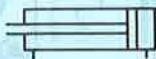


Double acting cylinder

Designs:

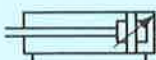
without end position cushioning

Type DN-...



with end position cushioning adjustable at both ends

Type DN-...-PPV



Special design:

S2		S6	
S3		S7	
S5		S8	

S 2 option cannot be used with clevis foot mounting.

The special design can be combined.

S 9 stainless design on request.

Additional components (sheets 1.310, 1.320):



Rod clevis, Type SG

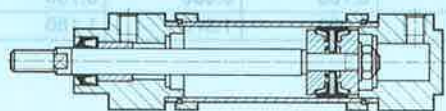


Rod eye, Type SGS



Self-aligning rod coupler, Type FK

Example: Type DN-...



Type to be discontinued

Replacement type either DNU-...

Catalogue sheet 1.274

Note:

Observe sheet 1.201

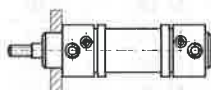


4

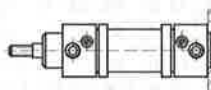
The operation, dimensions and mounting options of this cylinder series meet the specifications of ISO 6431, DIN 24335 (VDMA) and CETOP RP 43 P.

Installation of basic cylinder using internal threads of end-cap screws

Mounting at front

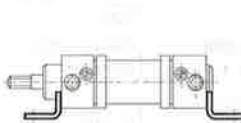


Mounting at rear

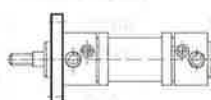


Other types of installation and additional mounting attachments

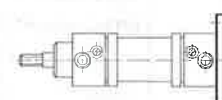
Foot mounting Type HN-...



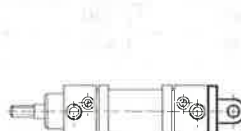
Flange mounting Type FN-... at front



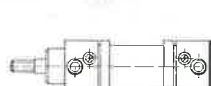
Flange mounting Type FN-... at rear



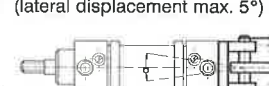
Swivel flange Type SN-...



Swivel flange Type SN-..., with clevis foot mounting Type LN-...

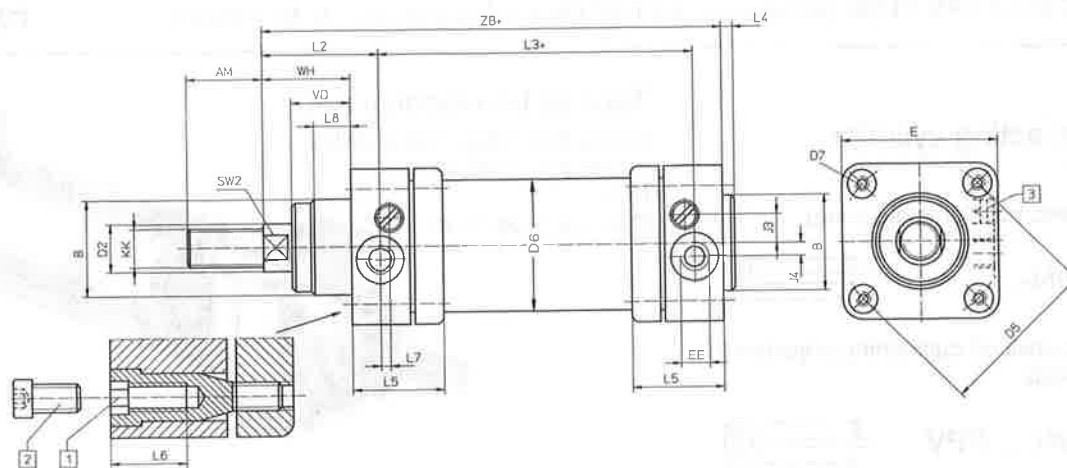


Swivel flange Type SN-..., with clevis foot mounting, Type LSN-... (lateral displacement max. 5°)



Order code (see sheet 1.270.2)			Part No. + DN + piston dia. + stroke length + end position cushioning + special design <i>Example: piston dia. 63 mm, stroke length 80 mm, adjustable end position cushioning special design S 2 = 5546 DN-63-80-PPV-S-2</i>			
Medium			Compressed air, filtered (lubricated or unlubricated)			
Design			Piston cylinder			
Max. permissible operating pressure			12 bar			
Temperature range			- 20 to + 80 °C			
Materials			Bearing cap and cover cap: cast aluminium, painted; cylinder barrel: precision steel, painted; piston rod: X 20 Cr 13, rolled thread; seals: Perbunan			
Weights			See overleaf			
Piston dia. mm	Standard stroke lengths mm	Stroke length* min. – max. mm	Thrust at 6 bar N (≈ kp)	Return force at 6 bar N (≈ kp)	Connection	Cushioning length mm
32	25 160 500	1 to 2000	450 (45)	380 (38)	G 1/8	19
40	40 200	1 to 2000	710 (71)	590 (59)	G 1/4	21
50	50 250	1 to 2000	1130 (113)	940 (94)	G 1/4	23
63	80 300	1 to 2000	1800 (180)	1610 (161)	G 3/8	23
80	100 320	1 to 2000	2900 (290)	2610 (261)	G 3/8	30
100	125 400	1 to 2000	4550 (455)	4260 (426)	G 1/2	30

* Stroke tolerances as per DIN ± 1.3 mm



- 1 Hexagon socket head screw with internal thread (built into cylinder)
 2 Cheesehead screw with hexagon socket head (included with mounting attachment)
 3 Regulating screw for adjustable end position cushioning
 + = Plus stroke length

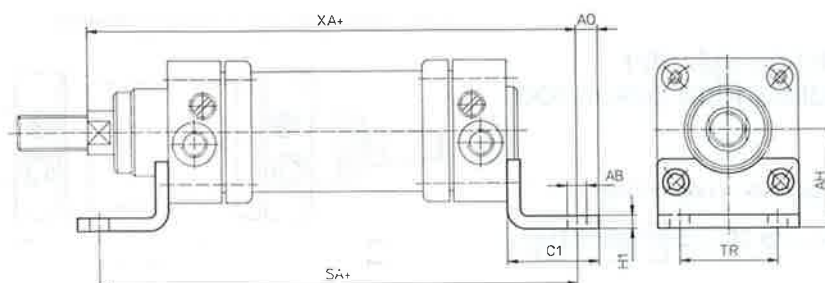
Piston dia. mm	AM	B ₁₈ dia.	D ₂₁₈ dia.	D ₅ dia.	D ₆ dia.	D ₇	E	EE	J ₃	J ₄	KK	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	SW ₂	VD	WH	ZB
32	20	30	12	46	37	M 5	45	G 1/8	7	—	M 10 × 1.25	35	76	4	38.5	13	12	—	10	16	26	120
40	24	35	16	56	45	M 5	54	G 1/4	9	4.5	M 12 × 1.25	42	81	5.5	37.5	13	6	—	13	20	30	135
50	32	40	20	68	55	M 6	65	G 1/4	12	5.5	M 16 × 1.5	49	82	5	38.5	16	4	17	17	25	37	143
63	32	42	20	84	68	M 6	80	G 3/8	13	13	M 16 × 1.5	54	87	6	46.5	19	—	20	17	28	40	155
80	40	48	25	100	86	M 8	96	G 3/8	17	16	M 20 × 1.5	62	96	6	48	21	—	23	22	34	48	172
100	40	52	25	132	110	M 8	126	G 1/2	16	16	M 20 × 1.5	69.5	101	7	54.5	21	—	23	22	40	53	187

Weights

Basic cylinder in kg					Mounting attachments: Materials and wt. in kg				
Piston dia. mm	Type DN-... Basic weight	Weight per 10 mm of stroke	DN-...PPV Basic weight	Weight per 10 mm of stroke	HN-... Galvanized steel	FN-... Cast aluminium	SN-... GD-Al	LN-... GTS-35	LSN-... GTS-35
32	0.970	0.030	1.000	0.030	0.140	0.080	0.110	0.160	0.140
40	1.150	0.042	1.200	0.042	0.220	0.110	0.180	0.210	0.200
50	1.675	0.057	1.760	0.057	0.380	0.190	0.260	0.420	0.350
63	2.685	0.065	2.760	0.065	0.580	0.340	0.460	0.540	0.460
80	3.505	0.099	3.650	0.099	1.100	0.520	0.700	0.880	0.780
100	6.355	0.168	6.500	0.168	1.480	0.900	1.280	1.370	1.180

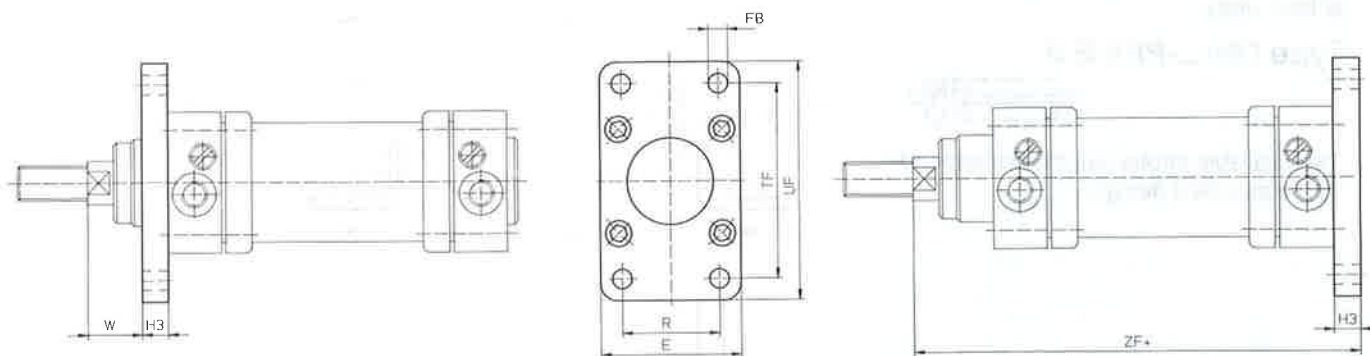
Foot mounting, Type HN-...

(2 feet with mounting bolts)



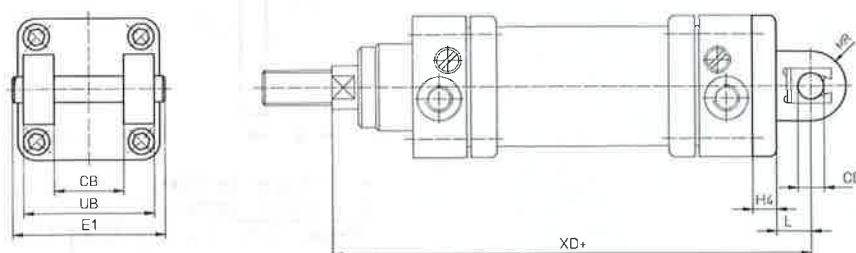
Flange mounting, Type FN-...

(1 flange and mounting bolts)



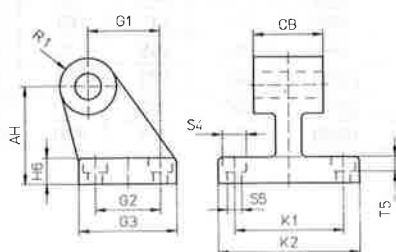
Swivel flange, Type SN-...

(1 swivel flange with king pin and mounting bolts)



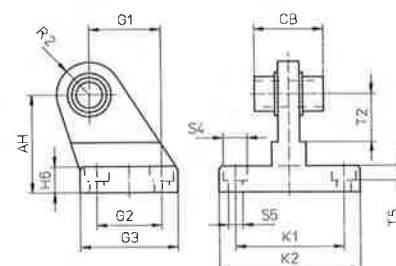
Clevis foot mounting, Type LN-...

(1 clevis foot)



Clevis foot mounting, Type LSN-...

(1 clevis foot with spherical bearing)



Please state piston dia. when ordering

+ = Plus stroke length

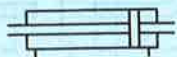
Piston dia. mm	AB Ø	AH	AO	C ₁	CB	CD	E	E ₁	G ₁	G ₂	G ₃	H ₁	H ₃	H ₄	H ₆	K ₁	K ₂	L
32	7	32	8	32	26	10	45	54	21	18	31	4	10	8	8	38	51	14
40	9	36	10	38	28	12	54	62	24	22	35	5	10	9	10	41	54	16
50	9	45	10	42	32	12	65	70	33	30	45	6	12	11	12	50	65	16
63	9	50	15	50	40	16	80	82	37	35	50	6	15	12	12	52	67	23
80	12	63	17	60	50	16	96	102	47	40	60	8	18	14	14	66	86	24
100	14	71	14	57	60	20	126	126	55	50	70	8	18	15	15	76	96	28
Piston dia. mm	MR	R ₁	R ₂	R	SA	S ₄ dia.	S ₅ dia.	T ₂	T ₅	TF	TR	UB	UF	W	XA	XD	ZF	
32	10	10	13	32	142	10	5.5	16	5.7	64	32	45	77	16	144	142	130	
40	13	11	15	36	161	10	5.5	20	5.7	72	36	52	90	20	163	160	145	
50	16	13	15	45	170	11	6.6	22	6.8	90	45	60	110	25	175	170	155	
63	18	15	20	50	185	11	6.6	30	6.8	100	50	70	125	25	190	190	170	
80	18	15	20	63	210	15	9	31	9	126	63	90	154	30	215	210	190	
100	23	19	24	75	220	15	9	38	9	150	75	110	186	35	230	230	205	

Double acting cylinder with double-ended piston rod

Designs:

without end position cushioning

Type DN-...-S 2



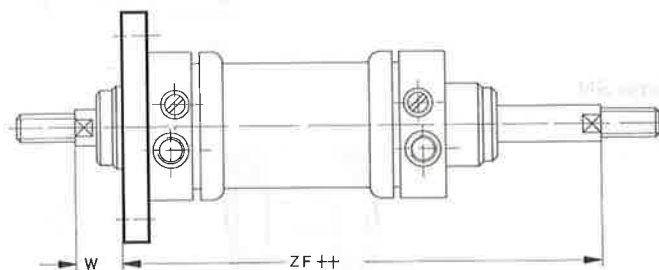
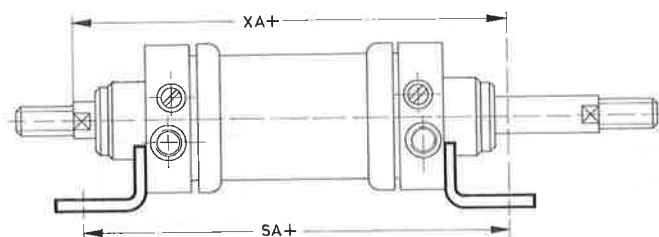
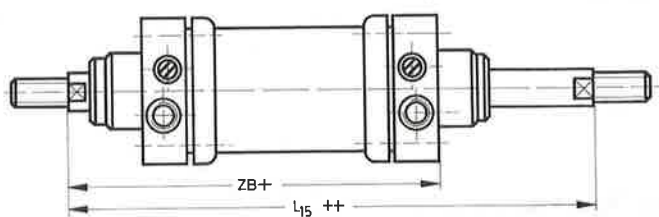
with end position cushioning adjustable
at both ends

Type DN-...-PPV-S 2



The available stroke lengths correspond
to the standard design.

Data differing from standard design



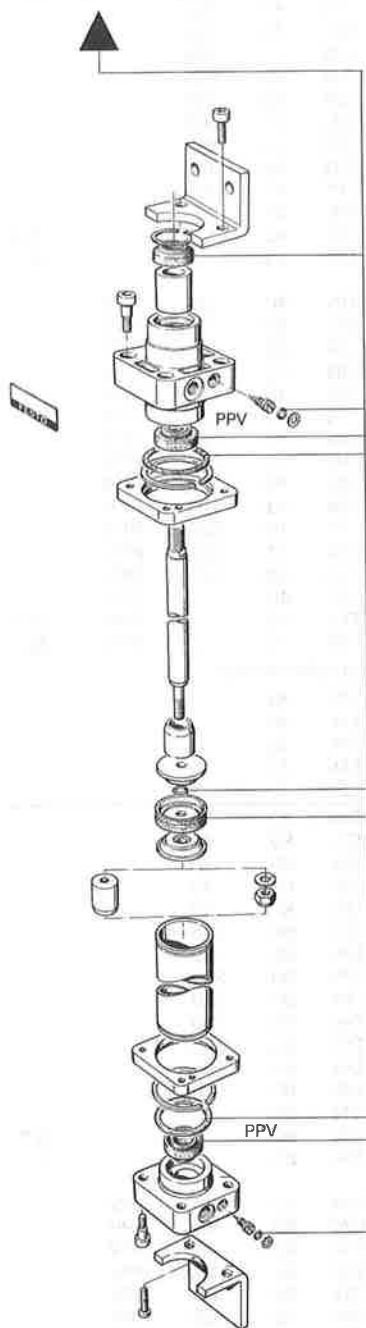
+ = Plus stroke length
++ = Plus 2 x stroke length

Piston dia. mm	Thrust = return force at 6 bar for S 2 N (≈ kp)	L ₁₅	ZF	SA	W	XA	ZB
32	380 (38)	146	130	142	16	144	120
40	590 (59)	165	145	161	20	163	135
50	940 (94)	180	155	170	25	175	143
63	1610 (161)	195	170	185	25	190	155
80	2610 (261)	220	190	210	30	215	172
100	4260 (426)	240	205	220	35	230	187

Order code						Order code						Order code					
Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design	Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design	Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design
5159	DN-	32-	25			5169	DN-	40-	25			5179	DN-	50-	25		
5160	DN-	32-	40			5170	DN-	40-	40			5180	DN-	50-	40		
5161	DN-	32-	50			5171	DN-	40-	50			5181	DN-	50-	50		
5162	DN-	32-	80			5172	DN-	40-	80			5182	DN-	50-	80		
5163	DN-	32-	100			5173	DN-	40-	100			5183	DN-	50-	100		
8535	DN-	32-	125			8539	DN-	40-	125			8543	DN-	50-	125		
5164	DN-	32-	160			5174	DN-	40-	160			5184	DN-	50-	160		
5165	DN-	32-	200			5175	DN-	40-	200			5185	DN-	50-	200		
8536	DN-	32-	250			8540	DN-	40-	250			8544	DN-	50-	250		
5166	DN-	32-	300			5176	DN-	40-	300			5186	DN-	50-	300		
34680	DN-	32-	320			34681	DN-	40-	320			34682	DN-	50-	320		
32302	DN-	32-	400			32306	DN-	40-	400			33040	DN-	50-	400		
32304	DN-	32-	500			32308	DN-	40-	500			33042	DN-	50-	500		
4964	DN-	32-	...			4965	DN-	40-	...			4966	DN-	50-	...		
5537	DN-	32-	...		-S 2	5538	DN-	40-	...		-S 2	5539	DN-	50-	...		-S 2
	DN-	32-	...		-S ...		DN-	40-	...		-S ...		DN-	50-	...		-S ...
4970	DN-	32-	25-	PPV		4980	DN-	40-	25-	PPV		4990	DN-	50-	25-	PPV	
4971	DN-	32-	40-	PPV		4981	DN-	40-	40-	PPV		4991	DN-	50-	40-	PPV	
4972	DN-	32-	50-	PPV		4982	DN-	40-	50-	PPV		4992	DN-	50-	50-	PPV	
4973	DN-	32-	80-	PPV		4983	DN-	40-	80-	PPV		4993	DN-	50-	80-	PPV	
4974	DN-	32-	100-	PPV		4984	DN-	40-	100-	PPV		4994	DN-	50-	100-	PPV	
8537	DN-	32-	125-	PPV		8541	DN-	40-	125-	PPV		8545	DN-	50-	125-	PPV	
4975	DN-	32-	160-	PPV		4985	DN-	40-	160-	PPV		4995	DN-	50-	160-	PPV	
4976	DN-	32-	200-	PPV		4986	DN-	40-	200-	PPV		4996	DN-	50-	200-	PPV	
8538	DN-	32-	250-	PPV		8542	DN-	40-	250-	PPV		8546	DN-	50-	250-	PPV	
4977	DN-	32-	300-	PPV		4987	DN-	40-	300-	PPV		4997	DN-	50-	300-	PPV	
34686	DN-	32-	320-	PPV		34687	DN-	40-	320-	PPV		34688	DN-	50-	320-	PPV	
32303	DN-	32-	400-	PPV		32307	DN-	40-	400-	PPV		33041	DN-	50-	400-	PPV	
32305	DN-	32-	500-	PPV		32309	DN-	40-	500-	PPV		33043	DN-	50-	500-	PPV	
4958	DN-	32-	...	PPV		4959	DN-	40-	...	PPV		4960	DN-	50-	...	PPV	
5543	DN-	32-	...	PPV	-S 2	5544	DN-	40-	...	PPV	-S 2	5545	DN-	50-	...	PPV	-S 2
	DN-	32-	...	PPV	-S ...		DN-	40-	...	PPV	-S ...		DN-	50-	...	PPV	-S ...
Mounting attachments						Mounting attachments						Mounting attachments					
5135	HN-	32				5136	HN-	40				5137	HN-	50			
5141	FN-	32				5142	FN-	40				5143	FN-	50			
5153	SN-	32				5154	SN-	40				5155	SN-	50			
5147	LN-	32				5148	LN-	40				5149	LN-	50			
5561	LSN-	32				5562	LSN-	40				5563	LSN-	50			
5189	DN-	63-	25			5199	DN-	80-	25			5209	DN-	100-	25		
5190	DN-	63-	40			5200	DN-	80-	40			5210	DN-	100-	40		
5191	DN-	63-	50			5201	DN-	80-	50			5211	DN-	100-	50		
5192	DN-	63-	80			5202	DN-	80-	80			5212	DN-	100-	80		
5193	DN-	63-	100			5203	DN-	80-	100			5213	DN-	100-	100		
8547	DN-	63-	125			8551	DN-	80-	125			8555	DN-	100-	125		
5194	DN-	63-	160			5204	DN-	80-	160			5214	DN-	100-	160		
5195	DN-	63-	200			5205	DN-	80-	200			5215	DN-	100-	200		
8548	DN-	63-	250			8552	DN-	80-	250			8556	DN-	100-	250		
5196	DN-	63-	300			5206	DN-	80-	300			5216	DN-	100-	300		
34683	DN-	63-	320			34684	DN-	80-	320			34685	DN-	100-	320		
32310	DN-	63-	400			32314	DN-	80-	400			32318	DN-	100-	400		
32312	DN-	63-	500			32316	DN-	80-	500			32320	DN-	100-	500		
4967	DN-	63-	...			4968	DN-	80-	...			4969	DN-	100-	...		
5540	DN-	63-	...		-S 2	5541	DN-	80-	...		-S 2	5542	DN-	100-	...		-S 2
	DN-	63-	...		-S ...		DN-	80-	...		-S ...		DN-	100-	...		-S ...
5000	DN-	63-	25-	PPV		5010	DN-	80-	25-	PPV		5020	DN-	100-	25-	PPV	
5001	DN-	63-	40-	PPV		5011	DN-	80-	40-	PPV		5021	DN-	100-	40-	PPV	
5002	DN-	63-	50-	PPV		5012	DN-	80-	50-	PPV		5022	DN-	100-	50-	PPV	
5003	DN-	63-	80-	PPV		5013	DN-	80-	80-	PPV		5023	DN-	100-	80-	PPV	
5004	DN-	63-	100-	PPV		5014	DN-	80-	100-	PPV		5024	DN-	100-	100-	PPV	
8549	DN-	63-	125-	PPV		8553	DN-	80-	125-	PPV		8557	DN-	100-	125-	PPV	
5005	DN-	63-	160-	PPV		5015	DN-	80-	160-	PPV		5025	DN-	100-	160-	PPV	
5006	DN-	63-	200-	PPV		5016	DN-	80-	200-	PPV		5026	DN-	100-	200-	PPV	
8550	DN-	63-	250-	PPV		8554	DN-	80-	250-	PPV		8558	DN-	100-	250-	PPV	
5007	DN-	63-	300-	PPV		5017	DN-	80-	300-	PPV		5027	DN-	100-	300-	PPV	
34689	DN-	63-	320-	PPV		34690	DN-	63-	320-	PPV		34691	DN-	100-	320-	PPV	
32311	DN-	63-	400-	PPV		32315	DN-	63-	400-	PPV		32319	DN-	100-	400-	PPV	
32313	DN-	63-	500-	PPV		32317	DN-	63-	500-	PPV		32321	DN-	100-	500-	PPV	
4961	DN-	63-	...	PPV		4962	DN-	80-	...	PPV		4963	DN-	100-	...	PPV	
5546	DN-	63-	...	PPV	-S 2	5547	DN-	80-	...	PPV	-S 2	5548	DN-	100-	...	PPV	-S 2
	DN-	63-	...	PPV	-S ...		DN-	80-	...	PPV	-S ...		DN-	100-	...	PPV	-S ...
Mounting attachments						Mounting attachments						Mounting attachments					
5138	HN-	63				5139	HN-	80				5140	HN-	100			
5144	FN-	63				5145	FN-	80				5146	FN-	100			
5156	SN-	63				5157	SN-	80				5158	SN-	100			
5150	LN-	63				5151	LN-	80				5152	LN-	100			
5564	LSN-	63				5565	LSN-	80				5566	LSN-	100			

Wearing parts kits

Piston dia. mm	Type DN-...	Type DN-...-PPV	
32	Order code	104 158	Order code ▶ 1/80 104 160
40		104 161	▶ 2/80 104 163
50		104 164	▶ 9/80 104 166
63		104 167	▶ 2/81 104 169
80		104 170	▶ 9/80 104 172
100		104 173	▶ 12/80 104 175

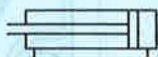


Double acting cylinder

Designs:

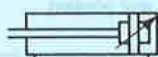
without end position cushioning

Type DN-...



with end position cushioning adjustable at both ends

Type DN-...-PPV



Special designs:

S 2	Double-ended piston rod	S 6	Heat-resistant seals for temperatures up to 150 °C
S 3	Acid-resistant piston rod	S 8	Outside cylinder surfaces with plastic coating ± 0.3
S 5	Nickel-plated cylinder bearing surface	Piston dia. 250 and 320 mm; S 5 and S 6 are only available with steel barrel	

For dia. 125, 160 and 200 mm:

S 7	Cylinder barrel made of brass
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The special designs can be combined.

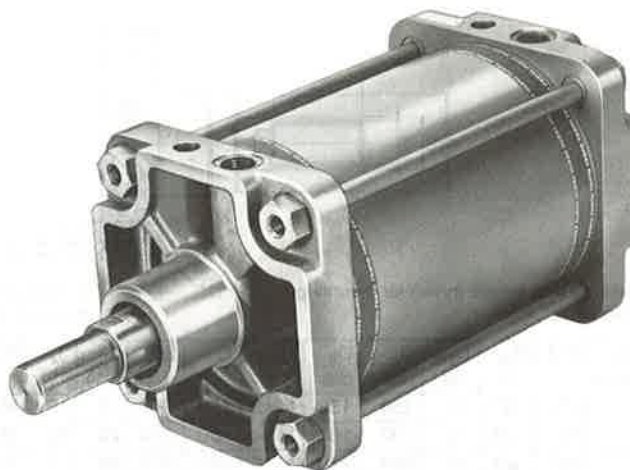
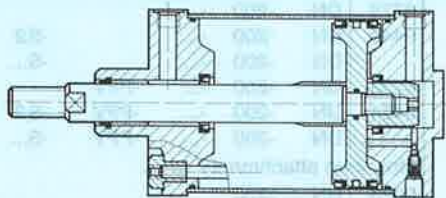
Additional components (sheets 1.310, 1.320):

Rod clevis, Type SG

Rod eye, Type SGS

Self-aligning rod coupler, Type FK

Example: Type DN-...-PPV

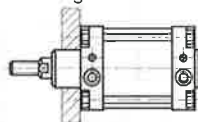


4

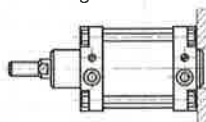
The operation, dimensions and mounting options of this cylinder series meet the specifications of ISO 6431, DIN 24 335 (VDMA) and CETOP RP 53 P.

Installation of basic cylinder without mounting attachments using internal threads of end cap-screws

Mounting at front

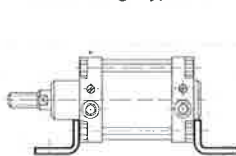


Mounting at rear

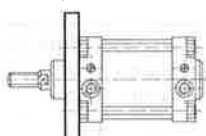


Other types of installation and additional mounting attachments

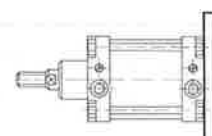
Foot mounting, Type HN



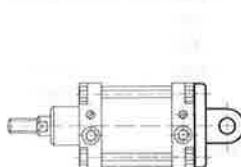
Flange mounting, Type FN at front



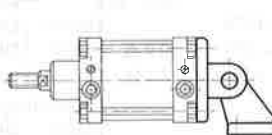
Flange mounting, Type FN at rear



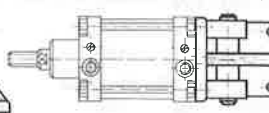
Swivel flange, Type SN



Swivel flange, Type SN, with clevis foot mounting Type LN



Swivel flange, Type SN, with clevis foot mounting Type LSN (lateral displacement max. 5°)



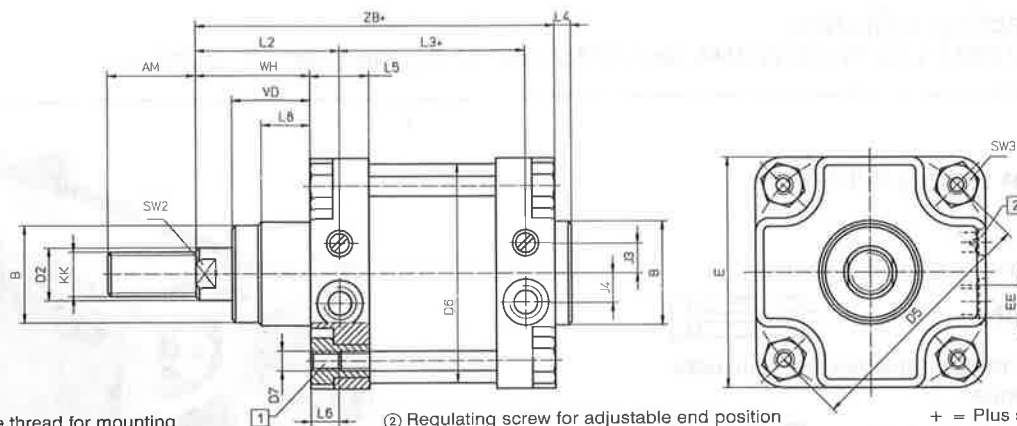
Order code (see overleaf)		Part No. + DN + piston dia. + stroke length + end position cushioning + special design Example: piston dia. 200 mm, stroke length 300 mm, adjustable end position cushioning = 6783 DN-200-300-PPV			
Medium		Compressed air, lubricated or unlubricated			
Design		Piston cylinder			
Max. permissible operating pressure		10 bar			
Temperature range		- 20 to + 80 °C			
Materials		Bearing cap and cover cap: cast aluminium, painted (dia. 250 and 320: GGG-42); cylinder barrel: precision steel (dia. 250 and 320**: glass-fibre reinforced plastic), painted; piston rod: C-45 chromed, rolled thread (dia. 125, X 20 Cr 13); seals: perbunan			
Weights		See overleaf			
Piston dia. mm	Stroke length* min – max. mm	Thrust at 6 bar*** N	Return force*** at 6 bar N	Connection	Cushioning length mm
125	1 to 2000	7360 (736)	6880 (688)	G 1/2	45
160	1 to 2000	12060 (1206)	11110 (1111)	G 3/4	50
200	1 to 2000	18840 (1884)	17890 (1789)	G 3/4	50
250	10 to 1100	29450 (2945)	28280 (2828)	G 1	58
320	10 to 1100	48250 (4825)	46380 (4638)	G 1	67

* Stroke tolerances as per DIN ± 1.3 mm

** Also available in special design with steel barrel

*** Theoretical values

Type DN-...



- + = Plus stroke length

Piston dia. mm	AM	B ₁₈ dia.	D ₂₁₈ dia.	D ₅ dia.	D ₆ dia.	D ₇	E	EE	J ₃	J ₄	KK	L ₂	L ₃	L ₄	L ₅	L ₆	L ₈	SW ₂	SW ₃	VD	WH	ZB
125	48	63	32	150	133	M12	140	G ¹ / ₂	18	18	M27 × 2	88	114	10	36	17	30	27	24	48	70	220
160	72	80	45	190	168	M14	180	G ³ / ₄	22	22	M36 × 2	108	124	10	46	25	30	41	30	55	85	255
200	72	80	45	234	210	M16	220	G ³ / ₄	25	25	M36 × 2	118	134	12	46	25	30	41	32	65	95	275
250	84	100	50	288	258	M20	270	G ¹	25	25	M42 × 2	130	150	14	50	25	—	46	36	75	105	305
320	96	110	63	360	329	M24	340	G ¹	30	30	M48 × 2	148	164	16	56	28	—	55	46	90	120	340

Weights

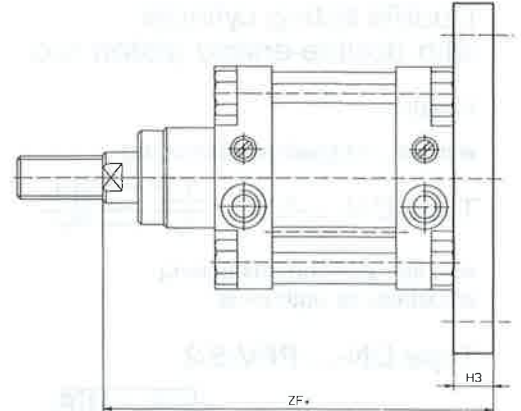
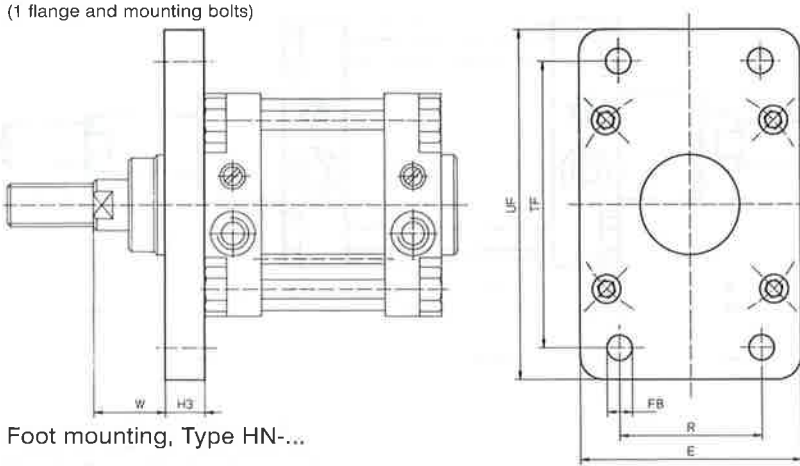
Basic cylinder in kg					Mounting attachments: Materials and wt in kg				
Piston dia.	Type DN-...Steel barrel		DN-...K-...Plastic barrel		HN-...	FN-...	SN-...	LN-...	LSN-...
	Basic weight	Weight per 10 mm of stroke	Basic weight	Weight per 10 mm of stroke	GGG-40; 125, 160: Cast aluminium			GGG-40	GGG-40
125	8.690	0.190	—	—	1.260	1.630	2.060	2.670	2.250
160	15.600	0.287	—	—	2.200	2.540	3.850	6.260	6.100
200	23.060	0.326	—	—	7.420	8.450	10.170	7.940	7.450
250	44.225	0.405	42.390	0.221	13.500	12.780	17.700	13.440	13.410
320	61.215	0.564	58.367	0.341	21.760	21.920	28.000	21.900	21.420

Order code						Order code						Order code					
Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design*	Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design	Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design
10438	DN	-125	-...		-B	6777	DN	-160	-...			6778	DN	-200	-...		
10445	DN	-125	-...		-S2-B	9448	DN	-160	-...		-S2	9449	DN	-200	-...		-S2
	DN	-125	-...		-S2...B		DN	-160	-...		-S...		DN	-200	-...		-S...
10441	DN	-125	-...	-PPV		6782	DN	-160	-...	-PPV		6783	DN	-200	-...	-PPV	
10444	DN	-125	-...	-PPV	-S2-B	9453	DN	-160	-...	-PPV	-S2	9454	DN	-200	-...	-PPV	-S2
	DN	-125	-...	-PPV	-S...B		DN	-160	-...	-PPV	-S...		DN	-200	-...	-PPV	-S...
Mounting attachments						Mounting attachments						Mounting attachments					
9021	HN	-125				9022	HN	-160				9023	HN	-200			
9026	FN	-125				9027	FN	-160				9028	FN	-200			
9031	SN	-125				9032	SN	-160				9033	SN	-200			
9036	LN	-125				9037	LN	-160				9038	LN	-200			
6987	LSN	-125				6988	LSN	-160				6989	LSN	-200			
Plastic barrel design						Plastic barrel design											
9285	DN	-250 K	-...			9286	DN	-320 K	-...								
9597	DN	-250 K	-...		-S2	9588	DN	-320 K	-...		-S2						
	DN	-250 K	-...		-S...		DN	-320 K	-...		-S...						
9287	DN	-250 K	-...	-PPV		9288	DN	-320 K	-...	-PPV							
9599	DN	-250 K	-...	-PPV	-S2	9600	DN	-320 K	-...	-PPV	-S2						
	DN	-250 K	-...	-PPV	-S...		DN	-320 K	-...	-PPV	-S...						
Steel barrel design						Steel barrel design											
6779	DN	-250	-...			6780	DN	-320	-...								
9450	DN	-250	-...		-S2	9451	DN	-320	-...		-S2						
	DN	-250	-...		-S...		DN	-320	-...		-S...						
6784	DN	-250	-...	-PPV		6785	DN	-320	-...	-PPV							
9455	DN	-250	-...	-PPV	-S2	9456	DN	-320	-...	-PPV	-S2						
	DN	-250	-...	-PPV	-S...		DN	-320	-...	-PPV	-S...						
Mounting attachments						Mounting attachments											
9024	HN	-250				9025	HN	-320									
9029	FN	-250				9030	FN	-320									
9034	SN	-250				9035	SN	-320									
9039	LN	-250				9040	LN	-320									
6990	LSN	-250				6991	LSN	-320									

* at piston dia. 125 mm: B-design with altered piston rods thread

Flange mounting, Type FN-...

(1 flange and mounting bolts)

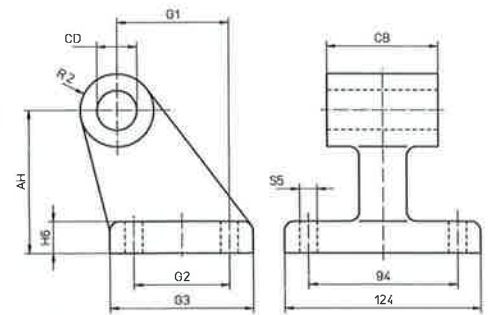
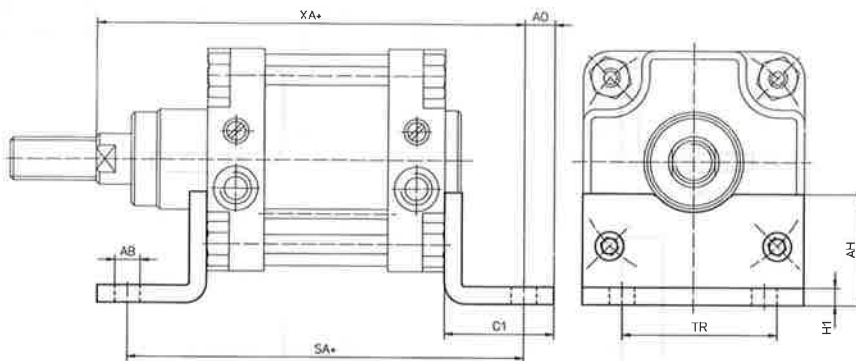


Clevis foot mounting, Type LN-...

(1 clevis foot)

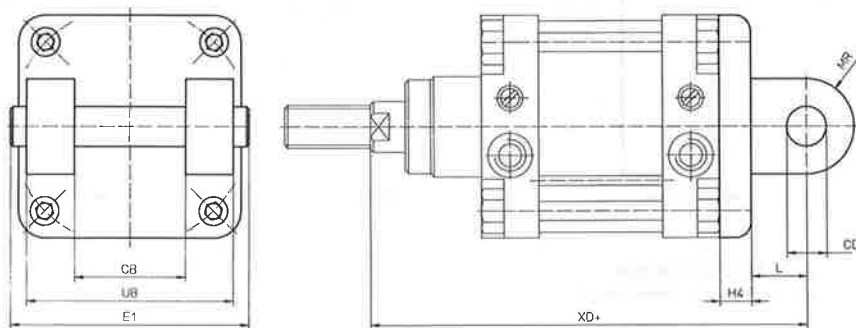
Foot mounting, Type HN-...

(2 feet with mounting bolts)



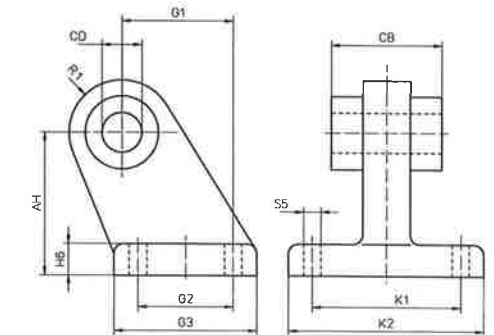
Swivel flange, Type SN-...

(1 swivel flange with king pin and mounting bolts)



Clevis foot mounting, Type LSN-...

(1 clevis foot with spherical bearing)



Please state piston dia. when ordering

+ = Plus stroke length

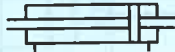
Piston dia. mm	AB	AH	AO	C ₁	CB	CD dia.	E	E ₁	FB dia.	G ₁	G ₂	G ₃	H ₁	H ₃	H ₄	H ₆	K ₁
125	16	90	19	69	70	25	140	150	16	70	60	90	11	25	20	20	94
160	18	115	22	87	90	30	180	192	18	97	88	126	13	25	22	25	118
200	22	135	25	95	90	30	220	192	22	105	90	130	15	25	25	30	122
250	26	165	30	105	110	40	270	232	26	128	110	160	20	25	25	35	150
320	33	200	40	125	120	45	340	254	33	150	122	186	23	30	30	40	170
Piston dia. mm	K ₂	L	MR	R ₁	R ₂	R	SA	S ₅ dia.	TF	TR	UB	UF	W	XA	XD	ZF	
125	124	35	30	23	33	90	250	11	180	90	130	220	45	270	275	245	
160	156	38	32	32	36	115	300	14	230	115	170	280	60	320	315	280	
200	162	35	35	32	36	135	320	16	270	135	170	320	70	345	335	300	
250	200	45	45	40	43	165	350	22	330	165	200	390	80	380	375	330	
320	234	50	54	45	54	200	390	26	400	200	220	470	90	425	420	370	

Double acting cylinder
with double-ended piston rod

Designs:

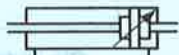
without end position cushioning

Type DN-...-S2



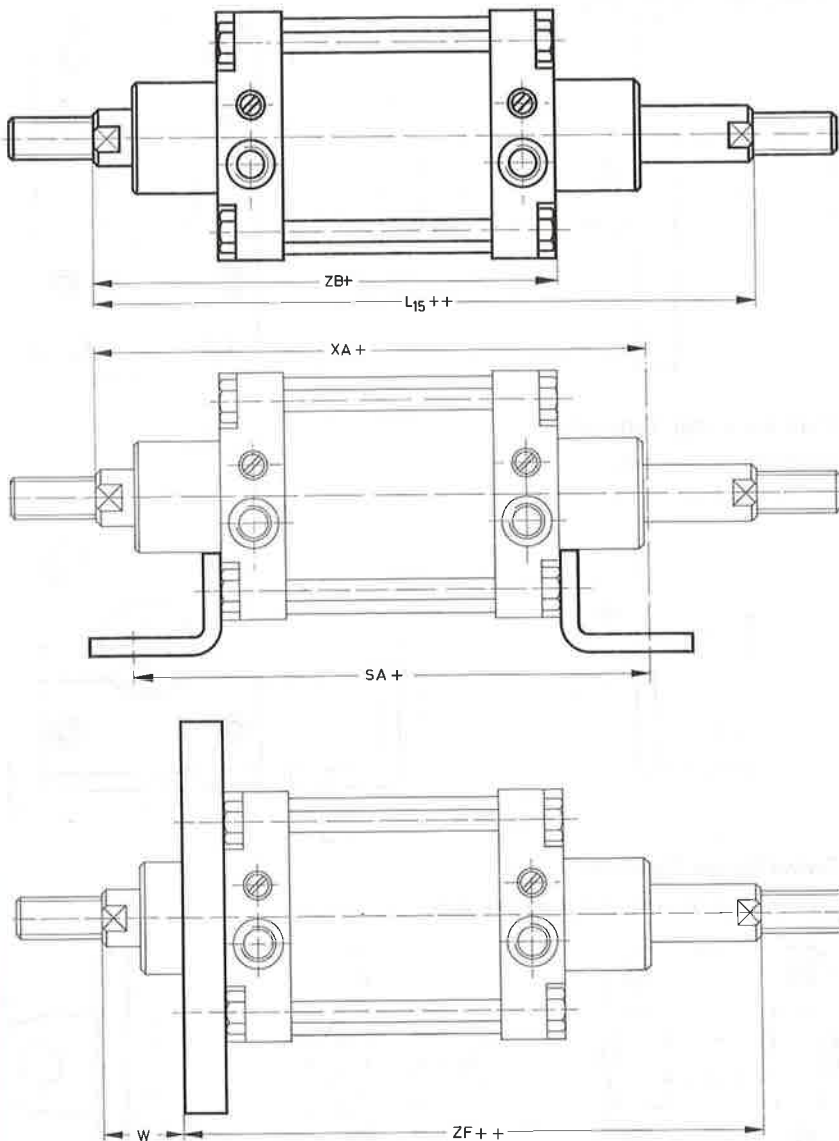
with end position cushioning
adjustable at both ends

Type DN-...-PPV-S2



The available stroke lengths correspond
to the standard design.

Data differing from standard design



+ = Plus stroke length
++ = Plus 2 x stroke length

Piston dia. mm	Forward thrust = return thrust at 6 bar for S2 N (≈ kp)	L ₁₅	SA	W	XA	ZB	ZF
125	6880 (688)	290	250	45	270	220	245
160	11110 (1111)	340	300	60	320	255	280
200	17890 (1789)	370	320	70	345	275	300
250	28280 (2828)	410	350	80	380	305	330
320	46380 (4638)	460	390	90	425	340	370

* Theoretical values