

## Series SA2



AVENTICS™ Series SA2



# Industrial shock absorber, Series SA2-MS

- for MSC-12-HM, MSC-16-HM MSC-20-HM
- Cushioning self-compensating
- Mounting Lock nut
- Mounting thread M8x1 M12x1
- SA2-MS



Ambient temperature min./max.

-20 ... 80 °C

Medium

Oil

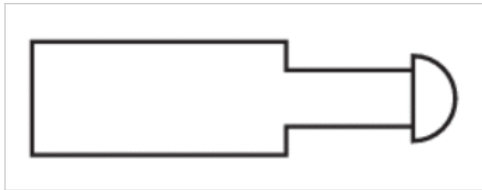
Mounting

Lock nut

Weight

See table below

The delivered product varies from that in the illustration. See the drawing for an exact description.



## Technical data

Part No.	for series	Mounting thread	Stroke	Max. energy absorption/stroke
R412010370	MSC-12-HM, MSC-16-HM	M8x1	7 mm	3 Nm
R412010371	MSC-20-HM	M12x1	10 mm	8 Nm

Part No.	Max. energy absorption/hour	Effective mass me	Return spring force
		min./max.	min./max.
R412010370	14100 Nm	1.7 ... 50 kg	2.5 ... 6 N
R412010371	26000 Nm	5 ... 57 kg	3.5 ... 7 N

Part No.	sealing for piston rod	Stop	Weight
R412010370	Polyurethane	Polyoxymethylene	0.015 kg
R412010371	Nitrile butadiene rubber	-	0.035 kg

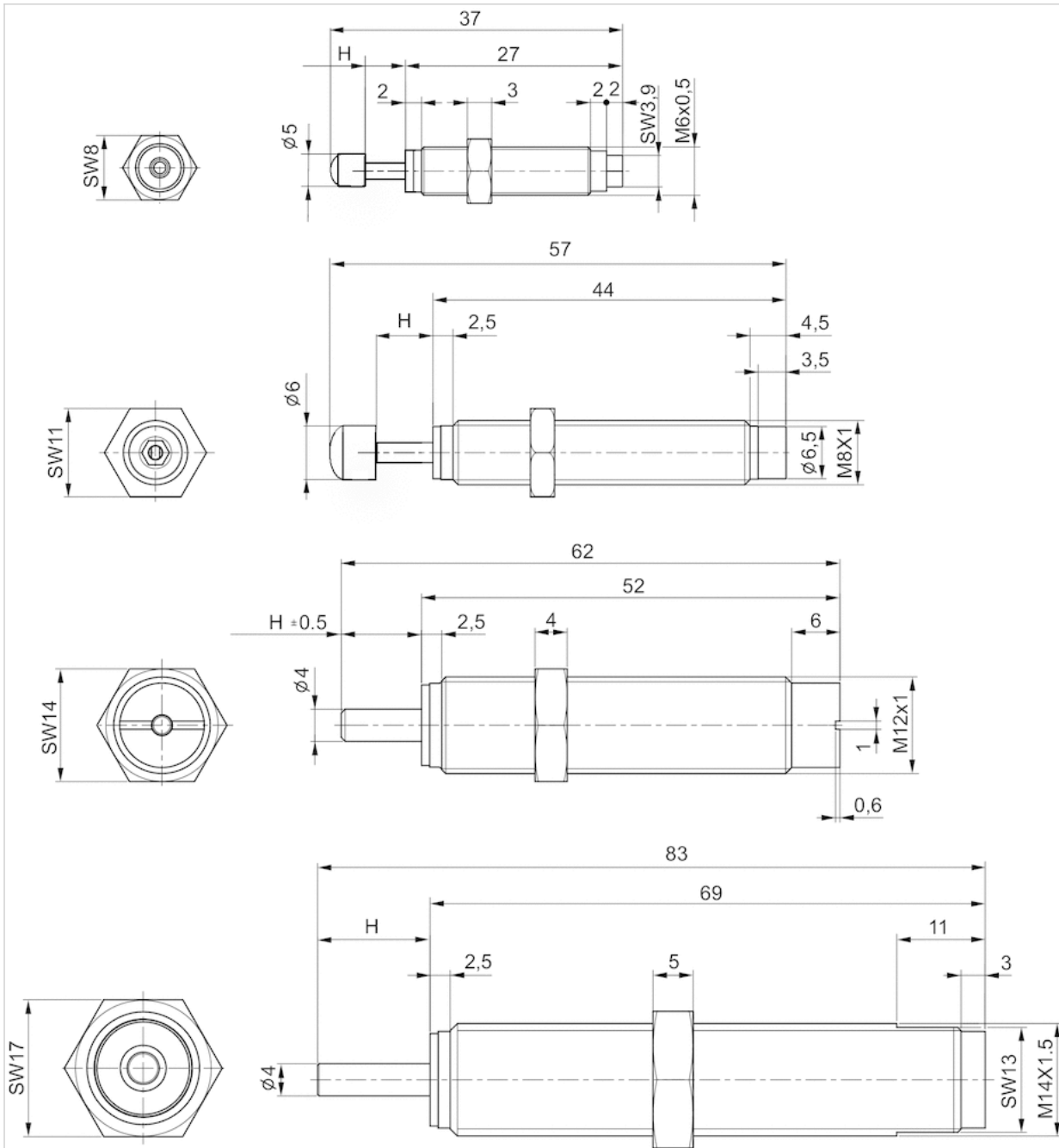
## Technical information

Material	
Cylinder tube	Steel, salt bath nitrocarburized
Piston rod	Stainless steel, hardened

Material	
sealing for piston rod	Polyurethane Nitrile butadiene rubber
Mounting ring	Polyoxymethylene

## Dimensions

### Dimensions



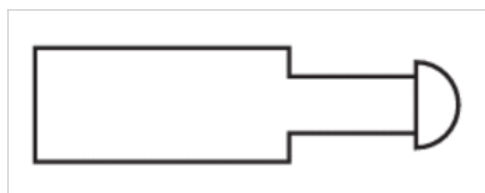
H = stroke

# Industrial shock absorber, Series SA2-RT

- for RTC-16 RTC-25,-32,-40 RTC-50,-63
- Cushioning self-compensating
- Mounting Lock nut
- Mounting thread M12x1 M14x1,5 M20x1,5
- SA2-RT



Ambient temperature min./max.	-10 ... 60 °C
Medium	Oil
Impact speed, min./max.	See table below
Mounting	Lock nut
Weight	See table below



## Technical data

Part No.	for series	Cushioning hardness	Mounting thread	Stroke	Max. energy absorption/stroke
R412010695	RTC-16	S = soft	M12x1	10 mm	14 Nm
R412010696	RTC-16	M = medium	M12x1	10 mm	14 Nm
R412010697	RTC-16	H = hard	M12x1	10 mm	14 Nm
R412010698	RTC-25,-32,-40	S = soft	M14x1,5	14 mm	30 Nm
R412010699	RTC-25,-32,-40	M = medium	M14x1,5	14 mm	30 Nm
R412010700	RTC-25,-32,-40	H = hard	M14x1,5	14 mm	30 Nm
R412010701	RTC-50,-63	S = soft	M20x1,5	13 mm	65 Nm
R412010702	RTC-50,-63	M = medium	M20x1,5	13 mm	65 Nm
R412010703	RTC-50,-63	H = hard	M20x1,5	13 mm	65 Nm

Part No.	Max. energy absorption/hour	Effective mass me		Return spring force
		min./max.		min./max.
R412010695	30000 Nm	0.5 ... 1.8 kg		3.5 ... 7 N
R412010696	30000 Nm	1.5 ... 7.7 kg		3.5 ... 7 N
R412010697	30000 Nm	5 ... 57 kg		3.5 ... 7 N
R412010698	50000 Nm	3.5 ... 17 kg		13 ... 23 N
R412010699	50000 Nm	9.9 ... 76 kg		13 ... 23 N
R412010700	50000 Nm	62 ... 252 kg		13 ... 23 N
R412010701	52000 Nm	7.5 ... 36 kg		12 ... 23 N

Part No.	Max. energy absorption/hour	Effective mass me	Return spring force
		min./max.	min./max.
R412010702	52000 Nm	20 ... 160 kg	12 ... 23 N
R412010703	52000 Nm	130 ... 610 kg	12 ... 23 N

Part No.	impact speed	Weight
	min./max.	
R412010695	3.5 ... 5 m/s	0.04 kg
R412010696	1.9 ... 4.3 m/s	0.04 kg
R412010697	0.7 ... 2.4 m/s	0.04 kg
R412010698	1.9 ... 4.1 m/s	0.05 kg
R412010699	0.9 ... 2.5 m/s	0.05 kg
R412010700	0.5 ... 1 m/s	0.05 kg
R412010701	1.9 ... 4.2 m/s	0.15 kg
R412010702	0.9 ... 2.6 m/s	0.15 kg
R412010703	0.5 ... 1 m/s	0.15 kg

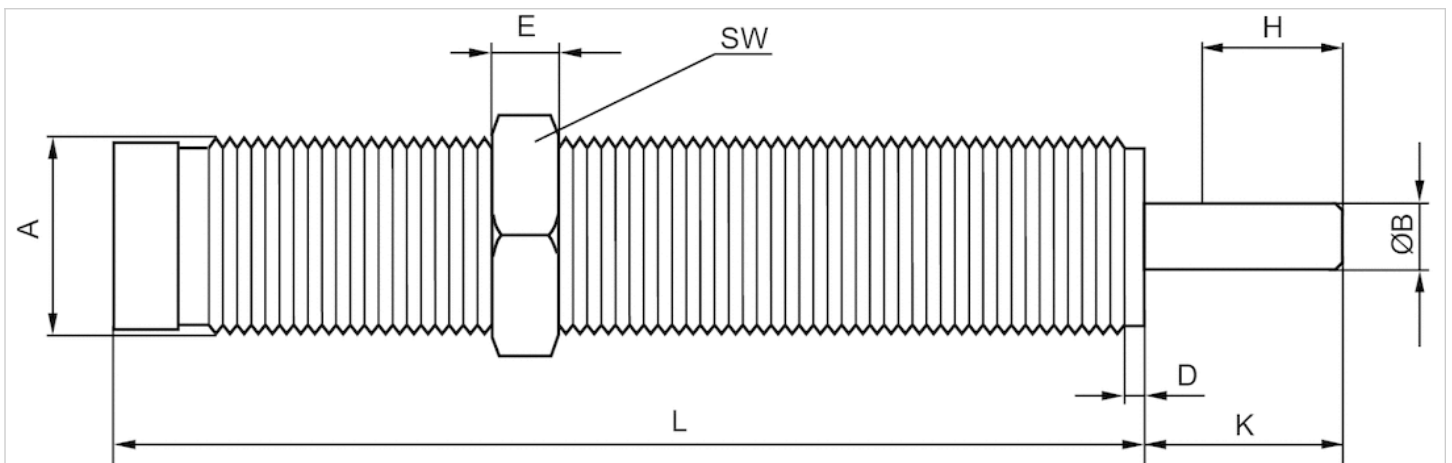
## Technical information

### Material

Cylinder tube	Steel, bronzed
Piston rod	Stainless steel, hardened
Lock nut	Steel, bronzed

## Dimensions

### Dimensions



H = stroke  
A = mounting thread

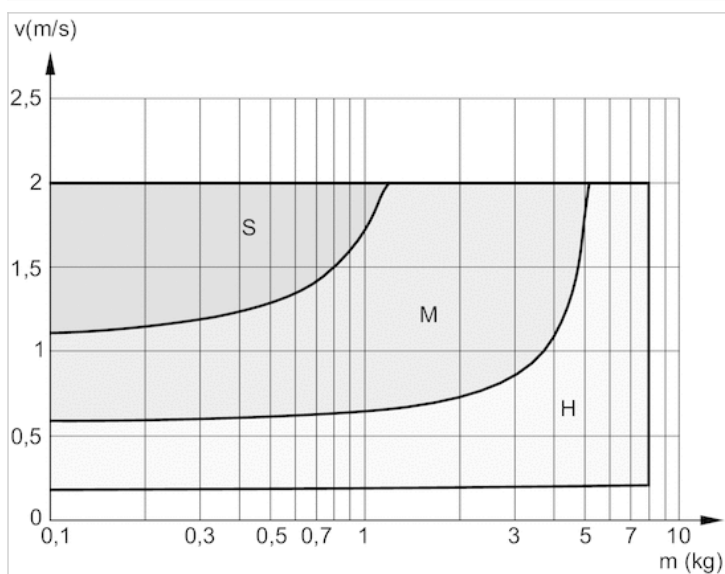
## Dimensions

Part No.	Type	Mounting thread	ØB	D	E	H	K	L	SW
R412010695	SA2-RT	M12x1	4	2.5	4	10	15	52	14
R412010696	SA2-RT	M12x1	4	2.5	4	10	15	52	14

Part No.	Type	Mounting thread	ØB	D	E	H	K	L	SW
R412010697	SA2-RT	M12x1	4	2.5	4	10	15	52	14
R412010698	SA2-RT	M14x1,5	4	2.5	5	14	18.5	69	17
R412010699	SA2-RT	M14x1,5	4	2.5	5	14	18.5	69	17
R412010700	SA2-RT	M14x1,5	4	2.5	5	14	18.5	69	17
R412010701	SA2-RT	M20x1,5	6	2.5	6	13	18	75	24
R412010702	SA2-RT	M20x1,5	6	2.5	6	13	18	75	24
R412010703	SA2-RT	M20x1,5	6	2.5	6	13	18	75	24

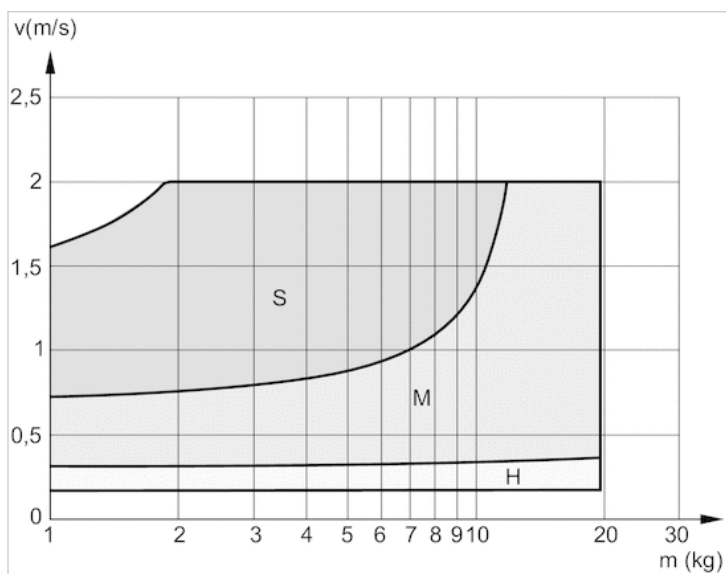
## Diagrams

### Cushioning diagram, Ø 16 mm



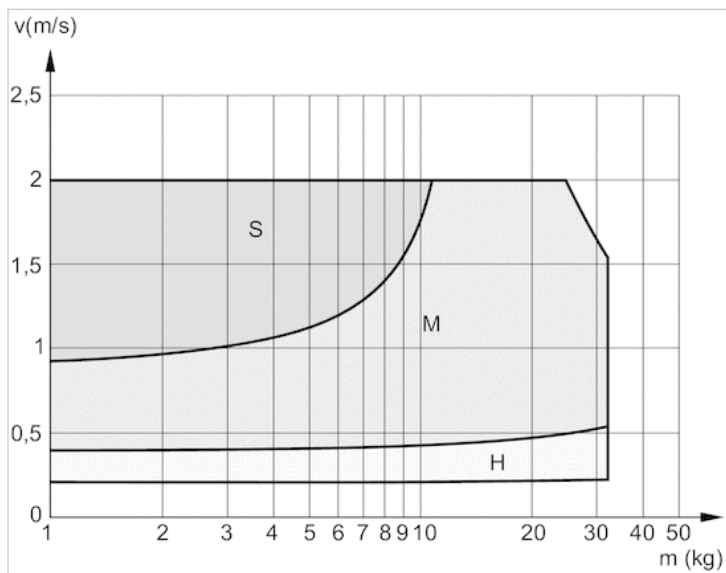
V = velocity [m/s]  
M = moving mass  
S = soft  
M = medium  
H = hard

Cushioning diagram, Ø 25 mm



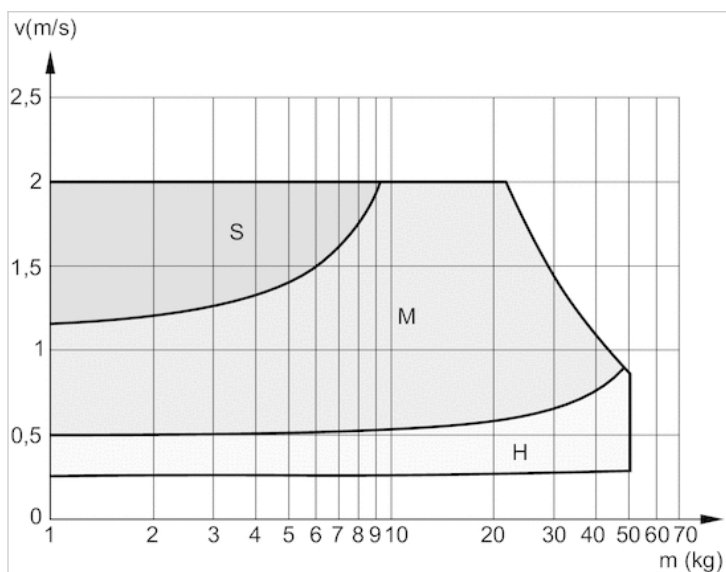
V = velocity [m/s]  
 M = moving mass  
 S = soft  
 M = medium  
 H = hard

Cushioning diagram, Ø 32 mm



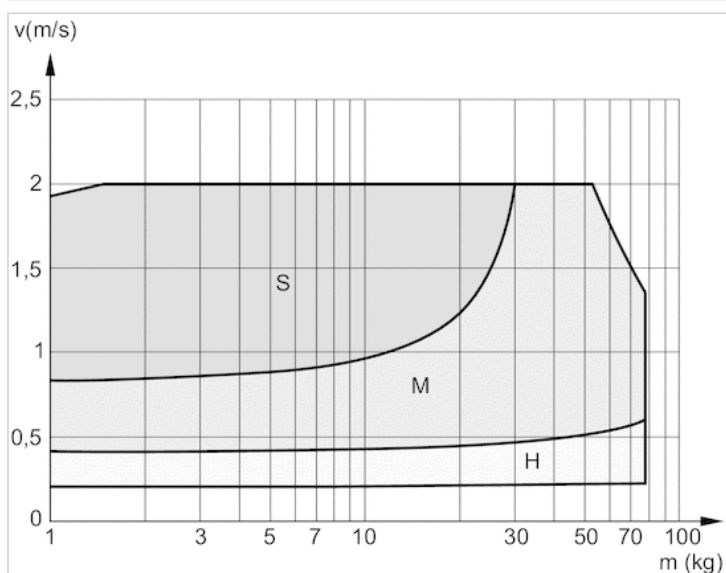
V = velocity [m/s]  
 M = moving mass  
 S = soft  
 M = medium  
 H = hard

Cushioning diagram, Ø 40 mm



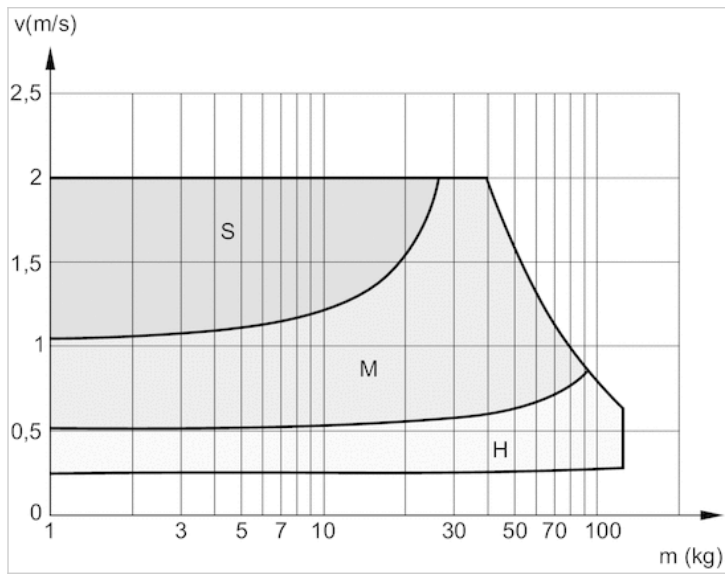
V = velocity [m/s]  
 M = moving mass  
 S = soft  
 M = medium  
 H = hard

Cushioning diagram, Ø 50 mm



V = velocity [m/s]  
 M = moving mass  
 S = soft  
 M = medium  
 H = hard



Cushioning diagram,  $\varnothing 63$  mm

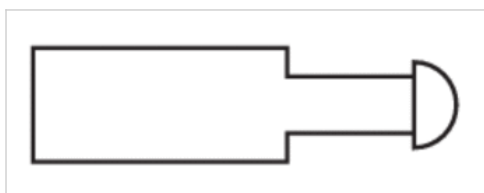
V = velocity [m/s]  
M = moving mass  
S = soft  
M = medium  
H = hard

# Industrial shock absorber, Series SA2-RC

- for RCM-12 RCM-16 RCM-20 RCM-25
- Cushioning self-compensating
- Mounting Lock nut
- Mounting thread M8x1 M10x1 M12x1 M14x1,5
- SA2-RC



Ambient temperature min./max.	0 ... 60 °C
Medium	Oil
Mounting	Lock nut
Weight	See table below



## Technical data

Part No.	for series	Mounting thread	Stroke	Max. energy absorption/stroke	Max. energy absorption/hour
R412004751	RCM-12	M8x1	6 mm	4 Nm	14400 Nm
R412004752	RCM-16	M10x1	6 mm	9 Nm	21000 Nm
R412004753	RCM-20	M12x1	8.5 mm	16 Nm	30000 Nm
R412010089	RCM-25	M14x1,5	9.5 mm	20 Nm	40000 Nm

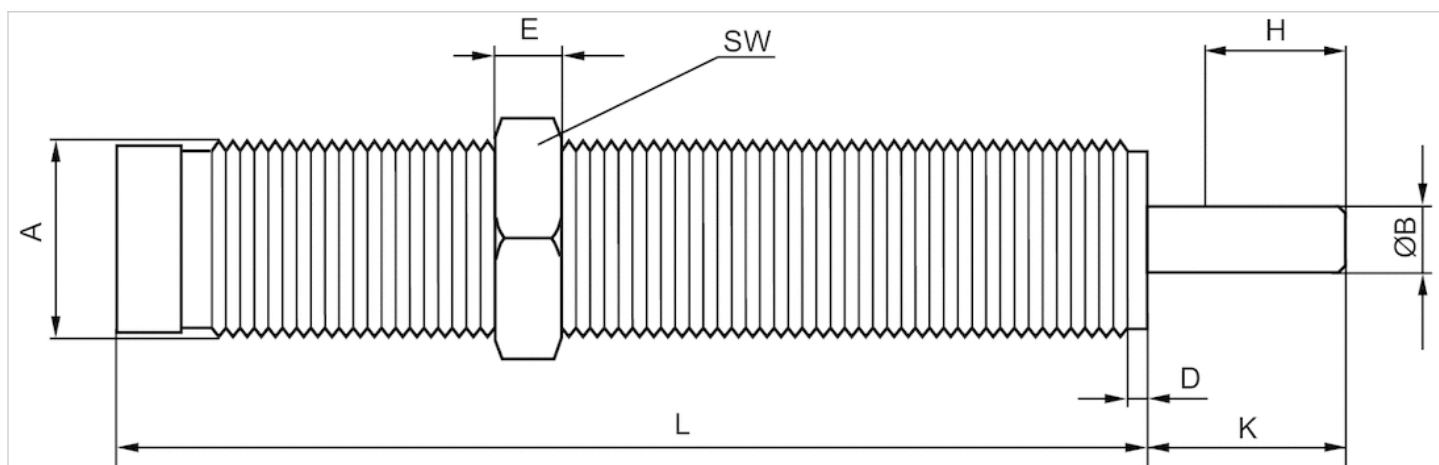
Part No.	Effective mass me	Return spring force	Weight
	min./max.	min./max.	
R412004751	2.8 ... 70 kg	2.5 ... 6 N	0.01 kg
R412004752	6 ... 280 kg	3.5 ... 8 N	0.02 kg
R412004753	17 ... 510 kg	3.5 ... 7 N	0.035 kg
R412010089	100 ... 420 kg	23 ... 35 N	0.06 kg

## Technical information

Material	
Cylinder tube	Steel, bronzed
Piston rod	Stainless steel, hardened
Lock nut	Steel, bronzed

## Dimensions

### Dimensions



H = stroke

A = mounting thread

## Dimensions

Part No.	For series	Mounting thread	ØB	D	E	H	K	L	SW
R412004751	RCM-12	M8x1	2.5	2.5	3	6	9	44	11
R412004752	RCM-16	M10x1	3	2.5	3	6	9	49.5	13
R412004753	RCM-20	M12x1	4	2.5	4	8,5	11	65	14
R412010089	RCM-25	M14x1,5	4	2.5	5	9,5	14	69	17

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