

# ISO 6432 MINI-CYLINDER SERIES STD

Mini-cylinders to ISO 6432 with a chamfered stainless steel barrel.

Can be used with different types of sensors.

Available in various versions with a wide range of accessories:

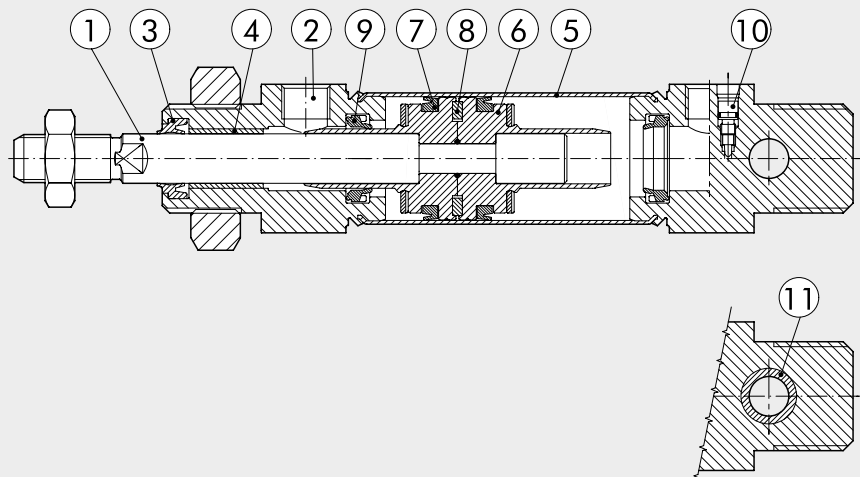
- with or without magnet
- single acting extended, retracted or through piston rod
- double acting, single or through piston rod
- with pneumatic cushioning (Ø 16-20-25)
- gaskets made of NBR, POLYURETHANE, and FKM/FPM (for high temperatures), and low-temperature gaskets
- special executions on request
- fixing accessories, guide units and mechanical rod lock.



TECHNICAL DATA		Ø8	Ø10	Ø12	Ø16	Ø20	Ø25
Max operating pressure	bar				10		
	MPa				1		
	psi				145		
Temperature range	POLYURETHANE °C				-20 to +80		
	NBR °C				-10 to +80		
	FKM/FPM °C				-10 to +150 (non-magnetic cylinder)		
	Low temperature °C				-35 to +80		
Design		Chamfered stainless steel barrel					
Fluid		Unlubricated air. Lubrication, if used, must be continuous					
Standard strokes $\pm$	double-acting mm	1 to 100	1 to 100	1 to 200	1 to 200	1 to 500	1 to 500
	double-acting, cushioned mm	-	-	-	1 to 300	1 to 500	1 to 500
	double-acting with spring extended or retracted piston rod mm	-	-	-	1 to 100	1 to 100	1 to 100
	single-acting extended or retracted piston rod mm	1 to 50	1 to 50	1 to 50	1 to 100	1 to 100	1 to 100
Versions		Double-acting, Double-acting cushioned, Double-acting with spring extended or retracted piston rod, Single-acting extended or retracted rod, Through-rod, Through-rod cushioned, Version suitable for rod lock, No stick-slip					
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.					
Inrush pressure	single piston rod bar		0.8			0.6	
	through-rod bar		1			0.8	
Forces generated at 6 bar thrust/retraction		See cylinder "General technical data" at the beginning of the chapter					
Weights		See cylinder "General technical data" at the beginning of the chapter					
Notes		<b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b>					
		<b><math>\pm</math> Maximum recommended strokes. Higher values can create operating problems</b>					

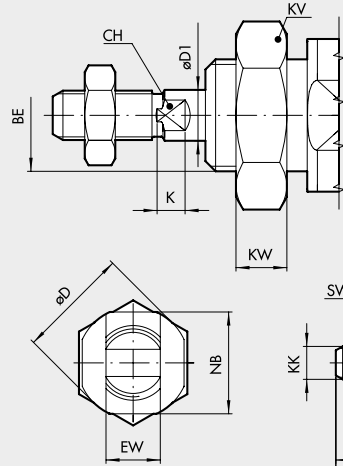
## COMPONENTS

- PISTON ROD: C45 steel or stainless steel, thick chromed
- HEAD: anodized aluminium alloy
- PISTON ROD GASKET: polyurethane, NBR or FKM/FPM
- GUIDE BUSHING: steel strip with bronze and PTFE insert
- BARREL: AISI 304 steel
- HALF-PISTON: acetal resin
- PISTON GASKET: polyurethane, NBR or FKM/FPM
- MAGNET: plasteodymium
- CUSHIONING GASKET: NBR or FKM/FPM
- NEEDLE: OT 58 with needle out movement safety system even when fully open
- BUSHING (optional): self-lubricating bronze

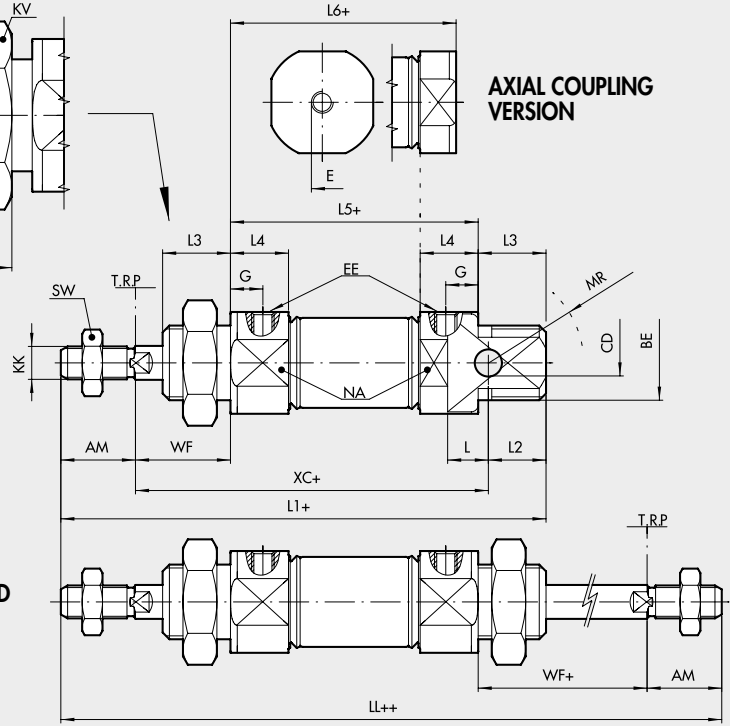


**DIMENSIONS OF DOUBLE-ACTING VERSIONS**

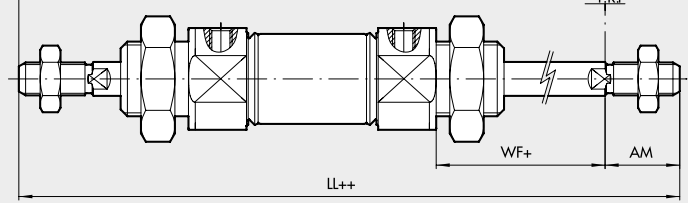
**SINGLE PISTON ROD VERSION**



**AXIAL COUPLING VERSION**



**THROUGH-ROD VERSION**



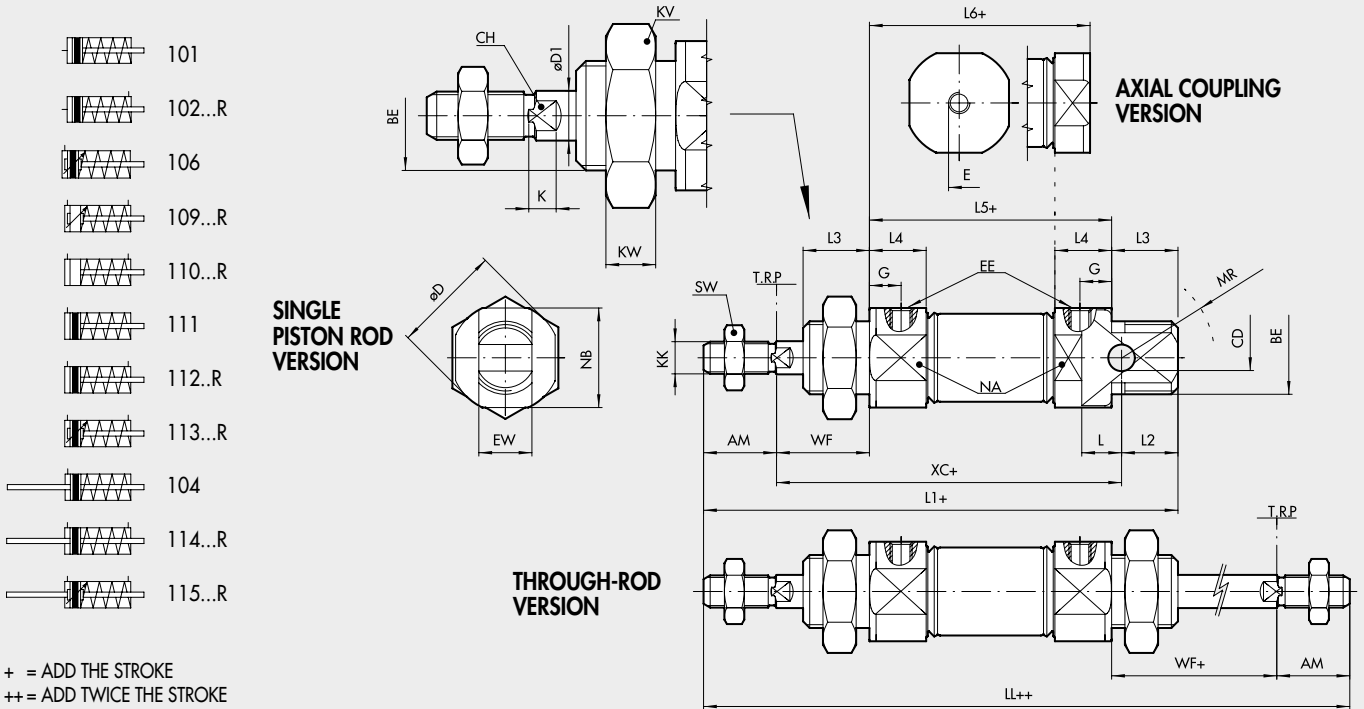
- 102
- 109
- 110
- 112
- 113
- 114
- 115

+ = ADD THE STROKE  
 ++ = ADD TWICE THE STROKE

Ø	AM <sup>±0</sup> / <sub>-2</sub>	BE	øCD <sup>H9</sup>	øD	øD1	E	G	EE	EW <sup>d13</sup>	L	LL	L1	L2	L3	L4	L5	L6	KK	XC <sup>±1</sup>	WF <sup>±1,2</sup>	KW	KV	MR	NA	NB	SW	CH	K
8	12	M12x1.25	4	16.7	4	M5	6	M5	8	6.5	102	86	10	12	10	46	46	M4	64	16	7	19	12	15	15	7	3	3
10	12	M12x1.25	4	16.7	4	M5	6	M5	8	6.5	102	86	10	12	10	46	46	M4	64	16	7	19	12	15	15	7	3	3
12	16	M16x1.5	6	19	6	M5	6	M5	12	9	125	104	13	17	10	49	47	M6	75	22	8	24	16	17	17	10	5	3.5
16	16	M16x1.5	6	19.7	6	1/8	6	M5	12	9	132	111	13	17	10	56	53	M6	82	22	8	24	16	18	18	10	5	3.5
20	20	M22x1.5	8	27.9	8	1/8	8	G 1/8	16	12	156	129	14	17	15.5	68	61	M8	95	24	7	32	18	24	24	13	7	4.6
25	22	M22x1.5	8	33	10	1/8	9	G 1/8	16	12	173	143	17	20	17.1	73	66.5	M10x1.25	104	28	7	32	21	30	30	17	8	5

**NOTES**

**DIMENSIONS OF DOUBLE-ACTING WITH SPRING, RETRACTED PISTON ROD VERSIONS**  
**DIMENSIONS OF SINGLE-ACTING WITH SPRING, RETRACTED PISTON ROD VERSIONS**



**VERSION 101... / 104... / 106... / 111... (Stroke 0-50)**

Ø	AM <sup>±2</sup>	BE	øCD <sup>H9</sup>	øD	øD1	E	G	EE	EW <sup>#13</sup>	L	LL	L1	L2	L3	L4	L5	L6	KK	XC <sup>±1</sup>	WF <sup>±1,2</sup>	KW	KV	MR	NA	NB	SW	CH	K
8	12	M12x1.25	4	16.7	4	M5	6	M5	8	6.5	102	86	10	12	10	46	46	M4	64	16	7	19	12	15	15	7	3	3
10	12	M12x1.25	4	16.7	4	M5	6	M5	8	6.5	102	86	10	12	10	46	46	M4	64	16	7	19	12	15	15	7	3	3
12	16	M16x1.5	6	19	6	M5	6	M5	12	9	125	104	13	17	10	49	47	M6	75	22	8	24	16	17	17	10	5	3.5
16	16	M16x1.5	6	19.7	6	1/8	6	M5	12	9	132	111	13	17	10	56	53	M6	82	22	8	24	16	18	18	10	5	3.5
20	20	M22x1.5	8	27.9	8	1/8	8	G 1/8	16	12	156	129	14	17	15.5	68	61	M8	95	24	7	32	18	24	24	13	7	4.6
25	22	M22x1.5	8	33	10	1/8	9	G 1/8	16	12	173	143	17	20	17.1	73	66.5	M10x1.25	104	28	7	32	21	30	30	17	8	5

**VERSION 101... (single-acting retracted piston rod)**

Ø	Dimension	Stroke	
		51-75	76-100
16	L6	101.8	126.2
20	L6	111.8	137.2
25	L6	118.5	144.5

**VERSION 102...R (double-acting retracted piston rod)**

Ø	Dimension	Stroke			
		0-25	26-50	51-75	76-100
16	L6	63.4	83.4	107.8	132.2
20	L6	72.4	93.4	118.8	144.2
25	L6	77.6	100.5	126.5	152.5

**VERSION 104... (single-acting through-rod)**

Ø	Dimension	Stroke	
		51-75	76-100
16	LL	180.8	205.2
	L5	104.8	129.2
20	LL	206.8	232.2
	L5	118.8	144.2
25	LL	225	251
	L5	125	151

**VERSION 106... (single-acting cushioned, retracted piston rod)**

Ø	Dimension	Stroke	
		51-75	76-100
16	L1	159.8	184.2
	L5	104.8	129.2
	XC <sup>±1</sup>	130.8	155.2
20	L1	179.8	205.2
	L5	118.8	144.2
	XC <sup>±1</sup>	145.8	171.2
25	L1	195	221
	L5	125	151
	XC <sup>±1</sup>	156	182

**VERSION 109...R / 113...R (double-acting cushioned, with spring, retracted piston rod)**

Ø	Dimension	Stroke			
		0-25	26-50	51-75	76-100
16	L1	121.4	141.4	165.8	190.2
	L5	66.4	86.4	110.8	135.2
	XC <sup>±1</sup>	92.4	112.4	136.8	161.2
20	L1	140.4	161.4	186.8	212.2
	L5	79.4	100.4	125.8	151.2
	XC <sup>±1</sup>	106.4	127.4	152.8	178.2
25	L1	154.1	177	203	229
	L5	84.1	107	133	159
	XC <sup>±1</sup>	115.1	138	164	190

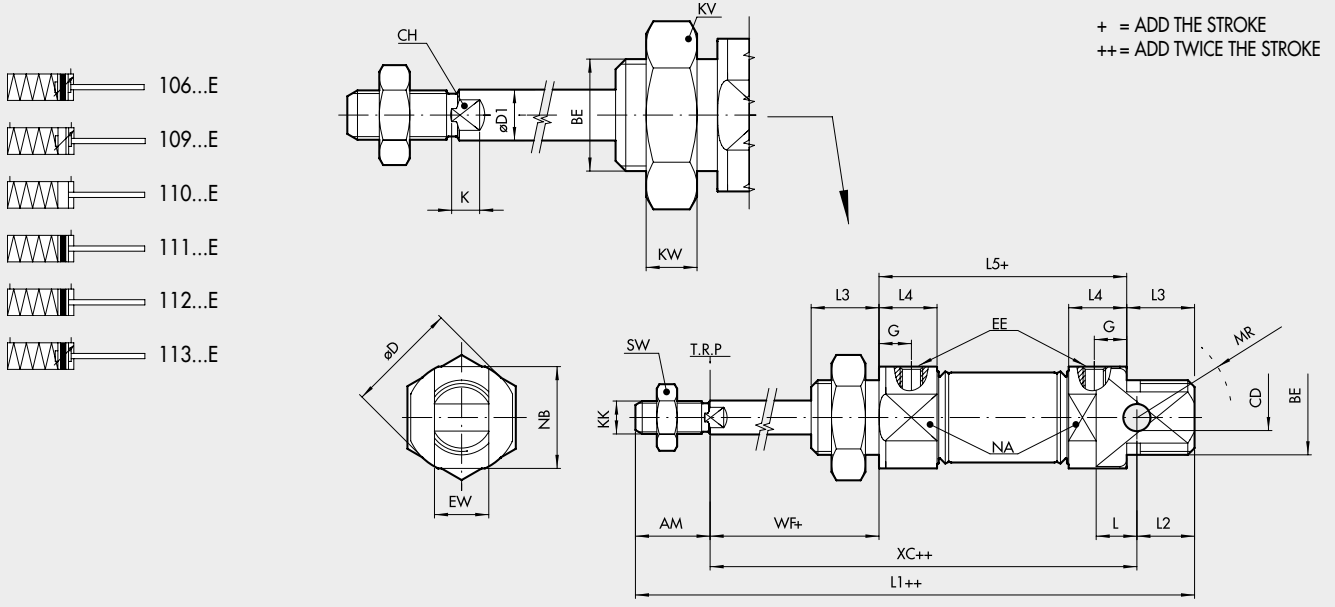
**VERSION 114...R (double-acting cushioned, with spring, through-rod)**

Ø	Dimension	Stroke			
		0-25	26-50	51-75	76-100
16	LL	142.4	162.4	186.8	211.2
	L5	66.4	86.4	110.8	135.2
20	LL	167.4	188.4	213.8	239.2
	L5	79.4	100.4	125.8	151.2
25	LL	184.1	207	233	259
	L5	84.1	107	133	159

**VERSION 110...R / 112...R (double-acting with spring, retracted piston rod)**

**VERSION 115...R (double-acting with spring, through-rod)**

**DIMENSIONS OF DOUBLE-ACTING WITH SPRING, EXTENDED PISTON ROD VERSIONS**  
**DIMENSIONS OF SINGLE-ACTING WITH SPRING, EXTENDED PISTON ROD VERSIONS**



Ø	AM <sup>±0</sup>	BE	øCD <sup>H9</sup>	øD	øD1	G	EE	EW <sup>d13</sup>	L	L2	L3	L4	KK	WF <sup>±1,2</sup>	KW	KV	MR	NA	NB	SW	CH	K
16	16	M16x1.5	6	19.7	6	6	M5	12	9	13	17	10	M6	22	8	24	16	18	18	10	5	3.5
20	20	M22x1.5	8	27.9	8	8	G 1/8	16	12	14	17	15.5	M8	24	7	32	18	24	24	13	7	4.6
25	22	M22x1.5	8	33	10	9	G 1/8	16	12	17	20	17.1	M10x1.25	28	7	32	21	30	30	17	8	5

**VERSION 106...E** (single-acting cushioned, extended piston rod)  
**VERSION 111...E** (single-acting extended piston rod)

Ø	Dimension	Stroke			
		0-25	26-50	51-75	76-100
16	L1	115.4	135.4	159.8	184.2
	L5	60.4	80.4	104.8	129.2
	XC <sup>±1</sup>	86.4	106.4	130.8	155.2
20	L1	133.4	154.4	179.8	205.2
	L5	72.4	93.4	118.8	144.2
	XC <sup>±1</sup>	99.4	120.4	145.8	171.2
25	L1	146.1	169	195	221
	L5	76.1	99	125	151
	XC <sup>±1</sup>	107.1	130	156	182

**VERSION 109...E / 113...E** (double-acting cushioned, with spring, extended piston rod)  
**VERSION 110...E / 112...E** (double-acting with spring, extended piston rod)

Ø	Dimension	Stroke			
		0-25	26-50	51-75	76-100
16	L1	121.4	141.4	165.8	190.2
	L5	66.4	86.4	110.8	135.2
	XC <sup>±1</sup>	92.4	112.4	136.8	161.2
20	L1	140.4	161.4	186.8	212.2
	L5	79.4	100.4	125.8	151.2
	XC <sup>±1</sup>	106.4	127.4	152.8	178.2
25	L1	154.1	177	203	229
	L5	84.1	107	133	159
	XC <sup>±1</sup>	115.1	138	164	190

**NOTES**

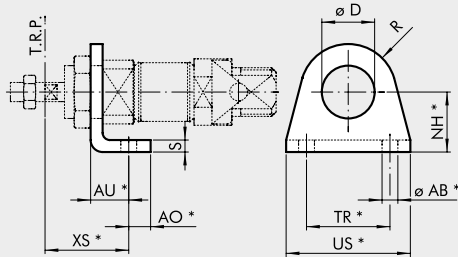


# ACCESSORIES FOR ISO 6432 MINI-CYLINDERS



## FIXINGS

### FOOT MODEL A

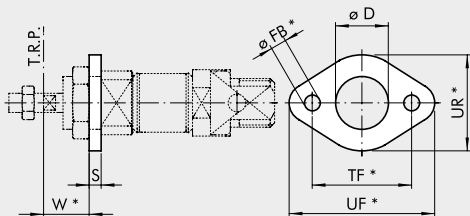


Code	Ø	ø D	XS ±1.4	AU	AO	NH ±0.3	TR J <sup>s14</sup>	US	ø AB H <sup>13</sup>	R	S	Weight [g]
W0950080001	8	12	24	11	5	16	25	35	4.5	10	3	22
W0950080001	10	12	24	11	5	16	25	35	4.5	10	3	22
W0950120001	12	16	32	14	6	20	32	42	5.5	13	4	42
W0950120001	16	16	32	14	6	20	32	42	5.5	13	4	42
W0950200001	20	22	36	17	8	25	40	54	6.5	20	5	90
W0950200001	25	22	40	17	8	25	40	54	6.5	20	5	90

\*ISO 6432 values

Note: Individually packed

### FLANGE MODEL C

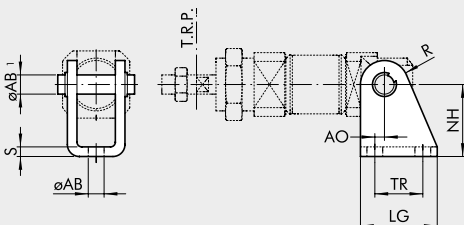


Code	Ø	ø D	W ±1.4	ø FB H <sup>13</sup>	TF J <sup>s14</sup>	UF	UR	S	Weight [g]
W0950080002	8	12	13	4.5	30	40	22	3	10
W0950080002	10	12	13	4.5	30	40	22	3	10
W0950120002	12	16	18	5.5	40	52	30	4	26
W0950120002	16	16	18	5.5	40	52	30	4	26
W0950200002	20	22	19	6.5	50	66	40	5	52
W0950200002	25	22	23	6.5	50	66	40	5	52

\*ISO 6432 values

Note: Individually packed

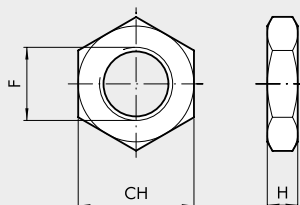
### COUNTER-HINGE MODEL BC



Code	Ø	AO	LG	TR J <sup>s13</sup>	NH ±0.2	MO	ø AB1	ø AB H <sup>13</sup>	R	S	Weight [g]
W0950080005	8	2.5	22	12.5	24	18	4	4.5	6	2.5	24
W0950080005	10	2.5	22	12.5	24	18	4	4.5	6	2.5	24
W0950120005	12	2	25	15	27	25	6	5.5	7	3	40
W0950120005	16	2	25	15	27	25	6	5.5	7	3	40
W0950200005	20	4	32	20	30	30	8	6.5	10	4	78
W0950200005	25	4	32	20	30	30	8	6.5	10	4	78

Note: Supplied complete with 1 pin and 2 snap rings

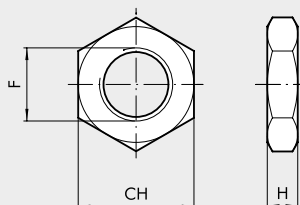
### NUT FOR HEADS MODEL D



Code	Ø	F	CH	H	Weight [g]
0950080010	8	M12x1.25	19	7	12
0950080010	10	M12x1.25	19	7	12
0950120010	12	M16x1.5	24	8	20
0950120010	16	M16x1.5	24	8	20
0950200010	20	M22x1.5	32	7	44
0950200010	25	M22x1.5	32	7	44

Note: Individually packed

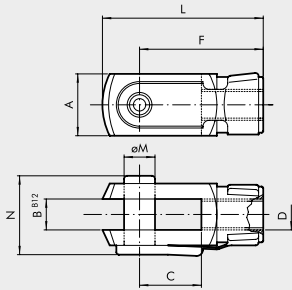
### NUT FOR PISTON RODS MODEL DA



Code	Ø	F	CH	H	Weight [g]
0950080011	8	M4	7	3	0.6
0950080011	10	M4	7	3	0.6
0950120011	12	M6	10	4	1
0950120011	16	M6	10	4	1
0950200011	20	M8	13	5	3
0950322010	25	M10x1.25	17	6	7

Note: Individually packed

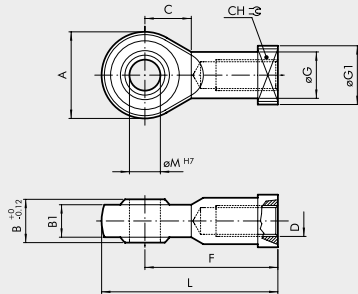
**FORK MODEL GK-M**



Code	∅	∅M	C	B	A	L	F	D	N	Weight [g]
W0950080020	8	4	8	4	8	21	16	M4	11	8
W0950080020	10	4	8	4	8	21	16	M4	11	8
W0950120020	12	6	12	6	12	31	24	M6	16	20
W0950120020	16	6	12	6	12	31	24	M6	16	20
W0950200020	20	8	16	8	16	42	32	M8	22	48
W0950322020	25	10	20	10	20	52	40	M10x1.25	26	92

Note: Individually packed

**ROD EYE MODEL GA-M**



Code	∅	∅M	C	B	B1	A	L	F	D	∅G	∅G1	CH	Weight [g]
W0950080025	8	5	10	8	6	18	36	27	M4	9	11	9	22
W0950080025	10	5	10	8	6	18	36	27	M4	9	11	9	22
W0950120025	12	6	11	9	6.75	20	40	30	M6	10	13	11	28
W0950120025	16	6	11	9	6.75	20	40	30	M6	10	13	11	28
W0950200025	20	8	13	12	9	24	48	36	M8	12.5	16	14	50
W0950322025	25	10	15	14	10.5	28	57	43	M10x1.25	15	19	17	78

Note: Individually packed

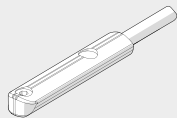
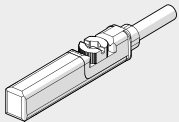
**ACCESSORIES FOR ISO 6432 MINI-CYLINDERS: MAGNETIC SENSORS**

**(E) RETRACTABLE SENSOR**

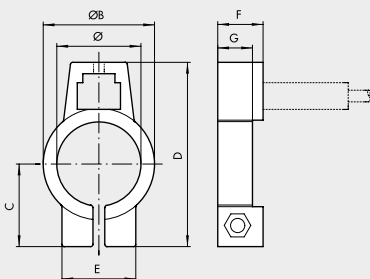
**SENSOR, SQUARE TYPE**  
Latest generation,  
secure fixing

**SENSOR, OVAL TYPE**  
Traditional

For codes and technical data, see **chapter A6**.



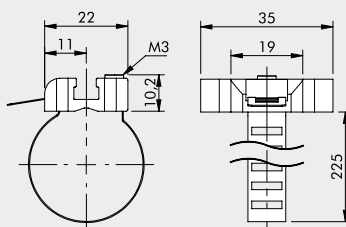
**(F) SENSOR BRACKET MOD. DSW**



Code	Bore	Model	∅	∅B	C	D	E	F	G
W0950000608	8	BEF-KHZ-RT-08F23	9.3	12.3	11	24.7	12.2	10	-
W0950000610	10	BEF-KHZ-RT-10F23	11.3	14.3	12	26.7	12.2	10	-
W0950000612	12	BEF-KHZ-RT-12F23	13.3	16.3	13.3	29	12.2	10	-
W0950000616	16	BEF-KHZ-RT-16F23	17.7	20.5	15.5	33.2	12.2	10	7.8
W0950000620	20	BEF-KHZ-RT-20F23	21.7	24.5	17.6	37.3	12.2	10	7.5
W0950000625	25	BEF-KHZ-RT-25F23	26.7	29.5	20.2	42.4	12.2	10	7.5

Note: Individually packed

**(G) UNIVERSAL SENSOR BRACKET**

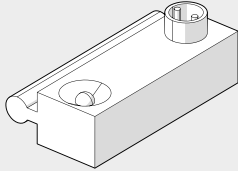


Code	Bore	Model
W0950001103	8 to 25	Sensor bracket 8 to 63

Note: Individually packed

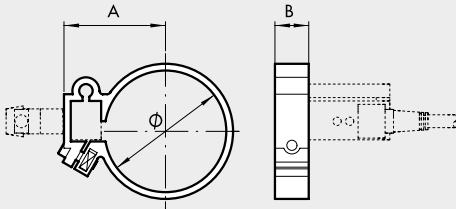
**MATERIAL**  
Bracket: stainless steel  
Sensor holder: zamak

**A** SENSOR SERIES DSM



For codes and technical data, see **chapter A6**.

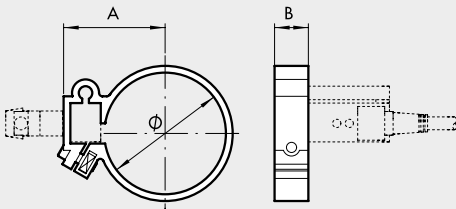
**B** SENSOR BRACKET MOD. DXF FOR STAINLESS STEEL BARREL



Code	Bore	Model	Ø	A	B
W0950000508	8	Bracket DXF - 09	9.3	15	10
W0950000510	10	Bracket DXF - 11	11.3	16.5	10
W0950000512	12	Bracket DXF - 13	13.3	17.5	10
W0950000516	16	Bracket DXF - 17	17.3	18.5	10
W0950000520	20	Bracket DXF - 21	21.3	21	10
W0950000525	25	Bracket DXF - 26	26.3	23.5	10

Note: Individually packed

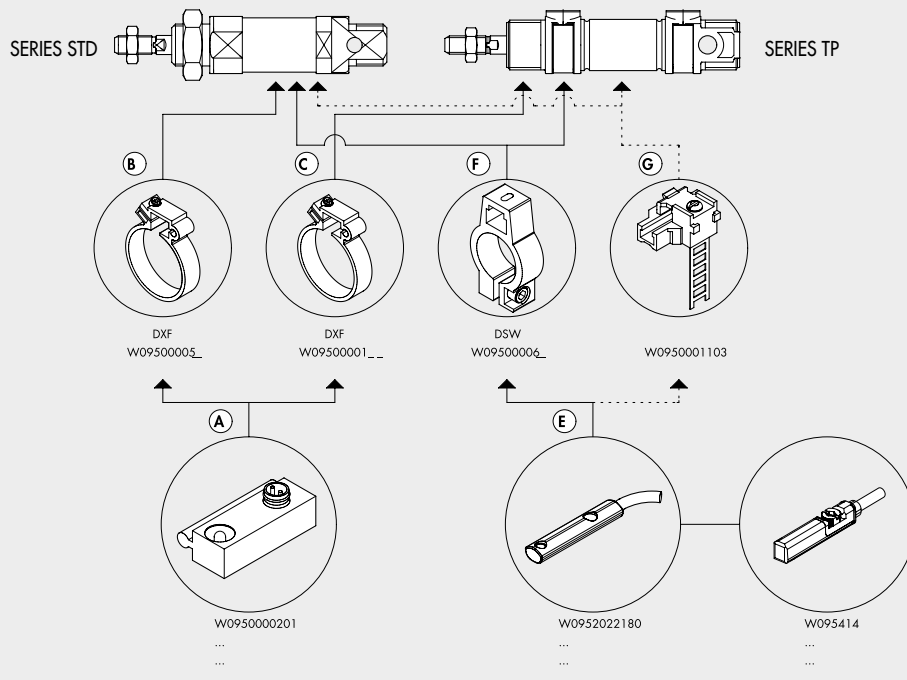
**C** SENSOR BRACKET MOD. DXF FOR ALUMINIUM BARREL



Code	Bore	Model	Ø	A	B
W0950000108	8	Bracket DXF 12- 8	12	17	10
W0950000110	10	Bracket DXF 14-10	14	18	10
W0950000112	12	Bracket DXF 16-12	16	19	10
W0950000116	16	Bracket DXF 20-16	20	21	10
W0950000120	20	Bracket DXF 24-20	24	23	10
W0950000125	25	Bracket DXF 29-25	29	28	10

Note: Individually packed. For the Ø16 in addition to the bracket 2 reduction rings, for the Ø20 and Ø25 1 reduction ring.

**USE SENSORS**





# ACCESSORIES FOR ISO 6432 MINI-CYLINDERS: MECHANICAL ROD LOCK

ACTUATORS

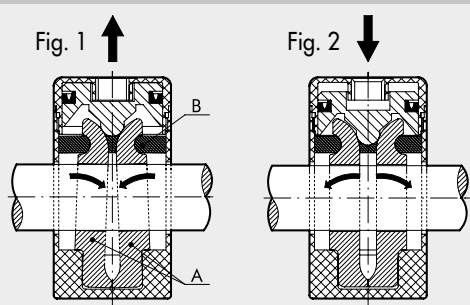
ACCESSORIES FOR ISO 6432 MINI-CYLINDERS

TECHNICAL DATA		
Operating pressure	bar	3 to 6
	MPa	0.3 to 0.6
Temperature range	°C	-10 to +80
Installation		In any position
Mechanics		Double pad with mechanical locking Mechanical stick-slip
Operation		NC bidirectional
Fluid		Lubricated or unlubricated compressed air
Locking force		Ø 12-16: 180 N / Ø 20: 250 N Ø 25: 400 N
Pilot port		M5
MATERIALS		
body		Aluminium
pad		Brass
spring		NBR
piston		Synthetic, with added teflon®
gasket		NBR



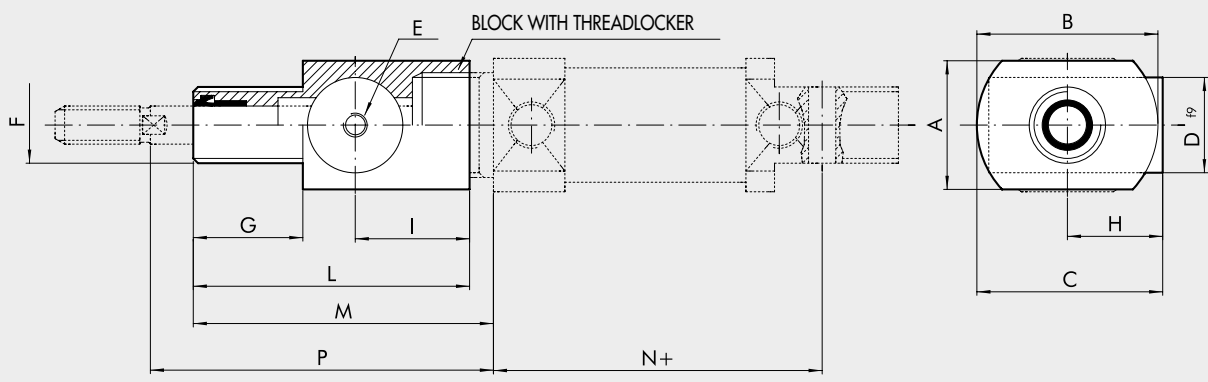
## OPERATING PRINCIPLE

The mechanical rod lock is a normally-closed mechanism. In the absence of pneumatic piloting, the two pads (A) lock the cylinder rod in both directions (Fig. 1). With pneumatic piloting, the piston rod guide forces the pads to come right up to each other and overcome the counter spring (B) force and the piston rod can slide (Fig. 2). **It is important to remember that the mechanical rod lock is a static type, which means that it is necessary to stop the cylinder piston rod pneumatically before locking the part mechanically.**



## DIMENSIONS

+ = ADD STROKE



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	P(±1.2)	Weight [g]
W5010001099	12	25	25	31.5	20	M5	M16x1.5	12	19	23	47	52	53	57	100
W5010001099	16	25	25	31.5	20	M5	M16x1.5	12	19	23	47	52	60	57	100
W5010001100	20	27	38	40	20	M5	M22x1.5	23	21	24	58	65	71	72	100
W5010001101	25	27	38	40	20	M5	M22x1.5	23	21	24	58	68	76	76	100

# ACCESSORIES FOR ISO 6432 MINI-CYLINDERS: GUIDE UNIT

Guide units series DS-DH-DM ensure optimal alignment and anti-rotation effect of the pneumatic cylinder connected to it. The guide units can be used separately or combined in order to get complete handling units: in which case the guide units can be coupled using the type A and C anchorage (foot and flange).

The guide unit can be coupled to ISO 6432 cylinders (Ø 12 - Ø 25).

The following versions are available:

U PROFILE (GDS)\*: for limited loads and speeds

H PROFILE (GDH)\*: for high loads

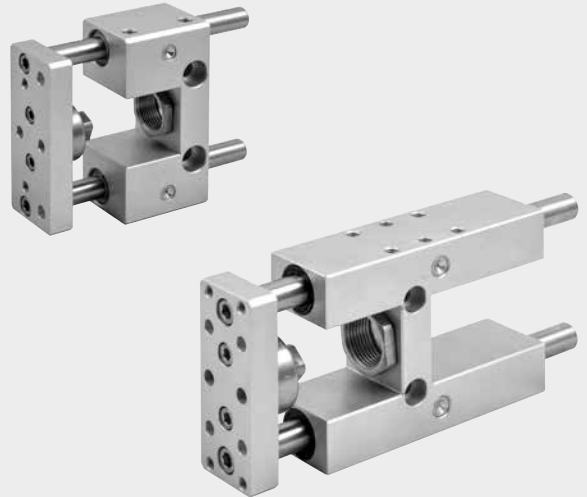
H PROFILE (GDM)\*\*: for high speeds

\* With bronze guide bushing

\*\* With ball guide bushing

**STANDARD STROKES:** 50 - 100 - 150 - 200 - 250 - 320 - 400 - 500

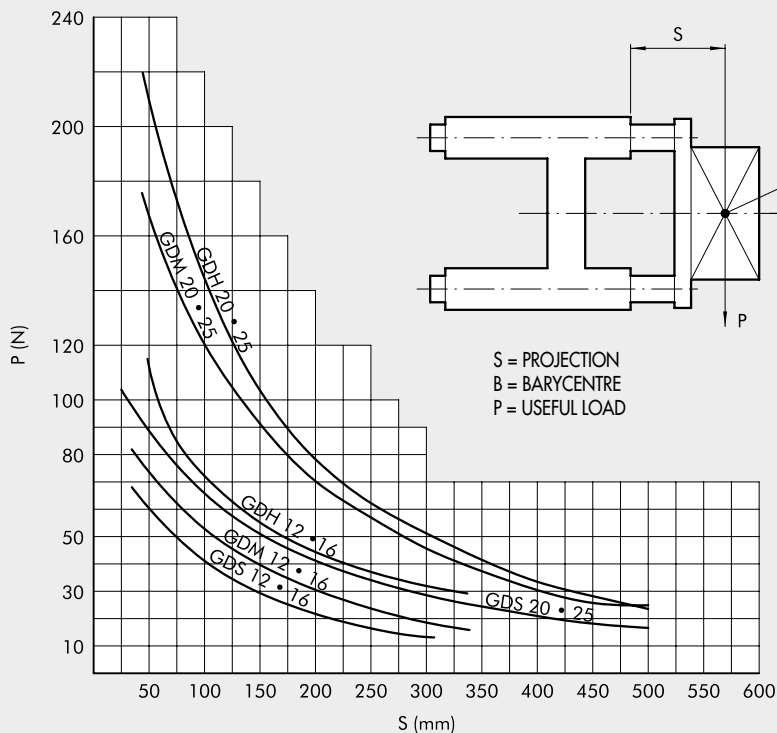
For weights, see cylinder "General technical data" at the beginning of the chapter.



## GUIDE ELEMENTS

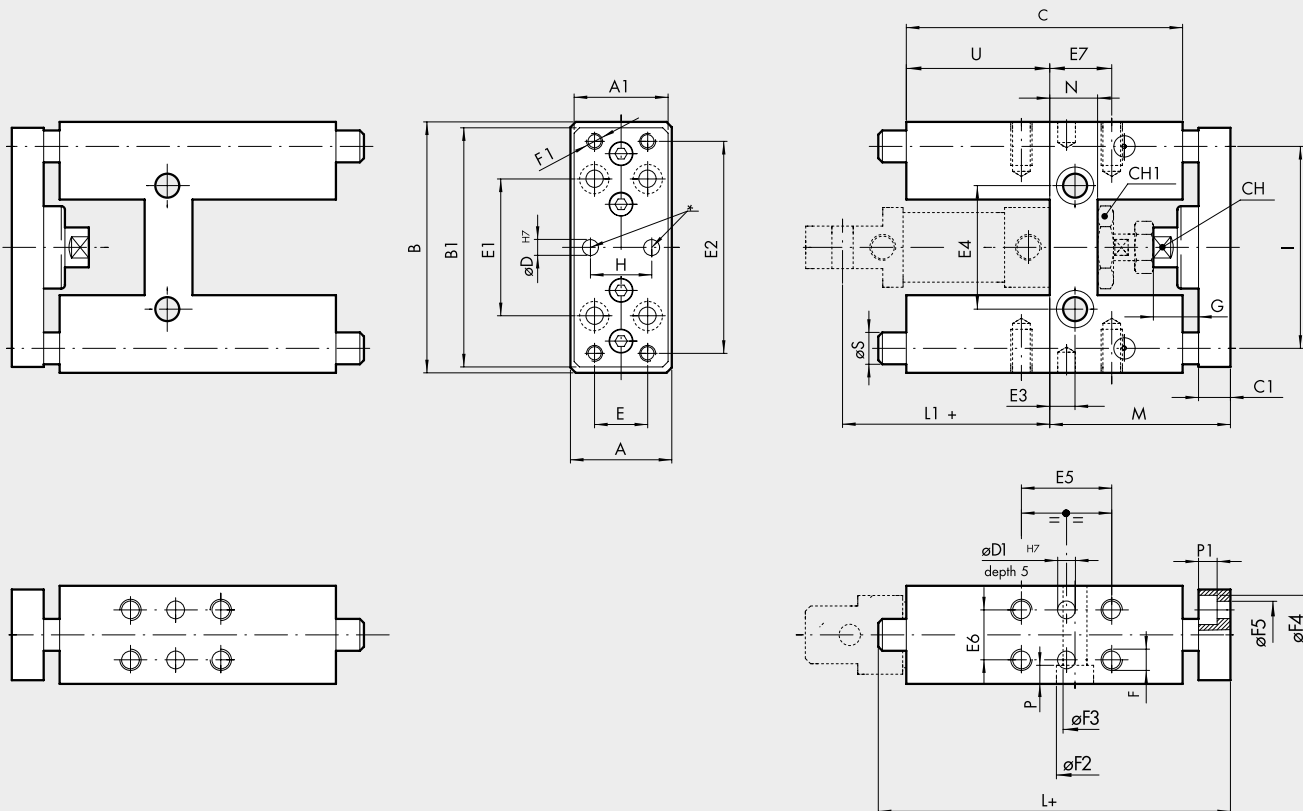
<b>SERIES GDS-GDH</b>	Body:	aluminium alloy
	Guide bushing:	self-lubricating sintered bronze and wiper rings
	Piston rod:	grinded chromed steel
<b>SERIES GDM</b>	Body:	aluminium alloy
	Guide bushing:	linear guide ball bearings and wiper rings
	Piston rod:	hardened, chromed and grinded steel

## GUIDE UNIT LOAD DIAGRAM



**DIMENSIONS OF TYPE GDH-GDM**

+ = ADD THE STROKE  
 \* = CENTERING PINHOLES



Ø	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	Ch	Ch <sub>1</sub>	D	D <sub>1</sub>	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	E <sub>7</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>	G	H	I	L	L <sub>1</sub>	M	N	P	S	U
12	30	27	65	63	75	10	8	19	4	-	15	32	54	6.5	24	32.5	22	11	M4	M4	8.5	5.1	7.5	4.5	15	15	46	130	53	54	15	5.5	10	37
16	30	27	65	63	75	10	8	19	4	-	15	32	54	6.5	24	32.5	22	11	M4	M4	8.5	5.1	7.5	4.5	15	15	46	130	60	54	15	5.5	10	37
20	34	32	79	76	108	12	13	27	6	5	20	40	68	8.5	38	32.5	23	15	M6	M5	10.5	6.5	9	5.5	22	20	58	160	71	65	15	7	12	58
25	34	32	79	76	108	12	13	27	6	5	20	40	68	8.5	38	32.5	23	15	M6	M5	10.5	6.5	9	5.5	22	20	58	160	76	65	15	7	12	58

**GDH (BRONZE GUIDE BUSHING)**

Code	Bore	Type
W0700122...	12	UNIT MW DH 012
W0700162...	16	UNIT MW DH 016
W0700202...	20	UNIT MW DH 020
W0700252...	25	UNIT MW DH 025

...Enter the stroke in 3 digits (e.g. 50 = 050).  
 Also available in V-Lock version (see **chapter A3**).

**GDM (BALL GUIDE BUSHING)**

Code	Bore	Type
W0700123...	12	UNIT MW DM 012
W0700163...	16	UNIT MW DM 016
W0700203...	20	UNIT MW DM 020
W0700253...	25	UNIT MW DM 025

...Enter the stroke in 3 digits (e.g. 50 = 050).  
 Also available in V-Lock version (see **chapter A3**).

**STROKE**

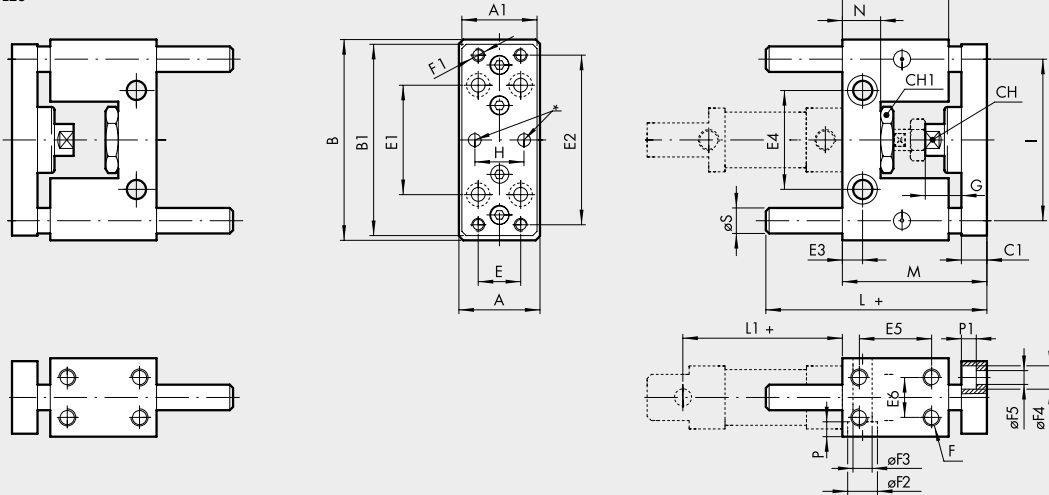
Cylinder stroke [mm]		Guide stroke [mm]
from	to	
0	75	50
75	125	100
125	175	150
175	225	200
225	275	250
275	345	320
345	425	400
425	525	500

**Note:**

Thanks to the dimensional features, it is possible to extend the use of GDH/GDM guides to cylinders with strokes up to 25 mm above the nominal guide stroke. The table here shows the stroke/cylinder range that can be used depending on the nominal stroke of the guide.

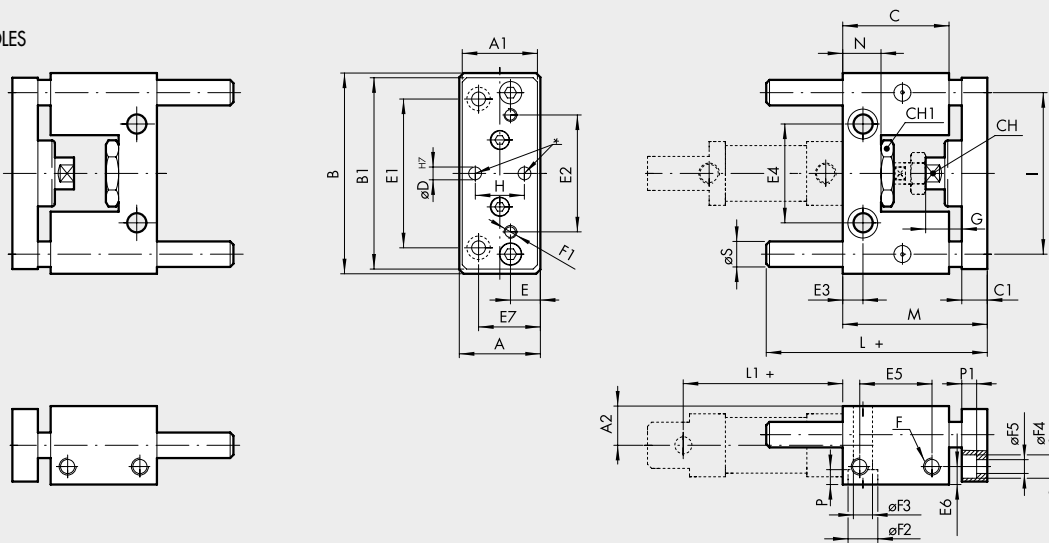
**DIMENSIONS OF TYPE GDS**

+ = ADD THE STROKE  
 \* = CENTERING PINHOLES



Ø	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	Ch	Ch <sub>1</sub>	D	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>	G	H	I	L	L <sub>1</sub>	M	N	P	P <sub>1</sub>	S
12	30	27	65	63	38	10	8	19	4	15	32	54	6.5	24	25	22	M4	M4	8.5	5.1	7.5	4.5	15	15	46	70	53	54	13	5.5	4.5	10
16	30	27	65	63	38	10	8	19	4	15	32	54	6.5	24	25	22	M4	M4	8.5	5.1	7.5	4.5	15	15	46	70	60	54	13	5.5	4.5	10

+ = ADD THE STROKE  
 \* = CENTERING PINHOLES



Ø	A	A <sub>1</sub>	A <sub>2</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	Ch	Ch <sub>1</sub>	D	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	E <sub>5</sub>	E <sub>6</sub>	E <sub>7</sub>	F	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>	G	H	I	L	L <sub>1</sub>	M	N	P	P <sub>1</sub>	S
20	40	38	20	100	90	48	12	13	27	6	15	70	55	8.5	46.5	32	10	30	M8	M6	14	9	11	6.5	22	20	76	77	71	65	17	9	6.5	12
25	40	38	20	100	90	48	12	13	27	6	15	70	55	8.5	46.5	32	10	30	M8	M6	14	9	11	6.5	22	20	76	77	76	71	17	9	6.5	12

**GDS (BRONZE GUIDE BUSHING)**

Code	Bore	Type
W0700121...	12	UNIT MW DS 012
W0700161...	16	UNIT MW DS 016
W0700201...	20	UNIT MW DS 020
W0700251...	25	UNIT MW DS 025

...Enter the stroke in 3 digits (e.g. 50 = 050).

**STROKE**

Cylinder stroke [mm]		Guide stroke [mm]
from	to	
0	50	50
51	100	100
101	150	150
151	200	200
201	250	250

**Note:**

Thanks to the dimensional features, it is possible to use the range of strokes - cylinders, as shown in the table here, without the guide piston rods projecting beyond the cylinder fixing value (L1 +).