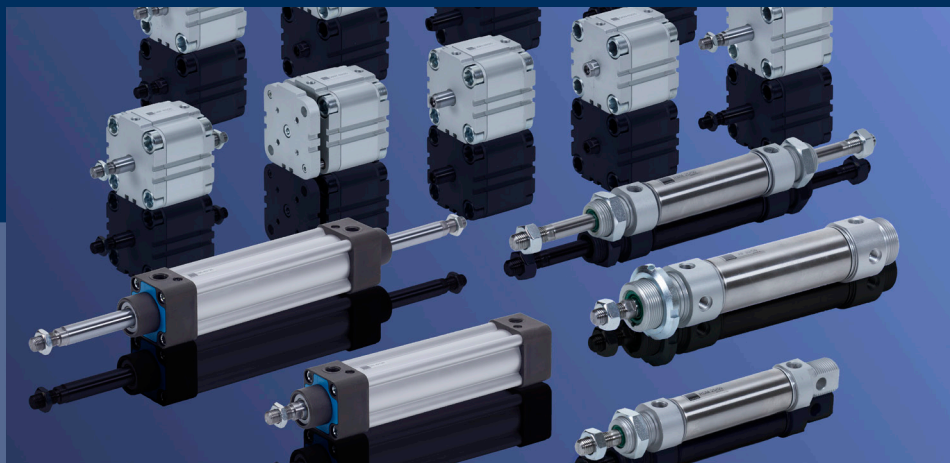


Hafner-Pneumatik Cylinders 2019





TANÚSÍTVÁNY / CERTIFICATE

N°18120269/h

Az Apave Certification tanúsítja, hogy a
Apave Certification certifies that

Hafner Pneumatika Kft.

által működtetett irányítási rendszer az alábbi telephelyen
implemented a management system on the following location

**Püski út 3.
9228 Halászi**

a következő tevékenység tekintetében
for the following activities

Pneumatikus és elektro-pneumatikus termékek, rendszerek és tartozékok tervezése, gyártása és forgalmazása automatizálási- és egyéb területek részére
Design, manufacturing and sales of pneumatic as well as electro-pneumatic components and systems. Accessories for industrial and process automation and other applications

megfelel az
which has been assessed to meet the

ISO 9001 : 2015

szabvány követelményeinek.
standard's requirements.

A tanúsítvány érvényességének kezdete:	This certificate is valid from:
2018.12.05.	05.12.2018.
A tanúsítvány érvényességének lejárata:	This certificate is valid until:
2019.10.13.	13.10.2019.
Első kiadás dátuma:	Initial certification date:
2013.10.14.	14.10.2013.

P. LABROUSSE

Az Apave Certification igazgatója
Director of Apave Certification



ACCREDITATION
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SCOPE
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EN ISO 9001 : 2015

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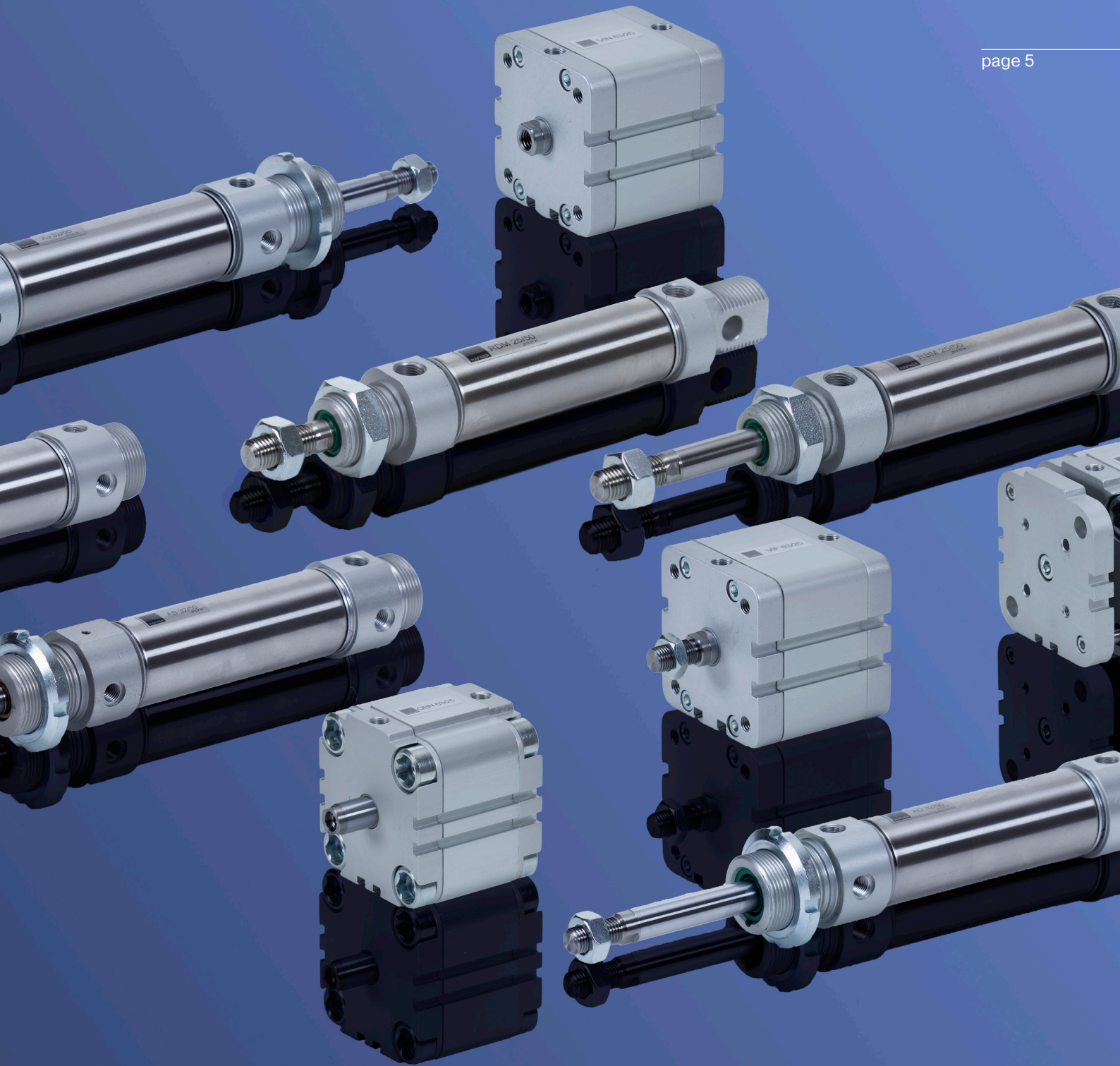


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ATEX Cylinder



Example marking of an electric product for explosion hazardous environment:

Example marking of an **electric** product
CE  **II** **2G** **mb** **IIC** **T4** **Gb**

Example marking of a **non-electric product (cylinder)** for explosion hazardous environment:

Example marking of a **non-electric** product
CE  **II** **2G** **c** **T6** $-10^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$

Ambient temperature
 Temperature class
 Ignition protection
 Category
 Product group

Product group:

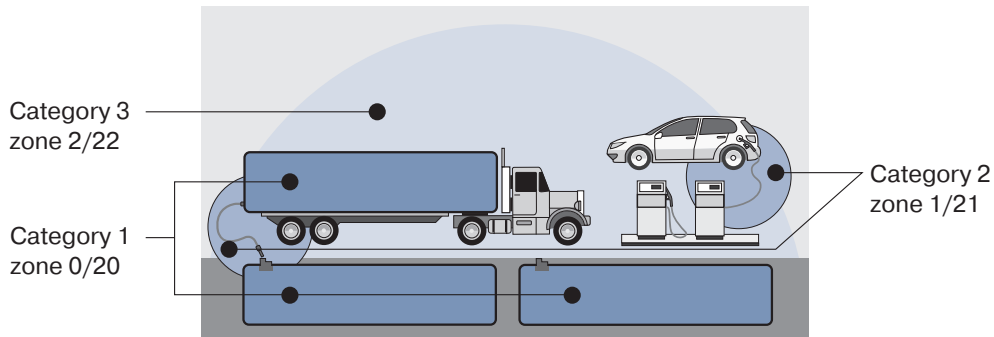
Product group I

Products from product group I are distinguished between M1 and M2. Both are suitable for mining applications. They are not in our focus as Hafner does not offer suitable equipment.

Product group II

All other products for explosion hazardous environment are in this group.

Category:



Category I

An area in which an explosive mixture is continuously present or present for long periods >1000 hours/year.

Category II

An area in which an explosive mixture is occasionally present 10 – 1000 hours/year.

Category III

An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time <10 hours/year.

	Zones for Gases	Zones for Dust
Category 1	Zone 0 Area in which an explosion hazardous atmosphere consisting of air and inflammable gases, vapors or fog is present constantly or over a longer period of time. > 1000 hours/year	Zone 20 Area in which an explosion hazardous atmosphere consisting of a dust-cloud or a mix of air and dust is present constantly or over a longer period of time. > 1000 hours/year
Category 2	Zone 1 Area in which there is a probability that under normal conditions an explosion hazardous atmosphere consisting of air and inflammable gases, vapors or fog can be present. 10 – 1000 hours/year	Zone 21 Area in which there is a probability that under normal conditions an explosion hazardous atmosphere consisting of a dust-cloud or a mix of air and dust can be present. 10 – 1000 hours/year
Category 3	Zone 2 Area in which once and a while an explosion hazardous atmosphere consisting of air and inflammable gases, steam or vapors can be present. < 10 hours/year	Zone 22 Area in which once and a while an explosion hazardous atmosphere consisting of a dust-cloud or a mix of air and dust can be present. < 10 hours/year

■ Covered by the Hafner product range

Group:

For various substances the explosive and spark ignition capability of a potentially explosive mixture are characteristics. Vapors and gases are classified in groups. The criteria for the subdivision are the maximum experimental safe gap and the minimum ignition current. Those are determined under precisely defined test conditions for various vapors and gases. Please refer to IEC60079-1A and IEC60079-3.

The hazard increases from group IIA to IIC, therefore the requirements applicable to electrical equipment become more strict. Consequently products classified IIC can also be used in IIB and IIA.

Temperatur classes:

Temperature class	Max. permitted surface temperature of equipment
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

T6 contains all other temperature classes

Cylinder forces

page 8

Round cylinder | ISO 6432

A = Load of spring at rest

B = Load of compressed spring

Spring traction forces:

Ø [mm]		Stroke [mm]		
		10	25	50
		Force [N]		
Ø 8	A	4,1	3,5	2,6
	B	4,5	4,5	4,5
Ø 10	A	4,1	3,5	2,6
	B	4,5	4,5	4,5
Ø 12	A	5,5	4,8	3,5
	B	6	6	6
Ø 16	A	16,5	13,7	9
	B	18,3	18,3	18,3
Ø 20	A	19	15,5	9,5
	B	21,5	21,5	21,5
Ø 25	A	27	24	13,5
	B	29	29	29

Thrust and traction forces:

	[N]*	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25
REM	Thrust	30	42	60	108	168	264
	Traction	18	36	45	96	144	216
RIM	Thrust	30	42	60	108	168	264
	Traction	18	36	45	96	144	216
RBM	Thrust	-	-	-	108	168	264
	Traction	-	-	-	96	144	216
RDM	Thrust	-	-	-	108	168	264
	Traction	-	-	-	96	144	216

Round cylinder | A-Series

Spring traction forces:

Ø [mm]		Stroke [mm]		
		10	25	50
		Force [N]		
Ø 32	A	56	51	42
	B	60	60	60
Ø 40	A	60	55	44
	B	65	65	65
Ø 50	A	64	57	46
	B	68	68	68
Ø 63	A	65	58	47
	B	70	70	70

Thrust and traction forces:

	[N]*	Ø32	Ø40	Ø50	Ø63
A_	Thrust	432	660	1050	1680
	Traction	372	570	888	1500

Cylinder with non-rotating piston rod

	[N]*	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø160	Ø200	Ø250	Ø320
D_	Thrust	432	660	1050	1680	2700	4200	6624	10645	16633	25990	42582
	Traction	372	570	888	1500	2430	3960	6192	9980	15968	24950	40932

* Theoretical forces at 6 bar pressure, for practical forces please deduct 5% for friction.

Compact cylinder | UNITOP

Thrust and traction forces:

	[N]*	Ø12	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
QIN	Thrust	68	121	188	295	483	754	1178	1870	3016	4712
	Traction	51	90	141	247	415	686	1057	1750	2827	4418
QEN	Thrust	68	121	188	295	483	754	1178	1870	3016	4712
	Traction	8	13	17	22	30	36	35	65	94	156
QENV	Thrust	51	90	141	247	415	686	1057	1750	2827	4418
	Traction	8	13	17	22	30	36	35	65	94	156
QBN	Thrust	51	90	141	247	415	686	1057	1750	2827	4418
	Traction	51	90	141	247	415	686	1057	1750	2827	4418
QINT	Thrust	68	121	188	295	483	754	1178	1870	3016	4712
	Traction	51	90	141	247	415	686	1057	1750	2827	4418

Short stroke cylinder

A = Load of spring at rest

B = Load of compressed spring

Spring traction forces:

Ø [mm]		Stroke [mm]				
		5	10	15	20	25
		Force [N]				
Ø 12	A	7,5	6,8	6	5,2	4,5
	B	8	8	8	8	8
Ø 26	A	12,3	10,8	9,5	7,8	6,5
	B	13,3	13,3	13,3	13,3	13,3
Ø 20	A	15,7	14	12,2	10,4	8,7
	B	17,4	17,4	17,4	17,4	17,4
Ø 25	A	19,5	18,5	17,3	16	15
	B	22	22	22	22	22
Ø 32	A	27,8	25,3	22,8	20,2	17,7
	B	30	30	30	30	30
Ø 40	A	36,4	34	31,7	29,5	27
	B	36	36	36	36	36
Ø 50	A	32	30,5	29	27,8	26,5
	B	35	35	35	35	35
Ø 63	A	61	58,5	56,3	53,5	51,5
	B	64,8	64,8	64,8	64,8	64,8
Ø 80	A	91,3	88	85	82	78,7
	B	94	94	94	94	94
Ø 100	A	150	145	140	134	129
	B	156	156	156	156	156

Thrust and traction forces:

	[N]*	Ø12	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
RD	Thrust	68	-	189	-	483	-	1178	1870	-	-
	Traction	51	-	141	-	415	-	1056	1750	-	-
B ₋	Thrust	60	105	170	264	432	660	1050	1680	2700	4200
	Traction	45	80	125	216	372	600	930	1560	2520	3960

* Theoretical forces at 6 bar pressure, for practical forces please deduct 5% for friction.

Tie-rod compact cylinder

Thrust and traction forces:

	[N]*	Ø125	Ø160	Ø200	Ø250
JEN, JEF, JIN, JIF	Thrust	7280	11960	18720	29350
	Traction	6880	11200	17960	28600
JINT, JBF, JBN	Thrust	6880	11200	17960	28600
	Traction	6880	11200	17960	28600

Double-acting magnetic twin-guide cylinder

Thrust and traction forces:

	[N]*	Ø6	Ø8	Ø12	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63
A-CG01	Thrust	-	-	59,9	106,5	166,3	259,9	425,8	665,4	1039,6	1650,5
	Traction	-	-	44,9	79,8	124,8	200,0	319,4	558,9	873,2	1484,1
A-CG02	Thrust	29,9	-	119,8	213,0	332,6	519,8	851,6	-	-	-
	Traction	16,6	-	89,8	159,6	249,6	400,0	638,8	-	-	-
A-CG04	Thrust	34,0	61,0	136,0	241,0	377,0	589,0	-	-	-	-
	Traction	25,0	45,0	102,0	181,0	283,0	454,0	-	-	-	-

Profile cylinder | ISO 15552

Thrust and traction forces:

	[N]*	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø160	Ø200	Ø250	Ø320
HEF	Thrust	432	660	1050	1680	2700	4200	6624	10645	16633	25990	42582
	Traction	372	570	888	1500	2430	3960	6192	9980	15968	24950	40932
DIL	Thrust	483	754	1178	1870	3016	4712	7363	-	-	-	-
	Traction	415	633	990	1682	2721	4418	6881	-	-	-	-
DBL	Thrust	415	633	990	1682	2721	4418	6881	-	-	-	-
	Traction	415	633	990	1682	2721	4418	6881	-	-	-	-
HIF	Thrust	483	754	1178	1870	3016	4712	7363	-	-	-	-
	Traction	415	633	990	1682	2721	4418	6881	-	-	-	-

Tie-rod cylinder | ISO 15552

Thrust and traction forces:

	[N]*	Ø160	Ø200	Ø250	Ø320
DIM	Thrust	12064	18850	29452	48255
	Traction	11310	18096	28274	46558
UDM	Thrust	12064	18850	29450	48250
	Traction	11310	18096	29470	46380
UDMP	Thrust	11310	18096	29470	46380
	Traction	11310	18096	29470	46380

* Theoretical forces at 6 bar pressure, for practical forces please deduct 5% for friction.

Linear cylinder with NAMUR-interface

Thrust and traction forces:

	[N]*	Ø80	Ø100	Ø125	Ø160	Ø200	Ø250	Ø320
LAZ	Thrust	3014	4710	7359	12057	18840	29437	48230
	Traction	2826	4521	6877	11575	18086	28683	47476

Compact cylinder | ISO 21287

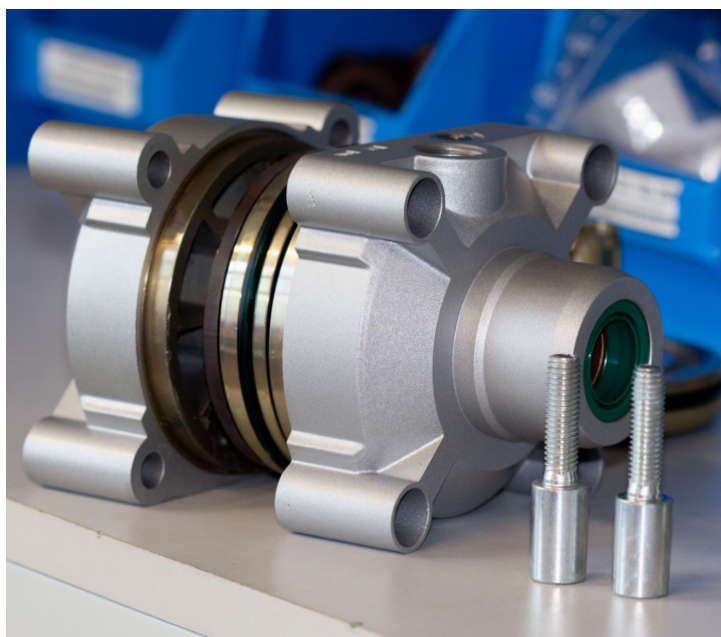
Thrust and traction forces:

	[N]*	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
VIN/VIF	Thrust	188	295	482	754	1178	1869	3014	4710
	Traction	142	248	415	687	1058	1750	2829	4420
VINT	Thrust	188	295	482	754	1178	1869	3014	4710
	Traction	142	248	415	687	1058	1750	2829	4420
VBF/VBN	Thrust	142	248	415	687	1058	1750	2829	4420
	Traction	142	248	415	687	1058	1750	2829	4420

* Theoretical forces at 6 bar pressure, for practical forces please deduct 5% for friction.



HAFNER Pneumatika Kft. Halászi





Mini Cylinder

Mini cylinder

Technical information

Diameter Ø6 - Ø10 - Ø16 mm

Stroke 5 - 10 - 15 mm

Medium Air

Pressure range 2 ... 7 bar

Temperature range -20°C ... +80°C

Below 0°C air has to be dried.

Materials

Tube Nickel plated brass

Cap Nickel plated brass

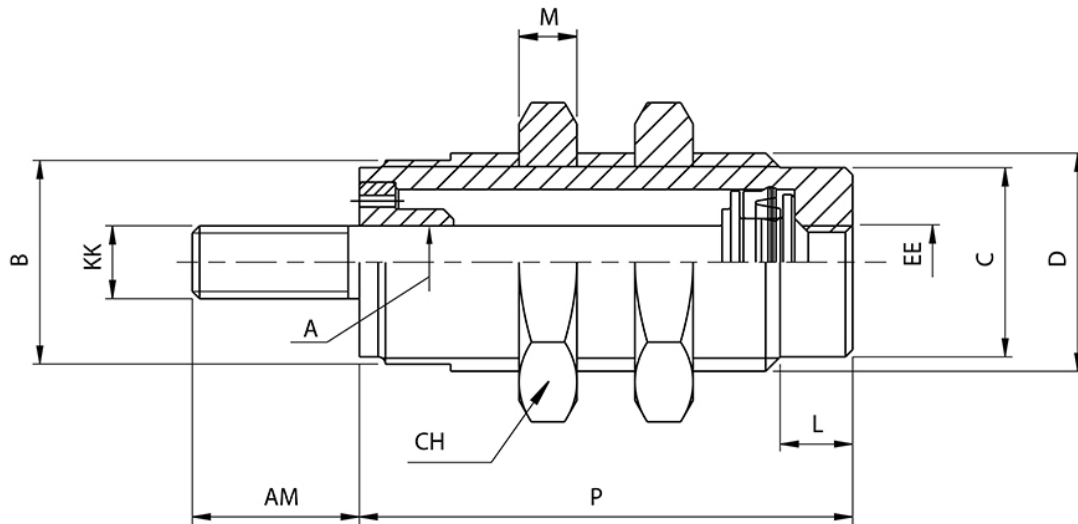
Piston Brass

Piston rod Stainless steel

Guide bushing Sintered bronze

Seals PUR

C	A	F	6	/	10
			DIAMETER		STROKE
			6		5
			10		10
			16		15



Type	Ø [mm]	A	B	C	D	L	M	P	AM	KK	EE	CH
CAF 6/5	Ø 6	3	9	8,5	M10x1	5	3	18,5	9	M3	M5	14
CAF 6/10	Ø 6	3	9	8,5	M10x1	5	3	25,5	9	M3	M5	14
CAF 6/15	Ø 6	3	9	8,5	M10x1	5	3	32,5	9	M3	M5	14
CAF 10/5	Ø 10 mm	5	14	13	M15x1,5	5	4	20,5	11,5	M4	M5	19
CAF 10/10	Ø 10 mm	5	14	13	M15x1,5	5	4	27	11,5	M4	M5	19
CAF 10/15	Ø 10 mm	5	14	13	M15x1,5	5	4	34	11,5	M4	M5	19
CAF 16/5	Ø 16 mm	5	20	19	M22x1,5	6	5	23,5	14	M5	M5	27
CAF 16/10	Ø 16 mm	5	20	19	M22x1,5	6	5	29,5	14	M5	M5	27
CAF 16/15	Ø 16 mm	5	20	19	M22x1,5	6	5	36	14	M5	M5	27



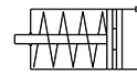
Round Cylinder | ISO 6432

Technical information	
Diameter	Ø8 - Ø10 - Ø12 - Ø16 - Ø20 - Ø25 mm
Stroke	10 - 25 - 40 - 50 - 160 - 200 - 250 - 320 mm (depending on diameter)
	<input type="checkbox"/> Single acting <input type="checkbox"/> Double acting
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
	FPM version 0°C ... +150°C
	Below 0°C air has to be dried.

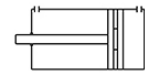
Materials	
Tube	Stainless steel
Heads	Anodized aluminum
Piston	Brass
Piston rod	Stainless steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

R	I	M	A	8	/	125	Ex
				DIAMETER	STROKE		OPTIONS
				8	10		Ex ATEX version
				10	25		
				12	40		
				16	50		
				20	80		
				25	100		
					125		
					160		
					200		
					250		
					320		
VERSION							
WITHOUT Standard seals, stainless steel piston rod							
F FPM seals (for type REM)							
V Spring pushes piston rod out (for type REM)							
VK Spring pushes piston rod out, FPM Piston (for type REM)							
VF Spring pushes piston rod out, FPM seals (for type REM)							
R Head cut off (for type RIM)							
A Head cut off, port parallel to rod (for type RIM)							
O Non-rotating piston rod (for type RIM)							
K FPM Piston (for type RIM, RBM and RDM)							
V FPM seals (for type RIM, RBM and RDM)							
FUNCTION							
E Single acting							
I Double acting							
B Double acting, through piston rod							
D Double acting, adjustable cushioning							

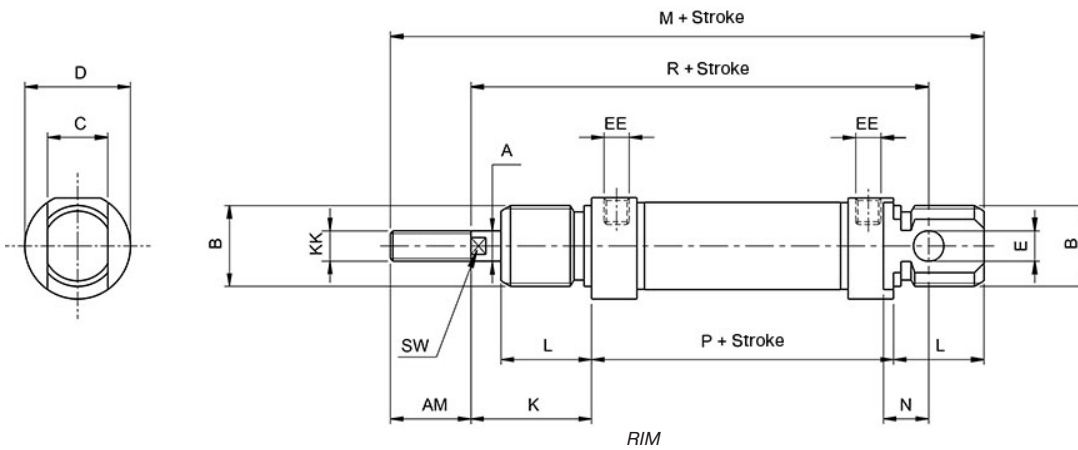
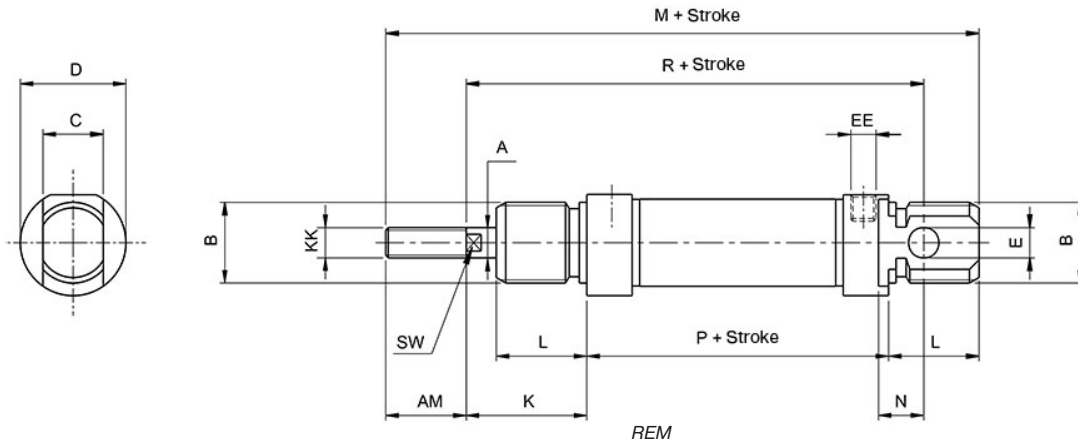
REM/RIM



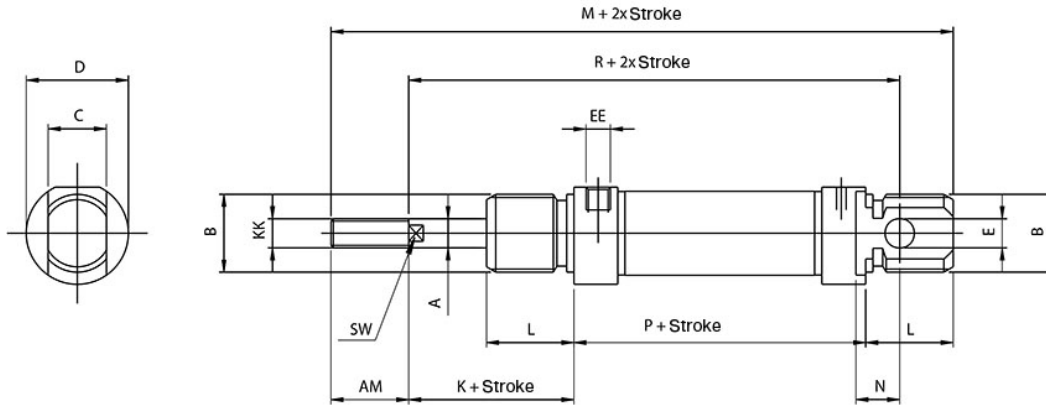
REM



RIM

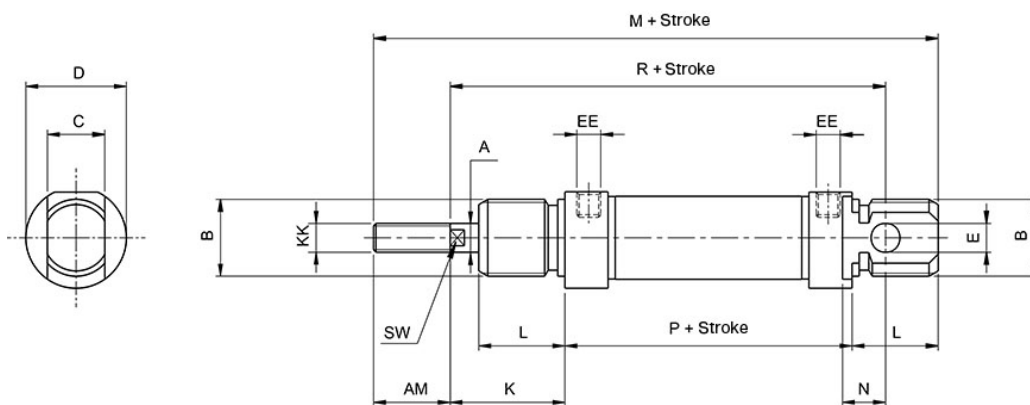
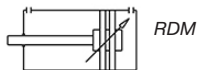


Ø [mm]	A	B	C	D	E	K	L	M	N	P	R	AM	EE	KK	SW
Ø 8	4	M12x1,25	8	16	4	16	12	86	6	46	64	12	M5	M4	-
Ø 10	4	M12x1,25	8	16	4	16	12	86	6	46	64	12	M5	M4	-
Ø 12	6	M16x1,5	12	19	6	22	18	104	9	48	75	16	M5	M6	5
Ø 16	6	M16x1,5	12	19	6	22	18	109	9	53	82	16	M5	M6	5
Ø 20	8	M22x1,5	16	27	8	24	20	131	12	67	95	20	G1/8"	M8	7
Ø 25	10	M22x1,5	16	30	8	28	22	140	12	68	104	22	G1/8"	M10x1,25	9



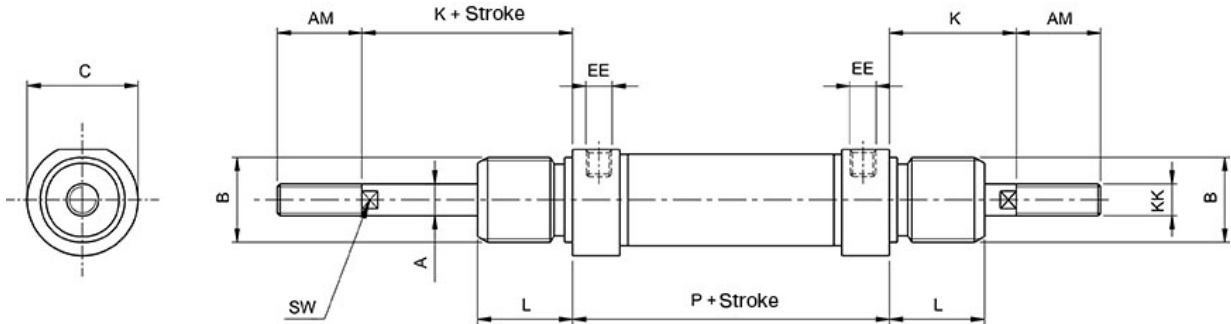
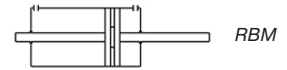
Ø [mm]	A	B	C	D	E	K	L	M	N	P	R	AM	EE	KK	SW
Ø 16	6	M16x1,5	12	19	6	22	18	134,5	9	78,5	107,5	16	M5	M6	5
Ø 20	8	M22x1,5	16	27	8	24	20	154	12	90	118	20	G1/8"	M8	7
Ø 25	10	M22x1,5	16	30	8	28	22	166	12	94	130	22	G1/8"	M10x1,25	9

RDM



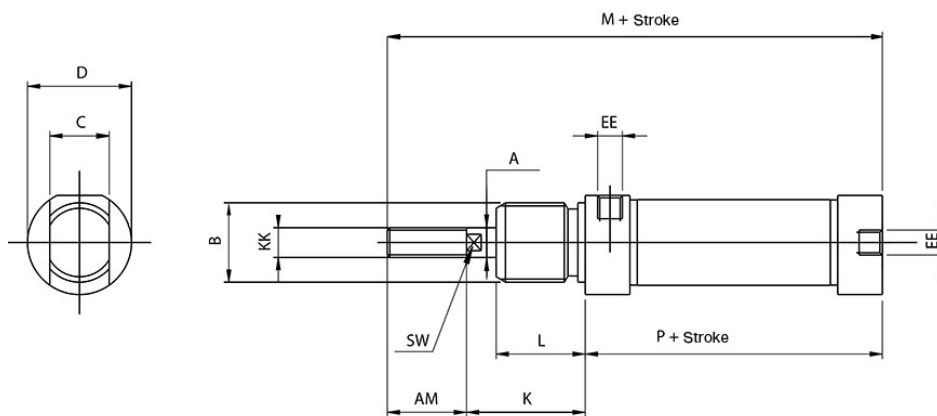
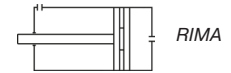
Ø [mm]	A	B	C	D	E	K	L	M	N	P	R	AM	EE	KK	SW
Ø 16	6	M16x1,5	12	21	6	22	18	109	9	53	82	16	M5	M6	5
Ø 20	8	M22x1,5	16	27	8	24	20	131	12	67	95	20	G1/8"	M8	7
Ø 25	10	M22x1,5	16	30	8	28	22	140	12	68	104	22	G1/8"	M10x1,25	9

RBM

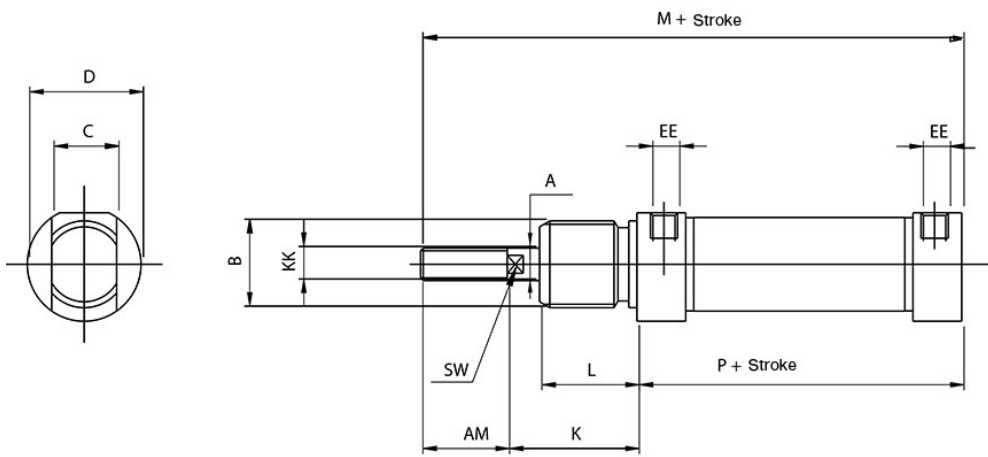
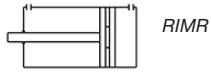


Ø [mm]	A	B	C	K	L	P	AM	EE	KK	SW
Ø 16	6	M16x1,5	19	22	18	53	16	M5	M6	5
Ø 20	8	M22x1,5	27	24	20	67	20	G1/8"	M8	7
Ø 25	10	M22x1,5	30	28	22	68	22	G1/8"	M10x1,25	9

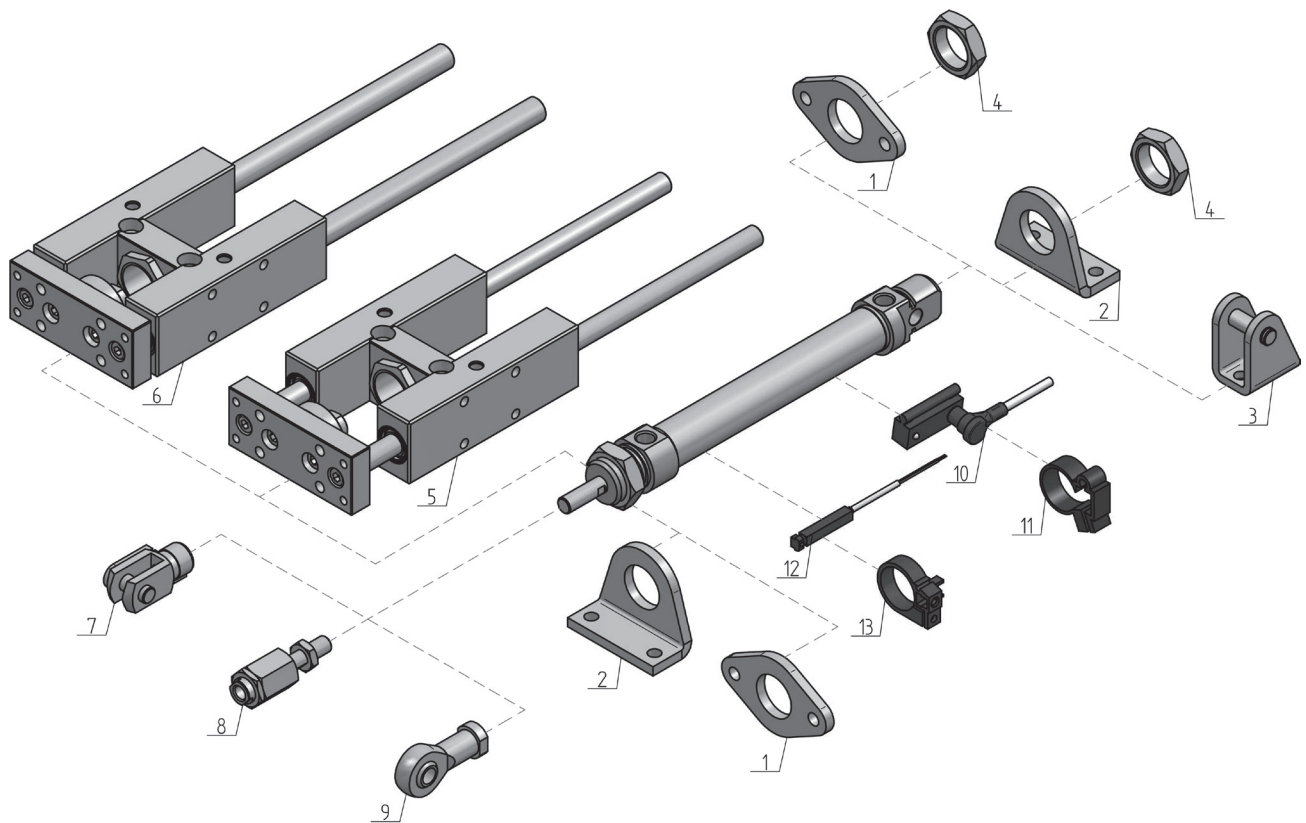
RIMA



Ø [mm]	A	B	C	D	K	L	M	P	AM	EE	KK	SW
Ø 16	6	M16x1,5	12	21	22	18	109	53	16	M5	M6	5
Ø 20	8	M22x1,5	16	27	24	20	131	67	20	G1/8"	M8	7
Ø 25	10	M22x1,5	16	30	28	22	140	68	22	G1/8"	M10x1,25	9



Ø [mm]	A	B	C	D	K	L	M	P	AM	EE	KK	SW
Ø 16	6	M16x1,5	12	21	22	18	91,5	53	16	M5	M6	5
Ø 20	8	M22x1,5	16	27	24	20	111,5	67	20	G1/8"	M8	7
Ø 25	10	M22x1,5	16	30	28	22	118,5	68	22	G1/8"	M10x1,25	9



Part	Type	Description	Page
1	RF/RFX	Flange	132
2	RL	Foot mounting	132
2	RLX	Foot mounting - stainless steel	132
3	RG	Female hinge with pin	133
3	RGX	Female hinge with pin - stainless steel	133
4	RA	Nose nut	133
4	RAX	Nose nut - stainless steel	133
5	RHS	H-shaped guide unit with plain bearing	148
5	RHSL	H-shaped guide unit with plain bearing and longer coupling	149
6	RHG	H-shaped guide unit with ball bearings	149
6	RHGL	H-shaped guide unit with ball bearings and longer coupling	149
7	UV	Clevis with lockable pin	129
8	FK	Self-aligning coupling	131
9	UK	Rod eye with internal thread	130
9	UKF	Rod eye with external thread	128
10	SM	REED switch	145
11	RX	Fastener for SM switch	145
12	SKR/SKH	REED / PNP switch	144
13	RXP	Fastener for SKR and SKH switch	145

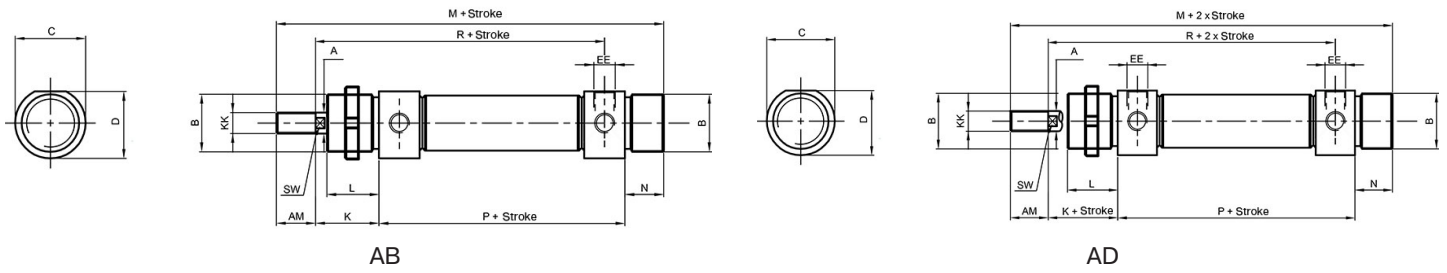


Round Cylinder

Round Cylinder

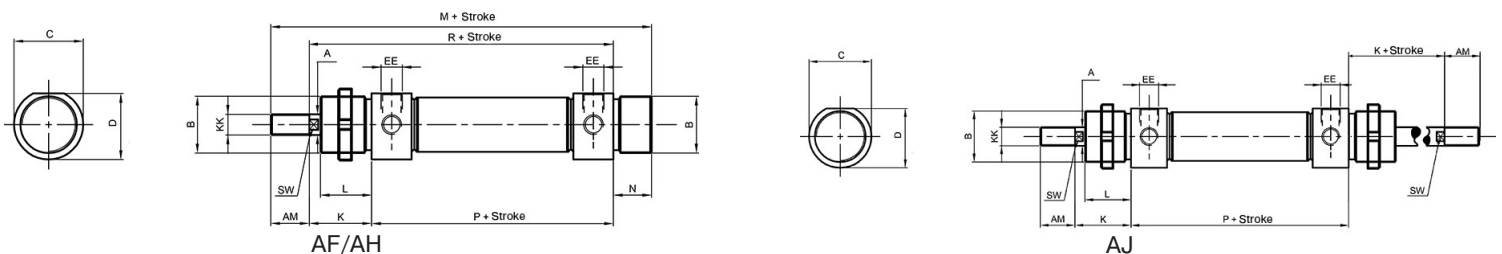
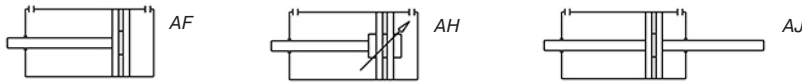
Technical information	
Diameter	Ø32 - Ø40 - Ø50 - Ø63 mm
Stroke	10 - 25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 mm
	Single acting
	Double acting
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
	FPM version 0°C ... +150°C
	Below 0°C air has to be dried.
Materials	
Tube	Stainless steel
Heads	Anodized aluminum
Piston	Anodized aluminum
Piston rod	Chromed steel / Stainless steel - AISI 316 (depending on type)
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

A	F	K	32 /	80	Ex
			DIAMETER	STROKE	OPTIONS
			32	10	Ex ATEX version (available: AB,AD,AF,AH, AJ)
			40	25	
			50	50	
			63	80	
				100	
				125	
				160	
				200	
				250	
				320	
				400	
				500	
				250	
				320	
				400	
				500	
VERSION					
WITHOUT Standard seals, chromed steel piston rod					
R Stainless steel piston rod (AISI 316) (for type AB, AD, AF and AH)					
RK Stainless steel piston rod (AISI 316) - FPM Piston (for type AF and AH)					
RV Stainless steel piston rod (AISI 316) - FPM seals (for type AF and AH)					
K FPM Piston (for type AF and AH)					
V FPM seals (for type AF and AH)					
FUNCTION					
B Single acting					
D Single acting, spring pushes piston rod out					
F Double acting					
H Double acting, adjustable cushioning					
J Double acting, through piston rod					



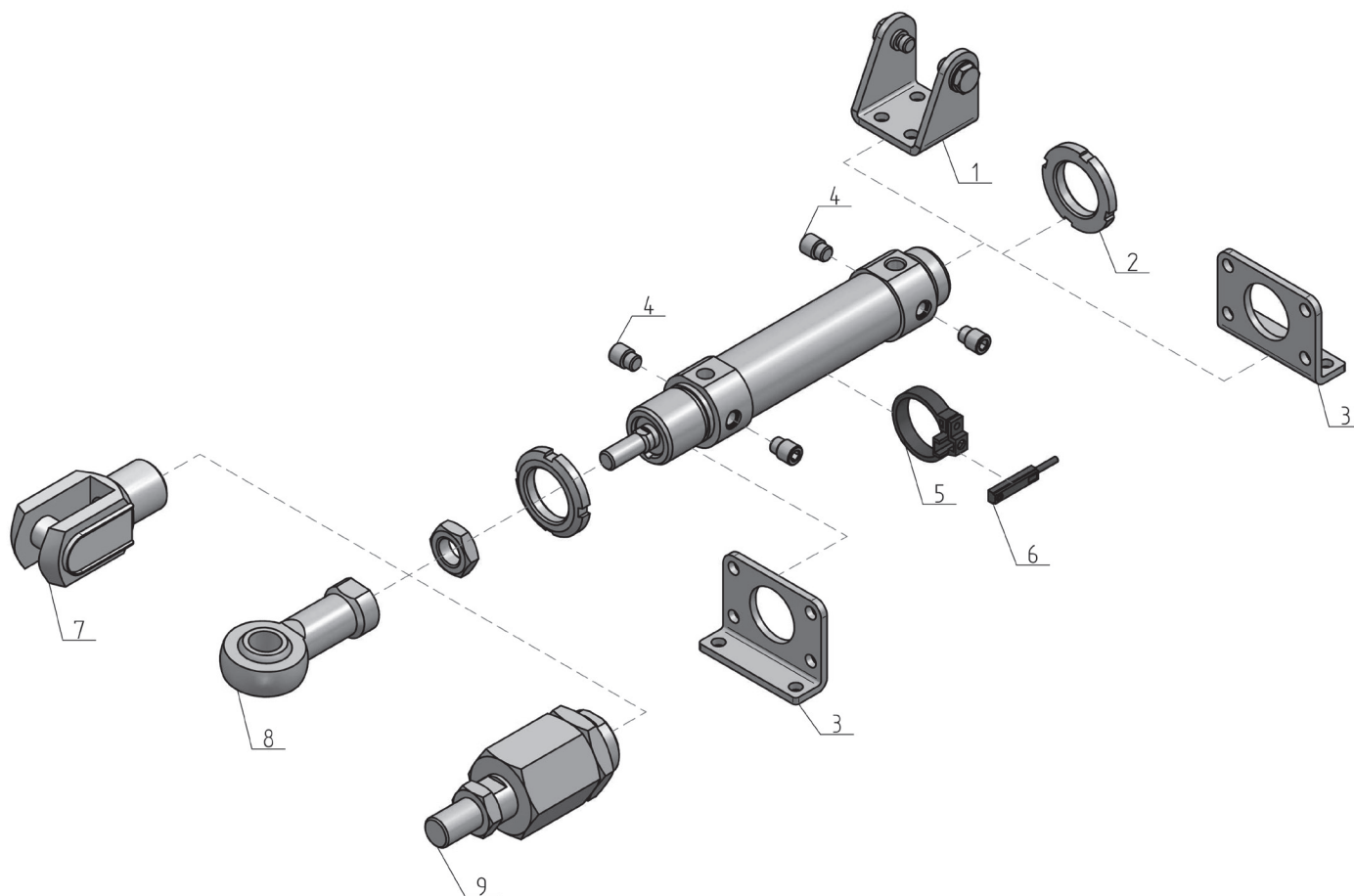
Ø [mm]	A	B	C	D	K	L	M	N	P	R	AM	EE	KK	SW
Ø 32	12	M30x1,5	38	36,5	38	30	168	14	96	125	20	G 1/8"	M10x1,25	10
Ø 40	16	M38x1,5	46	44	45	35	196 (198)*	16	111 (113)*	144 (146)*	24	G 1/4"	M12x1,25	12
Ø 50	20	M45x1,5	57	55	50	38	220	18	120	158	32	G 1/4"	M16x1,5	16
Ø 63	20	M45x1,5	70	67,5	50	38	224	18	124	161	32	G 3/8"	M16x1,5	16

AF/AH/AJ



Ø [mm]	A	B	C	D	K	L	M	N	P	R	AM	EE	KK	SW
Ø 32	12	M30x1,5	38	36,5	38	30	168	14	96	125	20	G 1/8"	M10x1,25	10
Ø 40	16	M38x1,5	46	44	45	35	196 (198)*	16	111 (113)*	144 (146)*	24	G 1/4"	M12x1,25	12
Ø 50	20	M45x1,5	57	55	50	38	220	18	120	158	32	G 1/4"	M16x1,5	16
Ø 63	20	M45x1,5	70	67,5	50	38	224	18	124	161	32	G 3/8"	M16x1,5	16

* For non-standard strokes or for cylinders type ABR, ADR, AFR, AFK, AFRK, AFV, AFRV, AHR, AHK, AHRK, AHV, AHRV



Part	Type	Description	Page
1	ACC	Foot flange	134
2	AGT	Slotted nut	134
3	APD	Hinge with screws	135
4	APE	Pivots	135
5	RXP	Fastener for SKR and SKH switch	145
6	SKR/SKH	REED / PNP switch	144
7	UV	Clevis with lockable pin	129
8	UK	Rod eye with internal thread	130
9	FK	Self-aligning coupling	131



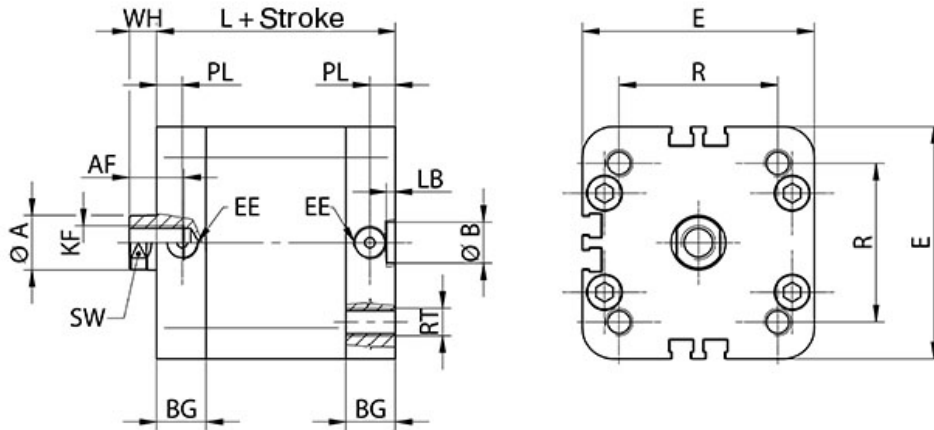
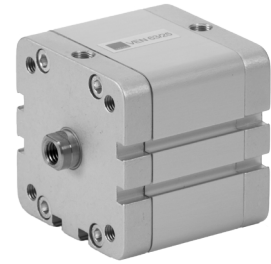
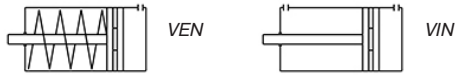
Compact Cylinder | ISO 21287

Compact Cylinder | ISO 21287

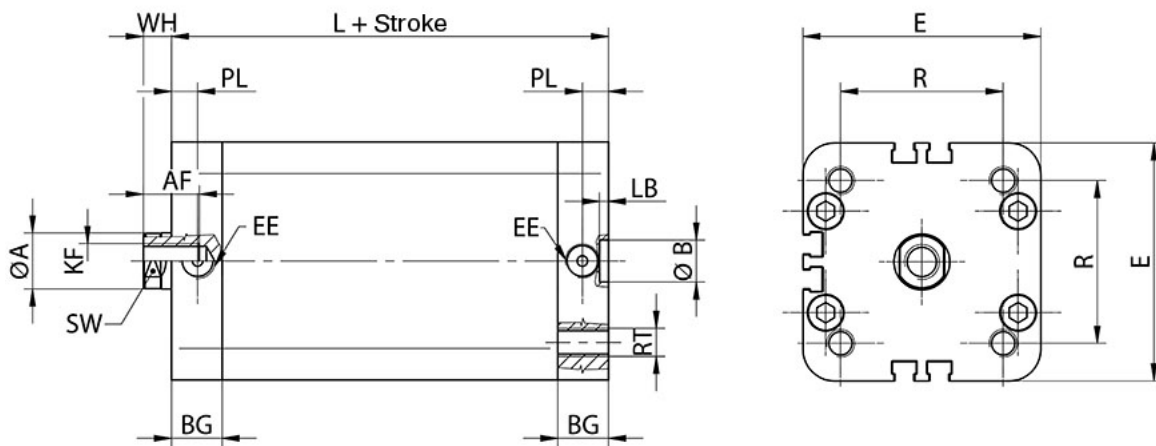
Technical information	
Diameter	Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 mm
Stroke	5- 10 - 25 - 50 - 80 -100 -125 - 160 - 200 - 250 - 320 - 400 mm
	Single acting
	Double acting
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
	FPM version 0°C ... +150°C
	Below 0°C air has to be dried.

Materials	
Tube	Anodized aluminum
Heads	Anodized aluminum
Piston	aluminium
Piston rod	Chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

V	I	N	V	20 / 80	Ex	
				DIAMETER	STROKE	OPTIONS
				20	5	Ex ATEX version
				25	10	
				32	15	
				40	25	
				50	40	
				63	50	
				80	80	
				100	100	
					125	
					160	
					200	
					250	
					320	
					400	
				SEALS		
				WITHOUT	Standard seals	
				K	FPM Piston	
				H	FPM seals (for type VE)	
				V	FPM seals (for type VI, VB and VINT)	
				VERSION		
				NV	Spring pushes piston rod out, piston rod with female thread (for type VE)	
				FV	Spring pushes piston rod out, piston rod with male thread (for type VE)	
				N	Piston rod with female thread	
				F	Piston rod with male thread	
				NT	Non-rotating piston rod (for type VI)	
				FUNCTION		
				E	Single acting	
				I	Double acting	
				B	Double acting, through piston rod	



VEN

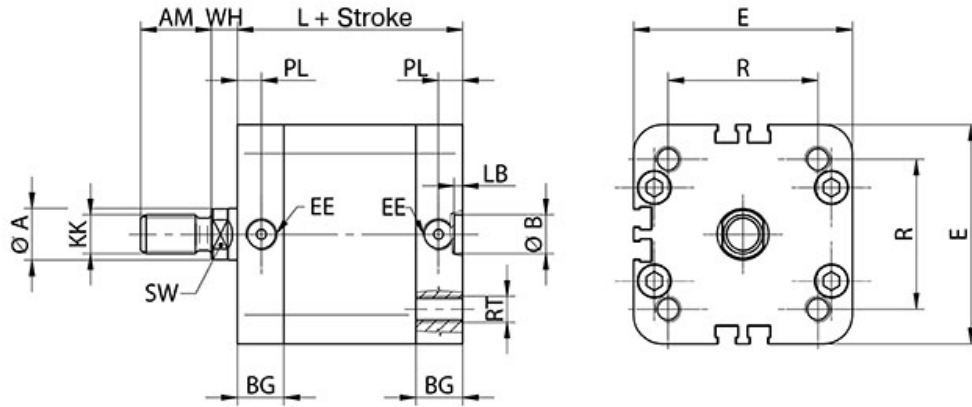
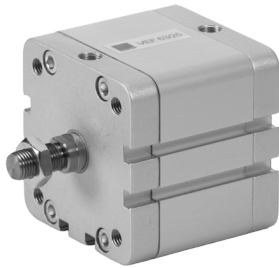


VIN

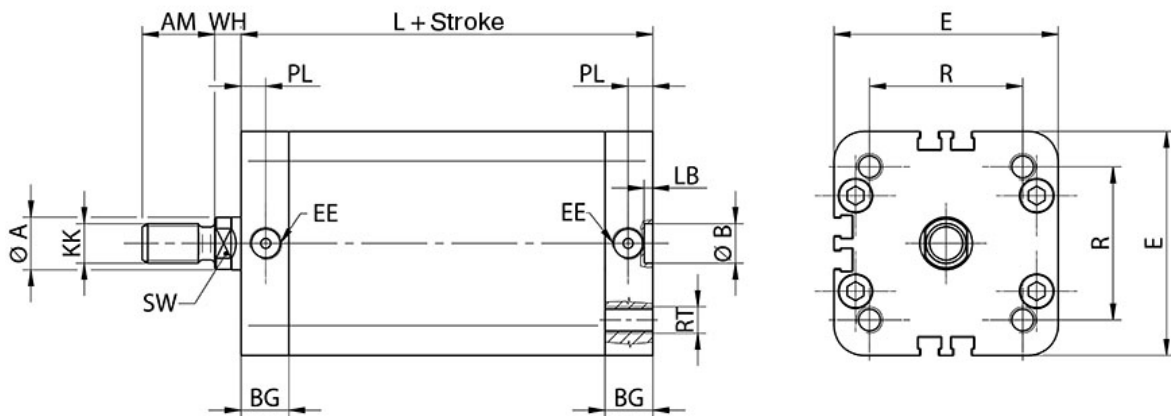
Ø [mm]	A	B	E	L	R	AF	BG	EE	KF	LB	PL	RT	SW	WH
Ø20	10	9	36	37	22	15	-	M5	M6	3	7,5	M5	-	6,5
Ø25	10	9	40	39	26	15	-	M5	M6	3	7,5	M5	-	6
Ø32	12	9	49	44	32,5	12 (15)*	14,5	G1/8"	M8	2,1 (3)*	7,5	M6	10	7 (6,5)*
Ø40	12	9	55 (54,5)*	45	38	12 (15)*	15	G1/8"	M8	2,1 (3)*	7,5 (8)*	M6	10	7
Ø50	16	12	68 (65,5)*	45	46,5	16 (17)*	14,5	G1/8"	M10	2,6 (4)*	7,5 (8)*	M8	13	8
Ø63	16	12	78,5 (77)*	49	56,5	16 (17)*	14	G1/8"	M10	2,6 (4)*	7,5	M8	13	8,5 (8)*
Ø80	20	12	98 (95,5)*	54	72	20	15,5	G1/8"	M12	2,6 (4)*	7,5 (8)*	M10	17	10 (9)*
Ø100	25	12	120 (113,5)*	67	89	20 (22)*	20	G1/8"	M12	2,6 (4)*	7,5 (8)*	M10	22	10

*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV



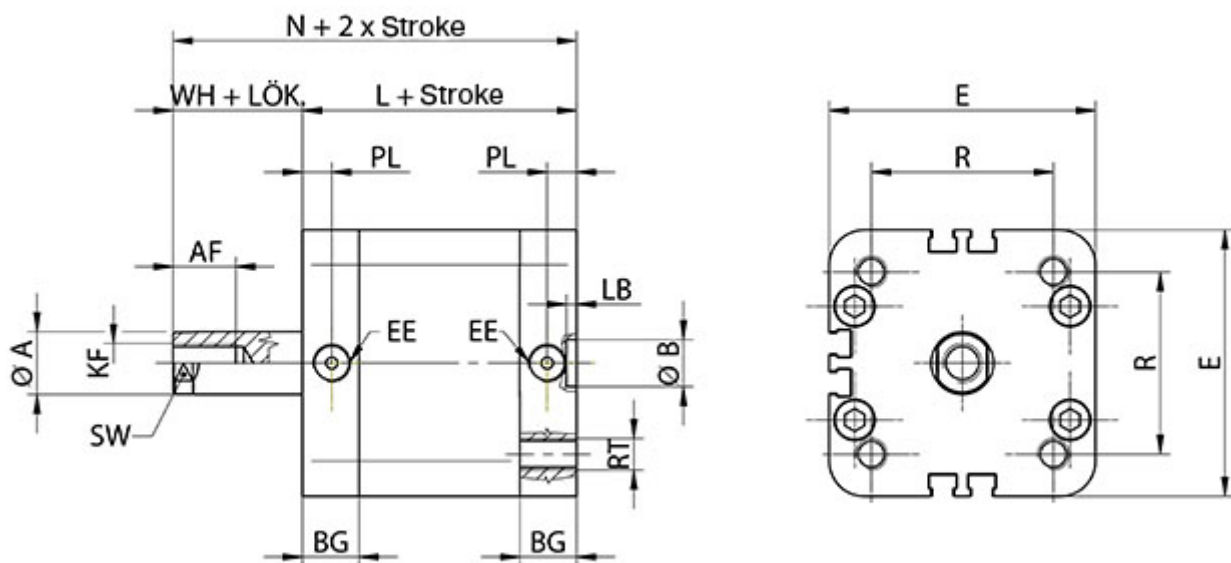
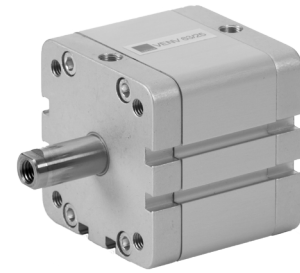


VEF



VIF

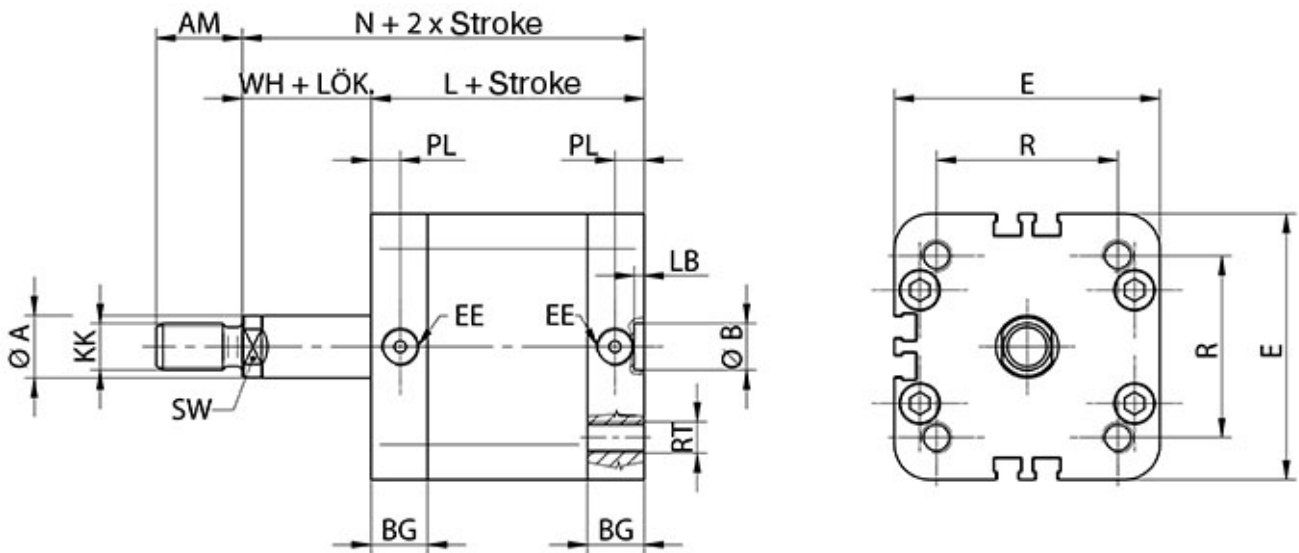
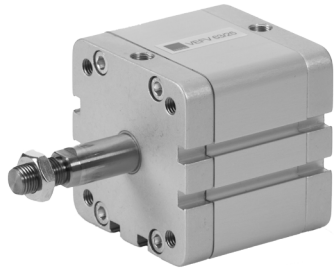
Ø [mm]	A	B	E	L	R	AM	BG	EE	KK	LB	PL	RT	SW	WH
Ø20	10	9	36	37	22	16	-	M5	M8	3	7,5	M5	-	6,5
Ø25	10	9	40	39	26	16	-	M5	M8	3	7,5	M5	-	6
Ø32	12	9	49	44	32,5	19	14,5	G1/8"	M10x1,25	2,1 (3)*	7,5	M6	10	7 (6,5)*
Ø40	12	9	55 (54,5)*	45	38	19	15	G1/8"	M10x1,25	2,1 (3)*	7,5 (8)*	M6	10	7
Ø50	16	12	68 (65,5)*	45	46,5	22	14,5	G1/8"	M12x1,25	2,6 (4)*	7,5 (8)*	M8	13	8
Ø63	16	12	78,5 (77)*	49	56,5	22	14	G1/8"	M12x1,25	2,6 (4)*	7,5	M8	13	8,5 (8)*
Ø80	20	12	98 (95,5)*	54	72	28	15,5	G1/8"	M16x1,5	2,6 (4)*	7,5 (8)*	M10	17 (9)*	10 (9)*
Ø100	25	12	120 (113,5)*	67	89	28	20	G1/8"	M16x1,5	2,6 (4)*	7,5 (10,5)*	M10	22	10



Ø [mm]	A	B	E	L	R	AF	BG	EE	KF	LB	PL	RT	SW	WH
Ø20	10	9	36	37	22	15	-	M5	M6	3	7,5	M5	-	6,5
Ø25	10	9	40	39	26	15	-	M5	M6	3	7,5	M5	-	6
Ø32	12	9	49	44	32,5	12 (15)*	14,5	G1/8"	M8	2,1 (3)*	7,5	M6	10	7 (6,5)*
Ø40	12	9	55 (54,5)*	45	38	12 (15)*	15	G1/8"	M8	2,1 (3)*	7,5 (8)*	M6	10	7
Ø50	16	12	68 (65,5)*	45	46,5	16 (17)*	14,5	G1/8"	M10	2,6 (4)*	7,5 (8)*	M8	13	8
Ø63	16	12	78,5 (77)*	49	56,5	16 (17)*	14	G1/8"	M10	2,6 (4)*	7,5	M8	13	8,5 (8)*
Ø80	20	12	98 (95,5)*	54	72	20	15,5	G1/8"	M12	2,6 (4)*	7,5 (8)*	M10	17	10 (9)*
Ø100	25	12	120 (113,5)*	67	89	20 (22)*	20	G1/8"	M12	2,6 (4)*	7,5 (8)*	M10	22	10

*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV

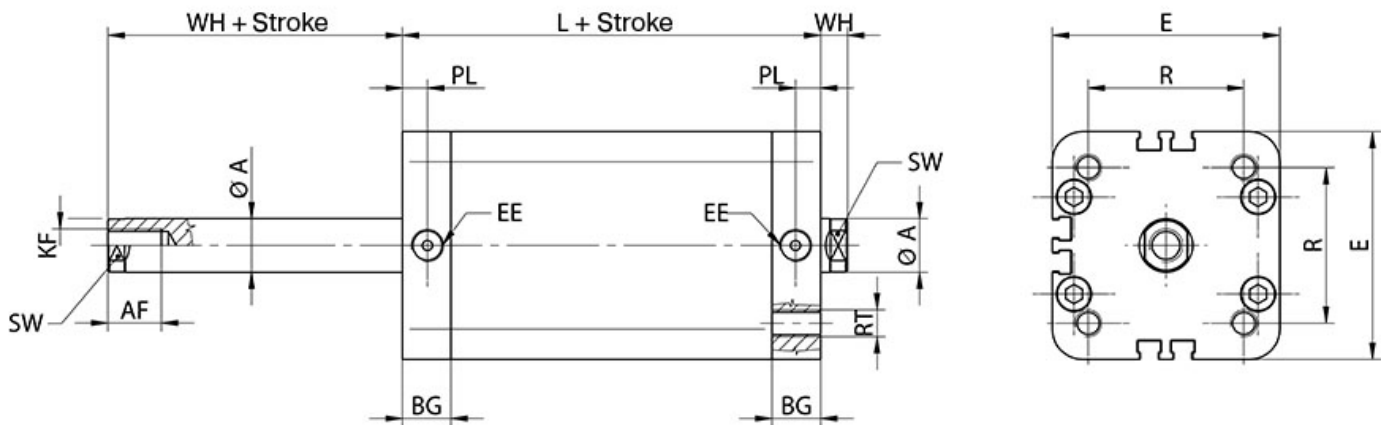
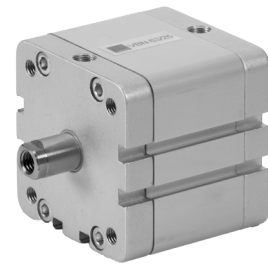
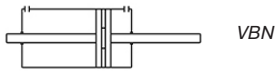




Ø [mm]	A	B	E	L	R	AM	BG	EE	KK	LB	PL	RT	SW	WH
Ø20	10	9	36	37	22	16	-	M5	M8	3	7,5	M5	-	6,5
Ø25	10	9	40	39	26	16	-	M5	M8	3	7,5	M5	-	6
Ø32	12	9	49	44	32,5	19	14,5	G1/8"	M10x1,25	2,1 (3)*	7,5	M6	10	7 (6,5)*
Ø40	12	9	55 (54,5)*	45	38	19	15	G1/8"	M10x1,25	2,1 (3)*	7,5 (8)*	M6	10	7
Ø50	16	12	68 (65,5)*	45	46,5	22	14,5	G1/8"	M12x1,25	2,6 (4)*	7,5 (8)*	M8	13	8
Ø63	16	12	78,5 (77)*	49	56,5	22	14	G1/8"	M12x1,25	2,6 (4)*	7,5	M8	13	8,5 (8)*
Ø80	20	12	98 (95,5)*	54	72	28	15,5	G1/8"	M16x1,5	2,6 (4)*	7,5 (8)*	M10	17 (9)*	10 (9)*
Ø100	25	12	120 (113,5)*	67	89	28	20	G1/8"	M16x1,5	2,6 (4)*	7,5 (10,5)*	M10	22	10



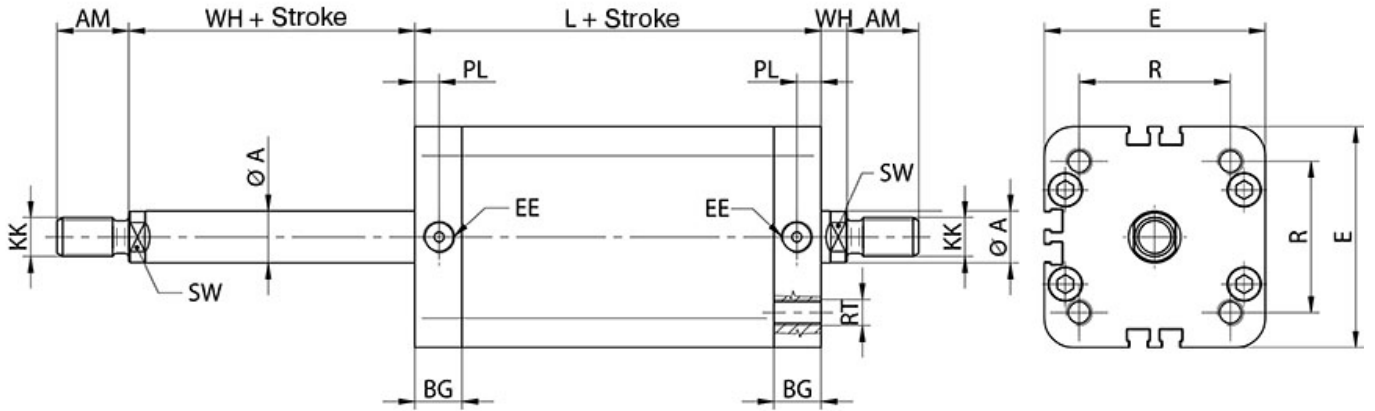
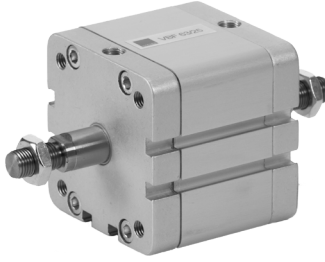
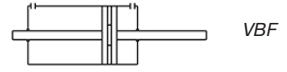
*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV



Ø [mm]	A	E	L	R	AF	BG	EE	KF	PL	RT	SW	WH
Ø20	10	36	37	22	15	-	M5	M6	7,5	M5	-	6,5
Ø25	10	40	39	26	15	-	M5	M6	7,5	M5	-	6
Ø32	12	49	44	32,5	12 (15)*	14,5	G1/8"	M8	7,5	M6	10	7 (6,5)*
Ø40	12	55 (54,5)*	45	38	12 (15)*	15	G1/8"	M8	7,5 (8)*	M6	10	7
Ø50	16	68 (65,5)*	45	46,5	16 (17)*	14,5	G1/8"	M10	7,5 (8)*	M8	13	8
Ø63	16	78,5 (77)*	49	56,5	16 (17)*	14	G1/8"	M10	7,5	M8	13	8,5 (8)*
Ø80	20	98 (95,5)*	54	72	20	15,5	G1/8"	M12	7,5 (8)*	M10	17	10 (9)*
Ø100	25	120 (113,5)*	67	89	20 (22)*	20	G1/8"	M12	7.5 (10,5)*	M10	22	10

*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV

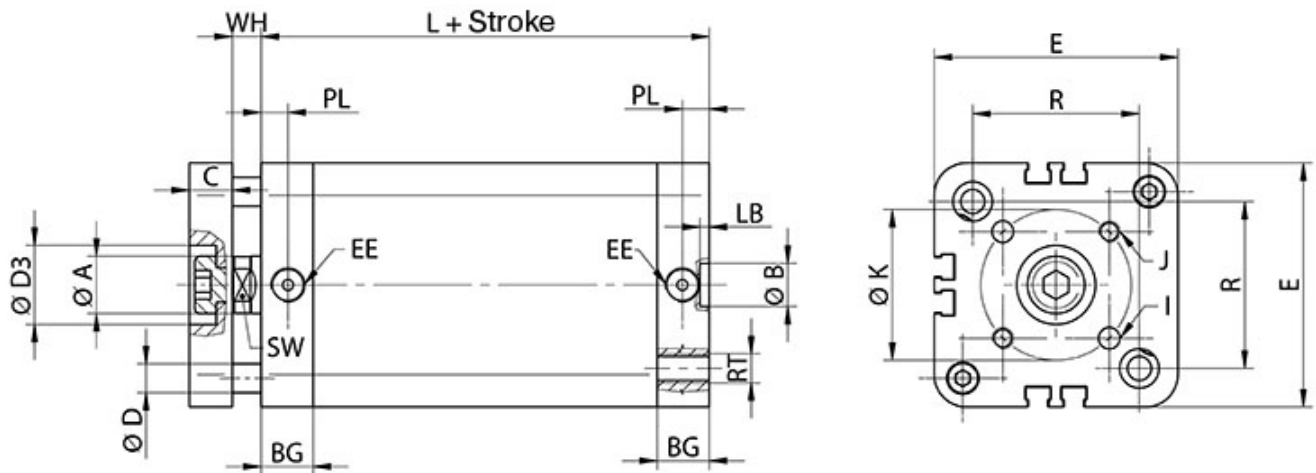
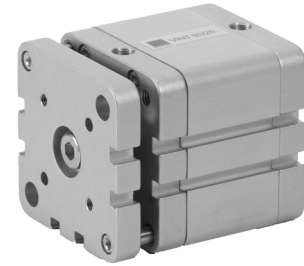
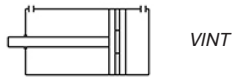




Ø [mm]	A	E	L	R	AM	BG	EE	KK	PL	RT	SW	WH
Ø20	10	36	37	22	16	-	M5	M8	7,5	M5	-	6,5
Ø25	10	40	39	26	16	-	M5	M8	7,5	M5	-	6
Ø32	12	49	44	32,5	19	14,5	G1/8"	M10x1,25	7,5	M6	10	7 (6,5)*
Ø40	12	55 (54,5)*	45	38	19	15	G1/8"	M10x1,25	7,5 (8)*	M6	10	7
Ø50	16	68 (65,5)*	45	46,5	22	14,5	G1/8"	M12x1,25	7,5 (8)*	M8	13	8
Ø63	16	78,5 (77)*	49	56,5	22	14	G1/8"	M12x1,25	7,5	M8	13	8,5 (8)*
Ø80	20	98 (95,5)*	54	72	28	15,5	G1/8"	M16x1,5	7,5 (8)*	M10	17	10 (9)*
Ø100	25	120 (113,5)*	67	89	28	20	G1/8"	M16x1,5	7.5 (10,5)*	M10	22	10



*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV

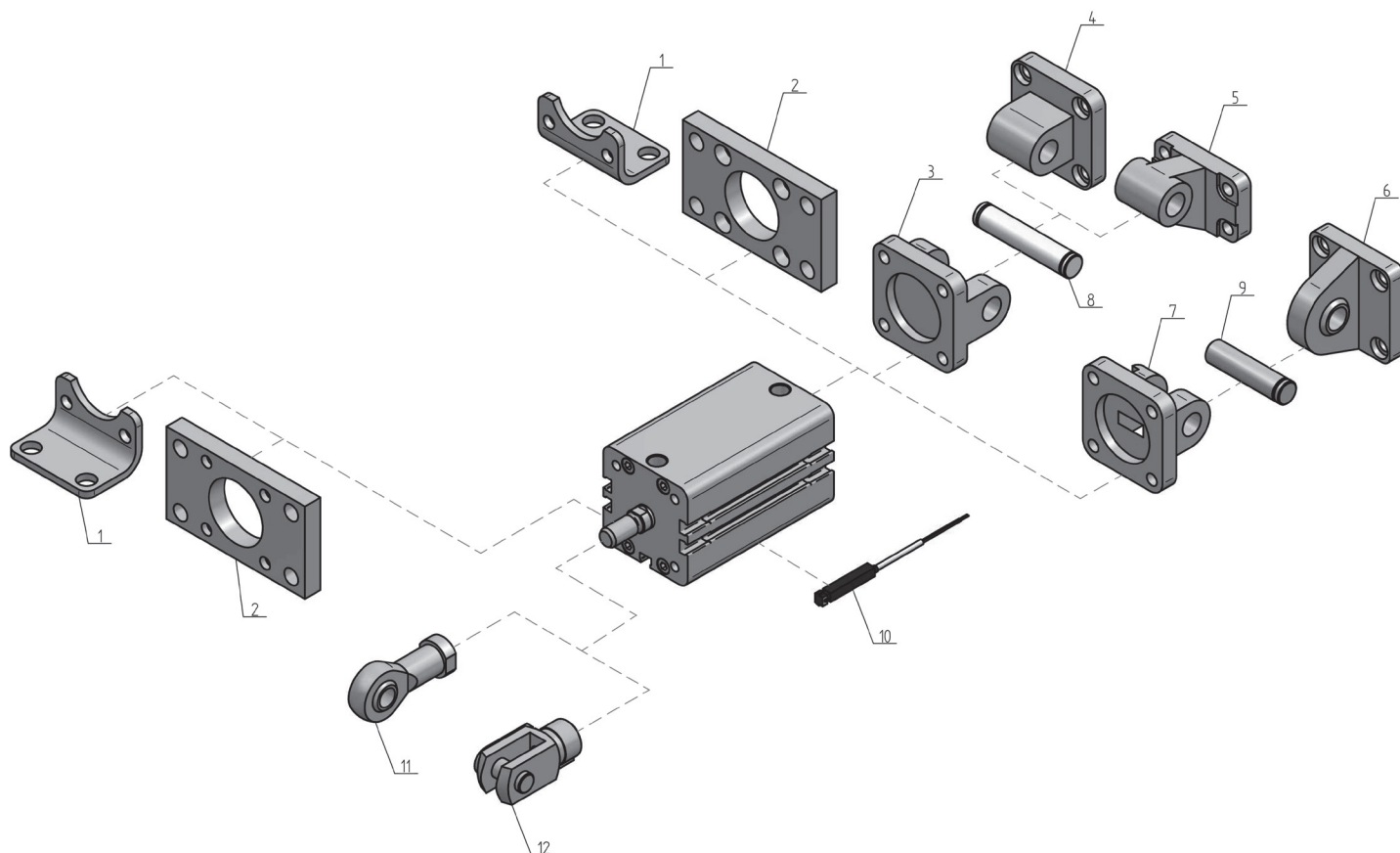


Ø [mm]	A	B	BG	C	D	D3	E	I	J
Ø20	10	9	-	8	5	11	36	4	M4
Ø25	10	9	-	8	6	14	40	5	M5
Ø32	12	9	14,5	10	6	17	49	5	M5
Ø40	12	9	15	10	6 (8)*	17	55 (54,5)*	5	M5
Ø50	16	12	14,5	12	8 (10)*	22	68 (65,5)*	6	M6
Ø63	16	12	14	12	8 (10)*	22	78,5 (77)*	6	M6
Ø80	20	12	15,5	14	12 (14)*	24 (28)*	98 (95,5)*	8	M8
Ø100	25	12	20	14	12 (14)*	24 (30)*	120 (113,5)*	10	M10

Ø [mm]	K	L	R	EE	LB	PL	RT	SW	WH
Ø20	-	37	22	M5	3	7,5	M5	-	6,5
Ø25	-	39	26	M5	3	7,5	M5	-	6
Ø32	28	44	32,5	G1/8"	7 (3)*	7,5	M6	10	7 (6,5)*
Ø40	33	45	38	G1/8"	7 (3)*	7,5 (8)*	M6	10	7
Ø50	42	45	46,5	G1/8"	8 (4)*	7,5 (8)*	M8	13	8
Ø63	50	49	56,5	G1/8"	8,5 (4)*	7,5	M8	13	8,5 (8)*
Ø80	65	54	72	G1/8"	10 (4)*	7,5 (8)*	M10	17	10 (9)*
Ø100	80	67	89	G1/8"	10 (4)*	7,5 (10,5)*	M10	22	10

*For cylinders type VENK, VENH, VEFK, VEFH, VENVK, VENVH, VEFVK, VEFVH, VINK, VINV, VIFK, VIFV, VBNK, VBNV, VBFK, VBFV, VINTK, VINTV





Part	Type	Description	Page
1	DL	Foot mounting	136
2	DF	Flange	135
3	DG	Female hinge	137
4	DH	Male hinge	138
5	DW	Square hinge	140
6	DKL	Male hinge with ball joint	140
7	DGS	Narrow female hinge	137
8	DC	Pin for hinge	141
9	DCS	Pin for narrow hinge	141
10	SKR/SKH	REED / PNP switch	144
11	UK	Rod eye with internal thread	130
11	UKF	Rod eye with external thread	128
12	UV	Clevis with lockable pin	129



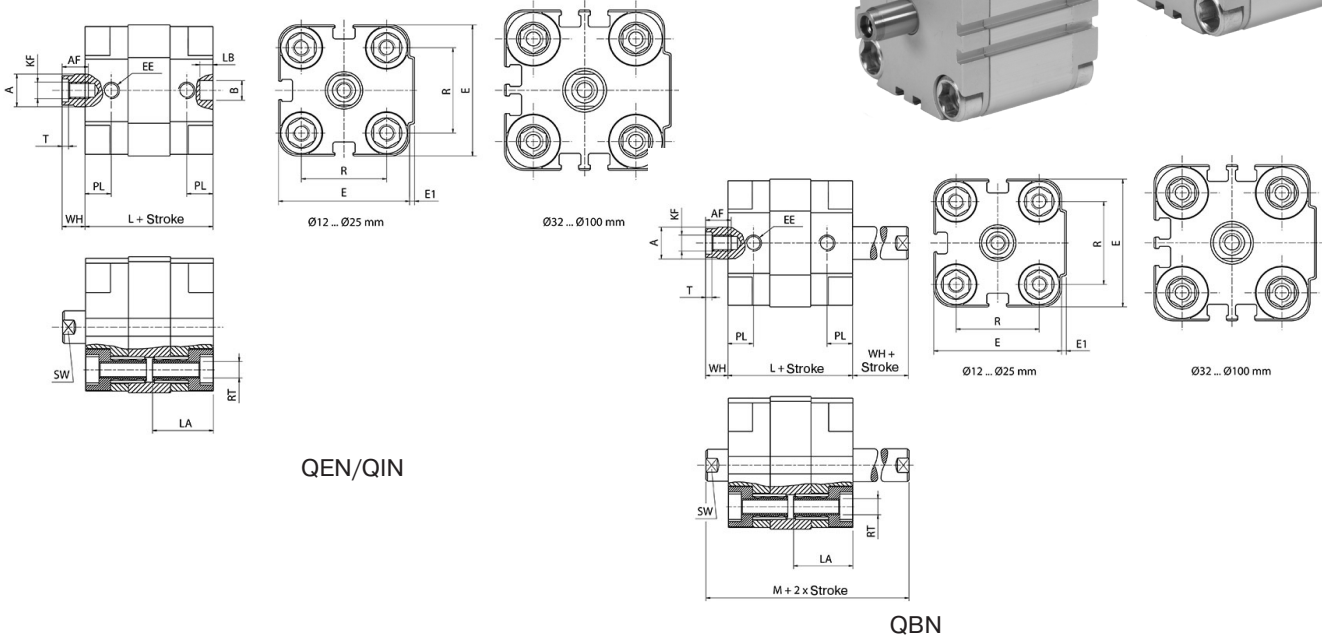
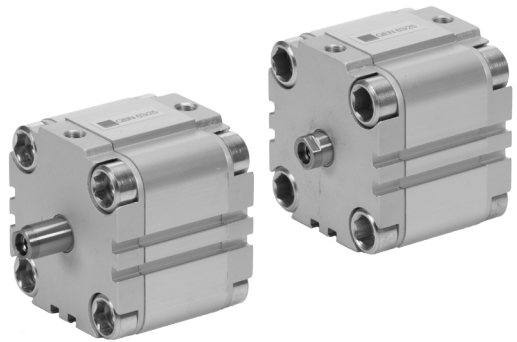
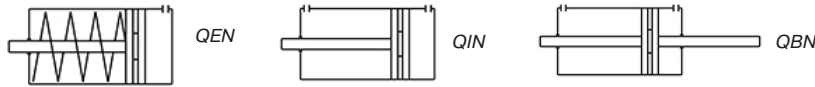
Compact Cylinder | UNITOP

Compact Cylinder | UNITOP

Technical information	
Diameter	Ø12 - Ø16 - Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 mm
Stroke	10 - 25 - 50 - 80 - 100 - 125 - 160 - 200 mm (Depending on diameter)
	<input type="checkbox"/> Single acting <input type="checkbox"/> Double acting
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C
	Below 0°C air has to be dried.
Materials	
Tube	Anodized aluminum
Heads	Anodized aluminum
Piston	Aluminum
Piston rod	Ø12 ... Ø25 stainless steel / Ø32 ... Ø100 chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

Q	I	N	V	20	/	80	Ex
				DIAMETER		STROKE	OPTIONS
				12		5	Ex ATEX version
				16		10	
				20		25	
				25		40	
				32		50	
				40		80	
				50		100	
				63		125	
				80		160	
				100		200	
				SEALS			
				WITHOUT	Standard seals		
				K	FPM Piston		
				H	FPM seals (for type QE)		
				V	FPM seals (for type QI, QB and QINT)		
				VERSION			
				NV	Spring pushes piston rod out, piston rod with female thread (for type QE)		
				FV	Spring pushes piston rod out, piston rod with male thread (for type QE)		
				N	Piston rod with female thread		
				F	Piston rod with male thread		
				NT	Non-rotating piston rod (for type QI)		
				FUNCTION			
				E	Single acting		
				I	Double acting		
				B	Double acting, through piston rod		

Type QINTV is only available from diameter 16 mm.



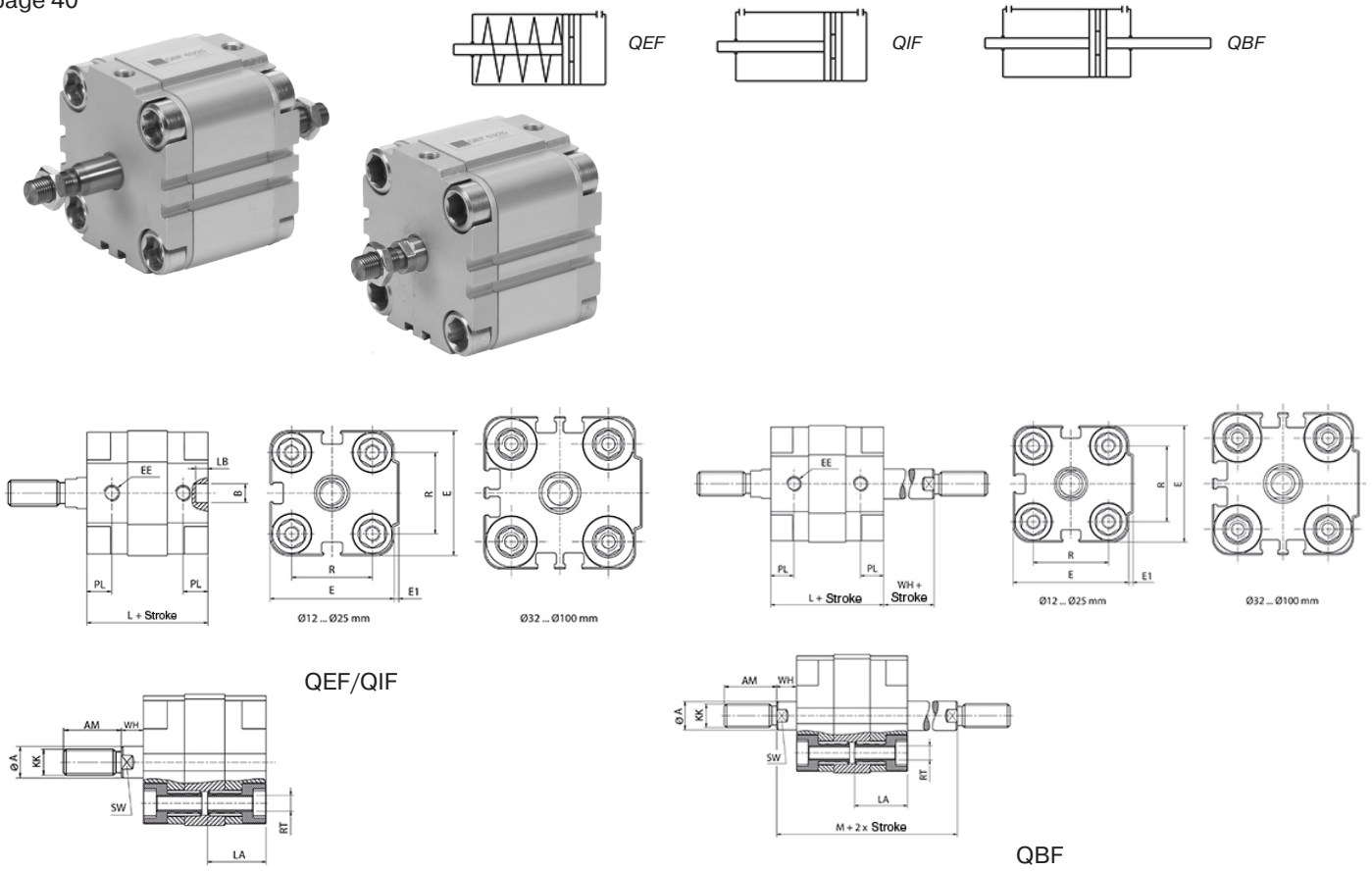
Ø [mm]	A	B	E	E1	L	M	R	T	AF
Ø 12	6	6	29	1	35 (38)*	50 (47)*	18	1,5	6
Ø 16	8	6	29	1	35 (38)*	52 (47)*	18	2	8
Ø 20	10	6	36	1,5	39 (38)*	53 (47)*	22	2	8
Ø 25	10	6	40	1,5	39 (39,5)*	53 (50,5)*	26	2	8
Ø 32	12	6	50	2	42 (44,5)*	56 (56,5)*	32	2,8	10
Ø 40	12	6	60 (58*)	2,5	45,5	62,5 (58,5)*	42	2,8	10
Ø 50	16	6	68 (67)*	3	45,5	65,5 (60,5)*	50	3,5	12
Ø 63	16	8	87 (80)*	4	51 (50)*	72 (65)*	62	3,5	12
Ø 80	20	8	107 (100)*	4	62 (56)*	88 (72)*	82	4,5	16
Ø 100	25	8	128 (124)*	5	68 (66,5)*	99 (86,5)*	103	6	20

Ø [mm]	EE	KF	LA	LB	PL	RT	SW	WH
Ø 12	M5	M3	16	4	6,5 (8)*	M4	5	7,5 (4,5)*
Ø 16	M5	M4	16	4	6,5 (8)*	M4	7	8,5 (4,5)*
Ø 20	M5	M5	18,5	4	8	M5	9	7 (4,5)*
Ø 25	M5	M5	18,5	4	8	M5	9	7 (5,5)*
Ø 32	G 1/8"	M6	21,5	4	6,5 (8)*	M6	10	7 (6)*
Ø 40	G 1/8"	M6	21,5	4	7,5 (8)*	M6	10	8,5 (6,5)*
Ø 50	G 1/8"	M8	23,5	4	7,5 (8)*	M8	13	10 (7,5)*
Ø 63	G 1/8"	M8	28,5	4	7,5 (8)*	M10	13	10,5 (7,5)*
Ø 80	G 1/8"	M10	28,5	4	9,5 (8,5)*	M10	17	13 (8)*
Ø 100	G 1/4"	M12	28,5	4	10,5	M10	22	15,5 (10)*

* For cylinders type QENK, QENH, QEFK, QEFH, QENVK, QENVH, QEFVK, QEFVH, QINK, QINV, QIFK, QIFV, QBNK, QBNV, QBFK, QBFV, QINTK, QINTV



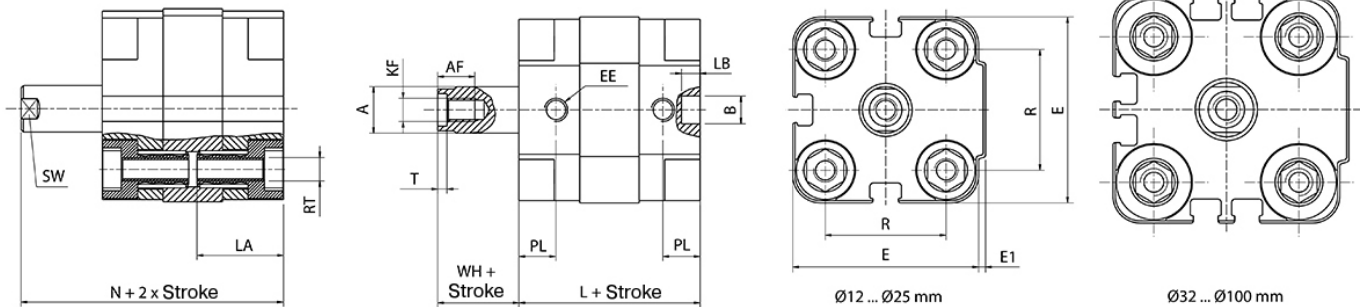
QEF/QIF/QBF



Ø [mm]	A	B	E	E1	L	M	R	T	AM
Ø 12	6	6	29	1	35 (38)*	50 (47)*	18	1,5	16
Ø 16	8	6	29	1	35 (38)*	52 (47)*	18	2	20
Ø 20	10	6	36	1,5	39 (38)*	53 (47)*	22	2	22
Ø 25	10	6	40	1,5	39 (39,5)*	53 (50,5)*	26	2	22
Ø 32	12	6	50	2	42 (44,5)*	56 (56,5)*	32	2,8	22
Ø 40	12	6	60 (58*)	2,5	45,5	62,5 (58,5)*	42	2,8	22
Ø 50	16	6	68 (67)*	3	45,5	65,5 (60,5)*	50	3,5	24
Ø 63	16	8	87 (80)*	4	51 (50)*	72 (65)*	62	3,5	24
Ø 80	20	8	107 (100)*	4	62 (56)*	88 (72)*	82	4,5	32
Ø 100	25	8	128 (124)*	5	68 (66,5)*	99 (86,5)*	103	6	40

Ø [mm]	EE	KK	LA	LB	PL	RT	SW	WH
Ø 12	M5	M6	16	4	6,5 (8)*	M4	5	7,5 (4,5)*
Ø 16	M5	M8	16	4	6,5 (8)*	M4	7	8,5 (4,5)*
Ø 20	M5	M10x1,25	18,5	4	8	M5	9	7 (4,5)*
Ø 25	M5	M10x1,25	18,5	4	8	M5	9	7 (5,5)*
Ø 32	G 1/8"	M10x1,25	21,5	4	6,5 (8)*	M6	10	7 (6)*
Ø 40	G 1/8"	M10x1,25	21,5	4	7,5 (8)*	M6	10	8,5 (6,5)*
Ø 50	G 1/8"	M12x1,25	23,5	4	7,5 (8)*	M8	13	10 (7,5)*
Ø 63	G 1/8"	M12x1,25	28,5	4	7,5 (8)*	M10	13	10,5 (7,5)*
Ø 80	G 1/8"	M16x1,5	28,5	4	9,5 (8,5)*	M10	17	13 (8)*
Ø 100	G 1/4"	M20x1,5	28,5	4	10,5	M10	22	15,5 (10)*

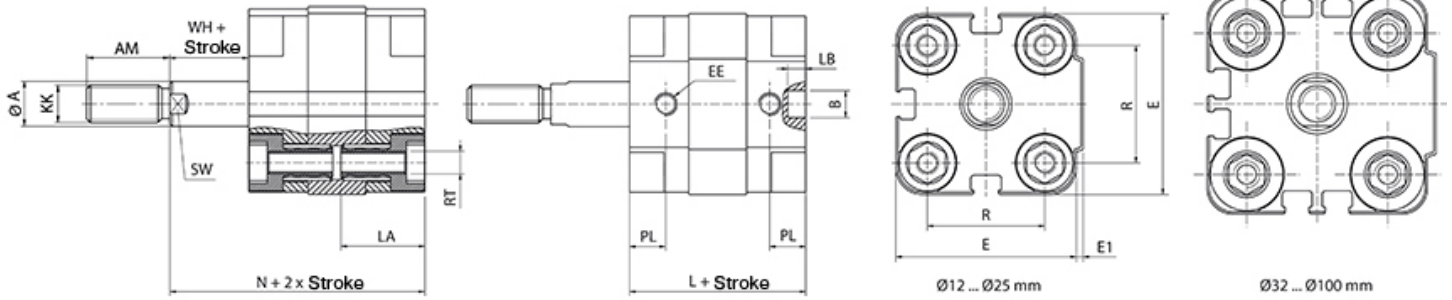
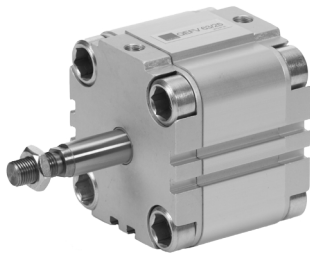
* For cylinders type QENK, QENH, QEFK, QEFH, QENVK, QENVH, QEFVK, QEFVH, QINK, QINV, QIFK, QIFV, QBNK, QBNV, QBFK, QBFV, QINTK, QINTV



Ø [mm]	A	B	E	E1	L	N	R	T	AF
Ø 12	6	6	29	1	35 (38)*	42,5	18	1,5	6
Ø 16	8	6	29	1	35 (38)*	43,5 (42,5)*	18	2	8
Ø 20	10	6	36	1,5	39 (38)*	46 (42,5)*	22	2	8
Ø 25	10	6	40	1,5	39 (39,5)*	46 (45)*	26	2	8
Ø 32	12	6	50	2	42(44,5)*	49 (50,5)*	32	2,8	10
Ø 40	12	6	60 (58*)	2,5	45,5	54 (52)*	42	2,8	10
Ø 50	16	6	68 (67)*	3	45,5	55,5 (53)*	50	3,5	12
Ø 63	16	8	87 (80)*	4	51 (50)*	61,5 (57,5)*	62	3,5	12
Ø 80	20	8	107 (100)*	4	62 (56)*	75 (64)*	82	4,5	16
Ø 100	25	8	128 (124)*	5	68 (66,5)*	83,5 (76,5)*	103	6	20

Ø [mm]	EE	KF	LA	LB	PL	RT	SW	WH
Ø 12	M5	M3	16	4	6,5 (8)*	M4	5	7,5 (4,5)*
Ø 16	M5	M4	16	4	6,5 (8)*	M4	7	8,5 (4,5)*
Ø 20	M5	M5	18,5	4	8	M5	9	7 (4,5)*
Ø 25	M5	M5	18,5	4	8	M5	9	7 (5,5)*
Ø 32	G 1/8"	M6	21,5	4	6,5 (8)*	M6	10	7 (6)*
Ø 40	G 1/8"	M6	21,5	4	7,5 (8)*	M6	10	8,5 (6,5)*
Ø 50	G 1/8"	M8	23,5	4	7,5 (8)*	M8	13	10 (7,5)*
Ø 63	G 1/8"	M8	28,5	4	7,5 (8)*	M10	13	10,5 (7,5)*
Ø 80	G 1/8"	M10	28,5	4	9,5 (8,5)*	M10	17	13 (8)*
Ø 100	G 1/4"	M12	28,5	4	10,5	M10	22	15,5 (10)*

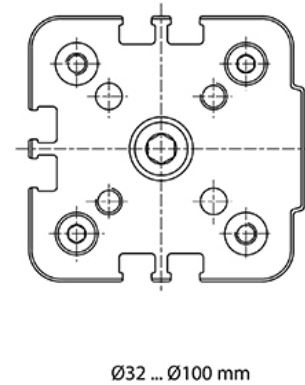
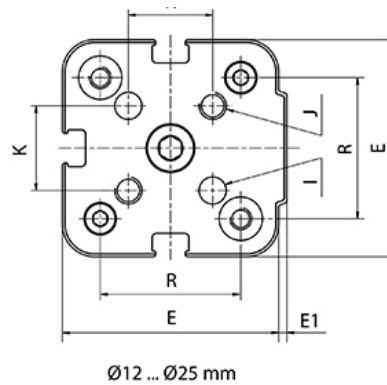
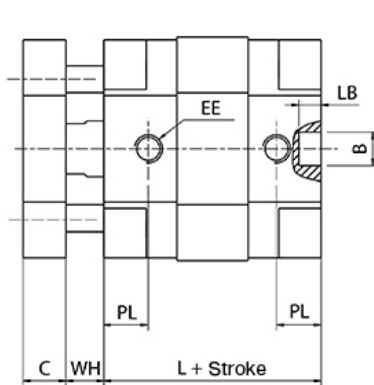
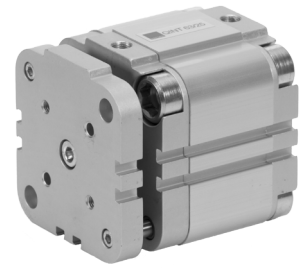
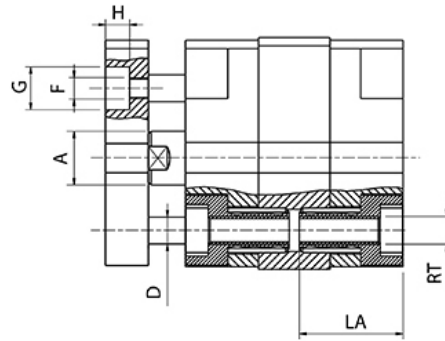
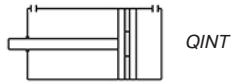
* For cylinders type QENK, QENH, QEFK, QEFH, QENVK, QENVH, QEFVK, QEFVH, QINK, QINV, QIFK, QIFV, QBNK, QBNV, QBFK, QBFV, QINTK, QINTV



Ø [mm]	A	B	E	E1	L	N	R	T	AM
Ø 12	6	6	29	1	35 (38)*	42,5	18	1,5	16
Ø 16	8	6	29	1	35 (38)*	43,5 (42,5)*	18	2	20
Ø 20	10	6	36	1,5	39 (38)*	46 (42,5)*	22	2	22
Ø 25	10	6	40	1,5	39 (39,5)*	46 (45)*	26	2	22
Ø 32	12	6	50	2	42(44,5)*	49 (50,5)*	32	2,8	22
Ø 40	12	6	60 (58*)	2,5	45,5	54 (52)*	42	2,8	22
Ø 50	16	6	68 (67)*	3	45,5	55,5 (53)*	50	3,5	24
Ø 63	16	8	87 (80)*	4	51 (50)*	61,5 (57,5)*	62	3,5	24
Ø 80	20	8	107 (100)*	4	62 (56)*	75 (64)*	82	4,5	32
Ø 100	25	8	128 (124)*	5	68 (66,5)*	83,5 (76,5)*	103	6	40

Ø [mm]	EE	KK	LA	LB	PL	RT	SW	WH
Ø 12	M5	M6	16	4	6,5 (8)*	M4	5	7,5 (4,5)*
Ø 16	M5	M8	16	4	6,5 (8)*	M4	7	8,5 (4,5)*
Ø 20	M5	M10x1,25	18,5	4	8	M5	9	7 (4,5)*
Ø 25	M5	M10x1,25	18,5	4	8	M5	9	7 (5,5)*
Ø 32	G 1/8"	M10x1,25	21,5	4	6,5 (8)*	M6	10	7 (6)*
Ø 40	G 1/8"	M10x1,25	21,5	4	7,5 (8)*	M6	10	8,5 (6,5)*
Ø 50	G 1/8"	M12x1,25	23,5	4	7,5 (8)*	M8	13	10 (7,5)*
Ø 63	G 1/8"	M12x1,25	28,5	4	7,5 (8)*	M10	13	10,5 (7,5)*
Ø 80	G 1/8"	M16x1,5	28,5	4	9,5 (8,5)*	M10	17	13 (8)*
Ø 100	G 1/4"	M20x1,5	28,5	4	10,5	M10	22	15,5 (10)*

* For cylinders type QENK, QENH, QEFK, QEFH, QENVK, QENVH, QEFVK, QEFVH, QINK, QINV, QIFK, QIFV, QBNK, QBNV, QBFK, QBFV, QINTK, QINTV

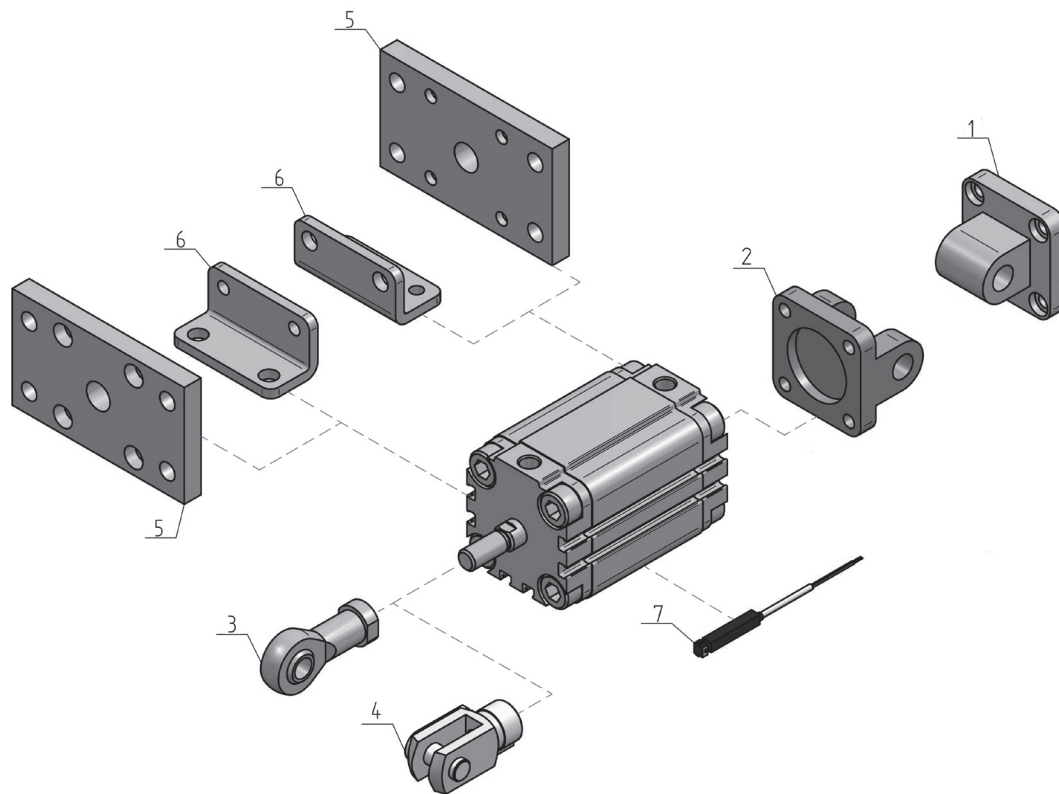


Ø [mm]	A	B	C	D	E	E1	F	G	H	I
Ø 12	6	6	5	4	29	1	M3	6	3,5	3
Ø 16	8	6	5 (6)*	4 (5)*	29	1	M3	6	3,5 (3,8)*	3
Ø 20	10	6	8 (5)*	6 (5)*	36	1,5	M3	6	3,5 (5)*	4
Ø 25	10	6	8	6	40	1,5	M4	8	4,5 (5)*	5
Ø 32	12	6	10	6 (8)*	50	2	M4	8	5,5 (6,5)*	5
Ø 40	12	6	10	6 (10)*	60	2,5	M4	8	5,5 (6,5)*	5
Ø 50	16	6	12	8 (10)*	68	3	M6	11	7 (7,5)*	6
Ø 63	16	8	12	8 (10)*	87	4	M6	11	7 (7,5)*	6
Ø 80	20	8	14	12 (14)*	107	4	M8	14	9	8
Ø 100	25	8	14	12 (14)*	128	5	M8	14	9 (10)*	10

Ø [mm]	J	K	L	R	EE	LA	LB	PL	RT	WH
Ø 12	M3	9,9	35	18	M5	16	4	6,5	M4	7,5
Ø 16	M3	9,9	35 (38)*	18	M5	16	4	6,5 (8)*	M4	8,5 (4,5)*
Ø 20	M4	12	39 (38)*	22	M5	18,5	4	8	M5	7 (4,5)*
Ø 25	M5	15,6	39 (39,5)*	26	M5	18,5	4	8	M5	7 (5,5)*
Ø 32	M5	19,8	42 (44,5)*	32	G 1/8"	21,5	4	6,5 (8)*	M6	7 (6)*
Ø 40	M5	23,3	45,5	42	G 1/8"	21,5	4	7,5 (8)*	M6	8,7 (6,5)*
Ø 50	M6	29,7	45,5	50	G 1/8"	23,5	4	7,5 (8)*	M8	10,2 (7,5)*
Ø 63	M6	35,4	51 (50)*	62	G 1/8"	28,5	4	7,5 (8)*	M10	10,5 (7,5)*
Ø 80	M8	46	62 (56)*	82	G 1/8"	28,5	4	9,5 (8,5)*	M10	12 (8)*
Ø 100	M10	56,5	68 (66,5)*	103	G 1/4"	28,5	4	10,5	M10	15,5 (10)*

Type QINTV is only available from diameter 16 mm.

* For cylinders type QENK, QENH, QEFK, QEFH, QENVK, QENVH, QEFVK, QEFVH, QINK, QINV, QIFK, QIFV, QBNK, QBNV, QBFK, QBFV, QINTK, QINTV



Part	Type	Description	Page
1	QCM	Male hinge self lubricating	144
2	QCF	Female clevis bracket	143
3	UK	Rod eye with internal thread	130
3	UKF	Rod eye with external thread	128
4	UV	Clevis with lockable pin	129
5	QFL	Flange	142
6	QCP	Foot mounting	143
7	SKR/SKH	REED / PNP switch	144

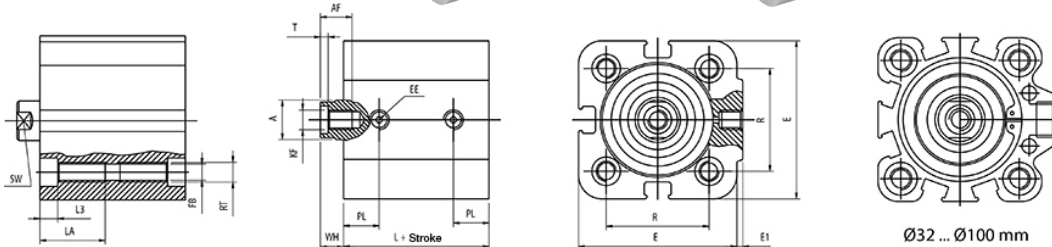
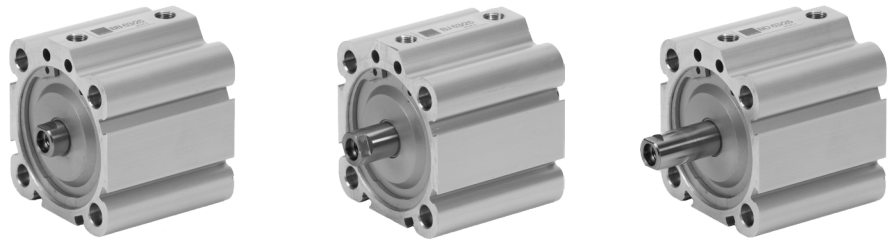
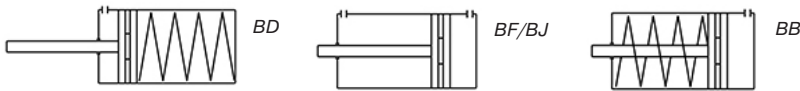


Short Stroke Cylinder

Short Stroke Cylinder

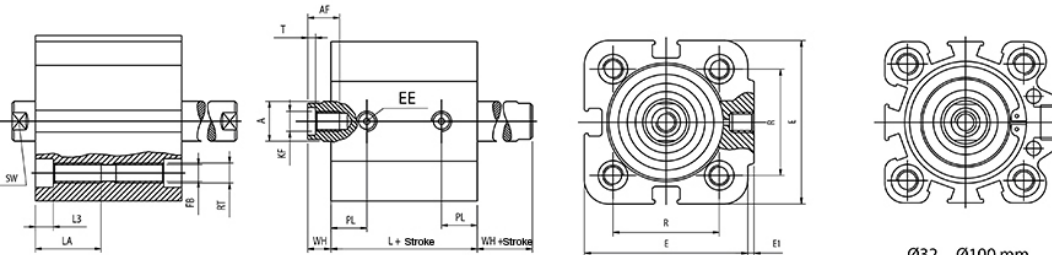
Technical information	
Diameter	Ø12 - Ø16 - Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 mm
Stroke	5 - 10 - 25 - 50 - 80 - 100 mm (Depending on diameter) Single acting Double acting
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C
Below 0°C air has to be dried.	
Materials	
Tube	Anodized aluminum
Heads	Anodized aluminum
Piston	Aluminum
Piston rod	Ø12 ... Ø25 stainless steel / Ø32 ... Ø100 chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

B	F	V	20	/	80	Ex
			DIAMETER		STROKE	OPTIONS
			12		5	Ex ATEX version (only for version with standard seals)
			16		10	
			20		25	
			25		40	
			32		50	
			40		80	
			50		100	
			63			
			80			
			100			
SEALS						
			WITHOUT	Standard seals		
			K	FPM Piston (for type BF and BJ from diam. 16 mm)		
			V	FPM seals (for type BB, BD, BF, BJ from diam. 16 mm)		
FUNCTION						
			B	Single acting		
			D	Single acting, spring pushes piston rod out		
			F	Double acting		
			J	Double acting, through piston rod		
			FA	Non-rotating piston rod		



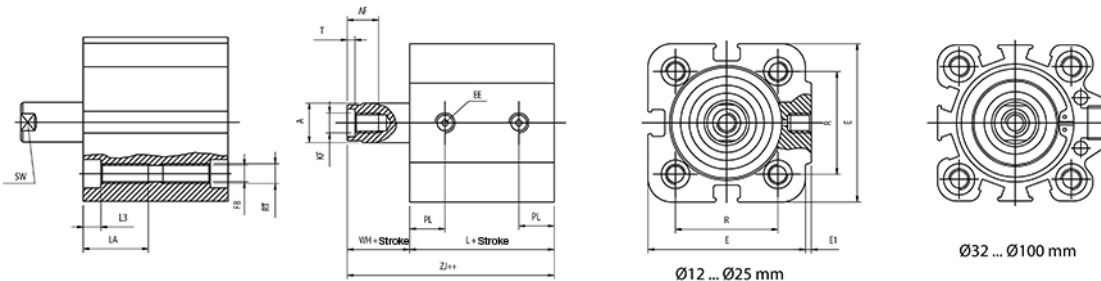
Ø12 ... Ø25 mm

BB/BF



Ø12 ... Ø25 mm

BJ

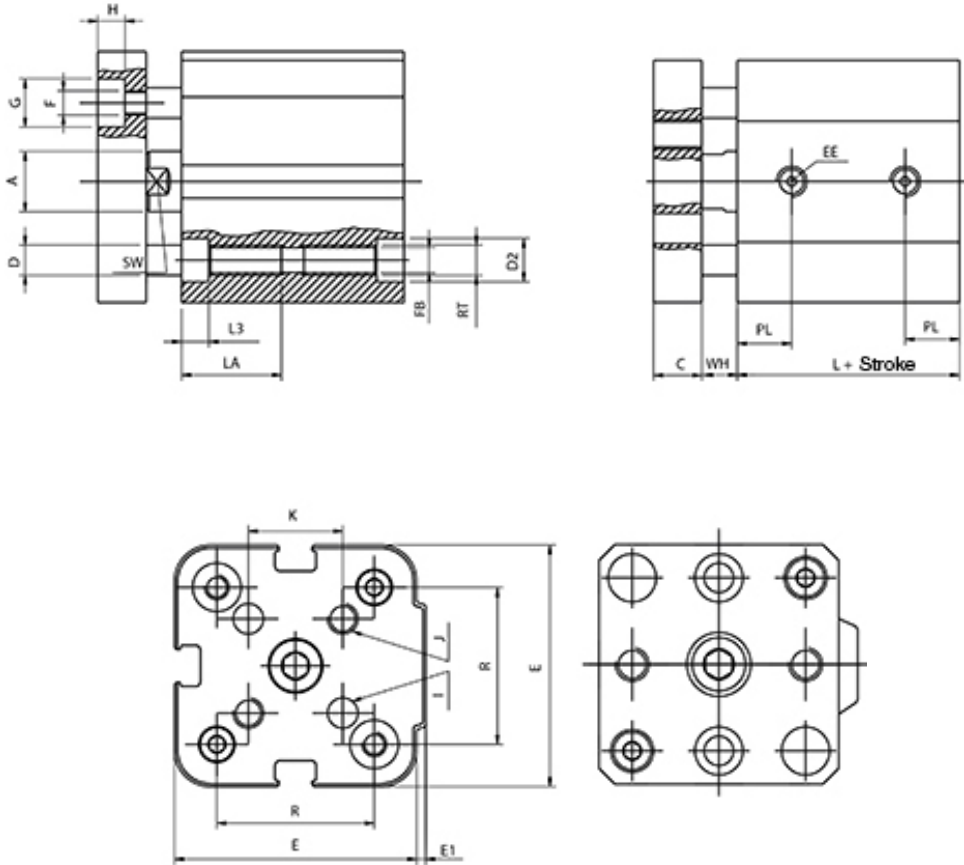
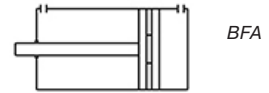


Ø12 ... Ø25 mm

BD

Ø [mm]	A	E	E1	FB	L	L3	R	T	AF	EE	KF	LA	PL	RT	SW	WH
Ø 12	6	29	1	3,3	28	3,5	18	1,5	6	M5	M3	12,5	7,5	M4	5	6
Ø 16	8	29	1	3,3	30,5	3,5	18	2	8	M5	M4	14,5	8,5	M4	7	6
Ø 20	10	36	1,5	4,2	31,5	4,5	22	2	8	M5	M5	16,5	9	M5	9	6
Ø 25	10	40	1,5	4,2	31,5	4,5	26	2	8	M5	M5	16,5	9	M5	9	6
Ø 32	12	45	3,5	5	32	5,7	32,5	2,8	10	G 1/8"	M6	21,7	10	M6	10	7
Ø 40	12	52	5	5	38,5	5,7	38	2,8	10	G 1/8"	M6	21,7	11	M6	10	7,2
Ø 50	16	63,5	7	6,8	39	6,8	46,5	3,5	12	G 1/8"	M8	22,8	11	M8	13	8,5
Ø 63	16	77	7	6,8	46	6,8	56,5	3,5	12	G 1/8"	M8	22,8	11,5	M8	13	8
Ø 80	20	92	10	8,5	54	9	72	4,5	16	G 1/8"	M10	25	14	M10	17	11
Ø 100	20	113	13	8,5	65	9	89	6	20	G 1/8"	M12	25	17,5	M10	22	12

BFA



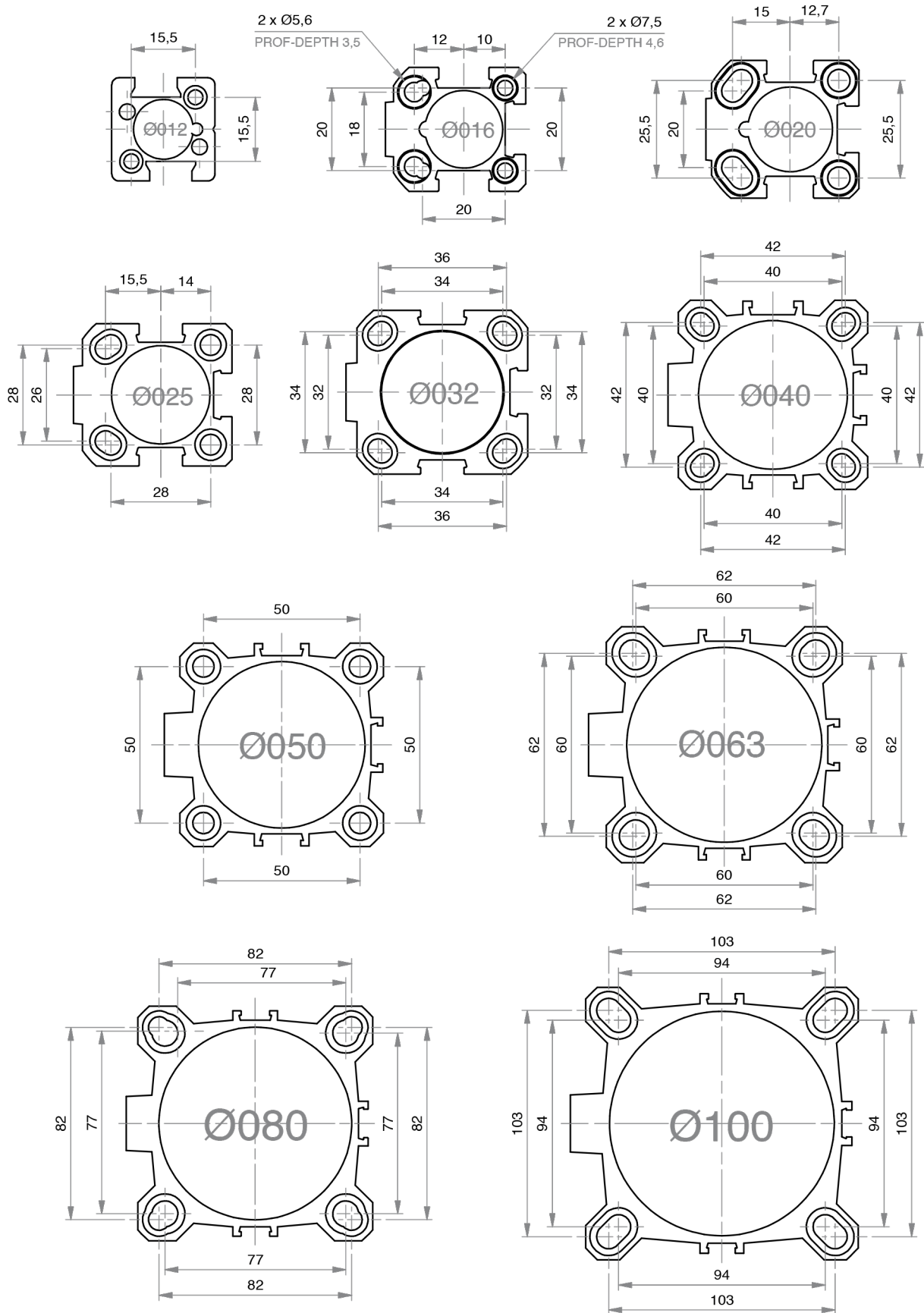
Ø [mm]	A	C	D	D2	E	E1	F	FB	G	H	I	J	K	L	L3	R	EE	LA	PL	RT	SW	WH
Ø 12	6	5	4	5,5	29	1	M3	3,5	6	3,5	3	M3	9,9	28	3,5	18	M5	12,5	7,5	M4	5	6
Ø 16	8	5	4	5,5	29	1	M3	3,5	6	3,5	3	M3	9,9	30,5	3,5	18	M5	14,5	8,5	M4	7	6
Ø 20	10	8	6	7	36	1,5	M3	4,2	6	3,5	4	M4	12	31,5	4,5	22	M5	16,5	9	M5	9	6
Ø 25	10	8	6	7	40	1,5	M4	4,2	8	4,5	5	M5	15,6	31,5	4,5	26	M5	16,5	9	M5	9	6
Ø 32	12	10	6	8,5	45	3,5	4,5	5	8	4,5	9	M5	-	32	5,7	32,5	G 1/8"	21,7	10	M6	10	7
Ø 40	12	10	6	8,5	52	5	4,5	5	8	4,5	9	M5	-	38,5	5,7	38	G 1/8"	21,7	11	M6	10	7,2
Ø 50	16	12	8	10	63,5	7	5,5	6,8	9	5,5	10	M6	-	39	6,8	46,5	G 1/8"	22,8	11	M8	13	8,5
Ø 63	16	12	8	10	77	7	5,5	6,8	9	5,5	14	M6	-	46	6,8	56,5	G 1/8"	22,8	11,5	M8	13	8
Ø 80	20	14	12	13	92	10	8,5	8,5	14	9	14	M8	-	54	9	72	G 1/8"	25	14	M10	17	11
Ø 100	25	14	12	13	113	13	8,5	8,5	14	9	17	M8	-	65	9	89	G 1/4"	25	17,5	M10	22	12

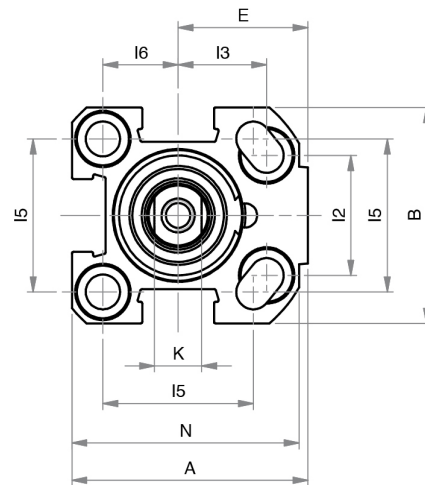
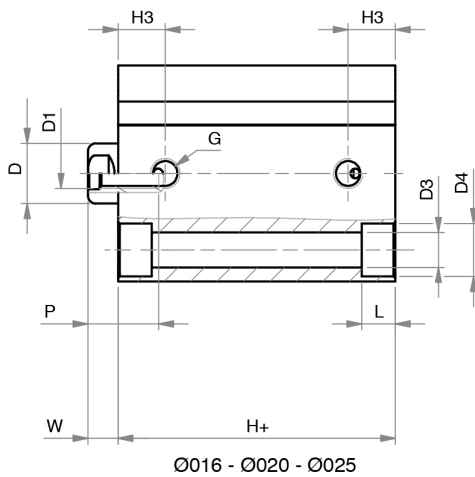
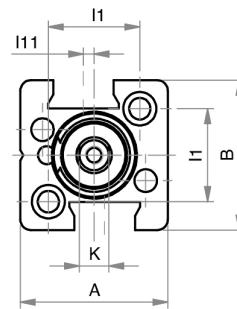
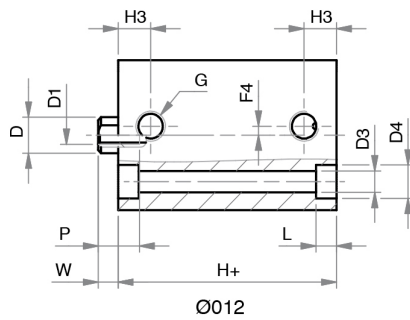
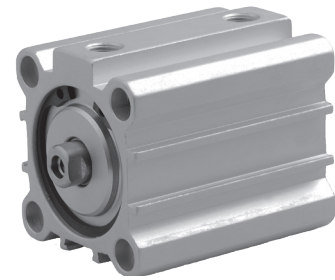
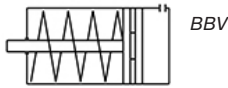
Short Stroke Cylinder - High Temperature Version

Technical information	
Diameter	Ø12 - Ø16 - Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 mm
Stroke	5 - 10 - 15 - 25 - 30 - 40 - 50 - 60 - 80 - 100 - 125 - 160 - 200 - 250 mm Single acting Double acting
Medium	Air
Pressure range	1 ... 10 bar (Double acting) 2 ... 10 bar (Single acting)
Temperature range	0°C ... +150°C Below 0°C air has to be dried.

Materials	
Tube	Anodized aluminum
Heads	Ø12 ... Ø25 brass / Ø32 ... Ø100 anodized aluminum
Piston	Aluminum
Piston rod	Stainless steel AISI 303
Guide bushing	Steel + PTFE
Seals	PUR

Short Stroke Cylinder - High Temperature Version

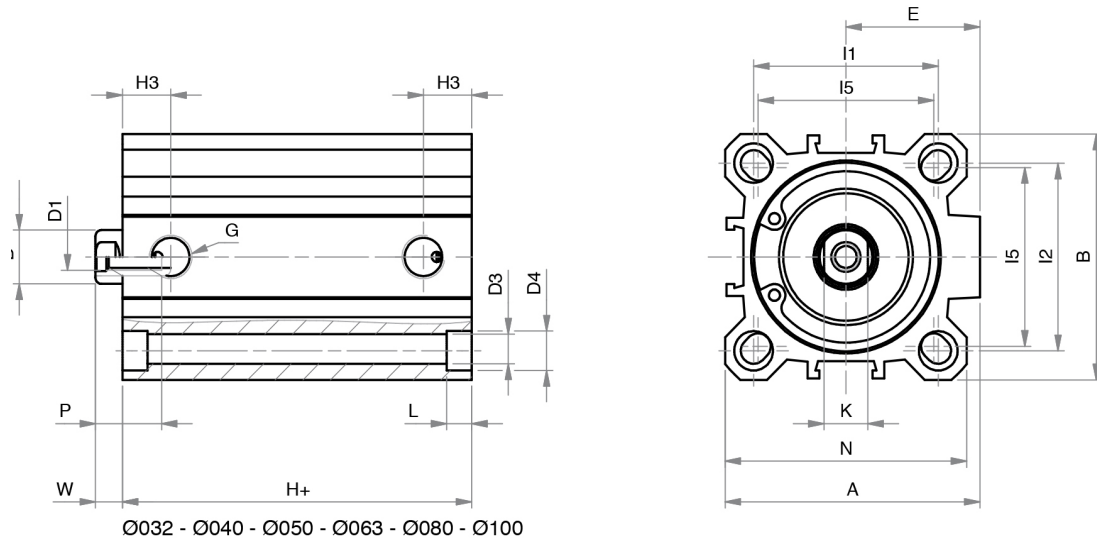




Ø [mm]	A	B	D	D1	D3	D4	E	G	H+	H3	I1
Ø12	25	25	6	M3	3,7	5,6	-	M5	27	5,5	15,5
Ø16	34	30	8	M4	**	**	19	M5	32*	8	-
Ø20	40	36	10	M5	5,8	9	22	M5	32*	8	-
Ø25	44,5	40	10	M5	5,8	9	24,5	G1/8	38,5*	10,5	-

Ø [mm]	I2	I3	I5	I6	K	L	L1	N	P	W
Ø12	-	-	-	-	5	3,5	-	-	7	3,5
Ø16	18	12	20	10	6	4,6	3,5	32	11	4,5
Ø20	20	15	25,5	12,7	8	5,7	5,7	38,5	12	4,5
Ø25	26	15,5	28	14	8	5,7	5,7	42	12	5,5

* For 25 mm stroke: Ø16-Ø20 add +6mm | Ø25 add +1mm
 * For 40-50 mm stroke: Ø32-Ø40-Ø50-Ø63-Ø80-Ø100 add +10 mm
 ** Refer to page 50

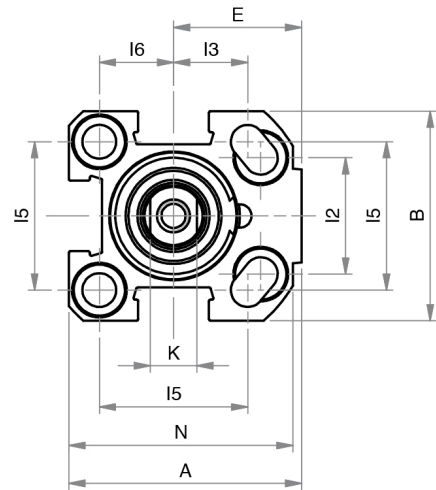
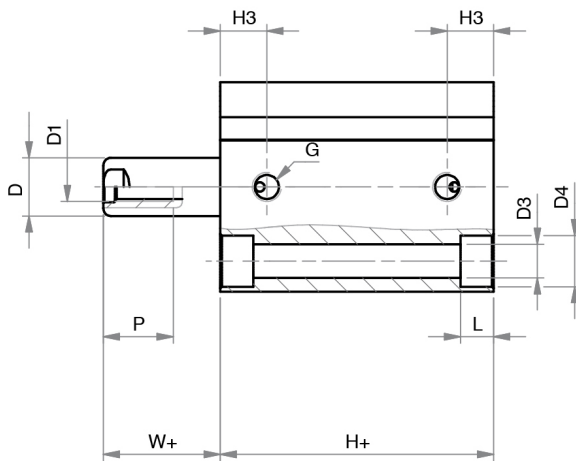
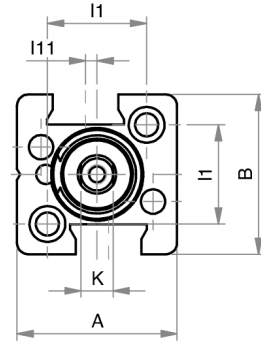
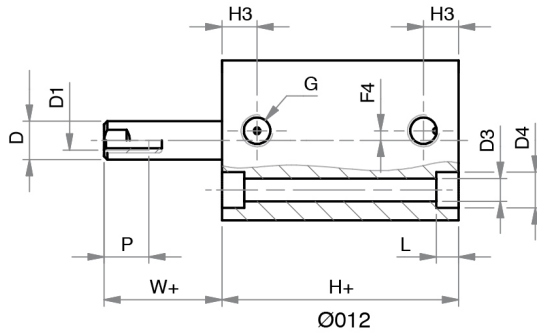
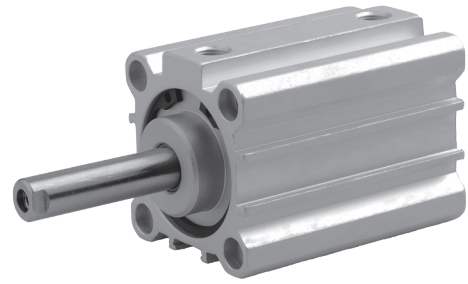
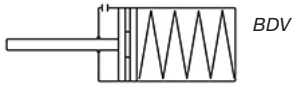


Ø [mm]	A	B	D	D1	D3	D4	E	G	H+
Ø32	51	46	12	M6	5,8	9	27	G1/8	39,5*
Ø40	58	55	12	M6	5,8	9	30,5	G1/8	39,5*
Ø50	70	65	16	M8	6,8	11	37,5	G1/8	39,5*
Ø63	89	80	16	M8	9	14	46	G1/8	42*
Ø80	105	100	20	M10	9	14	55	G1/4	46*
Ø100	131	124	25	M12	11	17,2	69	G1/4	56*

Ø [mm]	H3	I1	I2	I5	K	L	N	P	W
Ø32	11,5	36	32	34	10	5,7	48	15	5,5
Ø40	11	42	42	40	10	5,7	55	15	6,5
Ø50	11,5	50	50	50	13	6,8	65	17	7,5
Ø63	11	62	62	60	13	8,8	80	17	6,5
Ø80	14	82	82	77	17	9	100	17	8
Ø100	16	103	103	94	22	11	124	22	10

* For 25 mm stroke: Ø16-Ø20 add +6mm | Ø25 add +1mm

* For 40-50 mm stroke: Ø32-Ø40-Ø50-Ø63-Ø80-Ø100 add +10 mm



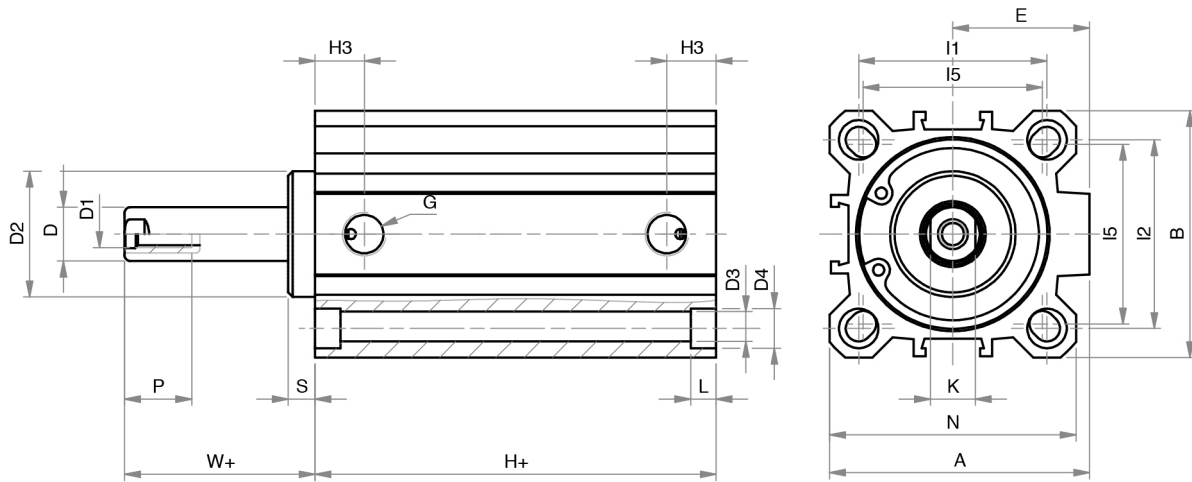
Ø [mm]	A	B	D	D1	D3	D4	E	G	H+	H3	I1
Ø12	25	25	6	M3	3,7	5,6	-	M5	27	5,5	15,5
Ø16	34	30	8	M4	**	**	19	M5	32*	8	-
Ø20	40	36	10	M5	5,8	9	22	M5	32*	8	-
Ø25	44,5	40	10	M5	5,8	9	24,5	G1/8	38,5*	10,5	-

Ø [mm]	I2	I3	I5	I6	K	L	L1	N	P	W
Ø12	-	-	-	-	5	3,5	-	-	7	3,5
Ø16	18	12	20	10	6	4,6	3,5	32	11	4,5
Ø20	20	15	25,5	12,7	8	5,7	5,7	38,5	12	4,5
Ø25	26	15,5	28	14	8	5,7	5,7	42	12	5,5

* For 20-25 mm stroke: Ø20 add +11mm | Ø25 add +6mm | Ø32 add +5mm

* For 30 mm stroke: Ø32 add +10 mm

** Refer to page 50.



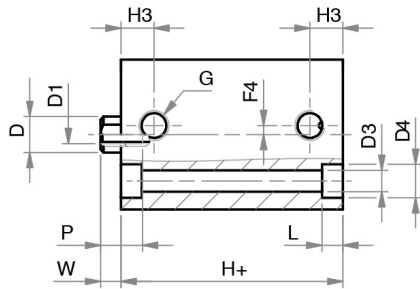
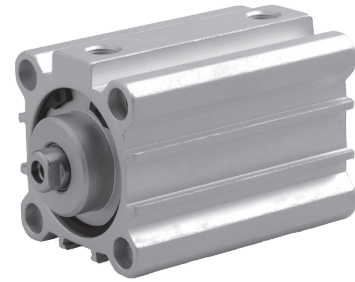
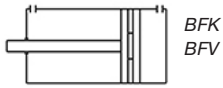
Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100

Ø [mm]	A	B	D	D1	D2	D3	D4	E	G	H+
Ø32	51	46	12	M6	24,5	5,8	9	27	G1/8	39,5*
Ø40	58	55	12	M6	28	5,8	9	30,5	G1/8	39,5*
Ø50	70	65	16	M8	34	6,8	11	37,5	G1/8	39,5*
Ø63	89	80	16	M8	38,5	9	14	46	G1/8	42*

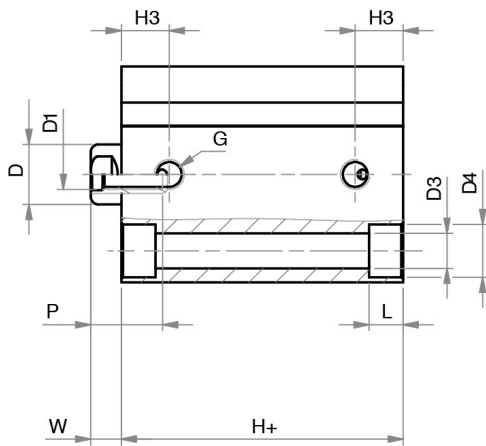
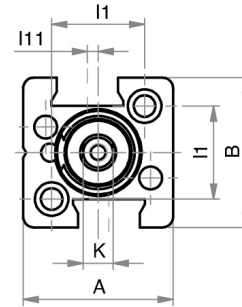
Ø [mm]	H3	I1	I2	I5	K	L	N	P	S	W
Ø32	11,5	36	32	34	10	5,7	48	15	5	5,5
Ø40	11	42	42	40	10	5,7	55	15	6	6,5
Ø50	11,5	50	50	50	13	6,8	65	17	6	7,5
Ø63	11	62	62	60	13	8,8	80	17	8	6,5

* For 20-25 mm stroke: Ø20 add +11mm | Ø25 add +6mm | Ø32 add +5mm

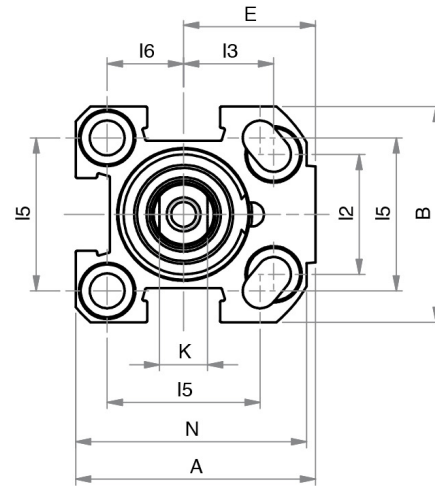
* For 30 mm stroke: Ø32 Diameter add +10 mm



Ø12



Ø16 - Ø20 - Ø25

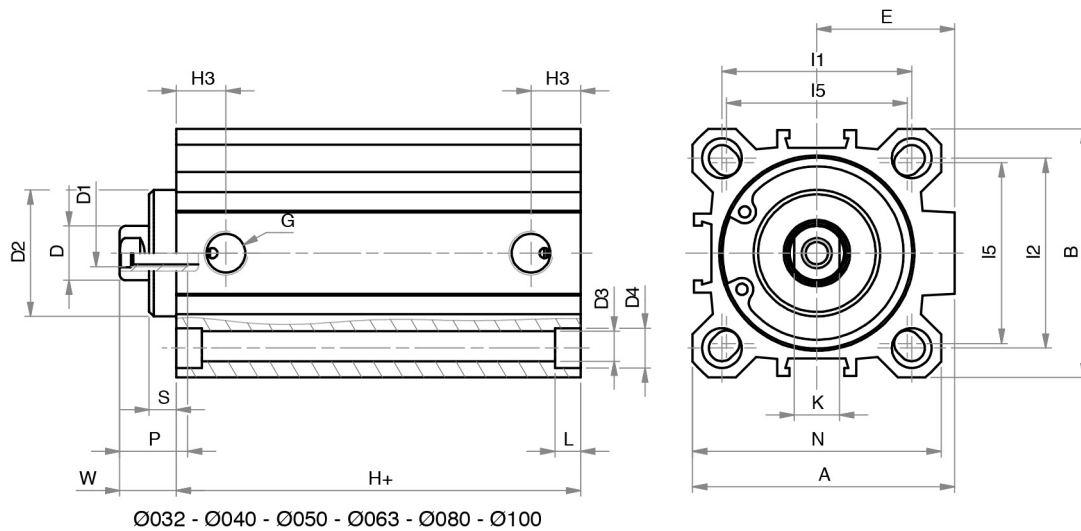


Ø [mm]	A	B	D	D1	D3	D4	E	G	H+	H3	I1
Ø12	25	25	6	M3	3,7	5,6	-	M5	27	5,5	15,5
Ø16	34	30	8	M4	**	**	19	M5	32*	8	-
Ø20	40	36	10	M5	5,8	9	22	M5	32*	8	-
Ø25	44,5	40	10	M5	5,8	9	24,5	G1/8	38,5*	10,5	-

Ø [mm]	I2	I3	I5	I6	K	L	L1	N	P	W
Ø12	-	-	-	-	5	3,5	-	-	7	3,5
Ø16	18	12	20	10	6	4,6	3,5	32	11	4,5
Ø20	20	15	25,5	12,7	8	5,7	5,7	38,5	12	4,5
Ø25	26	15,5	28	14	8	5,7	5,7	42	12	5,5

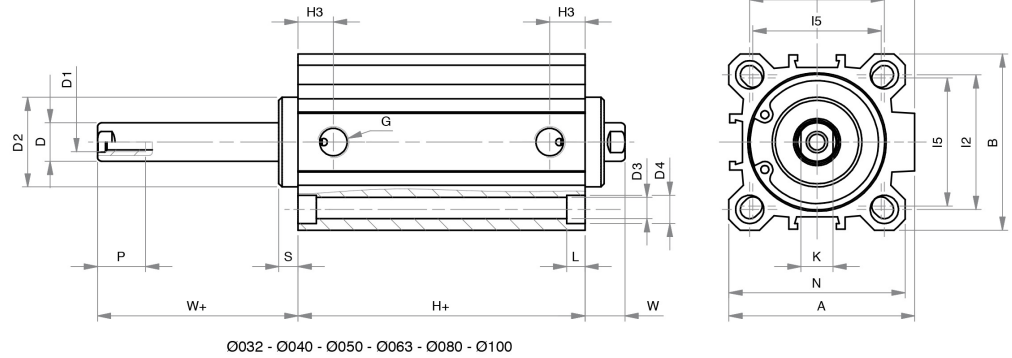
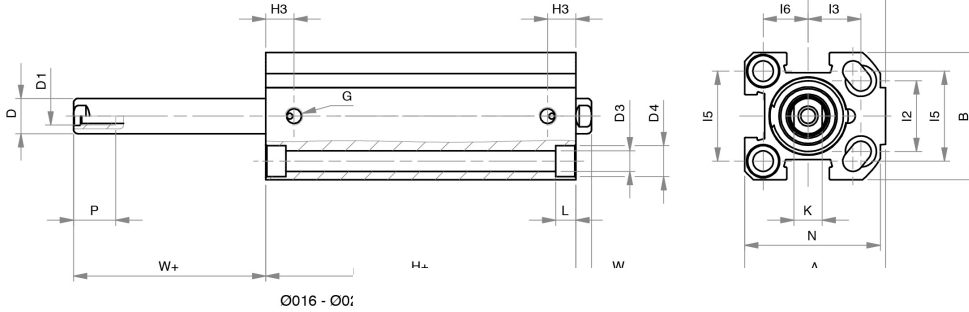
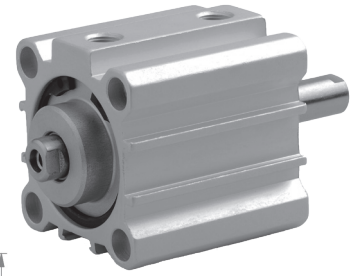
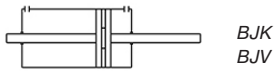
* When stroke length is equal to 19 mm or less: Ø16-Ø20 add +6mm | Ø25 add +1mm

** Refer to page 50.



Ø [mm]	A	B	D	D1	D2	D3	D4	E	G	H+	H3
Ø32	51	46	12	M6	24,5	5,8	9	27	G1/8	39,5	11,5
Ø40	58	55	12	M6	28	5,8	9	30,5	G1/8	39,5	11
Ø50	70	65	16	M8	34	6,8	11	37,5	G1/8	39,5	11,5
Ø63	89	80	16	M8	38,5	9	14	46	G1/8	42	11
Ø80	105	100	20	M10	44	9	14	55	G1/4	46	14
Ø100	131	124	25	M12	56	11	17,2	69	G1/4	56	16

Ø [mm]	I1	I2	I2	I5	K	L	N	P	S	W
Ø32	36	32	32	34	10	5,7	48	15	5	5,5
Ø40	42	42	42	40	10	5,7	55	15	6	6,5
Ø50	50	50	50	50	13	6,8	65	17	6	7,5
Ø63	62	62	62	60	13	8,8	80	17	8	6,5
Ø80	82	82	82	77	17	9	100	17	10	8
Ø100	103	103	103	94	22	11	124	22	10,5	10



Ø [mm]	A	B	D	D1	D2	D3	D4	E	G	H+	H3	I1
Ø16	34	30	8	M4	-	**	**	19	M5	32*	8	-
Ø20	40	36	10	M5	-	5,8	9	22	M5	32*	8	-
Ø25	44,5	40	10	M5	-	5,8	9	24,5	G1/8	38,5*	10,5	-
Ø32	51	46	12	M6	24,5	5,8	9	27	G1/8	39,5*	11,5	36
Ø40	58	55	12	M6	28	5,8	9	30,5	G1/8	39,5*	11	42
Ø50	70	65	16	M8	34	6,8	11	37,5	G1/8	39,5*	11,5	50
Ø63	89	80	16	M8	38,5	9	14	46	G1/8	42*	11	62
Ø80	105	100	20	M10	44	9	14	55	G1/4	46*	14	82
Ø100	131	124	25	M12	56	11	17,2	69	G1/4	56*	16	103

Ø [mm]	I2	I3	I5	I6	K	L	L1	N	P	S	W	W+
Ø16	18	12	20	10	6	4,6	3,5	32	11	-	4,5	4,5
Ø20	20	15	25,5	12,7	8	5,7	5,7	38,5	12	-	4,5	4,5
Ø25	26	15,5	28	14	8	5,7	5,7	42	12	-	5,5	5,5
Ø32	32	-	34	-	10	5,7	-	48	15	5	5,5	11
Ø40	42	-	40	-	10	5,7	-	55	15	6	6,5	12,5
Ø50	50	-	50	-	13	6,8	-	65	17	6	7,5	13,5
Ø63	62	-	60	-	13	8,8	-	80	17	8	6,5	15
Ø80	82	-	77	-	17	9	-	100	17	10	8	18
Ø100	103	-	94	-	22	11	-	124	22	10,5	10	20,5

* When stroke length is equal to 25 mm or less: Ø16-Ø20 add +6mm | Ø25 add +1mm

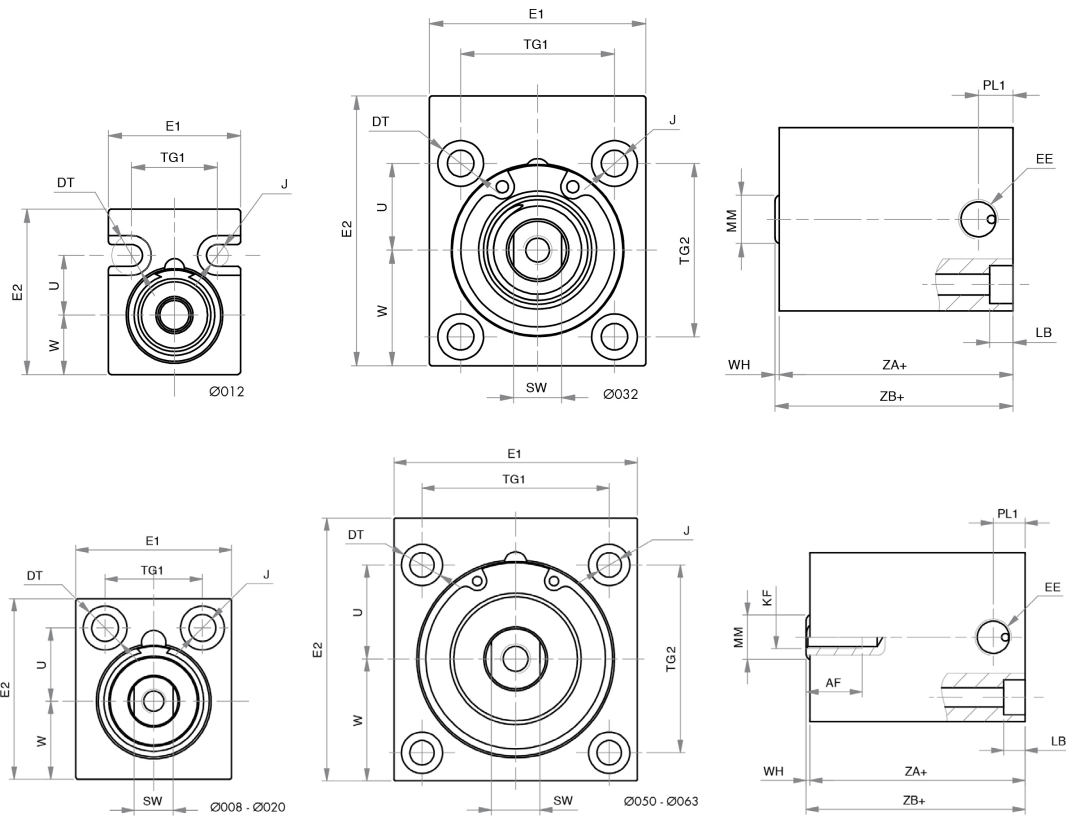
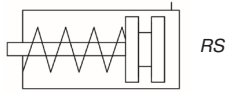
** Refer to page 50.

Short Stroke Cylinder with Reduced Size

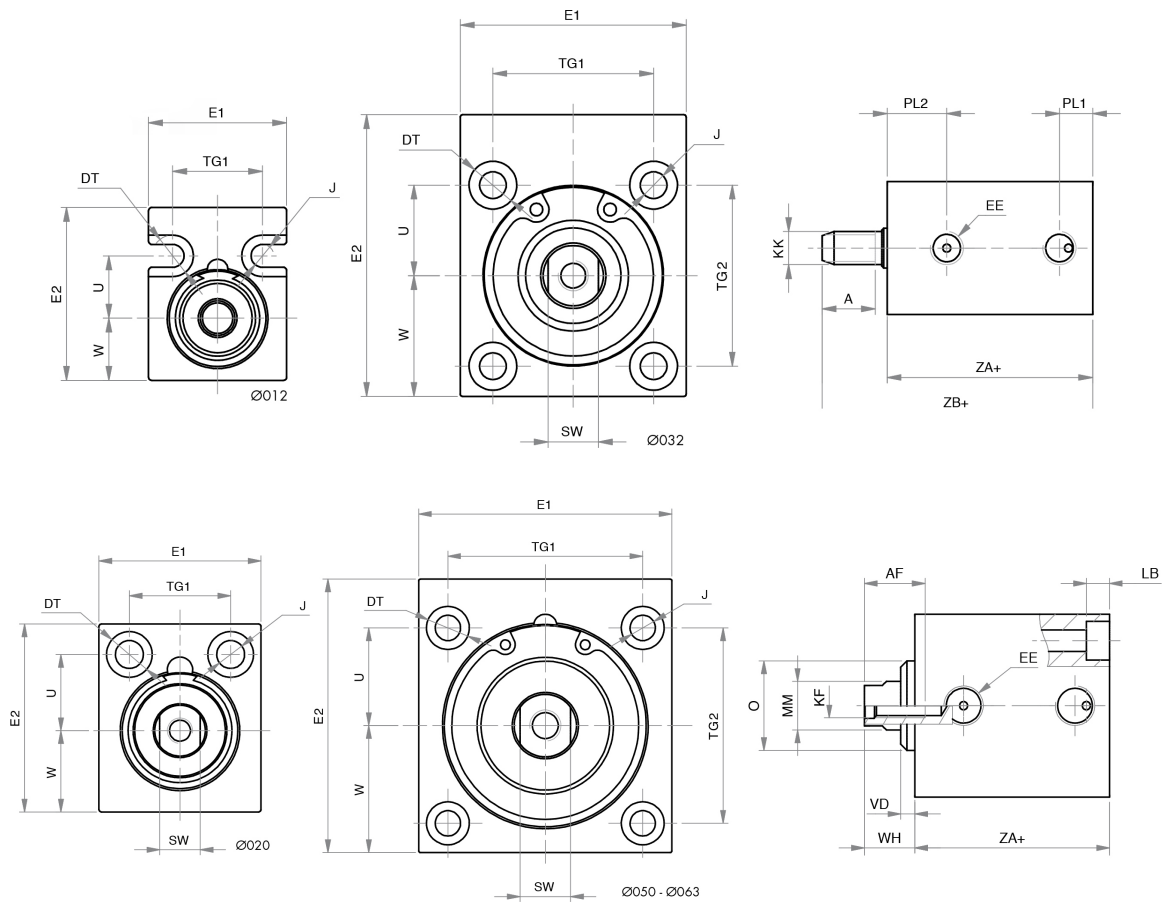
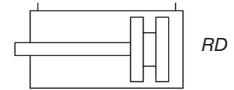
Technical information	
DiameterØ	8 - Ø12 - Ø 20 - Ø32 - Ø50 - Ø63 mm
Stroke	4 - 5 - 10 - 15 - 20 - 25 - 30 mm Single acting Double acting
Medium	Air
Pressure range	Single acting: 2 ... 10 bar Double acting: 1 ... 10 bar
Temperature range	-20°C ... +80°C Below 0°C air has to be dried.

Materials	
Tube	Stainless steel AISI 303
Heads	Ø 8 - Ø12 - Ø 20 Brass Ø 32 - Ø 50 - Ø 63 Anodized aluminum
Piston	RS Ø 8 - Ø12 Stainless steel AISI 303 Ø 20 Aluminum Ø 32 - Ø 50 - Ø 63 POM RD Ø 12 - Ø 20 Aluminum Ø 32 - Ø 50 - Ø 63 POM
Piston rod	Anodized aluminum
Guide bushing	Steel + PTFE
Seals	PUR, NBR

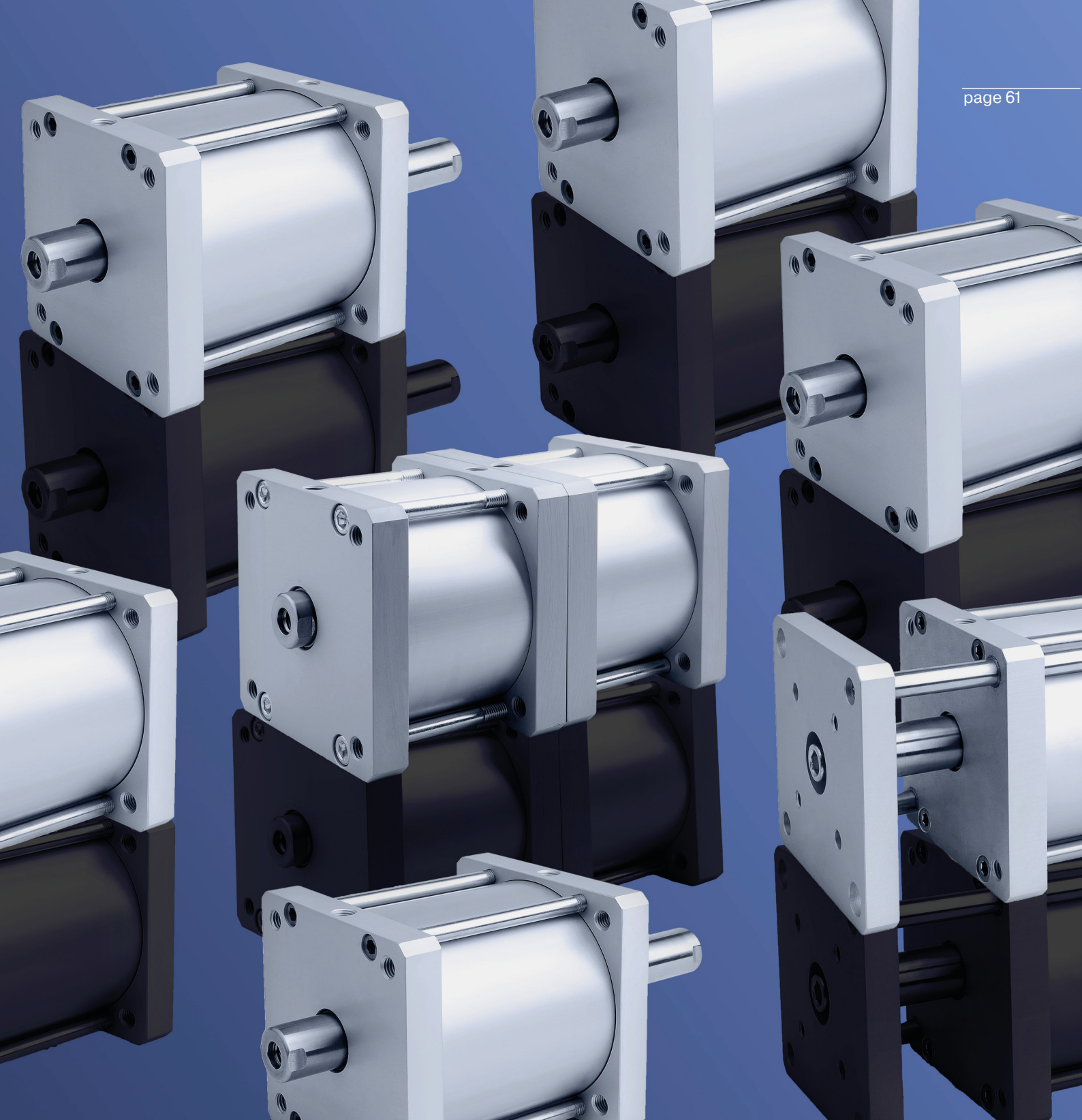
R	D	20	/	10
		DIAMETER	STROKE	
		8	RS	RD
		12	4	5
		20	5	10
		32	10	15
		50	25	20
		63		25
				30
FUNCTION				
S		Single acting		
D		Double acting		



Ø [mm]	Stroke [mm]	AF	DT	E1	E2	EE	KF	LB	J	PL1	SW	TG1	TG2	U	W	WH	ZA+	ZB+
Ø 8	4	-	6	18	20	M5	M3	3,1	3,4	5,5	-	11	-	8	6,5	1	12	13
Ø 12	4	10	6	20	25	M5	M5	3,4	3,3	6	-	13	-	9	9	1	12	13
Ø 12	10	10	6	20	25	M5	M5	3,4	3,3	6	-	13	-	9	9	4	16	20
Ø 20	4	9	9	32	37	M5	M5	5,5	5,5	5	8	20	-	15	16	1	16	17
Ø 20	10	10	9	32	37	M5	M5	5,5	5,5	5	8	20	-	15	16	1	22	23
Ø 20	25	10	9	32	37	M5	M5	5,5	5,5	5	8	20	-	15	16	1	28	29
Ø 32	5	10	9,5	45	55	G1/8	M6	5,7	5,3	8,5	10	32	36	18	24	1	21	22
Ø 32	10	14,5	9,5	45	55	G1/8	M6	5,7	5,3	8,5	10	32	36	18	24	1	22	23
Ø 32	25	14,5	9,5	45	55	G1/8	M6	5,7	5,3	8,5	10	32	36	18	24	1	32,5	33,5
Ø 50	10	10,5	11	65	70	G1/8	M8	6,8	6,5	7,5	13	50	50	25	32,5	1	20	21
Ø 50	25	15,5	11	65	70	G1/8	M8	6,8	6,5	8	13	50	50	25	32,5	1	32,5	33,5
Ø 63	10	14,5	14	80	85	G1/8	M8	9	9	8	13	62	62	31	40	1	25	26
Ø 63	25	14,5	14	80	85	G1/8	M8	9	9	8	13	62	62	31	40	2	35,5	37,5



Ø [mm]	Stroke [mm]	Dimensions																
		AF	DT	E1	E2	EE	KF	LB	J	PL1	SW	TG1	TG2	U	W	WH	ZA+	ZB+
Ø 12	5-10-15-20-25-30	-	6	20	25	M5	-	3,4	3,3	5	-	13	-	9	9	1	21	31
Ø 20	5-10-15-20-25-30	10	9	32	37	M5	M5	5,5	5,5	5	8	20	-	15	16	9,5	24,5	34
Ø 32	5-10-15-20-25-30	15	9,5	45	56	G1/8	M6	5,7	5,3	8,5	10	32	36	18	24	12,5	33	45,5
Ø 50	5-10-15-20-25-30	17	11	65	70	G1/8	M8	6,8	6,5	9	13	50	50	25	32,5	17	32,5	49,5
Ø 63	5-10-15-20-25-30	17	14	80	85	G1/8	M8	9	9	8	13	62	62	31	40	17	35,5	52,5

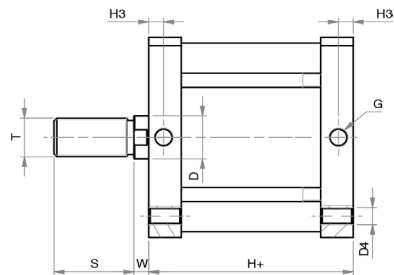
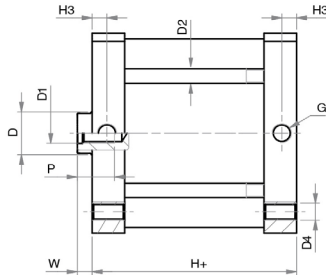
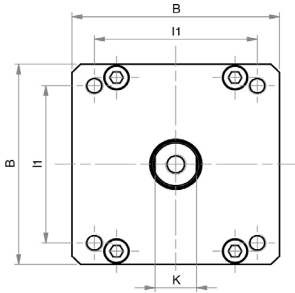
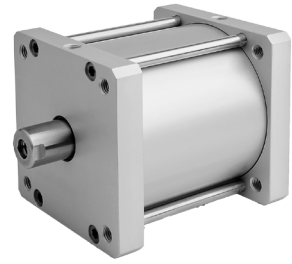
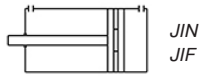


Tie-rod Compact Cylinder

Tie-rod Compact Cylinder

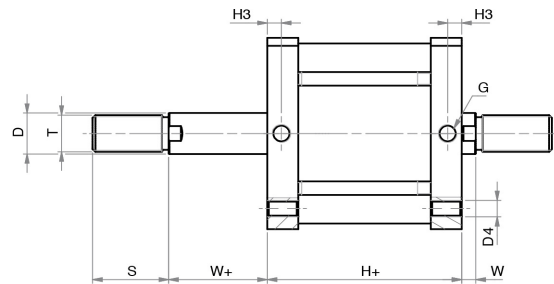
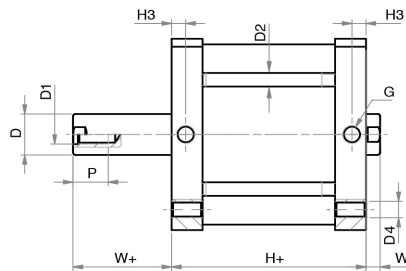
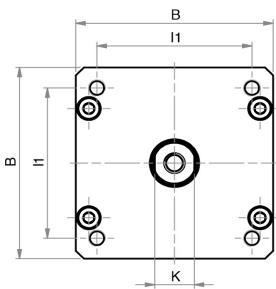
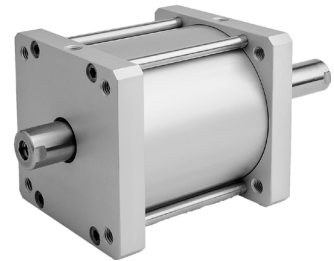
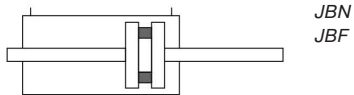
Technical information	
Diameter	Ø125 - Ø160 - Ø 200 - Ø250 mm
Stroke	10 - 25 -50 -75 - 100 - 125 - 160 - 200 - 250 - 300 mm
	<input type="checkbox"/> Single acting <input type="checkbox"/> Double acting
Medium	Air
Pressure range	Single acting: 2 ... 10 bar Double acting: 1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C Below 0°C air has to be dried.
Materials	
Tube	Stainless steel AISI 303
Heads	Anodized aluminum
Piston	Aluminum
Piston rod	Anodized aluminum
Guide bushing	Steel + PTFE
Seals	PUR

J	I	N	V	125	/	50
				DIAMETER		STROKE
				125		10
				160		25
				200		50
				250		75
						100
						125
						160
						200
						250
						300
				SEALS		
				WITHOUT Standard seals		
			K	FPM Piston (for type JI, JB, JINT up to diam. 200 mm)		
			V	FPM seals (for type JI, JB, JINT up to diam.Ø200 mm)		
				VERSION		
		N	Piston rod with female thread			
		F	Piston rod with male thread			
		NT	Non-rotating piston rod (for type JI)			
				FUNCTION		
			E	Single acting		
			I	Double acting		
			B	Double acting, through piston rod		

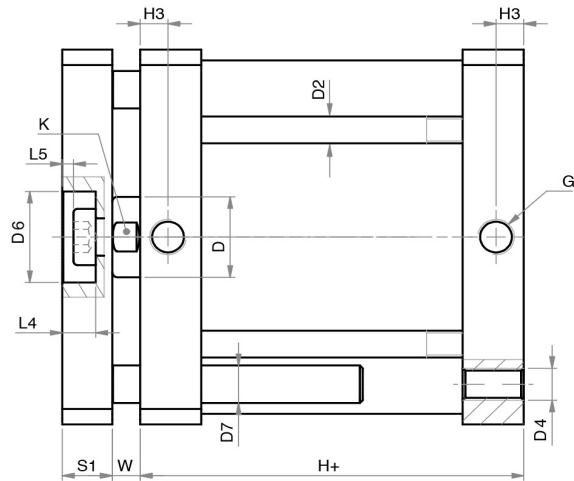
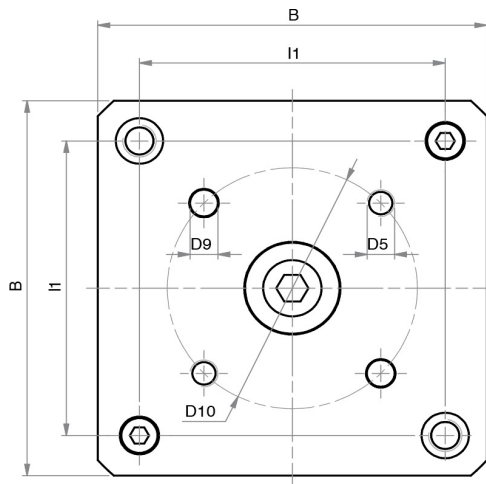
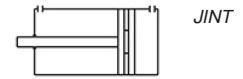
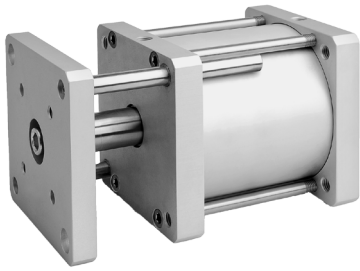


Ø [mm]	B	D	D1	D2	D4	G	H+	H+ (FPM version)	H3	I1	K	P	S	T	W
Ø 125	140	30	M14	10	M12	G1/4	78	83	10	110	28	25	54	M27x2	10
Ø 160	180	40	M20	12	M16	G3/8	87	91	12	140	36	30	72	M36x2	12
Ø 200	220	40	M20	14	M16	G3/8	87	105	12	175	36	30	72	M36x2	12
Ø 250	270	40	M24	16	M20	G1/2	116	116	15	220	36	35	72	M36x2	12

JBN/JBF



Ø [mm]	B	D	D1	D2	D4	G	H+	H+ (FPM version)	H3	I1	K	P	S	T	W	W+
Ø 125	140	30	M14	10	M12	G1/4	78	83	10	110	28	25	54	M27x2	10	10
Ø 160	180	40	M20	12	M16	G3/8	87	91	12	140	36	30	72	M36x2	12	12
Ø 200	220	40	M20	14	M16	G3/8	87	105	12	175	36	30	72	M36x2	12	12
Ø 250	270	40	M24	16	M20	G1/2	116	116	15	220	36	35	72	M36x2	12	12



Ø [mm]	B	D	D1	D2	D4	D5	D6	D7	D9	D10
Ø 125	140	30	M14	10	M12	M10	34	14	10	90
Ø 160	180	40	M20	12	M16	M12	46	20	12	110
Ø 200	220	40	M20	14	M16	M12	46	20	12	110

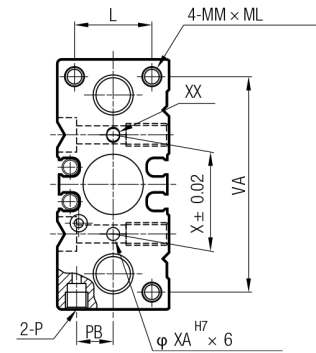
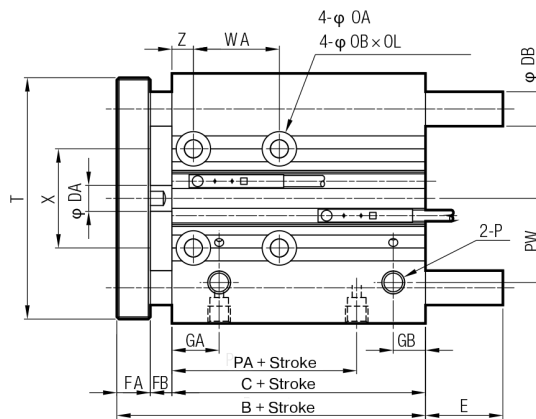
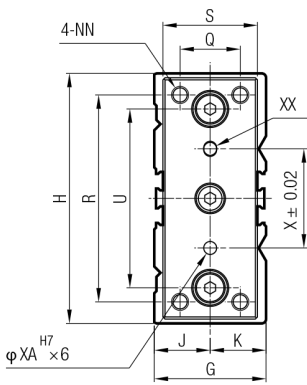
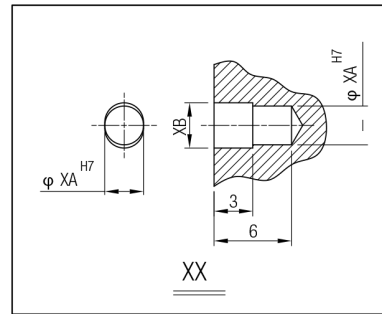
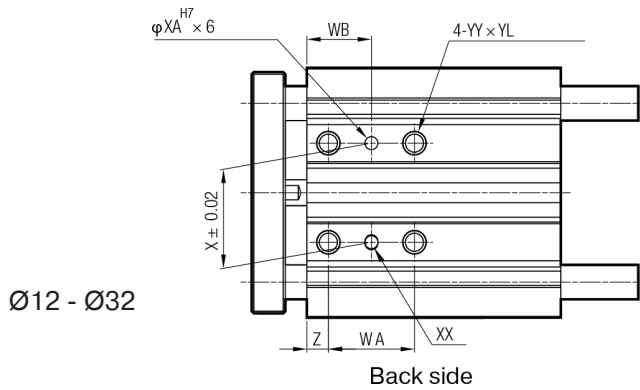
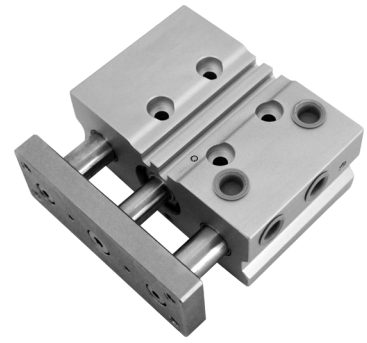
Ø [mm]	G	H+	H+ (FPM version)	H3	I1	K	L4	L5	S1	W
Ø 125	G1/4	78	83	10	110	28	12	3	18	10
Ø 160	G3/8	87	91	12	140	36	16	3	23	12
Ø 200	G3/8	87	105	12	175	36	16	3	23	12



Twin-Guide Cylinder

Twin-Guide Cylinder

Technical information											
Diameter	Ø6 - Ø8 - Ø12 - Ø16 - Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 mm										
	<table border="0"> <tr> <td>A-CG04</td> <td colspan="2"> ----- </td> </tr> <tr> <td>A-CG02</td> <td colspan="2"> ----- </td> </tr> <tr> <td>A-CG01</td> <td colspan="2"> ----- </td> </tr> </table>		A-CG04	-----		A-CG02	-----		A-CG01	-----	
A-CG04	-----										
A-CG02	-----										
A-CG01	-----										
Stroke	10 - 20 - 25 - 30 - 40 - 50 - 75 - 100 - 125 - 150 - 175 - 200 - 250 - 300 - 350 - 400 mm (A-CG01)										
	10 - 20 - 30 - 40 - 50 - 60 - 70 - 80 - 90 - 100 mm (A-CG02)										
	10 - 20 - 30 - 40 - 50 - 75 - 100 - 125 - 150 mm (A-CG04)										
Medium	Air										
Pressure range	1,5 ... 7 bar (A-CG04) 0,5 ... 7 bar (A-CG02) 1 ... 10 bar (A-CG01, CC_)										
Temperature range	-5°C ... +60°C (plain bearing) -20°C ... +80°C (ball bearing)										
Speed range	50 mm/s ... 500 mm/s										
	Below 0°C air has to be dried.										
Versions	A-CG01, A-CG02, A-CG04 (plain bearing) CCIG6, CCBG6, CCLG6, CCVG (ball bearing)										
Materials	A_	C_									
Body	Aluminum	Aluminum									
Plate	Carbon steel	Nickel-plated steel									
Piston rod	Ø12 - Ø20 Stainless steel Ø25 - Ø63 Carbon steel	Chrome-plated steel									
Seals	NBR	NBR, PUR									

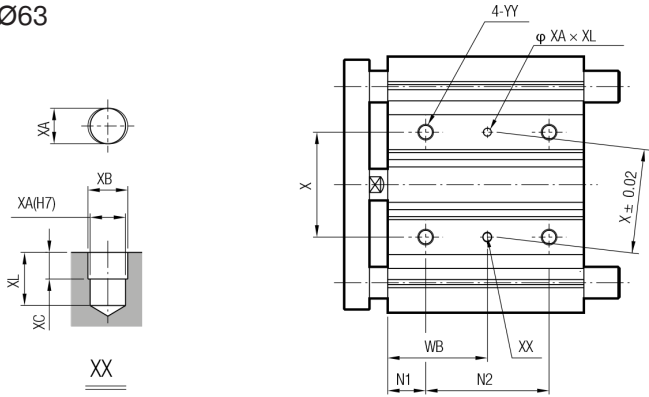


Ø [mm]	B	C	DA	DB	FA	FB	G	GA	GB	H	J	K	L	MM	ML	NN	OA	OB
Ø12	42	29	6	8	8	5	26	11	15*	58	13	13	18	M4x0,7	10	M4x0,7	4,3	8
Ø16	46	33	8	10	8	5	30	11	18**	64	15	15	22	M5x0,8	12	M5x0,8	4,3	8
Ø20	53	37	10	12	10	6	36	10,5	9	85	19	19	24	M5x0,8	13	M5x0,8	5,2	9,5
Ø25	53,5	37,5	12	16	10	6	42	11,5	9	96	21	21	30	M6x1,0	15	M6x1,0	5,2	9,5
Ø32	59,5	37,5	16	20	12	10	51	12,5	9	116	25	25	34	M8x1,25	20	M8x1,25	6,6	11,0

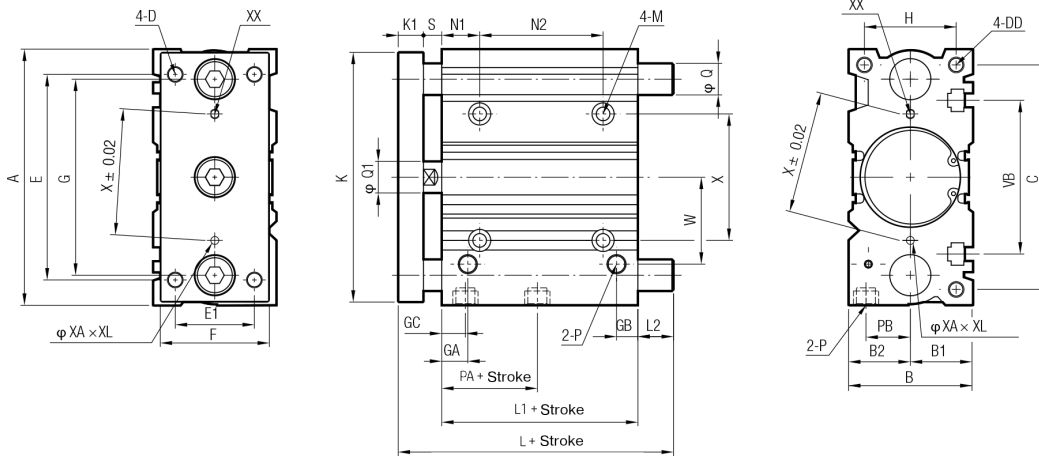
Ø [mm]	OL	P	PA	PB	PW	Q	R	S	T	U	VA	X	XA	XB	YY	YL	Z
Ø12	4,5	M5x0,8	14	8,5	18	14	48	22	56	41,5	50	23	3	3,5	M5x0,8	10	5
Ø16	4,5	M5x0,8	15	10	19	16	54	25	62	46	56	24	3	3,5	M5x0,8	10	5
Ø20	5,5	G1/8	12,5	11,5	25	18	70	30	81	55	72	28	3	3,5	M6x1,0	12	17
Ø25	5,5	G1/8	12,5	13,5	29	26	78	38	91	65	82	34	4	4,5	M6x1,0	12	17
Ø32	7,5	G1/8	7	16	34	30	96	44	110	80	98	42	4	4,5	M8x1,25	16	21

* When stroke length is equal to 19 mm or less, GB = 7.5 mm
 ** When stroke length is equal to 19 mm or less, GB = 9.0 mm

Ø40 - Ø63



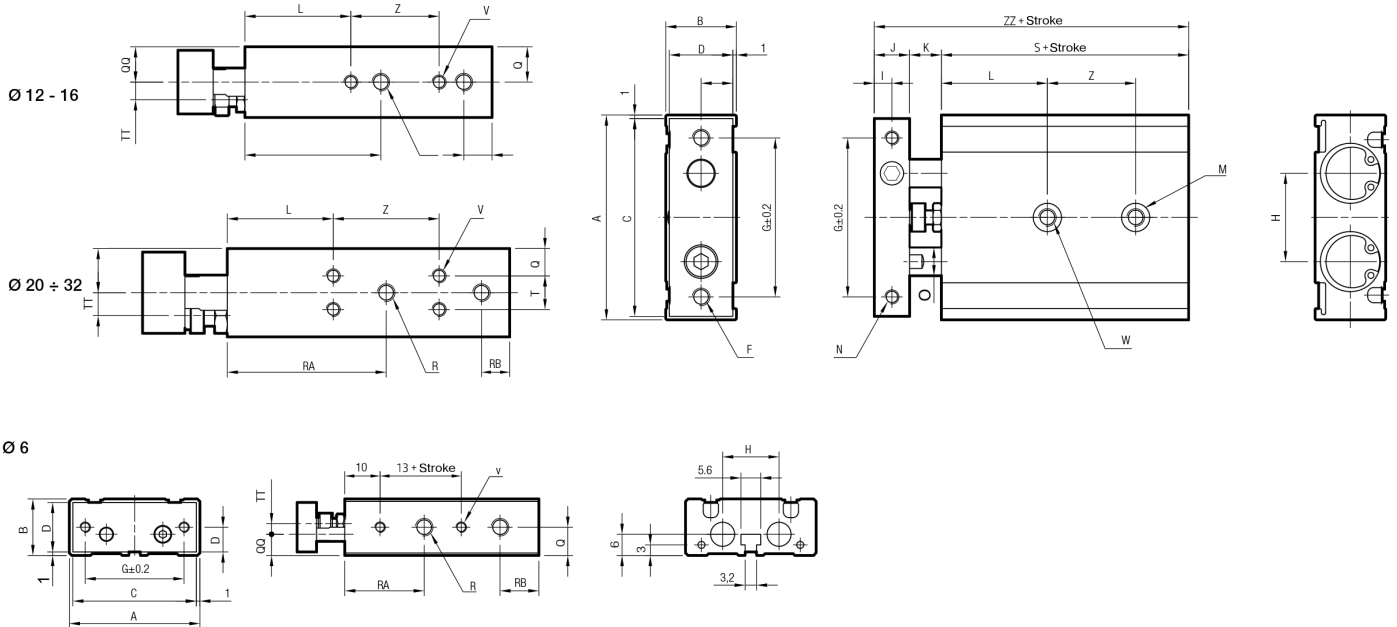
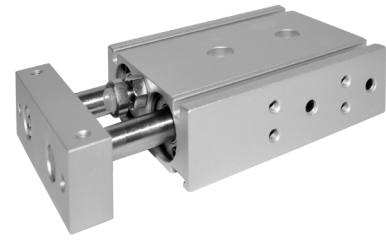
Back side



Ø [mm]	A	B	B1	B2	C	D	DD	E	E1	F	G	GA	GB	GC	H	K	K1	L1
Ø40	120	54	27	27	106	M8x1,25	M8x1,25x20	104	30	44	86	14,0	10,0	14,0	40	118	12	44
Ø50	148	64	32	32	130	M10x1,5	M10x1,5x22	130	40	60	110	14,0	11,0	12,0	46	146	16	44
Ø63	162	78	39	39	142	M10x1,5	M10x1,5x22	130	50	70	124	16,5	13,5	16,5	58	158	16	49

Ø [mm]	M	N1	P	PA	PB	Q1	S	VB	W	X	XA	XB	XC	XL	YY
Ø40	Ø6,6-Ø11x7,5	22	G1/8	13	18,0	16	10	72	38	50	4	4,5	3	6,0	M8x1,25x16
Ø50	Ø8,6-Ø14,9	24	G1/4	9	21,5	20	12	92	47	66	5	6,0	4	8,0	M10x1,5x20
Ø63	Ø8,6-Ø14,9	24	G1/4	14	28,0	20	12	110	55	80	5	6,0	4	8,0	M10x1,5x20

Ø [mm]	N2			WB			L		L2		Q
	25 mm	50-100 mm	100~ mm	25 mm	50-100 mm	100~ mm	25 - 50 mm	50~ mm	25 - 50 mm	50~ mm	
Ø40	24	48	124	34	46	84	97,0	102	31,0	36	Ø20
Ø50	24	48	124	36	48	86	106,5	118	34,5	46	Ø25
Ø63	28	52	128	38	50	88	106,5	118	39,5	41	Ø25



Ø [mm]	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Ø6	37	16	35	14	7	2-M3x0,5	28	16	2,75	5,5	8	13	2-Ø6,5x3,3*	2-M3x0,5	4
Ø12	46	18	44	16	8	2-M4x0,7	35	19	4,00	8,0	9	20	4-Ø6,5x3,3	4-M3x0,5x5	6
Ø16	58	20	56	18	9	2-M5x0,8	45	25	5,00	10,0	9	30	4-Ø8x4,4	4-M4x0,7x6	8
Ø20	64	25	62	23	11,5	2-M5x0,8	50	28	6,00	12,0	12	30	4-Ø9,5x5,3	4-M4x0,7x6	10
Ø25	80	30	78	28	14	2-M6x1,0	60	35	6,00	12,0	12	30	4-Ø11x6,3	4-M4x0,8x8	12
Ø32	98	38	96	36	18	2-M6x1,0	75	44	8,00	16,0	14	30	4-Ø11x6,3	4-M4x0,8x8	16

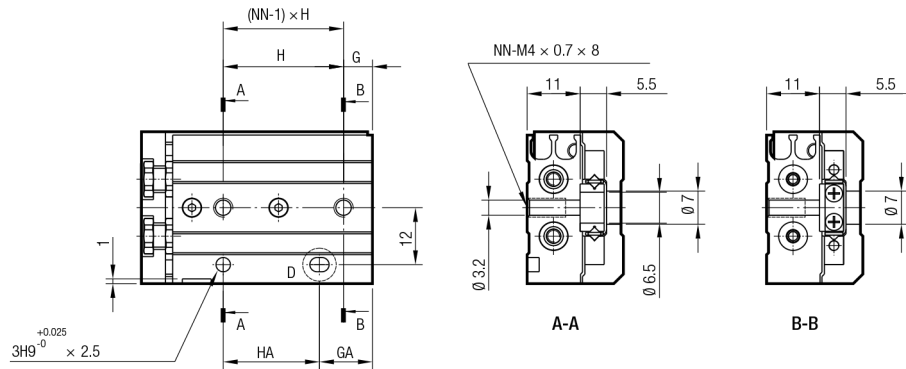
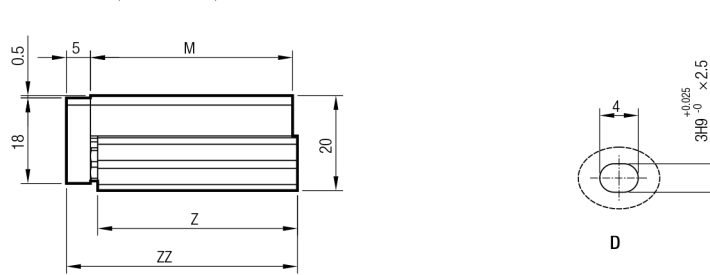
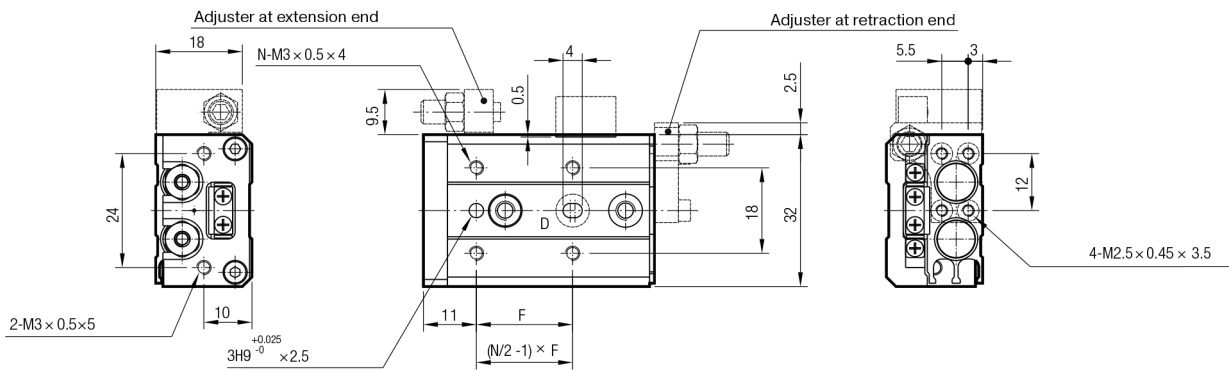
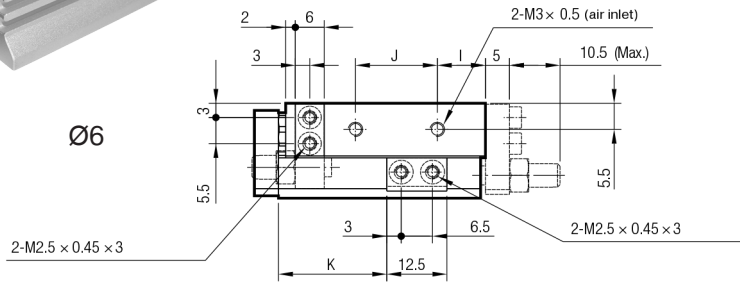
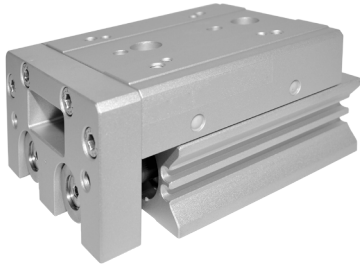
Ø [mm]	Q	QQ	R	RA	RB	S	T	TT	V	W
Ø6	8,00	6,0	4-M5x0,8	22,5	11	45	-	3	4-M3x0,5x4,5	2-Ø3,4
Ø12	9,00	10,0	4-M5x0,8	30,0	8	55	-	3,5	4-M3x0,5x4,5	2-M4x0,7
Ø16	10,00	10,0	4-M5x0,8	38,5	8	60	-	5	4-M4x0,7x5	2-M5x0,8
Ø20	7,75	12,5	4-M5x0,8	45,0	8	70	9,5	6,5	8-M4x0,7x5,5	2-M6x1,0
Ø25	8,50	15,0	4-G1/8	46,0	9	72	13,0	9	8-M5x0,8x7,5	2-M8x1,25
Ø32	9,00	19,0	4-G1/8	56,0	10	82	20,0	11,5	8-M5x0,8x7,5	2-M8x1,25

Z (stroke)						
Ø [mm]	10 ~ 25	30 ~ 50	60 ~ 75	80	90~100	ZZ
Ø6	10+1/2 Stroke**					58,8
Ø12	30	40	50	-	-	72,0
Ø16	25	35	45	45	55	79,0
Ø20	30	40	60	60	60	94,0
Ø25	30	40	60	60	60	96,0
Ø32	40	50	70	70	70	112,0

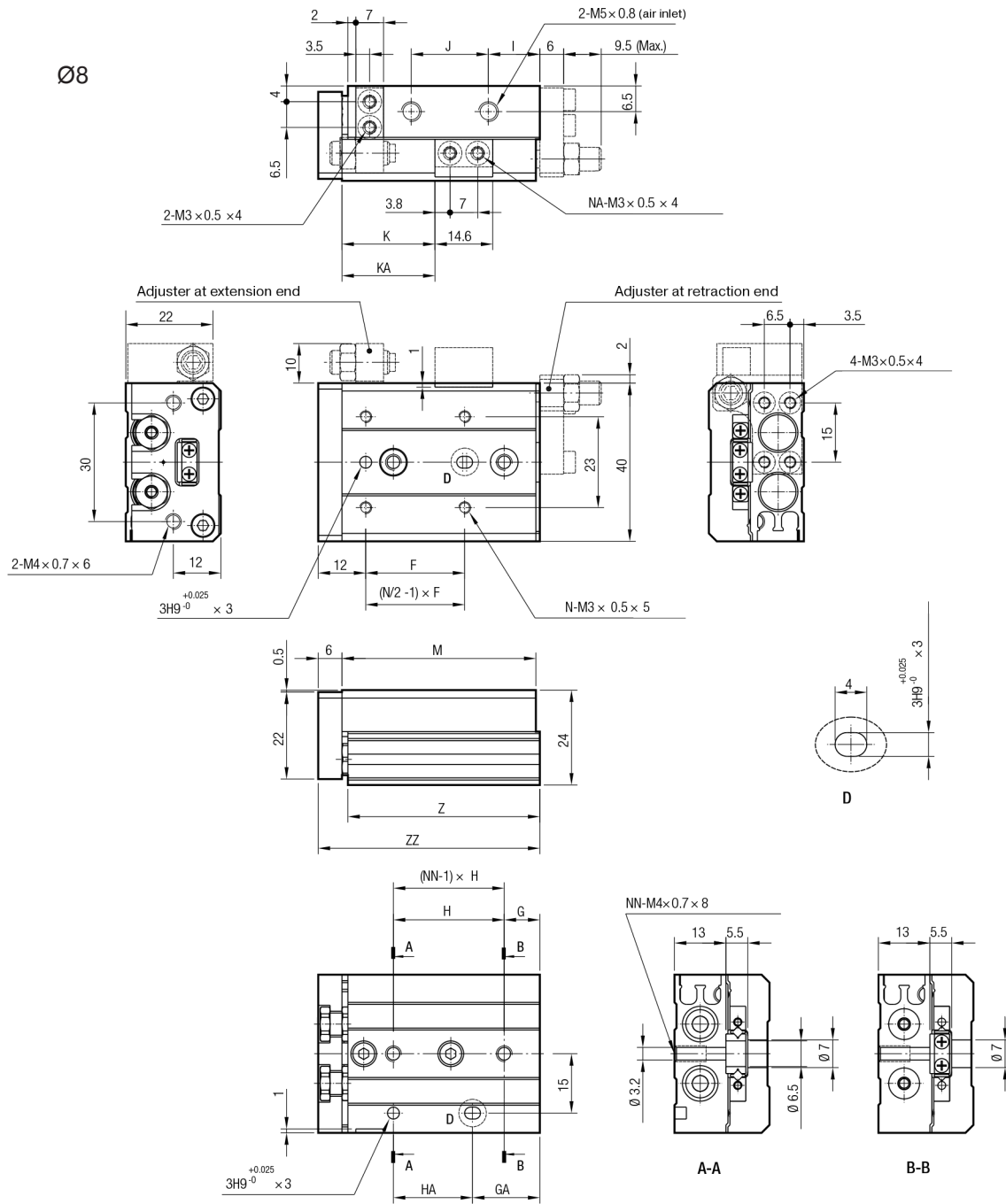
*Ø6 - single side
 **Ø6 - stroke (10-20-30 mm)



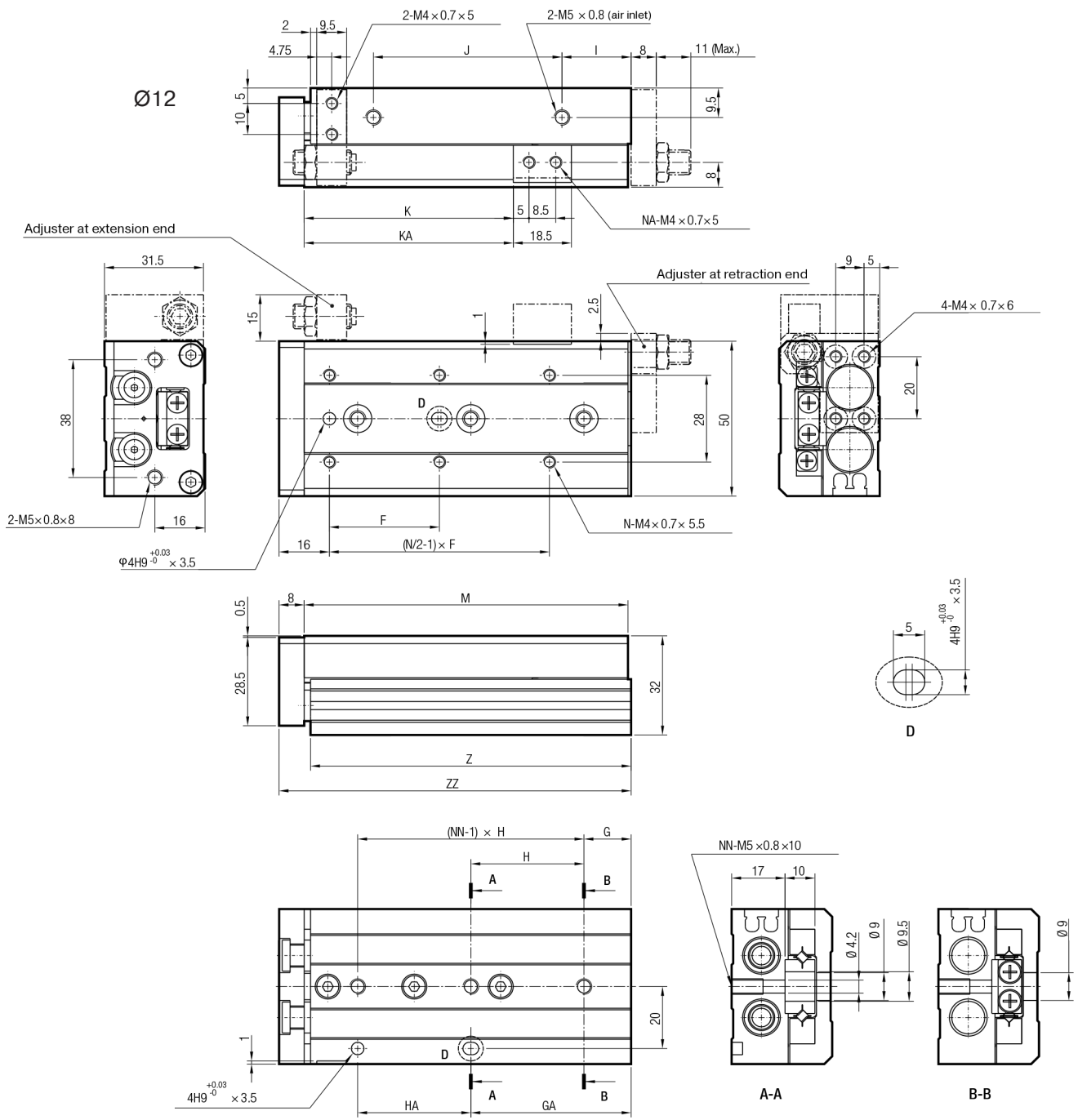
A-CG04



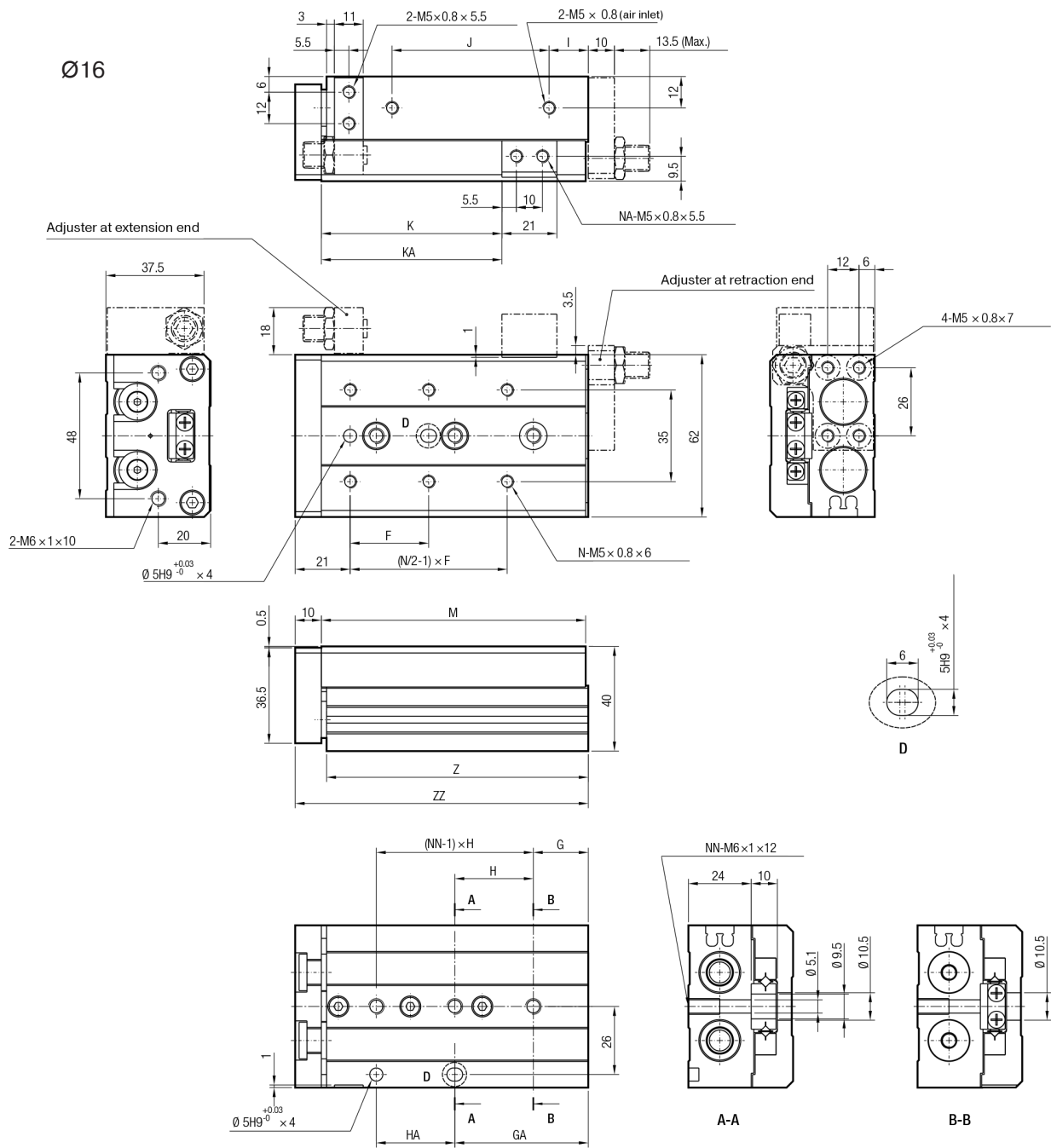
Stroke [mm]	F	G	GA	H	HA	I	J	K	M	N	NN	Z	ZZ
10	20	6	11	25	20	10	17	22,5	42	4	2	41,5	48
20	30	6	21	35	20	10	27	32,5	52	4	2	51,5	58
30	20	11	31	20	20	7	40	42,5	62	6	3	61,5	68
40	28	13	43	30	30	19	50	52,5	84	6	3	83,5	90
50	38	17	41	24	48	25	60	62,5	100	6	4	99,5	106



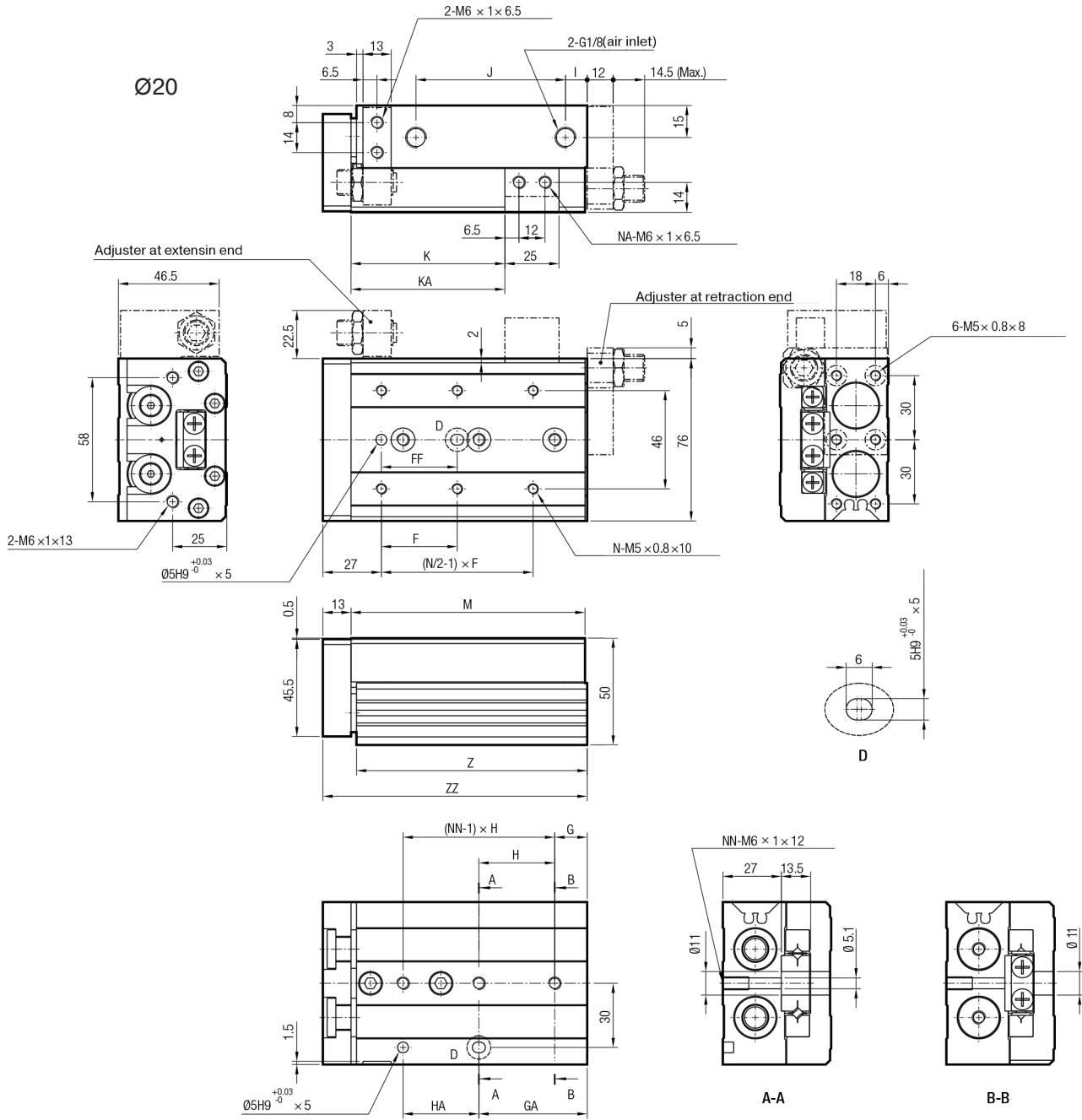
Stroke [mm]	F	G	GA	H	HA	I	J	K	KA	M	N	NA	NN	Z	ZZ
10	25	9	17	28	20	13,0	19,5	23,5	-	49	4	2	2	48,5	56
20	25	12	12	30	30	8,5	29,0	33,5	-	54	4	2	2	53,5	61
30	40	13	33	20	20	9,5	39,0	43,5	-	65	4	2	3	64,5	72
40	50	15	43	28	28	10,5	56,0	53,5	-	83	4	2	3	82,5	90
50	38	20	43	23	46	24,5	60,0	63,5	82,5	101	6	4	4	100,5	108
75	50	27	83	56	56	38,5	96,0	88,5	132,5	151	6	4	5	150,5	158



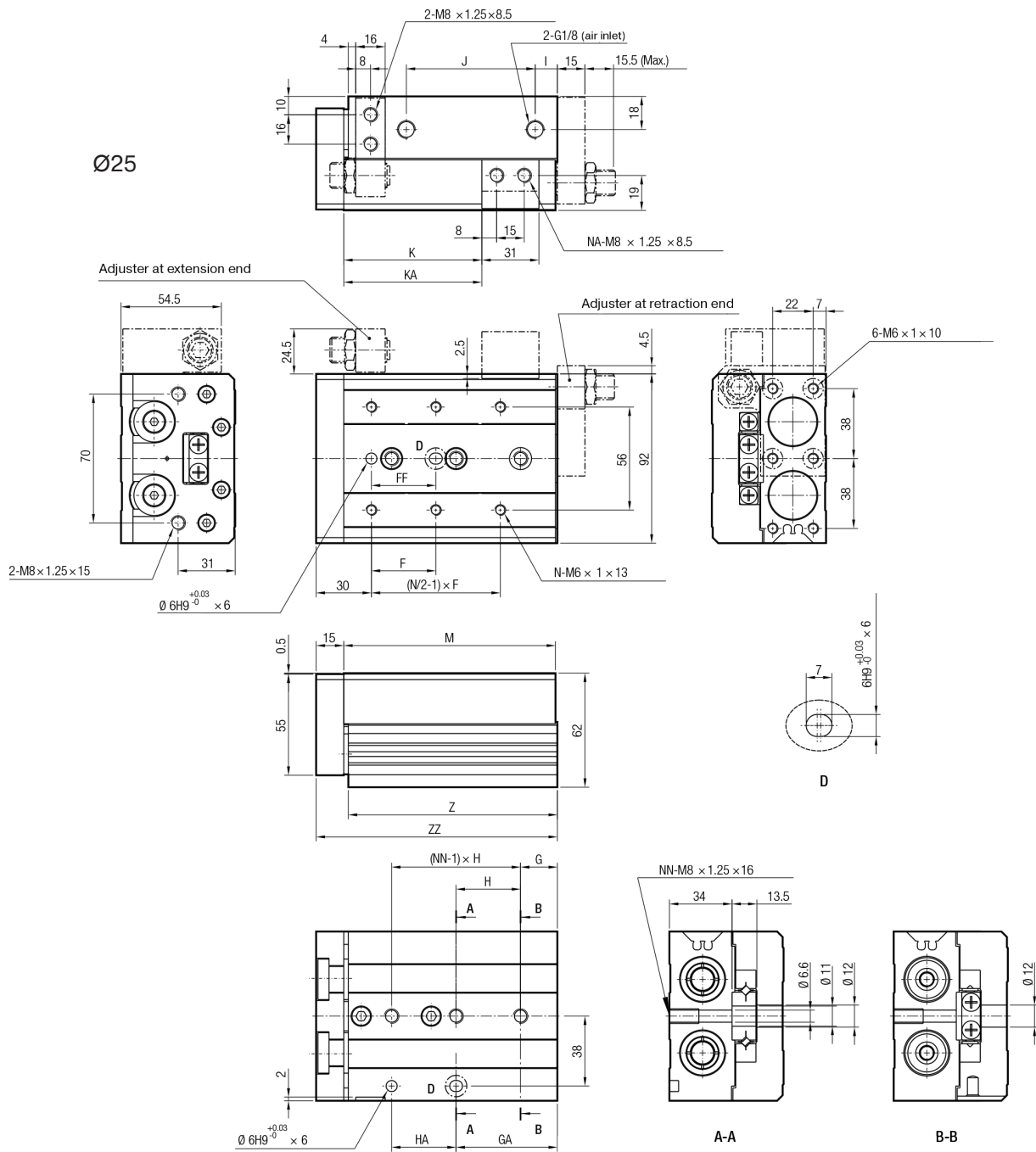
Stroke [mm]	F	G	GA	H	HA	I	J	K	KA	M	N	NA	NN	Z	ZZ
10	35	15	15	40	40	10	40	26,5	-	71	4	2	2	70	80
20	35	15	15	40	40	10	40	36,5	-	71	4	2	2	70	80
30	35	15	15	40	40	10	40	46,5	-	71	4	2	2	70	80
40	50	17	42	25	25	10	52	56,5	-	83	4	2	3	82	92
50	35	15	51	36	36	22	60	66,5	-	103	6	2	3	102	112
75	55	25	61	36	72	43	85	91,5	125,5	149	6	4	4	148	158
100	65	35	111	38	76	52	130	116,5	116,5	203	6	4	5	202	212



Stroke [mm]	F	G	GA	H	HA	I	J	K	KA	M	N	NA	NN	Z	ZZ
10	35	16	16	40	40	10	40	29	-	76	4	2	2	75	87
20	35	16	16	40	40	10	40	39	-	76	4	2	2	75	87
30	35	16	16	40	40	10	40	49	-	76	4	2	2	75	87
40	40	16	16	50	50	10	50	59	-	86	4	2	2	85	97
50	30	21	51	30	30	15	60	69	-	101	6	2	3	100	112
75	55	26	61	35	70	40	85	94	125	151	6	4	4	150	162
100	65	39	109	35	70	55	118	119	173	199	6	4	5	198	210
125	70	19	159	35	70	68	155	144	223	249	8	4	7	248	260

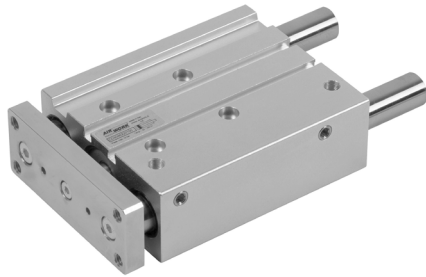
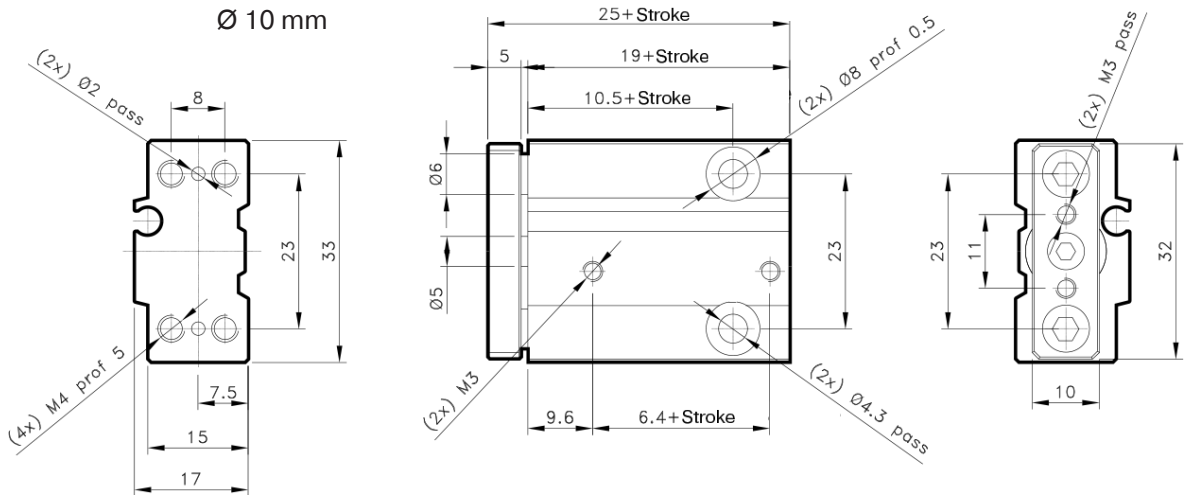
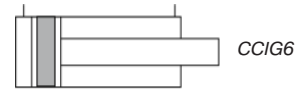
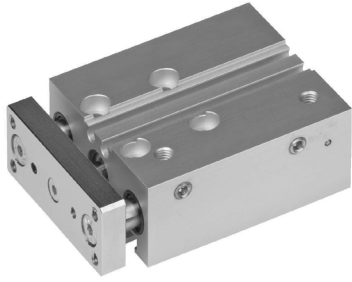


Stroke [mm]	F	FF	G	GA	H	HA	I	J	K	KA	M	N	NA	NN	Z	ZZ
10	50	40	15	25	45	35	10	44	31	-	83	4	2	2	81,5	97
20	50	40	15	25	45	35	10	44	41	-	83	4	2	2	81,5	97
30	50	40	15	25	45	35	10	44	51	-	83	4	2	2	81,5	97
40	60	50	15	35	55	35	10	54	61	-	93	4	2	2	91,5	107
50	35	35	15	50	35	35	10	69	71	-	108	6	2	3	106,5	122
75	60	60	19	54	35	70	10	108	96	-	147	6	2	4	145,5	161
100	70	70	37	107	35	70	58	113	121	169	200	6	4	5	198,5	214
125	70	70	41	155	38	76	70	155	146	223	254	8	4	6	252,5	268
150	80	80	19	195	44	88	87	190	171	275	306	8	4	7	304,5	320

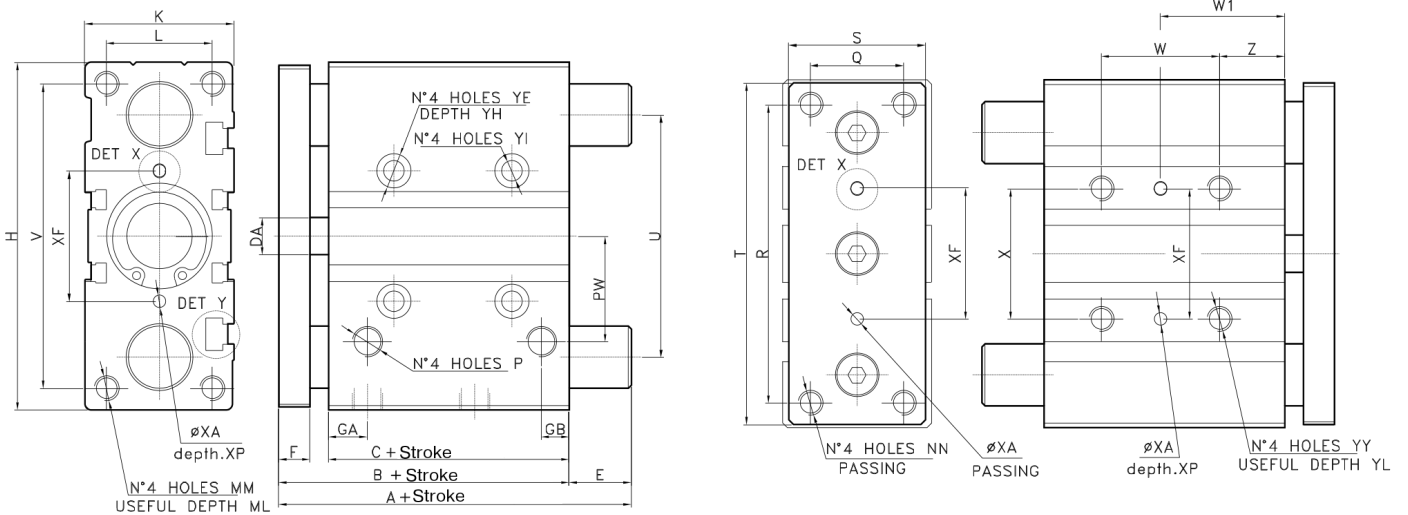
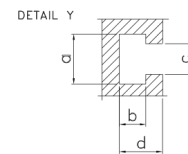
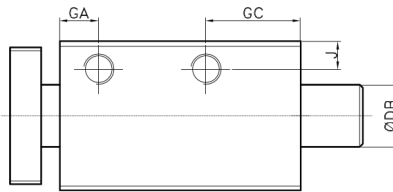
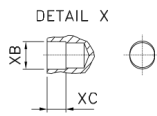


Stroke [mm]	F	FF	G	GA	H	HA	I	J	K	KA	M	N	NA	NN	Z	ZZ
10	50	40	22	22	45	45	12	47	35	-	92	4	2	2	90,5	108
20	50	40	22	22	45	45	12	47	45	-	92	4	2	2	90,5	108
30	50	40	22	22	45	45	12	47	55	-	92	4	2	2	90,5	108
40	60	50	22	22	55	55	12	57	65	-	102	4	2	2	100,5	118
50	35	35	20	55	35	35	12	70	75	-	115	6	2	3	113,5	131
75	60	60	26	61	35	70	33	90	100	-	156	6	2	4	154,5	172
100	70	70	32	102	35	70	50	114	125	162	197	6	4	5	195,5	213
125	75	75	40	154	38	76	67	155	150	218	255	8	4	6	253,5	271
150	80	80	30	190	40	80	82	180	175	258	295	8	4	7	293,5	311

CCIG6



Ø12 - Ø63 mm



Ø [mm]	B	C	DA	F	GA	GB	GC	H	J	K	L	MM	ML	NN	P	PW	Q	R	S
Ø 12	42	29	6	7	10	7	18	58	5	26	18	M4	10	M4	M5	18	14	48	22
Ø 16	46	33	8	8	11	8	18	64	5	30	22	M5	12	M5	M5	19	16	54	25
Ø 20	53	37	10	10	10,5	8,5	24,5	83	6,5	36	24	M5	13	M5	G1/8	25	18	70	30
Ø 25	53,3	37,5	10	10	11,5	9	25	93	7,5	42	30	M6	15	M6	G1/8	28,5	26	78	38
Ø 32	59,5	37,5	12	12	12,5	9	30,5	112	9	48	34	M8	20	M8	G1/8	34	30	96	44
Ø 40	66	44	12	12	14	10	31	120	9	54	40	M8	20	M8	G1/8	38	30	104	44
Ø 50	72	44	16	16	14	11	35	148	9,5	64	46	M10	22	M10	G1/4	47	40	130	60
Ø 63	77	49	16	16	16,5	13,5	35	162	11	78	58	M10	22	M10	G1/4	55	50	130	70

Ø [mm]	T	U	V	X	YY	YL	YE	YH	YI	Z	XF	XA	XP	XB	XC	a	b	c	d
Ø 12	56	41	50	23	M4	10	8	4,5	4,3	5	23	3	6	3,5	3	7,4	3,7	4,4	6,2
Ø 16	62	46	56	24	M5	10	8	4,5	4,3	5	24	3	6	3,5	3	7,4	3,7	4,4	6,2
Ø 20	81	54	72	28	M6	12	9,5	5,5	5,6	17	28	3	6	3,5	3	8,4	4,5	5,5	7,3
Ø 25	91	64	82	34	M6	12	9,5	5,5	5,6	17	34	4	6	4,5	3	8,4	4,5	5,5	7,5
Ø 32	110	78	98	42	M8	16	11	7,5	6,6	21	42	4	6	4,5	3	10,5	5,5	6,5	9,0
Ø 40	118	86	106	50	M8	16	11	7,5	6,6	22	50	4	6	4,5	3	10,5	5,5	6,5	9,0
Ø 50	146	110	130	66	M10	20	14	9	8,6	24	66	5	8	6,0	4	13,5	7,5	8,5	12,0
Ø 63	158	124	142	80	M10	20	14	9	8,6	24	80	5	8	6,0	4	17,8	10	11,0	16,5

Plain bearing

Ø [mm]	A (Stroke)		E (Stroke)		DB
Ø12	42 (10-50)	60,5 (75-100)	0 (10-50)	18,5 (75-100)	8
Ø16	46 (10-50)	64,5 (75-100)	0 (10-50)	18,5 (75-100)	10
Ø20	53 (20-50)	84,5 (75-200)	0 (20-50)	31,5 (75-200)	12
Ø25	53,5 (20-50)	85 (75-200)	0 (20-50)	31,5 (75-200)	16
Ø32	97 (25-50)	107 (75-200)	37,5 (25-50)	47,5 (75-200)	20
Ø40	97 (25-50)	107 (75-200)	31 (25-50)	41 (75-200)	20
Ø50	106,5 (25-50)	118 (75-200)	34,5 (25-50)	46 (75-200)	25
Ø63	106,5 (25-50)	118 (75-200)	29,9 (25-50)	41 (75-200)	25

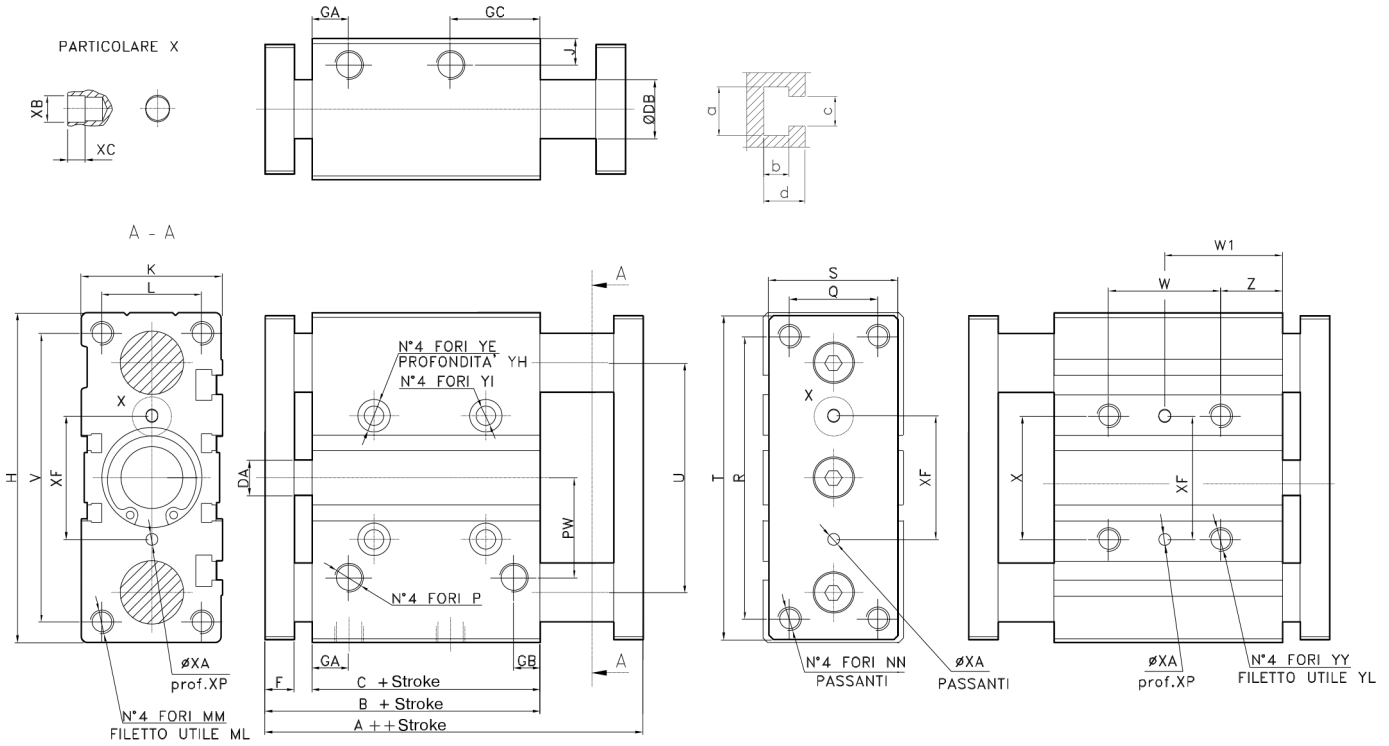
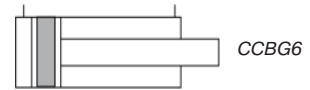
Ball bearing

Ø [mm]	A (Stroke)		E (Stroke)		DB		
Ø12	43 (10-30)	55 (40-100)	1 (10-30)	13 (40-100)	6		
Ø16	46 (10-30)	66 (40-100)	0 (10-30)	20 (40-100)	8		
Ø20	53 (20-30)	85,5 (40-200)	0 (20-30)	32,5 (40-200)	12		
Ø25	53,5 (20-30)	86 (40-200)	0 (20-30)	32,5 (40-200)	12		
Ø32	97 (25-50)	107 (75-200)	37,5 (25-50)	47,5 (75-200)	20		
Ø40	97 (25-50)	107 (75-200)	31 (25-50)	41 (75-200)	20		
Ø50	106,5 (25)	114 (50)	118 (75-200)	34,5 (25)	42 (50)	46 (75-200)	25
Ø63	106,5 (25)	114 (50)	118 (75-200)	29,5 (25)	37 (50)	41 (75-200)	25

Ø [mm]	W (Stroke)		W1 (Stroke)			
Ø12	20 (10-30)	40 (40-100)	15 (10-30)	25 (40-100)		
Ø16	24 (10-30)	44 (40-100)	17 (10-30)	27 (40-100)		
Ø20	24 (20-30)	44 (40-100)	120 (125-200)	29 (20-30)	39 (40-100)	77 (125-200)
Ø25	24 (25)	44 (40-100)	120 (125-200)	29 (20-30)	39 (40-100)	77 (125-200)

Ø [mm]	W (Stroke)		W1 (Stroke)			
Ø32	24 (25)	48 (50-100)	124 (125-200)	33 (25)	45 (50-100)	83 (125-200)
Ø40	24 (25)	48 (50-100)	124 (125-200)	34 (25)	46 (50-100)	84 (125-200)
Ø50	24 (25)	48 (50-100)	124 (125-200)	36 (25)	48 (50-100)	86 (125-200)
Ø63	28 (25-50)	52 (50-100)	128 (125-200)	38 (25)	50 (50-100)	88 (125-200)

CCBG6



Ø [mm]	A	B	C	DA	F	GA	GB	GC	H	J	K	L	MM	ML	NN	P	PW	Q	R
Ø16	59	46	33	8	8	11	8	18	64	5	30	22	M5	12	M5	M5	19	16	54
Ø20	69	53	37	10	10	10,5	8,5	24,5	83	6,5	36	24	M5	13	M5	G1/8	25	18	70
Ø25	69,5	53,5	37,5	10	10	11,5	9	25	93	7,5	42	30	M6	15	M6	G1/8	28,5	26	78
Ø32	81,5	59,5	37,5	12	12	12,5	9	30,5	112	9	48	34	M8	20	M8	G1/8	34	30	96
Ø40	88	66	44	12	12	14	10	31	120	9	54	40	M8	20	M8	G1/8	38	30	104
Ø50	100	72	44	16	16	14	11	35	148	9,5	64	46	M10	22	M10	G1/4	47	40	130
Ø63	105	77	49	16	16	16,5	13,5	35	162	11	78	58	M10	22	M10	G1/4	55	50	130

Ø [mm]	S	T	U	V	X	XF	XA	XP	XB	XC	YY	YL	YE	YH	YI	Z	a	b	c	d
Ø16	25	62	46	56	24	24	3	6	3,5	3	M5	10	8	4,5	4,3	5	7,4	3,7	4,4	6,2
Ø20	30	81	54	72	28	28	3	6	3,5	3	M6	12	9,5	5,5	5,6	17	8,4	4,5	5,5	7,3
Ø25	38	91	64	82	34	34	4	6	4,5	3	M6	12	9,5	5,5	5,6	17	8,4	4,5	5,5	7,5
Ø32	44	110	78	98	42	42	4	6	4,5	3	M8	16	11	7,5	6,6	21	10,5	5,5	6,5	9
Ø40	44	118	86	106	50	50	4	6	4,5	3	M8	16	11	7,5	6,6	22	10,5	5,5	6,5	9
Ø50	60	146	110	130	66	66	5	8	6	4	M10	20	14	9	8,6	22	13,5	7,5	8,5	12
Ø63	70	158	124	142	80	80	5	8	6	4	M10	20	14	9	8,6	24	17,8	10	11	16,5

Plain bearing

Ø [mm]	DB
Ø16	10
Ø20	12
Ø25	16
Ø32	20
Ø40	20
Ø50	25
Ø63	25

Ball bearing

Ø [mm]	DB
Ø16	8
Ø20	12
Ø25	12
Ø32	20
Ø40	20
Ø50	25
Ø63	25

Ø [mm]	W (Stroke)			W1 (Stroke)		
	Ø16	24 (10 - 30)	44 (40-100)		17 (10-30)	27 (40-100)
Ø20	24 (20-30)	44 (40-100)		29 (20-30)	39 (40-100)	77 (125-200)
Ø25	24 (20-30)	44 (40-100)	120 (125-200)	29 (20-30)	39 (40-100)	77 (125-200)
Ø32	24 (25)	48 (40-100)	120 (125-200)	33 (25)	45 (50-100)	83 (125-200)
Ø40	24 (25)	48 (50-100)	124 (125-200)	34 (25)	46 (50-100)	84 (125-200)
Ø50	24 (25)	48 (50-100)	124 (125-200)	36 (25)	48 (50-100)	86 (125-200)
Ø60	28 (25)	52 (50-100)	128 (125-200)	38 (25)	50 (50-100)	88 (125-200)

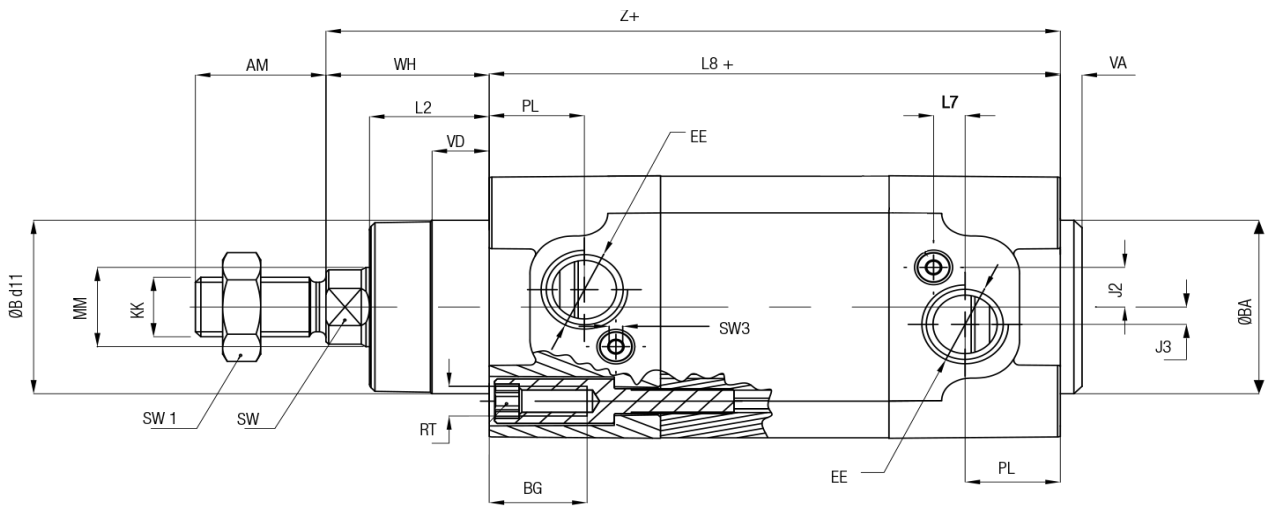
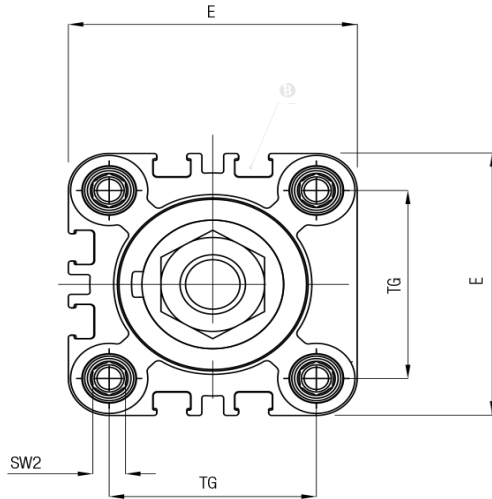
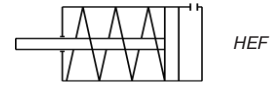


Profile Cylinder | ISO 15552

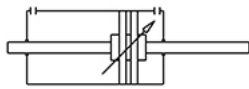
Technical information	
Diameter	Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 - Ø125 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C
Below 0°C air has to be dried.	

Materials	
Tube	Anodized aluminum
Heads	Die-cast aluminum
Piston	Aluminum
Piston rod	Chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

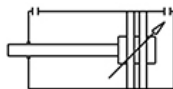
H	I	F	V	32 /	80	Ex
				DIAMETER	STROKE	OPTIONS
				32	25 320	Ex ATEX version
				40	40 400	
				50	50 500	
				63	80 600	
				80	100 700	
				100	125 800	
				125	160 900	
					200 1000	
					250	
VERSION						
WITHOUT Standard seals						
R Stainless steel piston rod (not available for type HEF)						
K FPM Piston (not available for type HEF)						
RK FPM Piston and stainless steel piston rod (not available for type HEF)						
V FPM seals(not available for type HEF)						
RV Stainless steel piston rod and FPM seals = high temperature version (not available for type HEF)						
FUNCTION						
E Single acting (max. stroke: 100 mm)						
I Double acting						
B Double acting, through piston rod						



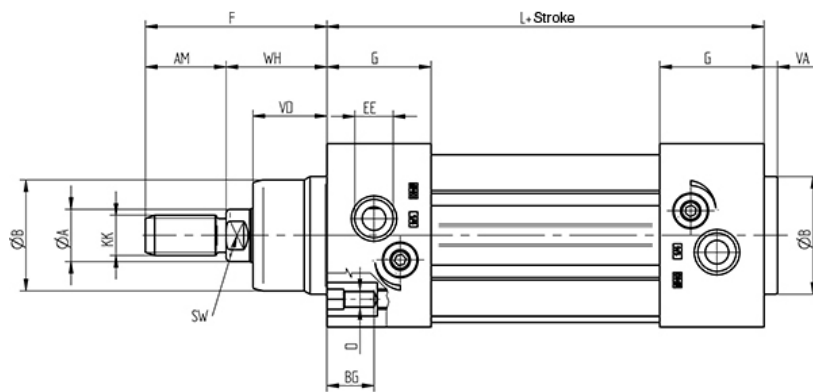
Ø [mm]	ØB d11	VD	VA	L2	WH	MM	SW	KK	AM	SW1	Z	LB	BG	RT	SW2	E	TG	EE	PL	J3
Ø32	30	10	4	20	26	12	10	M10x1,25	22	17	145	119	18	M6	6	46	32,5	G1/8	18	4
Ø40	35	10,5	4	22	30	16	13	M12x1,25	24	19	160	130	18	M6	6	54	38	G1/4	17,5	3,5
Ø50	40	11,5	4	28	37	20	17	M16x1,5	32	22	168	131	20	M8	8	64	46,5	G1/4	20,5	7
Ø63	45	15	4	29	37	20	17	M16x1,5	32	22	183	146	20	M8	8	74	56,5	G3/8	22	8
Ø80	45	15,7	4	35	46	25	22	M20x1,5	40	30	199	153	19	M10	6	94	72	G3/8	22	11
Ø100	55	19,2	4	38	51,5	25	22	M20x1,5	40	30	214,5	163	19	M10	6	111	89	G1/2	26	9



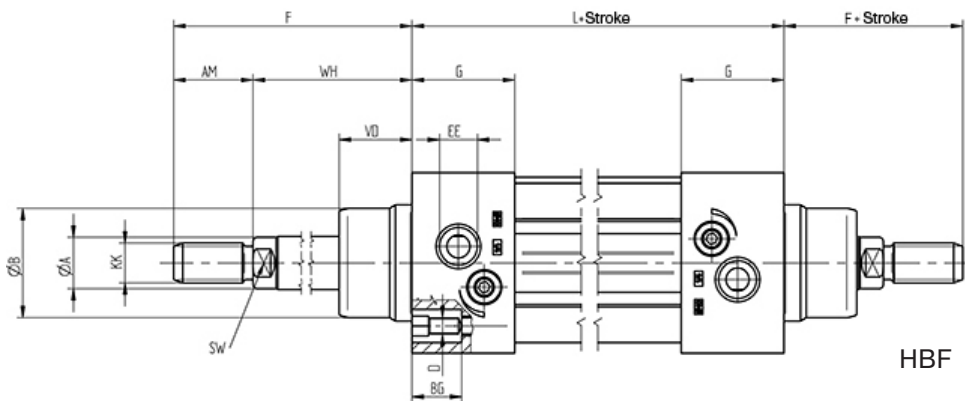
HBF



HIF



HIF



HBF

\varnothing [mm]	A	B	D	E	F	G	L	R	AM	BG	EE	KK	SW	VA	VD	WH
$\varnothing 32$	12	30	M6	47	48	26,5	94	32,5	22	16	G1/8	M10x1,25	10	4	18	26
$\varnothing 40$	16	35	M6	54,5	54	31	105	38	24	16	G1/4	M12x1,25	13	4	22	30
$\varnothing 50$	20	40	M8	65	69	31	106	46,5	32	16	G1/4	M16x1,5	17	4	25,5	37
$\varnothing 63$	20	45	M8	75	69	33,5	121	56,5	32	16	G3/8	M16x1,5	17	4	26	37
$\varnothing 80$	25	45	M10	93	86	40	128	72	40	17	G3/8	M20x1,5	22	4	32	46
$\varnothing 100$	25	55	M10	110	91	40,5	138	89	40	17	G1/2	M20x1,5	22	4	38	51
$\varnothing 125$	32	60	M12	134	119	47	160	110	54	20	G1/2	M27x2	27	6	46	65

Profile Tandem Cylinder| ISO 15552

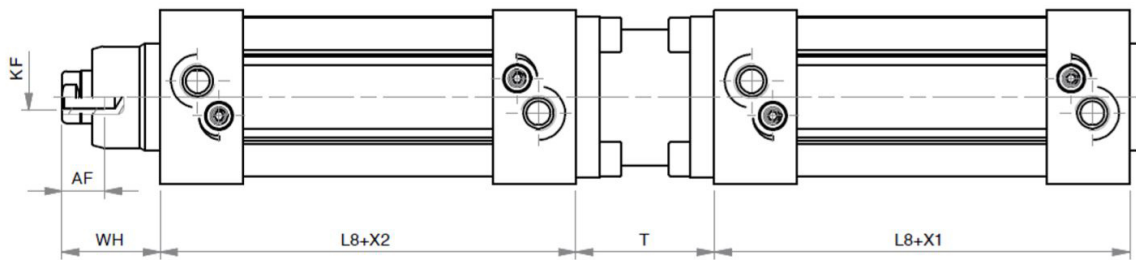
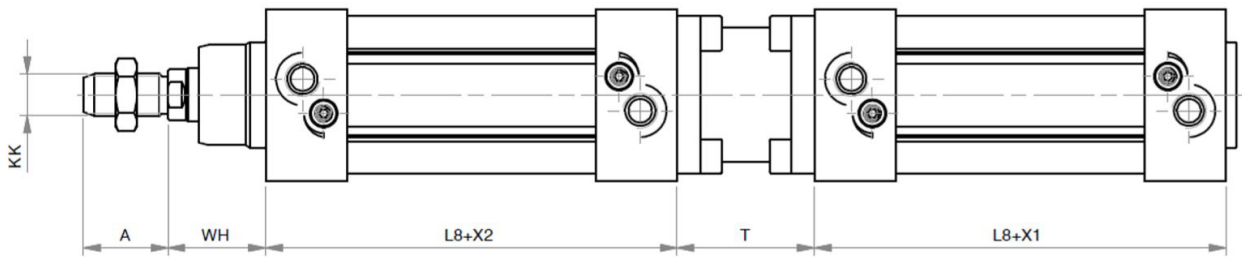
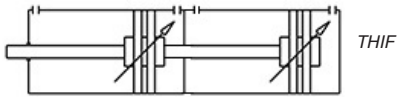
Technical information

Diameter	32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 - Ø125 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
	Below 0°C air has to be dried.

Materials

Tube	Anodized aluminum
Heads	Die-cast aluminum
Piston	Aluminum
Piston rod	Chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR

T H I F		32 /	2 X	80	Ex
FUNCTION		DIAMETER	QUANTITY OF CYLINDERS	STROKE	OPTIONS
T	Double acting tande	32	2	25	Ex ATEX version
		40	3	40	
		50	4	50	
		63		80	
		80		100	
		100		125	
		125		160	
				200	
				250	
				320	
			400		
			500		
			600		
			700		
			800		
			900		
			1000		



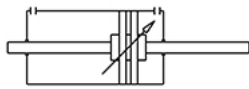
X1, X2: Stroke

Ø [mm]	A	AF	KF	KK	L8	T	WH
Ø32	22	12	M6	M10x1,25	94	39	26
Ø40	24	12	M8	M12x1,25	105	45	30
Ø50	32	16	M8	M16x,15	106	52	37
Ø63	32	16	M10	M16x1,5	121	53	37
Ø80	40	20	M10	M20x1,5	128	65	46
Ø100	40	20	M12	M20x1,5	138	77	51
Ø125	54	32	M16	M27x2	160	93	65

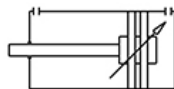
Technical information	
Diameter	32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 - Ø125 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C
Below 0°C air has to be dried.	

Materials	DILA	DIL, DBL
Tube	Anodized aluminum	Anodized aluminum
Heads	Die-cast aluminum	Die-cast aluminum
Piston	Aluminum	Technopolymer
Piston rod	Chromed steel	Chromed steel
Guide bushing	Sintered bronze	Sintered bronze
Seals	PUR, NBR	PUR, NBR

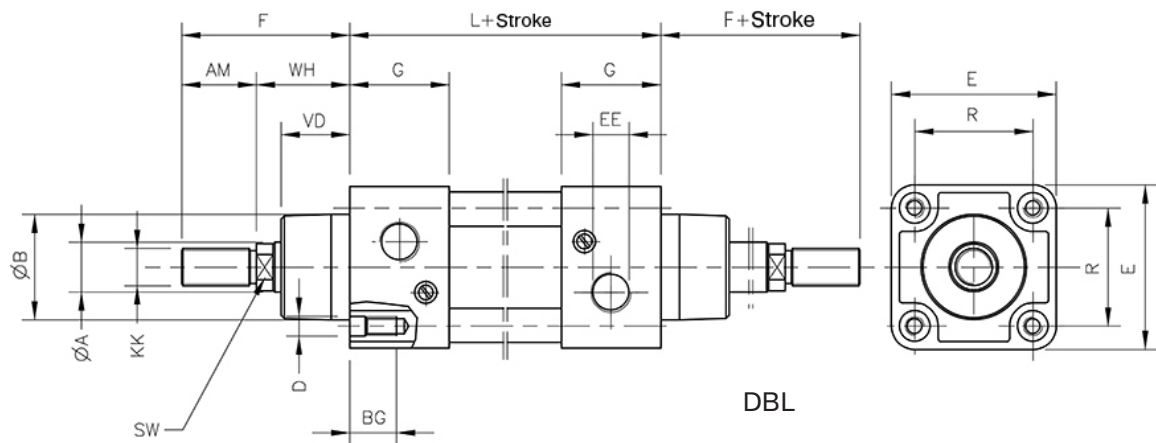
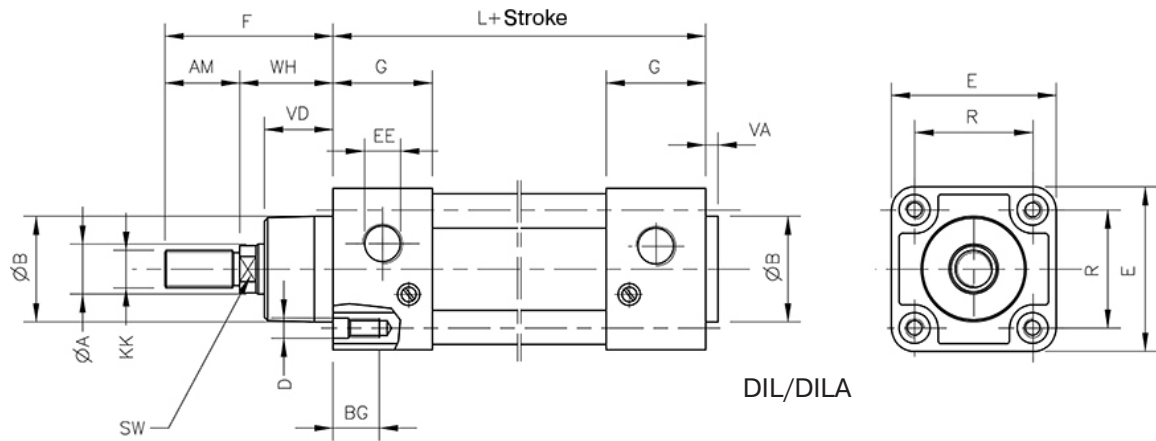
D	I	L	V	32 /	80
				DIAMETER	STROKE
				32	25
				40	40
				50	50
				63	80
				80	100
				100	125
				125	160
					200
					250
					320
					400
					500
					600
					700
					800
					900
					1000
VERSION					
WITHOUT Standard seals					
A Enforced piston					
R Stainless steel piston rod					
V FPM seals					
FUNCTION					
I Double acting					
B Double acting, through piston rod					



DBL

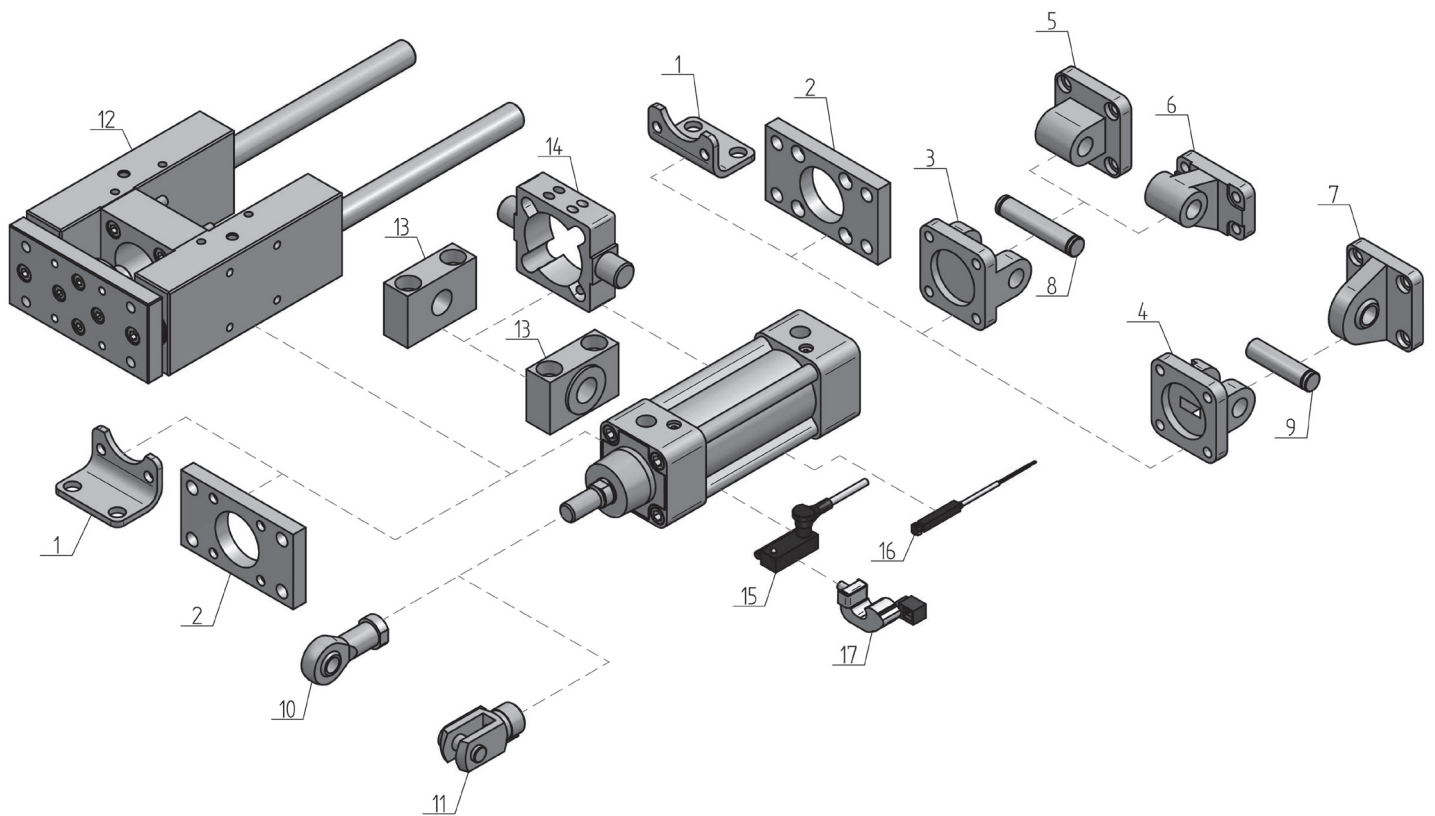


DIL/
DILA

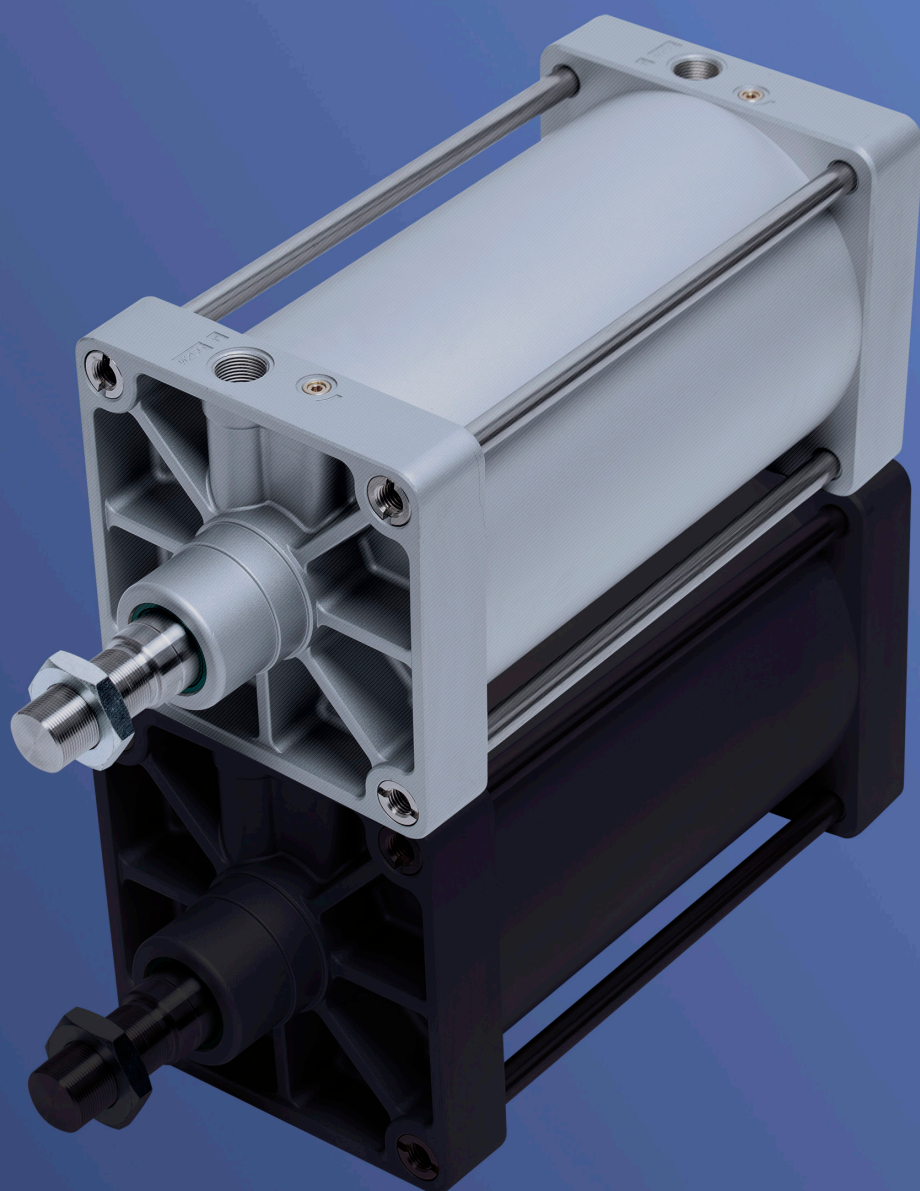


Ø [mm]	A	B	D	E	F	G	L	R	AM	BG	EE	KK	SW	VA	VD	WH
Ø32	12	30	M6	47	48	28	94	32,5	22	16	G1/8	M10x1,25	10	4	20	26
Ø40	16	35	M6	53	54	31,5	105	38	24	16	G1/4	M10x1,25	13	4	22	30
Ø50	20	40	M8	65	69	31,5	106	46,5	32	16	G1/4	M16x1,5	16	4	28	37
Ø63	20	45	M8	75	69	35	121	56,5	32	16	G3/8	M16x1,5	16	4	28	37
Ø80	25	45	M10	95	86	36	128	72	40	16	G3/8	M20x1,5	21	4	34	46
Ø100	25	55	M10	115	91	41	138	89	40	16	G1/2	M20x1,5	21	4	38	51
Ø125	32	60	M12	140	119	45	160	110	54	20	G1/2	M27x2	27	5	50	65

Accessories Profile Cylinder | ISO 15552



Part	Type	Description	Page
1	DL	Foot mounting	136
2	DF	Flange	135
3	DG	Female hinge	137
4	DGS	Narrow female hinge	137
5	DH	Male hinge	138
6	DW	Square hinge	140
7	DKL	Male hinge with ball joint	140
8	DC	Pin for hinge	141
9	DCS	Pin for narrow hinge	141
10	UK	Rod eye with internal thread	130
11	UV	Clevis with lockable pin	129
12	DHS/DHSL	Guide unit with plain bearing	150
12	DHG/DHGL	Guide unit with ball bearings	151
13	DSL	Support for intermediate hinge	136
14	DS	Intermediate hinge for cylinder of the D-series	139
14	DP	Intermediate hinge for cylinder of the H-series	139
15	SM	REED switch	145
16	SKR/SKH	REED / PNP switch	144
17	DXS	Fastener for SKR and SKH switch	146



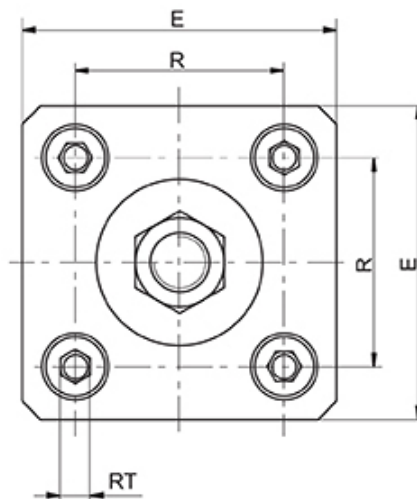
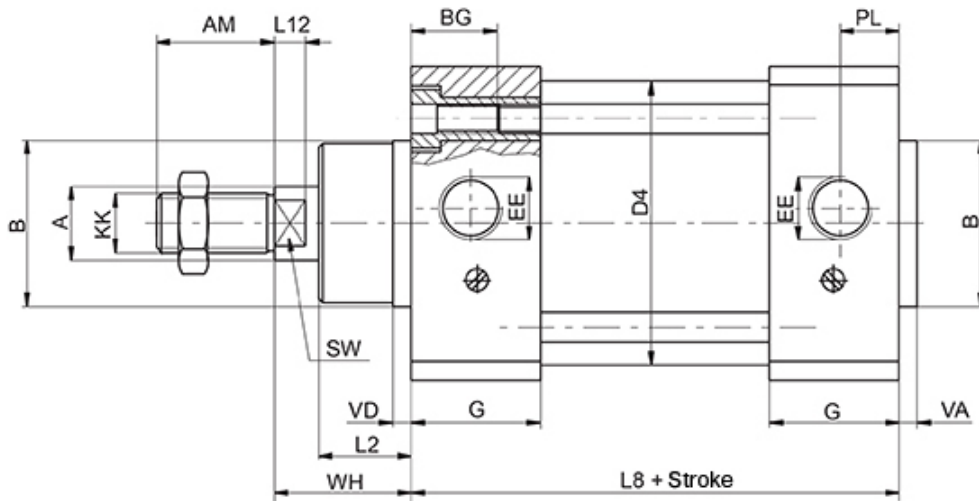
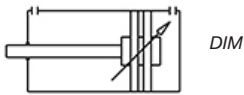
Tie-rod Cylinder | ISO 15552

Tie-rod Cylinder | ISO 15552

Technical information	
Diameter	Ø160 - Ø200 - Ø250 - Ø320 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700-800 -900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
Below 0°C air has to be dried.	

Materials	
Tube	Anodized aluminum
Fedél	Die-cast aluminum
Piston	Aluminum
Piston rod	Stainless steel
Guide bushing	Sintered bronze
Seals	PUR, NBR

D	I	M	160 / 200
			DIAMETER
			160
			200
			250
			320
			STROKE
			25
			50
			80
			100
			125
			160
			200
			250
			320
			400
			500
			600
			700
			800
			900
			1000
	FUNCTION		
I	Double acting		



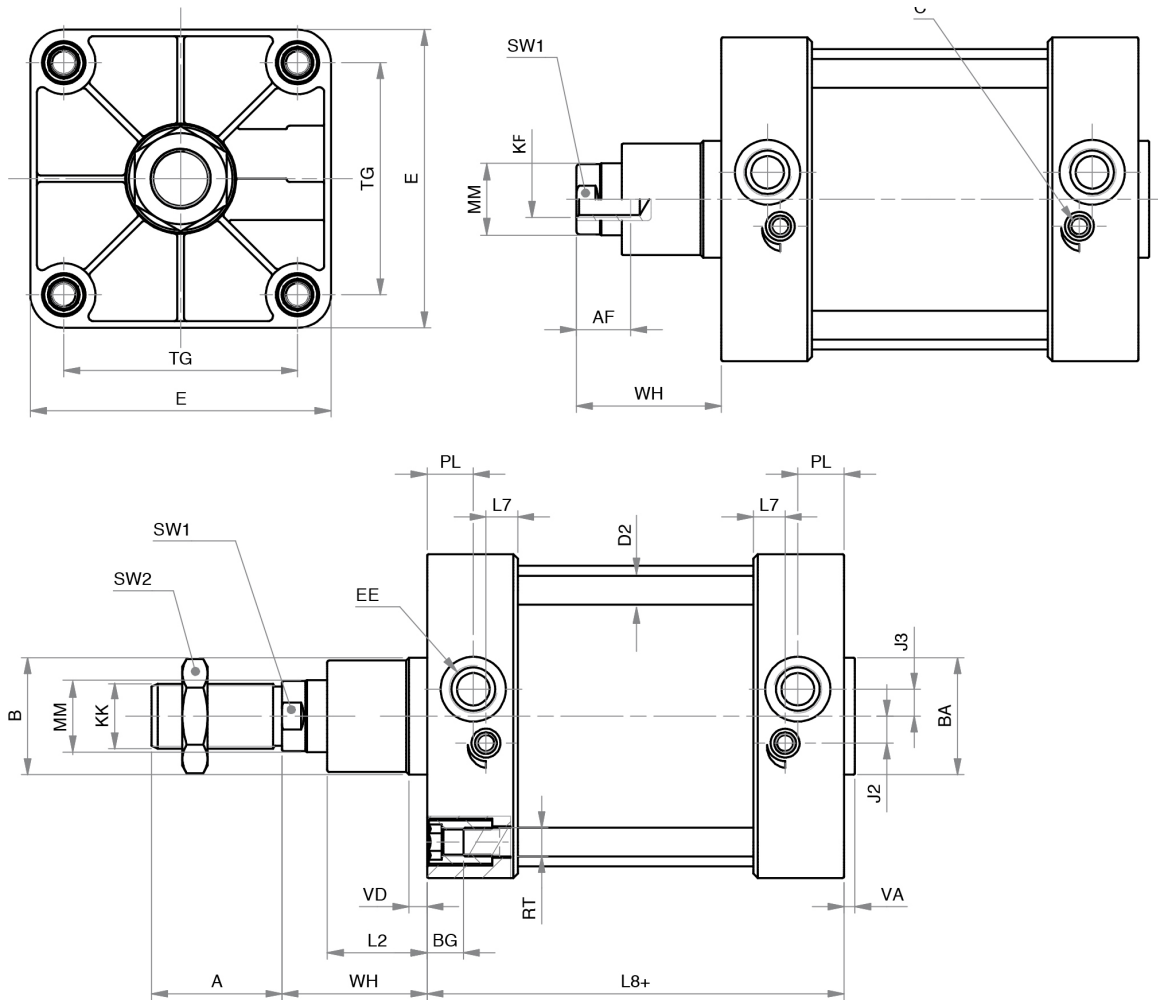
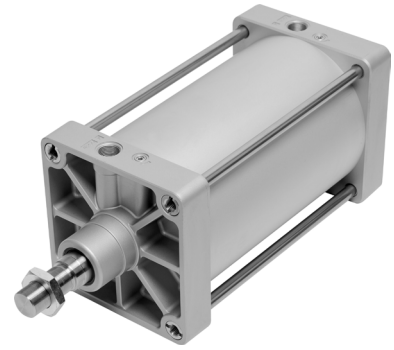
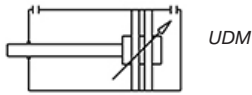
Ø [mm]	A	AM	B	BG	D4	E	EE	G	KK	L2	L8	L12	PL	R	RT	SW	VA	VD	WH
Ø160	40	72	65	24	170	182	G3/4	59	M36x2	38	180	12	27	140	M16	38	6	6	80
Ø200	40	72	75	24	210	222	G3/4	61	M36x2	55	180	12	35	175	M16	38	6	6	95
Ø250	50	84	90	25	264	274	G1	61	M42x2	65	200	20	31	220	M20	46	10	10	105
Ø320	60	96	110	28	336	352	G1	63	M42x2	75	220	20	34	270	M24	55	10	10	120

Tie-rod Cylinder | ISO 15552

Technical information	
Diameter	160 - Ø200 - Ø250 - Ø320 mm
Stroke	25 - 50 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C FPM version 0°C ... +150°C
	Below 0°C air has to be dried.

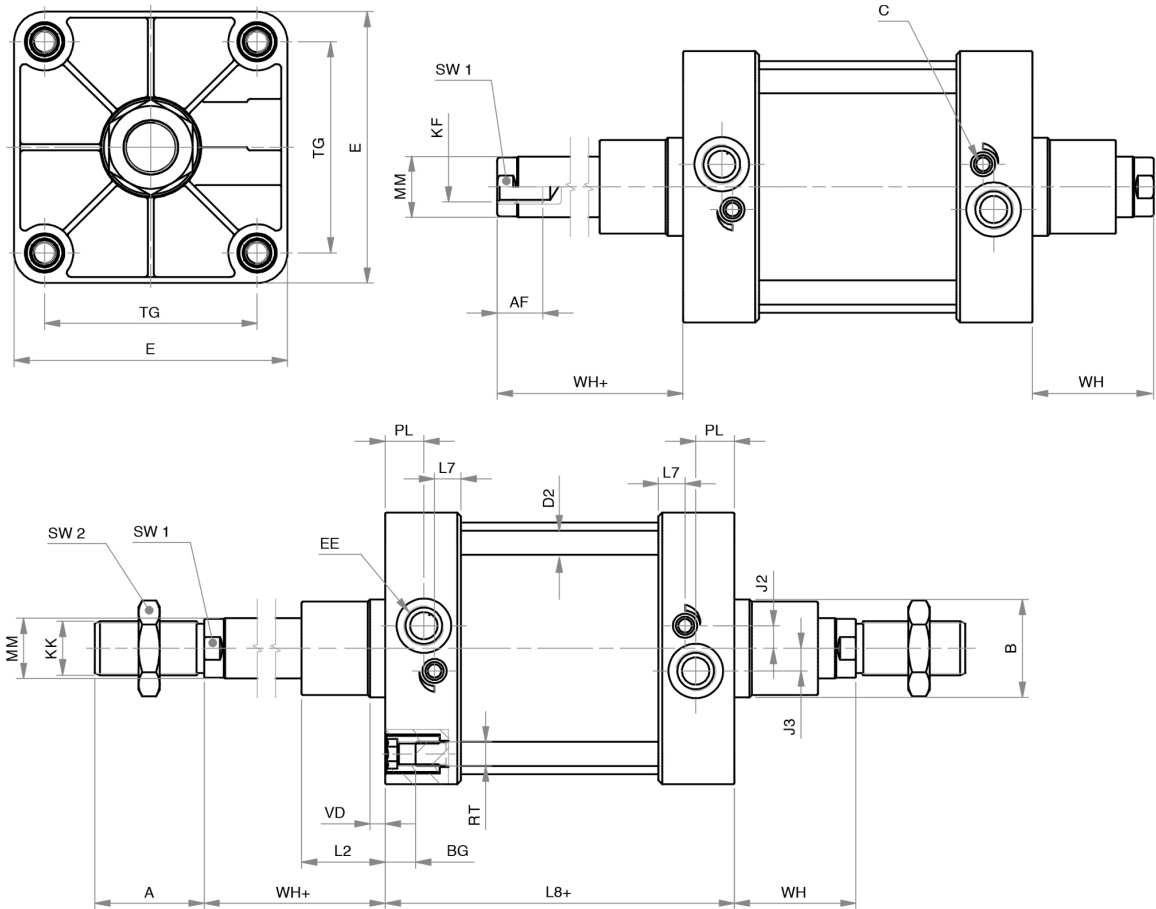
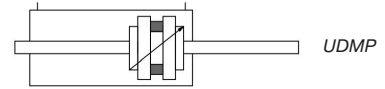
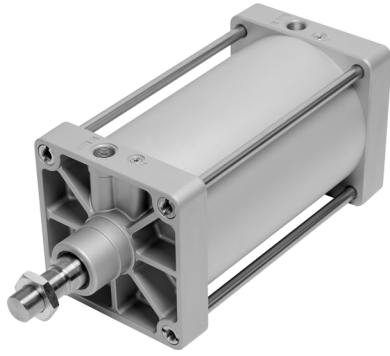
Materials	
Tube	Anodized aluminum
Fedél	Die-cast aluminum
Piston	Aluminum
Piston rod	Stainless steel
Guide bushing	Sintered bronze
Seals	PUR, NBR/FPM (depending on type)

U	D	M	N	V	160 / 200	200	Ex
					DIAMETER	STROKE	OPTIONS
					160	25	Ex ATEX version
					200	50	
						80	
						100	
						125	
						160	
						200	
						250	
						320	
						400	
						500	
						600	
						700	
						800	
						900	
						1000	
					VERSION		
					WITHOUT	Standard seals	
					R	Stainless steel piston rod	
					K	FPM Piston	
					V	FPM seals	
					P	Through piston rod	
					THREAD		
					WITHOUT	Piston rod with male thread	
					N	Piston rod with female thread	

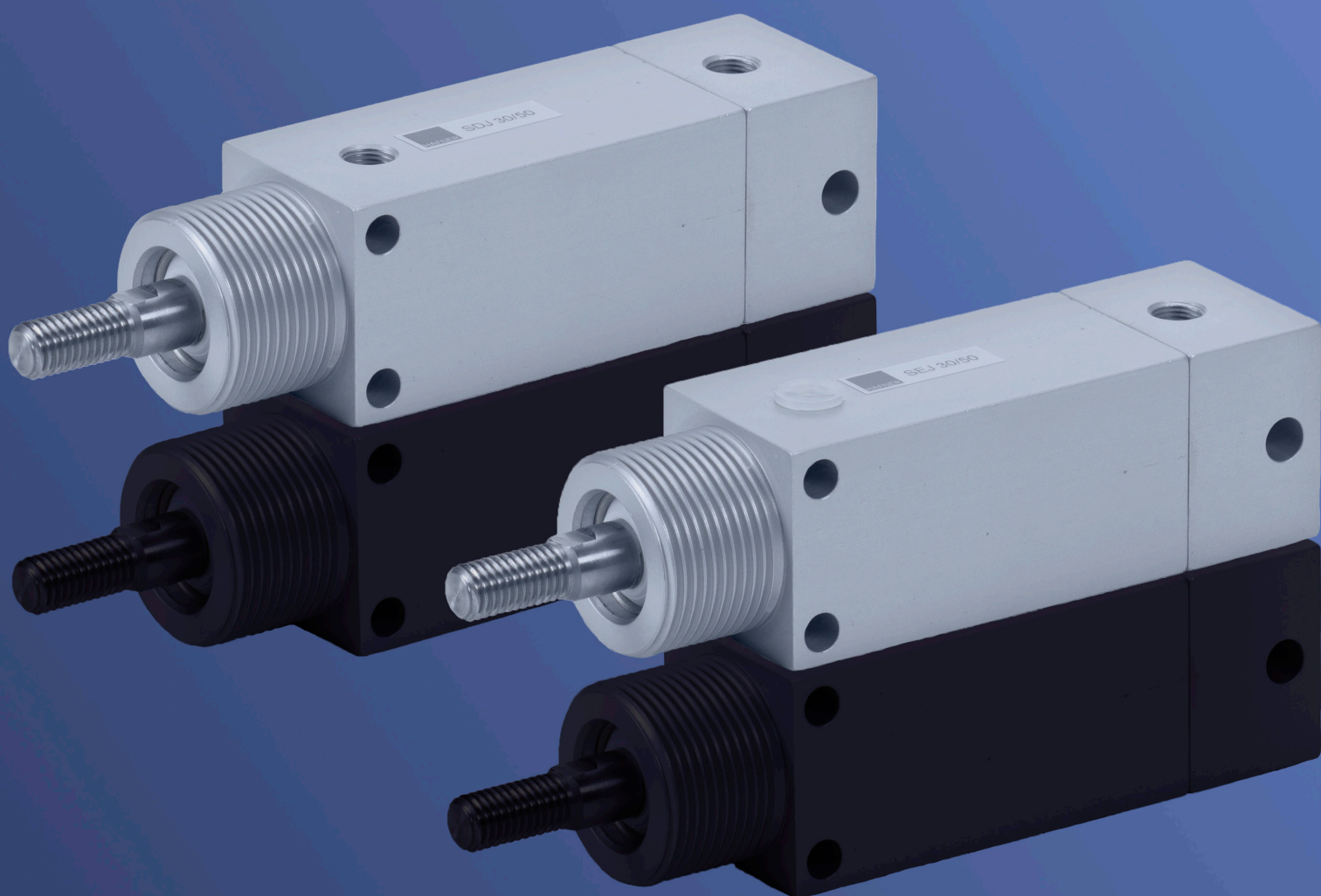


Ø [mm]	A	AF	B	BA	BG	D2	E	EE	J2	J3	KF	KK	L2	L7	L8+	MM	PL	RT	SW1	SW2	TG	VA	VD	WH
Ø160	72	30	65	65	24	16	180	G3/4	15	15	M20	M36x2	55	17,5	180	40	25,5	M16	36	55	140	6	10	80
Ø200	72	30	75	75	24	16	220	G3/4	15	15	M20	M36x2	65	16	180	40	25,5	M16	36	55	175	8	25	95
Ø250	84	40	90	90	25	20	270	G1	25	25	M24	M42x2	75	20	200	50	30	M20	46	65	220	8	25	105
Ø320	96	50	110	110	28	25	350	G1	35	35	M30	M48x2	90	20	220	63	30	M24	55	75	270	10	25	120

UDMP



Ø [mm]	A	AF	B	BG	D2	E	EE	J2	J3	KF	KK	L2	L7	L8+	MM	PL	RT	SW1	SW2	TG	VD	WH	WH+
Ø160	72	30	65	24	16	180	G3/4	15	15	M20	M36x2	55	17,5	180	40	25,5	M16	36	55	140	10	80	80
Ø200	72	30	75	24	16	220	G3/4	15	15	M20	M36x2	65	16	180	40	25,5	M16	36	55	175	25	95	95
Ø250	84	40	90	25	20	270	G1	25	25	M24	M42x2	75	20	200	50	30	M20	46	65	220	25	105	105
Ø320	96	50	110	28	25	350	G1	35	35	M30	M48x2	90	20	220	63	30	M24	55	75	270	25	120	120

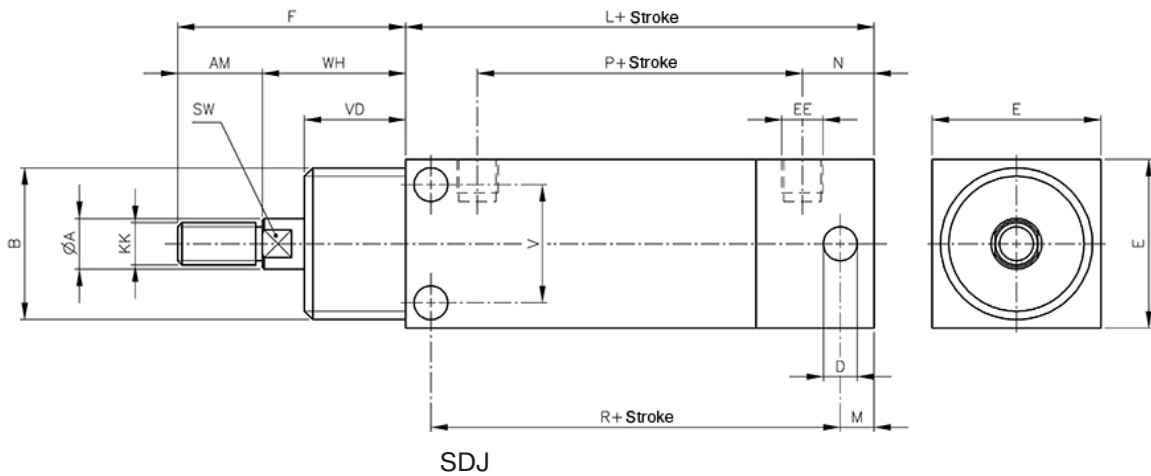
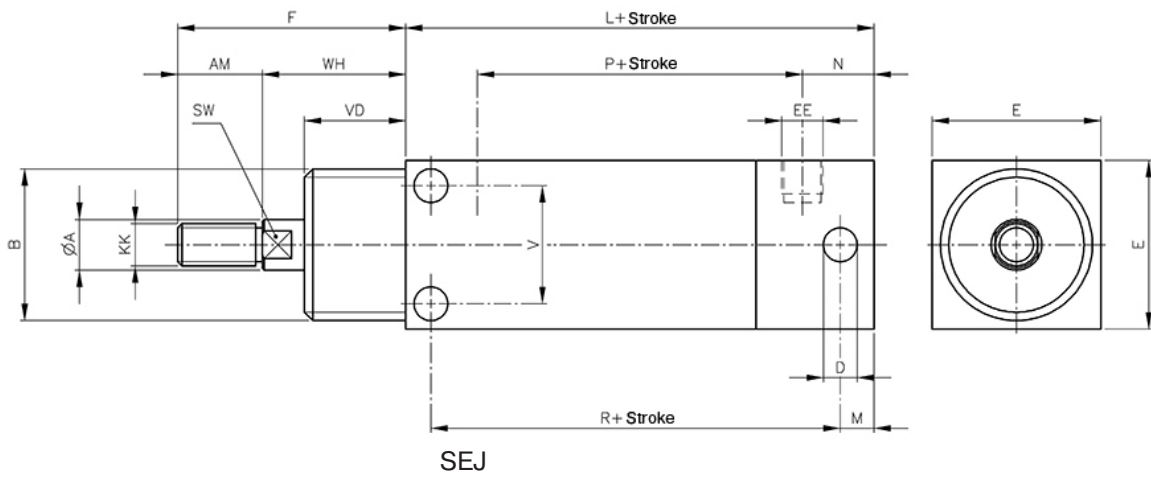


Clamping Cylinder

Clamping Cylinder

Technical information	
Diameter	Ø20 - Ø30 - Ø40 mm
Stroke	10 - 20 - 30 - 50 - 75 - 100 mm Single acting Double acting
Medium	Air
Pressure range	0,2 ... 10 bar
Temperature range	-20°C ... +80°C Below 0°C air has to be dried.
Variánsok	SEJ (Single acting) SDJ (Double acting)
Materials	
Tubetest	Anodized aluminum
Fedél	Anodized aluminum
Piston	Aluminum
Piston rod	Stainless steel
Guide bushing	Iglidur® D
Seals	NBR

S	E	J	20	/	25
			DIAMETER		
			20		
			30		
			40		
				STROKE	
				10	
				20	
				30	
				50	
				75	
				100	
FUNCTION					
			E	Single acting	
			D	Double acting	



Ø [mm]	A	B	D	E	F	L	M	N	P	R	V	AM	EE	KK	SW	VD	WH
Ø 20	10	M26x1,5	-	30	40	50	6	15	26	-	-	14	G1/8	M8	9	20	26
Ø 30	12	M36x2	7	40	54	61	8	17	27	47	28	20	G1/8	M10	10	24	34
Ø 40	12	M36x2	7	50	61,5	68,5	10	20,5	30	52	38	20	G1/8	M10	10	30	41,5



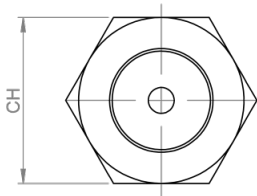
Shock Absorbers

Technical information	
Stroke	6 - 8 - 15 -20 mm
Medium	Air
Temperature range	-10°C ... +70°C
	Below 0°C air has to be dried.
Versions	SH, SH C

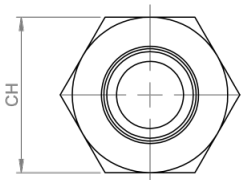
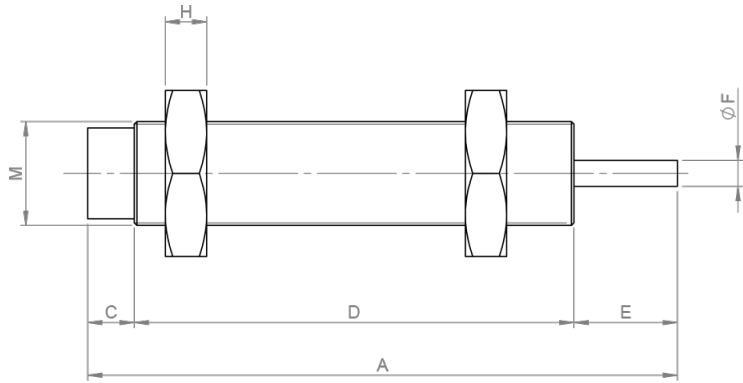
Materials	
Body	Anodized aluminum
Heads	Anodized aluminum
Piston	Aluminum
Piston rod	Stainless steel
Guide bushing	Iglidur® D
Seals	NBR

S	H	8	/	6	C
		10	/	8	OPTIONS
		14	/	15	C Including cap
		20	/	20	

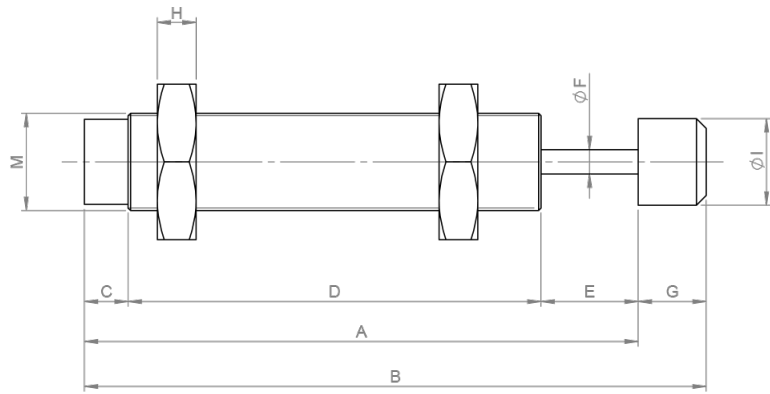
SH/SH C



SH



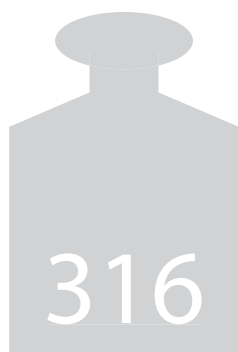
SHC



Stroke	M	Max. impact speed	A	B	C	D	E	F	G	I	CH	H
6 mm	M8x1	1,2 m/s	46,5	55	5	35,5	6	2,8	8,5	6,5	11	3
8 mm	M10x1	1,5 m/s	53,5	62	5	40,5	8	3	8,5	8,5	13	3
15 mm	M14x1,5	1,5 m/s	90	102	8	67	15	3,5	12	12,2	19	6
20 mm	M20x1,5	2 m/s	114	128	9	85	20	5	14	17,8	26	8



INOX Cylinder



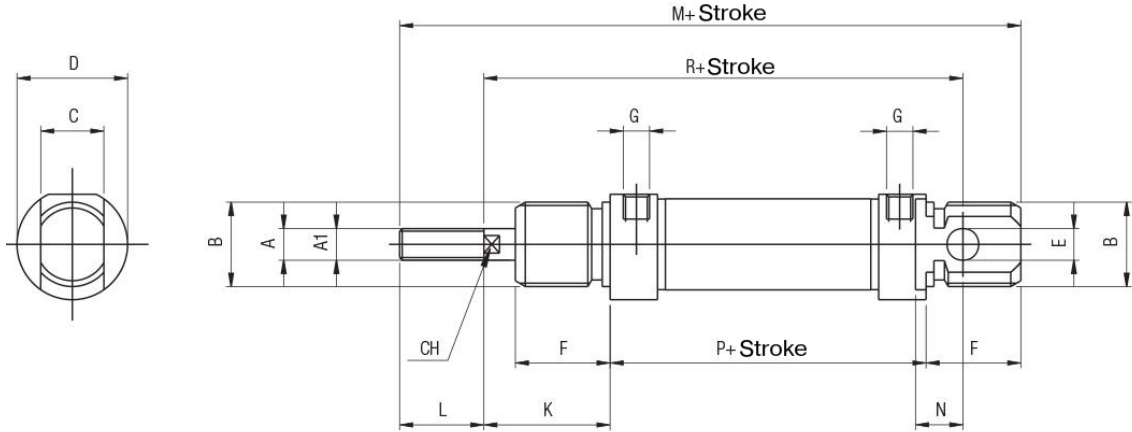
Technical information	
Diameter	Ø20 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 - Ø125 - Ø160 - Ø200 mm
Stroke*	10 - 25 - 50 mm Single acting
	5 - 10 - 25 - 50 - 70 - 75 - 80 - 90 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm Double acting
Medium	Air
Pressure range	1 ... 10 bar (Single acting) 2 ... 10 bar (Double acting)
Temperature range	0°C ... +80°C 0°C ... + 150°C (high temperature version)
	Below 0°C air has to be dried.
Versions	VENX, VEFX, VENXV, VEFXV (Single acting)
	VINX/VIFX, VINTX, VBFX/VBNX, DIMX, RIMX/RIMOX, HIFX, HBFX (Double acting)

Materials		HIFX, HBFX
Tube	Stainless steel	Stainless steel
Heads	Stainless steel	Stainless steel
Piston	Aluminum	Die-cast aluminum
Piston rod	Stainless steel	Stainless steel
Guide bushing	Technopolymer	Sintered bronze
Seals	PUR	PUR

Round Cylinder | ISO 6432 RIMX



RIMX

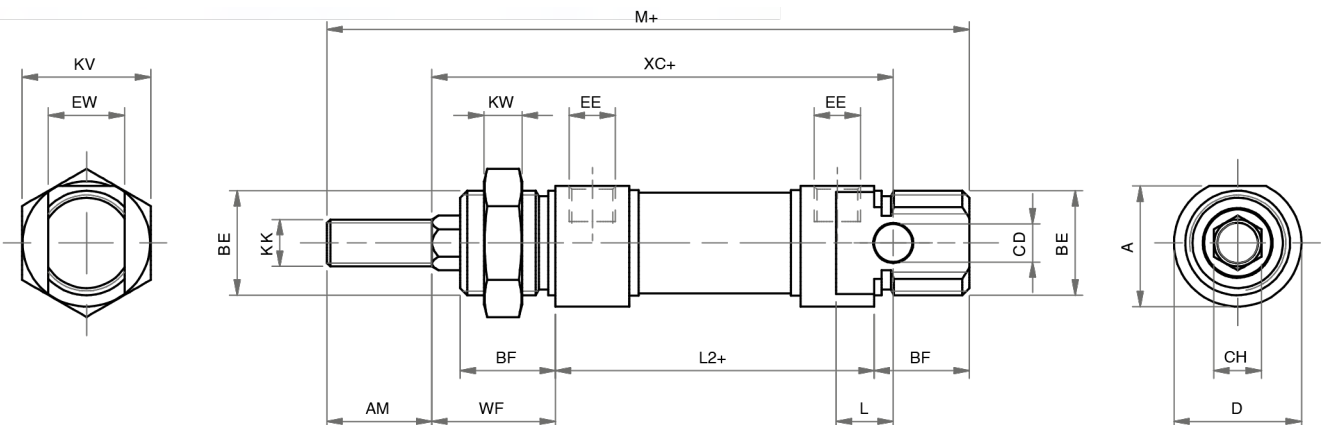


Ø [mm]	A	B	C	D	E	K	L	M	N	P	R	AM	EE	KK	SW
Ø16	6	M16x1,5	12	19	6	22	18	109	9	53	82	16	M5	M6	5
Ø20	8	M22x1,5	16	27	8	24	20	131	12	67	95	20	G1/8"	M8	7
Ø25	10	M22x1,5	16	30	8	28	22	140	12	68	104	22	G1/8"	M10x1,25	9

RIMOX

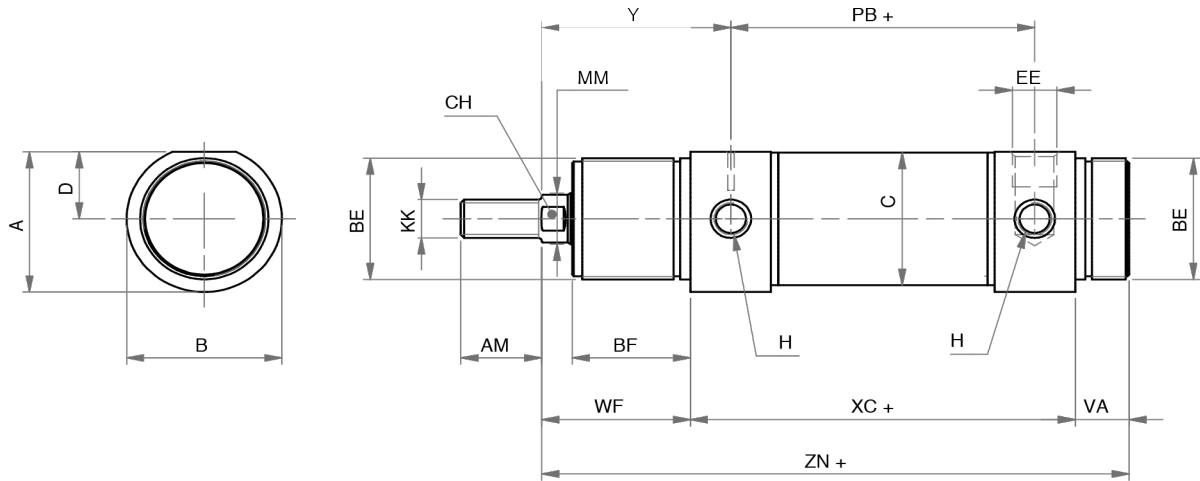
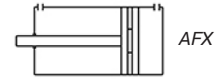


RIMOX

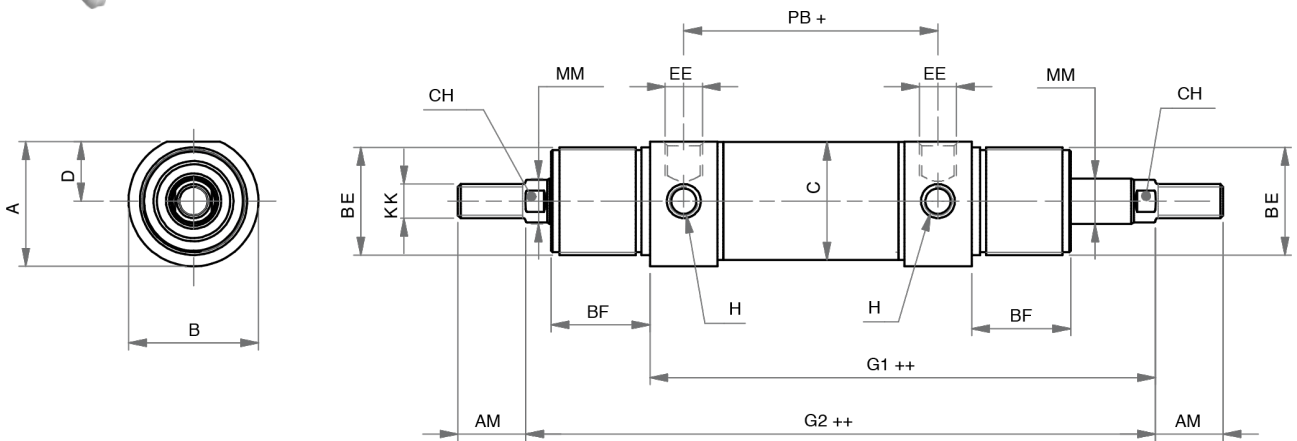
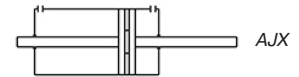


Ø [mm]	A	AM	BE	BF	CD	CH	D	EE	EW	KK	KV	KW	L	L2+	M+	WF	XC+
Ø16	18	16	M16x1,5	18	6	6	19	M5	12	M6	22	8	9	53	109	22	82
Ø20	25,5	20	M22x1,5	20	8	8	27	G1/8	16	M8	27	11	12	67	131	24	95
Ø25	28,5	22	M22x1,5	22	8	10	30	G1/8	16	M10x1,25	27	11	12	68	140	28	104

Round Cylinder AFX/AJX

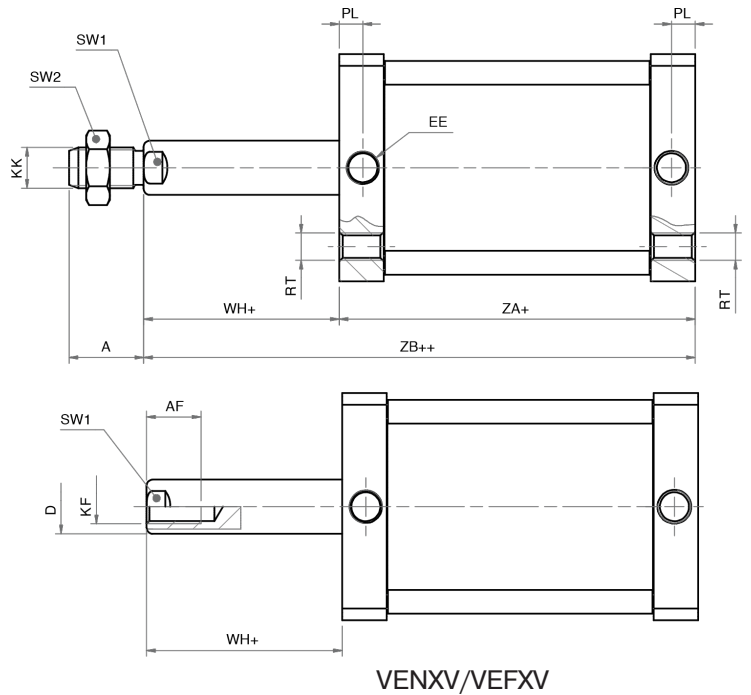
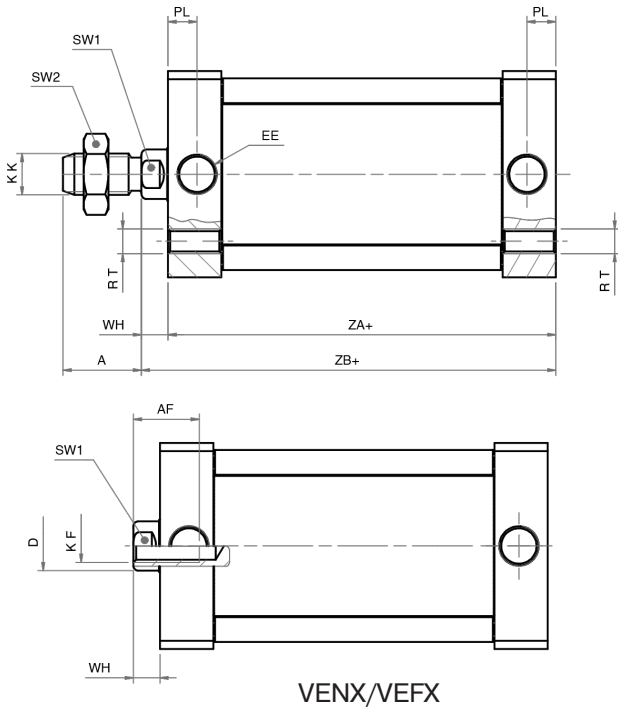
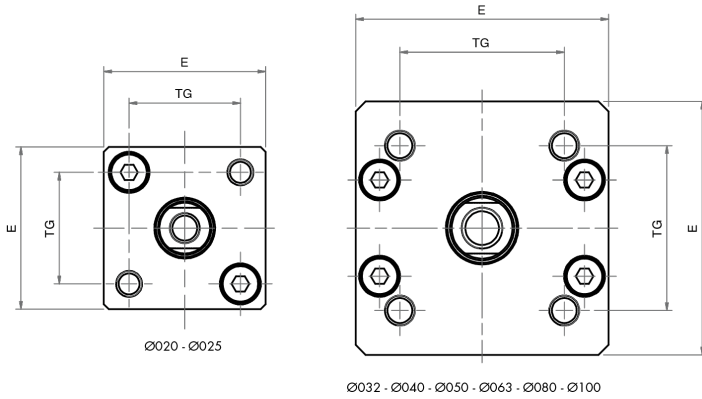


Ø [mm]	A	AM	B	BE	BF	C	CH	D	EE	H	KK	MM	PB+	VA	WF	XC+	Y	ZN+
Ø32	36,5	20	38	M30x1,5	30	33,6	10	17,5	G1/8	M8x1	M10x1,25	12	78	14	38	96	47	148
Ø40	44	24	46	M38x1,5	35	41,6	12	21	G1/4	M10x1	M12x1,25	16	89	16	45	113	57	174
Ø50	55	32	57	M45x1,5	38	52,4	16	26,5	G1/4	M12x1,5	M16x1,5	20	96	18	50	120	62	188
Ø63	67,5	32	70	M45x1,5	38	65,4	16	32,5	G3/8	M14x1,5	M16x1,5	20	98	18	50	124	63	192



Ø [mm]	A	AM	B	BE	BF	C	CH	D	EE	G1	G2	H	KK	MM	PB+
Ø32	36,5	20	38	M30x1,5	30	33,6	10	17,5	G1/8	134	172	M8x1	M10x1,25	12	78
Ø40	44	24	46	M38x1,5	35	41,6	13	21	G1/4	158	203	M10x1	M12x1,25	16	89
Ø50	55	32	57	M45x1,5	38	52,4	17	26,5	G1/4	170	220	M12x1,5	M16x1,5	20	96
Ø63	67,5	32	70	M45x1,5	38	65,4	17	32,5	G3/8	174	224	M14x1,5	M16x1,5	20	98

Compact Cylinder | ISO 21287 VENX/VEFX/VENVX/VEFXV



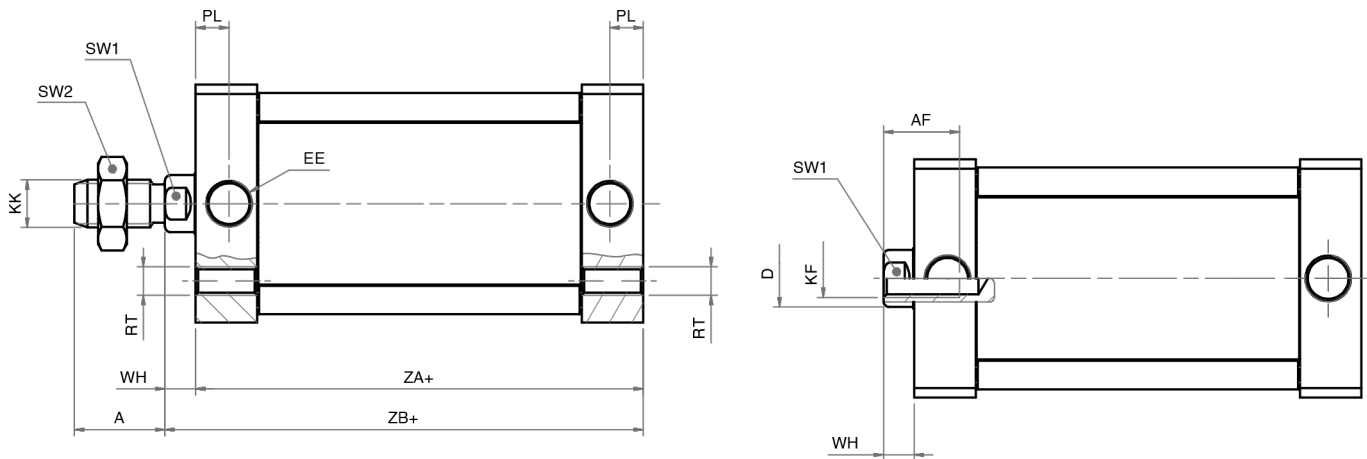
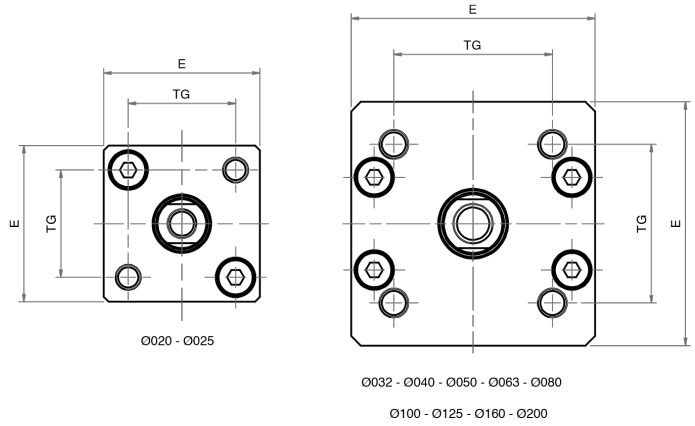
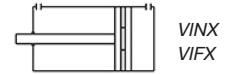
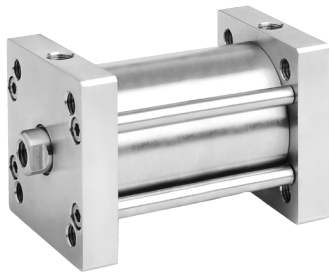
Ø [mm]	A	AF	D	E	EE	KF	KK	PL	RT	SW1	SW2	TG	WH	ZA+	ZB+
Ø20	16	10	10	32	M5	M6	M8	6	M5	8	13	22	6,5	47*	53,5*
Ø25	16	10	10	36	M5	M6	M8	6	M5	8	13	26	6	49*	55*
Ø32	19	12	12	50	G1/8	M8	M10x1,25	7	M6	10	17	32,5	6,5	44*	50,5*
Ø40	19	12	12	57	G1/8	M8	M10x1,25	7	M6	10	17	38	7	45*	52*
Ø50	22	16	16	67	G1/8	M10	M12x1,25	7	M8	13	19	46,5	8	45*	53*
Ø63	22	16	16	80	G1/8	M10	M12x1,25	7	M8	13	19	56,5	8	49*	57*
Ø80	28	20	20	96	G1/8	M12	M16x1,5	7,5	M10	17	24	72	10	54*	64*
Ø100	28	25	25	116	G1/8	M12	M16x1,5	7,5	M10	22	24	89	10	67*	77*

*VENX, VEFX for 50 mm stroke version please add: Ø20 +10 mm, Ø25-Ø63 +20 mm, Ø80-Ø100 + 30 mm

*VENVX, VEFVX for 50 mm stroke version please add: Ø20-Ø25 +10 mm, Ø32-Ø63 +10 mm, Ø80-Ø100 + 20 mm

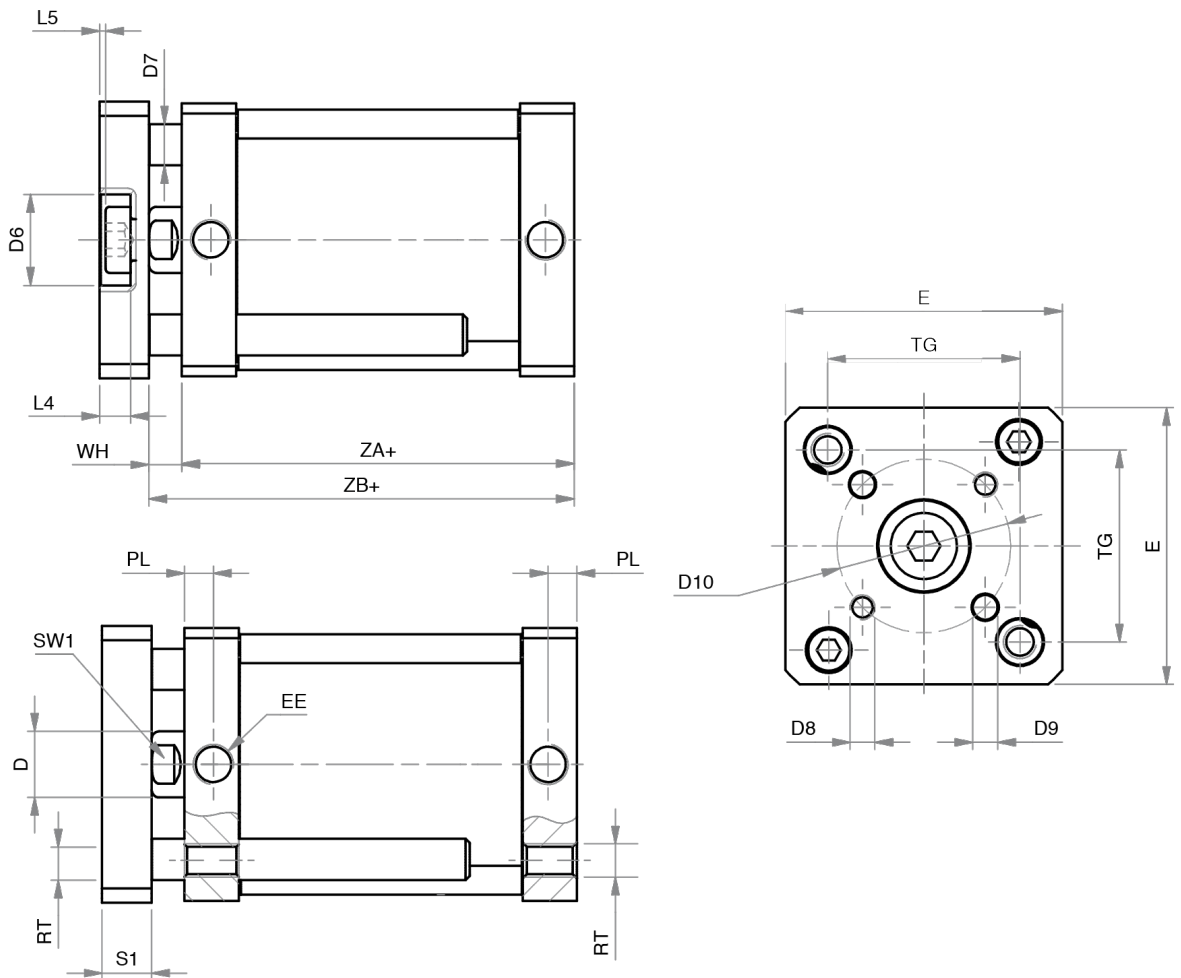
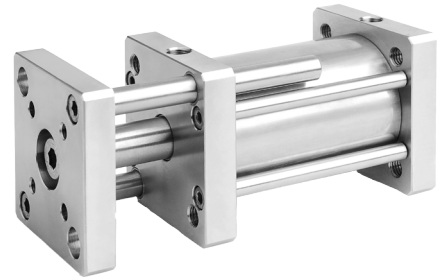
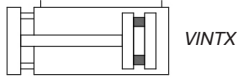


Compact Cylinder | ISO 21287 VINX/VIFX



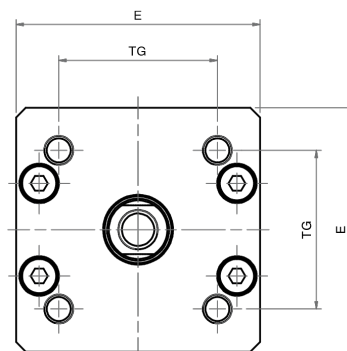
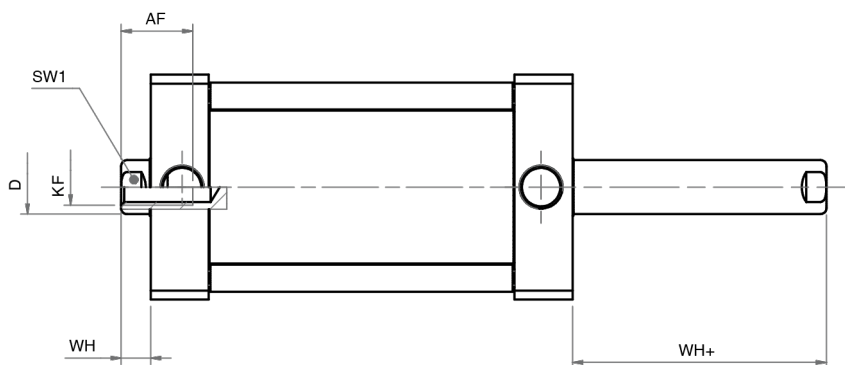
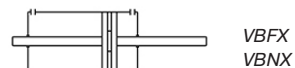
Ø [mm]	A	AF	D	E	EE	KF	KK	PL	RT	SW1	SW2	TG	WH	ZA+	ZB+
Ø20	16	10	10	32	M5	M6	M8	6	M5	8	13	22	6,5	37	43,5
Ø25	16	10	10	36	M5	M6	M8	6	M5	8	13	26	6	39	45
Ø32	19	12	12	50	G1/8	M8	M10x1,25	7	M6	10	17	32,5	6,5	44	50,5
Ø40	19	12	12	57	G1/8	M8	M10x1,25	7	M6	10	17	38	7	45	52
Ø50	22	16	16	67	G1/8	M10	M12x1,25	7	M8	13	19	46,5	8	45	53
Ø63	22	16	16	80	G1/8	M10	M12x1,25	7	M8	13	19	56,5	8	49	57
Ø80	28	20	20	96	G1/8	M12	M16x1,5	7,5	M10	17	24	72	10	54	64
Ø100	28	20	25	116	G1/8	M12	M16x1,5	7,5	M10	22	24	89	10	67	77
Ø125	54	25	30	140	1/4"	M14	M27x2	10	M12	28	41	110	10	78	88
Ø160	72	30	40	180	3/8"	M20	M36x2	12	M16	36	55	140	12	87	99
Ø200	72	30	40	220	3/8"	M20	M36x2	12	M16	36	55	175	12	87	99

Compact Cylinder | ISO 21287 VINTX

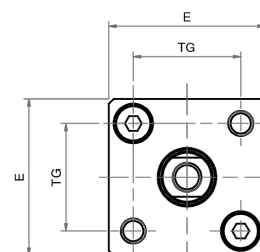
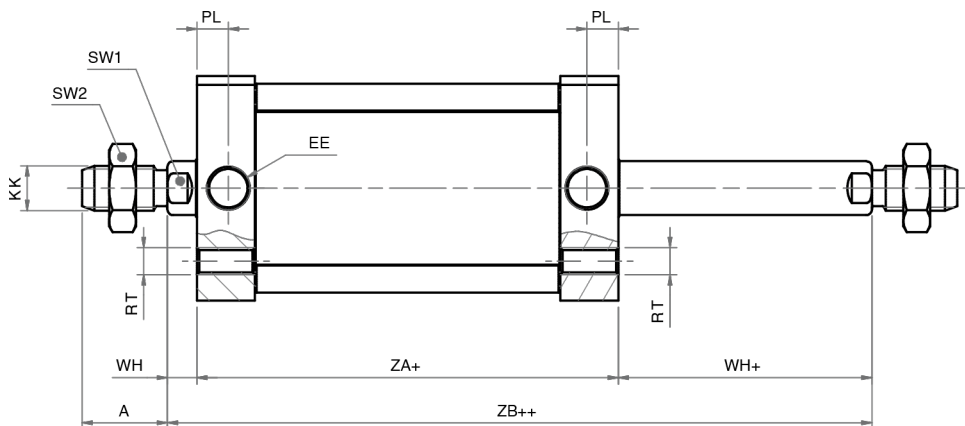


Ø [mm]	D	D6	D7	D8	D9	D10	E	EE	SW1	L4	L5	PL	RT	S1	TG	WH	ZA+	ZB+
Ø20	10	11	6	M4	4	17	32	M5	8	5	1	6	M5	8	22	6,5	37	43,5
Ø25	10	14	6	M5	5	22	36	M5	8	5	1	6	M5	8	26	6	39	45
Ø32	12	17	6	M5	5	28	50	G1/8	10	6,5	1,5	7	M6	10	32,5	6,5	44	50,5
Ø40	12	17	8	M5	5	33	57	G1/8	10	6,5	1,5	7	M6	10	38	7	45	52
Ø50	16	22	10	M6	6	42	67	G1/8	13	7,5	1,5	7	M8	12	46,5	8	45	53
Ø63	16	22	10	M6	6	50	80	G1/8	13	7,5	1,5	7	M8	12	56,5	8	49	57
Ø80	20	28	12	M8	8	65	96	G1/8	17	9	2	7,5	M10	14	72	10	54	64
Ø100	25	30	14	M10	10	80	116	G1/8	22	10	3	7,5	M10	14	89	10	67	77

Compact Cylinder | ISO 21287 VBFX/VBNX

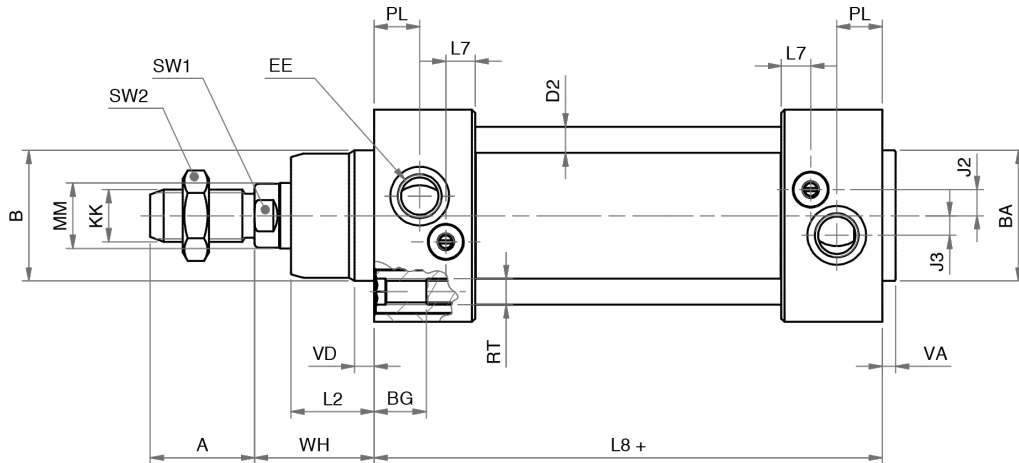
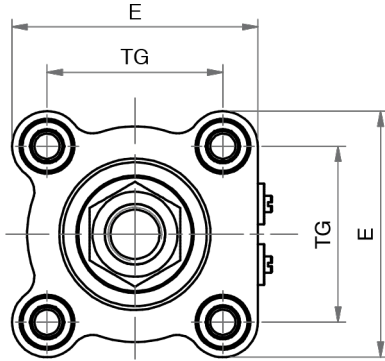
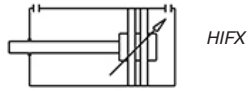


Ø032 - Ø040 - Ø050 - Ø063 - Ø080
Ø100 - Ø125 - Ø160 - Ø200



Ø020 - Ø025

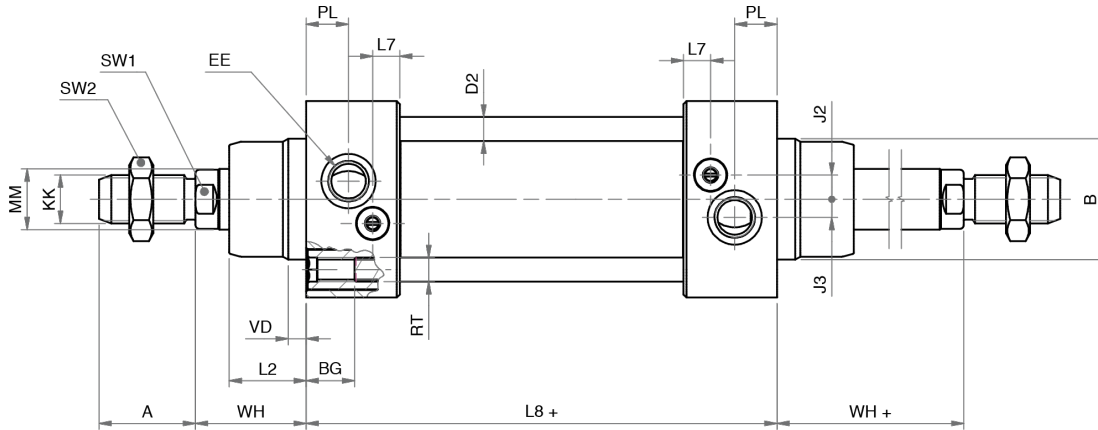
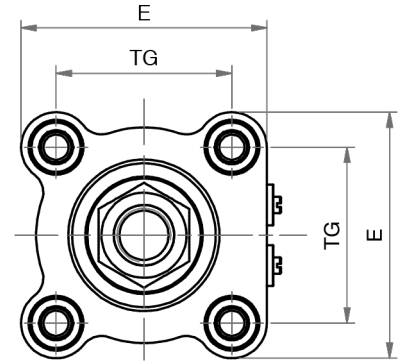
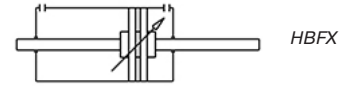
Ø [mm]	A	AF	D	E	EE	KF	KK	PL	RT	SW1	SW2	TG	WH	WH+	ZA+	ZB++
Ø20	16	10	10	32	M5	M6	M8	6	M5	8	13	22	6,5	6,5	37	43,5
Ø25	16	10	10	36	M5	M6	M8	6	M5	8	13	26	6	6	39	45
Ø32	19	12	12	50	G1/8	M8	M10x1,25	7	M6	10	17	32,5	6,5	6,5	44	50,5
Ø40	19	12	12	57	G1/8	M8	M10x1,25	7	M6	10	17	38	7	7	45	52
Ø50	22	16	16	67	G1/8	M10	M12x1,25	7	M8	13	19	46,5	8	8	45	53
Ø63	22	16	16	80	G1/8	M10	M12x1,25	7	M8	13	19	56,5	8	8	49	57
Ø80	28	20	20	96	G1/8	M12	M16x1,5	7,5	M10	17	24	72	10	10	54	64
Ø100	28	20	25	116	G1/8	M12	M16x1,5	7,5	M10	22	24	89	10	10	67	77
Ø125	54	25	30	140	1/4"	M14	M27x2	10	M12	28	41	110	10	10	78	88
Ø160	72	30	40	180	3/8"	M20	M36x2	12	M16	36	55	140	12	12	87	99
Ø200	72	30	40	220	3/8"	M20	M36x2	12	M16	36	55	175	12	12	87	99



Ø [mm]	A	B	BA	BG	D2	E	EE	J2	J3	KK	L2
Ø32	32	30	30	16	6	48	G1/8	6,6	5,3	M10x1,25	18
Ø40	24	35	35	16	6	52	G1/4	8,5	5	M12x1,25	22
Ø50	32	40	40	16	8	65	G1/4	8	6	M16x1,5	25,5
Ø63	32	45	45	16	8	75	G3/8	10	6,5	M16x1,5	26
Ø80	40	45	45	18	10	95	G3/8	8	8	M20x1,5	32
Ø100	40	55	55	18	10	115	G1/2	15	7	M20x1,5	38
Ø125	54	60	60	20	12	140	G1/2	13	7	M27x2	46

Ø [mm]	L7	L8+	MM	PL	RT	SW1	SW2	TG	VA	VD	WH
Ø32	7,2	94	12	13	M6	10	17	32,5	4	5	26
Ø40	9,2	105	16	14	M6	13	19	38	4	5	30
Ø50	9	106	20	14	M8	17	24	46,5	4	6	37
Ø63	9,5	121	20	16	M8	17	24	56,5	4	6	37
Ø80	11	128	25	16	M10	22	30	72	4	7	46
Ø100	12	138	25	18	M10	22	30	89	4	7	51
Ø125	12	160	32	18	M12	27	41	110	6	10	65

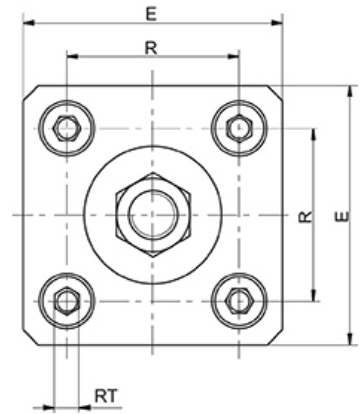
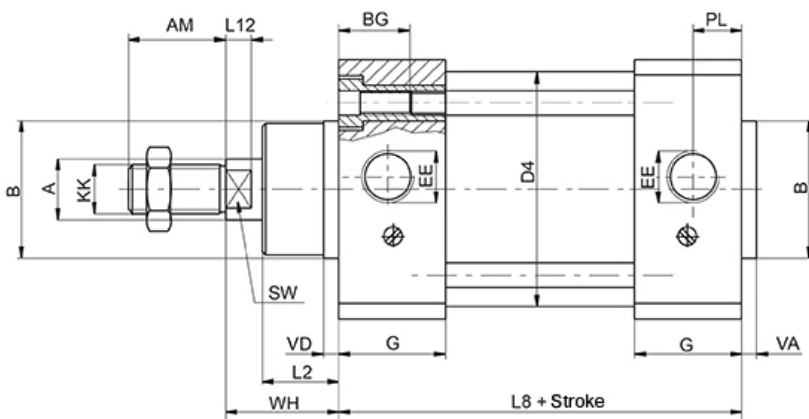
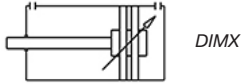
Tie-rod Cylinder | ISO 15552 HBFX



Ø [mm]	A	B	BA	BG	D2	E	EE	J2	J3	KK	L2
Ø32	22	30	30	16	6	48	G1/8	6,6	5,3	M10x1,25	18
Ø40	24	35	35	16	6	52	G1/4	8,5	5	M12x1,25	22
Ø50	32	40	40	16	8	65	G1/4	8	6	M16x1,5	25,5
Ø63	32	45	45	16	8	75	G3/8	10	6,5	M16x1,5	26
Ø80	40	45	45	18	10	95	G3/8	8	8	M20x1,5	32
Ø100	40	55	55	18	10	115	G1/2	15	7	M20x1,5	38
Ø125	54	60	60	20	12	140	G1/2	13	7	M27x2	46

Ø [mm]	L7	L8+	MM	PL	RT	SW1	SW2	TG	VD	WH	WH+
Ø32	7,2	94	12	13	M6	10	17	32,5	5	26	26
Ø40	9,2	105	16	14	M6	13	19	38	5	30	30
Ø50	9	106	20	14	M8	17	24	46,5	6	37	37
Ø63	9,5	121	20	16	M8	17	24	56,5	6	37	37
Ø80	11	128	25	16	M10	22	30	72	7	46	46
Ø100	12	138	25	18	M10	22	30	89	7	51	51
Ø125	12	160	32	18	M12	27	41	110	10	65	65

Tie-rod Cylinder | ISO 15552 DIMX



Ø [mm]	A	AM	B	BG	E	EE	G	KK	L2	L8	L12	PL	R	RT	SW	VA	VD	WH
Ø160	40	72	65	24	182	G3/4	59	M36x2	38	180	12	27	140	M16	38	6	6	80
Ø200	40	72	75	24	222	G3/4	61	M36x2	55	180	12	35	175	M16	38	6	6	95

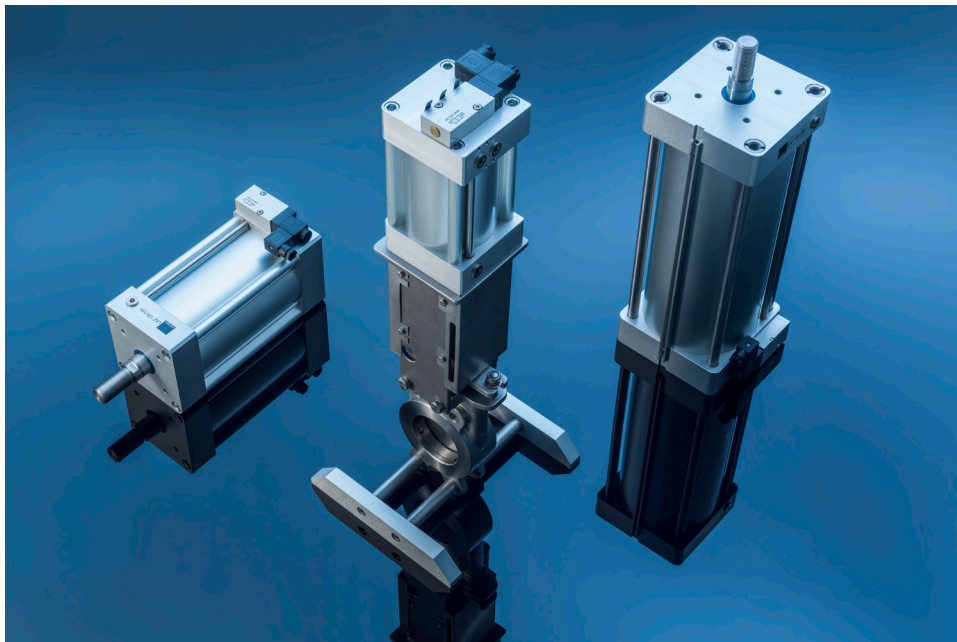


Linear Cylinder with NAMUR-interface

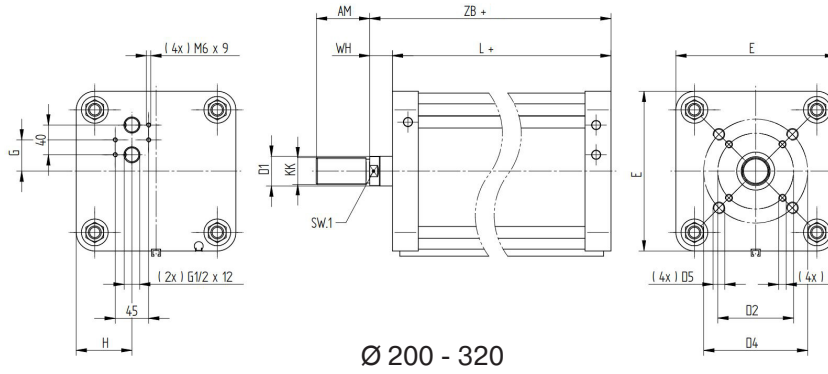
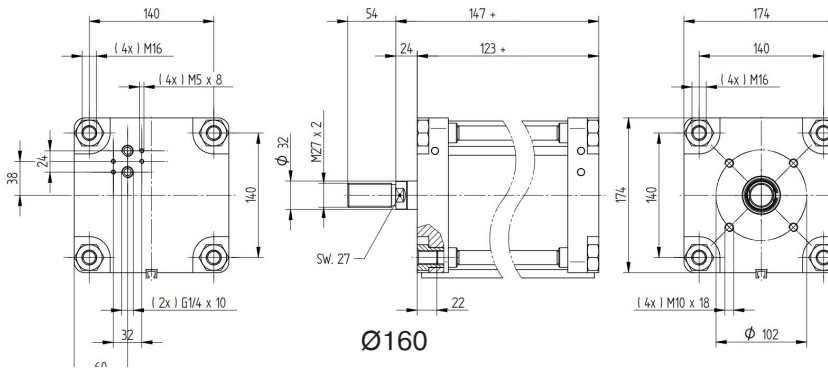
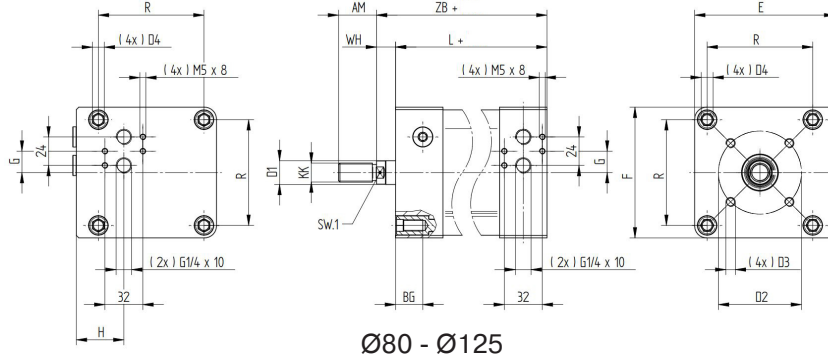
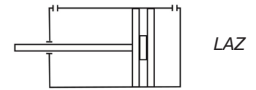
Technical information	
Diameter	Ø80 - Ø100 - Ø125 - Ø160 - Ø200 - Ø250 - Ø320 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C
	Below 0°C air has to be dried.

Cylinder series designed to automate knife gate valves:

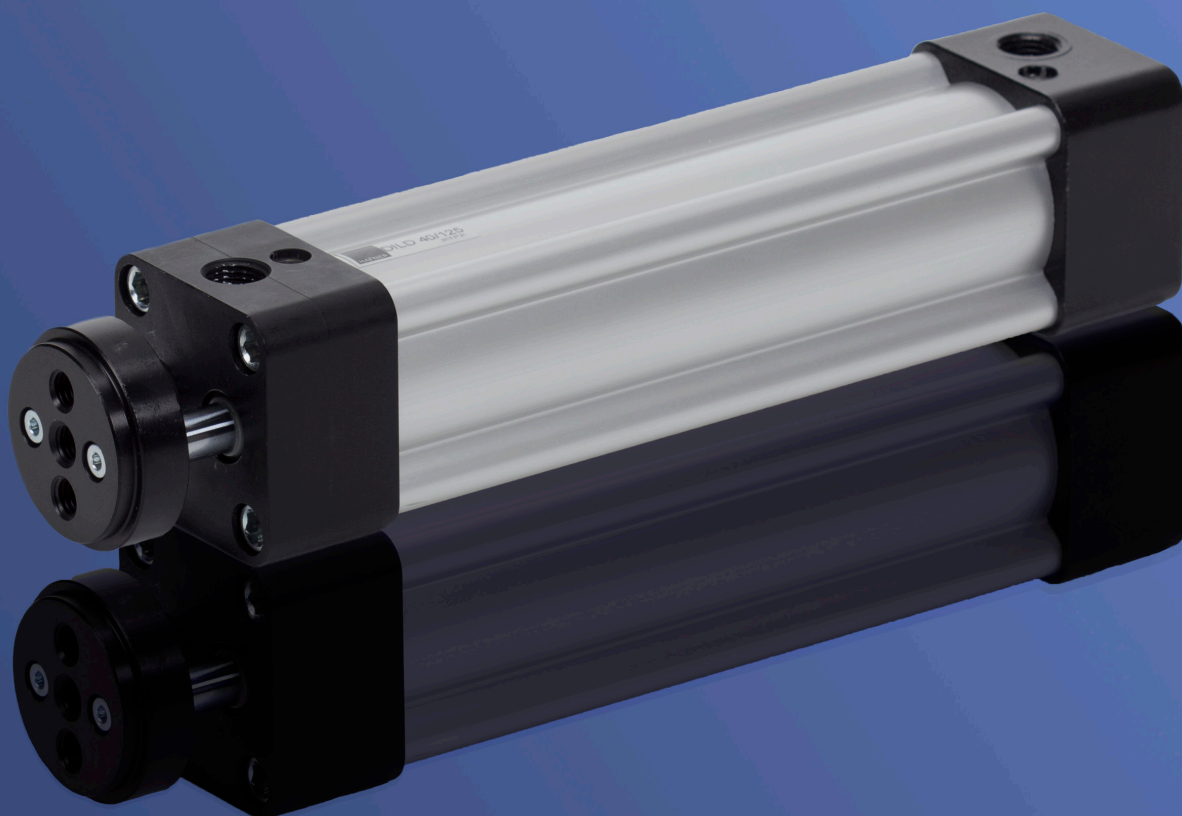
- Interface to solenoid valve according to VDI/VDE 3845 (NAMUR 1 - 1/4").
- Mounting port pattern at cylinder head according to DIN 3358/ISO 5210 for direct mounting to knife gates valves.



L	A	Z	80	/	200
			DIAMETER	STROKE	
			80	25	
			100	50	
			125	80	
			160	100	
			200	125	
			250	160	
			320	200	
				250	
				320	
				400	
				500	
				600	
				700	
				800	
				900	
				1000	



Ø [mm]	AM	D1	KK	SW.1	D2	D3	D4	BG	R	D5	E	F	G	H	WH	L	ZB
Ø 80	32	Ø20	M16x1,5	17	Ø70	M8x15	M10	22	72	-	100	90	8	35	16	114	130
Ø 100	32	Ø20	M16x1,5	17	Ø70	M8x15	M10	22	89	-	118	110	18	40	16	118	134
Ø 125	54	Ø32	M27x2	27	Ø102	M10x18	M12	26	110	-	140	134	28	45	24	138	162
Ø 200	72	Ø40	M36x2	36	Ø102	M10x20	Ø140	-	-	M16x25	215	-	-	75	30	123	153
Ø 250	72	Ø40	M36x2	36	Ø102	M10x20	Ø140	-	-	M16x25	265	-	-	80	30	138	168
Ø 320	72	Ø40	M36x2	36	Ø102	M10x20	Ø140	-	-	M16x25	340	-	-	100	30	135	168



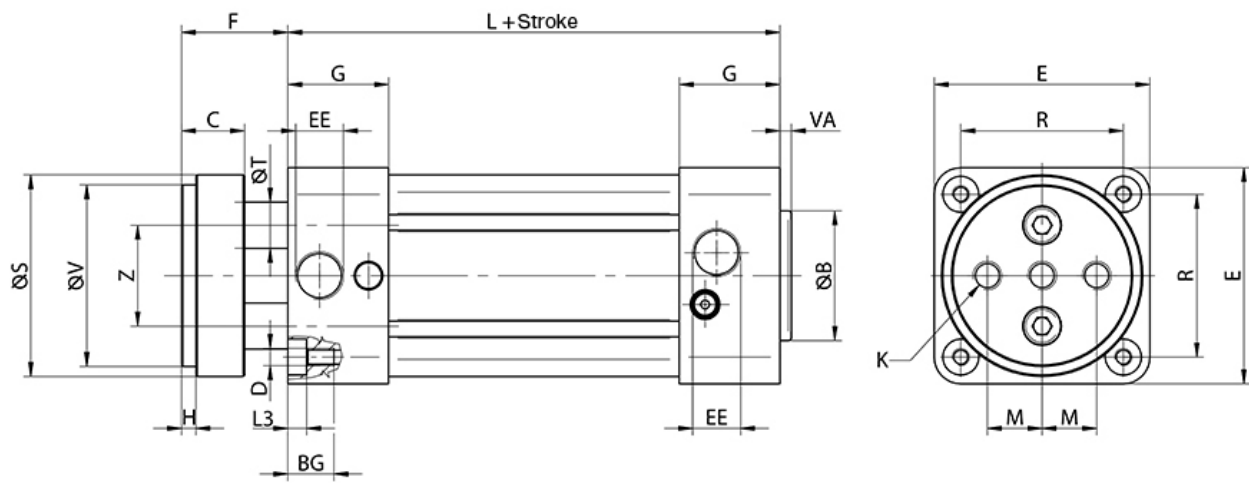
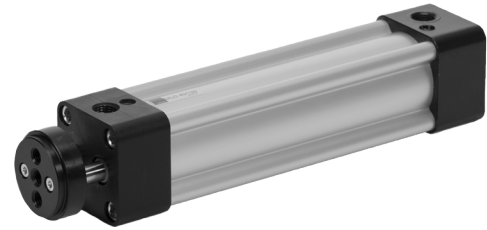
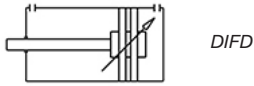
Cylinder with Non-Rotating Piston Rod

Cylinder with non-rotating piston rod

Technical information	
Diameter	Ø32 - Ø40 - Ø50 - Ø63 - Ø80 - Ø100 mm
Stroke	25 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 320 - 400 - 500 mm Ø32 - Ø50 mm Ø63 mm Ø80 - Ø100 mm
Medium	Air
Pressure range	1 ... 10 bar
Temperature range	-20°C ... +80°C Below 0°C air has to be dried.

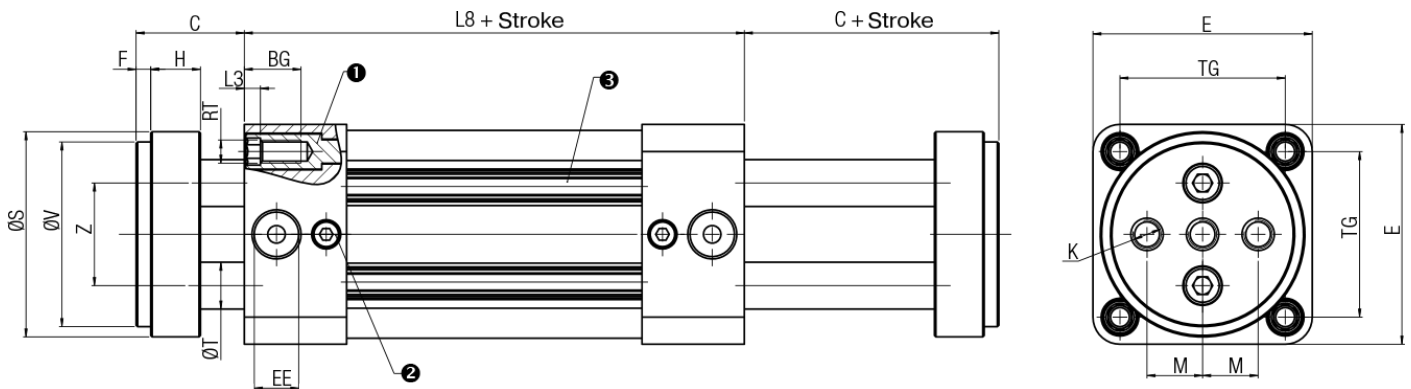
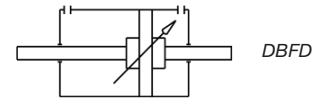
Materials	
Tube	Anodized aluminum
Heads	Die-cast aluminum
Piston	Aluminum
Piston rod	Chromed steel
Guide bushing	Sintered bronze
Seals	PUR, NBR

D	I	F	D	50	/	100	Ex
				DIAMETER		STROKE	OPTIONS
				32		25	Ex ATEX version
				40		50	
				50		80	
				63		100	
				80		125	
				100		160	
						200	
						250	
						320	
						400	
						500	
FUNCTION							
I				Double acting			
B				Double acting, through piston rod			

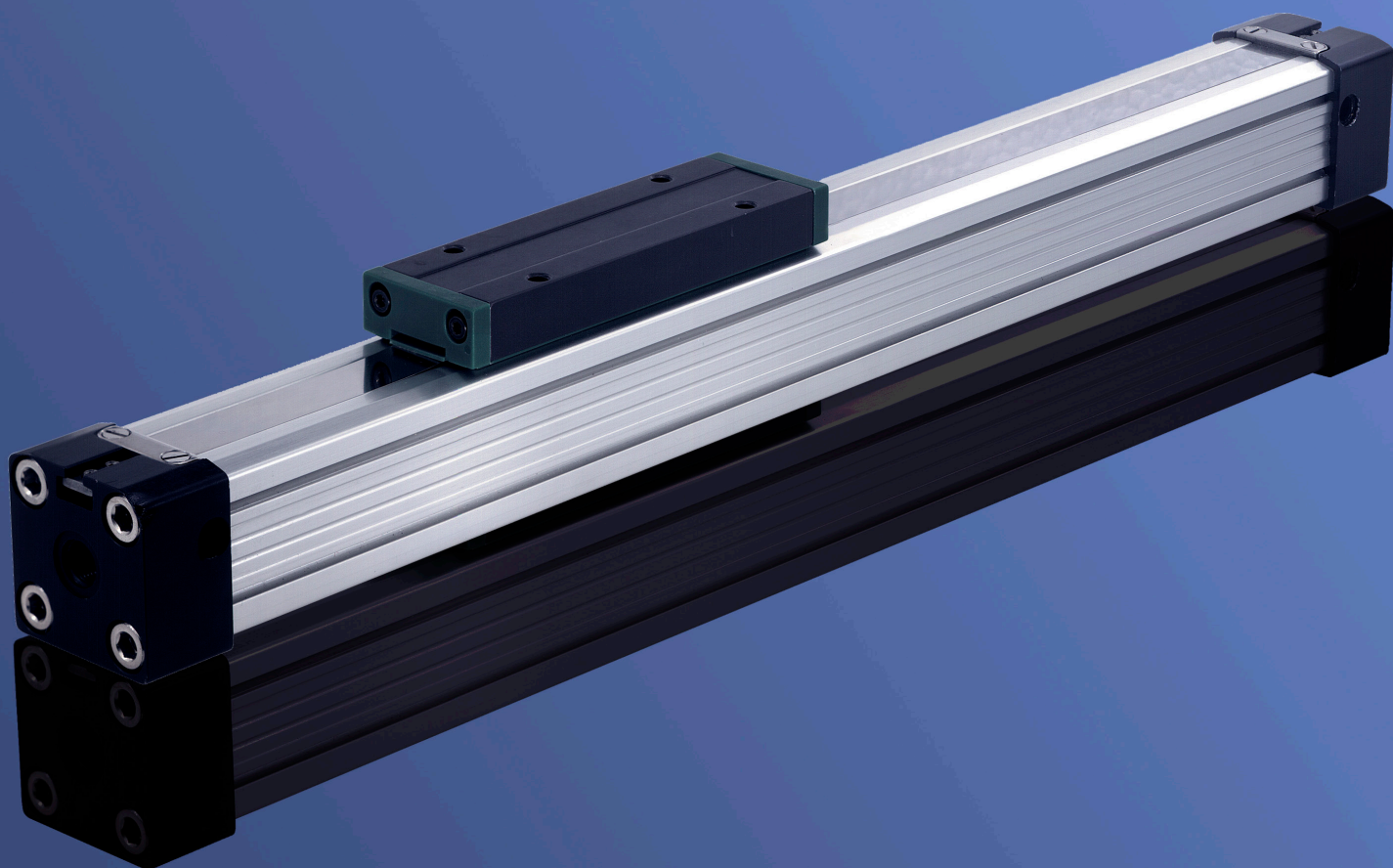


Ø [mm]	B	F	E	H	C	K	M	S	T	V	Z	VA	L	BG	D	R	EE	L3
Ø32	30	26	47	4	15	M6	9,5	35	8	32	18	4	94	16	M6	32,5	G1/8	5
Ø40	35	30	53	4	15	M8	11,25	45	10	40	22	4	105	16	M6	38	G1/4	5
Ø50	40	37	65	5	18	M8	15	55	12	50	26	4	106	16	M8	46,5	G1/4	5
Ø63	45	37	75	5	22	M10	19	70	16	63	35	4	121	16	M8	56,5	G3/8	5
Ø80	45	46	95	5	22	M12	25	85	20	80	40	4	128	17	M10	72	G3/8	6,5
Ø100	55	51	115	5	22	M12	35	105	20	100	50	4	138	17	M10	89	G1/2	6,5

DBFD



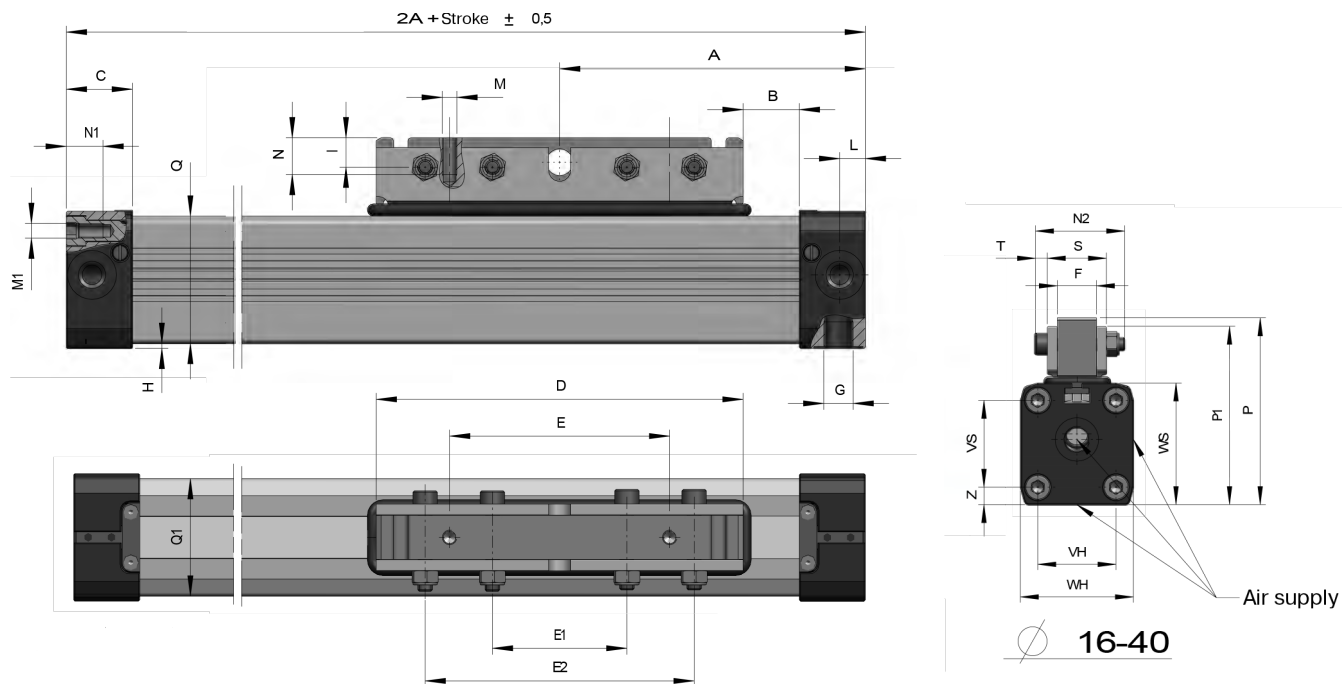
Ø [mm]	Ø Bd11	C	E	F	H	K	M	S	T	V	Z	F1	VA	L2
Ø32	30	26	47	4	15	M6	9,5	35	8	32	18	48	4	20
Ø40	35	30	53	4	15	M8	11,25	45	10	40	22	54	4	22
Ø50	40	37	65	5	18	M8	15	55	12	50	26	69	4	28
Ø63	45	37	75	5	22	M10	19	70	16	63	35	69	4	28
Ø80	45	46	95	5	22	M12	25	85	20	80	40	86	4	34
Ø100	55	51	115	5	22	M12	35	105	20	100	50	91	4	38
Ø [mm]	WH	MM	SW	KK	L8	BG	RT	E	TG	EE	PL	L3	ZM	
Ø32	26	12	10	M10x1,25	94	16	M6	47	32,5	G1/8	14	5	146	
Ø40	30	16	13	M12x1,25	105	16	M6	53	38	G1/4	16	5	165	
Ø50	37	20	17	M16x1,5	106	16	M8	65	46,5	G1/4	21	5	180	
Ø63	37	20	17	M16x1,5	121	16	M8	75	56,5	G3/8	22	5	195	
Ø80	46	25	22	M20x1,5	128	18	M10	95	72	G3/8	23	6	220	
Ø100	51,5	25	22	M20x1,5	138	18	M10	115	89	G1/2	26	6	240	



Rodless Cylinder

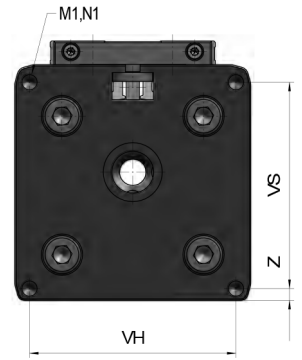
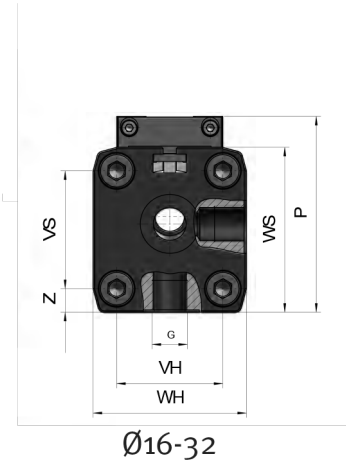
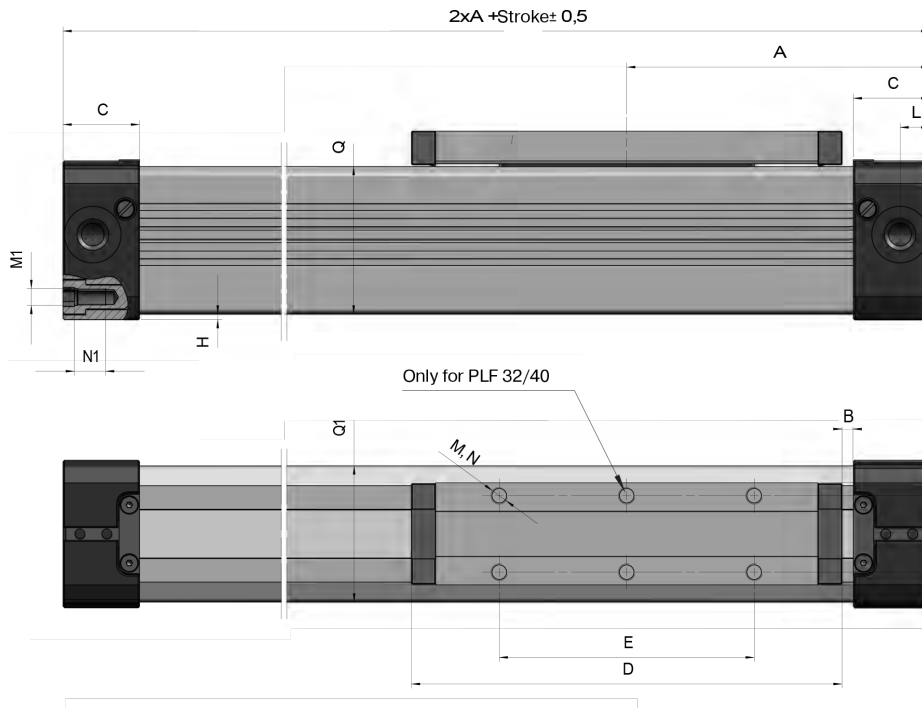
Rodless Cylinder

Technical information	
Diameter	Ø16 - Ø25 - Ø32 - Ø40 - Ø50 - Ø63 mm
Stroke	100 - 3300 - 4400 - 5700 mm (1 mm-steps) Ø16 mm (PLK, PLG) Ø16 mm (PL, PLF) Ø25 - Ø63 mm (PL, PLF, PLK, PLG, PLR, PLS)
Medium	Air
Pressure range	0,5 ... 8 bar
Temperature range	-10°C ... +80°C -10°C ... +55°C (PLS) Below 0°C air has to be dried.
Versions	PL, PLF, PLK, PLG, PLR, PLS (pneumatic drives)
Materials	
Tube	Anodized aluminum
Heads	Anodized aluminum
Piston	Anodized aluminum
Seals	Oilproof synthetic material ($V < 1\text{m/s}$ (NBR) $V \geq 1\text{m/s}$ (VITON))



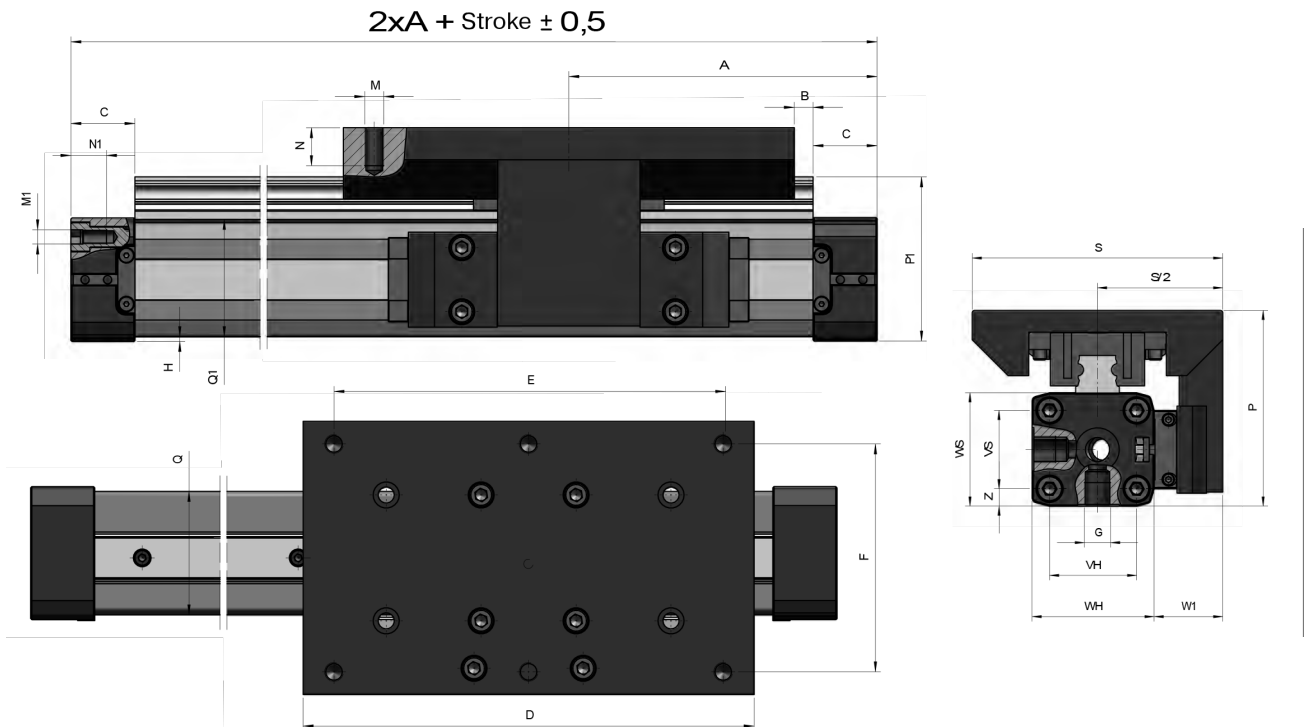
Ø [mm]	A	B	C	D	E	E1	F	G	I	L	M	M1	N1	N2	P-P1
Ø16	65	12	15	76	48	32	10	M5	6	5,5	M4	M3	7	27	43,5 - 42,3
Ø16L	90	37	15	76	48	32	10	M5	6	5,5	M4	M3	7	27	43,5 - 42,3
Ø25	100	17	23	120	80	50	15	G1/8	13	8,5	M5	M5	10	35	66-58
Ø25L	150	67	23	120	80	50	15	G1/8	13	8,5	M5	M5	10	35	66-58
Ø32	125	23	27	150	90	55	18	G1/4	12	10,5	M6	M6	14	41	86-82
Ø32L	200	23	27	300	180	120	18	G1/4	12	10,5	M6	M6	14	41	86-82
Ø40	150	45	30	150	90	55	18	G1/4	12	15	M6	M6	17	41	97-93
Ø40L	250	70	30	300	180	120	18	G1/4	12	15	M6	M6	17	41	97-93

Ø [mm]	P-P1	P1	QxQ1	E2	H	S	T	VH	WH	VS	WS	Z
Ø16	43,5 - 42,3	37,5	24,5x25	64	1	18	4	18	27	18	27	4,5
Ø16L	43,5 - 42,3	37,5	24,5x25	64	1	18	4	18	27	18	27	4,5
Ø25	66-58	53	36x36	100	2	23	5	27	40	27	40	6,5
Ø25L	66-58	53	36x36	100	2	23	5	27	40	27	40	6,5
Ø32	86-82	74	52x51	110	2	27	6	40	52	40	56	8
Ø32L	86-82	74	52x51	240	2	27	6	40	52	40	56	8
Ø40	97-93	85	58,5x59	110	7	28	6	54	72	54	69	9
Ø40L	97-93	85	58,5x59	240	7	28	6	54	72	54	69	9



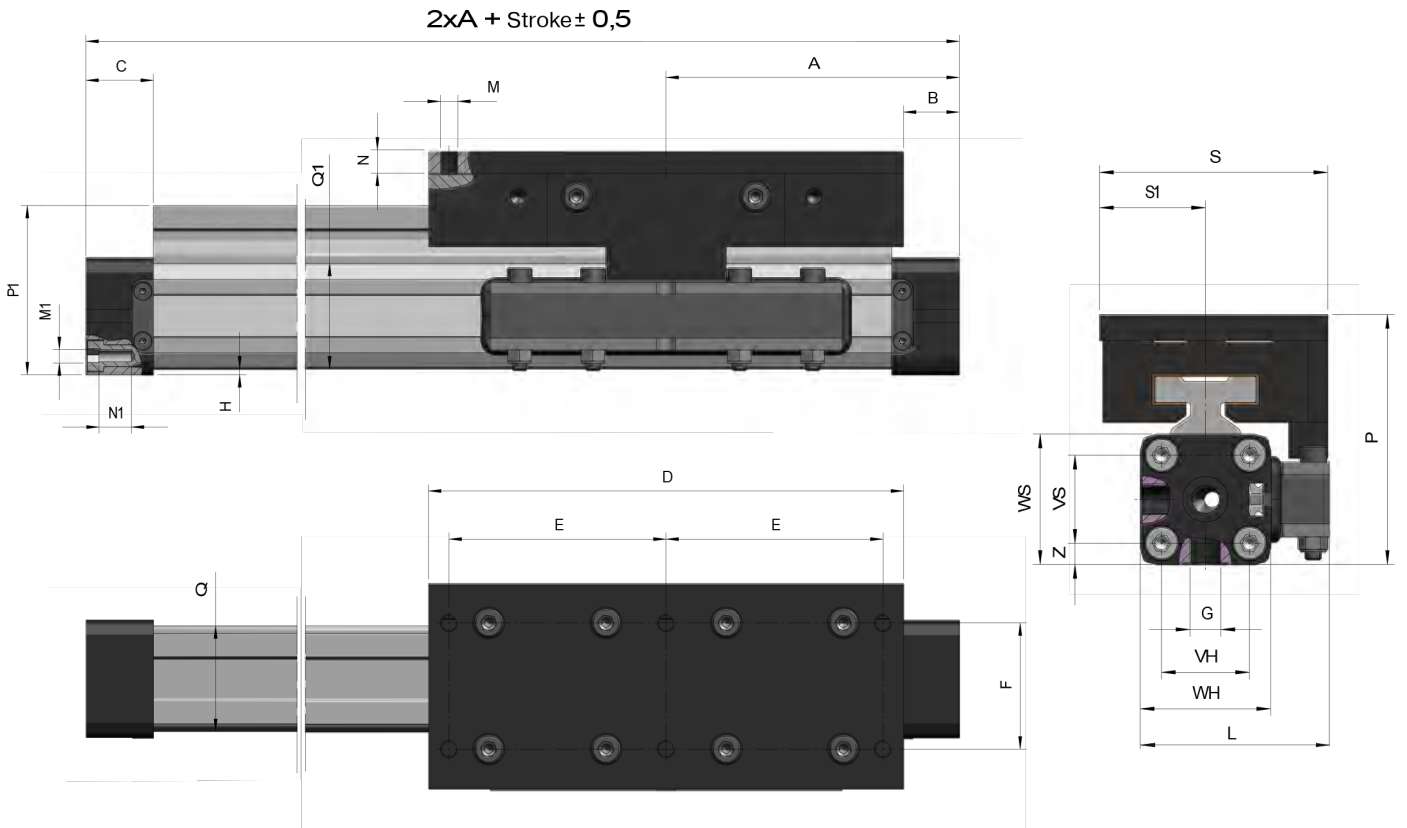
Ø [mm]	A	B	C	D	E	F	G	H	L	M	M1
Ø16	65	15,5	15	69	36	16,5	M5	1	5,5	M4	M3
Ø25	100	21	23	111	65	25	G1/8	2	8,5	M5	M5
Ø32	125	22	27	152	90	27	G1/4	2	10,5	M6	M6
Ø40	150	44	30	152	90	27	G1/4	6,8	15	M6	M6
Ø50	175	42	33	200	110	27	G1/4	0,5	11,7	M6	M6
Ø63	215	47,5	50	235	155	36	G3/8	1,5	25	M8	M8

Ø [mm]	N	N1	P	QxQ1	S	VS	VH	WS	WH	Z
Ø16	7	7	36,5	24,5x25	22	18	18	27	27	4,5
Ø25	10	12	52,5	36x36	33	27	27	40	40	6,5
Ø32	7	14	66,5	52x51	36	40	36	56	52	8
Ø40	10	17	80	58,5x59	36,4	54	54	69	72	9
Ø50	6	18	88	77x78	56	70	70	80	80	4
Ø63	15	18	123	102x102	50	78	78	106	106	14,5

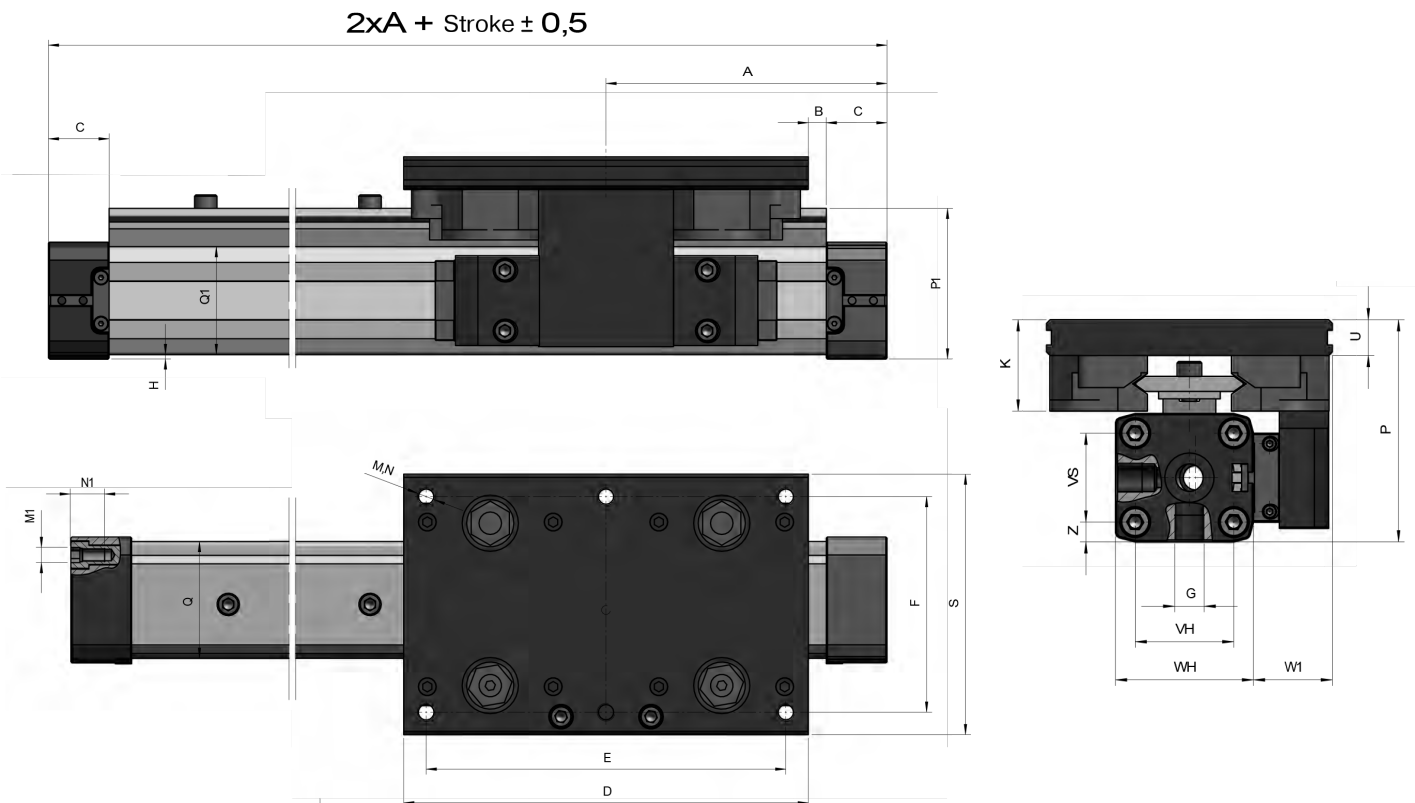
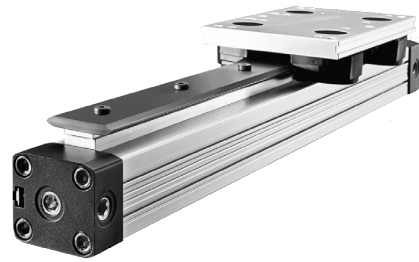


Ø [mm]	A	B	C	D	E	F	G	H	M	N	M1	N1
Ø16	65	5	15	90	70	36	M5	1	M4	10	M3	7
Ø25	100	4,5	23	145	125	64	G1/8	2	M6	12	M5	10
Ø32	125	3	27	190	164	96	G1/4	2	M8	13	M6	14
Ø40	150	25	30	190	164	96	G1/4	7	M8	18	M6	17
Ø50	175	34,5	33	215	180	110	G1/4	1	M8	20	M6	18
Ø63	215	57,5	50	215	180	140	G3/8	2	M8	20	M8	18

Ø [mm]	P	P1	QxQ1	S	S2	VH	VS	WH	WS	W1	Z
Ø16	48,9	34	24,5x25	63	31,5	18	18	27	27	18	4,5
Ø25	73	52,3	36x36	80	40	27	27	40	40	20	6,5
Ø32	90	69,3	48x52	115	57,5	40	36	56	52	30,5	8
Ø40	105	84,3	58x58	115	57,5	54	54	69	72	24,5	9
Ø50	130	102,3	77x78	130	65	70	70	80	80	28,5	5
Ø63	155	128,3	102x102	170	85	78	78	106	106	31,5	14

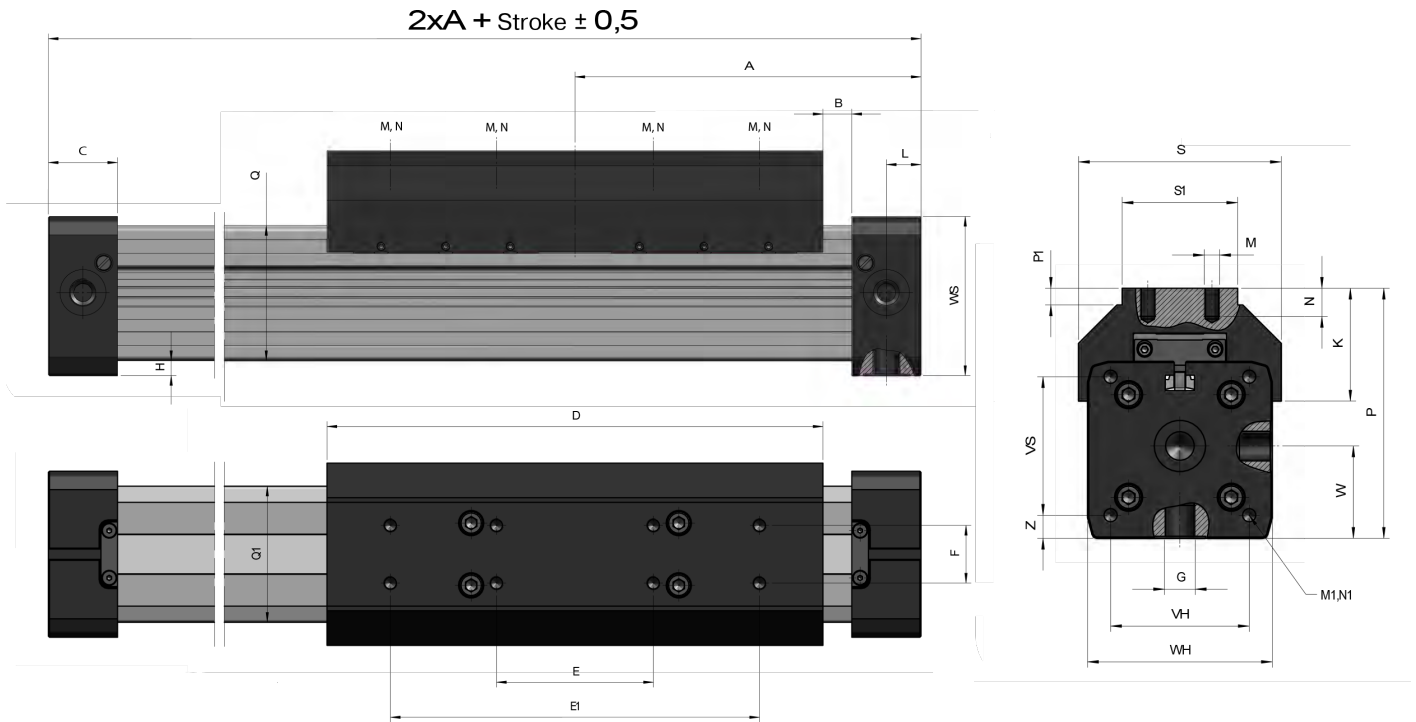


Ø [mm]	A	C	D	E	F	G	H	L	M	N	M1	N1	P	QxQ1	S	S1	VH	VS	WH	WS	Z
Ø 16	65	15	90	20	36	M5	1,5	42,3	M4	10	M3	7	48,5	24,5x25	63	31,5	18	18	27	27	4,5
Ø 25	100	23	162	74	53	G1/8	2	59,5	M6	8	M5	10	76	36x36	70	32,5	27	27	40	40	6,5
Ø 32	125	27	162	74	53	G1/4	2	82	M6	8	M6	14	88,5	52x48	70	32,5	40	36	52	52	8
Ø 40	150	30	162	74	53	G1/4	7	93	M6	8	M6	17	103	58x58	70	32,5	54	54	69	72	9



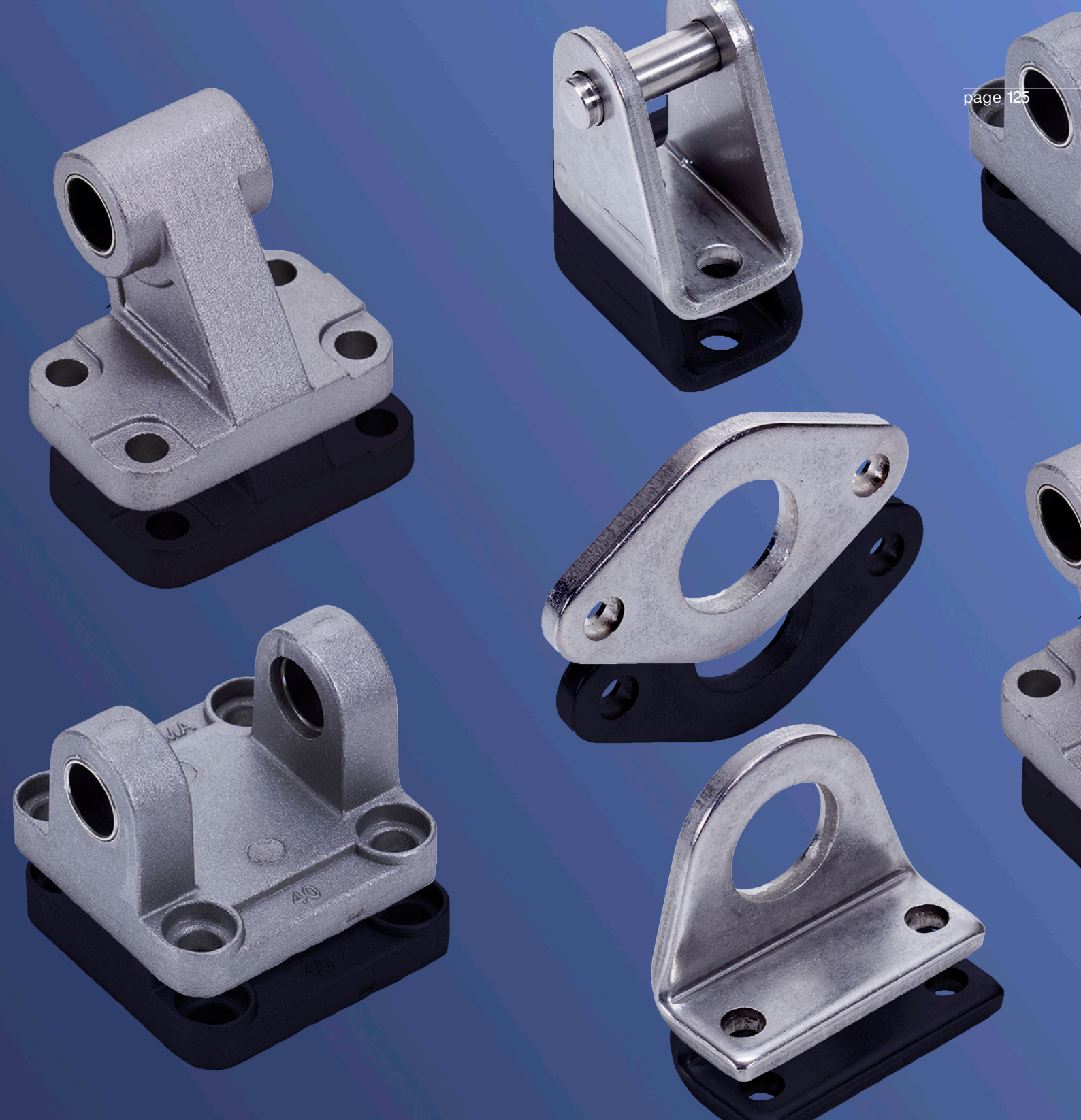
Ø [mm]	A	B	C	D	E	F	G	H	K	M	N	M1
Ø 25	100	9,5	23	135	120	65	G1/8	2	29,5	M6	11	M5
Ø 32	125	8	27	180	160	96	G1/4	2	37	M8	14,5	M6
Ø 40	150	0	30	240	216	115	G1/4	6,75	39	M8	16,5	M6
Ø 50	175	22	33	240	216	115	G1/4	1	39	M8	16,5	M6

Ø [mm]	N1	P	P1	QxQ1	S	U	VH	VS	WH	W1	Z
Ø 25	10	73,5	50,5	36x36	80	11	27	27	40	22	6,5
Ø 32	14	90	64,5	52x48	116	14,5	40	36	56	32	8
Ø 40	17	108,5	84	58,5x59	135	16,5	54	54	69	34,5	9
Ø 50	18	122	97,5	77x78	135	16,5	70	70	80	31	5



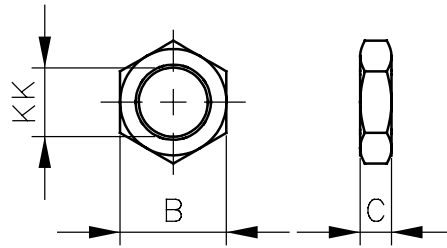
Ø [mm]	A	B	C	D	E	E1	F	G	H	K	L	M	N
Ø 32	125	22	27	152	60	120	25	G1/4	2	42,5	10,5	M5	10
Ø 40	150	12,5	30	215	68	160	25	G1/4	7	44	15	M8	10
Ø 50	175	17,5	33	250	84	190	25	G1/4	0,5	48,5	11,7	M8	10
Ø 63	215	6,5	55	320	120	240	25	G3/8	1,5	56	25	M8	14

Ø [mm]	M1	N1	P	P1	QxQ1	S	S1	VH	VS	W	WH	WS	Z
Ø 32	M6	14	81,5	6,5	52x51	66	40	36	40	30	52	56	8
Ø 40	M6	17	97,5	6,5	58,5x59	79	45	54	54	36	72	69	9
Ø 50	M6	18	110	6,5	77x78	92	50	70	70	43,5	80	80	4
Ø 63	M8	18	137	5	102x102	116	50	78	78	62,5	106	106	14,5



Mounting Accessories

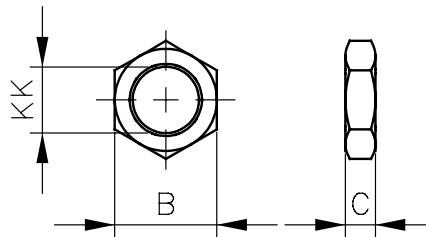
Fixtures for Rod-End



UA

Piston rod nut

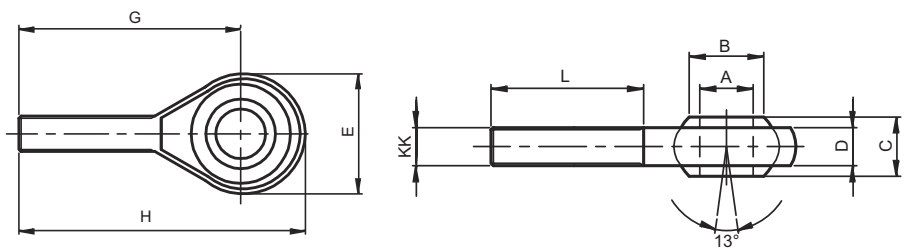
Type	Thread	KK	B	C
UA-M4	M4	M4	7	3,2
UA-M6	M6	M6	10	5
UA-M8	M8	M8	13	6,5
UA-M10x1,25	M10x1,25	M10x1,25	17	5
UA-M12x1,25	M12x1,25	M12x1,25	19	6
UA-M16x1,5	M16x1,5	M16x1,5	24	8
UA-M20x1,5	M20x1,5	M20x1,5	30	10
UA-M27x2	M27x2	M27x2	41	13



UAX

Piston rod nut
INOX - Stainless Steel

Type	Thread	KK	B	C
UAX-M6	M6	M6	7	3,2
UAX-M8	M8	M8	10	5
UAX-M10x1,25	M10x1,25	M10x1,25	13	6,5



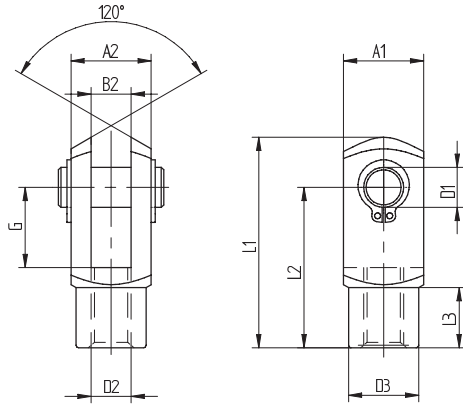
UKF

Rod eye
with external thread

Type	Thread	KK	A	B	C	D	E	G	H	L
UKF-M5	M5	M5	5	7,5	8	7,5	18	33	42	19
UKF-M6	M6	M6	6	8,9	9	7,5	20	36	46	21
UKF-M8	M8	M8	8	10,4	12	9,5	24	42	54	25
UKF-M10	M10	M10	10	12,9	14	11,5	30	48	63	28
UKF-M12	M12	M12	12	15,4	16	12,5	34	54	71	32

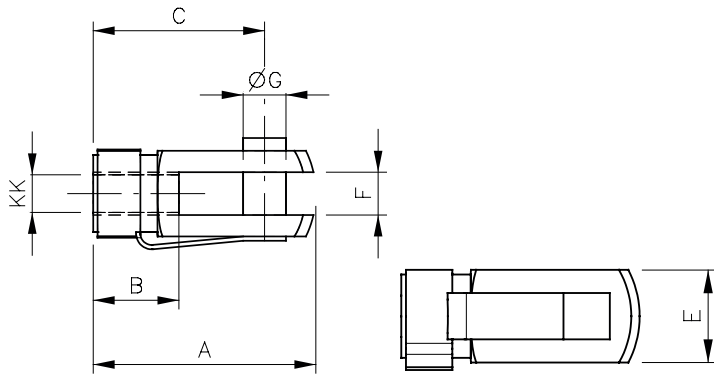


UVX



Clevis
with lockable pin
INOX - Stainless Steel

Type	A1	A2	B2	G	L1	L2	L3	D2	D3	D1
UVX-M6	12	12	6	12	31	24	9	M6x1	10	6
UVX-M8	16	16	8	16	42	32	12	M8x1,25	14	8
UVX-M10x1,25	20	20	10	20	52	40	15	M10x1,25	18	10
UVX-M12x1,25	24	24	12	24	62	48	18	M12x1,25	20	12
UVX-M16x1,5	32	32	16	32	83	64	24	M16x1,5	26	16
UVX-M20x1,5	40	40	20	40	105	80	30	M20x1,5	34	20
UVX-M27x1,5	55	55	30	54	148	110	38	M27x2	48	30
UVX-M36x2	70	70	35	72	188	144	40	M36x2	60	35

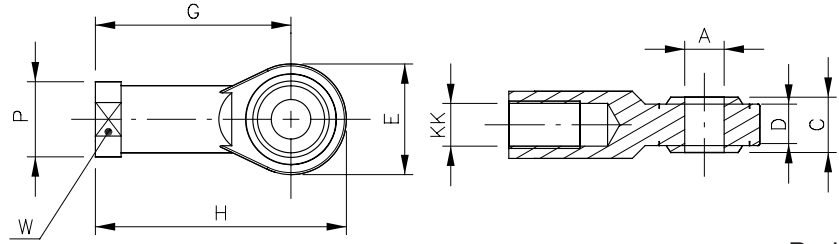


UV

Clevis
with lockable pin

Type	Thread	KK	A	B	C	E	F	G
UV-M4	M4	M4	21	8	16	8	4	4
UV-M6	M6	M6	31	12	24	12	6	6
UV-M8	M8	M8	42	16	32	16	8	8
UV-M10x1,25	M10x1,25	M10x1,25	52	20	40	20	10	10
UV-M12x1,25	M12x1,25	M12x1,25	62	24	48	24	12	12
UV-M16x1,5	M16x1,5	M16x1,5	83	32	64	32	16	16
UV-M20x1,5	M20x1,5	M20x1,5	105	40	80	40	20	20
UV-M27x2	M27x2	M27x2	148	56	110	55	30	30
UV-M36x2	M36x2	M36x2	188	72	144	70	35	35
UV-M42x2	M42x2	M42x2	232	84	168	85	42	42

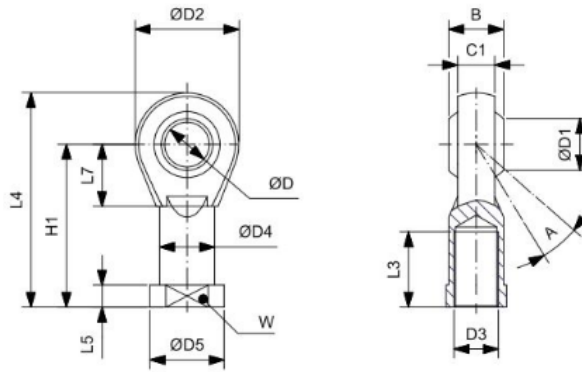
Fixtures for Rod-End



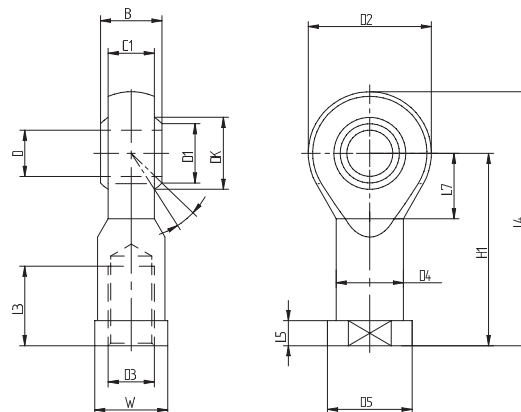
UK

Rod Eye
with internal thread

Type	Thread	KK	A	C	D	E	G	H	P	W
UK-M4	M4	M4	5	8	6	18	27	36,5	9	11
UK-M6	M6	M6	6	9	6,75	20	30	40,5	11	13
UK-M8	M8	M8	8	12	9	24	36	48,5	14	16
UK-M10x1,25	M10x1,25	M10x1,25	10	14	10,5	28	43	57,5	17	19
UK-M12x1,25	M12x1,25	M12x1,25	12	16	12	32	50	66,5	19	22
UK-M16x1,5	M16x1,5	M16x1,5	16	21	15	42	64	85,5	22	27
UK-M20x1,5	M20x1,5	M20x1,5	20	25	18	50	77	102,5	30	34
UK-M27x2	M27x2	M27x2	30	37	25	70	110	145,5	41	50



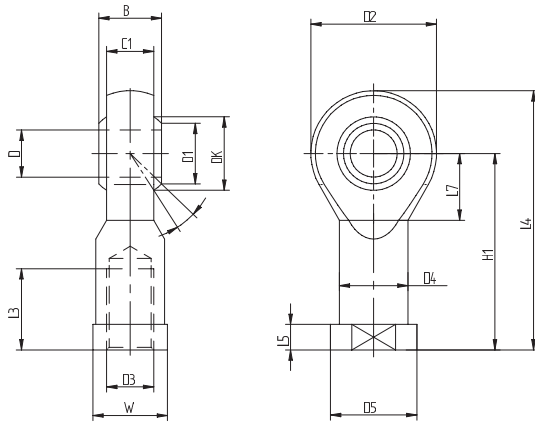
Type	D3	W	L3	A	D	D1	C1	B	D4	D5	L5	L7	H1	L4	D2
UK-M36x2	M36x2	50	56	19°	35	37,7	28	43	46	58	17	41	125	165	80
UK-M42x2	M42x2	55	60	16°	40	45,1	33	49	53	65	19	45	142	187	91



Type	a°	B	C1	D1	D2	D3	D4	D5	DK	D	H1	L2	L4	L5	L7	W
UK-M48x2	14	60	45	56,6	117	M48x2	65	75	82,5	50	162	65	218	23	58	65

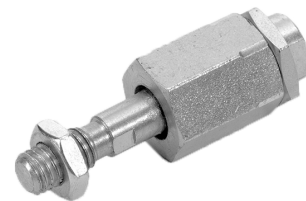
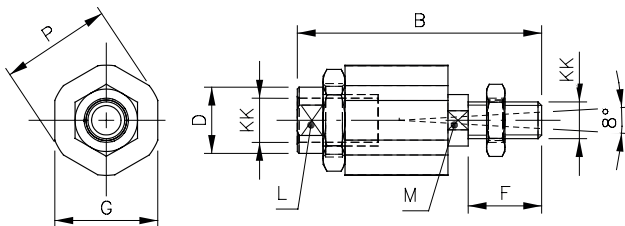


UKX



Rod Eye
with internal thread
INOX - Stainless Steel

Type	a°	B	C1	D1	D2	D3	D4	D5	DK	D	H1	L3	L4	L5	L7	W
UKX-M8	14	12	9	10,4	24	M8	12,5	16	15,87	8	36	16	48	5	13	14
UKX-M10x1,25	13	14	10,5	12,9	28	M10x1,25	15	19	19,05	10	43	20	57	6,5	15	17
UKX-M12x1,25	13	16	12	15,4	32	M12x1,25	17,5	22	22,22	12	50	22	66	6,5	17	19
UKX-M16x1,5	15	21	15	19,3	42	M16x1,5	22	27	28,57	16	64	28	85	8	23	22
UKX-M20x1,5	14	25	18	24,3	50	M20x1,5	27,5	34	34,92	20	77	33	102	10	27	30
UKX-M27x2	17	37	25	34,8	70	M27x2	40	50	50,8	30	110	51	145	15	36	41
UKX-M36x2	16	43	28	37,7	80	M36x2	46	58	57,15	35	125	56	165	17	41	50

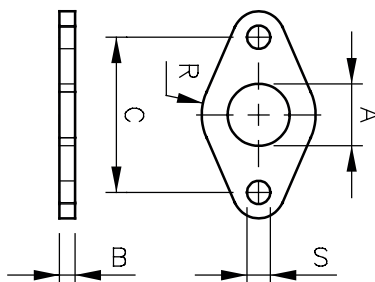


Self-aligning coupling

FK

Type	Thread	KK	B	D	F	G	L	M	P
FK-M4	M4	M4	33	11	8	12,7	-	3,2	11
FK-M6	M6	M6	35	8,5	10	14,5	7	5	13
FK-M8	M8	M8	48,5	12,5	12	19	10	7	17
FK-M10x1,25	M10x1,25	M10x1,25	69,5	21,5	20	32	19	12	30
FK-M12x1,25	M12x1,25	M12x1,25	74,5	21,5	24	32	19	12	30
FK-M16x1,5	M16x1,5	M16x1,5	103	33,5	32	45	30	19	41
FK-M20x1,5	M20x1,5	M20x1,5	120	33,5	40	45	30	19	41
FK-M27x2	M27x2	M27x2	147	40,5	44	-	40	24	55

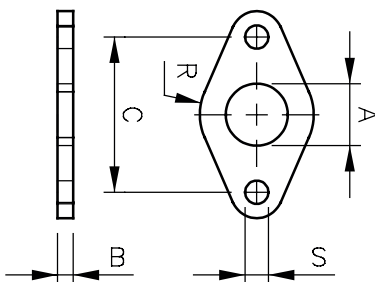
Accessories for Round Cylinder | ISO 6432



RF

Flange

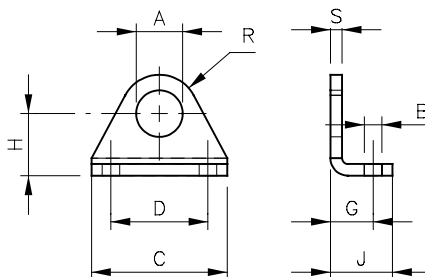
Type	Diameter	A	B	C	R	S
RF 8-10	Ø-10	12	3	30	9	4,5
RF 12-16	Ø2-16	16	4	40	13	5,5
RF 20-25	Ø0-25	22	5	50	19	6,5



RFX

Flange
INOX - Stainless Steel

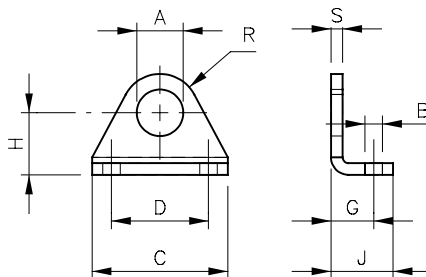
Type	Diameter	A	B	C	R	S
RFX 16	Ø6	16	4	40	13	5,5
RFX 20-25	Ø0-25	22	5	50	19	6,5



RL

Foot mounting

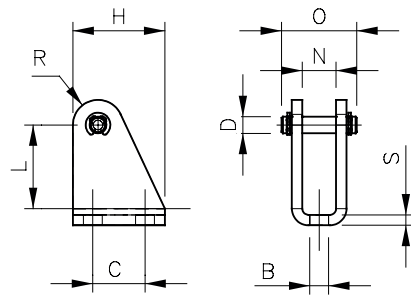
Type	Diameter	A	B	C	D	G	H	J	R	S
RL 8-10	Ø-10	12	4,5	35	25	11	16	16	10	3
RL 12-16	Ø2-16	16	5,5	42	32	14	20	20	13,5	4
RL 20-25	Ø0-25	22	6,6	54	40	17	25	25	18	5



RLX

Foot mounting
INOX - Stainless Steel

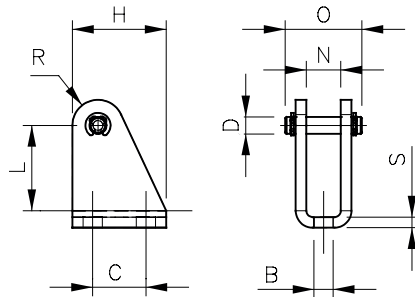
Type	Diameter	A	B	C	D	G	H	J	R	S
RLX 16	Ø6	16	5,5	42	32	14	20	20	13,5	4
RLX 20-25	Ø0-25	22	6,6	54	40	17	25	25	18	5



Female hinge with pin

RG

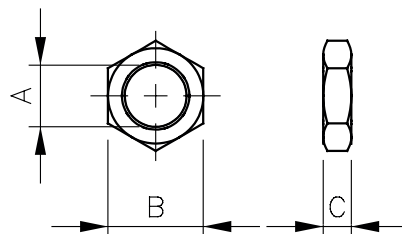
Type	Diameter	B	C	D	H	L	N	O	R	S
RG 8-10	Ø-10	4,5	12,5	4	20	24	8,1	17	5	2,5
RG 12-16	Ø2-16	5,5	15	6	25	27	12,1	23	7	3
RG 20-25	Ø0-25	6,6	20	8	32	30	16,1	29,5	10	4



Female hinge with pin
INOX - Stainless Steel

316
RGX

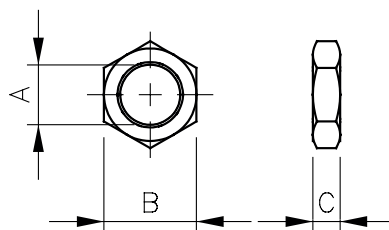
Type	Diameter	B	C	D	H	L	N	O	R	S
RGX 16	Ø6	5,5	15	6	25	27	12,1	23	7	3
RGX 20-25	Ø0-25	6,6	20	8	32	30	16,1	29,5	10	4



Nose nut

RA

Type	Diameter	A	B	C
RA 8-10	Ø-10	M12x1,25	19	7
RA 12-16	Ø2-16	M16x1,5	22	6
RA 20-25	Ø0-25	M22x1,5	27	8

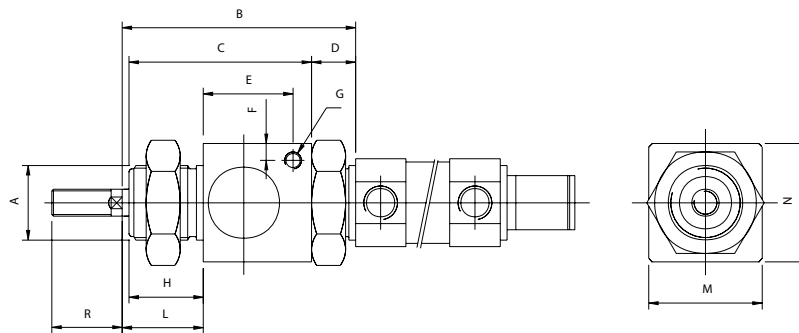
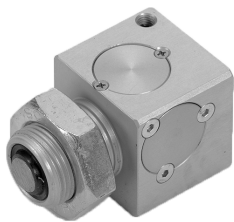


Nose nut
INOX - Stainless Steel

316
RAX

Type	Diameter	A	B	C
RAX 16	Ø6	M16x1,5	22	6
RAX 20-25	Ø0-25	M22x1,5	27	8

Accessories for Round Cylinder | ISO 6432

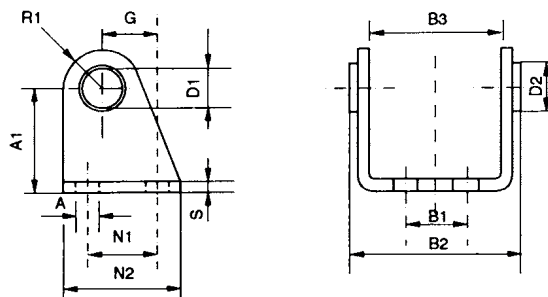
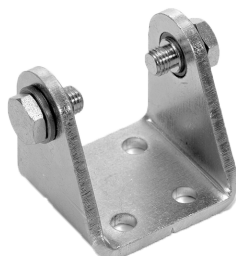


MRL

Rod lock

Type	Diameter	A	B	C	D	E	F	G	H	L	M	N	R
MRL 20	∅0	M22x1,5	68,5	54	13	27	5	M5	22	23,5	34	35	23
MRL 25	∅5	M22x1,5	68,5	54	13	27	5	M5	22	24,5	34	35	26

Accessories for Round Cylinder | A-Series

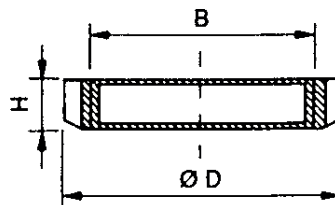


ACC

Foot flange

Type	Diameter	D1	D2	A	A1	G	M1	N1	N2
ACC 32	∅2	10	16	7	35	20	M8x1	24	40
ACC 40	∅0	12	18	9	40	27	M10x1	30	50
ACC 50	∅0	14	23	9	45	30	M12x1,5	34	54
ACC 63	∅3	16	24	9	50	34	M14x1,5	35	65

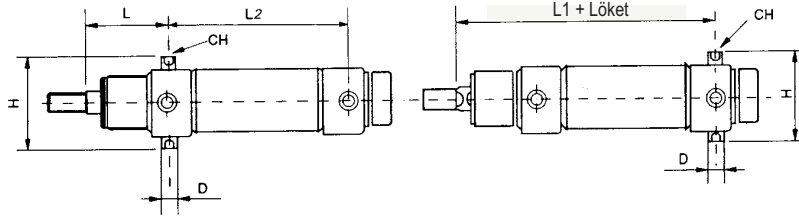
Type	Diameter	R1	S	CH2	B1	B2	B3	V	C1	C2
ACC 32	∅2	12	4	13	20	50,1	38,1	4	6	18
ACC 40	∅0	13	5	17	28	60,1	46,1	5	7	21,6
ACC 50	∅0	14	6	19	36	74,1	57,1	6	9	26,4
ACC 63	∅3	16	6	19	42	88,1	70,1	6	15	34



AGT

Slotted nut

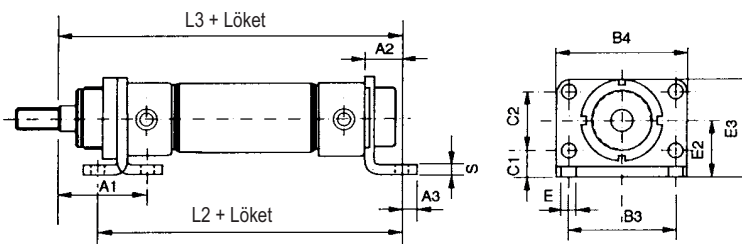
Type	Diameter	B	D	H
AGT 32	∅2	M30x1,5	45	7
AGT 40	∅0	M38x1,5	50	8
AGT 50-63	∅0-63	M45x1,5	58	9



APE

Pivots

Type	Diameter	D	H	L1	L2	L	CH
APE 32	Ø2	10	51	125	78	47	5
APE 40	Ø0	12	61	144	87	57	6
APE 50	Ø0	14	75	158	96	62	6
APE 63	Ø3	16	90	161	98	63	8

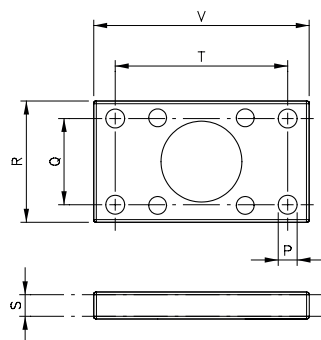


APD

Hinge with screws

Type	Diameter	E	E2	E3	C1	C2	L2	L3	B3	B4	S	A1	A2	A3
APD 32	Ø2	7	28	49	14	28	124	148	52	66	4	48	14	7
APD 40	Ø0	9	33	58	18	30	151	176	60	80	5	60	20	10
APD 50	Ø0	9	40	70	20	40	160	190	70	90	6	64	20	10
APD 63	Ø3	9	45	80	20	50	164	194	76	96	6	65	20	10

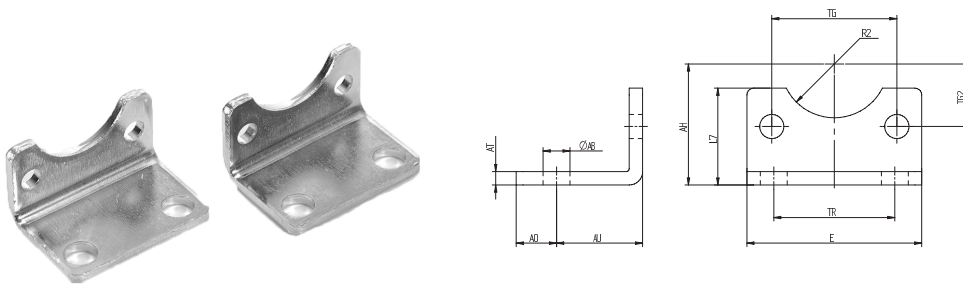
Accessories for Profile and compact Cylinder | ISO



DF

ISO flange

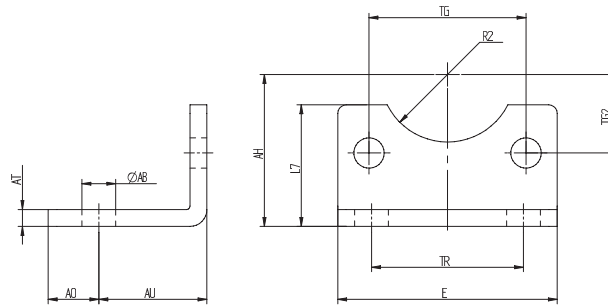
Type	Diameter	P	Q	R	S	T	V
DF 32	Ø2	7	32	45	10	64	80
DF 40	Ø0	9	36	52	10	72	90
DF 50	Ø0	9	45	65	12	90	110
DF 63	Ø3	9	50	75	12	100	120
DF 80	Ø0	12	63	95	16	126	150
DF 100	Ø00	14	75	115	16	150	170
DF 125	Ø25	16	90	140	20	180	205



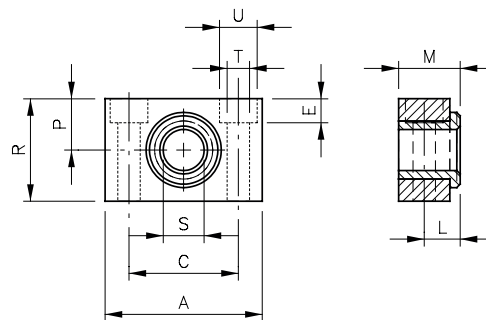
DL

ISO flange

Type	Diameter	B	C	E	F	O	U	V
DL 32	Ø2	4	32,5	45	32	7	24	35
DL 40	Ø40	4	38	52	36	9	28	36
DL 50	Ø0	5	46,5	65	45	9	32	47
DL 63	Ø3	5	56,5	75	50	9	32	45
DL 80	Ø0	6	72	92	63	12	41	55
DL 100	Ø00	6	89	115	71	14	41	57
DL 125	Ø25	8	110	140	90	16	45	70



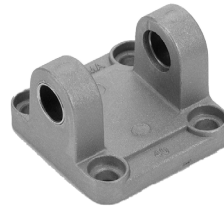
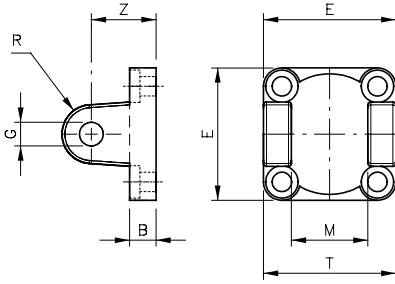
Type	Diameter	AH	AO	AT	AU	E	L7	AB	R2	TG2	TG	TR
DL 160	Ø60	115	15	10	60	180	100	18,5	32,5	70	140	115
DL 200	Ø00	135	30	12	70	220	109	24	37,5	87,5	175	135



DSL

Support for intermediate hinge

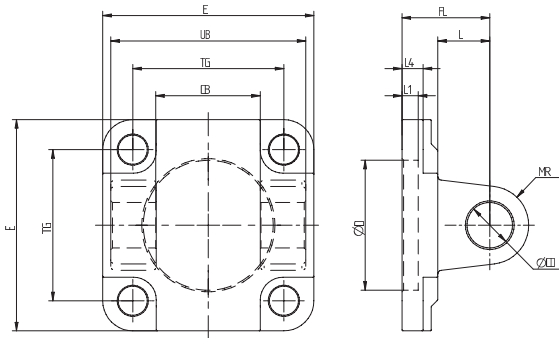
Type	Diameter	A	C	E	L	M	P	R	S	T	U
DSL 32	Ø2	46	32	7	10,5	18	15	30	12	6,6	11
DSL 40-50	Ø0-50	55	36	9	12	21	18	36	16	9	15
DSL 63-80	Ø3-80	65	42	11	13	23	20	40	20	11	18
DSL 100-125	Ø00-125	75	50	13	16	28,5	25	50	25	14	20



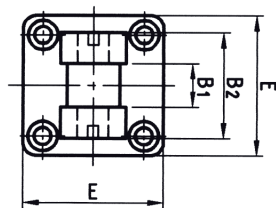
ISO female hinge

DG

Type	Diameter	B	E	G	M	R	T	Z
DG 32	∅2	9	45	10	26	10	45	22
DG 40	∅40	9	52	12	28	12	52	25
DG 50	∅0	11	65	12	32	12	60	27
DG 63	∅3	11	75	16	40	16	70	32
DG 80	∅0	14	95	16	50	16	90	36
DG 100	∅00	14	115	20	60	20	110	41
DG 125	∅25	20	140	25	70	25	130	50



Type	Diameter	CB	E	FL	L1	L4	L	MR	∅D	∅	TG	UB
DG 160	∅60	90	180	55	7	10	35	25	30	65	140	170
DG 200	∅00	90	220	60	7	10	35	25	30	75	175	170
DG 250	∅50	110	270	70	17	-	45	40	40	90	220	200
DG 320	∅20	120	350	80	22	-	50	45	45	110	270	200



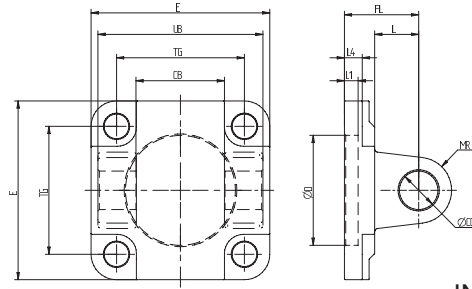
ISO narrow female hinge

DGS

Type	Diameter	B1	B2	CN	E	FL	R1	R2	XD
DGS 32	∅2	14	34	10	45	22	10	17	142
DGS 40	∅40	16	40	12	52	25	12	20	160
DGS 50	∅0	21	45	16	65	27	14	22	170
DGS 63	∅3	21	51	16	75	32	18	25	190
DGS 80	∅0	25	65	20	95	36	20	30	210
DGS 100	∅00	25	75	20	115	41	22	32	230
DGS 125	∅25	37	97	30	140	50	25	42	275

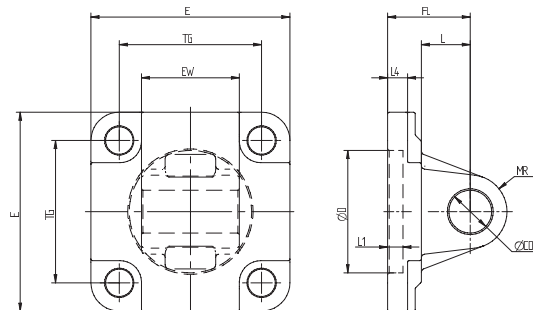


DGX



ISO female hinge
INOX - Stainless Steel

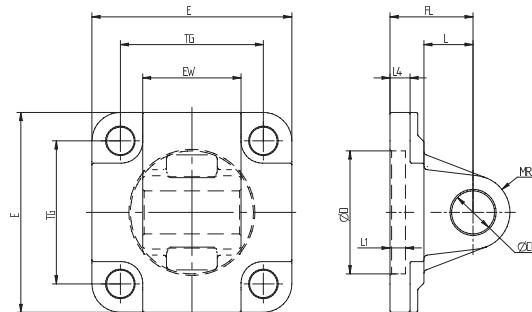
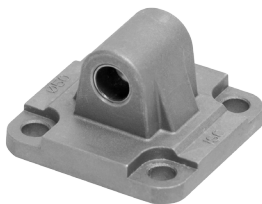
Type	Diameter	CB	E	FL	L1	L4	L	MR	CD	D	TG	UB
DGX 32	Ø2	26	45	22	5	5,5	13	10	10	30	32,5	45
DGX 40	Ø0	28	52	25	5	5,5	16	12	12	35	38	52
DGX 50	Ø0	32	65	27	5	6,5	16	12	12	40	46,5	60
DGX 63	Ø3	40	75	32	5	6,5	21	16	16	45	56,5	70
DGX 80	Ø0	50	93	36	5	10	22	16	16	45	72	90
DGX 100	Ø100	60	110	41	5	10	27	20	20	55	89	110
DGX 125	Ø25	70	134	50	7	10	30	25	25	60	110	130



ISO male hinge

DH

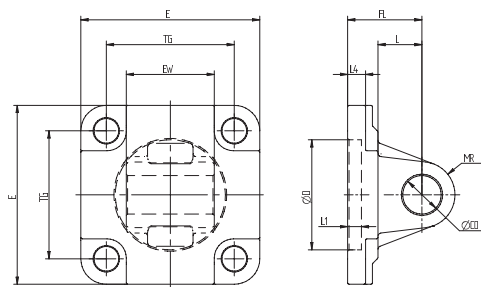
Type	Diameter	B	E	G	M	R	Z
DH 32	Ø2	9	45	10	26	10	22
DH 40	Ø0	9	52	12	28	12	25
DH 50	Ø0	11	65	12	32	12	27
DH 63	Ø3	11	75	16	40	16	32
DH 80	Ø0	14	95	16	50	16	36
DH 100	Ø100	14	115	20	60	20	41
DH 125	Ø25	20	140	25	70	25	50



Type	Diameter	EW	E	FL	L1	L4	L	MR	ØD	Ø	TG
DH 160	Ø60	90	180	55	7	10	35	25	30	65	140
DH 200	Ø200	90	220	60	10	11	35	25	30	75	175
DH 250	Ø250	110	270	70	11	17	45	40	40	90	220
DH 320	Ø320	120	350	80	15	22	50	45	45	110	270



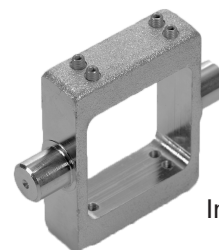
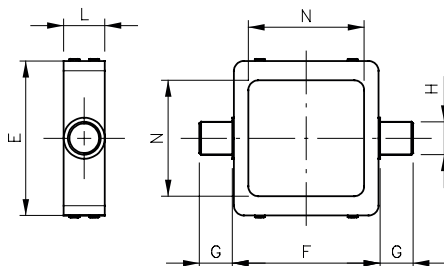
DHX



ISO male hinge
INOX - Stainless Steel

Type	Diameter	E	EW	TG	FL	L1	L	L4	D	CD	MR
DHX 32	Ø2	45	26	32,5	22	5	13	5,5	30	10	10
DHX 40	Ø40	52	28	38	25	5	16	5,5	35	12	12
DHX 50	Ø0	65	32	46,5	27	5	16	6,5	40	12	12
DHX 63	Ø3	75	40	56,5	32	5	21	6,5	45	16	16
DHX 80	Ø0	93	50	72	36	5	22	10	45	16	16
DHX 100	Ø00	110	60	89	41	5	27	10	55	20	20
DHX 125	Ø25	134	70	110	50	7	30	10	60	25	25

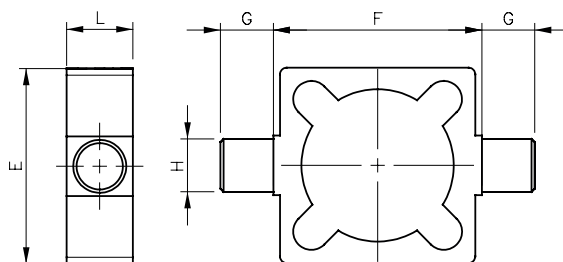
DP



Intermediate hinge for
profile cylinders
of the H-series

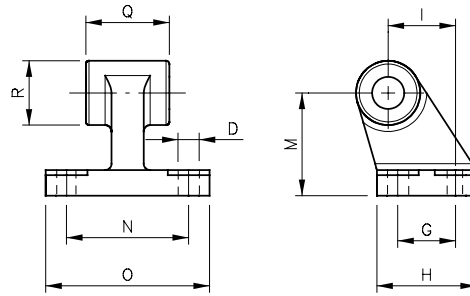
Type	Diameter	E	F	G	H	L	N
DP 32	Ø2	71	50	12	12	18	45
DP 40	Ø40	79	63	16	16	20	51
DP 50	Ø0	91	75	16	16	20	60,8
DP 63	Ø3	96	90	20	20	26	70,5
DP 80	Ø0	132	110	20	20	26	87,5
DP 100	Ø00	147	132	25	25	30	107
DP 125	Ø25	155	155	25	25	32	133

DS



Intermediate hinge for
profile cylinders
of the D-series

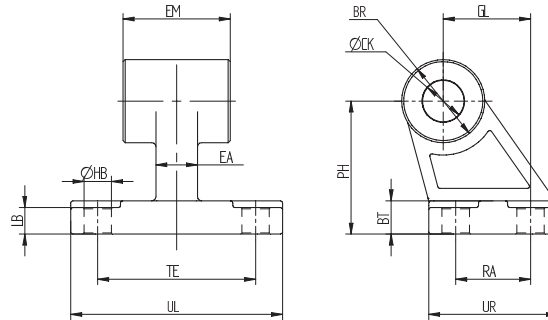
Type	Diameter	E	F	G	H	L
DS 32	Ø2	49	50	12	12	18
DS 40	Ø40	59	63	16	16	20
DS 50	Ø0	71	75	16	16	20
DS 63	Ø3	75	90	20	20	26
DS 80	Ø0	105	110	20	20	26
DS 100	Ø00	129	132	25	25	32
DS 125	Ø25	154	160	25	25	33



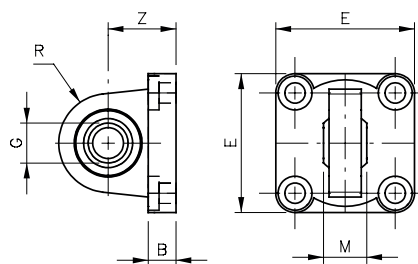
ISO square hinge

DW

Type	Diameter	D	G	H	I	M	N	O	Q	R
DW 32	Ø2	6,6	18	31	21	32	38	51	26	20
DW 40	Ø0	6,6	22	35	24	36	41	54	28	22
DW 50	Ø0	9	30	45	33	45	50	65	32	26
DW 63	Ø3	9	35	50	37	50	52	67	40	30
DW 80	Ø0	11	40	60	47	63	66	86	50	30
DW 100	Ø00	11	50	70	55	71	76	96	60	38
DW 125	Ø25	14	60	90	70	90	94	124	70	45



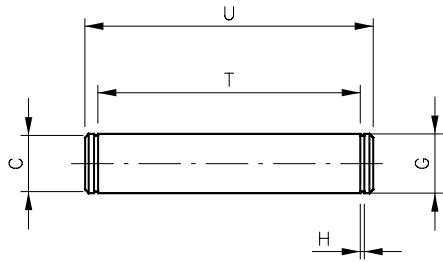
Type	Diameter	BR	BT	CK	EA	EM	GL	LB	HB	H	RA	TE	UL	UR
DW 160	Ø60	31,5	25	30	36	90	97	21	14	115	88	118	156	126
DW 200	Ø00	31,5	30	30	40	90	105	26	18	135	90	122	162	130



ISO male hinge with ball joint

DKL

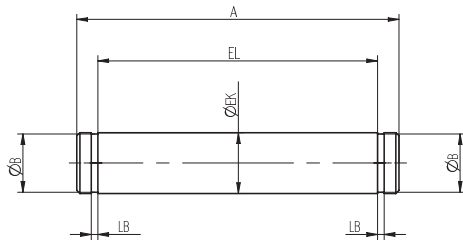
Type	Diameter	B	E	G	M	R	Z
DKL 32	Ø2	9	45	10	14	16	22
DKL 40	Ø0	9	52	12	16	19	25
DKL 50	Ø0	11	65	16	21	21	27
DKL 63	Ø3	11	75	16	21	24	32
DKL 80	Ø0	14	95	20	25	28	36
DKL 100	Ø00	14	115	20	25	30	41
DKL 125	Ø25	20	140	30	37	40	50



DC

Pin for hinge

Type	Diameter	C	G	H	T	U
DC 32	Ø2	9,6	10	1,1	46	53
DC 40	Ø4	11,5	12	1,1	53	60
DC 50	Ø6	11,5	12	1,1	61	68
DC 63	Ø8	15,2	16	1,1	71	78
DC 80	Ø10	15,2	16	1,1	91	98
DC 100	Ø16	19	20	1,3	111	118
DC 125	Ø25	23,9	25	1,3	132	139
DC 160-200	Ø160-200	30	28,6	1,6	172	180
DC 250	Ø50	40	37,5	1,85	202	211
DC 320	Ø80	45	42,5	1,85	222	234



Pin for hinge
INOX - Stainless Steel

Type	Diameter	A	B	EL	EK	LB
DCX 32	Ø2	53	9,6	46	10	1,1
DCX 40	Ø4	60	11,5	53	12	1,1
DCX 50	Ø6	68	11,5	61	12	1,1
DCX 63	Ø8	78	15,2	71	16	1,1
DCX 80	Ø10	98	15,2	91	16	1,1
DCX 100	Ø16	118	19	111	20	1,3
DCX 125	Ø25	139	23,9	132	25	1,3

DCX

DCS



Pin for narrow hinge

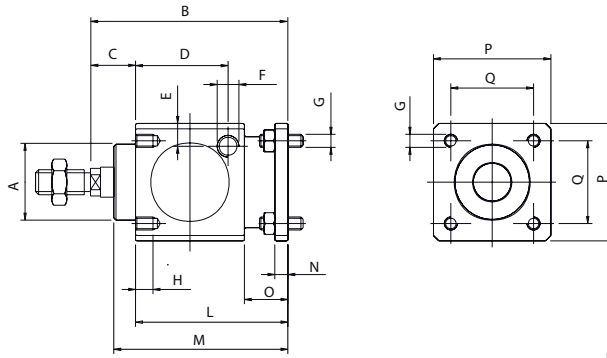
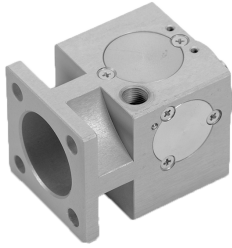
Type	Diameter
DCS 32	Ø2
DCS 40	Ø4
DCS 50	Ø6
DCS 63	Ø8
DCS 80	Ø10
DCS 100	Ø16
DCS 125	Ø25



ZHA

Valve mounting plate

Type	Diameter
ZHA-032 SET	Ø2
ZHA-040 SET	Ø4
ZHA-050 SET	Ø6
ZHA-063 SET	Ø8
ZHA-080 SET	Ø10
ZHA-100 SET	Ø16
ZHA-125 SET	Ø25

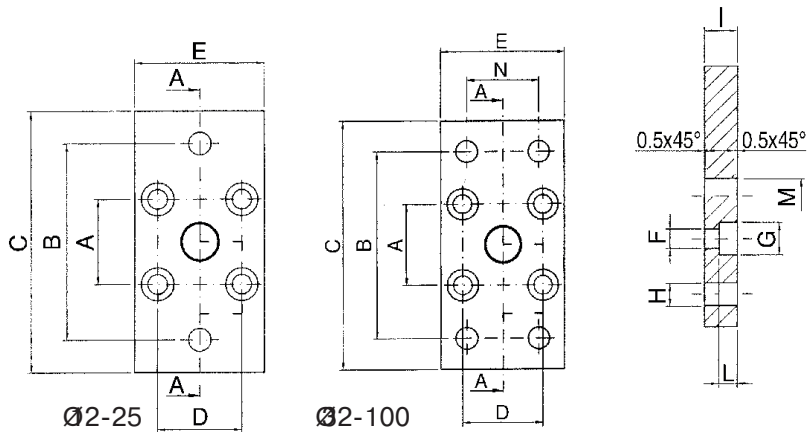
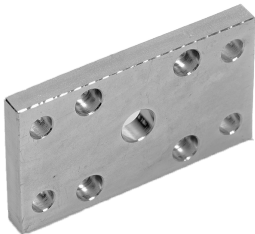


Rod lock
ISO 15552 cylinder

VRL

Type	Diameter	A	B	C	D	E	F	G	H	L	M	N	O	P	Q
VRL 32	Ø2	30	86	26	33,25	9	G1/8	M6	8	60	67,5	6	20	47	32,5
VRL 40	Ø0	34,5	100	30	42,5	9	G1/8	M6	8	70	80	6	20	54	38
VRL 50	Ø0	40	127	37	58	12,5	G1/8	M8	12	90	100	8	24	65	46,5
VRL 63	Ø3	45	127	37	59	17,5	G1/8	M8	12	90	100	8	24	75	56,5
VRL 80	Ø0	45	156	46	69	17,5	G1/4	M10	16	110	120	12	32	95	72
VRL 100	Ø00	55	161	51	69	20	G1/4	M10	16	110	120	12	32	114	89
VRL 125	Ø25	60	205	65	84,5	19	G1/4	M12	20	140	156	20	45	138	110

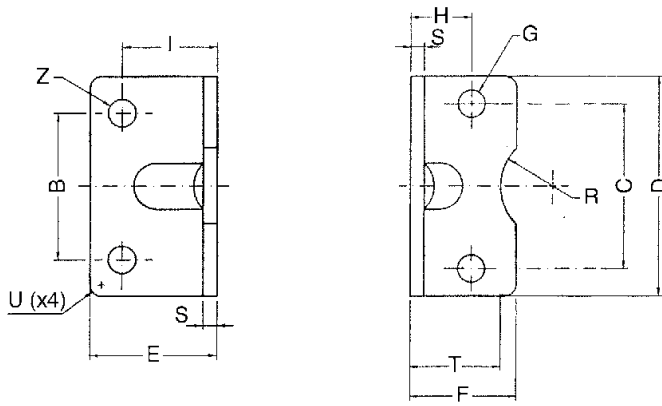
Accessories for Compact Cylinder | UNITOP



Flange

QFL

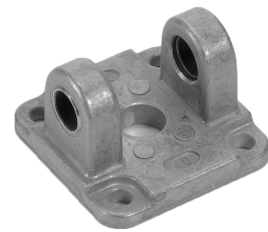
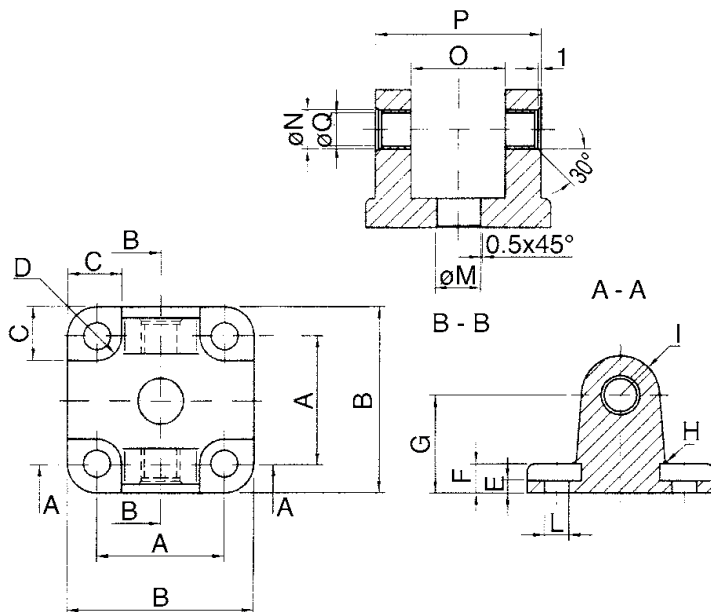
Type	Diameter	A	B	C	D	E	F	G	H	I	L	M	N
QFL 12-16	Ø2-16	18	43	55	18	29	4,5	9	5,5	10	5,4	10	-
QFL 20	Ø0	22	55	70	22	36	5,5	10	6,6	10	5,4	12	-
QFL 25	Ø5	26	60	76	26	40	5,5	10	6,6	10	5,4	12	-
QFL 32	Ø2	32	65	80	32	50	6,6	11	7	10	6,4	14	32
QFL 40	Ø0	42	82	102	42	60	6,6	11	9	10	6,4	14	36
QFL 50	Ø0	50	90	110	50	68	9	15	9	12	8,6	18	45
QFL 63	Ø3	62	110	130	62	87	11	15	9	15	10,6	18	50
QFL 80	Ø0	82	135	160	82	107	11	18	12	15	10,6	23	63
QFL 100	Ø00	103	163	190	103	128	11	18	14	15	10,6	28	75



QCP

Foot mounting

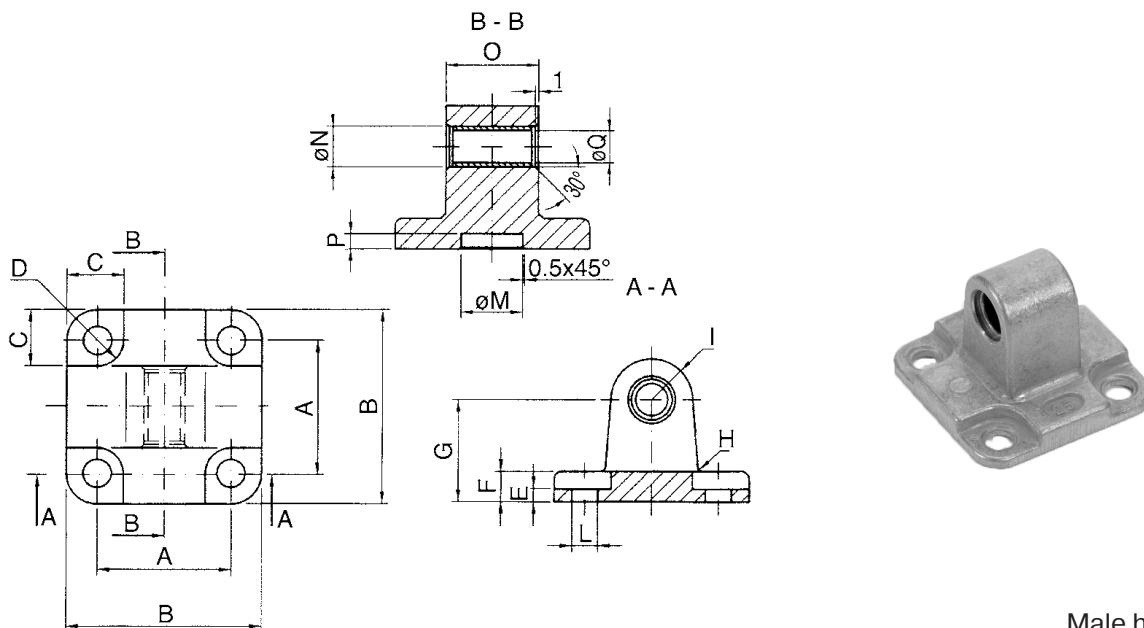
Type	Diameter	C	B	D	E	F	G	H	I	S	T	R	U	Z
QCP 12-16	Ø2-16	18	18	30	17,5	17,5	4,4	13	13	3	15	9	2	5,5
QCP 20	Ø0	22	22	36	22	22	5,4	16	16	4	17	10	2	6,6
QCP 25	Ø5	26	26	40	22	23	5,4	17	16	4	19	11	2	6,6
QCP 32	Ø2	32	32	50	26	24	6,6	16	18	5	20	12	2	6,6
QCP 40	Ø0	42	42	60	28	29,5	6,6	21,5	20	5	-	-	5	9
QCP 50	Ø0	50	50	68	32	30	9	22	24	6	-	-	5	9
QCP 63	Ø3	62	62	84	39	39	9	28,5	27	6	-	-	5	11
QCP 80	Ø0	82	82	102	36,5	36,5	11	24,5	30	8	-	-	5	11
QCP 100	Ø00	103	103	123	38,5	38,5	11	26,5	33	8	-	-	5	13,5



QCF

Female clevis bracket

Type	Diameter	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q
QCF 32	Ø2	32	48	13,5	5,5	5,5	9	22	2,5	10	6,6	14	12	26	45	10
QCF 40	Ø0	42	58	13,5	5,5	5,5	9	25	2,5	12,5	6,6	14	14	28	52	12
QCF 50	Ø0	50	66	15,5	6,5	6,5	11	27	2,5	12,5	9	18	14	32	60	12
QCF 63	Ø3	62	83	18	6,5	6,5	11	32	4	15	11	18	18	40	70	16
QCF 80	Ø0	82	102	19	10	10	13	36	4	15	11	23	18	50	90	16
QCF 100	Ø00	103	123	19	10	10	15	41	4	20	11	28	23	60	110	20

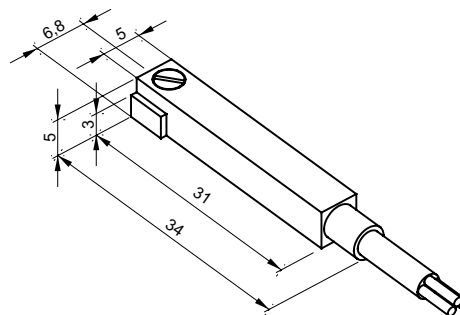


QCM

Male hinge
self lubricating

Type	Diameter	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q
QCM 12-16	Ø2-16	18	27	10	4,5	2,6	6	16	2	6	4,5	10	8	12	3	6
QCM 20	Ø0	22	34	11	5	2,6	6	20	2	8	5,5	12	10	16	3	8
QCM 25	Ø5	26	38	11	5	2,6	6	20	2	8	5,5	12	10	16	3	8

Proximity Switches and Fasteners



SKR

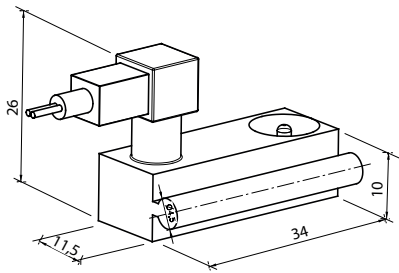
REED switch

Type	Voltage	Max. current	Cable length	Temperature range
SKR-130	5...130 V AC/DC	200 mA	2 m	-5°C...+70°C
SKR-230	5...230 V AC	200 mA	2 m	-5°C...+70°C

SKH

PNP switch

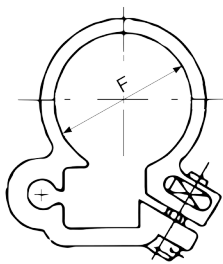
Type	Voltage	Max. current	Cable length	Temperature range
SKH-30	10...30 V DC	200 mA	2 m	-5°C...+70°C
SKH-30-M8	10...30 V DC	200 mA	0,3 m (M8x1)	-5°C...+70°C



SM

REED switch

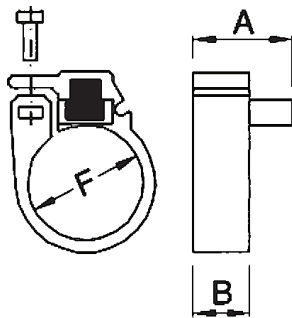
Type	Voltage	Max. current	Cable length	Temperature range
SM	3...230 V AC/DC	500 mA	2,5 m	-20°C...+85°C



Fastener to mount the SM-switch to round cylinders of the R-series

RX

Type	Diameter	F
RX 8	Ø	9,3
RX 10	Ø0	11,3
RX 12	Ø2	13,3
RX 16	Ø6	17,3
RX 20	Ø0	21,3
RX 25	Ø5	26,3



Fastener to mount the SKR or SKH switch to round cylinders of the R-series or A-series

RXP

Type	Diameter	F	A	B
RXP 8	Ø	9,4	14	8
RXP 10	Ø0	11,3	14	8
RXP 12	Ø2	13,3	14	8
RXP 16	Ø6	17,3	14	8
RXP 20	Ø0	21,3	14	8
RXP 25	Ø5	26,3	14	8

Proximity Switches and Fasteners



Fastener to mount the SM switch to ISO 15552 profile cylinders of the D-series

DX

Type	Diameter
DX 32-40	Ø2-40
DX 50-63	Ø0-63
DX 80	Ø0
DX 100-125	Ø00-125



Fastener to mount the SKR or SKH switch to ISO 15552 profile cylinders of the D-series

DXS

Type	Diameter
DXS 32-40	Ø2-40
DXS 50-63	Ø0-63
DXS 80	Ø0
DXS 100-125	Ø00-125

Cylinder Repair Kits



QIR

Repair kit
Q-Series
UNITOP

Type	Diameter
QIR-12	Ø2
QIR-16	Ø6
QIR-20	Ø0
QIR-25	Ø5
QIR-32	Ø2
QIR-40	Ø0
QIR-50	Ø0
QIR-63	Ø3
QIR-80	Ø0
QIR-100	Ø00

DIR

Repair kit
D-series
ISO 15552

Type	Diameter
DIR-32	Ø2
DIR-40	Ø0
DIR-50	Ø0
DIR-63	Ø3
DIR-80	Ø0
DIR-100	Ø00
DIR-125	Ø25

HIR

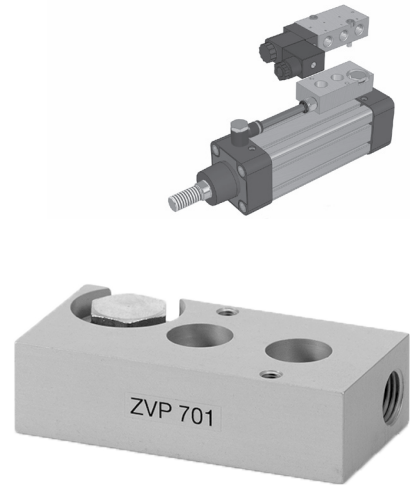
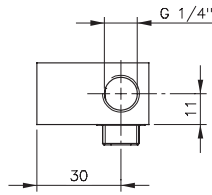
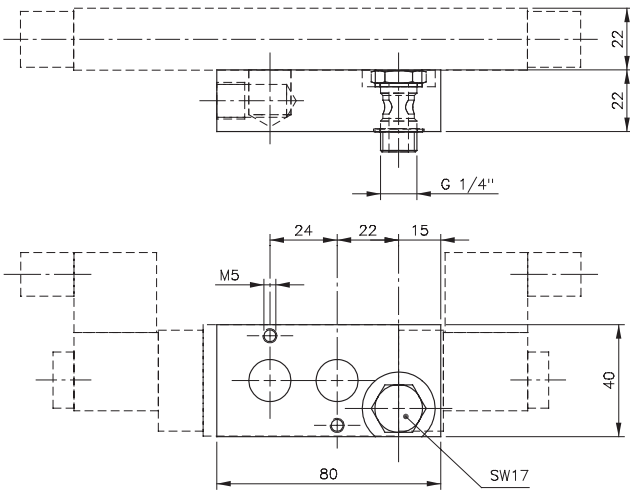
Repair kit
H-series
DIR ISO 15552

Type	Diameter
HIR-32	Ø2
HIR-40	Ø0
HIR-50	Ø0
HIR-63	Ø3
HIR-80	Ø0
HIR-100	Ø00
HIR-125	Ø25

VIR

Repair kit
V-series
ISO 21287

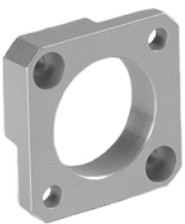
Type	Diameter
VIR-32	Ø2
VIR-40	Ø0
VIR-50	Ø0
VIR-63	Ø3
VIR-80	Ø0
VIR-100	Ø00



ZVP

Cylinder-Valve-Combination Plate

Type	Thread A	Thread B	Orifice size	Interface
ZVP 701	G1/4" banjo-screw	G1/4"	DN 7	NAMUR [G1/4"]
ZVP 101	G3/8" banjo-screw	G3/8"	DN 10	NAMUR [G1/4"]
ZVP 121	G1/2" banjo-screw	G1/2"	DN 12	NAMUR [G1/2"]
ZVP 121-701	G1/2" banjo-screw	G1/4"	DN 7	NAMUR [G1/4"]



TZA

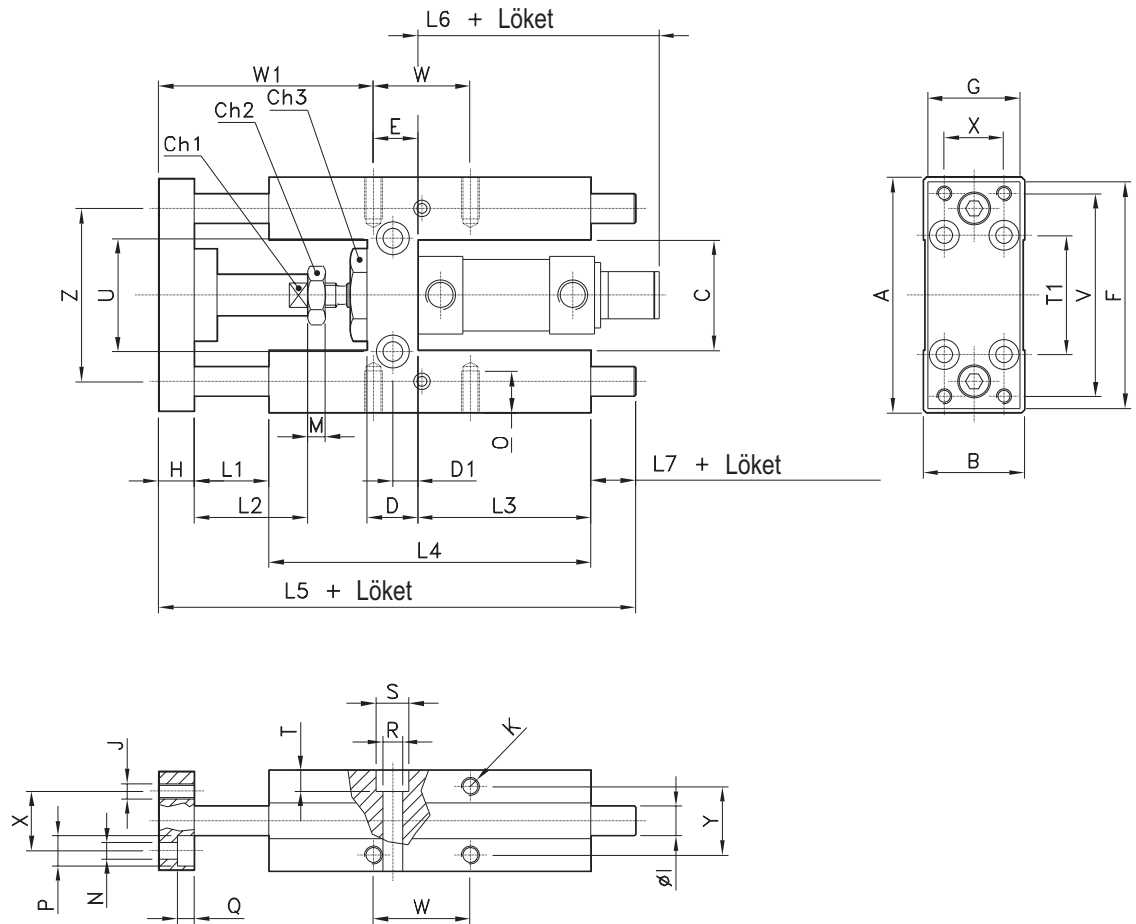
Adapter plates to assemble cylinders "back-to-back"

Type
TZA-032 SET
TZA-040 SET
TZA-050 SET
TZA-063 SET
TZA-080 SET
TZA-100 SET

VTS LAZ

Repair kit LAZ-series

Type
VTS LAZ 80
VTS LAZ 100
VTS LAZ 125
VTS LAZ 160
VTS LAZ 200
VTS LAZ 250
VTS LAZ 320



RHS

H-shaped guide unit with plain bearing

Type	Stroke	Diameter	A	B	C	Ch1	Ch2	Ch3	D	D1	E
RHS 12-16/...	50-500	Ø2-16	69	30	30	8	10	24	12	6	8
RHS 20/...	50-500	Ø0	79	34	37	12	13	27	17	8,5	15
RHS 25/...	50-500	Ø5	79	34	37	12	17	27	17	8,5	15

Type	F	G	H	Ø	J	K	L1	L2	L3	L4	L5	L6	L7	M
RHS 12-16/...	66	29	10	10	M4	M4	-	18	46	68	124	-	20,5	4
RHS 20/...	78	32	12	12	M5	M6	3	18	58	108	166	43	21	5
RHS 25/...	78	32	12	12	M5	M6	3	18	58	108	166	43	21	6

Type	N	O	P	Q	R	S	T	T1	U	V	W	W1	X	Y	Z
RHS 12-16/...	4,5	6	8	4,5	5,5	9	5,5	32	24	58	18	-	18	22	49,5
RHS 20/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58
RHS 25/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58

RHSL

H-shaped guide unit with plain bearing and longer coupling

Type	Stroke	Diameter	A	B	C	Ch1	Ch2	Ch3	D	D1	E
RHSL 12-16/...	50-500	∅2-16	69	30	30	8	10	24	12	6	8
RHSL 20/...	50-500	∅0	79	34	37	12	13	27	17	8,5	15
RHSL 25/...	50-500	∅5	79	34	37	12	17	27	17	8,5	15

Type	F	G	H	∅	J	K	L1	L2	L3	L4	L5	L6	L7	M
RHSL 12-16/...	66	29	10	10	M 4	M 4	25	18	46	68	123,5	73	20,5	4
RHSL 20/...	78	32	12	12	M 5	M 6	25	40	58	108	166	87	21	5
RHSL 25/...	78	32	12	12	M 5	M 6	25	40	58	108	166	87	21	6

Type	N	O	P	Q	R	S	T	T1	U	V	W	W1	X	Y	Z
RHSL 12-16/...	4,5	6	8	4,5	5,5	9	5,5	32	24	58	18	-	18	22	49,5
RHSL 20/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58
RHSL 25/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58

RHG

H-shaped guide unit with ball bearings

Type	Stroke	Diameter	A	B	C	Ch1	Ch2	Ch3	D	D1	E
RHG 12-16/...	50-500	∅2-16	69	30	30	8	10	24	12	6	8
RHG 20/...	50-500	∅0	79	34	37	12	13	27	17	8,5	15
RHG 25/...	50-500	∅5	79	34	37	12	17	27	17	8,5	15

Type	F	G	H	∅	J	K	L1	L2	L3	L4	L5	L6	L7	M
RHG 12-16/...	66	29	10	8	M 4	M 4	-	18	46	68	123,5	-	20,5	4
RHG 20/...	78	32	12	10	M 5	M 6	3	18	58	108	166	43	21	5
RHG 25/...	78	32	12	10	M 5	M 6	3	18	58	108	166	43	21	6

Type	N	O	P	Q	R	S	T	T1	U	V	W	W1	X	Y	Z
RHG 12-16/...	4,5	6	8	4,5	5,5	9	5,5	32	24	58	18	-	18	22	49,5
RHG 20/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58
RHG 25/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58

RHGL

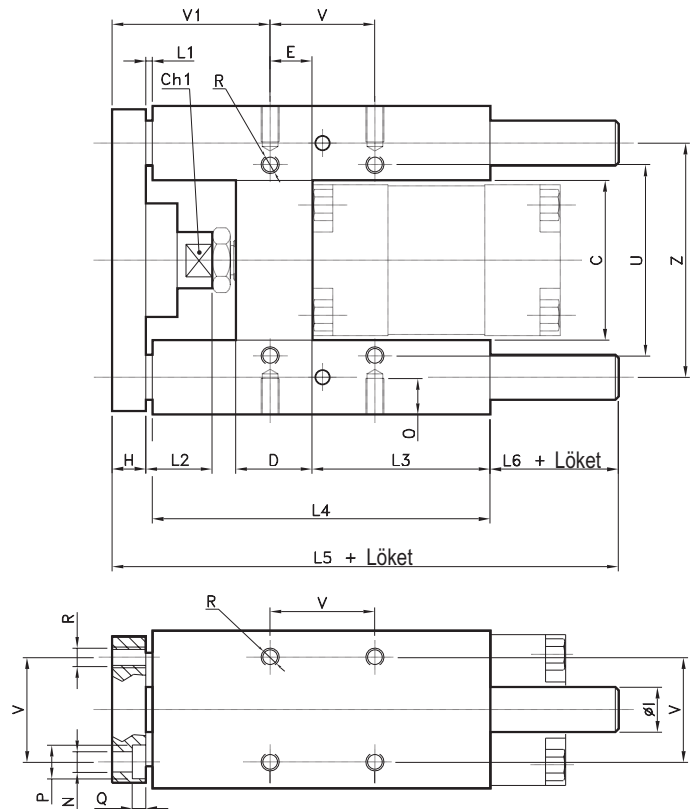
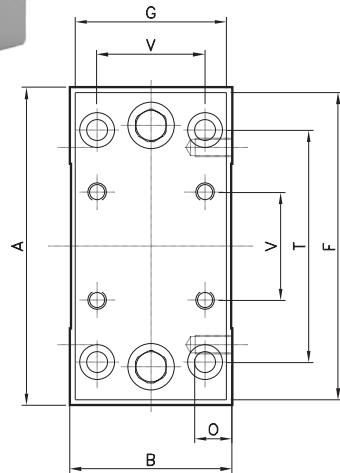
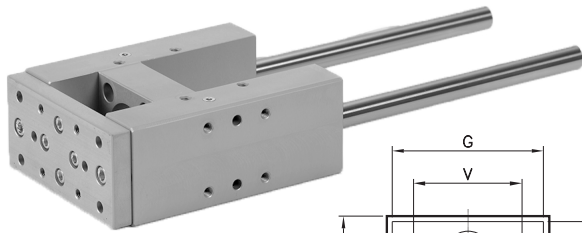
H-shaped guide unit with ball bearings and longer coupling

Type	Stroke	Diameter	A	B	C	Ch1	Ch2	Ch3	D	D1	E
RHGL 12-16/...	50-500	∅2-16	69	30	30	8	10	24	12	6	8
RHGL 20/...	50-500	∅0	79	34	37	12	13	27	17	8,5	15
RHGL 25/...	50-500	∅5	79	34	37	12	17	27	17	8,5	15

Type	F	G	H	∅	J	K	L1	L2	L3	L4	L5	L6	L7	M
RHGL 12-16/...	66	29	10	8	M 4	M 4	25	18	46	68	123,5	73	20,5	4
RHGL 20/...	78	32	12	10	M 5	M 6	25	40	58	108	166	87	21	5
RHGL 25/...	78	32	12	10	M 5	M 6	25	40	58	108	166	87	21	6

Type	N	O	P	Q	R	S	T	T1	U	V	W	W1	X	Y	Z
RHGL 12-16/...	4,5	6	8	4,5	5,5	9	5,5	32	24	58	18	-	18	22	49,5
RHGL 20/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58
RHGL 25/...	5,5	9	10	7,5	6,5	11	6,5	38	38	68	32,5	50	20	23	58

Guide Units for Profile Cylinder | ISO 15552



H-shaped guide unit with plain bearing

DHS

Type	Stroke	Diameter	A	B	C	Ch1	D	E	F	G	H	Ø
DHS 32/...	50-500	Ø2	97	49	51	15	24	4,3	93	45	12	12
DHS 40/...	50-500	Ø0	115	58	58,2	15	28	11	112	55	12	16
DHS 50/...	50-500	Ø0	137	70	70,2	20	34	18,8	134	65	15	20
DHS 63/...	50-500	Ø3	152	85	85,2	20	34	15,3	147	80	15	20
DHS 80/...	50-500	Ø0	189	105	105,5	26	50	25	180	100	20	25
DHS 100/...	50-500	Ø00	213	130	130,5	26	55	30	206	120	20	25

Type	L1	L2	L3	L4	L5	L6	N	O	P	Q	R	T	U	V	V1	Z
DHS 32/...	3	19	75	125	187	47	6,6	12	11	6,5	M 6	78	61	32,5	60,7	74
DHS 40/...	3	24	80	140	207	52	6,6	12	11	6,5	M 6	84	69	38	64	87
DHS 50/...	3	27	78	148	223	57	9	16	15	8,5	M 8	100	85	46,5	69,2	104
DHS 63/...	3	27	106	178	243	47	9	16	15	9	M 8	105	100	56,5	74,7	119
DHS 80/...	3	27	111	195	267	49	11	20	18	11	M 10	130	130	72	82	148
DHS 100/...	3	27	128	218	290	49	11	20	18	11	M 10	150	150	89	83	173

DHSL

H-shaped guide unit with plain bearing and longer coupling

Type	Stroke	Diameter	A	B	C	Ch1	D	E	F	G	H	Ø
DHSL 32/...	50-500	Ø2	97	49	51	15	24	4,3	93	45	12	12
DHSL 40/...	50-500	Ø0	115	58	58,2	15	28	11	112	55	12	16
DHSL 50/...	50-500	Ø0	137	70	70,2	20	34	18,8	134	65	15	20
DHSL 63/...	50-500	Ø3	152	85	85,2	20	34	15,3	147	80	15	20
DHSL 80/...	50-500	Ø0	189	105	105,5	26	50	25	180	100	20	25
DHSL 100/...	50-500	Ø00	213	130	130,5	26	55	30	206	120	20	25

Type	L1	L2	L3	L4	L5	L6	N	O	P	Q	R	T	U	V	V1	Z
DHSL 32/...	25	42	75	125	187	25	6,6	12	11	6,5	M 6	78	61	32,5	82,7	74
DHSL 40/...	25	42	80	140	207	30	6,6	12	11	6,5	M 6	84	69	38	86	87
DHSL 50/...	25	50	78	148	223	35	9	16	15	8,5	M 8	100	85	46,5	91,2	104
DHSL 63/...	25	50	106	178	243	25	9	16	15	9	M 8	105	100	56,5	96,7	119
DHSL 80/...	25	50	111	195	267	27	11	20	18	11	M 10	130	130	72	104	148
DHSL 100/...	25	50	128	218	290	27	11	20	18	11	M 10	150	150	89	105	173

DHG

H-shaped guide unit with ball bearings

Type	Stroke	Diameter	A	B	C	Ch1	D	E	F	G	H	Ø
DHG 32/...	50-500	Ø2	97	49	51	15	24	4,3	93	45	12	12
DHG 40/...	50-500	Ø0	115	58	58,2	15	28	11	112	55	12	16
DHG 50/...	50-500	Ø0	137	70	70,2	20	34	18,8	134	65	15	20
DHG 63/...	50-500	Ø3	152	85	85,2	20	34	15,3	147	80	15	20
DHG 80/...	50-500	Ø0	189	105	105,5	26	50	25	180	100	20	25
DHG 100/...	50-500	Ø00	213	130	130,5	26	55	30	206	120	20	25

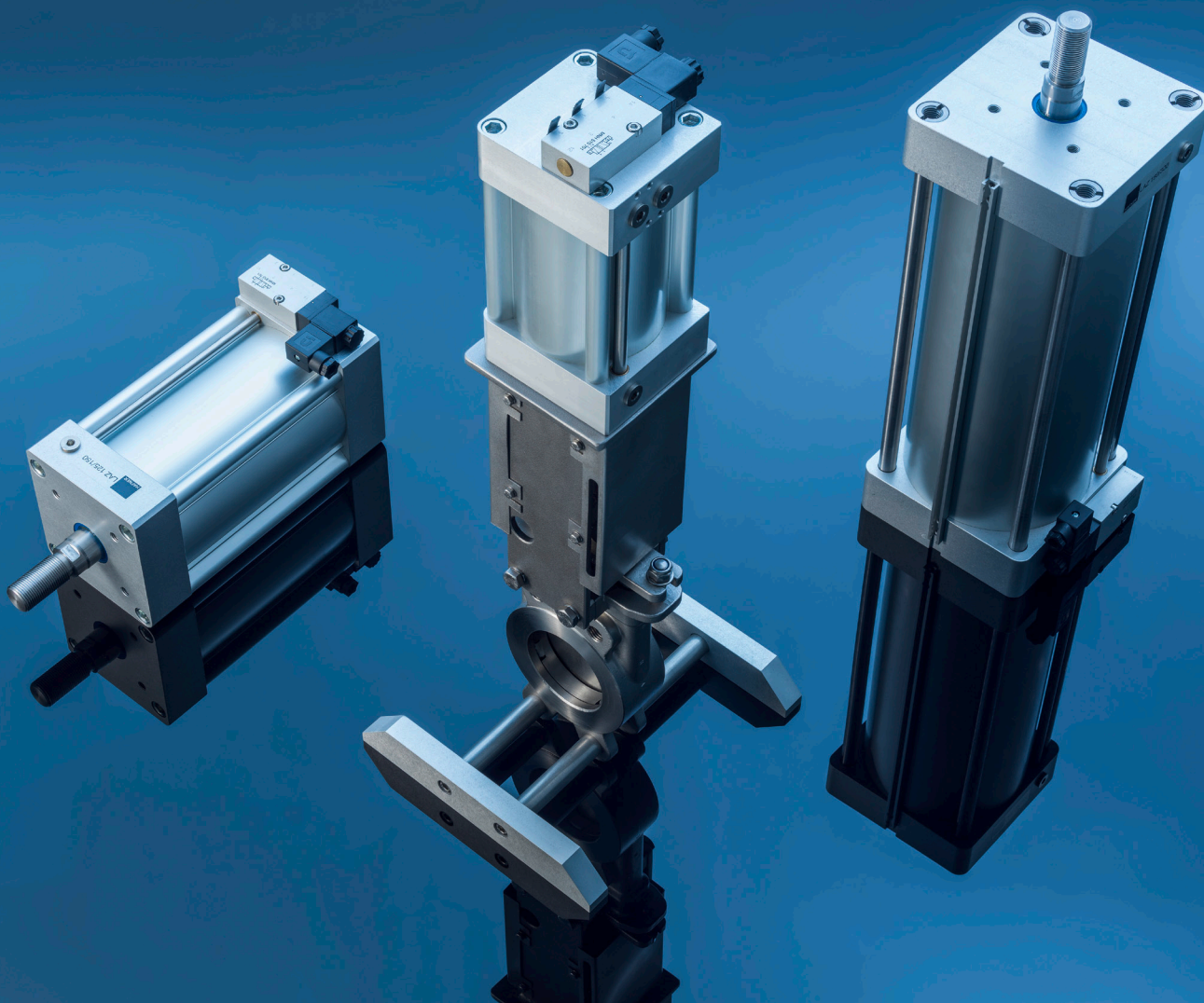
Type	L1	L2	L3	L4	L5	L6	N	O	P	Q	R	T	U	V	V1	Z
DHG 32/...	3	19	75	125	187	47	6,6	12	11	6,5	M 6	78	61	32,5	60,7	74
DHG 40/...	3	24	80	140	207	52	6,6	12	11	6,5	M 6	84	69	38	64	87
DHG 50/...	3	27	78	148	223	57	9	16	15	8,5	M 8	100	85	46,5	69,2	104
DHG 63/...	3	27	106	178	243	47	9	16	15	9	M 8	105	100	56,5	74,7	119
DHG 80/...	3	27	111	195	267	49	11	20	18	11	M 10	130	130	72	82	148
DHG 100/...	3	27	128	218	290	49	11	20	18	11	M 10	150	150	89	83	173

DHGL

H-shaped guide unit with ball bearings and longer coupling

Type	Stroke	Diameter	A	B	C	Ch1	D	E	F	G	H	Ø
DHGL 32/...	50-500	Ø2	97	49	51	15	24	4,3	93	45	12	12
DHGL 40/...	50-500	Ø0	115	58	58,2	15	28	11	112	55	12	16
DHGL 50/...	50-500	Ø0	137	70	70,2	20	34	18,8	134	65	15	20
DHGL 63/...	50-500	Ø3	152	85	85,2	20	34	15,3	147	80	15	20
DHGL 80/...	50-500	Ø0	189	105	105,5	26	50	25	180	100	20	25
DHGL 100/...	50-500	Ø00	213	130	130,5	26	55	30	206	120	20	25

Type	L1	L2	L3	L4	L5	L6	N	O	P	Q	R	T	U	V	V1	Z
DHGL 32/...	25	42	75	125	187	25	6,6	12	11	6,5	M 6	78	61	32,5	82,7	74
DHGL 40/...	25	42	80	140	207	30	6,6	12	11	6,5	M 6	84	69	38	86	87
DHGL 50/...	25	50	78	148	223	35	9	16	15	8,5	M 8	100	85	46,5	91,2	104
DHGL 63/...	25	50	106	178	243	25	9	16	15	9	M 8	105	100	56,5	96,7	119
DHGL 80/...	25	50	111	195	267	27	11	20	18	11	M 10	130	130	72	104	148
DHGL 100/...	25	50	128	218	290	27	11	20	18	11	M 10	150	150	89	105	173



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