

Cylinders Series 60

Single and double-acting (magnetic) (DIN/ISO 6431)

Bore: \varnothing 32, 40, 50, 63, 80, 100, 125 cushioned

[1 1/4", 1 9/16", 2", 2 1/2",
3 1/8", 4", 5" inch approximations]



The Series 60 cylinders with diameters 32, 40, 50, 63, 80, 100 and 125 have been designed to comply with the dimensions laid down in the DIN/ISO 6431 standards. A removeable magnet is mounted on the piston in these cylinders.

This cylinders series is normally equipped with adjustable end-stroke cushioning. Moreover these cylinders are equipped with a mechanical cushioning in order to reduce the impact of the piston as it reaches the end of the stroke.

These cylinders can also accommodate stroke lengths up to 1000 mm for bore sizes shown in the table.



CYLINDERS

▶ DIN/ISO 6431

▶ VDMA 24562

▶ Rolled stainless steel rod

GENERAL DATA

Type of construction	with tie-rods
Operation	double-acting, single-acting, tandem
Materials	aluminum end-blocks, Buna-N seals, others parts see coding
Type of mounting	with tie-rods, front flange, rear flange, feet, center trunnion, front and rear trunnion, swivel combination
Max. strokes	10 – 2500mm
Bore	\varnothing 32, 40, 50, 63, 80, 100, 125
Ports	32 = 1/8; 40-50 = 1/4; 63/80 = 3/8; 100/125 = 1/2
Assembly position	any position
Operating temperature	0 – 80°C (with dry air –20°C), 32°F – 175°F (dry air – 4°F)
Special design	for use in damp, dusty and aggressive environments

PNEUMATIC DATA

Operating pressure	1 – 10 bar [Min.1 bar (14.5psi); Max. 10 bar (145 psi)]
Speed	10 – 1000 mm/sec (No load) [Min. 10 mm/sec(No load); Max ≤ 1000mm/sec (No load)]
Fluid	clean air, without lubrication*

*If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

CYLINDER CODING

60M2L050A0200

SERIES

60 = from ø 32 – 125
DIN/ISO 6431

VERSIONS

M = magnetic
N = non magnetic

STROKE (see table)

S = special to be indicated
V = viton rod seal
N = tandem
R = Buna-N rod seal
W = all seals in viton

OPERATION

- 1 = single-acting (front spring)
- 2 = double-acting (front and rear cushions)
- 3 = double-acting (no cushion)
- 4 = double-acting (rear cushion)
- 5 = double-acting (front cushion)
- 6 = double-acting (double-rod with front and rear cushions)
- 7 = single-acting (double-rod)

BORE

32 mm	80 mm
40 mm	100 mm
50 mm	125 mm
63 mm	

TYPE OF BRACKET

A = standard with lock nut for rod
F = centre trunnion
RL = cylinder with rod lock

MATERIALS

- L = rolled stainless steel rod – anodized aluminum round tube Buna-N seals – nuts and tie rods zinc-plated steel – rod seals polyurethane
- * T = rolled stainless steel rod – anodized aluminum round tube – Buna-N seals – rod seals polyurethane – nuts and tie-rods stainless steel on request

60M2L = standard version in stock (32–125)

Note: The accessories are not mounted on the cylinders

CHARACTERISTICS OF SINGLE-ACTING CYLINDERS SERIES 60-61

Force in N x D.245 = lbf

∅	min-max stroke	Extend N at 6 bar	Force of spring at rest N (stroke 75 mm)	Force of compressed spring N
32	10 - 75	425	31	57
40	10 - 75	664	35	57
50	10 - 75	1037	60	115
63	10 - 75	1650	60	115
80	10 - 75	2660	84	133
100	10 - 75	4154	84	133

NOTE : the Series 60-61 single-acting cylinders' dimensions for L1 and L2 are to be increased by 25 mm.

TABLE SHOWING AIR CONSUMPTION OF SERIES 60

ø Cyl in mm.	ø Rod in mm.	Working area in cm ² .	Operating pressure in bar										
			1	2	3	4	5	6	7	8	9	10	
			Air consumption in NL for each 10 mm. of stroke										
32	12	Extend side	8.03	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088
		Retract side	6.9	0.014	0.021	0.028	0.035	0.042	0.048	0.055	0.062	0.069	0.076
40	16	Extend side	12.56	0.025	0.038	0.050	0.063	0.075	0.088	0.100	0.113	0.126	0.138
		Retract side	10.56	0.021	0.032	0.042	0.053	0.063	0.074	0.085	0.095	0.106	0.116
50	20	Extend side	19.6	0.039	0.059	0.079	0.098	0.118	0.137	0.157	0.177	0.196	0.216
		Retract side	16.48	0.033	0.050	0.066	0.083	0.099	0.115	0.132	0.148	0.165	0.182
63	20	Extend side	31.15	0.062	0.094	0.125	0.156	0.187	0.218	0.249	0.280	0.312	0.343
		Retract side	28	0.056	0.084	0.112	0.140	0.168	0.196	0.224	0.252	0.280	0.308
80	25	Extend side	50.25	0.101	0.151	0.201	0.251	0.302	0.352	0.402	0.452	0.503	0.553
		Retract side	45.35	0.091	0.136	0.181	0.227	0.272	0.317	0.363	0.408	0.454	0.499
100	25	Extend side	78.5	0.157	0.235	0.314	0.392	0.471	0.550	0.628	0.707	0.785	0.864
		Retract side	73.6	0.147	0.221	0.295	0.368	0.441	0.515	0.589	0.663	0.736	0.810
125	32	Extend side	122.65	0.245	0.368	0.491	0.614	0.736	0.859	0.982	1.104	1.227	1.350
		Retract side	115.6	0.229	0.344	0.459	0.573	0.688	0.803	0.917	1.032	1.147	1.261

THE VALUES SHOWN IN THE TABLE WERE OBTAINED USING THE FOLLOWING FORMULA:

$$Q_s = \frac{D^2 \cdot \pi \cdot (P + 1)}{4 \cdot 1000} \cdot H$$

$$Q_n = (Q_s + Q_t) \cdot n$$

$$Q_t = \frac{(D^2 - d^2) \cdot \pi \cdot (P + 1)}{4 \cdot 1000} \cdot H$$

Q_s = consumption on extend side
D = diameter on extend side in cm.

Q_t = consumption on retract side
d = rod diameter in cm.

Q_n = consumption of cylinder
H = cylinder stroke in cm.

n = number of cycles per minute
P = operating pressure in bar

TABLE SHOWING THE OUTPUT FORCE OF SERIES 60

ø Cyl. in mm.	ø Rod in mm.	Working area in cm ² .	Operating pressure in bar										
			1	2	3	4	5	6	7	8	9	10	
			Output force in N (efficiency factor 0,9)										
32	12	Extend side	8.03	70	140	210	283	354	425	494	595	635	706
		Retract side	6.9	60	120	180	243	305	365	426	487	548	608
40	16	Extend side	12.56	110	220	330	443	554	664	775	886	998	1108
		Retract side	10.56	93	186	280	375	465	559	652	745	838	931
50	20	Extend side	19.6	173	346	518	692	865	1037	1210	1382	1556	1729
		Retract side	16.48	145	290	436	582	727	872	1017	1163	1308	1454
63	20	Extend side	31.15	275	550	824	1098	1373	1650	1923	2198	2472	2747
		Retract side	28	247	494	740	988	1235	1480	1729	1976	2222	2470
80	25	Extend side	50.25	443	886	1330	1772	2216	2660	3100	3545	3990	4432
		Retract side	45.35	400	800	1200	1600	2000	2400	2800	3200	3600	4000
100	25	Extend side	78.5	692	1385	2077	2770	3460	4154	4847	5540	6320	6923
		Retract side	73.6	650	1300	1948	2608	3245	3895	4544	5193	5842	6492
125	32	Extend side	122.65	1090	2180	3270	4360	5450	6540	7631	8721	9811	10901
		Retract side	115.6	1019	2037	3056	4075	5093	6112	7130	8149	9168	10186

THE VALUES SHOWN IN THE TABLE WERE OBTAINED USING THE FOLLOWING FORMULA:

$$S_s = \frac{D^2 \cdot \pi}{4} \cdot P \cdot \eta$$

$$S_t = \frac{(D^2 - d^2) \cdot \pi}{4} \cdot P \cdot \eta$$

S_s = output force on extend side
S_t = forza sviluppata lato trazione

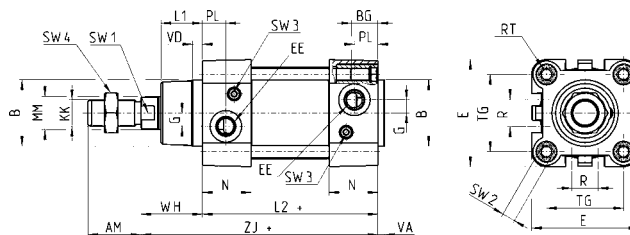
P = operating pressure in bar
D = diameter on extend side in cm.

d = rod diameter in cm
η = efficiency factor

TORQUE FORCE BRACKETS SERIES 60

Cylinder bore	32	40	50	63	80	100	125
Max. torque force brackets	6Nm	6Nm	13Nm	13Nm	19Nm	22Nm	26Nm

Cylinders Series 60



+ add the stroke

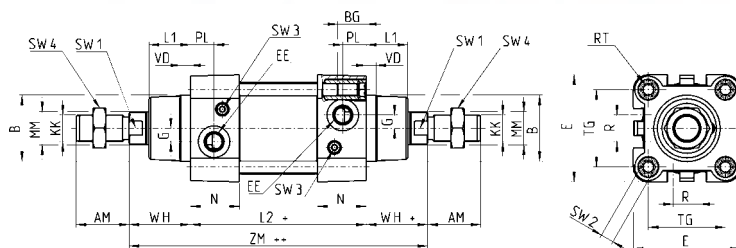
DIMENSIONS

ø	MM	KK	Bd ¹⁾	PL	L1	AM	VA	EE	WH	L2	ZJ	VD	N	BG	RT	G	TG	R	E	SW1	SW2	SW3	SW4	Cushion stroke
32	12	M10x1,25	30	14	18	22	4	G1/8	26	94	120	5	26	16	M6	5	32,5	13	46	10	6	2	17	19
40	16	M12x1,25	35	15	21	24	4	G1/4	30	105	135	5	29	16	M6	5	38	13,5	55	13	6	2	19	22
50	20	M16x1,5	40	15	25	32	4	G1/4	37	106	143	6	29,5	16	M8	8	46,5	16	64,5	17	8	3	24	22
63	20	M16x1,5	45	21	26	32	4	G3/8	37	121	158	6	36,5	16	M8	8	56,5	28	75	17	8	3	24	22
80	25	M20x1,5	45	21	30	40	4	G3/8	46	128	174	7	36	19	M10	8	72	30	93	22	10	5	30	25
100	25	M20x1,5	55	23	35	40	4	G1/2	51	138	189	7	38,5	19,5	M10	8	89	40	110	22	10	5	30	25
125	32	M27x2	60	23,5	42	54	6	G1/2	65	160	225	8	43	23	M12	10,5	110	50	135	27	12	4	41	43

N.B. : the single-acting cylinders' sizes L1 and L2 are increased by 25 mm.

Cylinders Series 60

Double-rod



+ add the stroke

++ add the stroke two times

DIMENSIONS

ø	MM	KK	Bd ¹⁾	PL	L1	AM	EE	WH	L2	ZM	VD	N	RT	BG	G	TG	R	E	SW1	SW2	SW3	SW4	Cushion stroke
32	12	M10x1,25	30	14	18	22	G1/8	26	94	146	5	26	M6	16	5	32,5	13	46	10	6	2	17	19
40	16	M12x1,25	35	15	21	24	G1/4	30	105	165	5	29	M6	16	5	38	13,5	55	13	6	2	19	22
50	20	M16x1,5	40	15	25	32	G1/4	37	106	180	6	29,5	M8	16	8	46,5	16	64,5	17	8	3	24	22
63	20	M16x1,5	45	21	26	32	G3/8	37	121	195	6	36,5	M8	16	8	56,5	28	75	17	8	3	24	22
80	25	M20x1,5	45	21	30	40	G3/8	46	128	220	7	36	M10	19	8	72	30	93	22	10	5	30	25
100	25	M20x1,5	55	23	35	40	G1/2	51	138	240	7	38,5	M10	19,5	8	89	40	110	22	10	5	30	25
125	32	M27x2	60	23,5	42	54	G1/2	65	160	290	8	43	M12	23	10,5	110	50	135	27	12	4	41	43

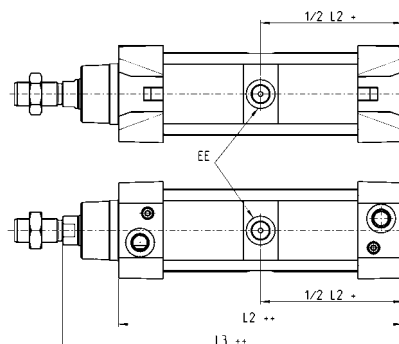
N.B. : the single-acting cylinders' sizes L1 and L2 are increased by 25 mm.

Cylinders Series 60 tandem

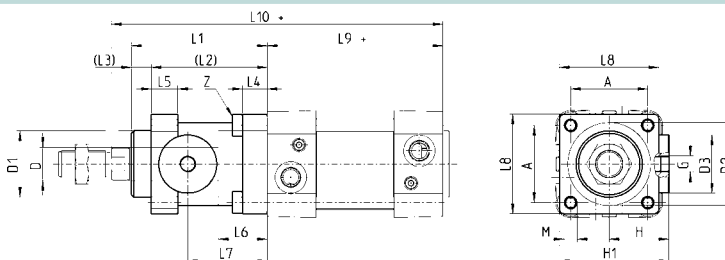
+ add the stroke
 ++ add the stroke two times

DIMENSIONS

ø	EE	L2	L3
32	G1/8	171,5	197,5
40	G1/4	191,5	221,5
50	G1/4	188	225
63	G3/8	204	230
80	G3/8	225,5	271,5
100	G1/2	231	282
125	G1/2	264	329



Cylinders Series 60 with rod lock



+ add the stroke

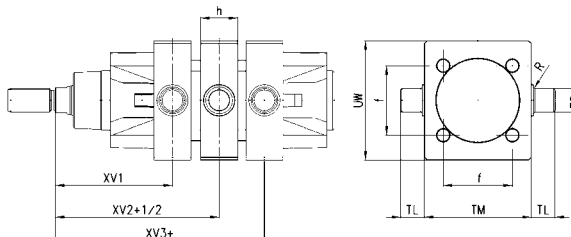
DIMENSIONS

ø	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	øD	øD1 ^{Ø11}	øD2	øD3 ^{Ø8}	A ^{Ø.15}	G	H	H1	M	Z
32	58	48	10	8	13	20,5	34	45	94	160	12	30,5	35	25	32,5	M5	25,5	46,5	M6	M6 x 20
40	65	55	10	8	13	22,5	38	50	105	178	16	35	40	28	38	G1/8	30	53	M6	M6 x 20
50	82	70	12	15	16	29,5	48	60	106	200	20	40	50	35	46,5	G1/8	36	64	M8	M8 x 30
63	82	70	12	15	16	29,5	49,5	70	121	215	20	45	60	38	56,5	G1/8	40	75	M8	M8 x 30
80	110	90	20	18	20	35	61	90	128	254	25	45	80	48	72	G1/8	50	95	M10	M10 x 35
100	115	100	15	18	20	39	69	105	138	269	25	55	100	58	89	G1/8	58	110,5	M10	M10 x 35
125	167	122	45	22	30	51	86,5	140	160	350	32	60	130	65	110	G1/8	80	150	M12	M12 x 40

Cylinders Series 60 with centre trunnion 60M2L... F...



+ add the stroke

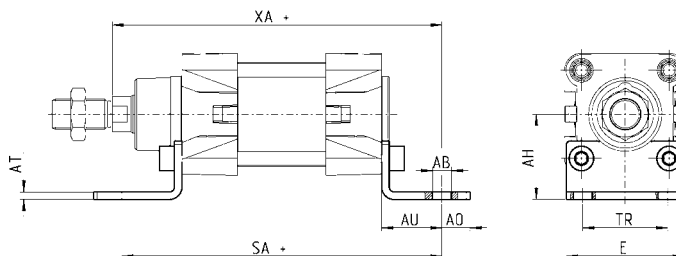


DIMENSIONS

ø	XV1 ⁺²	XV2 ⁺²	XV3 ⁺²	f	TM ^{H14}	h	TD ^{Ø9}	TL ^{H14}	UW	R
32	63,5	73	82,5	32,5	50	20	12	12	65	0,1
40	72,5	82,5	92,5	38	63	25	16	16	74	0,15
50	79,5	90	100,5	46,5	75	25	16	16	85	0,15
63	88	97,5	107	56,5	90	30	20	20	100	0,15
80	97	110	123	72	110	30	20	20	120	0,15
100	102	120	138	89	132	30	25	25	135	0,2
125	121	145	169	110	160	30	25	25	160	0,2

Foot mount Mod. B..

Material: zinc-plated steel.
The following is supplied:
N° 2 feet
N° 4 screws



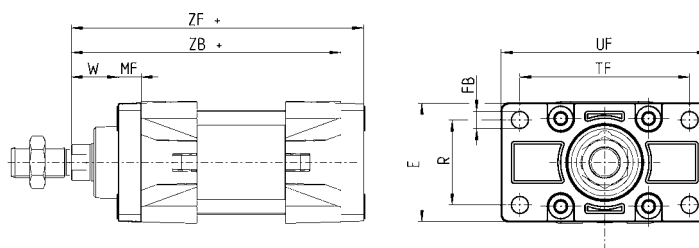
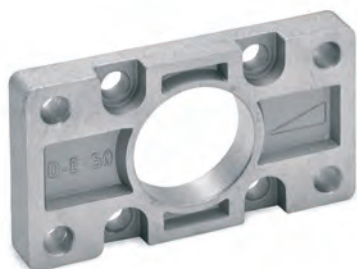
+ add the stroke

DIMENSIONS

Mod.	∅	AT	SA ±1.25	XA ±1.25	TR ^{J514}	E	AB	AH ^{J516}	AO	AU	Torque force (max)
B-41-32	32	4	142	144	32	45	7	32	11	24	6 Nm
B-41-40	40	4	161	163	36	53,5	10	36	15	28	6 Nm
B-41-50	50	4	170	175	45	62,5	10	45	15	32	13 Nm
B-41-63	63	5	185	190	50	73	10	50	15	32	13 Nm
B-41-80	80	6	210	216	63	92	12	63	20	41	19 Nm
B-41-100	100	6	220	230	75	108,5	14,5	71	25	41	22 Nm
B-41-125	125	7	250	270	90	132	16,5	90	25	45	26 Nm

Front and rear flange Mod. D-E...

Material: aluminium.
The following is supplied:
N° 1 flange
N° 4 screws



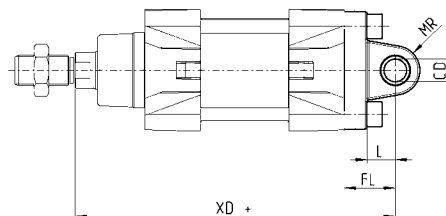
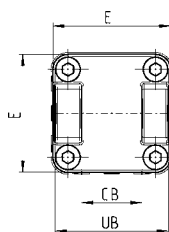
+ add the stroke

DIMENSIONS

Mod.	∅	W±2	MF	ZB ^{J514}	TF ^{J514}	R ^{J514}	UF	E	FB ^{H13}	ZF ±1.25	Torque force (max)
D-E-41-32	32	16	10	120	64	32	86	45	7	130	6 Nm
D-E-41-40	40	20	10	135	72	36	88	52	9	145	6 Nm
D-E-41-50	50	25	12	143	90	45	110	63	9	155	13 Nm
D-E-41-63	63	25	12	158	100	50	116	73	9	170	13 Nm
D-E-41-80	80	30	16	174	126	63	148	95	12	190	19 Nm
D-E-41-100	100	35	16	189	150	75	176	115	14	205	22 Nm
D-E-41-125	125	45	20	225	180	90	224	135	16	245	26 Nm

Rear trunnion, female Mod. C..... and CH...

Material: aluminium.
The following is supplied:
N° 1 female trunnion
N° 4 screws



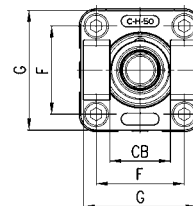
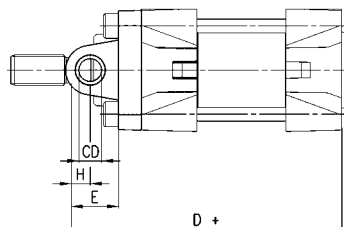
+ add the stroke

DIMENSIONS

Mod.	ø	CD ^{H9}	FL	C	XD ^{+1.6}	MR	E	CB ^{H14}	UB ^{H14}	Torque force (max)
C-41-32	32	10	12	22	142	10	45	26	45	6 Nm
C-41-40	40	12	15	25	160	13	52	28	52	6 Nm
C-41-50	50	12	15	27	170	13	63	32	60	13 Nm
C-H-41-63	63	16	20	32	190	15	73	40	70	13 Nm
C-H-41-80	80	16	24	36	210	15	95	50	90	19 Nm
C-H-41-100	100	20	29	41	230	18	115	60	110	22 Nm
C-H-41-125	125	25	30	50	275	25	135	70	130	26 Nm

Front trunnion female Mod. H... and C-H...

Material: aluminium.
The following is supplied:
N° 2 female trunnions
N° 4 screws



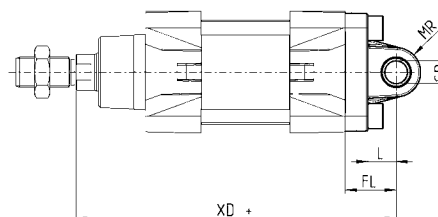
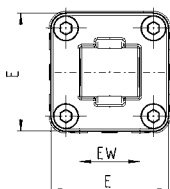
+ add the stroke

DIMENSIONS

Mod.	ø	CD ^{H9}	E	H	D	MR	F	G	CB ^{H14}	UB ^{H14}
H-41-32	32	10	16	4	120	10	32,5	45	26	45
H-41-40	40	12	20	5	135	13	38	52	28	52
H-41-50	50	12	25	10	143	13	46,5	63	32	60
H-60-63	63	16	25	5	158	15	56,5	73	40	70
C-H-41-80	80	16	34	10	174	15	72	95	50	90
C-H-41-100	100	20	39	10	189	18	89	115	60	110
C-H-41-125	125	25	45	15	225	25	110	135	70	130

Rear trunnion, male Mod. L...

Material: aluminium.
 The following is supplied:
 N° 2 male trunnion
 N° 4 screws



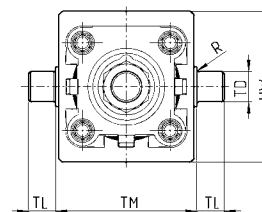
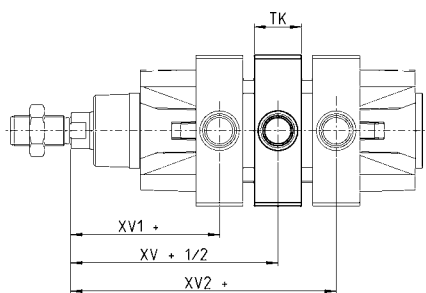
+ add the stroke

DIMENSIONS

Mod.	ø	CD ^{H9}	L	FL	XD ^{+1.6}	MR	E	EW ^{-0.2 -0.6}	Torque force (max)
L-41-32	32	10	12	22	142	9	45	26	6 Nm
L-41-40	40	12	15	25	160	13	52	28	6 Nm
L-41-50	50	12	15	27	170	13	63	32	13 Nm
L-41-63	63	16	20	32	190	15	73	40	13 Nm
L-41-80	80	16	24	36	210	15	95	50	19 Nm
L-41-100	100	20	29	41	230	18	115	60	22 Nm
L-41-125	125	25	30	50	275	25	135	70	26 Nm

Centre trunnion Mod. F...

Material: zinc-plated steel.
 The following is supplied:
 N° 1 intermediate trunnion
 N° 4 clamping elements
 N° 4 locking screws



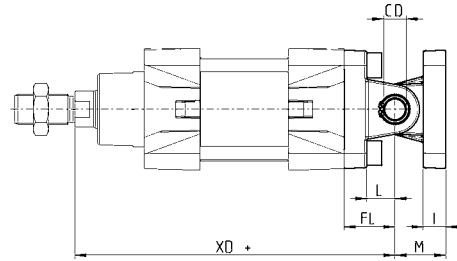
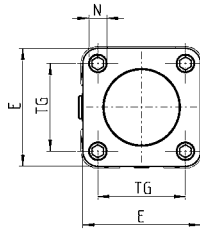
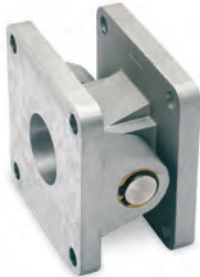
+ add the stroke

DIMENSIONS

Mod.	ø	XV ⁻²	XV1 ⁺²	XV2 ⁺²	TM ^{H14}	TK	TD ^{H9}	TL ^{H14}	UW	R
F-32	32	63,5	73	82,5	50	20	12	12	65	0,1
F-40	40	72,5	82,5	92,5	63	25	16	16	74	0,15
F-50	50	79,5	90	100,5	75	25	16	16	85	0,15
F-63	63	88	97,5	107	90	30	20	20	100	0,15
F-80	80	97	110	123	110	30	20	20	120	0,15
F-100	100	102	120	138	132	30	25	25	135	0,2
F-125	125	121	145	169	160	30	25	25	160	0,2

Accessory combination Mod.C+L+S

Material: aluminium.



+ add the stroke

DIMENSIONS

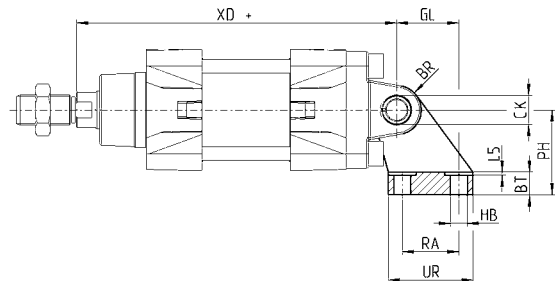
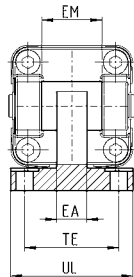
ø	CD ^{H9}	L	FL	XD ^{+1.6}	TG	E	I	M	N	Torque force (max)
32	10	12	22	142	32,5	45	10	22	6,5	6 Nm
40	12	15	25	160	38	52	10	25	6,5	6 Nm
50	12	15	27	170	46,5	63	12	27	9	13 Nm
63	16	20	32	190	56,5	73	12	32	9	13 Nm
80	16	24	36	210	72	95	12	36	11	19 Nm
100	20	29	41	230	89	115	12	41	11	22 Nm
125	25	30	50	275	110	135	20	50	13	26 Nm

90° male trunnion according to CETOP RP 107P Mod. ZC...

Material: aluminium.

The following is supplied:

N° 1 male trunnion



+ add the stroke

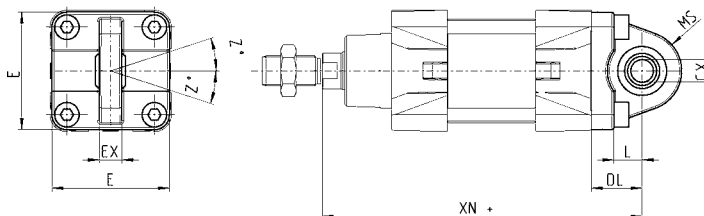
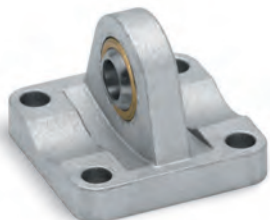
DIMENSIONS

Mod.	ø	EB ^{H13}	CK ^{H9}	HB ^{H13}	XD	TE ^{J14}	UL ^{MAX}	EA ^{MAX}	GL ^{J14}	L5 ^{MAX}	RA ^{J14}	EM	UR ^{J14}	PH ^{J15}	BT	BR ^{MAX}
ZC-32	32	11	10	6,6	154	38	51	10	21	1,6	18	26	31	32	8	10
ZC-40	40	11	12	6,6	173	41	54	15	24	1,6	22	28	^{-0,2} 35	36	10	11
ZC-50	50	15	12	9	188	50	65	16	33	1,6	30	32	^{-0,4} 45	45	12	13
ZC-63	63	15	16	9	209,5	52	67	16	37	1,6	35	40	50	50	12	15
ZC-80	80	18	16	11	237	66	86	20	47	2,5	40	50	60	63	14	15
ZC-100	100	18	20	11	260	76	96	20	55	2,5	50	60	^{-0,5} 70	71	15	19
ZC-125	125	20	25	14	315	94	124	30	70	3,2	60	70	^{-1,5} 90	90	20	22,5



Rear Trunnion ball-joint Mod. R*...

Material: aluminium
 *not according to standard.
 The following is supplied:
 N° 1 trunnion ball joint
 N° 4 screws



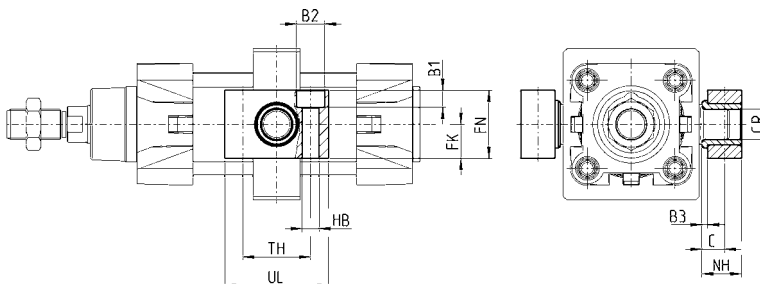
+ add the stroke

DIMENSIONS

Mod.	ø	CX ^{H9}	L	DL	XN ^{+1.6}	MS	E	EX ^{-0.1}	Z°	Torque force (max)
R-41-32	32	10	12	22	142	16	45	14	4	6 Nm
R-41-40	40	12	15	25	160	20	52	16	4	6 Nm
R-41-50	50	12	15	27	170	20	63	16	4	13 Nm
R-41-63	63	16	20	32	190	24	73	21	4	13 Nm
R-41-80	80	16	24	36	210	24	95	21	4	19 Nm
R-41-100	100	20	29	41	230	30	115	25	4	22 Nm

Counter bracket for centre trunnion Mod. BF...

Material: aluminium.
 The following is supplied:
 N° 2 supports



DIMENSIONS

Mod.	ø	CR	NH	C	b3	TH	UL	FK	FN	B1	B2	HB
BF-32	32	12	15	7,5	3	32	46	15	30	6,8	11	6,6
BF-40-50	40-50	16	18	9	3	36	55	18	36	9	15	9
BF-63-80	63-80	20	20	10	3	42	65	20	40	11	18	11
BF-100-125	100-125	25	25	12,5	3,5	50	75	25	50	13	20	14

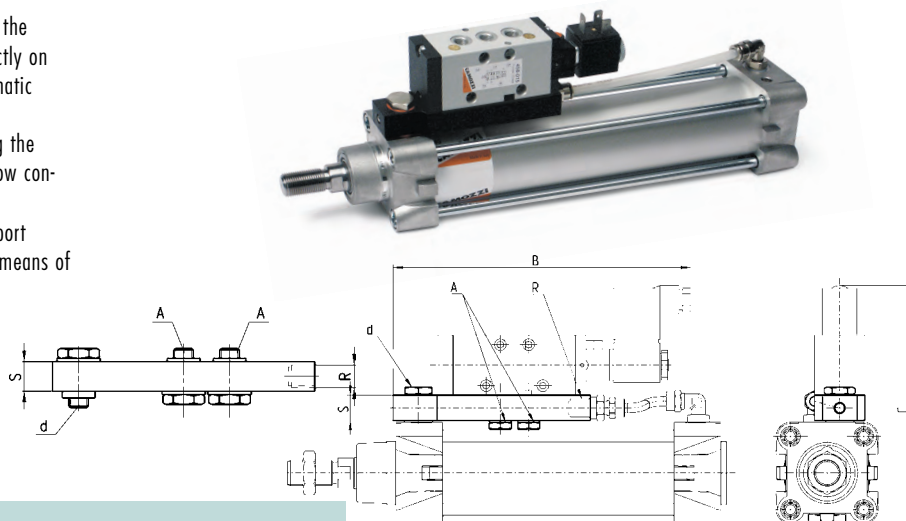
Example of assembly

The mounting subbase Mod. **PCV**, enables the valve or solenoid valve to be mounted directly on the cylinder, thus forming a compact pneumatic operating unit which is easy to install.

The subbase is fixed onto the cylinder using the screws Mod. **1635** or the unidirectional flow controllers, Mod. **SCU**...

The other end of the plate has a threaded port which allows the tube to be connected, by means of a fitting, to the other end-cap.

Note: the minimum possible stroke is 100mm.

**DIMENSIONS**

Mod.	ø	A	B	C	R	S	d*	Valve Mod.**
PCV-32	32	G1/8	185	131,5	G1/8	16	G1/8	458-015-22-S19
PCV-40-50	40	G1/8	188,5	140,5	G1/4	16	G1/4	458-015-22-S19
PCV-40-50	50	G1/8	188,5	150	G1/4	16	G1/4	458-015-22-S19
PCV-63-80	63	G1/4	215	167	G1/4	16	G3/8	454-015-22S07
PCV-63-80	80	G1/4	215	185	G1/4	16	G3/8	454-015-22S07

d* = mounting on the cylinder using Mod. **1635** or Mod. **SCU**.

Valve Mod. ** = standard valves with end cap turned 180°

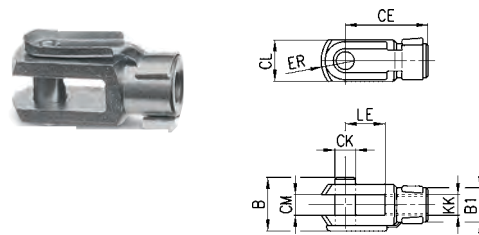
Rod Fork End G...

ISO 8140.

Material: zinc-plated steel.

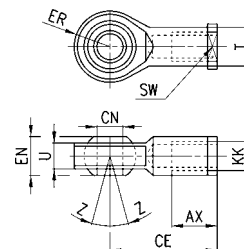
DIMENSIONS

Mod.	ø	øCK	LE	CM	CL	ER	CE	KK	B	øB1
G-25-32	32	10	20	10	20	12	40	M10x1,25	26	18
G-40	40	12	24	12	24	14	48	M12x1,25	32	20
G-50-63	50-63	16	32	16	32	19	64	M16x1,5	40	26
G-80-100	80-100	20	40	20	40	25	80	M20x1,5	48	34
G-41-125	125	30	55	30	55	38	110	M27x2	74	48

**Swivel Ball Joint Mod. GA...**

ISO 8139.

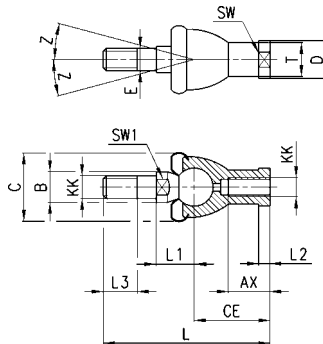
Material: zinc-plated steel.

**DIMENSIONS**

Mod.	ø	øCN ^{H7}	U	EN	ER	AX	CE	KK	øT	Z	SW
GA-32	32	10	10,5	14	14	20	43	M10x1,25	15	6,5	17
GA-40	40	12	12	16	16	22	50	M12x1,25	17,5	6,5	19
GA-50-63	50-63	16	15	21	21	28	64	M16x1,5	22	7,5	22
GA-80-100	80-100	20	18	25	25	33	77	M20x1,5	27,5	7	30
GA-41-125	125	30	25	37	35	51	110	M27x2	40	7,5	41

Piston Rod Socket Joint Mod. GY...

Material: zama and zinc-plated steel.

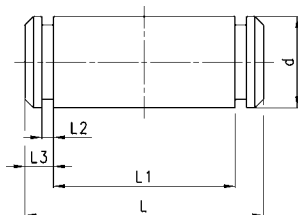


DIMENSIONS

Mod.	ø	KK	L	CE	L2	AX	SW	SW1	L1	L3	øT	øD	E	øB	øC	Z
GY-25-32	32	M10x1,25	74	35	6,5	18	17	11	19,5	15	15	19	10	14	28	15
GY-40	40	M12x1,25	84	40	6,5	20	19	17	22	17	17,5	22	12	19	32	15
GY-50-63	50-63	M16x1,5	112	50	8	27	22	19	27,5	23	22	27	16	22	40	11
GY-80-100	80-100	M20x1,5	133	63	10	38	30	24	31,5	25	27,5	34	20	29	45	7,5

Clevis Pin Mod. S...

The following is supplied:
 N° 1 clevis pin (stainless steel 303)
 N° 2 Seeger (steel)

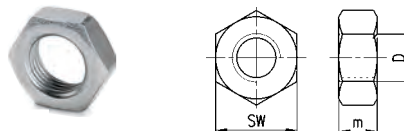


DIMENSIONS

Mod.	ø	d	L	L1	L2 ^{H13}	L3
S-32	32	10	52	46	1,1	3
S-40	40	12	59	53	1,1	3
S-50	50	12	67	61	1,1	3
S-63	63	16	77	71	1,1	3
S-80	80	16	97	91	1,1	3
S-100	100	20	121	111	1,3	5
S-125	125	25	140,5	132	1,3	4,25

Piston Rod Lock Nut Mod. U...

UNI EN ISO 4035.
 Material: zinc-plated steel.
 Included on Series 60 cylinders.



DIMENSIONS

Mod.	ø	D	m	SW
U-25-32	32	M10x1,25	6	17
U-40	40	M12x1,25	7	19
U-50-63	50-63	M16x1,5	8	24
U-80-100	80-100	M20x1,5	9	30
U-41-125	125	M27x2	12	41