

## ACCESSORIES FOR ISO 15552 CYLINDERS: "SECURE LOCK" ROD LOCK

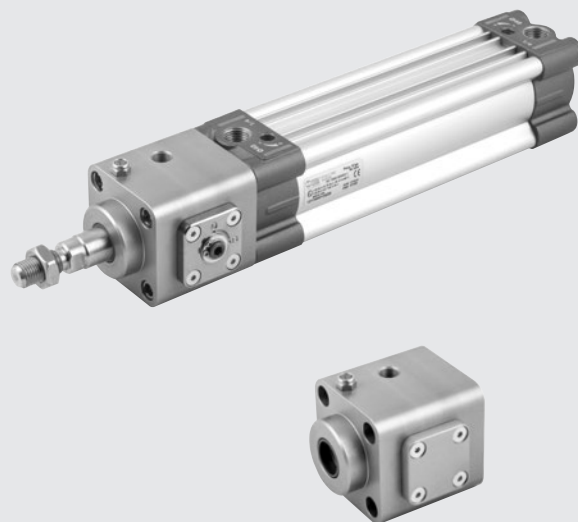
A new series of in-line locking devices by Metal Work with superior characteristics. Performances are guaranteed by a system of springs and conical sliding and ball bearings which, combined with carefully selected materials, ensure reliable and accurate locking of the system, which can be released by supplying air through the relevant inlet.

A version with manual release is also available.

When "Secure Lock" devices are fitted to ISO 15552 cylinders, the piston rod can be locked in position when the system is turned off or an emergency stop occurs.

"Secure Lock" can withstand occasional situations of dynamic locking. It locks the rod and prevents it from moving. Since negligible play is created, it is ideal for high-precision applications.

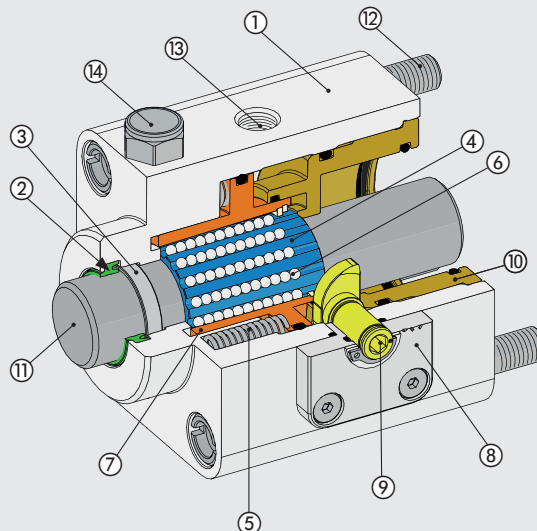
With the optional cam-operated manual release function, the rod lock can be disengaged mechanically merely by rotating a pin using a standard Allen wrench. When the pin is released, it automatically returns to the "rod locked" position.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Pilot pressure	bar	5 to 10						
	MPa	0.5 to 1						
	psi	72.5 to 145						
Temperature range	°C	-10 to +80						
Operation		NC - Bidirectional						
Mechanics		Locking gripper controlled by a bearing ball piston.						
Locking force	N	650	1100	1600	2500	4000	6300	8700
Notes		The piston rod must be clean and dry.						
		During assembly, do not rotate the piston rod if the Secure Lock device is locked.						

### COMPONENTS

- ① BODY: anodized aluminium
- ② WIPER RING: polyurethane
- ③ GUIDE RING: technopolymer
- ④ GRIPPER: hardened steel
- ⑤ SPRINGS: spring steel
- ⑥ BALLS: hardened steel
- ⑦ PISTON: hardened steel
- ⑧ MANUAL RELEASE PLATE: treated aluminium
- ⑨ MANUAL RELEASE PIN: hardened steel
- ⑩ PLUG: anodized aluminium
- ⑪ FALSE ROD: steel
- ⑫ TIE RODS: stainless steel
- ⑬ AIR SUPPLY FOR RELEASE
- ⑭ SILENCER: nickel-plated brass with stainless steel wire

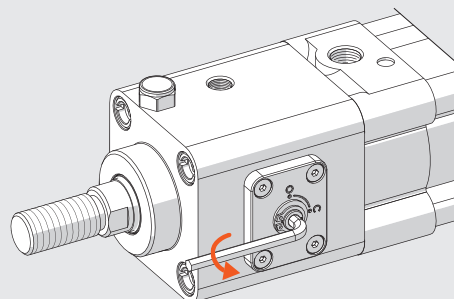


## MANUAL RELEASE

In the versions equipped with manual control it is possible to use a hex key to temporarily unlock the device.

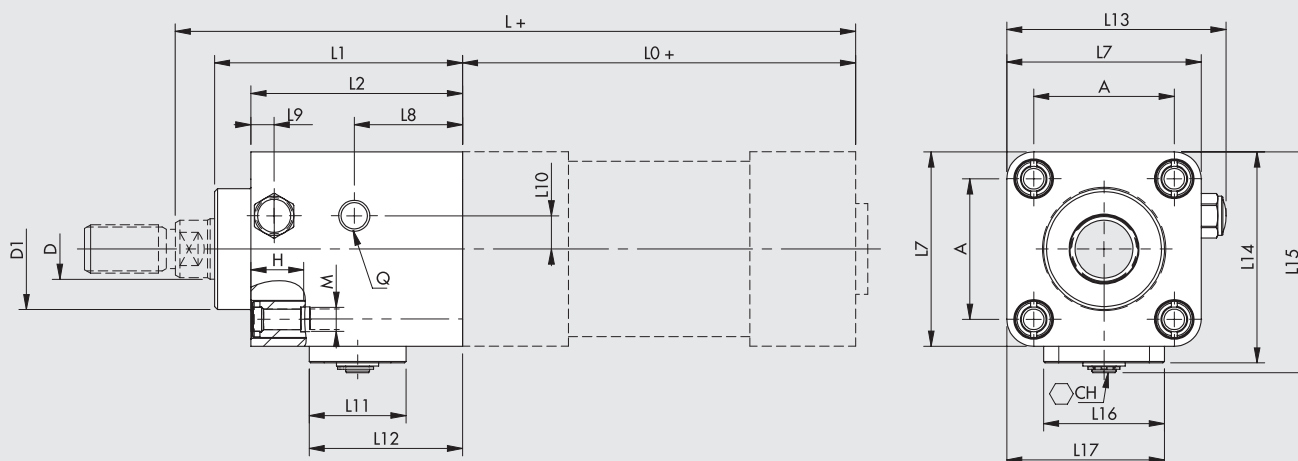
The hex key must be inserted in the hexagonal seat of the pin for the manual control (component 9 in the list of components) and used for the rotation of the same as shown in the figure.

Once released, the pin will automatically return to its initial position.



## DIMENSIONS

+ = ADD STROKE



### VERSION WITH MANUAL CONTROL

Code	Ø	L1	L2	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	D	D1	A	H	M	Q	CH	L0	L	Weight [g] ♦
W5010010102	32	58	48	46	25.2	9.5	8	30	41.2	50.7	51.5	54.3	28	37	12	30	32.5	14.5	M6	M5	2.5	94	162	295
W5010010103	40	65	55	54	26.9	6	8.5	32	43.9	58.7	59.5	63	33	43.5	16	35	38	14.5	M6	G1/8	4	105	180	444
W5010010104	50	82	70	64.3	35.8	7.7	11	32	50.7	72.5	69.8	73	40	52.2	20	40	46.5	17.5	M8	G1/8	4	106	200	826
W5010010105	63	82	70	76	34.6	8.7	16.3	32	50.5	84.2	81.5	84.7	40	58	20	45	56.5	17.5	M8	G1/8	4	121	215	1060
W5010010106	80	110	90	94	41.3	14.7	20.5	47	66.1	102.2	103	106.3	65	79.5	25	45	72	21.5	M10	G1/8	6	128	251	2272
W5010010107	100	115	100	111	49.8	18.2	25	47	73.6	119.2	120	123.3	65	88.5	25	55	89	21.5	M10	G1/8	6	138	266	3410
W5010010108	125	167	122	135	67.5	23	30	54	90.2	143.2	148	151.8	84	109.5	32	60	110	25.5	M12	G1/8	10	160	347	6328

♦ Weight of the rod lock without the false rod

### VERSION WITHOUT MANUAL CONTROL

Code	Ø	L1	L2	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	D	D1	A	H	M	Q	CH	L0	L	Weight [g] ♦
W5010020102	32	58	48	46	25.2	9.5	8	30	41.2	50.7	51.5	-	28	37	12	30	32.5	14.5	M6	M5	-	94	162	290
W5010020103	40	65	55	54	26.9	6	8.5	32	43.9	58.7	59.5	-	33	43.5	16	35	38	14.5	M6	G1/8	-	105	180	432
W5010020104	50	82	70	64.3	35.8	7.7	11	32	50.7	72.5	69.8	-	40	52.2	20	40	46.5	17.5	M8	G1/8	-	106	200	814
W5010020105	63	82	70	76	34.6	8.7	16.3	32	50.5	84.2	81.5	-	40	58	20	45	56.5	17.5	M8	G1/8	-	121	215	1044
W5010020106	80	110	90	94	41.3	14.7	20.5	47	66.1	102.2	103	-	65	79.5	25	45	72	21.5	M10	G1/8	-	128	251	2220
W5010020107	100	115	100	111	49.8	18.2	25	47	73.6	119.2	120	-	65	88.5	25	55	89	21.5	M10	G1/8	-	138	266	3350
W5010020108	125	167	122	135	67.5	23	30	54	90.2	143.2	148	-	84	109.5	32	60	110	25.5	M12	G1/8	-	160	347	6120

♦ Weight of the rod lock without the false rod

# ACCESSORIES FOR ISO 15552 CYLINDERS: MECHANICAL ROD LOCK SERIES RL

ACTUATORS

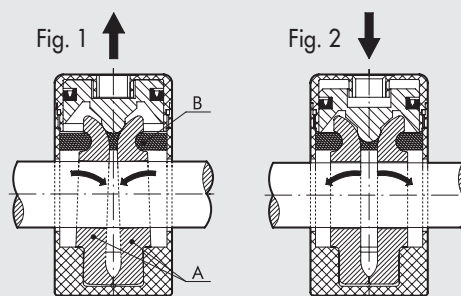
ACCESSORIES FOR ISO 15552 CYLINDERS

TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Pilot pressure	bar	4 to 8						
	MPa	0.4 to 0.8						
	psi	58 to 118						
Temperature range	°C	-10 to +80						
Operation		NC - Bidirectional						
Mechanics		Double pad with mechanical lock						
		Mechanical stick-slip						
Locking force	N	650	1100	1600	2500	4000	6300	8700
<b>MATERIAL</b>								
body		Aluminium						
pad		Brass						
spring		NBR						
piston		Synthetic material with added Teflon®						
gasket		NBR						
pilot port		M5 o 1/8"						



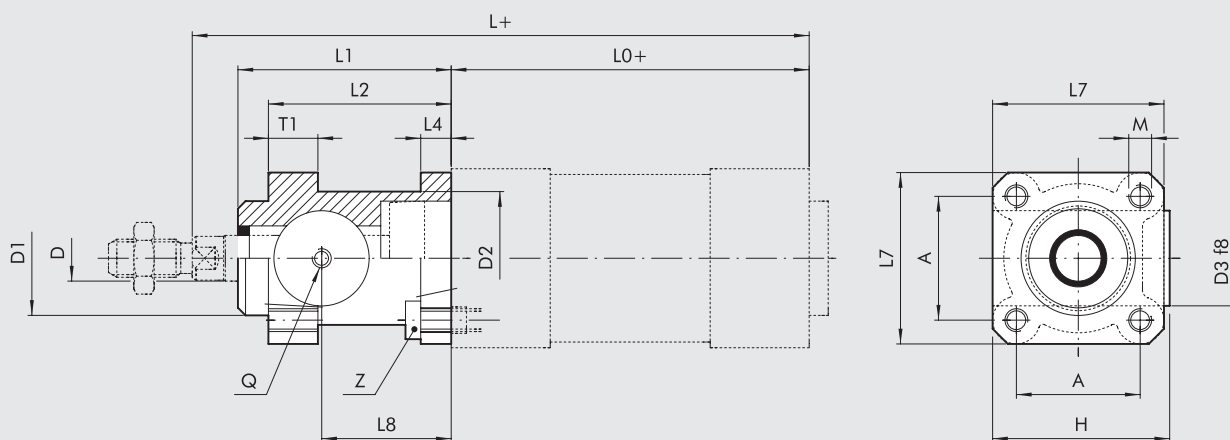
## OPERATING PRINCIPLE

The mechanical rod lock series RL 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 THE STROKE



Code	Ø	L <sub>1</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>7</sub>	L <sub>8</sub>	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	H	A	T <sub>1</sub>	M	Z	Q	L <sub>0</sub>	L	Weight [g]
W5010001102	32	58	48	8	45	34	12	30	35	25	46.5	32.5	13	M6	M6x20	M5	94	162	150
W5010001103	40	65	55	8	50	38	16	35	40	28	53	38	13	M6	M6x20	G1/8	105	180	200
W5010001104	50	82	70	15	60	48	20	40	50	35	64	46.5	16	M8	M8x30	G1/8	106	200	500
W5010001109	63	82	70	15	70	49.5	20	45	60	38	75	56.5	16	M8	M8x30	G1/8	121	215	700
W5010001106	80	110	90	18	90	61	25	45	80	48	95	72	20	M10	M10x35	G1/8	128	251	1700
W5010001107	100	115	100	18	105	68	25	55	100	58	110.5	89	20	M10	M10x35	G1/8	138	266	2700
W5010001108	125	167	122	22	140	86.5	32	60	130	65	150	110	30	M12	M12x40	G1/8	160	347	5600

# ACCESSORIES FOR ISO 15552 CYLINDERS: GUIDE UNITS

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 (pin and flange).

The guide units can be coupled to ISO 15552 cylinders (Ø 32 to 100).

The following versions are available:

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

H PROFILE (GDH)\*: for high loads

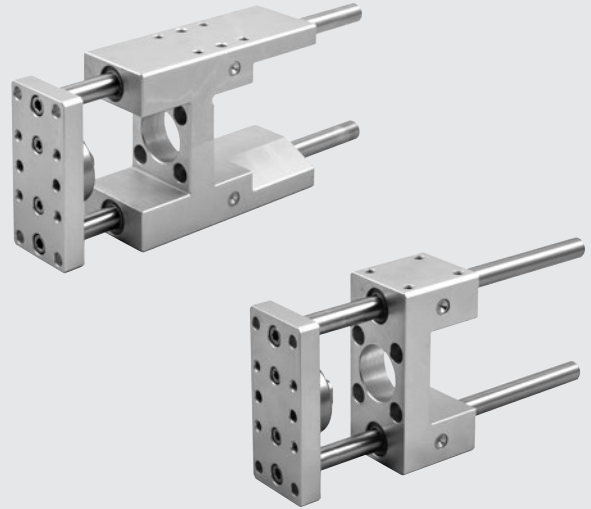
H PROFILE (GDM)\*\*: for high speeds

\* 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.

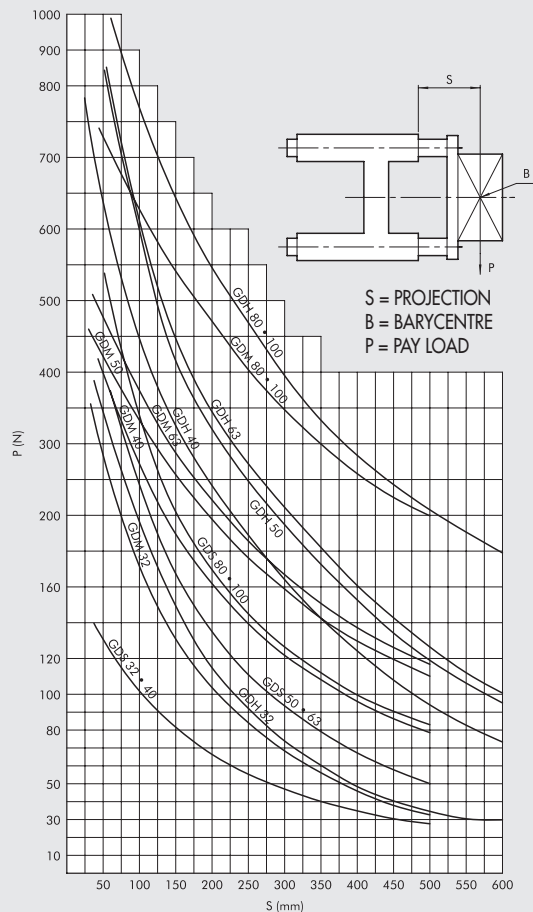


## COMPONENTS

<b>SERIES GDS-GDH</b>	Body:	aluminium alloy
	Guide bushing:	self-lubricating sintered bronze and wiper rings
	Piston rod:	grinded chromed steel

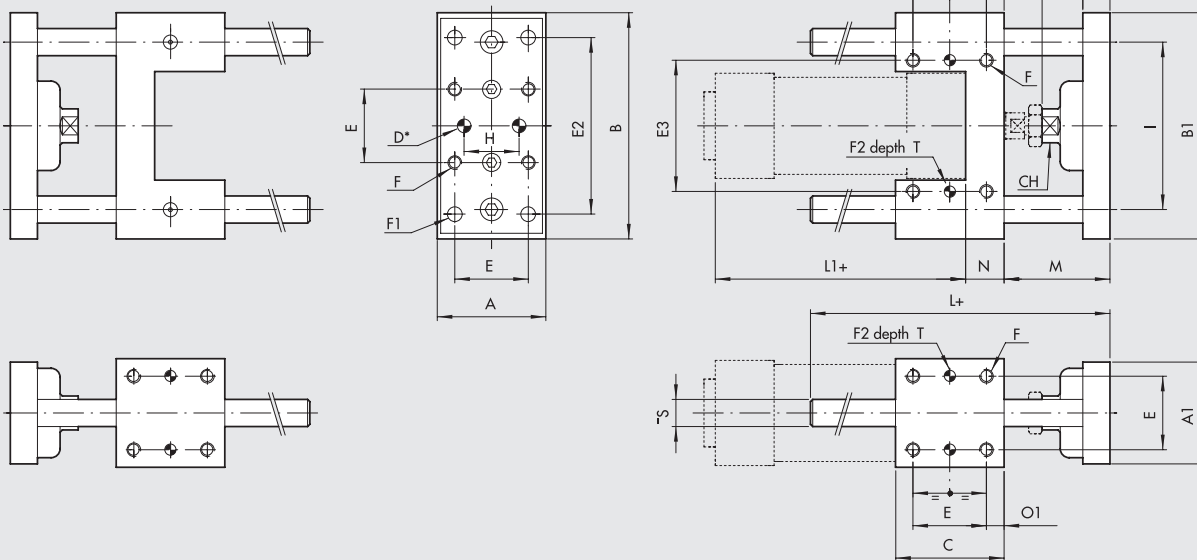
<b>SERIES GDM</b>	Body:	aluminium alloy
	Guide bushing:	ball linear bearings and scraper ring
	Piston rod:	hardened, chromed and grinded steel

## GRAPH OF GUIDE UNIT LOADS



**DIMENSIONS TYPE GDS**

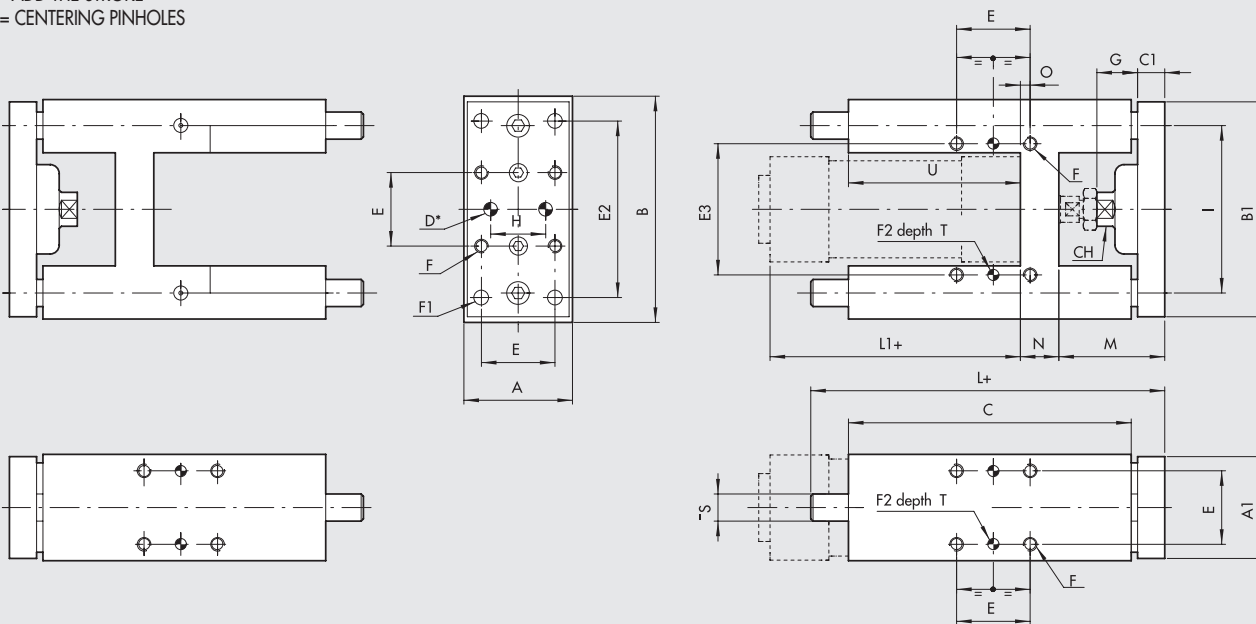
+ = ADD THE STROKE  
\* = CENTERING PINHOLES



Ø	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D <sup>H7</sup>	E	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	F	F <sub>1</sub>	F <sub>2</sub> <sup>H7</sup>	G	H	I	L	L <sub>1</sub>	M	N	O	O <sub>1</sub>	ØS	CH	T
32	48	45	100	95	48	12	6	32.5	32.5	78	58	M6	6.5	6	18	31	74	108	94	46	17	7.8	7.8	12	15	7
40	56	53	106	101	58	15	6	38	38	84	64	M6	6.5	6	21	36	80	120	105	52	21	10	10	12	15	7
50	66	63	125	120	59	15	6	46.5	46.5	100	80	M8	8.5	6	24	45	96	130	106	65	25	6.3	6.3	16	22	7
63	76	73	132	127	76	15	6	56.5	56.5	105	95	M8	8.5	6	24	45	104	145	121	65	25	9.8	9.8	16	22	7
80	98	95	165	160	90	16	6	72	50	130	130	M10	11	6	31	56	130	170	128	71	34	20	9	20	27	10
100	118	115	185	180	110	16	6	89	70	150	150	M10	11	6	31	56	152	190	138	71	39	20	10.5	20	27	10

**DIMENSIONS 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	D <sup>H7</sup>	E	E <sub>2</sub>	E <sub>3</sub>	F	F <sub>1</sub>	F <sub>2</sub> <sup>H7</sup>	G	H	I	L	L <sub>1</sub>	M	N	O	ØS	U	T
32	49	45	97	90	125	12	13	6	32.5	78	61	M6	6.5	6	18	31	74	177	94	48	17	4.3	12	76	7
40	58	54	115	110	139	15	15	6	38	84	69	M6	6.5	6	21	36	87	192	105	53	21	11	16	81	7
50	69	63	137	130	148	15	22	6	46.5	100	85	M8	8.5	6	24	45	104	205	106	63	26	18.5	20	78	7
63	85	79	152	145	182	15	22	6	56.5	105	100	M8	8.5	6	24	45	119	237	121	62	26	15.3	20	111	7
80	105	99	189	180	215	20	27	6	72	130	130	M10	11	6	31	56	148	280	128	76	34	21	25	128	10
100	129	120	213	200	220	20	27	6	89	150	150	M10	11	6	31	56	172	280	138	76	39	24.5	25	128	10

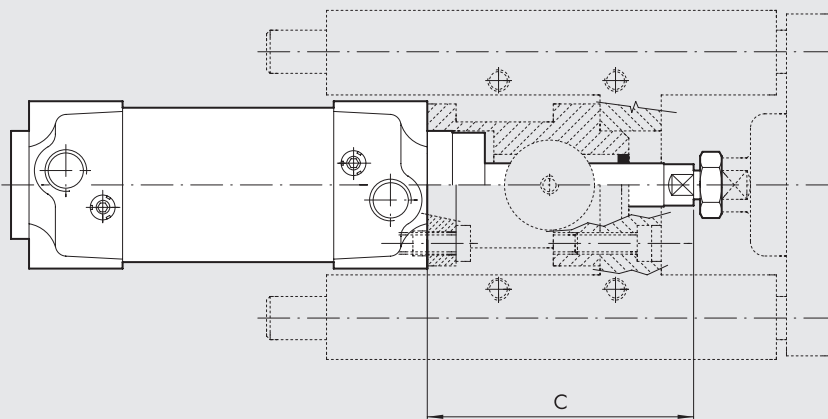
**ORDER CODE GUIDE UNIT**

Version	Code	Bore	Type
Sliding on bronze bushings (GDS)	W0700321...	32	UNIT MW DS 032...
	W0700401...	40	UNIT MW DS 040...
	W0700501...	50	UNIT MW DS 050...
	W0700631...	63	UNIT MW DS 063...
	W0700801...	80	UNIT MW DS 080...
	W0701001...	100	UNIT MW DS 100...
Sliding on bronze bushings (GDH)	W0700322...*	32	UNIT MW DH 032...
	W0700402...*	40	UNIT MW DH 040...
	W0700502...	50	UNIT MW DH 050...
	W0700632...	63	UNIT MW DH 063...
	W0700802...	80	UNIT MW DH 080...
	W0701002...	100	UNIT MW DH 100...
* Also available in V-Lock version (see chapter A3).			
Sliding on ball bearing (GDM)	W0700323...*	32	UNIT MW DM 032...
	W0700403...*	40	UNIT MW DM 040...
	W0700503...	50	UNIT MW DM 050...
	W0700633...	63	UNIT MW DM 063...
	W0700803...	80	UNIT MW DM 080...
	W0701003...	100	UNIT MW DM 100...
* Also available in V-Lock version (see chapter A3).			

Note: To complete the type and code, add the 3-digit stroke (e.g. 50=050)


**DIMENSIONS ROD LOCK + GUIDE UNIT COD. 137**

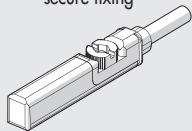
Ø	C
32	74
40	85
50	107
63	107
80	136
100	143




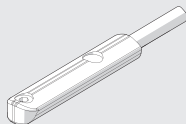
# ACCESSORIES FOR ISO 15552 CYLINDERS: MAGNETIC SENSORS AND POSITION SENSOR

## RETRACTABLE SENSOR

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



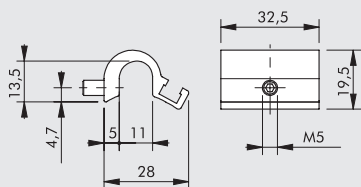
**B** SENSOR, OVAL TYPE   
Traditional



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

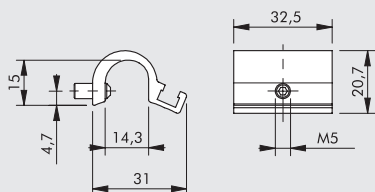
## D SENSOR SUPPORT BRACKETS FOR SENSORS SQUARE TYPE AND OVAL TYPE

Ø 32 to 40



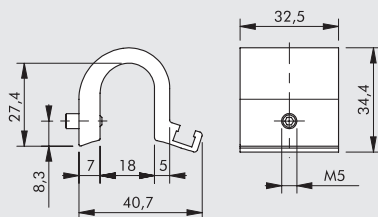
**Code** W0950001711  
**Description** Bracket D.32-40

Ø 50 to 63



**Code** W0950001712  
**Description** Bracket D.50-63

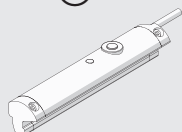
Ø 80 to 125



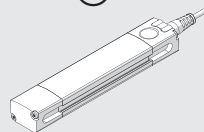
**Code** W0950001713  
**Description** Bracket D.80-100-125

## POSITION SENSOR

**G** LTS 



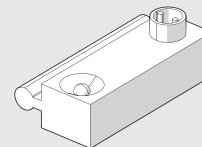
**H** LTL 



**Model** For ISO 15552 cylinders  
**LTS** type A - series 3  
**LTL** type A

For technical data and usage strokes see **chapter A6**.

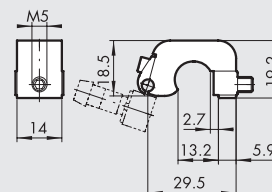
## C SENSOR SERIES DSM



Can be used on ISO 15552 cylinders in the STD series and series 3.  
For codes and technical data, see **chapter A6**.

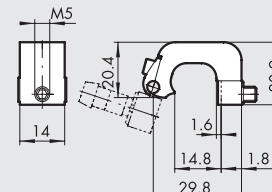
## E SENSOR SUPPORT BRACKETS FOR SENSORS DSM

Ø 32 to 40



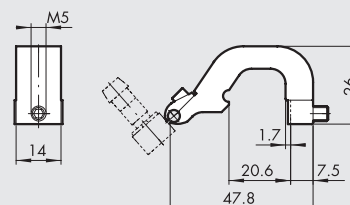
**Code** W0950000711  
**Description** Bracket D.32-40 DST 80

Ø 50 to 63



**Code** W0950000712  
**Description** Bracket Bracket D.50-63 DST 81

Ø 80 to 125

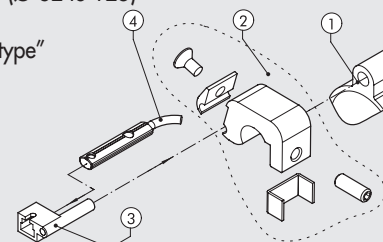


**Code** W0950000713  
**Description** Bracket D.80-100-125 DST 82

## F ADAPTER FOR OVAL TYPE RETRACTABLE SENSORS

### ASSEMBLY DIAGRAM

- ① ISO 15552 cylinder with serie STD or serie 3 barrel
- ② Sensor bracket mod. DST (Ø 32 to 125)
- ③ Adaptor
- ④ Retractable sensor "oval type"



**Code** W0950001001  
**Description** Adaptor DSS005 for DST/ST brackets