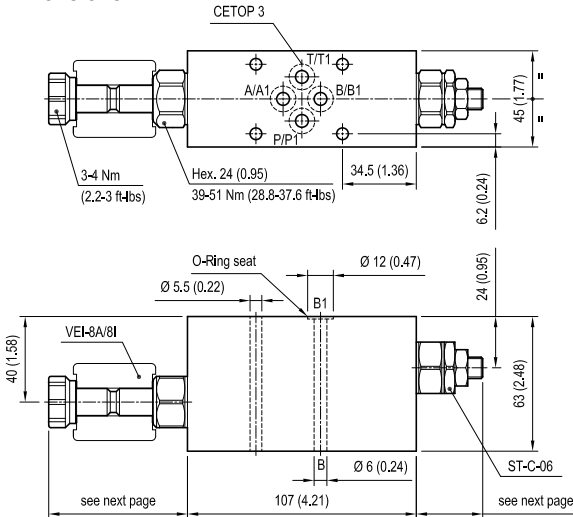
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-B1

OP . 62 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

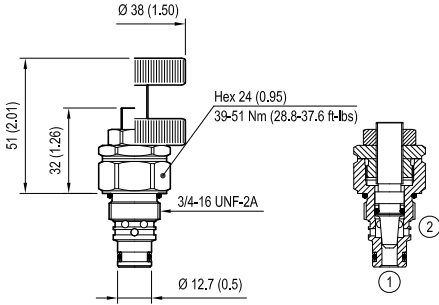
Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

Note: meter-in control

[mm (inches)]

CARTRIDGE CODE	OP62	- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15		05	see next page	18	3I	3A		
	OD15		05		18	3M	3D		
	OD15		06		18	1I	1A		
	OD15		06		18	1L	1B		
	OD15		06		18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z



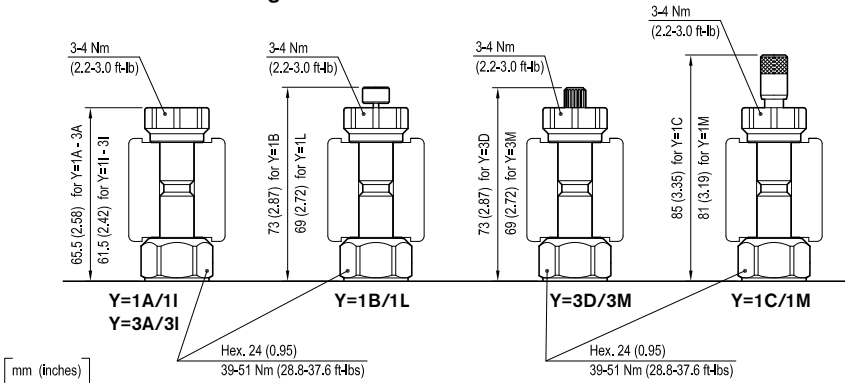
[mm (inches)]

Table "X"

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

VEI-8A/8I Solenoid cartridge

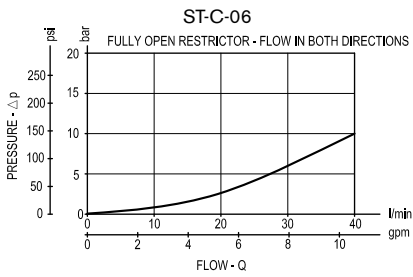
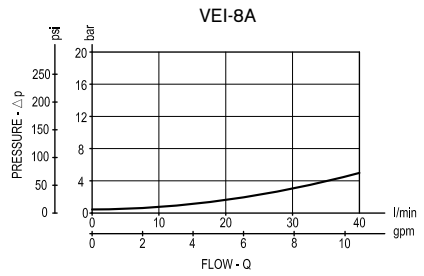
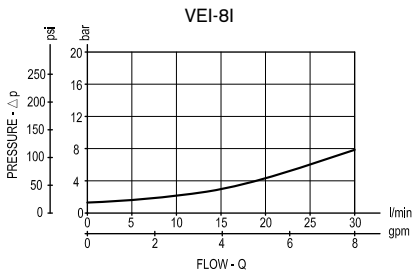


[mm (inches)]

Table "Y"

Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA
	K = 05	K = 06	
1A/1I	/	No override	Internal leakage: max. 1cm ³ /min (0.06 inch ³ /min)
1B/1L	/	Push style	Filtration: 25 µm nominal or better
1C/1M	/	Push and twist style	Minimum voltage required: 90% of nominal value
3A/3I	No override	/	Coil: S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3D/3M	Knob style	/	For other details see cartridge data sheet

Performance graphs



Ordering code

OP.62	K	X	29	Y
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Sandwich valves module with solenoid valve and flow restrictor

Cartridge scheme (see page 1)

- = 05 bidirectional
- = 06

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options
(see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP620503293A00	R934002729
OP620503293B00	R934002730
OP620603291A00	R934002731

Type	Material number

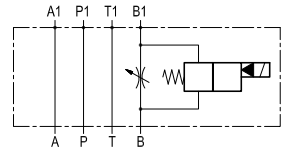
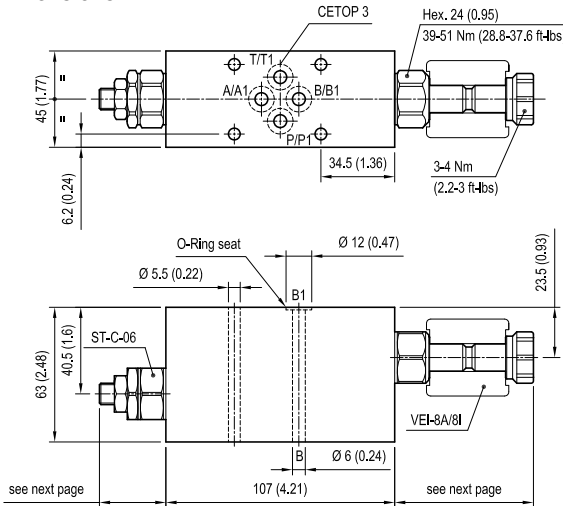
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-B

OP . 64 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

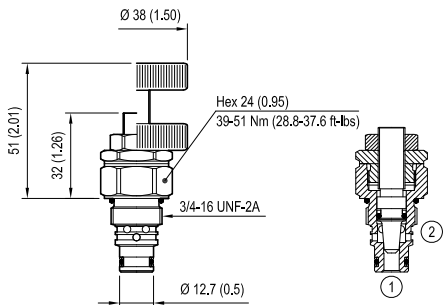
Standard manifolds in high strength **aluminium**.
For working pressure up to 350 bar (5000 psi)
and for fatigue applications with any working
pressure, steel manifolds are available upon
request.

Note: meter-out control

[mm (inches)]

OP64		- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
CARTRIDGE CODE	OD15		05	see next page	18	3I	3A		
	OD15		05		18	3M	3D		
	OD15		06		18	1I	1A		
	OD15		06		18	1L	1B		
	OD15		06		18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z



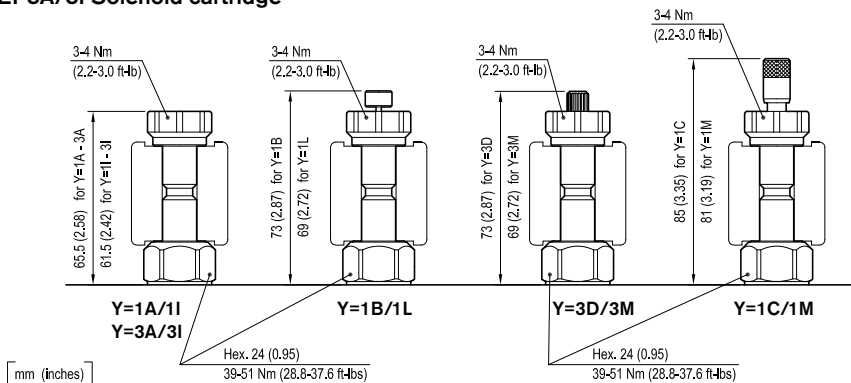
[mm (inches)]

Table “X”

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

VEI-8A/8I Solenoid cartridge



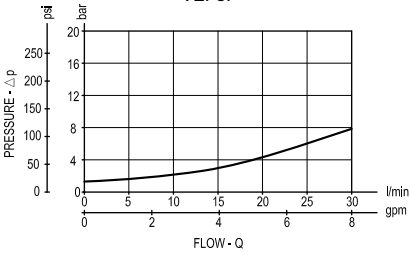
[mm (inches)]

Table “Y”

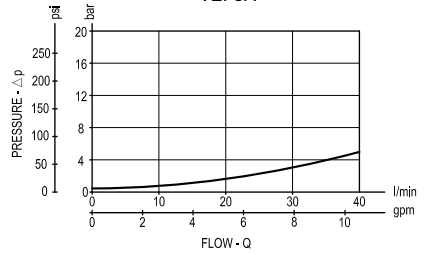
Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA	
	K = 05	K = 06	Internal leakage:	max. 1cm ³ /min (0.06 inch ³ /min)
1A/1I	/	No override	Filtration:	25 µm nominal or better
1B/1L	/	Push style	Minimum voltage required:	90% of nominal value
1C/1M	/	Push and twist style	Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3A/3I	No override	/	For other details see cartridge data sheet	
3D/3M	Knob style	/		

Performance graphs

VEI-8I

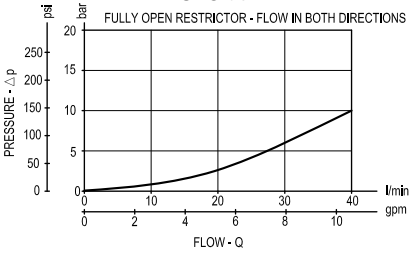


VEI-8A



ST-C-06

FULLY OPEN RESTRICTOR - FLOW IN BOTH DIRECTIONS



Ordering code

OP.64	K	X	29	Y
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Sandwich valves module with solenoid valve and flow restrictor

Cartridge scheme (see page 1)

- = 05
- = 06 bidirectional

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options (see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP640503293A00	R934002740
OP640603291A00	R934002741

Type	Material number

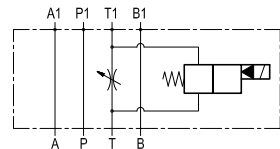
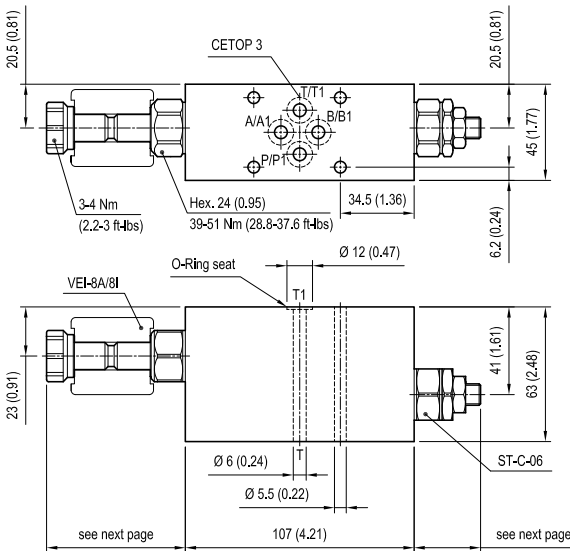
Further types available by request

Sandwich valves, module with solenoid valve and flow restrictor

EM-VEI8A/8I-ST-CETOP3-T

OP . 60 - K - X - 29 - Y

Dimensions



Technical data

Max flow: up to 40 l/min (11 gpm)

Max operating pressure: 210 bar (3000 psi)

Standard manifolds in high strength **aluminium**.

For working pressure up to 350 bar (5000 psi) and for fatigue applications with any working pressure, steel manifolds are available upon request.

[mm (inches)]

CARTRIDGE CODE	OP60	- K -		- X -	29	- Y -		CARTRIDGE SCHEME	
		monodir.	bidir.			Rated Flow		monodir.	bidir.
						30 l/min (8 gpm)	40 l/min (11 gpm)		
	OD15	01		see next page	18	3I	3A		
	OD15	01			18	3M	3D		
	OD15	02			18	1I	1A		
	OD15	02			18	1L	1B		
	OD15	02			18	1M	1C		

ST-C-06 FLOW RESTRICTOR
code OD.21.01.X.56.Z

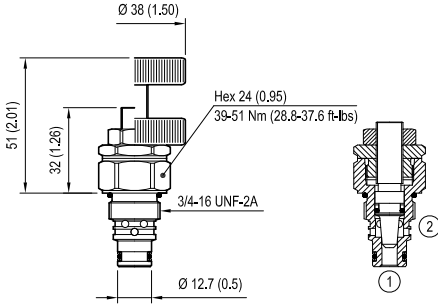


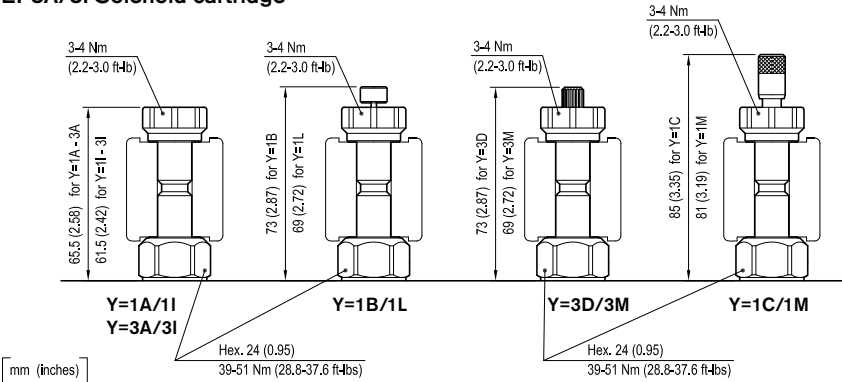
Table "X"

X	ST-C-06 ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

For other details see data sheet RE 18321-26

[mm (Inches)]

VEI-8A/8I Solenoid cartridge

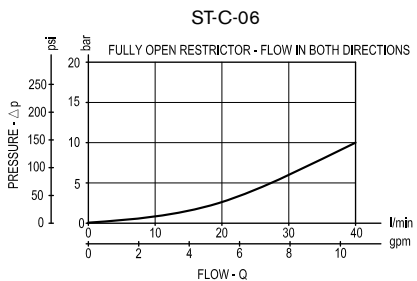
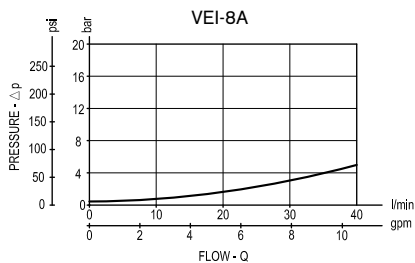
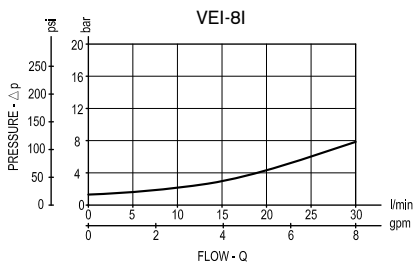


[mm (inches)]

Table "Y"

Y	MANUAL OVERRIDE OPTIONS		VEI-8A TECHNICAL DATA	
	K = 01	K = 02	Internal leakage:	max. 1cm ³ /min (0.06 inch ³ /min)
1A/1I	/	No override	Filtration:	25 μ m nominal or better
1B/1L	/	Push style	Minimum voltage required:	90% of nominal value
1C/1M	/	Push and twist style	Coil:	S8-356 (must be ordered separately) (see data sheet RE 18325-90)
3A/3I	No override	/	For other details see cartridge data sheet	
3D/3M	Knob style	/		

Performance graphs



Ordering code

OP.60	K	X	29	Y
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Sandwich valves
module with solenoid valve
and flow restrictor

Cartridge scheme (see page 1)

- = 01 Monodirectional
- = 02

Cartridge adjustment (see page 2)

- = 03 Leakproof hex. socket screw
- = 04 Handknob and locknut

Manual override options
(see page 2)

Flange CETOP 3 (DOT3)

Preferred types (readily available)

Type	Material number
OP600103293A00	R934002722
OP600104293A00	R934002723
OP600203291A00	R934002724
OP600203291B00	R934001059
OP600203291M00	R934000808

Type	Material number

Further types available by request

Manifolds

Designation	Data sheet	Pages
Standard manifolds (common cavity, special cavity, with emergency screw)	RE 18325-85	1533

Manifolds

RE 18325-85/01.11 ^{1/16}
Replaces: RE 18325-85/02.10

- Standard manifolds common cavity
- Standard manifolds special cavity
- Manifolds with emergency screw



Summary

Description	Page
Standard manifold common cavity aluminium or steel	
Size 08	2-3
Size 10	4-5
Size 12	6-7
Size 16	8-9
Size 20	10-11
Standard manifold special cavity aluminium or steel	
017-E	12
021-E	12
019-E	12
004	13
Manifold with emergency screw aluminium or steel	
Size 08	14
017-E	14
021-E	14

General specifications

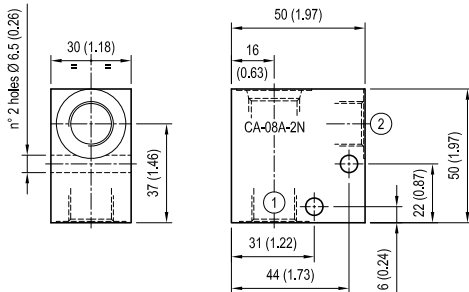
- | | |
|--|--------------------|
| • Max operating pressure for steel body: | 350 bar (5000 psi) |
| • Max operating pressure for aluminium body: | 210 bar (3000 psi) |

Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.

Standard manifolds - Common cavity Size 08 - Aluminium / Steel

CAVITY: CA-08A-2N

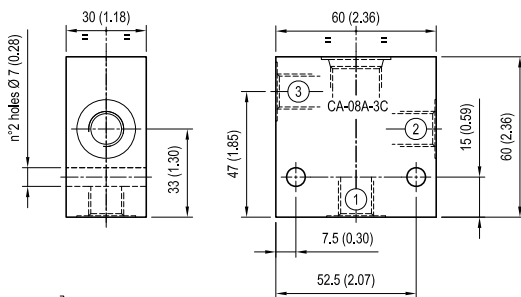
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009009 R901090786	G 1/4	0.17 (0.38)
	OC1009004 R901082022	G 3/8	0.16 (0.35)
Steel	OC1009067 R901090800	G 1/4	0.47 (1.04)
	OC1009066 R901090799	G 3/8	0.45 (0.99)



[mm / Inches]

CAVITY: CA-08A-3C

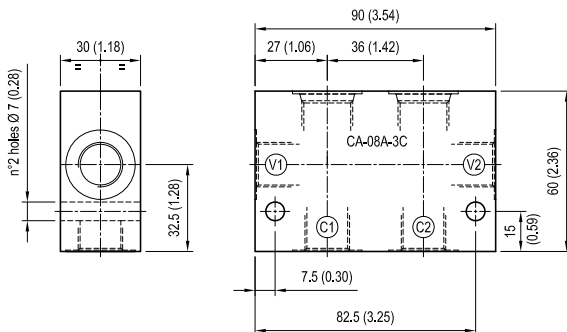
	Ordering code	Ports 1-2	3	Weight kg (lbs)
Aluminium	OC1009262 R934000223	G 1/4	G 1/4	0.25 (0.55)
	OC1009260 R934000221	G 3/8	G 1/4	0.25 (0.55)
Steel	OC1009263 R934000224	G 1/4	G 1/4	0.71 (1.57)
	OC1009261 R934000222	G 3/8	G 1/4	0.69 (1.52)



[mm / Inches]

CAVITY: CA-08A-3C
(DOUBLE CAVITY)

	Ordering code	Ports V1-V2-C1-C2	Weight kg (lbs)
Aluminium	OC1009185 R934000146	G 3/8	0.36 (0.79)
	OC1009184 R934000145	G 3/8	1.00 (2.21)

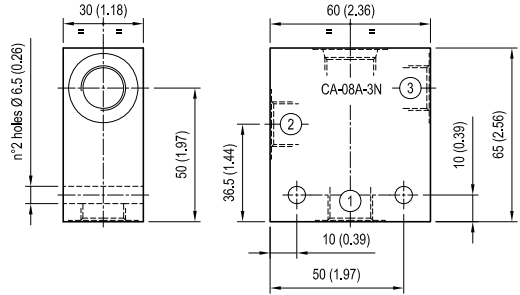


[mm / Inches]

Standard manifolds - Common cavity
Size 08 - Aluminium / Steel

CAVITY: CA-08A-3N

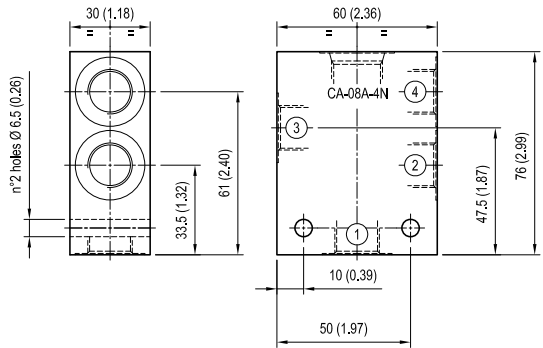
	Ordering code	Ports 1-2-3	Weight kg (lbs)
Aluminium	OC1009042 R901100471	G 1/4	0.30 (0.66)
	OC1009048 R901100497	G 3/8	0.27 (0.60)
Steel	OC1009225 R934000186	G 1/4	0.78 (1.72)
	OC1009153 R934000140	G 3/8	0.74 (1.63)



[mm / Inches]

CAVITY: CA-08A-4N

	Ordering code	Ports 1-2-3-4	Weight kg (lbs)
Aluminium	OC1009047 R901100531	G 1/4	0.33 (0.73)
	OC1009046 R901100524	G 3/8	0.29 (0.64)
Steel	OC1009236 R934000197	G 1/4	0.93 (2.05)
	OC1009237 R934000198	G 3/8	0.81 (1.79)



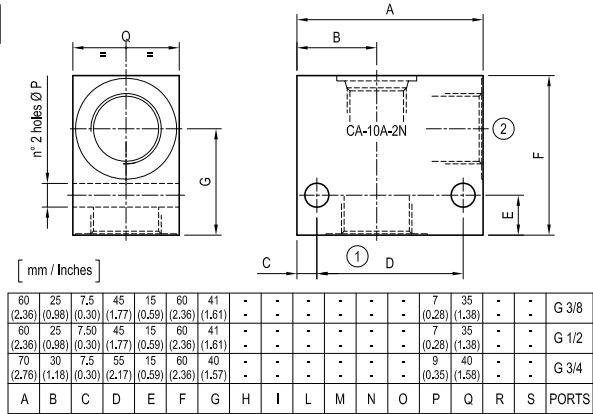
[mm / Inches]

Standard manifolds - Common cavity

Size 10 - Aluminium / Steel

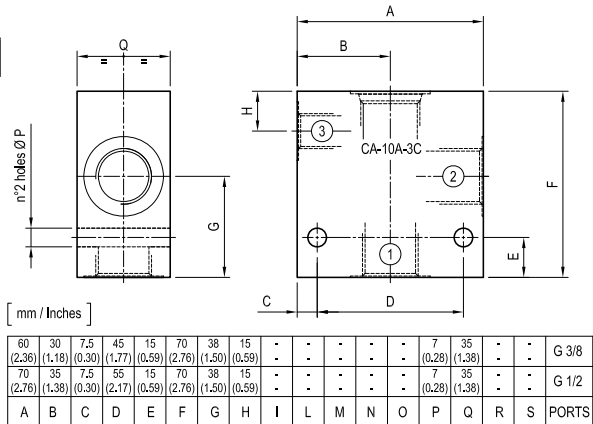
CAVITY: CA-10A-2N

	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009294 R934003943	G 3/8	0.3 (0.66)
	OC1009209 R934000170	G 1/2	0.28 (0.62)
	OC1009211 R934000172	G 3/4	0.36 (0.79)
Steel	OC1009295 R934003944	G 3/8	0.82 (1.81)
	OC1009210 R934000171	G 1/2	0.77 (1.70)
	OC1009212 R934000173	G 3/4	1.00 (2.21)



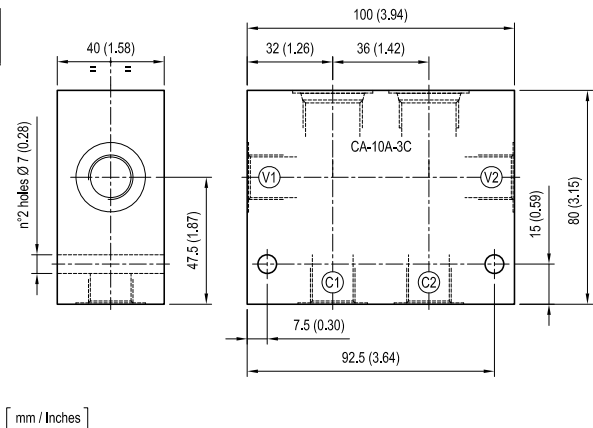
CAVITY: CA-10A-3C

	Ordering code	Ports 1-2	3	Weight kg (lbs)
Aluminium	OC1009264 R934000225	G 3/8	G 1/4	0.34 (0.75)
	OC1009266 R934000227	G 1/2	G 1/4	0.39 (0.86)
Steel	OC1009265 R934000226	G 3/8	G 1/4	0.94 (2.07)
	OC1009267 R934000228	G 1/2	G 1/4	1.10 (2.43)



CAVITY: CA-10A-3C (DOUBLE CAVITY)

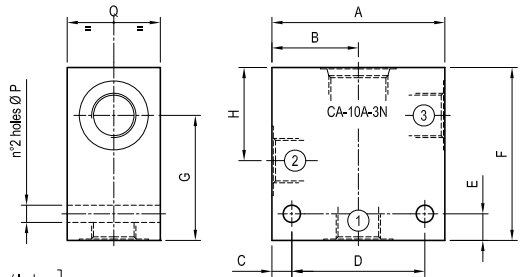
	Ordering code	Ports V1-V2-C1-C2	Weight kg (lbs)
Aluminium	OC1009187 R934000148	G 3/8	0.75 (1.65)
	OC1009189 R934000150	G 1/2	0.72 (1.59)
Steel	OC1009186 R934000147	G 3/8	2.10 (4.63)
	OC1009188 R934000149	G 1/2	2.03 (4.48)



Standard manifolds - Common cavity
Size 10 - Aluminium / Steel

CAVITY: CA-10A-3N

	Ordering code	Ports 1-2-3	Weight kg (lbs)
Aluminium	OC1009116 R901100626	G 1/4	0.35 (0.77)
	OC1009115 R901100638	G 3/8	0.34 (0.75)
	OC1009283 R934000244	G 1/2	0.38 (0.84)
Steel	OC1009226 R934000187	G 1/4	0.98 (2.16)
	OC1009227 R934000188	G 3/8	0.95 (2.09)
	OC1009284 R934000245	G 1/2	1.07 (2.36)

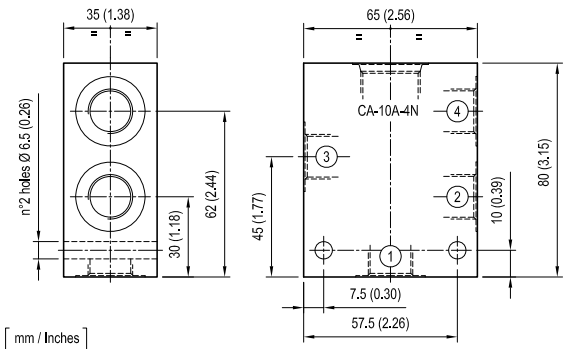


[mm / Inches]

65 (2,56)	32,5 (1,28)	7,5 (0,30)	50 (1,97)	10 (0,39)	65 (2,56)	47 (1,85)	35 (1,38)	-	-	-	-	-	-	-	6,5 (0,26)	35 (1,38)	-	-	-	G 1/4
65 (2,56)	32,5 (1,28)	7,5 (0,30)	50 (1,97)	10 (0,39)	65 (2,56)	47 (1,85)	35 (1,38)	-	-	-	-	-	-	-	6,5 (0,26)	35 (1,38)	-	-	-	G 3/8
70 (2,76)	35 (1,38)	10 (0,39)	50 (1,97)	15 (0,59)	70 (2,76)	52 (2,05)	35 (1,38)	-	-	-	-	-	-	-	6,5 (0,26)	35 (1,38)	-	-	-	G 1/2
A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	PORTS			

CAVITY: CA-10A-4N

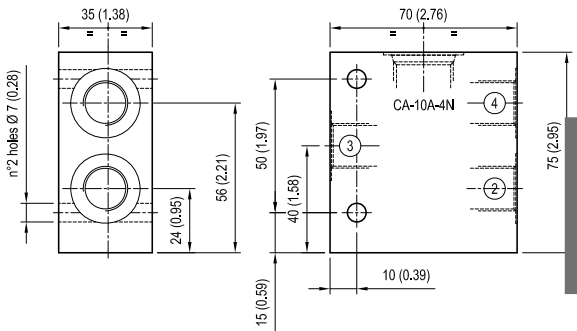
	Ordering code	Ports 1-2-3-4	Weight kg (lbs)
Aluminium	OC1009117 R901100734	G 1/4	0.43 (0.95)
	OC1009118 R901100747	G 3/8	0.41 (0.90)
Steel	OC1009238 R934000199	G 1/4	1.21 (2.67)
	OC1009239 R934000200	G 3/8	1.15 (2.54)



[mm / Inches]

CAVITY: CA-10A-4N
(Port 1 closed)

	Ordering code	Ports 1-2-3-4	Weight kg (lbs)
Aluminium	OC1009252 R934000213	G 3/8	0.42 (0.93)
	OC1009254 R934000215	G 1/2	0.40 (0.88)
Steel	OC1009253 R934000214	G 3/8	1.18 (2.60)
	OC1009255 R934000216	G 1/2	1.12 (2.47)



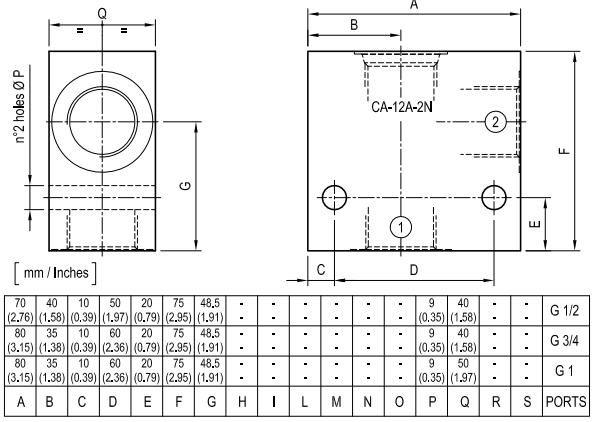
[mm / Inches]

Standard manifolds - Common cavity

Size 12 - Aluminium / Steel

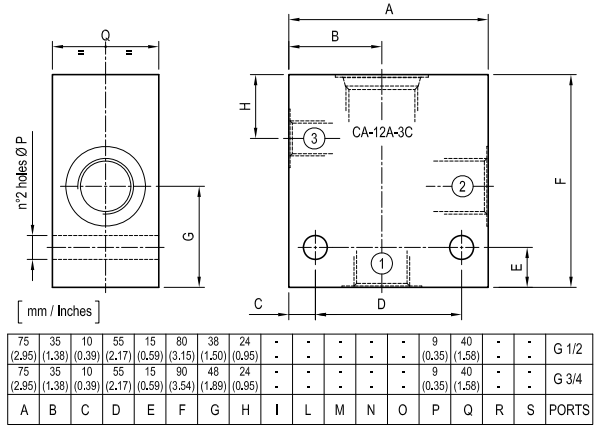
CAVITY: CA-12A-2N

	Ordering code	Ports	Weight kg (lbs)
			1-2
Aluminium	OC1009280 R934000241	G 1/2	0.47 (1.04)
	OC1009213 R934000174	G 3/4	0.52 (1.15)
	OC1009215 R934000176	G 1	0.64 (1.41)
Steel	OC1009281 R934000242	G 1/2	1.51 (3.33)
	OC1009214 R934000175	G 3/4	1.46 (3.22)
	OC1009216 R934000177	G 1	1.79 (3.95)



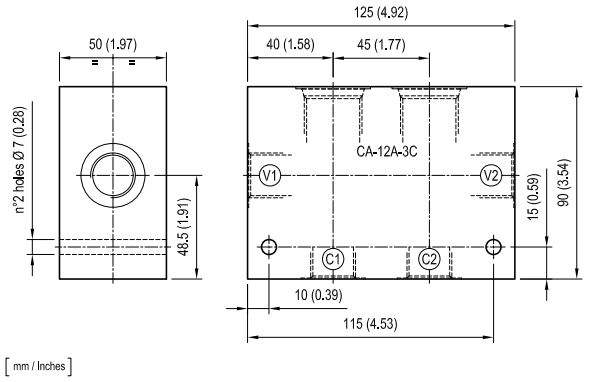
CAVITY: CA-12A-3C

	Ordering code	Ports	Weight kg (lbs)
		1-2 3	
Aluminium	OC1009268 R934000229	G 1/2 G 1/4	0.54 (1.19)
	OC1009270 R934000231	G 3/4 G 1/4	0.59 (1.30)
Steel	OC1009269 R934000230	G 1/2 G 1/4	1.51 (3.33)
	OC1009271 R934000232	G 3/4 G 1/4	1.65 (3.64)



CAVITY: CA-12A-3C (DOUBLE CAVITY)

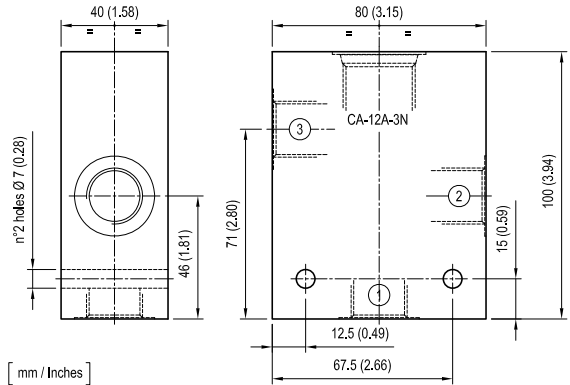
	Ordering code	Ports	Weight kg (lbs)
		V1-V2-C1-C2	
Aluminium	OC1009191 R934000152	G 1/2	1.31 (2.89)
	OC1009193 R934000154	G 3/4	1.26 (2.78)
Steel	OC1009190 R934000151	G 1/2	3.69 (8.14)
	OC1009192 R934000153	G 3/4	3.54 (7.80)



Standard manifolds - Common cavity
Size 12 - Aluminium / Steel

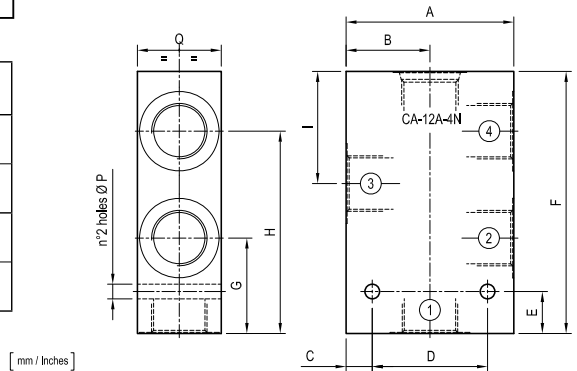
CAVITY: CA-12A-3N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009205 R934000166	G 1/2	0.73 (1.61)
	OC1009208 R934000169	G 3/4	0.69 (1.52)
Steel	OC1009206 R934000167	G 1/2	2.04 (4.50)
	OC1009207 R934000168	G 3/4	1.93 (4.26)



CAVITY: CA-12A-4N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009240 R934000201	G 3/4	0.85 (1.87)
	OC1009242 R934000203	G 1	1.26 (2.78)
Steel	OC1009241 R934000202	G 3/4	2.40 (5.29)
	OC1009243 R934000204	G 1	3.53 (7.78)



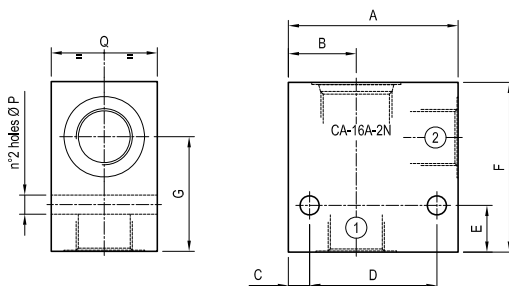
80	40	12.5	55	20	125	45.5	96.5	53.5	-	-	-	-	7	40	-	-	G 3/4
(3.15)	(1.58)	(0.49)	(2.17)	(0.79)	(4.92)	(1.79)	(3.80)	(2.11)	-	-	-	-	(0.28)	(1.58)	-	-	
90	45	17.5	55	20	130	50.5	101.5	53.5	-	-	-	-	7	50	-	-	G 1
(3.54)	(1.77)	(0.69)	(2.17)	(0.79)	(5.12)	(1.99)	(3.40)	(2.11)	-	-	-	-	(0.28)	(1.97)	-	-	
A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	PORTS

Standard manifolds - Common cavity

Size 16 - Aluminium / Steel

CAVITY: CA-16A-2N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009217 R934000178	G 3/4	0.69 (1.52)
	OC1009219 R934000180	G 1	0.75 (1.65)
Steel	OC1009218 R934000179	G 3/4	1.94 (4.28)
	OC1009220 R934000181	G 1	2.11 (4.65)

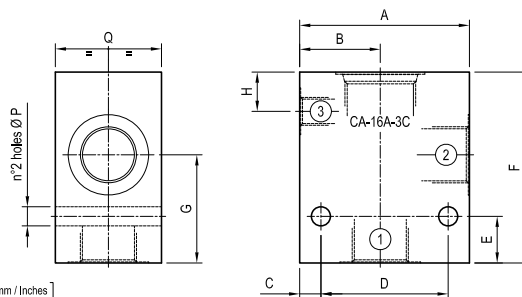


[mm / Inches]

80	32	10	60	22	80	54	-	-	-	-	-	-	9	50	-	-	G 3/4
(3.15)	(1.26)	(0.39)	(2.36)	(0.87)	(3.15)	(2.13)	-	-	-	-	-	-	(0.35)	(1.97)	-	-	
90	37	10	60	22	80	54	-	-	-	-	-	-	9	50	-	-	G 1
(3.54)	(1.46)	(0.39)	(2.36)	(0.87)	(3.15)	(2.13)	-	-	-	-	-	-	(0.35)	(1.97)	-	-	
A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	PORTS

CAVITY: CA-16A-3C

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009274 R934000235	G 3/4 G 1/4	0.80 (1.76)
	OC1009272 R934000233	G 1 G 1/4	0.87 (1.92)
Steel	OC1009275 R934000236	G 3/4 G 1/4	2.23 (4.92)
	OC1009273 R934000234	G 1 G 1/4	2.45 (5.40)

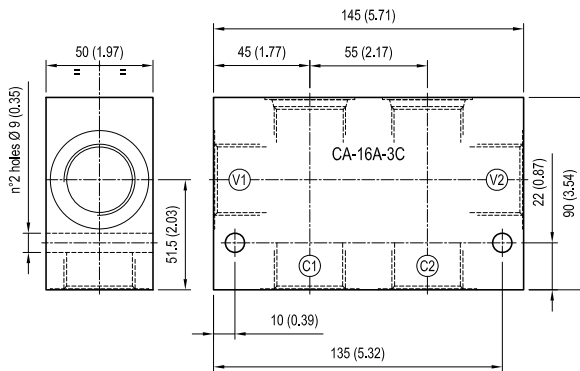


[mm / Inches]

80	38	10	60	22	90	51	18.5	-	-	-	-	-	9	50	-	-	G 3/4
(3.15)	(1.50)	(0.39)	(2.36)	(0.87)	(3.54)	(2.01)	(0.73)	-	-	-	-	-	(0.35)	(1.97)	-	-	
90	40	10	70	22	90	51	18.5	-	-	-	-	-	9	50	-	-	G 1
(3.54)	(1.58)	(0.39)	(2.76)	(0.87)	(3.54)	(2.01)	(0.73)	-	-	-	-	-	(0.35)	(1.97)	-	-	
A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	PORTS

CAVITY: CA-16A-3C (DOUBLE CAVITY)

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009195 R934000156	G 1	1.34 (2.95)
	OC1009194 R934000155	G 1	3.74 (8.25)



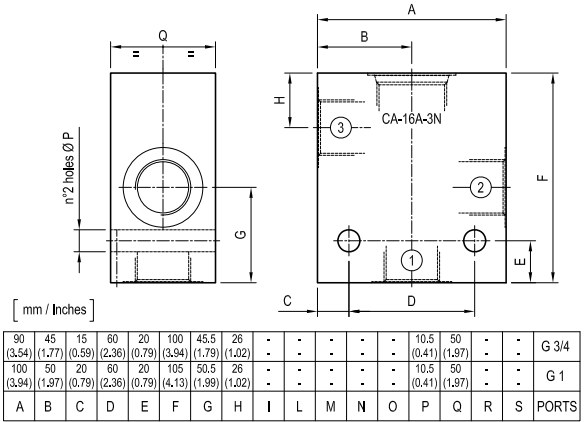
[mm / Inches]

Standard manifolds - Common cavity

Size 16 - Aluminium / Steel

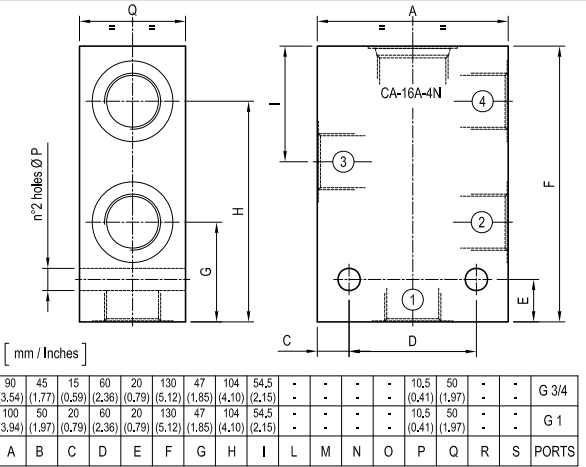
CAVITY: CA-16A-3N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009228 R934000189	G 3/4	0.98 (2.16)
	OC1009230 R934000191	G 1	1.11 (2.45)
Steel	OC1009229 R934000190	G 3/4	2.76 (6.09)
	OC1009231 R934000192	G 1	3.11 (6.86)



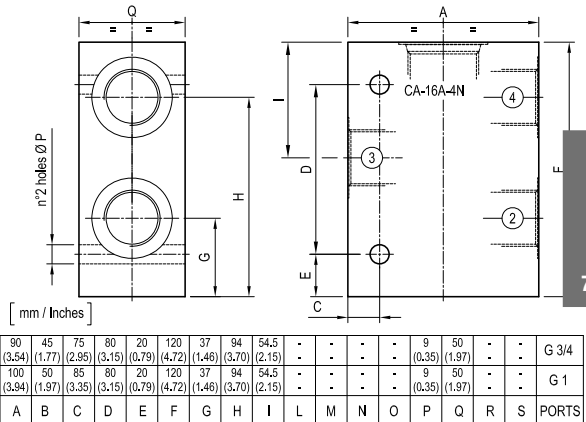
CAVITY: CA-16A-4N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009244 R934000205	G 3/4	1.28 (2.82)
	OC1009246 R934000207	G 1	1.36 (3.00)
Steel	OC1009245 R934000206	G 3/4	3.59 (7.92)
	OC1009247 R934000208	G 1	3.81 (8.40)



CAVITY: CA-16A-4N (Port 1 closed)

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009256 R934000217	G 3/4	1.19 (2.62)
	OC1009258 R934000219	G 1	1.28 (2.82)
Steel	OC1009257 R934000218	G 3/4	3.34 (7.36)
	OC1009259 R934000220	G 1	3.58 (7.89)

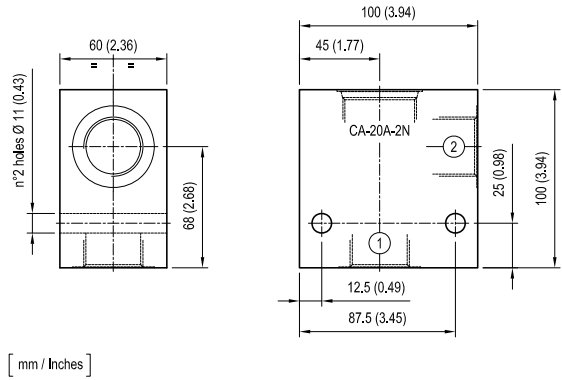


Standard manifolds - Common cavity

Size 20 - Aluminium / Steel

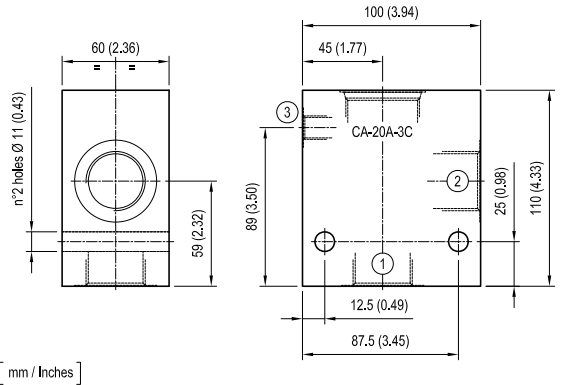
CAVITY: CA-20A-2N

	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009223 R934000184	G 1	1.3 (2.87)
	OC1009221 R934000182	G 1-1/4	1.21 (2.67)
Steel	OC1009224 R934000185	G 1	3.65 (8.05)
	OC1009222 R934000183	G 1-1/4	3.40 (3.50)



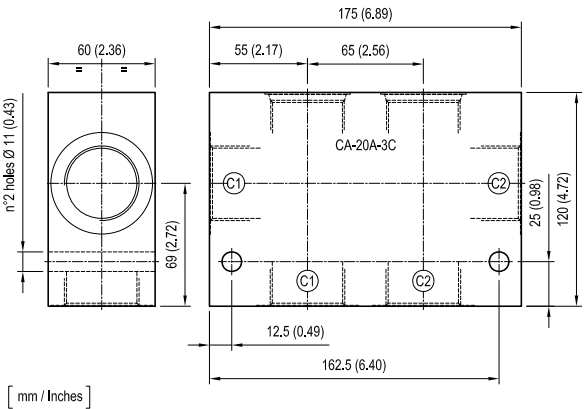
CAVITY: CA-20A-3C

	Ordering code	Ports 1-2	3	Weight kg (lbs)
Aluminium	OC1009278 R934000239	G 1	G 1/4	1.43 (3.15)
	OC1009276 R934000237	G 1-1/4	G 1/4	1.35 (2.98)
Steel	OC1009279 R934000240	G 1	G 1/4	4.02 (8.86)
	OC1009277 R934000238	G 1-1/4	G 1/4	3.78 (8.33)



CAVITY: CA-20A-3C (DOUBLE CAVITY)

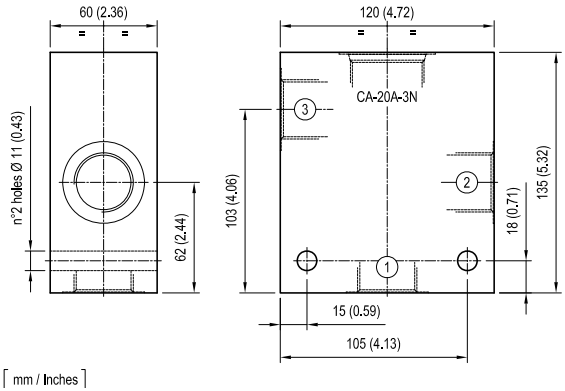
	Ordering code	Ports V1-V2-C1-C2	Weight kg (lbs)
Aluminium	OC1009197 R934000158	G 1-1/4	2.53 (5.58)
Steel	OC1009196 R934000157	G 1-1/4	7.11 (15.68)



Standard manifolds - Common cavity Size 20 - Aluminium / Steel

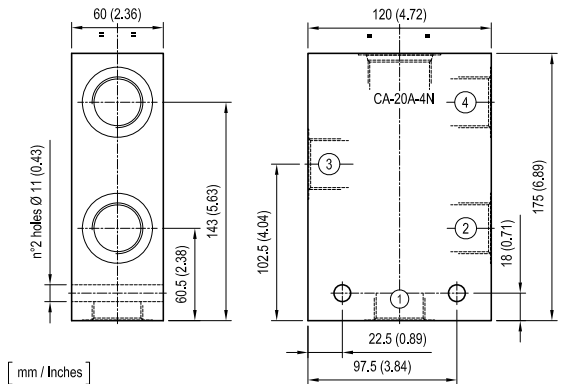
CAVITY: CA-20A-3N

	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009234 R934000195	G 1	2.15 (1.61)
	OC1009232 R934000193	G 1-1/4	2.02(1.52)
Steel	OC1009235 R934000196	G 1	6.02 (4.50)
	OC1009233 R934000194	G 1-1/4	5.66 (4.26)



CAVITY: CA-20A-4N

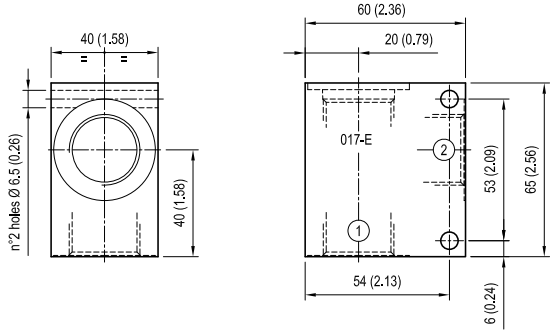
	Ordering code	Ports	Weight kg (lbs)
Aluminium	OC1009248 R934000209	G 1	2.78 (6.13)
	OC1009250 R934000211	G 1-1/4	2.60 (5.73)
Steel	OC1009249 R934000210	G 1	7.80 (17.20)
	OC1009251 R934000212	G 1-1/4	7.30 (16.10)



Standard manifolds - Special cavity Aluminium / Steel

CAVITY: 017-E

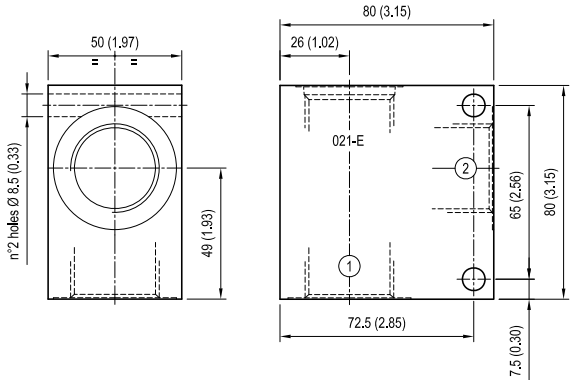
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009015 R901180260	G 1/2	0.32 (0.71)
	OC1009012 R900990630	G 3/4	0.30 (0.66)
Steel	OC1009074 R988004951	G 1/2	0.90 (1.98)
	OC1009073 R901184887	G 3/4	0.83 (1.83)



[mm / Inches]

CAVITY: 021-E

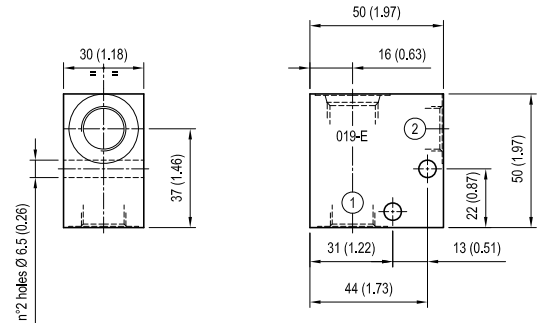
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009017 R934000102	G 3/4	0.68 (1.50)
	OC1009019 R900068903	G 1	0.65 (1.43)
Steel	OC1009075 R900766822	G 3/4	1.89 (4.17)
	OC1009076 R901132883	G 1	1.78 (3.92)



[mm / Inches]

CAVITY: 019-E

	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009103 R901090812	G 1/4	0.17 (0.38)
	OC1009054 R901090792	G 3/8	0.16 (0.35)
Steel	OC1009102 R901090811	G 1/4	0.46 (1.01)
	OC1009101 R901090810	G 3/8	0.44 (0.97)

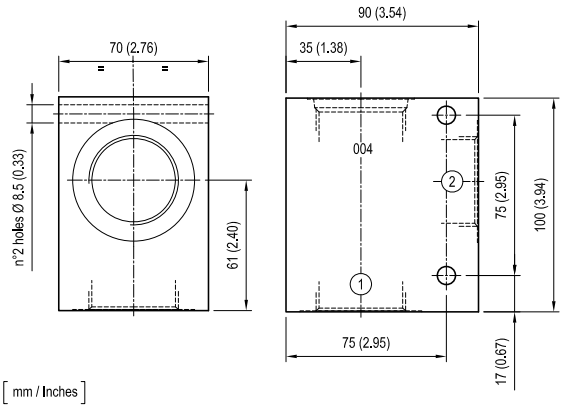


[mm / Inches]

Standard manifolds - Special cavity
Aluminium / Steel

CAVITY: 004

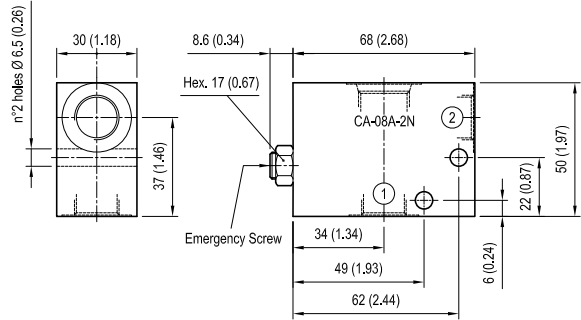
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OC1009040 R901090789	G 1	1.35 (2.98)
	OC1009041 R901090791	G 1-1/4	1.28 (2.82)
Steel	OC1009122 R901090813	G 1	3.74 (8.25)
	OC1009056 R901090794	G 1-1/4	3.52 (7.76)



Manifolds with emergency screw Aluminium / Steel

CAVITY: CA-08A-2N

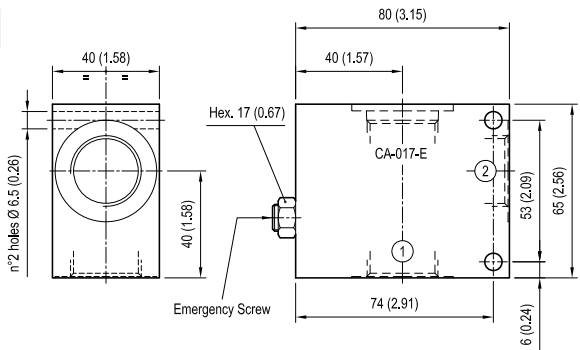
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OE150009 R934001566	G 1/4	0.26 (0.57)
	OE150002 R934001554	G 3/8	0.25 (0.55)
Steel	OE1500090055 R934001567	G 1/4	0.69 (1.52)
	OE1500020055 R934001555	G 3/8	0.66 (1.46)



[mm / Inches]

CAVITY: 017-E

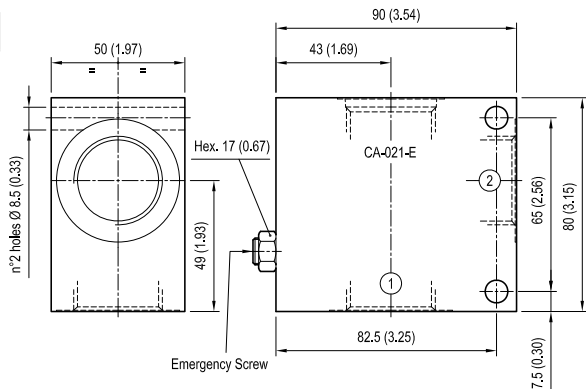
	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OE150003 R934001557	G 1/2	0.48 (1.06)
	OE150004 R901121824	G 3/4	0.47 (1.04)
Steel	OE1500030055 R934001558	G 1/2	1.32 (2.91)
	OE1500040055 R934001561	G 3/4	1.24 (2.73)



[mm / Inches]

CAVITY: 021-E

	Ordering code	Ports 1-2	Weight kg (lbs)
Aluminium	OE150005 R934001563	G 1	0.77 (1.70)
Steel	OE1500050055 R934001564	G 1	2.10 (4.63)



[mm / Inches]

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