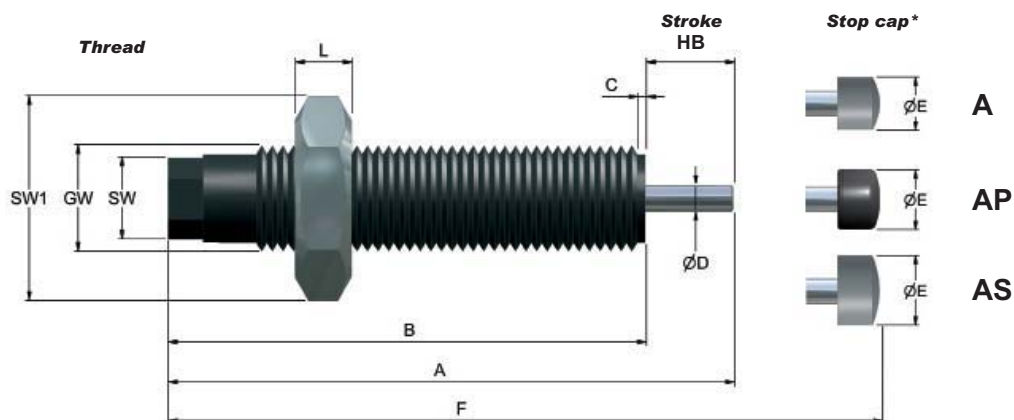


SHOCK ABSORBER

Mega-Line M4 - M12



*A: Plastic / AP: Soft Touch (Page 5) / AS: Steel

Dimensions

	GW Standard	A mm	B mm	C mm	Ø D mm	ØE (A) mm	ØE (AP) mm	ØE (AS) mm	F (A) mm	F (AP) mm	F (AS) mm	L mm	SW mm	SW1 mm
WS-M 4 x 4	M 4 x 0,35	29,0	25,0	2,0	1,5	3,0	-	-	33,0	-	-	3,0	3,0	7,0
WS-M 5 x 4	M 5 x 0,5	29,0	25,0	2,0	1,5	3,0	-	-	33,0	-	-	3,0	4,0	8,0
WS-M 6 x 5	M 6 x 0,5	32,0	27,0	2,0	2,0	5,0	-	-	37,0	-	-	3,0	4,0	8,0
WS-M 8 x 5	M 8 x 1	35,0	30,0	2,5	2,3	6,0	6,5	-	41,0	41,5	-	3,0	5,5	11,0
WS-M 10 x 6	M 10 x 1	37,0	31,0	2,5	3,0	6,0	8,5	8,5	43,5	43,5	43,5	3,0	7,0	13,0
WS-M 10 x 8	M 10 x 1	48,0	40,0	2,5	3,0	6,0	8,5	8,5	54,5	54,5	54,5	3,0	7,0	13,0
WS-M 12 x 10	M 12 x 1	61,0	51,0	2,5	4,0	10,0	10,0	10,0	69,0	69,5	69,0	4,0	9,0	14,0

Performance

	Stroke mm	Energy absorption			Effective mass			Impact Speed	Return spring force
		Constant load*	Emergency*		-1 (soft)	-2 (medium)	-3 (hard)		
		Nm/HB (max.)	Nm/HB (max.)	Nm/h (max.)	min. - max.kg	min. - max.kg	min. - max.kg	m/s	N
WS-M 4 x 4	4	0,4	0,7	1500	0,1 - 1	0,9 - 3,2	-	0,2 - 1,5	2 - 7
WS-M 5 x 4	4	0,6	1,0	1800	0,1 - 1,2	1,0 - 5,0	-	0,2 - 2,0	2 - 7
WS-M 6 x 5	5	1,0	1,5	3000	0,05 - 1	0,8 - 2,8	1,5 - 4	0,2 - 2,5	2 - 5
WS-M 8 x 5	5	1,5	2,0	4000	0,25 - 3	0,7 - 6	3 - 9	0,2 - 2,5	2 - 5
WS-M 10 x 6	6	2,2	3,0	12000	0,7 - 3	3 - 10	8 - 18	0,2 - 2,5	3 - 6
WS-M 10 x 8	8	3,0	4,0	24000	0,9 - 9	2 - 12	9 - 23	0,2 - 3	3 - 6
WS-M 12 x 10	10	9,0	12,0	27450	1 - 15	10 - 42	25 - 61	0,2 - 3	4 - 10

Specifications

WS-M..... self-compensating, linear

Temperature -20°C - +80°C

Weight M4x4 / M5x4 / M6x5 : 3 g / M8x5 : 7 g
M10x6 : 11 g / M10x8 : 14 g / M12x10 : 30 g

Material..... Housing: ProSurf
Piston rod: hardened stainless steel

Torque: Max force by using the flats..... M4x4: 0,8 Nm / M5x4: 1,0 Nm
M6x5: 1,2 Nm / M8x5: 2 Nm
M10xX: 4 Nm / M12x10: 8 Nm

Included..... 1 lock nut
Instructions for use and assembly

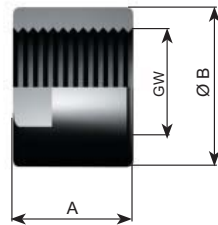
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ACCESSORIES

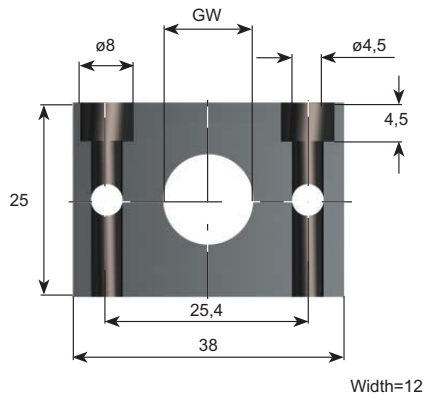
Mega-Line M8x5 - 12x10

Stop Limit Nut



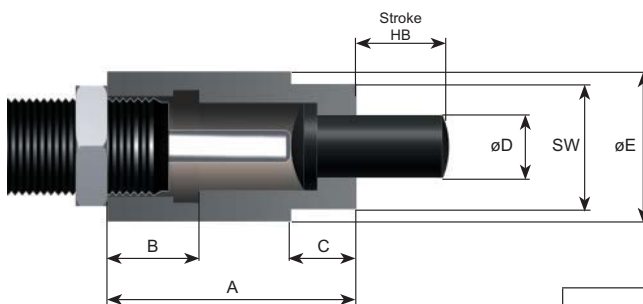
GW	A mm	Ø B mm
M 8 x 1	12	11
M 10 x 1	15	14
M 12 x 1	20	16

Rectangular Flange



GW
M 10 x 1
M 12 x 1

AK1 for Side Forces



	GW	A mm	B mm	C mm	Ø D mm	Ø E mm	SW mm
M 10 x 6	M 10 x 1	17,5	7	5	7	14	13
M 10 x 8	M 10 x 1	20,5	7	5	7	14	13
M 12 x 10	M 12 x 1	23,0	7	5	9	15	14
0,15	M 10 x 1	23,5	7	5	6	14	13
0,2	M 12 x 1	25,0	7	5	9	15	14

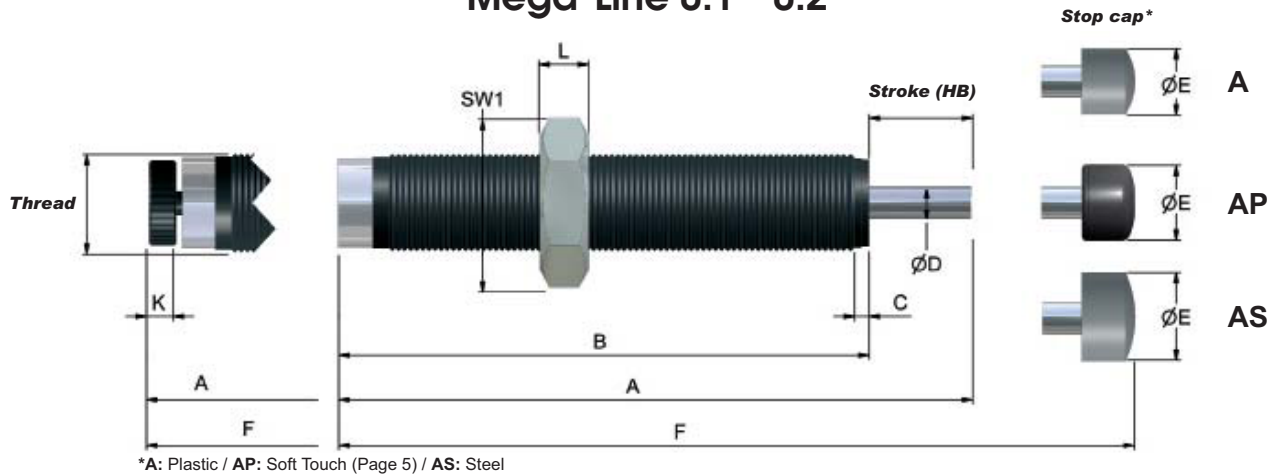


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SHOCK ABSORBER

Mega-Line 0.1 - 0.2



*A: Plastic / AP: Soft Touch (Page 5) / AS: Steel

Dimensions

	Thread Standard	A mm	B mm	C mm	Ø D mm	Ø E (A) mm	Ø E (AP) mm	Ø E (AS) mm	F (A) mm	F (AP) mm	F (AS) mm	L mm	SW mm	K mm
WE-M 0,1	M 8 x 1	56,0	45,0	2,5	2,5	6	6,5	-	61,5	62,0	-	3	11	3,5
WS-M 0,1	M 8 x 1	51,0	44,0	2,5	2,5	6	6,5	-	57,0	58,0	-	3	11	-
WP-M 0,1	M 8 x 1	51,0	44,0	2,5	2,5	6	6,5	-	57,0	58,0	-	3	11	-
WE-M 0,15	M 10 x 1	62,0	48,5	2,5	3,0	6	8,5	8,5	68,5	68,5	68,5	3	13	3,5
WS-M 0,15	M 10 x 1	59,5	49,5	2,5	3,0	6	8,5	8,5	66,0	66,0	66,0	3	13	-
WP-M 0,15	M 10 x 1	59,5	49,5	2,5	3,0	6	8,5	8,5	66,0	66,0	66,0	3	13	-
WE-M 0,2	M 12 x 1	81,5	66,0	2,5	4,0	10	10,0	10	89,5	90,0	89,5	4	14	3,5
WS-M 0,2	M 12 x 1	77,0	65,0	2,5	4,0	10	10,0	10	85,0	85,0	85,0	4	14	-
WP-M 0,2	M 12 x 1	77,0	65,0	2,5	4,0	10	10,0	10	85,0	85,0	85,0	4	14	-

Performances

	Stroke mm	Energy absorption		Effective mass				Impact Speed m/s	Return spring force N
		Constant load		-1 (soft)	-2 (medium)	-3 (hard)	-4 (very hard)		
		Nm/HB (max.)	Nm/h (max.)	min. - max.kg	min. - max.kg	min. - max.kg	min. - max.kg		
WE-M 0,1	7	4	14.400	0,65 - 50	-	-	-	0,2 - 3,5	2,5 - 6
WS-M 0,1	7	4	14.400	0,65 - 2,0	1,3 - 5,5	1,7 - 50	-	0,2 - 5,0	2,5 - 6
WP-M 0,1	7	4	14.400	0,3 - 0,9	0,65 - 2,0	1,8 - 8	-	0,2 - 5,0	2,5 - 6
WE-M 0,15	10	15	24.000	1,0 - 500	-	-	-	0,2 - 3,5	3,6 - 8
WS-M 0,15	10	15	24.000	1,6 - 7,5	6,1 - 71	61 - 252	232 - 750	0,2 - 5,0	3,6 - 8
WP-M 0,15	10	15	24.000	1,0 - 2,2	2,0 - 7,5	6,1 - 71	-	0,2 - 5,0	3,6 - 8
WE-M 0,2	12	22	35.200	9 - 800	-	-	-	0,2 - 3,5	3,5 - 7
WS-M 0,2	12	22	35.200	2,0 - 11	10 - 107	104 - 360	343 - 1.100	0,2 - 5,0	3,5 - 7
WP-M 0,2	12	22	35.200	1,5 - 2,8	2 - 21	17 - 92	-	0,2 - 5,0	3,5 - 7

Specifications

WS-M.....Self-compensating, linear Torque: max force by using the flats..... 0,1: 2,0 Nm / 0,15 : 6 Nm
 0,2 : 10 Nm
 WP-M..... Self-compensating, progressive Temperature-20°C - +80°C
 WE-M.....Adjustable, linear Material..... Housing: ProSurf
 Weight 0,1 : 10 g / 0,15 : 20 g / 0,2 : 36 g Piston rod: hardened stainless steel



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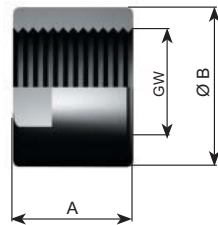
Included 1 lock nut
 Instructions for use and assembly

Group 051

ACCESSORIES

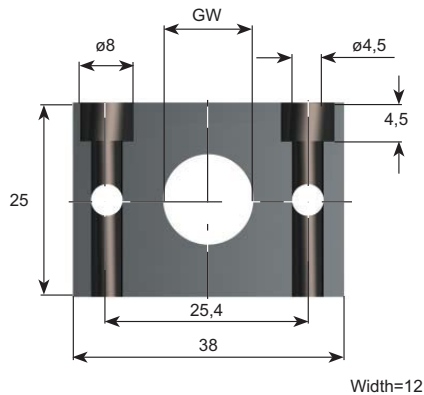
Mega-Line M8x5 - 12x10 / 0.1-0.2

Stop Limit Nut



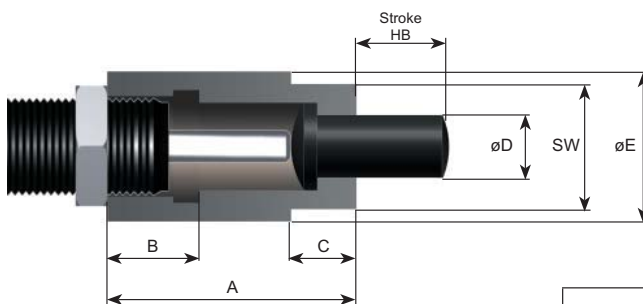
GW	A mm	Ø B mm
M 8 x 1	12	11
M 10 x 1	15	14
M 12 x 1	20	16

Rectangular Flange



GW
M 10 x 1
M 12 x 1

AK1 for Side Forces



	GW	A mm	B mm	C mm	Ø D mm	Ø E mm	SW mm
M 10 x 6	M 10 x 1	17,5	7	5	7	14	13
M 10 x 8	M 10 x 1	20,5	7	5	7	14	13
M 12 x 10	M 12 x 1	23,0	7	5	9	15	14
0,15	M 10 x 1	23,5	7	5	6	14	13
0,2	M 12 x 1	25,0	7	5	9	15	14

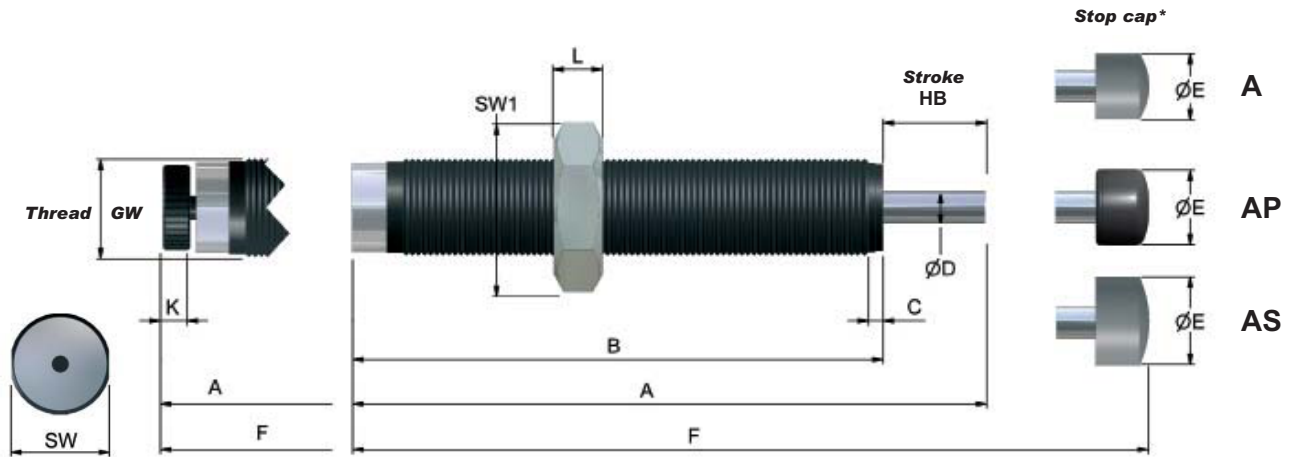


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SHOCK ABSORBER

Mega-Line 0.25-0.5



*A: Plastic / AP: Soft Touch (Page 5) / AS: Steel

Dimensions

	GW*	A	B	C	ØD	ØE (A)	ØE (AP)	ØE (AS)	F (A)	F (AP)	F (AS)	K	L	SW	SW1
WE-M 0,25	M 14 x 1	97	78	2,5	4	10	10	10	105	105	105	4,5	5	13	17
WS-M 0,25	M 14 x 1	92	78	2,5	4	10	10	10	100	101	100	-	5	13	17
WP-M 0,25	M 14 x 1	92	78	2,5	4	10	10	10	100	101	100	-	5	13	17
WE-M 0,35	M 16 x 1	97	78	2,5	4	10	10	10	105	105	105	4,5	6	14	19
WS-M 0,35	M 16 x 1	92	78	2,5	4	10	10	10	100	101	100	-	6	14	19
WP-M 0,35	M 16 x 1	92	78	2,5	4	10	10	10	100	101	100	-	6	14	19
WE-M 0,5 x 13	M 20 x 1	94	75	2,5	6	12	17	16	104	105	104	6	6	18	24
WS-M 0,5 x 13	M 20 x 1	88	75	2,5	6	12	17	16	98	99	98	-	6	18	24
WP-M 0,5 x 13	M 20 x 1	88	75	2,5	6	12	17	16	98	99	98	-	6	18	24
WE-M 0,5 x 19	M 20 x 1	113	88	2,5	6	12	17	16	123	125	123	6	6	18	24
WS-M 0,5 x 19	M 20 x 1	107	88	2,5	6	12	17	16	117	119	117	-	6	18	24
WP-M 0,5 x 19	M 20 x 1	107	88	2,5	6	12	17	16	117	119	117	-	6	18	24
WE-M 0,5 x 40	M 20 x 1	171	125	2,5	6	12	17	16	181	183	181	6	6	18	24
WS-M 0,5 x 40	M 20 x 1	165	125	2,5	6	12	17	16	175	177	177	-	6	18	24
WP-M 0,5 x 40	M 20 x 1	165	125	2,5	6	12	17	16	175	177	177	-	6	18	24

*Optional Threads: page 3

Performances

	Stroke mm	Energy absorption		Effective mass				
		Constant load* Nm/HB (max.)	Nm/h (max.)	-0 (very soft) min. - max.kg	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 0,25	14	30	50.000	-	1,6 - 1500	-	-	-
WS-M 0,25	14	30	50.000	0,9 - 8	3,5 - 17	9,9 - 76	62 - 252	250 - 950
WP-M 0,25	14	30	50.000	-	0,8 - 3,7	3 - 26	21 - 165	-
WE-M 0,35	14	35	52.500	-	6,5 - 1750	-	-	-
WS-M 0,35	14	35	52.500	1,9 - 4,5	4 - 25	22 - 90	85 - 428	420 - 1320
WP-M 0,35	14	35	52.500	-	1,1 - 6,4	5 - 28	25 - 280	-
WE-M 0,5 x 13	13	65	52.000	-	6 - 3250	-	-	-
WS-M 0,5 x 13	13	65	52.000	1,8 - 8,5	7,5 - 36	20 - 160	130 - 610	520 - 3500
WP-M 0,5 x 13	13	65	52.000	-	1,8 - 8,5	6,4 - 58	44 - 360	-
WE-M 0,5 x 19	19	100	76.500	-	9 - 4.500	-	-	-
WS-M 0,5 x 19	19	100	76.500	2,6 - 10,6	10 - 86	40 - 209	170 - 800	680 - 4.050
WP-M 0,5 x 19	19	100	76.500	-	2,6 - 12,5	10 - 89	69 - 555	-
WE-M 0,5 x 40	40	125	95.625	-	12 - 6.300	-	-	-
WS-M 0,5 x 40	40	125	95.625	3,5 - 16	14 - 69	40 - 305	250 - 1.180	1.000 - 6.250
WP-M 0,5 x 40	40	125	95.625	-	3,5 - 20	13 - 100	90 - 690	-

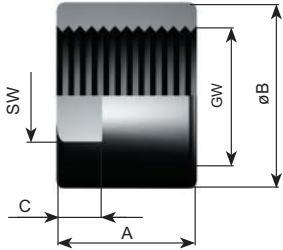
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ACCESSORIES

Mega-Line 0.25-0.5

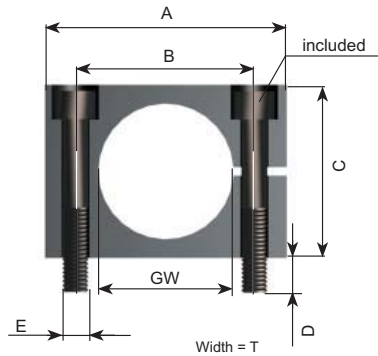
Stop Limit Nut



GW*	A mm	Ø B mm	C mm	SW mm
M 14 x 1	20	18	6	15
M 16 x 1	25	21	8	19
M 20 x 1	35	25	8	22

*Optional Threads: page 3

Rectangular Flange



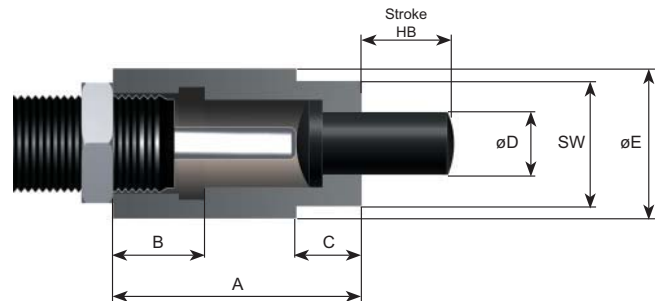
GW*	A mm	B mm	C mm	D mm	E mm	T mm
M 14 x 1	32	20	20	5	M5	12
M 16 x 1	40	28	25	6	M6	20
M 20 x 1	40	28	25	6	M6	20

*Optional Threads: page 3

Specifications

WS-M.....	Self-compensating, linear
WP-M.....	Self-compensating, progressive
WE-M.....	Adjustable, linear
Weight	0.25 : 0.05 kg / 0.35 : 0.07 kg 0.5 : 0.14 kg / 0.5 x 40 : 0.20 kg
Impact Speed	WE-M : 0.08 - 6.0 m/s WS-M : 0.08 - 6.0 m/s WP-M : 0.30 - 8.0 m/s
Returning Spring Force	0.25 / 0.35 : 13 N/min - 23 N/max 0.5 / 0.5x40 : 12 N/min - 23 N/max
Torque: max force by using the flats.....	0.25 / 0.35 : 20 Nm 0.5 / 0.5x40 : 25 Nm
Temperature	-20°C - +90°C
Material.....	housing: ProSurf piston rod: hardened stainless steel
Included.....	1 lock nut instructions for use and assembly

AK1 for Side Forces

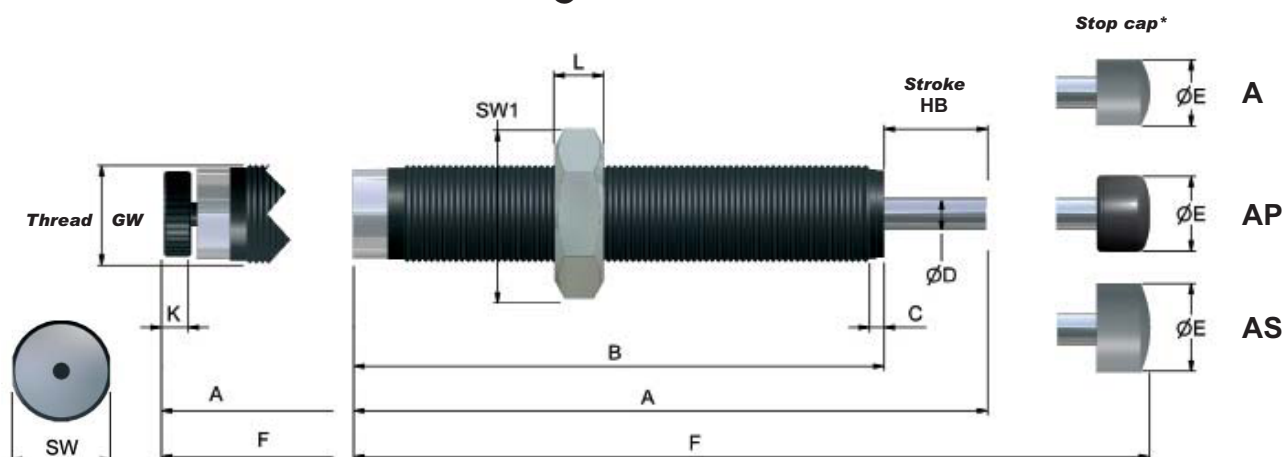


	GW*	A mm	B mm	C mm	ø D mm	ø E mm	SW mm
WE-M / WS-M / WP-M 0,25	M14x1	32,0	10,0	6	9	18	15
WE-M / WS-M / WP-M 0,35	M16x1	33,0	10,0	5	12	20	17
WE-M / WS-M / WP-M 0,5x19	M20x1	42,0	16,0	8	12	24	22

*Optional Threads: page 3

SHOCK ABSORBER

Mega-Line 1.0



*A: Plastic / AP: Soft Touch (Page 5) / AS: Steel

Dimensions

	GW*	A mm	B mm	C mm	ØD mm	ØE (A) mm	ØE (AP) mm	ØE (AS) mm	F (A) mm	F (AP) mm	F (AS) mm	K mm	L mm	SW mm	SW1 mm
WE-M 1,0	M 24 x 1,5	141	108	3,5	8	16	21	20	154	156	154	8	8	23	30
WS-M 1,0	M 24 x 1,5	133	108	3,5	8	16	21	20	146	148	146	-	8	23	30
WP-M 1,0	M 24 x 1,5	133	108	3,5	8	16	21	20	146	148	146	-	8	23	30
WE-M 1,0 x 40	M 24 x 1,5	178	130	3,5	8	16	21	20	191	193	191	8	8	23	30
WS-M 1,0 x 40	M 24 x 1,5	170	130	3,5	8	16	21	20	183	185	183	-	8	23	30
WP-M 1,0 x 40	M 24 x 1,5	170	130	3,5	8	16	21	20	183	185	183	-	8	23	30
WE-M 1,0 x 80	M 24 x 1,5	321	233	3,5	8	16	21	20	334	336	334	8	8	-	30
WS-M 1,0 x 80	M 24 x 1,5	313	233	3,5	8	16	21	20	326	328	326	-	8	-	30
WP-M 1,0 x 80	M 24 x 1,5	313	233	3,5	8	16	21	20	326	328	326	-	8	-	30

*Optional Threads: page 3

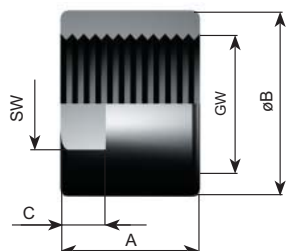
Performances

	Stroke mm	Energy absorption		Effective mass				
		Constant load* Nm/HB (max.)	Nm/h (max.)	-0 (very soft) min. - max.kg	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 1,0	25	220	105.600	-	22 - 11.000	-	-	-
WS-M 1,0	25	220	105.600	6 - 29	24 - 120	70 - 460	440 - 2.050	1760 - 10.800
WP-M 1,0	25	220	105.600	-	6 - 27,5	21 - 195	150 - 1200	-
WE-M 1,0 x 40	40	390	175.500	-	38 - 18.000	-	-	-
WS-M 1,0 x 40	40	390	175.500	15 - 103	44 - 216	135 - 962	780 - 3.600	3100 - 19.500
WP-M 1,0 x 40	40	390	175.500	-	10 - 48	39 - 340	270 - 2150	-
WE-M 1,0 x 80	80	390	175.500	-	38 - 18.000	-	-	-
WS-M 1,0 x 80	80	390	175.500	15 - 103	44 - 216	135 - 962	780 - 3.600	3100 - 19.500
WP-M 1,0 x 80	80	390	175.500	-	10 - 48	39 - 340	270 - 2150	-

ACCESSORIES

Mega-Line 1.0

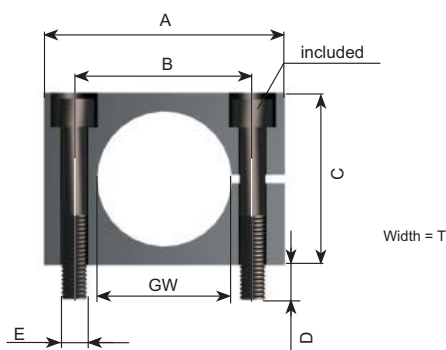
Stop Limit Nut



GW*	A mm	Ø B mm	C mm	SW mm
M 24 x 1,5	38	31	10	30

*Optional Threads: page 3

Rectangular Flange



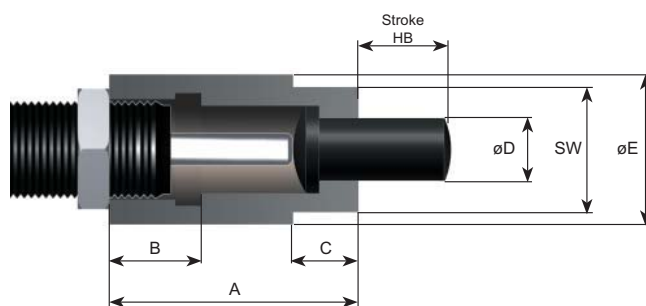
GW*	A mm	B mm	C mm	D mm	E mm	T mm
M 24 x 1,5	46	33	32	6	M6	25

*Optional Threads: page 3

Specifications

WS-M.....	Self-compensating, linear
WP-M.....	Self-compensating, progressive
WE-M.....	Adjustable, linear
Weight	1.0 : 0.29 kg 1.0x40 : 0.39 kg / 1.0x80 : 0.63 kg
Impact Speed	WE-M : 0.08 - 6.0 m/s WS-M : 0.08 - 6.0 m/s WP-M : 0.30 - 8.0 m/s
Returning Spring Force	1.0 : 15 N/min - 31 N/max 1.0x40 : 11 N/min - 20 N/max 1.0x80 : 14 N/min - 31 N/max
Torque: max force by using the flats.....	1.0 / 1.0x40 / 1.0x80 : 30 Nm
Temperature	-20°C - +90°C
Material.....	Housing: ProSurf Piston rod: hardened stainless steel
Included.....	1 lock nut Instructions for use and assembly

AK 1 for Side Forces



	GW*	A mm	B mm	C mm	ø D mm	ø E mm	SW mm
WE-M / WS-M / WP-M 1.0	M 24x 1,5			10	16	29	27

*Optional Threads: page 3

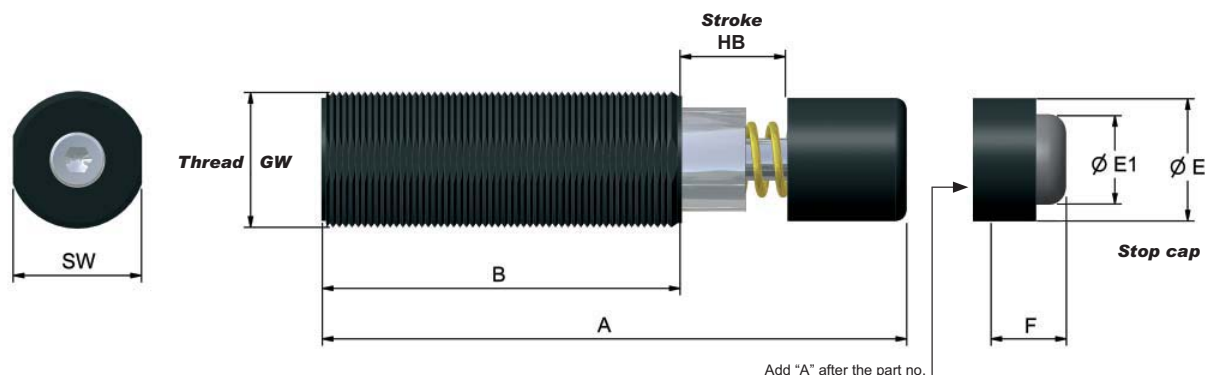


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SHOCK ABSORBER

Mega-Line 1.25



Dimensions

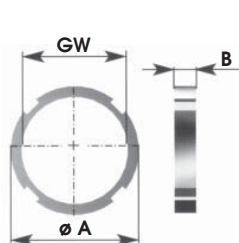
	GW* Standard	A mm	B mm	Ø E mm	Ø E1 mm	F mm	SW mm
WE-M 1,25 x 1	M 32 x 1,5	138	85	29	21	16	30
WS-M 1,25 x 1	M 32 x 1,5	138	85	29	21	16	30
WP-M 1,25 x 1	M 32 x 1,5	138	85	29	21	16	30
WE-M 1,25 x 2	M 32 x 1,5	188	110	29	21	16	30
WS-M 1,25 x 2	M 32 x 1,5	188	110	29	21	16	30
WP-M 1,25 x 2	M 32 x 1,5	188	110	29	21	16	30

*Optional Threads: page 3

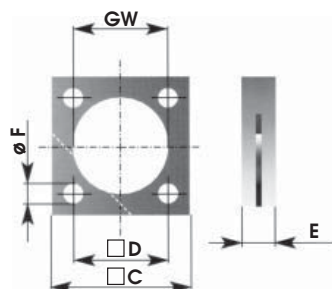
Performance

	Stroke mm	Energy absorption			Effective mass				
		Constant load Nm/HB (max.)	Nm/h (max.)	External tank Nm/h	-0 (very soft) min. - max.kg	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 1,25 x 1	25	300	120.000	240.000	10 - 100	60 - 2.950	600 - 89.000	-	-
WS-M 1,25 x 1	25	300	120.000	240.000	7 - 32	28 - 130	80 - 590	440 - 2.050	2.000 - 12.500
WP-M 1,25 x 1	25	300	120.000	240.000	-	7 - 35	30 - 260	207 - 1.650	-
WE-M 1,25 x 2	50	500	150.000	300.000	15 - 160	100 - 4.000	800 - 120.000	-	-
WS-M 1,25 x 2	50	500	150.000	300.000	13 - 60	56 - 240	160 - 1.200	1.000 - 4.200	4.000 - 25.000
WP-M 1,25 x 2	50	500	150.000	300.000	-	7 - 35	30 - 260	207 - 1.650	-

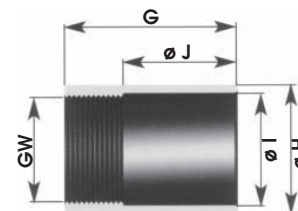
Lock Nut



Square Flange



Stop Limit Nut



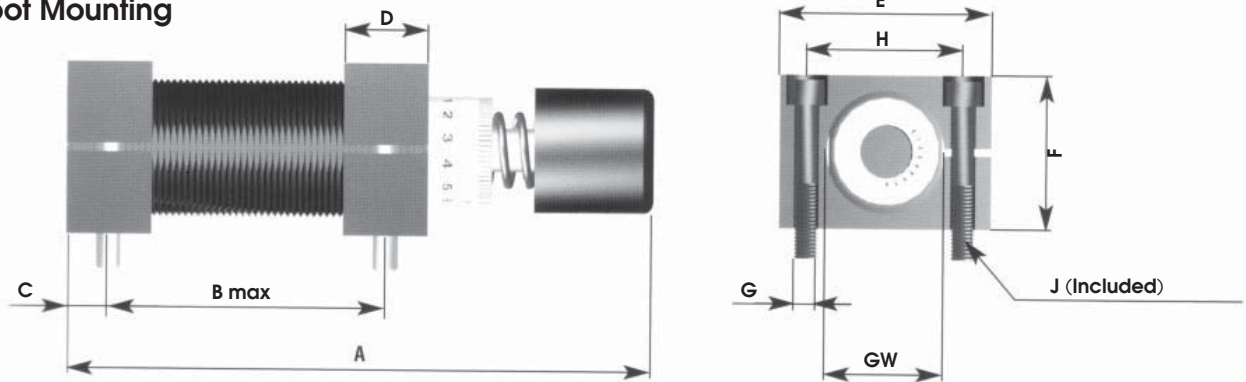
GW	Ø A mm	B mm	C mm	D mm	E mm	Ø F mm	G mm	Ø H mm	Ø I mm	Ø J mm
M 32x1.5	38	6.5	45	31	12	6.6	60	38	33	35

*Optional Threads: page 3

ACCESSORIES

Mega-Line 1.25

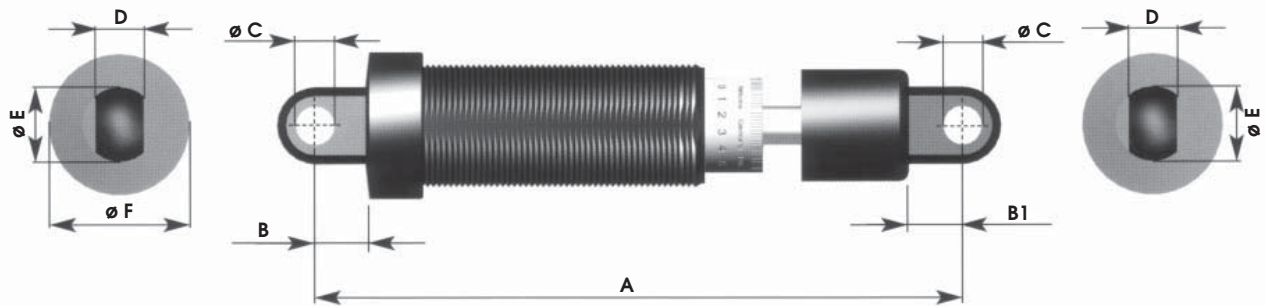
Foot Mounting



	GW*	A mm	B max mm	C mm	D mm	E mm	F mm	Ø G mm	H mm	J mm
1.25x1	M 32x1.5	138	65	10	20	56	40	6.6	41	M6x40
1.25x2	M 32x1.5	188	90	10	20	56	40	6.6	41	M6x40

*Optional Threads: page 3

Clevis Mounting



	GW*	A max mm	B mm	B1 mm	Ø C mm	D mm	Ø E mm	Ø F mm	G mm	H mm	I mm	J mm	Ø K mm	L mm	M mm	N mm	Ø O mm	P mm
1.25x1	M 32x1.5	168	14	14	10	13	20	38	45	32	14	34	6.5	22	13	5	10	20
1.25x2	M 32x1.5	218	14	14	10	13	20	38	45	32	14	34	6.5	22	13	5	10	20

*Optional Threads: page 3

Specifications

WS-M.....Self-compensating, linear
WP-M.....Self-compensating, progressive
WE-M.....Adjustable, linear

Weight 1.25 x 1: 0.45 kg / 1.25 x 2: 0.55 kg

Impact Speed WE-M : 0.02 - 6.0 m/s
WS-M : 0.10 - 6.0 m/s
WP-M : 0.40 - 8.0 m/s

Returning Spring Force 1.25 x 1 : 30 N/min - 50 N/max
1.25 x 2 : 23 N/min - 50 N/max

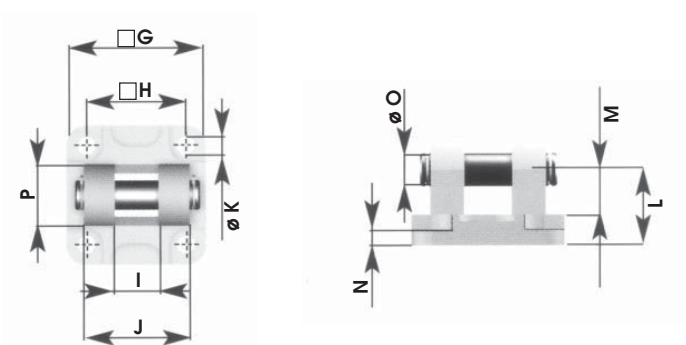
Torque: max force by using the flats..... 1.25 : 40 Nm

Temperature -20°C - +80°C

Material..... Housing: black finish
Piston rod: hardened stainless steel

Included Instructions for use and assembly
1-051-040120

Clevis Flange

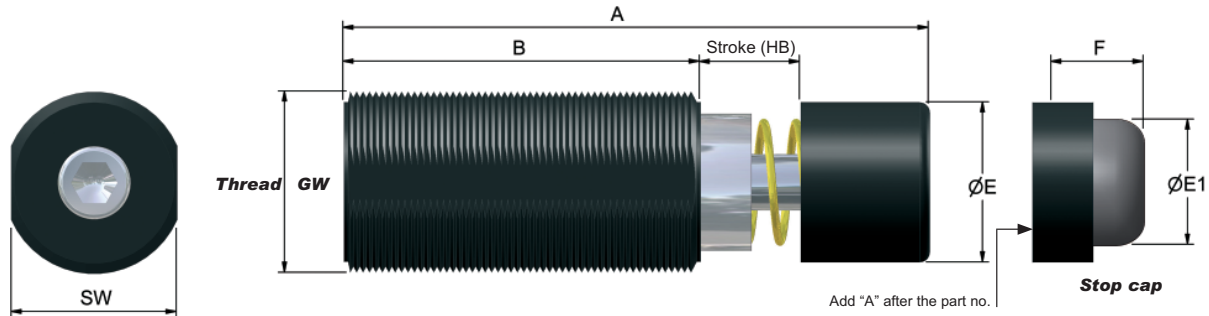


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Group 051

SHOCK ABSORBER

Mega-Line 1.5



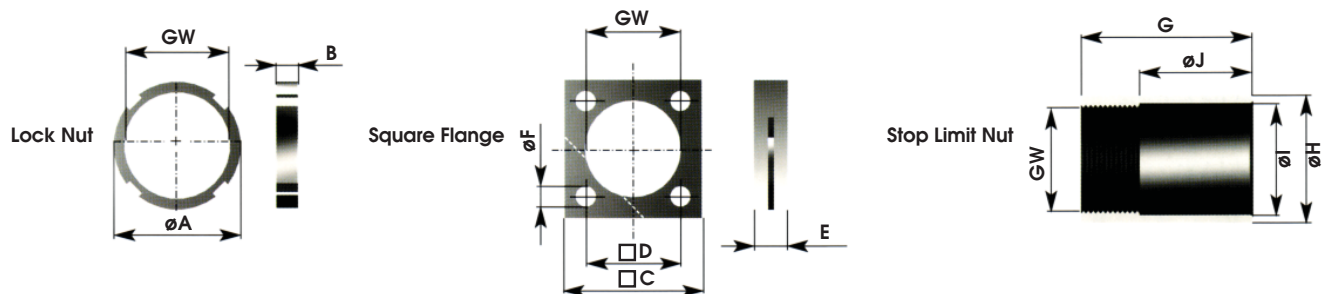
Dimensions

	GW*	A mm	B mm	Ø E mm	Ø E1 mm	F mm	SW mm
WE-M 1,5 x 1	M 45 x 2	148	89	39,6	31	18	41
WS-M 1,5 x 1	M 45 x 2	148	89	39,6	31	18	41
WP-M 1,5 x 1	M 45 x 2	148	89	39,6	31	18	41
WE-M 1,5 x 2	M 45 x 2	198	114	39,6	31	18	41
WS-M 1,5 x 2	M 45 x 2	198	114	39,6	31	18	41
WP-M 1,5 x 2	M 45 x 2	198	114	39,6	31	18	41
WE-M 1,5 x 3	M 45 x 2	248	139	39,6	31	18	41
WS-M 1,5 x 3	M 45 x 2	248	139	39,6	31	18	41
WP-M 1,5 x 3	M 45 x 2	248	139	39,6	31	18	41

*Optional Threads: page 3

Performances

	Stroke mm	Energy absorption			Effective mass				
		Constant load Nm/HB (max.)	Nm/h (max.)	External tank Nm/h	-0 (very soft) min. - max.kg	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 1,5 x 1	25	870	261.000	450.000	30 - 250	150 - 21.000	6.200 - 240.000	-	-
WS-M 1,5 x 1	25	870	261.000	450.000	24 - 114	98 - 480	280 - 2.100	1.740 - 8.200	6.960 - 43.500
WP-M 1,5 x 1	25	870	261.000	450.000	-	24 - 108	85 - 770	600 - 4.800	-
WE-M 1,5 x 2	50	1350	340.000	544.000	45 - 430	300 - 26.000	10.800 - 330.000	-	-
WS-M 1,5 x 2	50	1350	340.000	544.000	35 - 170	160 - 680	440 - 2900	2.700 - 12.700	10.800 - 67.500
WP-M 1,5 x 2	50	1350	340.000	544.000	-	37 - 160	130 - 1200	940 - 7500	-
WE-M 1,5 x 3	75	2100	420.000	670.000	70 - 670	450 - 27.600	16.800 - 500.000	-	-
WS-M 1,5 x 3	75	2100	420.000	670.000	40 - 270	240 - 1.100	670 - 5.000	4.200 - 19.500	16.800 - 105.000
WP-M 1,5 x 3	75	2100	420.000	670.000	-	58 - 260	200 - 1.850	1.450 - 11.600	-



GW	ØA mm	B mm	C mm	D mm	E mm	ØF mm	G mm	ØH mm	ØI mm	ØJ mm
M 45 x 2	54	8	55	43	12	9	65	54	47	35

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*Optional Threads: page 3

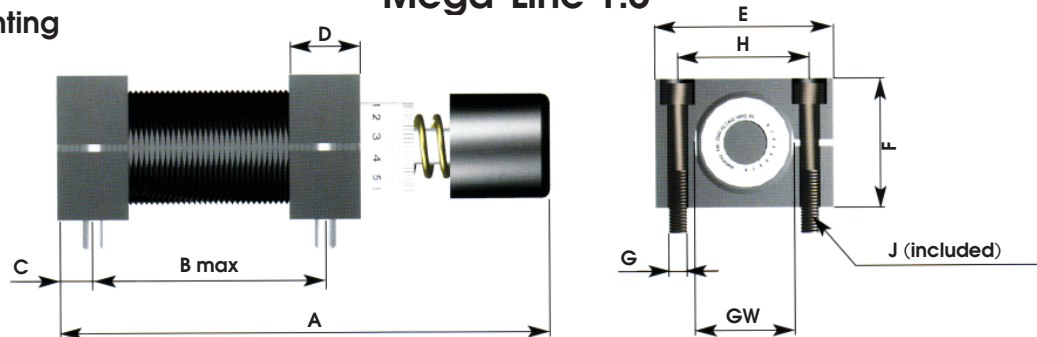
Group 051

1-051-040429

ACCESSORIES

Mega-Line 1.5

Foot Mounting

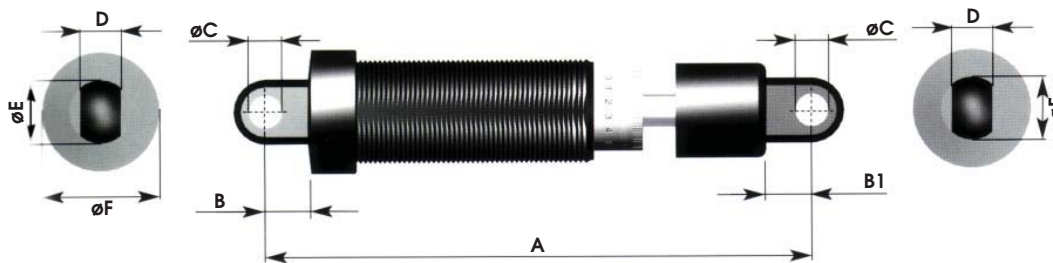


Dimensions

	GW	A mm	B max mm	C mm	D mm	E mm	F mm	ØG mm	H mm	J mm
1.5 x 1	M 45 x 2	146	64	12.5	25	80	56	9	58	M 8 x 50
1.5 x 2	M 45 x 2	196	89	12.5	25	80	56	9	58	M 8 x 50
1.5 x 3	M 45 x 2	246	114	12.5	25	80	56	9	58	M 8 x 50

*Optional Threads: page 3

Clevis Mounting



Dimensions

	GW	A max mm	B mm	B1 mm	ØC mm	D mm	ØE mm	ØF mm	G mm	H mm	I mm	J mm	ØK mm	L mm	M mm	N mm	ØO mm	P mm
1.5 x 1	M 45 x 2	200	28	18	16	20	28	53	65	46	21	45	9	27	15	6	16	29
1.5 x 2	M 45 x 2	250	28	18	16	20	28	53	65	46	21	45	9	27	15	6	16	29
1.5 x 3	M 45 x 2	300	28	18	16	20	28	53	65	46	21	45	9	27	15	6	16	29

*Optional Threads: page 3

Specifications

WS-M.....Self-compensating, linear
WP-M.....Self-compensating, progressive
WE-M.....Adjustable, linear

Weight 1.5x1: 0.95 kg / 1.5x2: 1.10 kg / 1.5x3 : 1.20 kg

Impact Speed WE-M : 0.02 - 6.0 m/s
WS-M : 0.10 - 6.0 m/s / WP-M : 0.40 - 8.0 m/s

Returning Spring Force1.5x1 : 50 N/min - 70 N/max
1.5x2 : 35 N/min - 70 N/max
1.5x3 : 35 N/min - 80 N/max

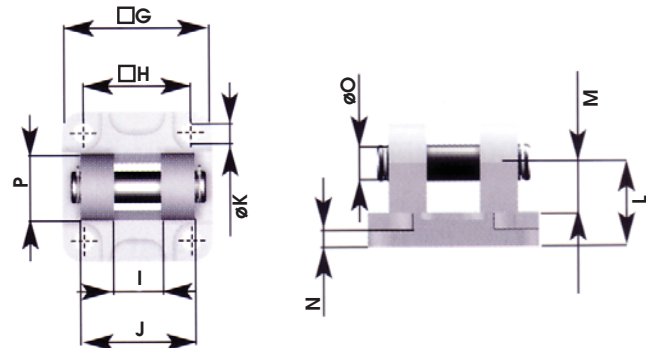
Torque: max force by using the flats.....1.5 : 40 Nm

Temperature-20°C - +80°C

Material..... Housing: black finish
Piston rod: hardened stainless steel

IncludedInstructions for use and assembly
1-051-040429

Clevis Flange

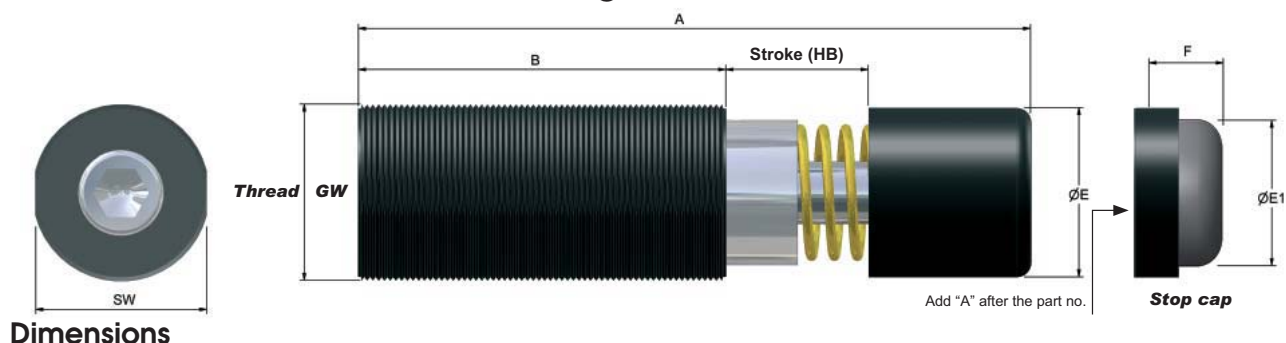


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Group 051

SHOCK ABSORBER

Mega-Line 2.0



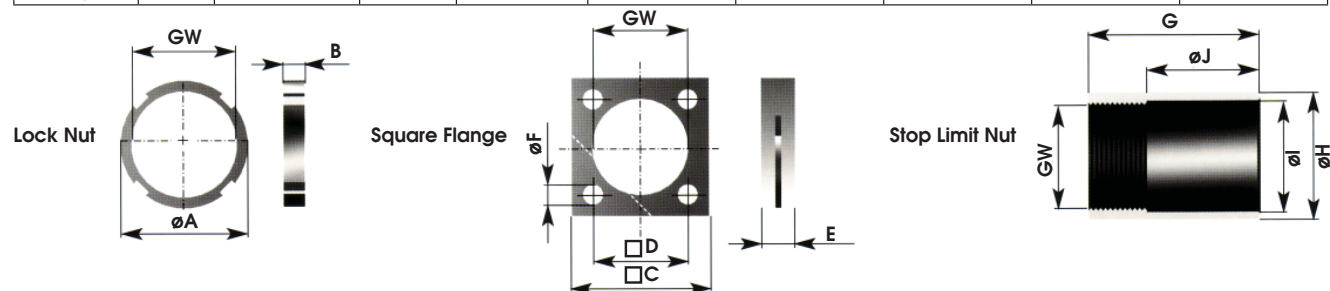
Dimensions

	GW*	A mm	B mm	Ø E mm	Ø E1 mm	F mm	SW mm
WE-M 2,0 x 1	M 62 x 2	186	104	59	49	25	60
WS-M 2,0 x 1	M 62 x 2	186	104	59	49	25	60
WP-M 2,0 x 1	M 62 x 2	186	104	59	49	25	60
WE-M 2,0 x 2	M 62 x 2	236	129	59	49	25	60
WS-M 2,0 x 2	M 62 x 2	236	129	59	49	25	60
WP-M 2,0 x 2	M 62 x 2	236	129	59	49	25	60
WE-M 2,0 x 4	M 62 x 2	336	179	59	49	25	60
WS-M 2,0 x 4	M 62 x 2	336	179	59	49	25	60
WP-M 2,0 x 4	M 62 x 2	336	179	59	49	25	60
WE-M 2,0 x 6	M 62 x 2	453	246	59	49	25	60
WS-M 2,0 x 6	M 62 x 2	453	246	59	49	25	60
WP-M 2,0 x 6	M 62 x 2	453	246	59	49	25	60

*Optional Threads: page 3

Performances

	Stroke mm	Energy absorption			Effective mass				
		Constant load Nm/HB (max.)	Nm/h (max.)	External tank Nm/h	-0 (very soft) min. - max.kg	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 2,0 x 1	25	1.500	150.000	240.000	60 - 480	300 - 41.150	12.000 - 470.000	-	-
WS-M 2,0 x 1	25	1.500	150.000	240.000	31 - 197	170 - 830	480 - 3.700	3.000 - 14.100	12.000 - 75.000
WP-M 2,0 x 1	25	1.500	150.000	240.000	-	31 - 187	150 - 1.330	1.030 - 8.300	-
WE-M 2,0 x 2	50	2.500	250.000	400.000	80 - 800	500 - 63.700	14.000 - 600.000	-	-
WS-M 2,0 x 2	50	2.500	250.000	400.000	52 - 330	280 - 1.385	800 - 6.150	5.000 - 23.500	20.000 - 125.000
WP-M 2,0 x 2	50	2.500	250.000	400.000	-	52 - 310	250 - 2.200	1.730 - 13.800	-
WE-M 2,0 x 4	100	5.000	350.000	525.000	160 - 1.600	1.000 - 62.500	40.000 - 1.000.000	-	-
WS-M 2,0 x 4	100	5.000	350.000	525.000	104 - 650	565 - 2.770	1.600 - 12.350	10.000 - 47.200	40.000 - 250.000
WP-M 2,0 x 4	100	5.000	350.000	525.000	-	100 - 625	490 - 4.400	3.460 - 27.700	-
WE-M 2,0 x 6	150	8.000	400.000	650.000	250 - 2.400	1.250 - 105.000	64.000 - 1.000.000	-	-
WS-M 2,0 x 6	150	8.000	400.000	650.000	160 - 1.050	905 - 4.430	2.560 - 1.9750	16.000 - 75.500	64.000 - 400.000
WP-M 2,0 x 6	150	8.000	400.000	650.000	-	160 - 1.000	790 - 7.100	5.530 - 44.000	-



GW	ØA mm	B mm	C mm	D mm	E mm	ØF mm	G mm	ØH mm	ØI mm	ØJ mm
M 62 x 2	74	10	80	60	20	11	100	74	65	60

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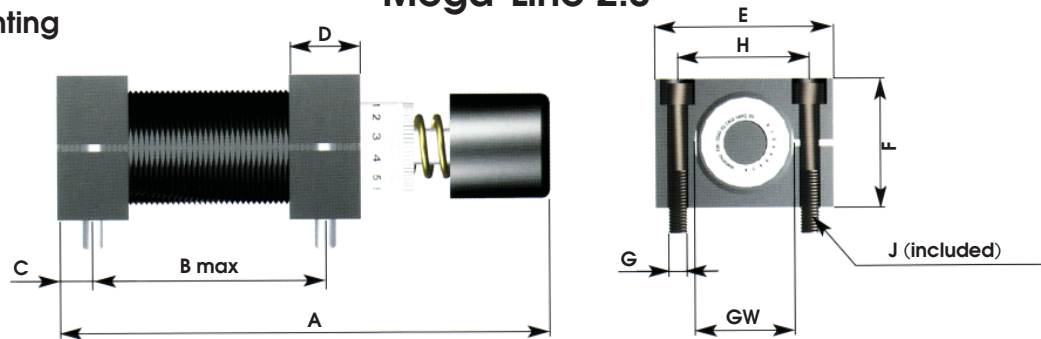
Group 051

1-051-040504

ACCESSORIES

Mega-Line 2.0

Foot Mounting

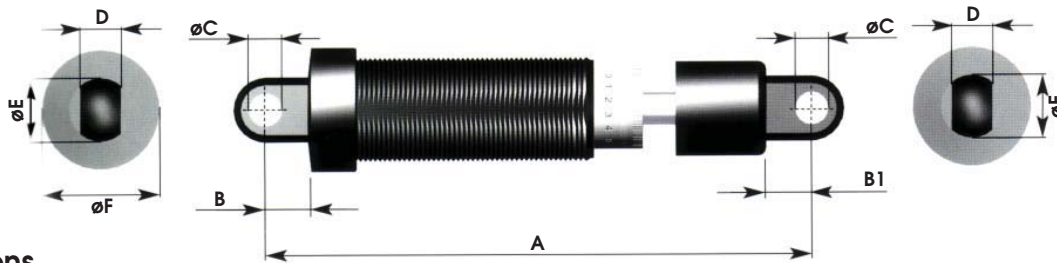


Dimensions

	GW	A mm	B max mm	C mm	D mm	E mm	F mm	øG mm	H mm	J mm
2.0 x 1	M 62 x 2	186	79	12.5	25	100	80	11	76	M 10 x 80
2.0 x 2	M 62 x 2	236	104	12.5	25	100	80	11	76	M 10 x 80
2.0 x 4	M 62 x 2	336	154	12.5	25	100	80	11	76	M 10 x 80
2.0 x 6	M 62 x 2	453	221	12.5	25	100	80	11	76	M 10 x 80

*Optional Threads: page 3

Clevis Mounting



Dimensions

	GW	A max mm	B mm	B1 mm	øC mm	D mm	øE mm	øF mm	G mm	H mm	I mm	J mm	øK mm	L mm	M mm	N mm	øO mm	P mm
2.0 x 1	M 62 x 2	272	35	35	20	24	40	74	95	72	25	65	11	36	22	10	20	42
2.0 x 2	M 62 x 2	322	35	35	20	24	40	74	95	72	25	65	11	36	22	10	20	42
2.0 x 4	M 62 x 2	422	35	35	20	24	40	74	95	72	25	65	11	36	22	10	20	42
2.0 x 6	M 62 x 2	539	35	35	20	24	40	74	95	72	25	65	11	36	22	10	20	42

*Optional Threads: page 3

Specifications

WS-M.....Self-compensating, linear
WP-M.....Self-compensating, progressive
WE-M.....Adjustable, linear

Weight 2.0x1 : 2.0 kg / 2.0x2 : 3.0 kg
2.0x4 : 3.9 kg / 2.0x6 : 4.8 kg

Impact Speed WE-M : 0.02 - 6.0 m/s
WS-M : 0.10 - 6.0 m/s / WP-M : 0.40 - 8.0 m/s

Returning Spring Force 2.0x1 : 50 N/min - 130 N/max
2.0x2 : 40 N/min - 130 N/max
2.0x4 : 45 N/min - 130 N/max
2.0x6 : 35 N/min - 130 N/max

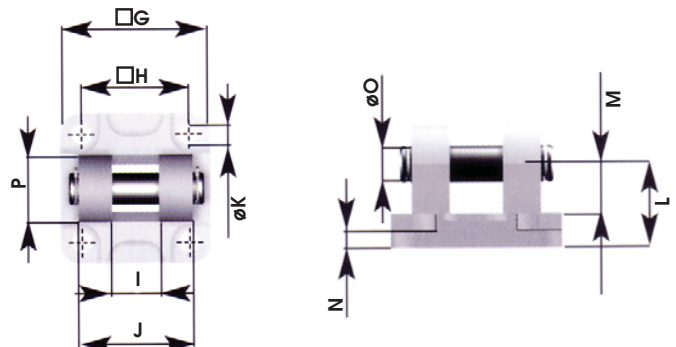
Torque: max force by using the flats.....2.0 : 40 Nm

Temperature -20°C - +80°C

Material..... Housing: black finish
Piston rod: hardened stainless steel

Included Instructions for use and assembly
1-051-040504

Clevis Flange

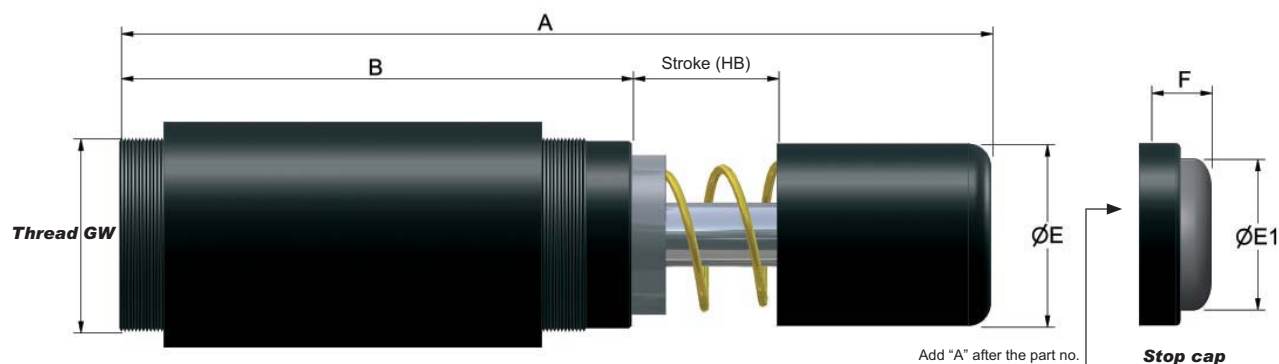


American Metric® Corporation

Group 051

SHOCK ABSORBER

Mega-Line 3.0



Dimensions

	GW	A mm	B mm	Ø E mm	Ø E1 mm	F mm
WE-M 3,0 x 2	M 85 x 2	319	225	80	66	25
WS-M 3,0 x 2	M 85 x 2	319	225	80	66	25
WP-M 3,0 x 2	M 85 x 2	319	225	80	66	25
WE-M 3,0 x 4	M 85 x 2	419	275	80	66	25
WS-M 3,0 x 4	M 85 x 2	419	275	80	66	25
WP-M 3,0 x 4	M 85 x 2	419	275	80	66	25
WE-M 3,0 x 6	M 85 x 2	569	325	80	66	25
WS-M 3,0 x 6	M 85 x 2	569	325	80	66	25
WP-M 3,0 x 6	M 85 x 2	569	325	80	66	25
WE-M 3,0 x 8	M 85 x 2	669	375	80	66	25
WS-M 3,0 x 8	M 85 x 2	669	375	80	66	25
WP-M 3,0 x 8	M 85 x 2	669	375	80	66	25
WE-M 3,0 x 10	M 85 x 2	769	425	80	66	25
WS-M 3,0 x 10	M 85 x 2	769	425	80	66	25
WP-M 3,0 x 10	M 85 x 2	769	425	80	66	25

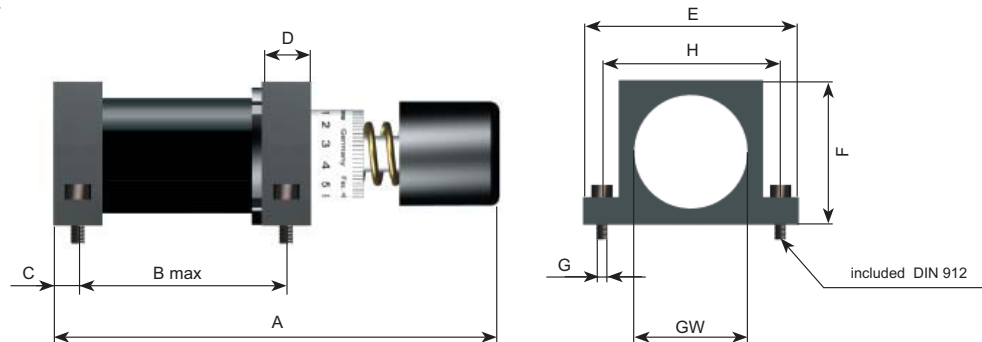
Performances

	Stroke mm	Energy absorption			Effective mass			
		Constant load Nm/HB (max.)	Nm/h (max.)	External tank Nm/h	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 3,0 x 2	50	4000	1200000	1500000	280 - 89000	-	-	-
WS-M 3,0 x 2	50	4000	1200000	1500000	695 - 2480	2000 - 6050	5550 - 15400	12500 - 40000
WP-M 3,0 x 2	50	4000	1200000	1500000	165 - 500	400 - 3550	2800 - 22000	-
WE-M 3,0 x 4	100	9000	1800000	2250000	600 - 112500	-	-	-
WS-M 3,0 x 4	100	9000	1800000	2250000	1750 - 5550	4500 - 13600	12500 - 34700	28800 - 88000
WP-M 3,0 x 4	100	9000	1800000	2250000	360 - 1125	890 - 8000	6300 - 50000	-
WE-M 3,0 x 6	150	14000	2100000	2625000	925 - 175000	-	-	-
WS-M 3,0 x 6	150	14000	2100000	2625000	3710 - 11700	7000 - 21200	19500 - 54000	44500 - 138200
WP-M 3,0 x 6	150	14000	2100000	2625000	555 - 1750	1380 - 12400	9700 - 77700	-
WE-M 3,0 x 8	200	19000	2660000	3325000	1250 - 237500	-	-	-
WS-M 3,0 x 8	200	19000	2660000	3325000	2750 - 8640	7500 - 28700	26400 - 73300	59400 - 187600
WP-M 3,0 x 8	200	19000	2660000	3325000	750 - 2375	1870 - 16800	13100 - 105000	-
WE-M 3,0 x 10	250	24000	2880000	3600000	1580 - 300000	-	-	-
WS-M 3,0 x 10	250	24000	2880000	3600000	4680 - 14800	12000 - 36200	33300 - 92600	75000 - 237300
WP-M 3,0 x 10	250	24000	2880000	3600000	950 - 3000	2370 - 21300	16600 - 133300	-

ACCESSORIES

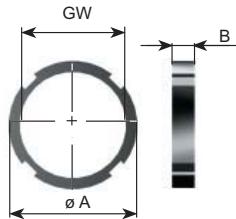
Mega-Line 3.0

Foot Mounting



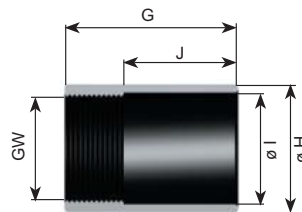
	GW	A mm	B max mm	C mm	D mm	E mm	F mm	G mm	H mm
3,0 x 2	M85 x 2	319	186	10	20	157	105	M12	134
3,0 x 4	M85 x 2	419	286	10	20	157	105	M12	134
3,0 x 6	M85 x 2	569	286	10	20	157	105	M12	134
3,0 x 8	M85 x 2	669	336	10	20	157	105	M12	134
3,0 x 10	M85 x 2	769	386	10	20	157	105	M12	134

Lock Nut



GW	ø A (mm)	B (mm)
M 85 x 2	99	10

Stop Limit Nut



	GW	G (mm)	ø H (mm)	ø I (mm)	J (mm)
3,0x2 - 3,0x4	M 85 x 2	85	100	83	63
3,0x2A - 3,0x4A	M 85 x 2	110	100	83	88
3,0x6 - 3,0x10	M 85 x 2	135	100	83	113
3,0x6A - 3,0x10A	M 85 x 2	160	100	83	138

*Optional Threads: page 3

Specifications

WS-M.....Self-compensating, linear
WP-M.....Self-compensating, progressive
WE-M.....Adjustable, linear

Weight3.0x2 : 7 kg / 3.0x4 : 9 kg / 3.0x6 : 12 kg
3.0x8 : 15 kg / 3.0x10 : 20 kg

Impact Speed WE-M : 0.02 - 6.0 m/s
WS-M : 0.10 - 6.0 m/s / WP-M : 0.40 - 8.0 m/s

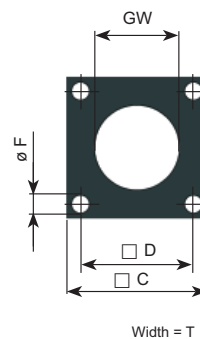
Returning Spring Force3.0x2 : 120 N/min - 200 N/max
3.0x4 : 120 N/min - 250 N/max
3.0x6 / 3.0x8 : 170 N/min - 250 N/max
3.0x10 : 170 N/min - 280 N/max

Temperature-20°C - +80°C

Material..... Housing: black finish
Piston rod: hardened stainless steel

IncludedInstructions for use and assembly

Square Flange



GW	C mm	D mm	ø F mm	T mm
M 85 x 2	140	111	17	20

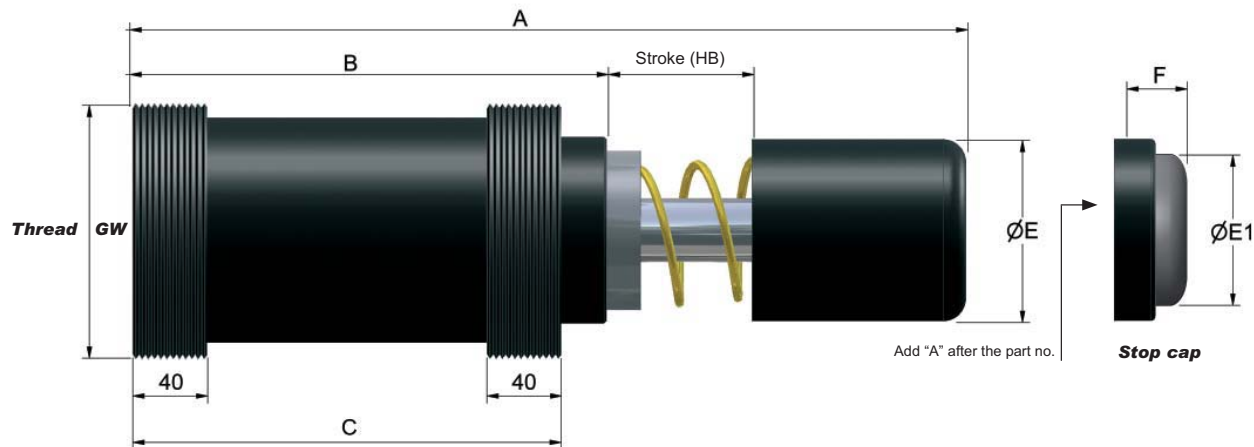


American Metric® Corporation

Group 051

SHOCK ABSORBER

Mega-Line 4.0



Dimensions

	GW Standard	A mm	B mm	C mm	Ø E mm	Ø E1 mm	F mm
WE-M 4,0 x 2	M 115 x 2	319	225	205	80	66	25
WS-M 4,0 x 2	M 115 x 2	319	225	205	80	66	25
WP-M 4,0 x 2	M 115 x 2	319	225	205	80	66	25
WE-M 4,0 x 4	M 115 x 2	419	275	255	80	66	25
WS-M 4,0 x 4	M 115 x 2	419	275	255	80	66	25
WP-M 4,0 x 4	M 115 x 2	419	275	255	80	66	25
WE-M 4,0 x 6	M 115 x 2	569	325	305	80	66	25
WS-M 4,0 x 6	M 115 x 2	569	325	305	80	66	25
WP-M 4,0 x 6	M 115 x 2	569	325	305	80	66	25
WE-M 4,0 x 8	M 115 x 2	669	375	355	80	66	25
WS-M 4,0 x 8	M 115 x 2	669	375	355	80	66	25
WP-M 4,0 x 8	M 115 x 2	669	375	355	80	66	25
WE-M 4,0 x 10	M 115 x 2	769	425	405	80	66	25
WS-M 4,0 x 10	M 115 x 2	769	425	405	80	66	25
WP-M 4,0 x 10	M 115 x 2	769	425	405	80	66	25

Performances

	Stroke mm	Energy absorption			Effective mass			
		Constant load Nm/HB (max.)	Nm/h (max.)	External tank Nm/h	-1 (soft) min. - max.kg	-2 (medium) min. - max.kg	-3 (hard) min. - max.kg	-4 (very hard) min. - max.kg
WE-M 4,0 x 2	50	4000	1200000	1500000	280 - 89000	-	-	-
WS-M 4,0 x 2	50	4000	1200000	1500000	695 - 2480	2000 - 6050	5550 - 15400	12500 - 40000
WP-M 4,0 x 2	50	4000	1200000	1500000	165 - 500	400 - 3550	2800 - 22000	-
WE-M 4,0 x 4	100	9000	1800000	2250000	600 - 112500	-	-	-
WS-M 4,0 x 4	100	9000	1800000	2250000	1750 - 5550	4500 - 13600	12500 - 34700	28800 - 88000
WP-M 4,0 x 4	100	9000	1800000	2250000	360 - 1125	890 - 8000	6300 - 50000	-
WE-M 4,0 x 6	150	14000	2100000	2625000	925 - 175000	-	-	-
WS-M 4,0 x 6	150	14000	2100000	2625000	3710 - 11700	7000 - 21200	19500 - 54000	44500 - 138200
WP-M 4,0 x 6	150	14000	2100000	2625000	555 - 1750	1380 - 12400	9700 - 77700	-
WE-M 4,0 x 8	200	19000	2660000	3325000	1250 - 237500	-	-	-
WS-M 4,0 x 8	200	19000	2660000	3325000	2750 - 8640	7500 - 28700	26400 - 73300	59400 - 187600
WP-M 4,0 x 8	200	19000	2660000	3325000	750 - 2375	1870 - 16800	13100 - 105000	-
WE-M 4,0 x 10	250	24000	2880000	3600000	1580 - 300000	-	-	-
WS-M 4,0 x 10	250	24000	2880000	3600000	4680 - 14800	12000 - 36200	33300 - 92600	75000 - 237300
WP-M 4,0 x 10	250	24000	2880000	3600000	950 - 3000	2370 - 21300	16600 - 133300	-

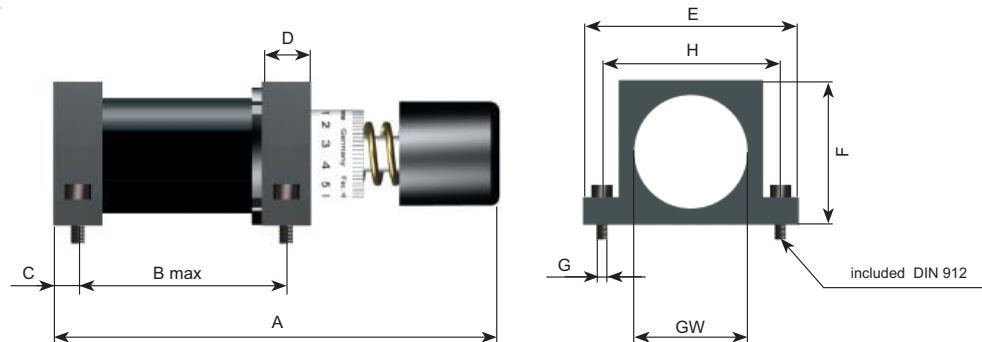
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ACCESSORIES

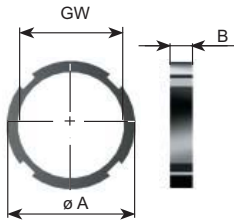
Mega-Line 4.0

Foot Mounting



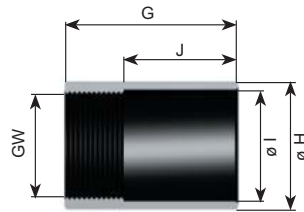
	GW	A mm	B max mm	C mm	D mm	E mm	F mm	G mm	H mm
4,0 x 2	M 115 x 2	319	180	12,5	25	203	149	M16x80	165
4,0 x 4	M 115 x 2	419	230	12,5	25	203	149	M16x80	165
4,0 x 6	M 115 x 2	569	280	12,5	25	203	149	M16x80	165
4,0 x 8	M 115 x 2	669	330	12,5	25	203	149	M16x80	165
4,0 x 10	M 115 x 2	769	380	12,5	25	203	149	M16x80	165

Lock Nut



GW	ø A (mm)	B (mm)
M 115 x 2	127	15

Stop Limit Nut



	GW	G (mm)	ø H (mm)	ø I (mm)	J (mm)
4,0x2 - 4,0x4	M115x2	106	130	110	66
4,0x2A - 4,0x4A	M115x2	131	130	110	91
4,0x6 - 4,0x10	M115x2	156	130	110	116
4,0x6A - 4,0x10A	M115x2	181	130	110	141

Specifications

WS-M.....Self-compensating, linear
 WP-M.....Self-compensating, progressive
 WE-M.....Adjustable, linear

Weight 4.0x2 : 10 kg / 4.0x4 : 12 kg / 4.0x6 : 15 kg
 4.0x8 : 18 kg / 4.0x10 : 23 kg

Impact Speed WE-M : 0.02 - 6.0 m/s
 WS-M : 0.10 - 6.0 m/s / WP-M : 0.40 - 8.0 m/s

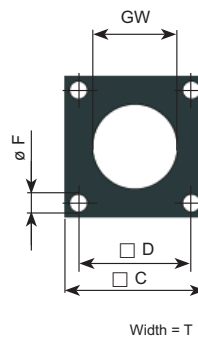
Returning Spring Force4.0x2 : 120 N/min - 200 N/max
 4.0x4 : 120 N/min - 250 N/max
 4.0x6 / 4.0x8 : 170 N/min - 250 N/max
 4.0x10 : 170 N/min - 280 N/max

Temperature-20°C - +80°C

Material..... Housing: black finish
 Piston rod: hardened stainless steel

IncludedInstructions for use and assembly

Square Flange



GW	C mm	D mm	ø F mm	T mm
M 115 x 2	140	111	17	25



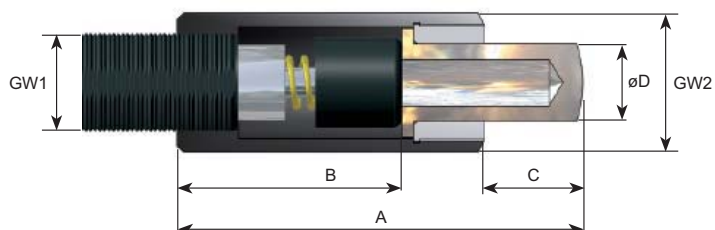
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ACCESSORIES

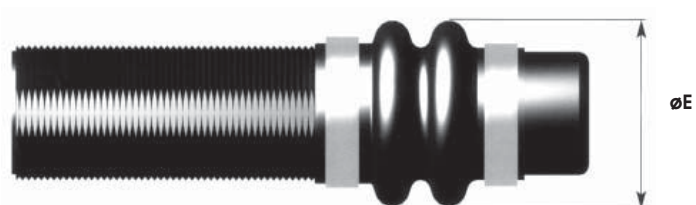
Mega-Line 1.25 - 2.0

AK1 for Side Forces



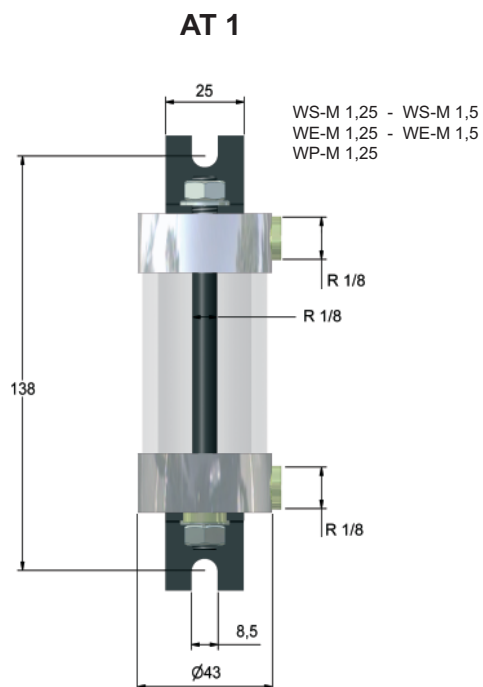
	GW1	GW2	A mm	B mm	C mm	ø D mm
1,25 x 1	M32x1,5	M45x2	132,0	73	32,0	25
1,25 x 2	M32,1,5	M45x2	184,5	98	59,5	25
1,5 x 1	M45x2	M62x2	135,5	77	31,5	35
1,5 x 2	M45x2	M62x2	182,0	102	53,0	35
2,0 x 1	M62x2	M85x2	158,5	102	29,5	55
2,0 x 2	M62x2	M85x2	208,5	127	54,5	55

Bellow



	ø E mm
1.25 x 1 / 1.25 x 2	65
1.5 x 1	60
1.5 x 2 / 1.5 x 3	80
2.0 x 1 / 2.0 x 2 / 2.0 x 4 / 2.0 x 6	90

External Tank



Ordering information

WE-M 1,25 x 2 - 1AT

For shock absorbers without return spring

WE-M 1,25 x 2 - 1 ATF

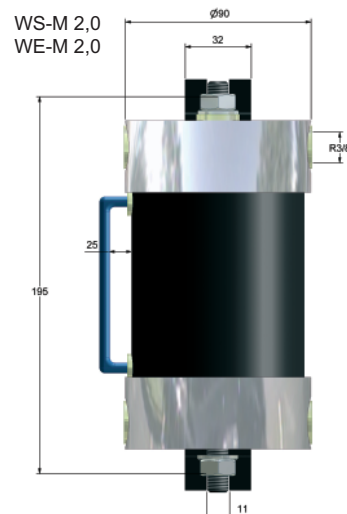
For shock absorbers with return spring

WM-AT 1

For external tank

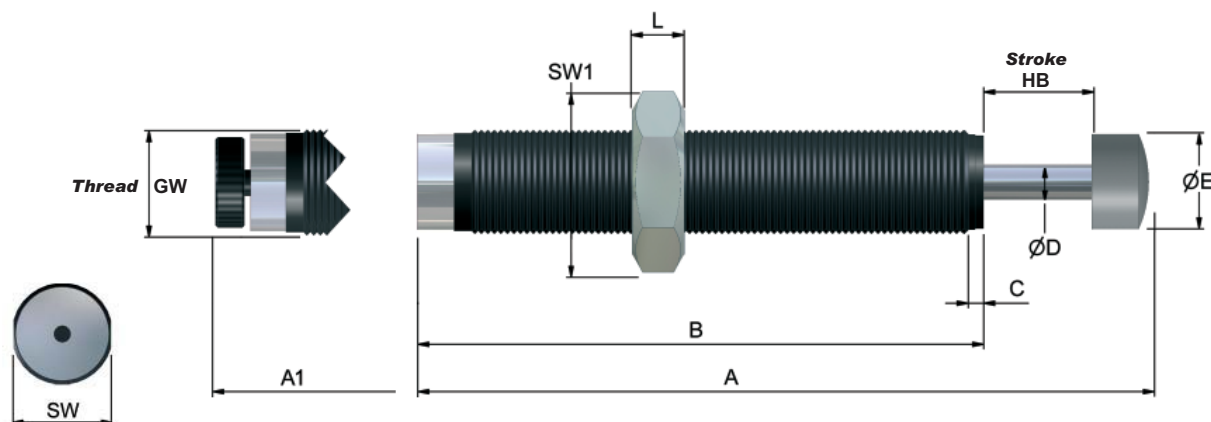


AT 2



SHOCK ABSORBER

WEB-M / WSB-M / WPB-M



Dimensions

			GW*	A mm	A 1 mm	B mm	C mm	Ø D mm	Ø E mm	L mm	SW mm	SW 1 mm
WSB-M 0,15-1/2/3/4	WPB-M 0,15-1/2/3	WEB-M 0,15	M 10 x 1,0	66,0	68,5	49,5	2,5	3	8,5	3	-	13
WSB-M 0,2-1/2/3/4	WPB-M 0,2-1/2/3	WEB-M 0,2	M 12 x 1,0	85,0	89,5	66,0	2,5	4	10	4	-	14
WSB-M 0,25-0/1/2/3/4	WPB-M 0,25-1/2/3	WEB-M 0,25	M 14 x 1,0	100,0	105,0	78,0	2,5	4	10	5	13	17
WSB-M 0,5x19 -0/1/2/3/4	WPB-M 0,5x19 -1/2/3	WEB-M 0,5 x 19	M 20 x 1,0	117,0	123,0	88,0	2,5	6	16	6	18	24
WSB-M 1,0-0/1/2/3/4	WPB-M 1,0-1/2/3	WEB-M 1,0	M 24 x 1,5	146,0	154,0	108,0	3,5	8	20	8	23	30

*Optional Threads: page 3

Performances

	Stroke mm	Energy absorption		Effective mass					Return spring force		Torque	Weight
		Nm/HB (max.)	Nm/h (max.)	-0 (very soft) min.-max.kg	-1 (soft) min.-max.kg	-2 (medium) min.-max.kg	-3 (hard) min.-max.kg	-4 (very hard) min.-max.kg	min. N	max. N	min. m/s	kg
WSB-M 0,15	8	12	24000	-	1,6 - 7,5	6,1 - 71	61 - 252	232 - 750	3,6	8	6	0,02
WSB-M 0,2	10	18	36000	-	2,0 - 11	10 - 107	104 - 360	343 - 1100	3,5	7	10	0,036
WSB-M 0,25	14	24	52800	0,9 - 8	3,5 - 17	9,9 - 76	62 - 252	250 - 1550	13	23	20	0,05
WSB-M 0,5x19	19	80	76800	2,6 - 10,6	10 - 86	40 - 209	170 - 800	680 - 4050	12	23	25	0,13
WSB-M 1,0	25	180	108000	6 - 29	24 - 120	70 - 460	440 - 2050	1760 - 10800	15	31	30	0,25
WPB-M 0,15	8	12	24000	-	1,0 - 2,2	2,0 - 7,5	6,1 - 71	-	3,6	8	6	0,02
WPB-M 0,2	10	18	36000	-	1,5 - 2,8	2 - 21	17 - 92	-	3,5	7	10	0,036
WPB-M 0,25	14	24	52800	-	0,9 - 2,4	2,3 - 26	21 - 165	-	13	23	20	0,05
WPB-M 0,5x19	19	80	76800	-	2,6 - 12,5	10 - 89	69 - 555	-	12	23	25	0,13
WPB-M 1,0	25	180	108000	-	6 - 27,5	21 - 195	150 - 1200	-	15	31	30	0,25
WEB-M 0,15	8	12	24000	-	1,0 - 500	-	-	-	3,6	8	6	0,02
WEB-M 0,2	10	18	36000	-	9 - 800	-	-	-	3,5	7	10	0,036
WEB-M 0,25	14	24	52800	-	1,6 - 1600	-	-	-	13	23	20	0,055
WEB-M 0,5x19	19	80	76800	-	9 - 4500	-	-	-	12	23	25	0,14
WEB-M 1,0	25	180	108000	-	22 - 11000	-	-	-	15	31	30	0,29

Specifications

Designed for side forces up to 15° without additional mounting parts

Accessories On enquiry

Included Instructions for use and assembly
1 Stop cap (Steel), 1 Lock nut

Material..... Housing: ProSurf

Temperature -20°C - +80°C

Integrated end stop..... Full stroke operation

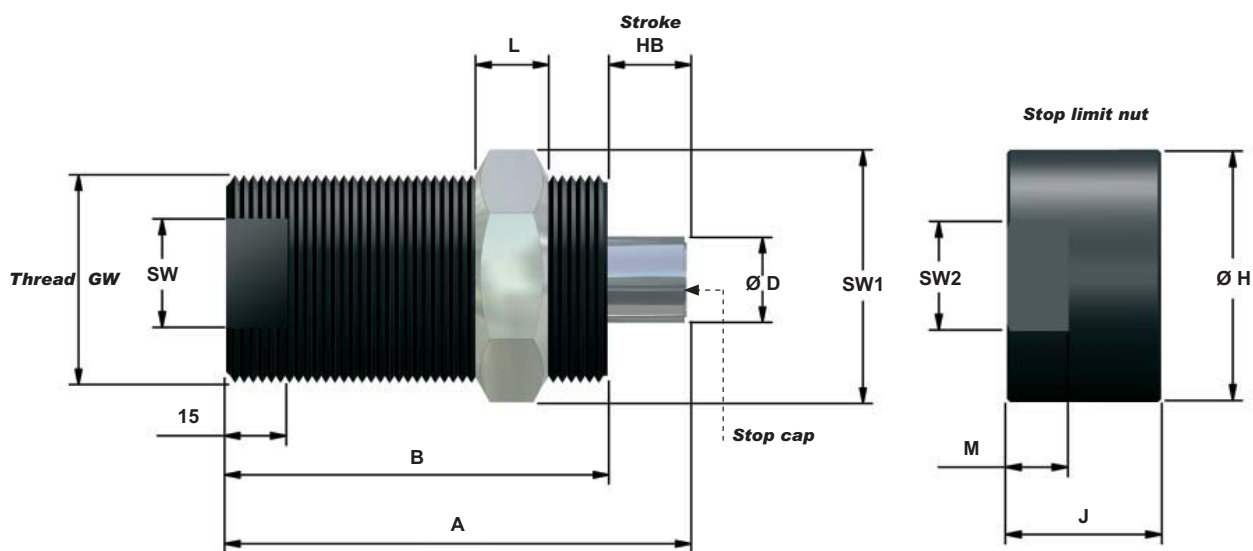


American Metric® Corporation

Group 051

SHOCK ABSORBER

WSK-M



Dimensions

	GW	A mm	B mm	Ø D mm	Ø H mm	J mm	L mm	SW mm	SW1 mm	SW2 mm	M mm
WSK-M 0,5	M 20 x 1,5	49	42	6	25	16	6	18	24	22	8
WSK-M 1,0	M 25 x 1,5	58	50	8	34	18	8	23	30	30	10
WSK-M 1,1	M 30 x 1,5	67	55	10	40	20	8	28	36	36	10
WSK-M 1,25	M 32 x 1,5	67	55	10	40	25	8	30	41	36	10

Performances

	Stroke mm	Energy absorption		Effective mass			Impact Speed V max. m/s	Return spring force		Weight g
		Nm/HB (max.)	Nm/h (max.)	-1 (soft) min.-max.kg	-2 (medium) min.-max.kg	-3 (hard) min.-max.kg		min. N	max. N	
WSK-M 0,5	7	25	67.500	5 - 22	20 - 180	150 - 480	3,5	11	18	65
WSK-M 1,0	8	40	68.000	8 - 36	33 - 280	250 - 750	3,5	15	20	105
WSK-M 1,1	12	70	105.000	10 - 80	50 - 490	460 - 1.500	3,5	17	30	200
WSK-M 1,25	12	90	135.000	15 - 120	85 - 690	600 - 1.870	3,5	17	30	270

Specifications

WSK-MSelf-compensating, linear

High energy absorptionmax. 135,000 Nm/h

Temperature-20°C - +80°C

AccessoriesOn enquiry

Included.....Instructions for use and assembly

 **American Metric® Corporation**

Group 051

SHOCK ABSORBER

Stainless Steel Shock Absorbers

Thread	Series	Page
M 4x0,35	WS-M 4x4-1 2	10 - 11
M 5x0,5	WS-M 5x4-1 2	10 - 11
M 6x0,5	WS-M 6x5-1 2 3	10 - 11
M 8x1	WS-M 8x5-1 2 3	10 - 11
	WS-M 0,1-1 2 3	12 - 13
	WP-M 0,1-1 2 3	12 - 13
M 10x1	WS-M 10x6-1 2 3	10 - 11
	WS-M 10x8-1 2 3	10 - 11
	WE-M 0,15	12 - 13
	WS-M 0,15-1 2 3 4	12 - 13
	WP-M 0,15-1 2 3	12 - 13
	WEB-M 0,15	29
	WSB-M 0,15-1 2 3 4	29
M 12x1	WPB-M 0,15-1 2 3	29
	WS-M 12x10-1 2 3	10 - 11
	WE-M 0,2	12 - 13
	WS-M 0,2-1 2 3 4	12 - 13
	WP-M 0,2-1 2 3	12 - 13
	WEB-M 0,2	29
	WSB-M 0,2-1 2 3 4	29
M 14x1 M 14x1,5 (L)	WPB-M 0,2-1 2 3	29
	WE-M 0,25	14 - 15
	WS-M 0,25-0 1 2 3 4	14 - 15
	WP-M 0,25-1 2 3	14 - 15
	WEB-M 0,25	29
	WSB-M 0,25-0 1 2 3 4	29
	WPB-M 0,25-1 2 3	29
M 16x1 M 16x1,5 (L)	WE-M 0,35	14 - 15
	WS-M 0,35-0 1 2 3 4	14 - 15
	WP-M 0,35-1 2 3	14 - 15
M 20x1 M 20x1,5 (L)	WE-M 0,5x19	14 - 15
	WS-M 0,5x19-0 1 2 3 4	14 - 15
	WP-M 0,5x19-1 2 3	14 - 15
	WS-M 0,5x13-0 1 2 3 4	14 - 15
	WP-M 0,5x13-1 2 3	14 - 15
	WE-M 0,5x40	14 - 15
	WS-M 0,5x40-0 1 2 3 4	14 - 15
	WP-M 0,5x40-1 2 3	14 - 15
	WEB-M 0,5x19	29
	WSB-M 0,5x19-0 1 2 3 4	29
	WPB-M 0,5x19-1 2 3	29

Thread	Series	Page
M 20x1,5	WSK-M 0,5-1 2 3	30
M 24x1,5	WE-M 1,0	16 - 17
M 25x1,5 (T)	WS-M 1,0-0 1 2 3 4	16 - 17
M 27x3 (R)	WP-M 1,0-1 2 3	16 - 17
	WE-M 1,0x40	16 - 17
	WS-M 1,0x40-0 1 2 3 4	16 - 17
	WP-M 1,0x40-1 2 3	16 - 17
	WEB-M 1,0	29
	WSB-M 1,0-0 1 2 3 4	29
	WPB-M 1,0-1 2 3	29
M 25x1,5	WSK-M 1,0-1 2 3	30
M 30x1,5	WSK-M 1,1-1 2 3	30
M 32x1,5	WS-M 1,25x1-0 1 2 3 4	18 - 19
M 33x1,5 (H)	WP-M 1,25x1-1 2 3	18 - 19
	WS-M 1,25x2-0 1 2 3 4	18 - 19
	WP-M 1,25x2-1 2 3	18 - 19
M 32x1,5	WSK-M 1,25-1 2 3	30
M 45x2 M 45x1,5 (L)	WS-M 1,5x1-0 1 2 3 4	20 - 21
	WP-M 1,5x1-1 2 3	20 - 21
	WS-M 1,5x2-0 1 2 3 4	20 - 21
	WP-M 1,5x2-1 2 3	20 - 21
	WS-M 1,5x3-0 1 2 3 4	20 - 21
	WP-M 1,5x3-1 2 3	20 - 21
	WS-M 2,0x1-0 1 2 3 4	22 - 23
M 62x2 M 64x2 (L)	WP-M 2,0x1-1 2 3	22 - 23
	WS-M 2,0x2-0 1 2 3 4	22 - 23
	WP-M 2,0x2-1 2 3	22 - 23
	WS-M 2,0x4-0 1 2 3 4	22 - 23
	WP-M 2,0x4-1 2 3	22 - 23
	WS-M 2,0x6-0 1 2 3 4	22 - 23
	WP-M 2,0x6-1 2 3	22 - 23

Benefits

- Corrosion resistance in wet environments
- Solid housing
- Short delivery times

Applications:

- Food industry
- Clean room technology
- Outside machinery



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