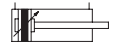


»SAI« series

170572 to 170709
16.DMD.32025 to 16.DMD.125900

Symbol



Product features

These cylinders are ideal for a wide range of applications owing to their robust design and excellent value for money.

The standard type is double-acting with a magnetic piston as well as integrated adjustable cushioning.

The magnetic switches are mounted in T-slots on two sides of the body.

Specifications / Technical data

Piston-Ø [mm]	32	40	50	63	80	100	125	160 ¹⁾	200 ¹⁾
Acting type	Double acting								
Fluid	Filtered, unlubricated or lubricated compressed air (to be filtered by 40 µm filter element). If lubrication is used, it must be continuous.								
Working pressure	1,5–10 bar (0.15 to 1.0 MPa; 22 to 145 psi)								
Proof pressure	15 bar (1.5 MPa; 215 psi)								
Temperature range	-20 to 70 °C								
Speed range	30–800 mm/s						30–500 mm/s		
Cushion type	Adjustable								
Cushion stroke	27 mm		30 mm		36 mm		40 mm		50 mm
Port size	1/8"	1/4"		3/8"		1/2"		3/4"	

Stroke

Piston-Ø	Standard stroke	Max. stroke ¹⁾
32	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500	1800
40	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800	1800
50	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 / 1000	1800
63		
80		
100	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 ²⁾	1800
125		
160 ¹⁾	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 / 1000	2000
200 ¹⁾	25 / 50 / 75 / 80 / 100 / 125 / 150 / 160 / 175 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 / 1000	2000

(Values in mm)

Ordering information

Art. No.	Piston-Ø	Stroke	Connection	Piston rod-Ø	Piston rod male thread
170572-170587	32	25–500	G 1/8	12	M10x1.25
170588-170606	40	25–800	G 1/4	16	M12x1.25
170607-170627	50	25–1000	G 1/4	20	M16x1.5
170628-170648	63	25–1000	G 3/8	20	M16x1.5
170649-170669	80	25–1000	G 3/8	25	M20x1.5
170670-170689	100	25–900 ²⁾	G 1/2	25	M20x1.5
170690-170709	125	25–900 ²⁾	G 1/2	32	M27x2

(Values in mm)

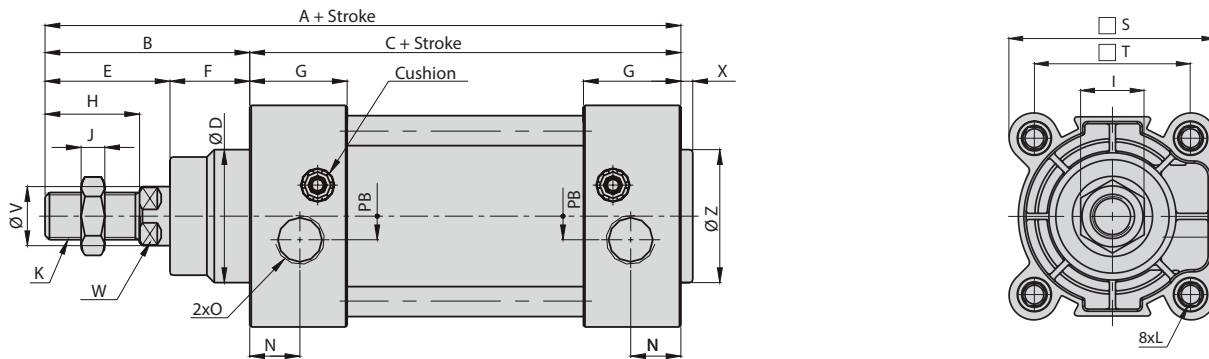
¹⁾ on request

²⁾ Stroke 1000 available on request

»SAI« series

170572 to 170709

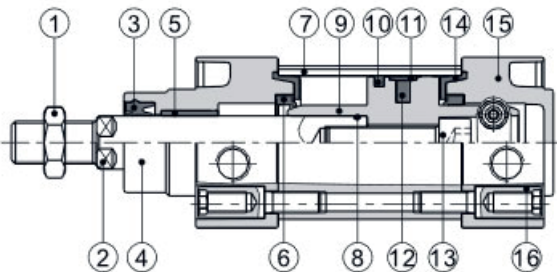
Dimensions



Piston-Ø	A	B	C	D	E	F	G	H	I	J	K	L	N	O	PB	S	T	V	W	X	Z
32	142	48	94	30	29	19	27.5	22	17	6.0	M10×1.25	M6	13.0	1/8"	5.5	47	32.5	12	10	3.0	30
40	159	54	105	35	33	21	32	24	17	7.0	M12×1.25	M6	17.0	1/4"	6.0	53	38.0	16	13	3.5	35
50	175	69	106	40	42	27	31	32	23	8.0	M16×1.5	M8	15.5	1/4"	7.5	65	46.5	20	17	3.5	40
63	190	69	121	45	42	27	33	32	23	8.0	M16×1.5	M8	16.5	3/8"	7.5	75	56.5	20	17	4.0	45
80	214	86	128	45	53	33	33	40	26	10.0	M20×1.5	M10	16.5	3/8"	9.0	95	72.0	25	22	4.0	45
100	229	91	138	55	55	36	37	40	26	10.0	M20×1.5	M10	18.5	1/2"	9.5	115	89.0	25	22	4.0	55
125	279	119	160	60	74	45	46	54	41	13.5	M27×2	M12	23.0	1/2"	14.0	140	110.0	32	27	4.0	60
160 ³⁾	332	152	180	65	94	58	50	72	55	18.0	M36x2	M16	25.0	3/4	5.0	180	140.0	40	36	4.0	65
200 ³⁾	347	167	180	75	100	67	50	72	55	18.0	M36x2	M16	25.0	3/4	5.0	220	175.0	40	36	5.0	75

(Values in mm, exception O = inch)

Components and materials



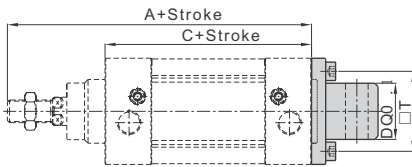
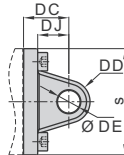
No.	Item	Material
1	Rod nut	Carbon steel ⁴⁾
2	Piston rod	Carbon steel hard chrome plated ⁴⁾
3	Piston rod sealing	TPU
4	Front cover	Aluminum alloy
5	Bushing	Wear resistant material (bronze)
6	Cushion O-ring	TPU
7	Barrel	Aluminum alloy
8	O-ring	NBR
9	Piston	Aluminum alloy
10	Piston O-ring	NBR
11	Wear ring	Wear resistant material
12	Magnet	Plastic / Rubber (Ø 125 mm to Ø 200 mm)
13	Bolt	Carbon steel
14	Buffer gasket	TPU
15	Back cover	Aluminum alloy
16	Screw	Carbon steel ⁴⁾

³⁾ on request⁴⁾ Stainless steel on request

Accessories

Male hinge model, »CA« type 115772 to 115778

(Can be combined with female hinge model, »CB« type)

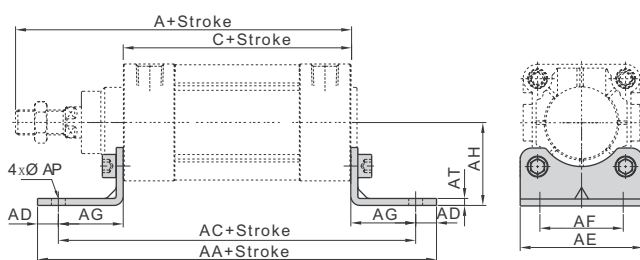


Dimensions and material

Art. No.	Type No.	Piston-Ø	A	C	S	T	DC	DD	DE	DJ	DQ	Material
115772	437.130	32	142	94	46.5	32.5	22	10.5	10	13	25.8	Nodular cast iron
115773	437.131	40	159	105	54	38	25	12	12	16	27.8	
115774	437.132	50	175	106	64	46.5	27	12	12	17	31.7	
115775	437.133	63	190	121	75	56.5	32	15	16	22	39.7	
115776	437.134	80	214	128	93	72	36	15.5	16	22	49.7	
115777	437.135	100	229	138	110	89	41	20	20	27	59.7	
115778	437.136	125	279	160	134	110	50	24	25	33	69.7	Cast steel

(Values in mm)

Foot model, »LB« type 115751 to 115757



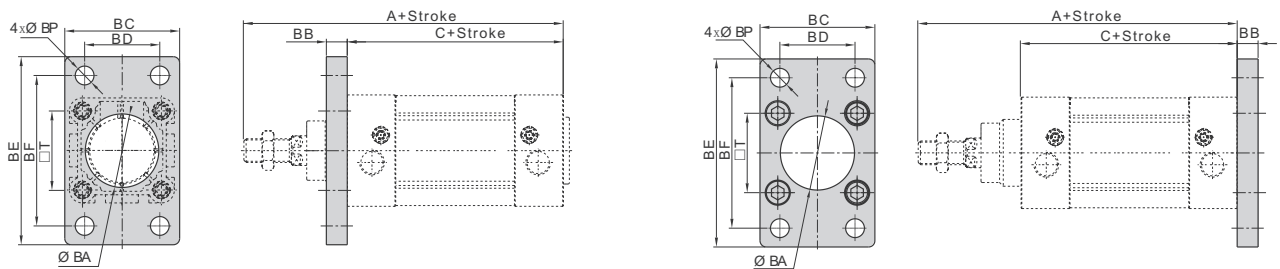
Dimensions and material

Art. No.	Type No.	Piston-Ø	A	C	AA	AC	AD	AE	AF	AG	AH	AP	AT	Material
115751	437.100	32	142	94	158	142	8	47	32	24	32	7	3	Low carbon steel
115752	437.101	40	159	105	179	161	9	53	36	28	36	9	3	
115753	437.102	50	175	106	190	170	10	65	45	32	45	9	3	
115754	437.103	63	190	121	209	185	12	75	50	32	50	9	3	
115755	437.104	80	214	128	248	210	19	95	63	41	63	12.5	4	
115756	437.105	100	229	138	266	228	19	115	75	45	71	14.5	4	
115757	437.106	125	279	160	290	250	20	140	90	45	90	16.5	8	Cast steel

(Values in mm)

Accessories

Flange model, »FA« type 115779 to 143832



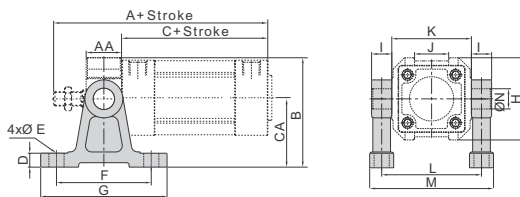
Dimensions and material

Art. No.	Type No.	Piston-Ø	A	C	BA	BB	BC	BD	BE	BF	BP	T	Material
115779	437.140	32	142	94	30.5	10	47	32	80	64	7	32.5	Aluminum alloy
115780	437.141	40	159	105	35.5	10	53	36	90	72	9	38	
115781	437.142	50	175	106	40.5	12	65	45	108	90	9	46.5	
115782	437.143	63	190	121	45.5	12	75	50	118	100	9	56.5	
115783	437.144	80	214	128	45.5	16	95	63	150	126	12.5	72	
115784	437.145	100	229	138	55.5	16	115	75	176	150	14.5	89	Cast steel
115785	437.146	125	279	160	60.5	20	139	90	218	180	16.5	110	
143832	437.148	200	347	180	72.5	25	220	135	320	270	270	175	

(Values in mm)

Hinge bracket model, »TF« type 115760 to 115763

(Only in conjunction with hinge head model, »FTC« type)



Dimensions and material

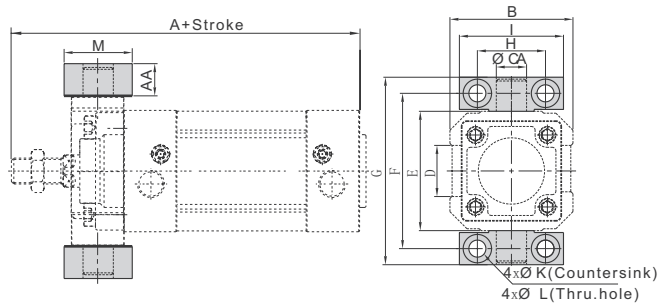
Art. No.	Type No.	Piston-Ø	A	AA	B	C	CA	D	E	F	G	H	I	J	K	L	M	N	Material
115760	437.110	32	142	19	66	94	40	11	9	60	80	52	12	20	50	62	77	12	Cast steel
115761	437.111	40	159	21	86.5	105	54	11	12	75	100	65	16	27	63	79	98	16	
		50	175	26	91.5	106	54	11	12	75	100	75	16	31	75	91	110	16	
115762	437.112	63	190	28	115	121	70	11	12	85	110	90	20	42	90	110	133	20	
		80	214	31	126	128	70	11	12	85	110	112	20	54	110	130	153	20	
115763	437.113	100	229	35	157.5	138	90	19	18	115	155	135	25	68	135	157	185	25	
		125	279	43	169.3	160	90	19	18	115	155	170	25	80	160	185	213	25	

(Values in mm)

Accessories

Hinge model, »TM« type 115800 to 115803

(Only in conjunction with hinge head model, »FTC« type)



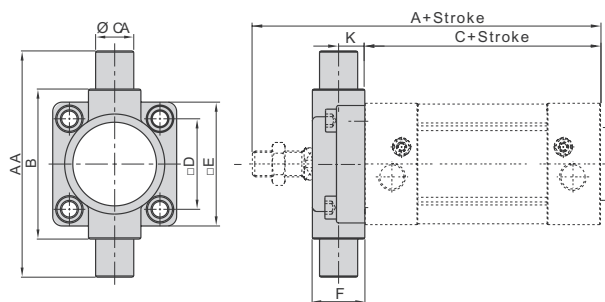
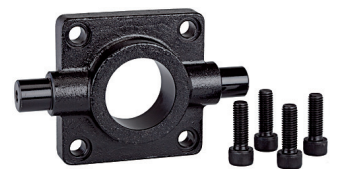
Dimensions and material

Art. No.	Type No.	Piston-Ø	A	AA	B	CA	D	E	F	G	H	I	K	L	M	Material
115800	437.180	32	142	14	52	12	20	50	66	80	32	46	11	7	30	Aluminum alloy
115801	437.181	40–50	159	17	65	16	27	63	82	99	36	55	15	9	36	
115802	437.183	63–80	190	20.5	90	20	42	90	113.5	134	42	65	18	11	40	
115803	437.185	100–125	229	24.5	135	25	68	132	159.5	184	50	75	20	14	50	Cast steel

(Values in mm)

Hinge head model, »FTC« type 115793 to 115799

(Can be combined with hinge model, »TM« type or hinge bracket model, »TF« type)



Dimensions and material

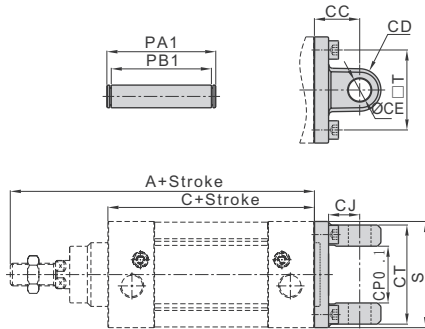
Art. No.	Type No.	Piston-Ø	A	AA	B	C	CA	D	E	F	K	Material
115793	437.170	32	142	74	50	94	12	32.5	46	19	10	Cast steel
115794	437.171	40	159	95	63	105	16	38	52	21	10	
115795	437.172	50	175	107	75	106	16	46.5	64	26	12	
115796	437.173	63	190	130	90	121	20	56.5	74	28	12	
115797	437.174	80	214	150	110	128	20	72	94	31	16	
115798	437.175	100	229	182	132	138	25	89	114	35	16	
115799	437.176	125	279	210	160	160	25	110	139	43	20	

(Values in mm)

Accessories

Female hinge model, »CB« type 115786 to 115792

(Can be combined with male hinge model, »CA« type)



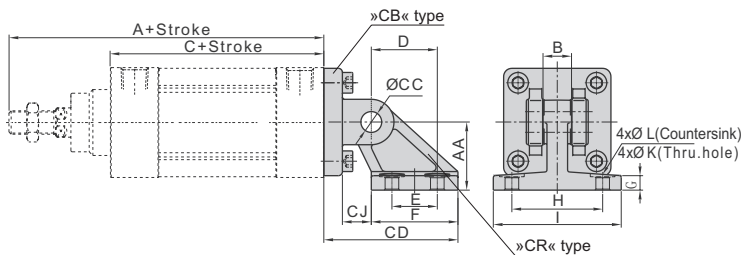
Dimensions and material

Art. No.	Type No.	Piston-Ø	A	C	CC	CD	CE	CJ	CP	CT	PA1	PB1	S	T	Material
115786	437.150	32	142	94	22	10.5	10	13	26	45	51	45.5	46.5	32.5	Nodular cast iron
115787	437.151	40	159	105	25	12	12	16	28	52	59	52.5	54	38	
115788	437.152	50	175	106	27	12	12	17	32	60	67	60.5	64	46.5	
115789	437.153	63	190	121	32	15	16	22	40	70	77	70.5	75	56.5	
115790	437.154	80	214	128	36	15.5	16	22	50	90	97	90.5	93	72	
115791	437.155	100	229	138	41	20	20	27	60	110	119	110.5	110	89	
115792	437.156	125	279	160	50	24	25	33	70	130	139	130.5	134	110	Cast steel

(Values in mm)

Counter-hinge model, »CR« type 115764 to 115770

(Only in conjunction with female hinge, »CB« type)



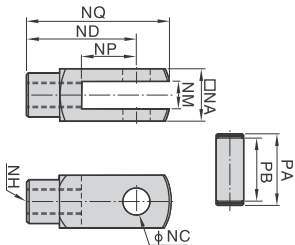
Dimensions and material

Art. No.	Type No.	Piston-Ø	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L	Material
115764	437.120	32	142	32	26	94	10	50	10	21	18	31	8	38	51	6.6	-	Nodular cast iron
115765	437.121	40	159	36	28	105	12	56	12	24	22	35	10	41	54	6.6	-	
115766	437.122	50	175	45	32	106	12	68	13	33	30	45	12	50	65	9	-	
115767	437.123	63	190	50	40	121	16	77	17	37	35	50	12	52	67	9	-	
115768	437.124	80	214	63	50	128	16	93	19	47	40	60	14	66	86	11	18	
115769	437.125	100	229	71	60	138	20	106	22	55	50	70	15	76	96	11	18	
115770	437.126	125	279	90	70	160	25	135	26	70	60	90	20	94	124	14	20	Cast steel

(Values in mm)

Accessories

Fork model, »Y« type 115835 to 115813

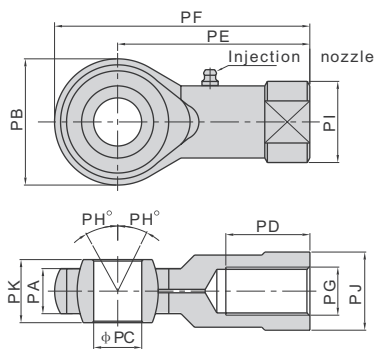


Dimensions and material

Art. No.	Type No.	Piston-Ø	NA	NC	ND	NP	NQ	NM	NH	PA	PB	Material
115835	437.313	25/32	19	10	40	20	52	10	M10x1.25	-	-	Carbon steel
115810	437.211	40	25.4	12	48	24	62	12	M12x1.25	32.4	26.2	
115811	437.212	50/63	32	16	64	32	80	16	M16x1.5	39	33	
115812	437.213	80/100	44.4	20	80	40	102	20	M20x1.5	53.4	45	
115813	437.214	125	54	30	110	55	139	30	M27x2.0	64.2	55	

(Values in mm)

Rod eye model, »UNIT« type 115814 to 115818



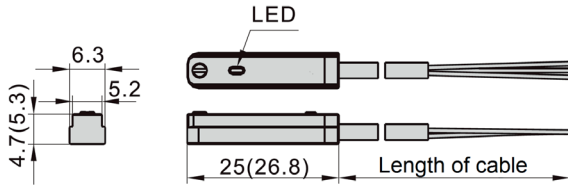
Dimensions and material

Art. No.	Type No.	Piston-Ø	PA	PB	PC(H9)	PD	PE	PF	PG	PH	PI	PJ	PK	Material
115814	437.220	32	11	26	10	20	43	56	M10x1.25	13	19	17	14	Carbon steel
115815	437.221	40	12	32	12	22	50	66	M12x1.25	13	22	19	16	
115816	437.222	50/63	15	40	16	28	64	84	M16x1.5	15	27	22	21	
115817	437.223	80/100	18	46	20	33	77	100	M20x1.5	15	34	30	25	
115818	437.224	125	25	70	30	51	111	146	M27x2.0	15	50	41	37	

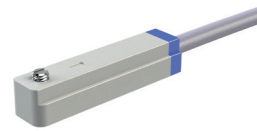
(Values in mm)

Accessories

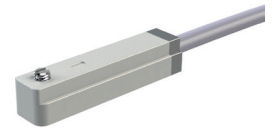
Sensors, »CS1« type 235.200–235.205



Dimensions in brackets apply to REED.



REED



HALL

Specifications

	REED, NO	HALL, NO, NPN	HALL, NO, PNP
Operating voltage	5...240 V AC/DC	5...30 V DC	
Max. switching current	100 mA	30 V / 200 mA	
Max. switching rating	10 W	6 W	
Max. current consumption	-	5 mA	
Max. voltage drop	2.5 V at 100 mA DC	0.7 V	
Max. leakage current	-	0.01 mA	
Max. frequency	200 Hz	1000 Hz	
Shock resistance	50 g		
Protection circuit	-	reverse polarity protected, overvoltage protection	
Temperature range	-10 °C to 70 °C*	-10 °C to 70 °C	
Enclosure classification	IP 64	IP 64**	

* High temperature version (max. 125 °C) available on request

** IP 68 available on request; only for versions with open cable.

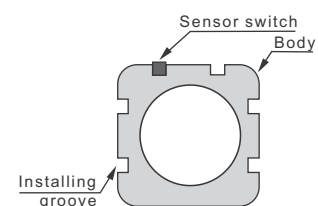
Ordering information

Art. No.	Type
235.200	Reed sensor, 2-wire, with M8 plug, with 150 mm cable length, NO
235.201	Reed sensor, 2-wire, with 3 m cable length, NO
235.202	Hall sensor, 3-wire, with M8 plug, with 150 mm cable length, NO, NPN
235.203	Hall sensor, 3-wire, with 3 m cable length, NO, NPN
235.204	Hall sensor, 3-wire, with M8 plug, with 150 mm cable length, NO, PNP
235.205	Hall sensor, 3-wire, with 3 m cable length, NO, PNP

Mounting

No installation accessories are necessary for the sensor switch (115533 to 115538). It can be directly fixed in the groove of the cylinder barrel which is convenient and fast.

1. Adjust the clamping screw on sensor switch to the parallel position that enables the sensor switch to enter the installation slot.
2. Then lead the sensor switch to the installation slot and adjust it to the proper position.
3. Tighten the clamping screw to fix.



Accessories

Sealing kits 437.160 - 437.166



Specifications

Art. No.	Type No.	Piston-Ø	Sealing kit consisting of:
116862	437.160	32	Piston rod seal (TPU) 1 pc Cushion Seals (TPU) 2 pcs O-ring for piston rod (TPU) 1 pc Piston seal (NBR) 1 pc incl. grease
116863	437.161	40	
116864	437.162	50	
116865	437.163	63	
116866	437.164	80	
116867	437.165	100	
116868	437.166	125	

(Values in mm)

Ordering information

Art. No.	Type No.
170572	16.DMD.32025
170573	16.DMD.32050
170574	16.DMD.32075
170575	16.DMD.32080
170576	16.DMD.32100
170577	16.DMD.32125
170578	16.DMD.32150
170579	16.DMD.32160
170580	16.DMD.32175
170581	16.DMD.32200
170582	16.DMD.32250
170583	16.DMD.32300
170584	16.DMD.32350
170585	16.DMD.32400
170586	16.DMD.32450
170587	16.DMD.32500
170588	16.DMD.40025
170589	16.DMD.40050
170590	16.DMD.40075
170591	16.DMD.40080
170592	16.DMD.40100
170593	16.DMD.40125
170594	16.DMD.40150
170595	16.DMD.40160
170596	16.DMD.40175
170597	16.DMD.40200
170598	16.DMD.40250
170599	16.DMD.40300
170600	16.DMD.40350
170601	16.DMD.40400
170602	16.DMD.40450
170603	16.DMD.40500
170604	16.DMD.40600
170605	16.DMD.40700
170606	16.DMD.40800
170607	16.DMD.50025
170608	16.DMD.50050
170609	16.DMD.50075
170610	16.DMD.50080
170611	16.DMD.50100
170612	16.DMD.50125
170613	16.DMD.50150
170614	16.DMD.50160
170615	16.DMD.50175
170616	16.DMD.50200
170617	16.DMD.50250
170618	16.DMD.50300
170619	16.DMD.50350
170620	16.DMD.50400
170621	16.DMD.50450
170622	16.DMD.50500

Ordering information

Art. No.	Type No.
170623	16.DMD.50600
170624	16.DMD.50700
170625	16.DMD.50800
170626	16.DMD.50900
170627	16.DMD.501000
170628	16.DMD.63025
170629	16.DMD.63050
170630	16.DMD.63075
170631	16.DMD.63080
170632	16.DMD.63100
170633	16.DMD.63125
170634	16.DMD.63150
170635	16.DMD.63160
170636	16.DMD.63175
170637	16.DMD.63200
170638	16.DMD.63250
170639	16.DMD.63300
170640	16.DMD.63350
170641	16.DMD.63400
170642	16.DMD.63450
170643	16.DMD.63500
170644	16.DMD.63600
170645	16.DMD.63700
170646	16.DMD.63800
170647	16.DMD.63900
170648	16.DMD.631000
170649	16.DMD.80025
170650	16.DMD.80050
170651	16.DMD.80075
170652	16.DMD.80080
170653	16.DMD.80100
170654	16.DMD.80125
170655	16.DMD.80150
170656	16.DMD.80160
170657	16.DMD.80175
170658	16.DMD.80200
170659	16.DMD.80250
170660	16.DMD.80300
170661	16.DMD.80350
170662	16.DMD.80400
170663	16.DMD.80450
170664	16.DMD.80500
170665	16.DMD.80600
170666	16.DMD.80700
170667	16.DMD.80800
170668	16.DMD.80900
170669	16.DMD.801000
170670	16.DMD.100025
170671	16.DMD.100050
170672	16.DMD.100075
170673	16.DMD.100080

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Art. No.	Type No.
170674	16.DMD.100100
170675	16.DMD.100125
170676	16.DMD.100150
170677	16.DMD.100160
170678	16.DMD.100175
170679	16.DMD.100200
170680	16.DMD.100250
170681	16.DMD.100300
170682	16.DMD.100350
170683	16.DMD.100400
170684	16.DMD.100450
170685	16.DMD.100500
170686	16.DMD.100600
170687	16.DMD.100700
170688	16.DMD.100800
170689	16.DMD.100900
170690	16.DMD.125025
170691	16.DMD.125050
170692	16.DMD.125075
170693	16.DMD.125080
170694	16.DMD.125100
170695	16.DMD.125125
170696	16.DMD.125150
170697	16.DMD.125160
170698	16.DMD.125175
170699	16.DMD.125200
170700	16.DMD.125250
170701	16.DMD.125300
170702	16.DMD.125350
170703	16.DMD.125400
170704	16.DMD.125450
170705	16.DMD.125500
170706	16.DMD.125600
170707	16.DMD.125700
170708	16.DMD.125800
170709	16.DMD.125900

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Art. No.	Type No.
115751	437.100
115752	437.101
115753	437.102
115754	437.103
115755	437.104
115756	437.105
115757	437.106
115760	437.110
115761	437.111
115762	437.112
115763	437.113
115764	437.120
115765	437.121
115766	437.122
115767	437.123
115768	437.124
115769	437.125
115770	437.126
115793	437.170
115794	437.171
115795	437.172
115796	437.173
115797	437.174
115798	437.175
115799	437.176
115800	437.180
115801	437.181
115802	437.183
115803	437.185
115786	437.150
115787	437.151
115788	437.152
115789	437.153
115790	437.154
115791	437.155
115792	437.156
115772	437.130
115773	437.131
115774	437.132
115775	437.133
115776	437.134
115777	437.135
115778	437.136

Ordering information

Art. No.	Type No.
115779	437.140
115780	437.141
115781	437.142
115782	437.143
115783	437.144
115784	437.145
115785	437.146
115835	437.313
115810	437.211
115811	437.212
115812	437.213
115813	437.214
115814	437.220
115815	437.221
115816	437.222
115817	437.223
115818	437.224
115533	235.200
115534	235.201
115535	235.202
115536	235.203
115537	235.204
115538	235.205