

ISO 15552 CYLINDER

Cylinders made to ISO 15552 available in various versions and with a wide range of accessories:

- Configuration with or without magnet
- Single-or double acting – single-or through-rod
- Wide choice of NBR, POLYURETHANE and FKM/FPM gaskets (for high temperatures), for LOW TEMPERATURE
- Piston rod scrapers for use in hostile environments available
- Special versions on request
- Fixing accessories, guide units and mechanical rod lock.

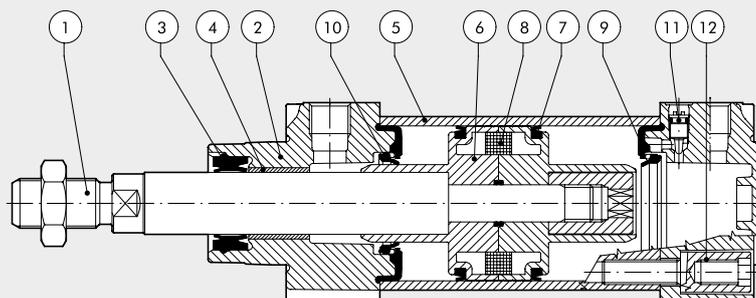
They are available in three versions, series STD, type A, series 3, which differ according to the shape of the barrel and, consequently, the type of sensors and accessories that can be mounted.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Max operating pressure	bar					10		
	MPa					1		
	psi					145		
Temperature range	POLYURETHANE °C					-25 to +80		
	NBR °C					-10 to +80		
	FKM/FPM °C					-10 to +150 (non-magnetic cylinders)		
	Low Temperature °C					-40 to +80		
	Other piston rod gasket °C					See next page		
Design		Heads with Tap Tite screws						
Fluid		Unlubricated air. Lubrication, if used, must be continuous						
Standard stroke †	single-acting mm	1 to 250	1 to 250	1 to 250	1 to 250	-	-	-
	double-acting with spring mm	1 to 250	1 to 250	1 to 250	1 to 250	-	-	-
	double-acting mm	1 to 2800	1 to 2800	1 to 2800	1 to 2800	1 to 2800	1 to 2600	1 to 2600
Versions		Double-acting cushioned, Double-acting cushioned with spring, extended or retracted piston rod, Single-acting extended or retracted rod cushioned, Through-rod cushioned, Long cushioning, High-temperature, Protective bellows, Rod lock, Oil seal, Through-rod oil seal, Low friction, No stick-slip.						
Sensor magnet		All versions come complete with magnet. Supplied without magnet on request.						
Inrush pressure	bar	0.4	0.4	strokes < 1500 mm: 0.3		strokes < 1500 mm: 0.2		
	bar			strokes > 1500 mm: 0.4		strokes > 1500 mm: 0.4		
	for type-R gasket bar	1.5	1	1	0.8	0.5	0.5	0.5
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		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.						
		† Maximum recommended strokes. Higher values can create operating problems						

COMPONENTS

- PISTON ROD: C45 steel or stainless steel, thick chromed
- HEAD: die cast aluminium
- PISTON ROD GASKET: polyurethane, NBR, FKM/FPM, FKM/FPM with metal scraper
- GUIDE BUSHING: steel strip with bronze and PTFE insert
- BARREL: drawn anodized calibrated aluminium
- HALF-PISTON: self-lubricating technopolymer with built-in cushioning olives (aluminium with PTFE pad for diameters 80-100-125)
- PISTON GASKET: polyurethane, NBR or FKM/FPM
- MAGNET: plastoferrite
- BUFFER + Static O-rings: NBR or FKM/FPM
- CUSHIONING GASKET: polyurethane, NBR or FKM/FPM
- CUSHIONING NEEDLE: OT 58 with needle out movement safety system even when fully open
- SCREWS: Tap Tite for assembly



OVERVIEW OF SEALS AND SCRAPERS

	Code identifier	Key feature	Applications	Gasket material	Temperature range	Notes
①	N	General use.	Standard applications, also with humidity.	NBR	-10 to +80 °C	
②	P	Long life.	Applications with long strokes or high number of cycles.	Polyurethane	-25 ÷ +80 °C	
③	V	High temperatures - chemicals.	Industrial applications with chemical agents and/or at high temperatures.	FPM/FKM	-10 to +150 °C (non magnetic cylinders)	
④	B	Low temperatures.	Applications in presence of low temperature such as in cold environments.	NBR	-40 to +80 °C	
⑦	C	Dirt and dust. Reference name: COMBI	Applications in dirty and dusty environments.	Scraper made of technopolymer, the other seals are made of NBR.	-10 to +80 °C	Maximum recommended speed: 1 m/s
⑧	R	Dirt and low temperatures. Reference name: HARD PU	Medium-Heavy duty applications, with presence of dirt and low temperatures, such as in agriculture or in transport sector.	Piston rod seal made of hard polyurethane, the other seals are made of polyurethane.	-25 to +80 °C	Low temperature versions for a minimum temperature of -35°C are available on request.
⑨	M	Dirt and high temperature. Reference name: METAL	Heavy duty applications, in presence of hard dirt and high temperatures, like in cement plants, foundries or in transport sector.	Metal scraper, the other seals are made of FKM/FPM.	-10 to +150 °C	Not available in Ø 32. The scraper is housed in a special head.

SEALS USED IN OTHER FAMILIES OF ISO 15552 CYLINDERS

①	 123... only for series 3	Ultra low friction.	Textile industry, dandy devices, pneumatic springs.	NBR	-10 to +80 °C	
⑩	BL and ....WL	HCR (High Corrosion Resistance)	Food and Beverage sector, such as dairy industry.	Anti-stagnation scraper made of special polyurethane, the other seals are made of NBR.	-10 to +60 °C	
②	 W184... W185...	INOX	Industrial applications with aggressive chemical agents.	Polyurethane	-20 to +80 °C	
③	 W184V... W185V...	Stainless steel high temperature.	Industrial applications, in presence of chemicals and high temperatures requested, such as in chemical plants.	FKM/FPM	-10 to +150 °C	

SEALS AVAILABLE ON REQUEST

⑥	 Only on request	Self lubricated.	Applications where the lubricants in the cylinder could be removed, such as in car washing plants.	Self lubricated tecnopolymer.	-30 to +80 °C	
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Anti-contamination Effect Indicators

An index of protection against the dirt that settles and adheres to the piston rod is provided for each version, on a 1 to 100 scale.



OVERVIEW DEGREE OF RESISTANCE TO CORROSION OF ISO 15552 CYLINDERS

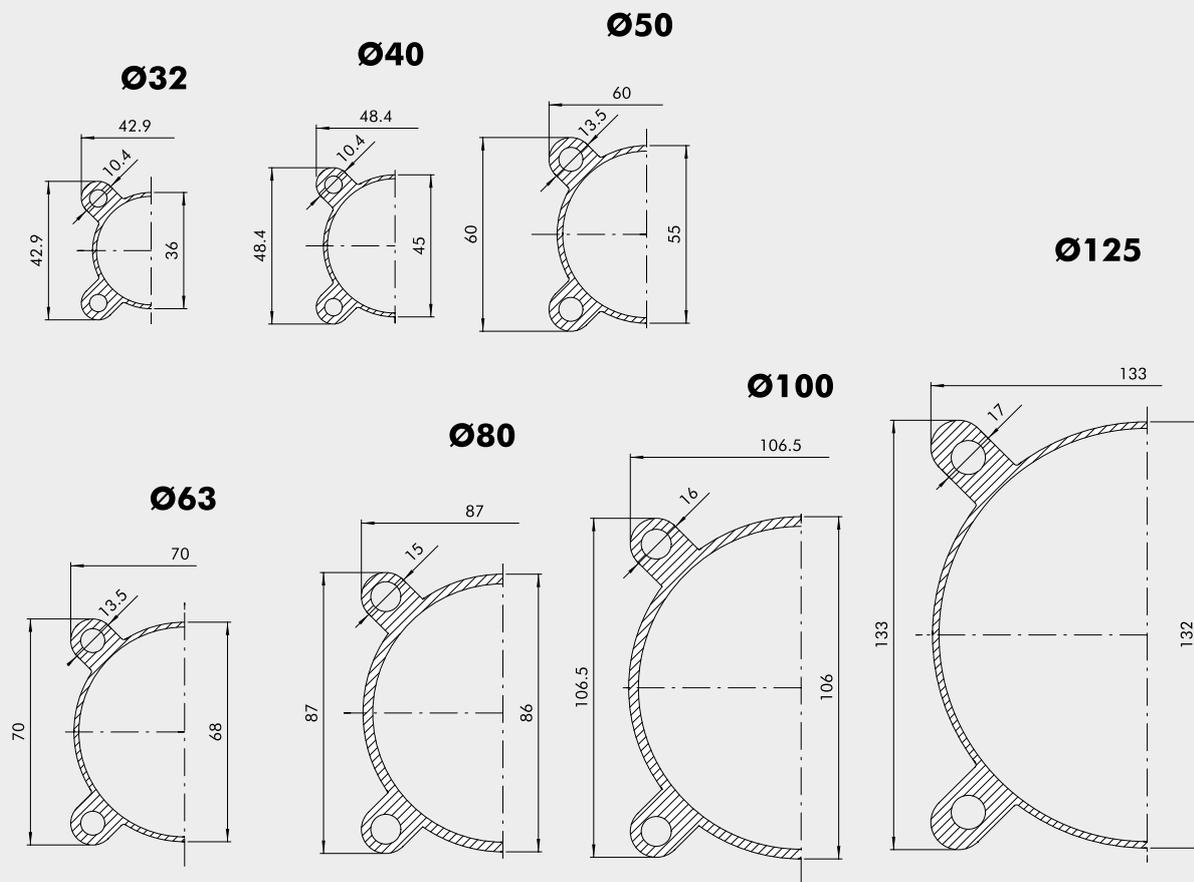
Degree	Family	
MW S	STANDARD	 ISO 15552 cylinder (STD, type A, series 3)
MW M	MEDIUM	 ISO 15552 cylinder - series MCR
MW H	HIGH	 ISO 15552 cylinder - series HCR
MW X	EXTRA	 Stainless steel ISO 15552 cylinder

ISO 15552 CYLINDER SERIES STD

ISO 15552 cylinders, featuring a smooth barrel with no longitudinal slots. This means it is easier to clean the cylinder and there are fewer points where dirt can collect. Specific brackets are required for mounting magnetic sensors.



BARREL CROSS SECTION



KEY TO CODES

CYL	1 2 1	0	3 2	0 0 5 0	C	P	E
	TYPE	VERSION	BORE	STROKE	MATERIAL	GASKETS	
	120 Double-acting, cushioned, non-magnetic	0 Diameter	32	For the maximum suppliable strokes, look at the technical data	A C45 chromed piston rod, aluminium piston: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with $\varnothing 80$ mm and over	N NBR gaskets	+ ▽ E Single-acting extended rod or double-acting with spring, retracted piston rod + ✕ R Double-acting with spring, retracted piston rod ★ 1 + Secure Lock with manual control ★ 2 + Secure Lock without manual control
	121 Double-acting, cushioned	S Non-magnetic	40		C C45 chromed piston rod, technopolymer piston: standard for cylinders of $\varnothing 32$ to 63 mm with <1000 mm strokes	P Polyurethane gaskets	
●	122 Through-rod	▲ G No stick-slip	50		Z Stainless steel piston rod and nut aluminium piston	V FKM/FPM gaskets	
	124 Double-acting, non-cushioned		63		X Stainless steel piston rod and nut technopolymer piston	● B Low temperature	
	125 Opposed		80			C "Combi" piston rod gasket	
+	126 Single-acting		80			▶ R "Hard PU" piston rod gasket	
	127 Tandem		100			● □ M "Metal" piston rod gasket	
▷	134 Version suitable for rod lock		125				
* ▷	136 Version with rod lock						
* ◆ ▷	137 Version suitable for rod lock + guide unit						
* ▷ ◆	154 Version suitable for bellows						
* ▷ ◆	156 Version with mounted bellows						

- In the code of cylinder with letter in fourth position $\varnothing 100$ becomes A1; $\varnothing 125$ becomes A2
- Only available for versions with aluminium piston (A or Z)
- +

- ▷ Not available for single-acting and double-acting with spring versions
- ▽ Letter to be added only to the single acting extended piston rod version or double-acting with spring, extended piston rod
- ✕ Letter to be added only for the double-acting version with spring, retracted piston rod
- ★ Extra digit to be added only for types 136 with the "Secure Lock" device
- ◆ Maximum suppliable strokes: $\varnothing 32$ to 63: from 1 to 720 mm; $\varnothing 80$ to 125: from 1 to 840 mm
- ▶ The 126 (single-action) type and the (No-stick-slip) version G are not available

KEY TO CODES VERSION LOW-FRICTION

CYL	1 2 3	A	3 2	0 0 5 0	C	P
		TYPE	BORE	STROKE	MATERIAL	GASKETS
		A Low friction, type A	32	$\varnothing 32$ to 80	A C45 chromed piston rod, aluminium piston: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with $\varnothing 80$ mm and over	N NBR gaskets
		B Low friction, type B	40	stroke 1 to 2800 mm	C C45 chromed piston rod, technopolymer piston: standard for cylinders of $\varnothing 32$ to 63 mm with <1000 mm strokes	P Polyurethane gaskets
		C Low friction, type C	50	$\varnothing 100$ to 125	Z Stainless steel piston rod and nut aluminium piston	V FKM/FPM gaskets
		D Low friction, type D	63	stroke 1 to 2600 mm	X Stainless steel piston rod and nut technopolymer piston	
		E Low friction, type E	80			
		F Low friction, type F	A1 = $\varnothing 100$ A2 = $\varnothing 125$			

KEY TO CODES VERSION LONG-CUSHIONING

CYL	1 3 1	A	3 2	0 0 5 0	A	P
		TYPE	BORE	STROKE	MATERIAL	GASKETS
		A 200 mm front/rear cushioning cone – 200 mm ext.	32	1 to 2600 mm	A C45 chromed rod, aluminium piston rod for all sizes	N NBR gaskets
		B 150 mm front/rear cushioning cone – 150 mm ext.	40		Z Stainless steel piston rod and nut aluminium piston	P Polyurethane gaskets
		C 100 mm front/rear cushioning cone – 100 mm ext.	50			* V FKM/FPM gaskets
		D 150 mm front/rear cushioning cone – 200 mm ext.	63			
		E 100 mm front/rear cushioning cone – 200 mm ext.				
		F 50 mm front/rear cushioning cone – 100 mm ext.				
		G 100 mm front/rear cushioning cone – 150 mm ext.				
		H 200 mm front cushioning cone – 200 mm ext.				
		I 150 mm front cushioning cone – 150 mm ext.				
		L 100 mm front cushioning cone – 100 mm ext.				
		M 150 mm front cushioning cone – 200 mm ext.				
		N 100 mm front cushioning cone – 150 mm ext.				
		O 50 mm front cushioning cone – 100 mm ext.				
		Q 200 mm rear cushioning cone – 200 mm ext.				
		R 150 mm rear cushioning cone – 150 mm ext.				
		S 100 mm rear cushioning cone – 100 mm ext.				
		T 150 mm rear cushioning cone – 200 mm ext.				
		U 100 mm rear cushioning cone – 200 mm ext.				
		V 50 mm rear cushioning cone – 100 mm ext.				

* Version valid only for types: Q, R, S, T, U and V.

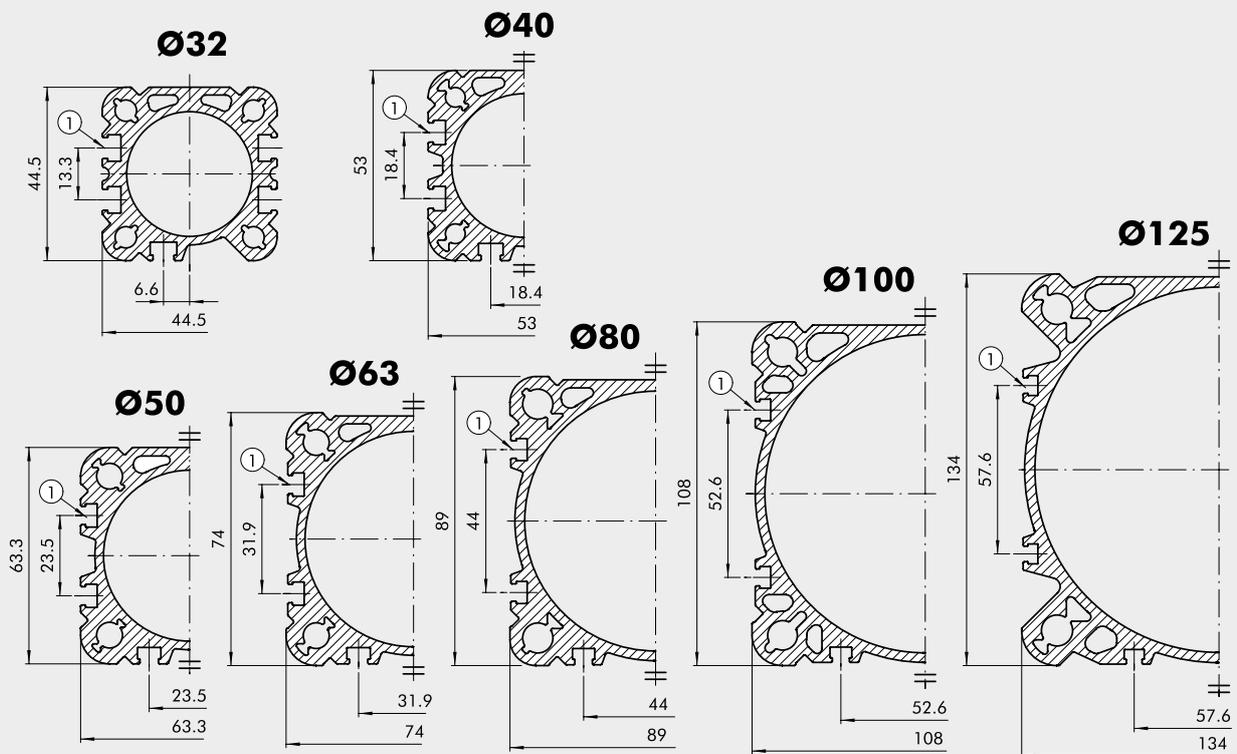
ISO 15552 CYLINDER TYPE A

ISO 15552 cylinders, featuring a barrel with longitudinal slots on three sides for inserting and securing retractable sensors. The same slots can also be used for valves and other mechanical parts.



BARREL CROSS SECTION

① SLOTS FOR RETRACTABLE SENSOR



KEY TO CODES

CYL	1 2 1 TYPE	A VERSION	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	E
	121 Double-acting, cushioned	A Standard	32	For the maximum	A C45 chromed piston rod, aluminium piston:	N NBR gaskets	+ ▼ E Single-acting extended rod or double-acting with spring, extended piston rod
●	122 Through-rod	▲ B No stick-slip	40	suppliable strokes,	standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	P Polyurethane gaskets	+ ✖ R Double-acting with spring, retracted piston rod
	124 Double-acting, non-cushioned	C Non-magnetic	50	look at the technical data	C C45 chromed piston rod, technopolymer piston:	V FKM/FPM gaskets	★ 1 + Secure Lock with manual control
	125 Opposed		63		standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes	● B Low temperature "Combi" piston rod gasket	★ 2 + Secure Lock without manual control
+	126 Single-acting		80		Z Stainless steel piston rod and nut aluminium piston	▶ R "Hard PU" piston rod gasket	
▷	127 Tandem		A1 = Ø 100		X Stainless steel piston rod and nut technopolymer piston	● ◻ M "Metal" piston rod gasket	
* ▷	134 Version suitable for rod lock		A2 = Ø 125				
* ▷	136 Version with rod lock						
* ◻ ▷	137 Version suitable for rod lock + guide unit						
* ▷ ◻	154 Version suitable for bellow						
* ▷ ◻	156 Version with mounted bellow						

- Only available for versions with aluminium piston (A or Z)
- +
- Available until Ø 63 and only the versions with piston in aluminium (A or Z). The versions without the final "E" are to be considered with retracted piston rod.
- ◻ Not available in Ø 32
- ▼ Letter to be added only to the single acting extended piston rod version or double-acting with spring, extended piston rod
- ✖ Letter to be added only for the double-acting version with spring, retracted piston rod
- ★ Extra digit to be added only for types 136 with the "Secure Lock" device
- ◊ Maximum suppliable strokes: Ø 32 to 63: from 1 to 720 mm; Ø 80 to 125: from 1 to 840 mm
- ▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.
- ◆ Available up to Ø 100
- * Not available for gaskets V or B
- ▷ Not available for single-acting and double-acting with spring versions
- ▶ The 126 (single-action) type and the (No-stick-slip) version B are not available

KEY TO CODES VERSION LOW-FRICTION

CYL	1 2 9	A TYPE	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS
		A Low friction, type A	32	Ø 32 to 80	A C45 chromed piston rod, aluminium piston:	N NBR gaskets
		B Low friction, type B	40	stroke 1 to 2800 mm	standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	P Polyurethane gaskets
		C Low friction, type C	50	Ø 100 to 125	C C45 chromed piston rod, technopolymer piston:	V FKM/FPM gaskets
		D Low friction, type D	63	stroke 1 to 2600 mm	standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes	
		E Low friction, type E	80		Z Stainless steel piston rod and nut aluminium piston	
		F Low friction, type F	A1 = Ø 100		X Stainless steel piston rod and nut technopolymer piston	
			A2 = Ø 125			

KEY TO CODES VERSION LONG-CUSHIONING

CYL	1 3 0	A TYPE	3 2 BORE	0 0 5 0 STROKE	A MATERIAL	P GASKETS
		A 200 mm front/rear cushioning cone – 200 mm ext.	32	1 to 2600 mm	A C45 chromed piston rod, aluminium piston	N NBR gaskets
		B 150 mm front/rear cushioning cone – 150 mm ext.	40		for all sizes	P Polyurethane gaskets
		C 100 mm front/rear cushioning cone – 100 mm ext.	50		Z Stainless steel piston rod and nut aluminium piston	* V FKM/FPM gaskets
		D 150 mm front/rear cushioning cone – 200 mm ext.	63			
		E 100 mm front/rear cushioning cone – 200 mm ext.				
		F 50 mm front/rear cushioning cone – 100 mm ext.				
		G 100 mm front/rear cushioning cone – 150 mm ext.				
		H 200 mm front cushioning cone – 200 mm ext.				
		I 150 mm front cushioning cone – 150 mm ext.				
		L 100 mm front cushioning cone – 100 mm ext.				
		M 150 mm front cushioning cone – 200 mm ext.				
		N 100 mm front cushioning cone – 150 mm ext.				
		O 50 mm front cushioning cone – 100 mm ext.				
		Q 200 mm rear cushioning cone – 200 mm ext.				
		R 150 mm rear cushioning cone – 150 mm ext.				
		S 100 mm rear cushioning cone – 100 mm ext.				
		T 150 mm rear cushioning cone – 200 mm ext.				
		U 100 mm rear cushioning cone – 200 mm ext.				
		V 50 mm rear cushioning cone – 100 mm ext.				

* Version valid only for types: Q, R, S, T, U and V.

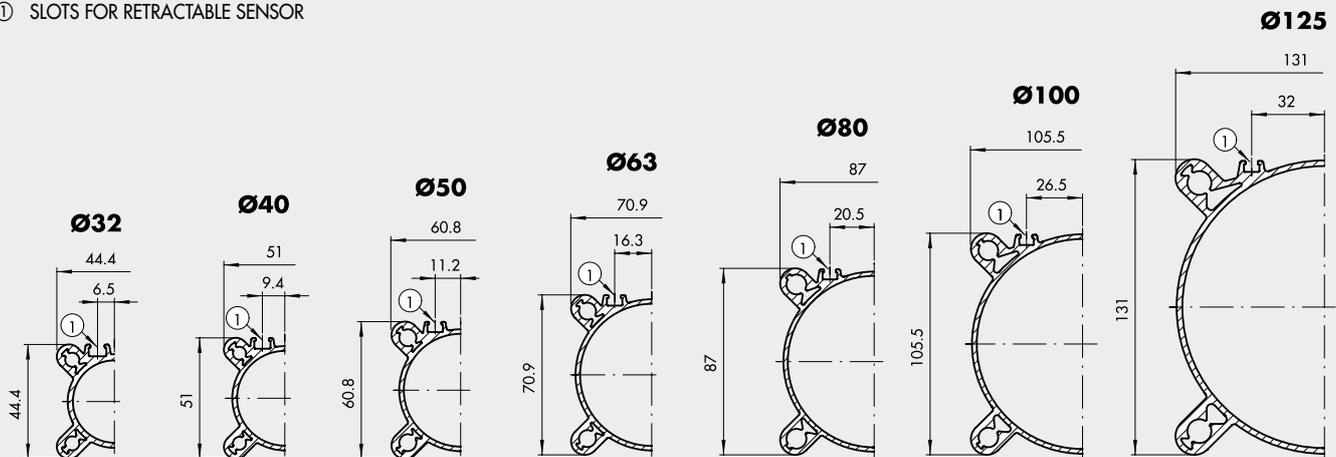
ISO 15552 CYLINDER SERIES 3

ISO 15552 cylinders, featuring specially-shaped barrels designed to reduce weight to a minimum.
Two T-slots on the same side as the threaded fittings can take retractable sensors.
The other three sides of the barrel are smooth, with no slots, and hence easy to clean.



BARREL CROSS SECTION

① SLOTS FOR RETRACTABLE SENSOR



KEY TO CODES

CYL	1 2 1 TYPE	3 VERSION	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	E
●	121 Double-acting, cushioned	3 Series 3	32	For the maximum	A C45 chromed piston rod, aluminium piston: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with ≥ 80 mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets	+ ▼ E Single-acting extended rod or double-acting with spring, extended piston rod
+	122 Through-rod	4 Series 3	40	suppliable	C C45 chromed piston rod, technopolymer piston: standard for cylinders of ≥ 80 mm and over	● B Low temperature C "Combi" piston rod gasket	+ ✕ R Double-acting with spring, retracted piston rod
▷	124 Double-acting, non-cushioned	5 Series 3	50	look at the technical data	Z Stainless steel piston rod and nut aluminium piston	▶ R "Hard PU" piston rod gasket	★ 1 + Secure Lock with manual control
▷	125 Opposed		63		X Stainless steel piston rod and nut technopolymer piston	● □ M "Metal" piston rod gasket	★ 2 + Secure Lock without manual control
+	126 Single-acting		80				
▷	127 Tandem		A1 = $\varnothing 100$ A2 = $\varnothing 125$				
▷	134 Version suitable for rod lock						
■ ▷	136 Version with rod lock						
■ * ▷	137 Version suitable for rod lock + guide unit						
■ ▷ ◇	154 Version suitable for bellow						
■ ▷ ◇	156 Version with mounted bellow						

- Only available for versions with aluminium piston (A or Z)
- + Available until $\varnothing 63$ and only the versions with piston in aluminium (A or Z). The versions without the final "E" are to be considered with retracted piston rod.
- ▼ Letter to be added only to the single acting extended piston rod version or double-acting with spring, extended piston rod
- ✕ Letter to be added only for the double-acting version with spring, retracted piston rod
- ★ Extra digit to be added only for types 136 with the "Secure Lock" device
- ◇ Maximum suppliable strokes: $\varnothing 32$ to 63 : from 1 to 720 mm; $\varnothing 80$ to 125 : from 1 to 840 mm
- ◆ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.
- * Available until $\varnothing 100$
- ▷ Not available for single-acting and double-acting with spring versions
- ▶ Not available for gasket V or B
- Not available in $\varnothing 32$
- ▶ The 126 (single-action) type and the (No-stick-slip) version 4 are not available

ISO 15552 LOW-FRICTION CYLINDER CODE 123 FOR SERIES STD CODE 129 FOR TYPE A



ACTUATORS

ISO 15552 LOW-FRICTIONS CYLINDER

The low-friction cylinder is typically used as a dandy or tensioning cylinder since it is a single-acting cylinder without a return spring. The configurations are shown below:

- 1) The best type is A as it involves less friction.
- 2) Type B should be used when the cylinder is working under normal conditions outside the pneumatic cushioning area. Cushioning is only for emergency use. It acts as a shock absorber in the case of malfunction.
- 3) Type C differs from type A due to the presence of a piston rod gasket that prevents dirt getting in when operating in dirty environments.
- 4) Type D differs from type B due to the presence of a piston rod gasket that prevents dirt getting in when operating in dirty environments.
- 5) Type E should be used when the pressurized chamber is the front one.
- 6) For type F, see point 2.

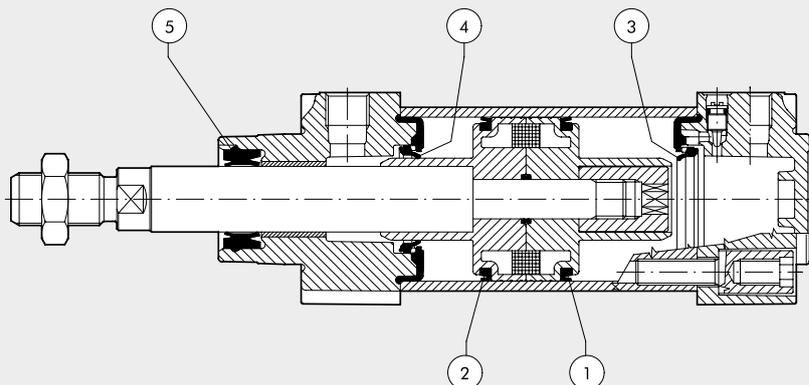


NB. THE CYLINDER IS ALWAYS SINGLE-ACTING WITHOUT A RETURN SPRING.

	TYPE	GASKETS
Rear chamber pressure	A	1
Rear chamber pressure and cushioning in case of impact	B	1+3
Rear chamber pressure and piston rod gasket	C	1+5
Rear chamber pressure, cushioning in case of impact and piston rod gasket	D	1+3+5
Front chamber pressure	E	2+5
Front chamber pressure and cushioning in case of impact	F	2+5+4

COMPONENTS

- ① Rear chamber piston gasket made of polyurethane, NBR or FKM/FPM
- ② Front chamber piston gasket made of polyurethane, NBR or FKM/FPM
- ③ Rear chamber cushioning gasket made of polyurethane, NBR or FKM/FPM
- ④ Front chamber cushioning gasket made of polyurethane, NBR or FKM/FPM
- ⑤ Piston rod gasket made of polyurethane, NBR or FKM/FPM



ISO 15552 ULTRA-LOW FRICTIONS CYLINDER

A typical ultra-low friction cylinder is generally used as an oscillating or tensioning cylinder. It is single acting, in the sense that compressed air is normally fed into one of the two chambers only. An external force acts on the other side. Metal Work's ultra-low friction cylinder is designed as a double-acting one, which means the compressed air can be fed into the rear or either the front chamber. They are built to comply with ISO 15552 and are available with or without a magnet.

Supplied with a series 3 barrel.

A through-rod version is not available.

These cylinders are always non-cushioned.

The gaskets are made of NBR.

A full range of accessories is available.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Max operating pressure	bar				10			
	MPa				1			
	psi				145			
Temperature range	NBR				-10 to +80			
	°C							
Design					Heads with Tap Tite screws			
Fluid					Unlubricated air			
Standard strokes	mm				1 to 1200			
Versions					Double-acting magnetic, Double-acting non-magnetic (always "No stick-slip" cylinder)			
Sensor magnet					Available magnetic and non-magnetic versions.			
Inrush pressure	bar	0.08	0.06	0.05	0.04	0.03	0.03	0.03
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		There may be leakage between the two chambers in the presence of low pressures (up to 1 bar).						

COMPONENTS

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: die cast aluminium
- ③ PISTON ROD GASKET: NBR
- ④ GUIDE BUSHING: steel strip with bronze insert
- ⑤ BARREL: drawn anodized calibrated aluminium
- ⑥ PISTON GASKET: NBR
- ⑦ HALF-PISTON: aluminium alloy
- ⑧ MAGNET: plastoferrite
- ⑨ GUIDE RING: special technopolymer
- ⑩ BUFFER + Static O-rings: NBR
- ⑪ CUSHIONING NEEDLE: OT 58 with needle out movement safety system even when fully open
- ⑫ SCREWS: Tap Tite for assembly

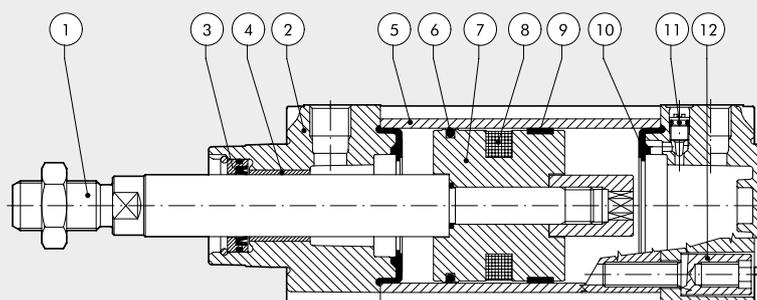
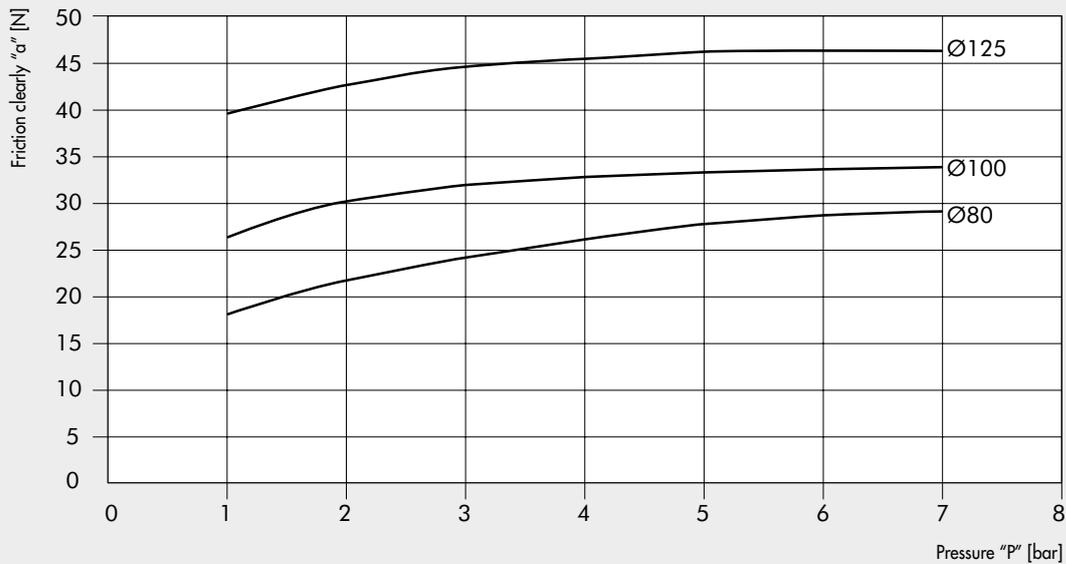
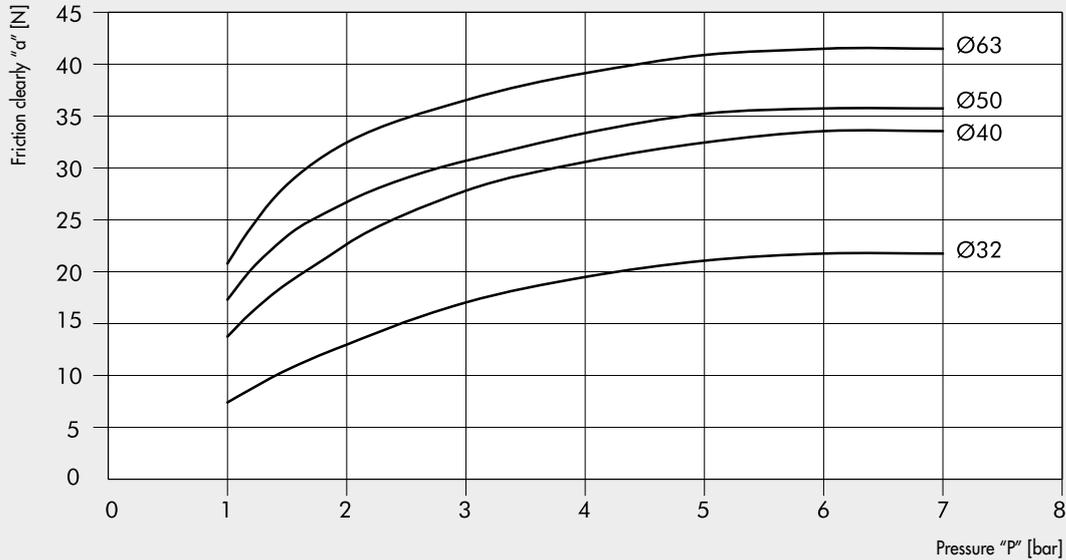


DIAGRAM OF THE CLEAN FRICTIONS



The clean friction values "α" in N have been obtained by inserting in the back chamber the pressure "P" in bars, and simultaneously by detecting the necessary force "F" in N to make the rod re-enter, applying the following formula:

$$\alpha = F - [(P \times S) \times 9.81]$$

where "S" is the thrust section in cm²

KEY TO CODES

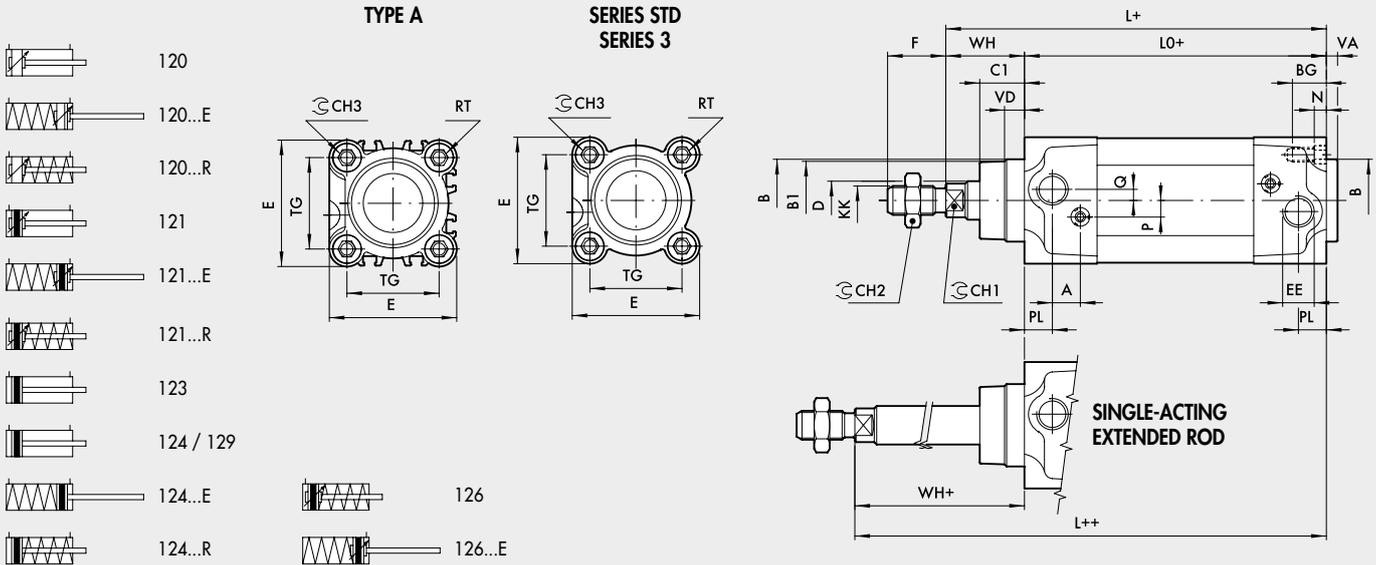
CYL	1 2 3 TYPE	3	3 2 BORE	0 1 0 0 STROKE	A MATERIAL	N GASKETS
	123 Ultra-low friction	3 Double-acting magnetic 5 Double-acting not magnetic	32 40 50 63 80 A1 = 100 A2 = 125	From 1 to 1200 mm	A C45 chromed piston rod, aluminium piston rod Z Stainless steel piston rod and nut aluminium piston	N NBR gaskets

ALL the cylinders are No stick-slip.
ALL the cylinders are non-cushioned.
Ultra-low friction cylinders are not available in the through-rod version.

ACTUATORS
ISO 15552 ULTRA-LOW FRICTIONS CYLINDER

ISO 15552 CYLINDER DIMENSIONS

DIMENSIONS SINGLE PISTON ROD VERSIONS



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

VERSION 120... / 121... (double-acting cushioned)

VERSION 123... / 124... / 129... (double-acting)

Ø	PL	VD	A	B	B ₁	WH	C ₁	CH ₁	CH ₂	KK	CH ₃	D	TG	VA	F	EE	RT	E	L	L ₀	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	M10x1.25	6	12	32.5	4	22	G1/8	M6	46	120	94	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	M12x1.25	6	16	38	4	24	G1/4	M6	54	135	105	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	M16x1.5	8	20	46.5	4	32	G1/4	M8	64.5	143	106	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	M16x1.5	8	20	56.5	4	32	G3/8	M8	75.5	158	121	17.5	5.5	6	6
80	18	12	12	45	43	46	33	22	30	M20x1.5	10	25	72	4	40	G3/8	M10	94	174	128	21.5	5.5	10	7
100	20	14	12	55	49	51	38	22	30	M20x1.5	10	25	89	4	40	G1/2	M10	111	189	138	21.5	5.5	10	7
125	25	20	10	60	54	65	45	27	41	M27x2	12	32	110	6	54	G1/2	M12	135	225	160	25.5	6.5	12	8

VERSION 126... (single-acting cushioned retracted piston rod)

VERSION 126...E (single-acting cushioned extended piston rod)

Stroke	L ₀								L							
	Ø 32		Ø 40		Ø 50		Ø 63		Ø 32		Ø 40		Ø 50		Ø 63	
0 - 25	94 •	94 •	105 •	105 •	106 •	106 •	121 •	121 •	120 •	120 •	135 •	135 •	143 •	143 •	158 •	158 •
26 - 50	94 •	115	105 •	129.5	106 •	130.5	121 •	145.5	120 •	141	135 •	159.5	143 •	167.5	158 •	182.5
51 - 75	115	136	129.5	154	130.5	155	145.5	170	141	162	159.5	184	167.5	192	182.5	207
76 - 100	136	157	154	178.5	155	179.5	170	194.5	162	183	184	208.5	192	216.5	207	231.5
101 - 125	157	178	178.5	203	179.5	204	194.5	219	183	204	208.5	233	216.5	241	231.5	256
126 - 150	178	199	203	227.5	204	228.5	219	243.5	204	225	233	257.5	241	265.5	256	280.5
151 - 175	199	220	227.5	252	228.5	253	243.5	268	225	246	257.5	282	265.5	290	280.5	305
176 - 200	220	241	252	276.5	253	277.5	268	292.5	246	267	282	306.5	290	314.5	305	329.5
201 - 225	241	262	276.5	301	277.5	302	292.5	317	267	288	306.5	331	314.5	339	329.5	354
226 - 250	262	283	301	325.5	302	326.5	317	341.5	288	309	331	355.5	339	363.5	354	378.5

• Dimensions according to ISO 15552

VERSION 12...R (double-acting with spring, retracted piston rod)

VERSION 12...E (double-acting with spring, extended piston rod)

Stroke	L ₀								L							
	Ø 32		Ø 40		Ø 50		Ø 63		Ø 32		Ø 40		Ø 50		Ø 63	
0 - 25	104	104	117	117	106 •	106 •	121 •	121 •	130	130	147	147	143 •	143 •	158 •	158 •
26 - 50	104	125	117	141.5	106 •	130.5	121 •	145.5	130	151	147	171.5	143 •	167.5	158 •	182.5
51 - 75	125	146	141.5	166	130.5	155	145.5	170	151	172	171.5	196	167.5	192	182.5	207
76 - 100	146	167	166	190.5	155	179.5	170	194.5	172	193	196	220.5	192	216.5	207	231.5
101 - 125	167	188	190.5	215	179.5	204	194.5	219	193	214	220.5	245	216.5	241	231.5	256
126 - 150	188	209	215	239.5	204	228.5	219	243.5	214	235	245	269.5	241	265.5	256	280.5
151 - 175	209	230	239.5	264	228.5	253	243.5	268	235	256	269.5	294	265.5	290	280.5	305
176 - 200	230	251	264	288.5	253	277.5	268	292.5	256	277	294	318.5	290	314.5	305	329.5
201 - 225	251	272	288.5	313	277.5	302	292.5	317	277	298	318.5	343	314.5	339	329.5	354
226 - 250	272	293	313	337.5	302	326.5	317	341.5	298	319	343	367.5	339	363.5	354	378.5

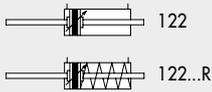
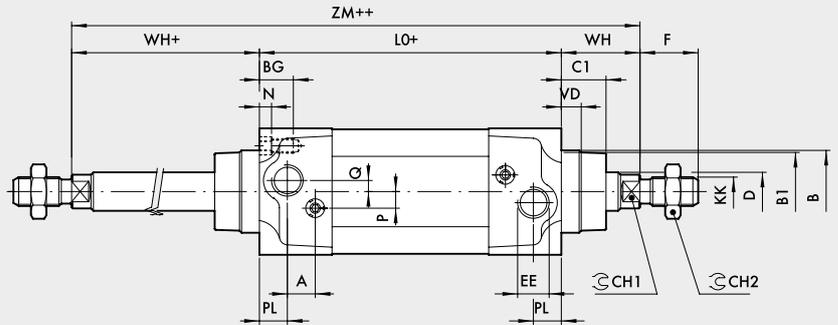
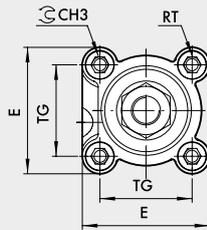
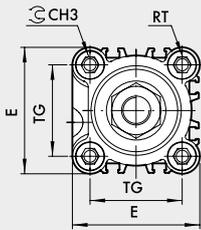
• Dimensions according to ISO 15552

DIMENSIONS THROUGH-ROD VERSIONS

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

TYPE A

**SERIES STD
 SERIES 3**



VERSION 122... (double-acting cushioned)

Ø	PL	VD	A	B	B ₁	WH	C ₁	CH ₁	CH ₂	CH ₃	KK	D	TG	VA	F	EE	RT	E	L	L ₀	ZM	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	6	M10x1.25	12	32.5	4	22	G1/8	M6	46	120	94	146	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	6	M12x1.25	16	38	4	24	G1/4	M6	54	135	105	165	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	8	M16x1.5	20	46.5	4	32	G1/4	M8	64.5	143	106	180	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	8	M16x1.5	20	56.5	4	32	G3/8	M8	75.5	158	121	195	17.5	5.5	6	6
80	18	12	12	45	43	46	33	22	30	10	M20x1.5	25	72	4	40	G3/8	M10	94	174	128	220	21.5	5.5	10	7
100	20	14	12	55	49	51	38	22	30	10	M20x1.5	25	89	4	40	G1/2	M10	111	189	138	240	21.5	5.5	10	7
125	25	20	10	60	54	65	45	27	41	12	M27x2	32	110	6	54	G1/2	M12	135	225	160	290	25.5	6.5	12	8

VERSION 122...R (double-acting cushioned with spring, retracted piston rod)

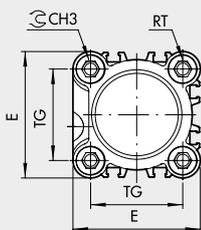
Stroke	L0				ZM			
	Ø 32	Ø 40	Ø 50	Ø 63	Ø 32	Ø 40	Ø 50	Ø 63
0 - 25	104	117	106 •	121 •	156	177	180	195
26 - 50	104	117	106 •	121 •	156	177	180	195
51 - 75	125	141.5	130.5	145.5	177	201.5	204.5	219.5
76 - 100	146	166	155	170	198	226	229	244
101 - 125	167	190.5	179.5	194.5	219	250.5	253.5	268.5
126 - 150	188	215	204	219	240	275	278	293
151 - 175	209	239.5	228.5	243.5	261	299.5	302.5	317.5
176 - 200	230	264	253	268	282	324	327	342
201 - 225	251	288.5	277.5	292.5	303	348.5	351.5	366.5
226 - 250	272	313	302	317	324	373	376	391

* Dimensions according to ISO 15552

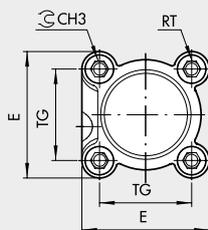
NOTES

DIMENSIONS LONG-CUSHIONING VERSION

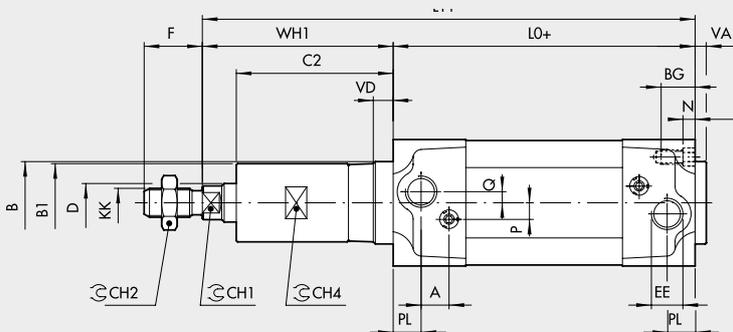
SERIES STD



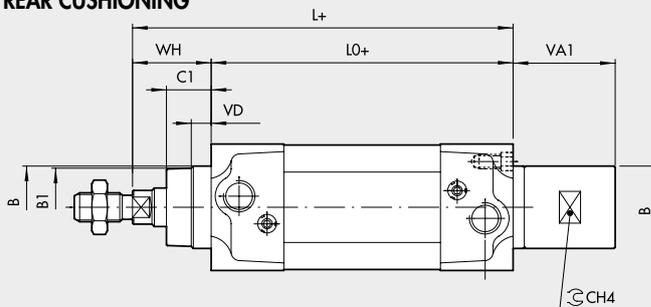
TYPE A



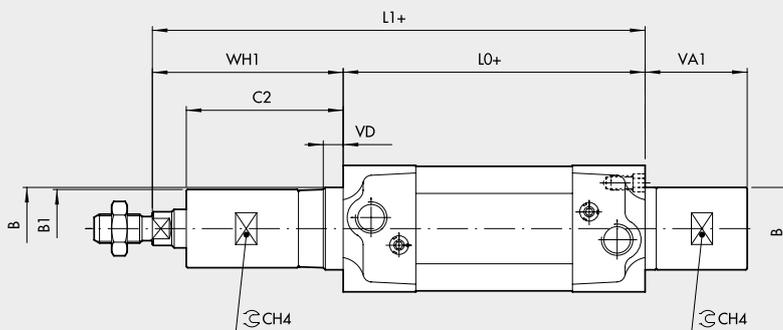
FRONT CUSHIONING



REAR CUSHIONING



FRONT/REAR CUSHIONING



+ = ADD THE STROKE



Ø	PL	VD	A	B	B ₁	CH ₁	WH	C ₁	CH ₂	CH ₃	CH ₄	KK	D	TG	VA	F	EE	RT	E	L ₀	BG	N	P	Q
32	10	6.5	10	30	29	10	26	16	17	6	27	M10x1.25	12	32.5	4	22	G1/8	M6	46	94	14.5	4.5	6	4
40	12	8	10	35	34	13	30	20	19	6	30	M12x1.25	16	38	4	24	G1/4	M6	54	105	14.5	4.5	6	4
50	14	13	10	40	38	17	37	25	24	8	35	M16x1.5	20	46.5	4	32	G1/4	M8	64.5	106	17.5	5.5	6	6
63	16	14	10	45	38	17	37	25	24	8	35	M16x1.5	20	56.5	4	32	G3/8	M8	75.5	121	17.5	5.5	6	6

100 mm LONG-CUSHIONING

Ø	WH ₁	C ₂	VA ₁	L ₁
32	106	96	79	200
40	107	97	76.5	212
50	113.5	101.5	76.5	219.5
63	113.5	101.5	76.5	234.5

150 mm LONG-CUSHIONING

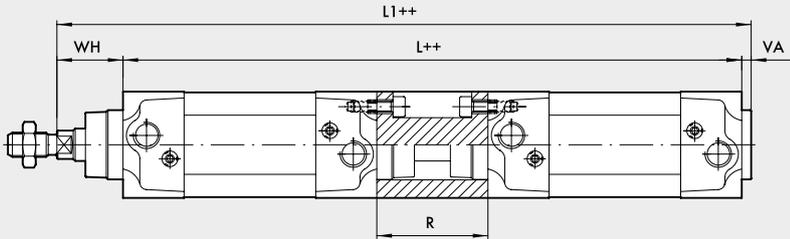
Ø	WH ₁	C ₂	VA ₁	L ₁
32	156	146	129	250
40	157	147	121.5	262
50	162.5	150.5	119.5	268.5
63	162.5	150.5	123.5	283.5

200 mm LONG-CUSHIONING

Ø	WH ₁	C ₂	VA ₁	L ₁
32	206	196	179	300
40	207	197	176.5	312
50	213.5	201.5	176.5	319.5
63	213.5	201.5	176.5	334.5

DIMENSIONS TANDEM VERSION

++ = ADD TWICE THE STROKE

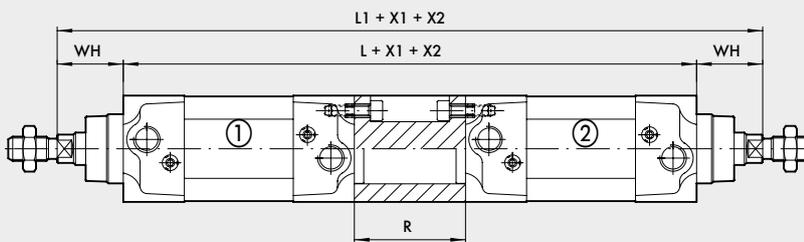


Ø	WH	VA	R	L	L ₁
32	26	4	55	243	273
40	30	4	55	265	299
50	37	4	68	280	321
63	37	4	68	310	351
80	46	4	92	348	398
100	51	4	92	368	423
125	65	6	120	440	511

Refer to standard cylinders for other values.

DIMENSIONS OPPOSED VERSION

X1 = STROKE CYLINDER 1
X2 = STROKE CYLINDER 2



Ø	WH	R	L	L ₁
32	26	55	243	295
40	30	55	265	325
50	37	68	280	354
63	37	68	310	384
80	46	92	348	440
100	51	92	368	470
125	65	120	440	570

Refer to standard cylinders for other values.

NOTE

ISO 15552 TWO-FLAT CYLINDER

This version of cylinder is used to keep the parts fixed to the piston rod at an angle and to apply torques within the specified limits.

The piston rod of the Two-Flat has two opposing longitudinal surfaces; it is made of stainless steel.

The front cylinder head includes a sintered bronze bush that matches the profile of the piston rod and prevents it from rotating on its own axis.

A special polyurethane gasket ensures pneumatic seal and prevents the accumulation of dirt. This technical solution is more reliable and gives a better pneumatic seal than with square or hexagonal piston rods.

Supplied in series STD, with a smooth barrel, and type A or series 3, with a barrel with slots for retractable sensors.

They are available in several versions and with a wide range of accessories:

- with or without magnet
- double acting, single piston rod
- double acting, through rod; one piston rod is Two-Flat, the other cylindrical
- fixing accessories.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63
Max operating pressure	bar	10			
	MPa	1			
	psi	145			
Temperature range	POLYURETHANE	-25 to +80			
Design		Heads with Tap Tite screws			
Fluid		Unlubricated air. Lubrication, if used, must be continuous			
Maximum stroke	mm	300	400	500	
Versions		Double-acting cushioned, Through-rod cushioned, No stick-slip			
Sensor magnet		Available magnetic and non-magnetic versions.			
Inrush pressure	bar	0.4	0.4	0.3	0.3
Max torque on piston rod	Nm	0.2	0.4	1	1
Maximum rotation on the rod	degrees	1° 30'	1° 30'	1°	1°
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		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.			

KEY TO CODES FOR ISO 15552 TWO-FLAT STD CYLINDERS

CYL	1 2 1 TYPE	0	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
	120 Double-acting, cushioned, non-magnetic	0 Diameter	32	+ Ø 32 stroke 1 to 300 mm	F "Two-Flat" piston rod	P Polyurethane gaskets
	121 Double-acting, cushioned	S Non-magnetic	40	+ Ø 40 stroke 1 to 400 mm	AISI 303, stainless steel	
	● 122 Through-rod	▲ G No stick-slip	50	+ Ø 50 to 63 stroke 1 to 500 mm	nut, technopolymer piston	
			63			

● Supplied with aluminium piston

▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

+ Maximum recommended strokes. Higher values can create operating problems

KEY TO CODES FOR ISO 15552 TWO-FLAT TYPE A CYLINDERS

CYL	1 2 1 TYPE	A	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
	121 Double-acting, cushioned	A Standard	32	+ Ø 32 stroke 1 to 300 mm	F "Two-Flat" piston rod	P Polyurethane gaskets
	● 122 Through-rod	▲ B No stick-slip	40	+ Ø 40 stroke 1 to 400 mm	AISI 303, stainless steel	
		C Non-magnetic	50	+ Ø 50 to 63 stroke 1 to 500 mm	nut, technopolymer piston	
			63			

● Supplied with aluminium piston

▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

+ Maximum recommended strokes. Higher values can create operating problems

KEY TO CODES FOR ISO 15552 TWO-FLAT SERIES 3 CYLINDERS

CYL	1 2 1 TYPE	3	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
	121 Double-acting cushioned	3 Series 3	32	+ Ø 32 stroke 1 to 300 mm	F "Two-Flat" piston rod AISI 303, stainless steel	P Polyurethane gaskets
●	122 Through-rod	▲ 4 Series 3 No stick-slip 5 Series 3 Non-magnetic	40 50 63	+ Ø 40 stroke 1 to 400 mm + Ø 50 to 63 stroke 1 to 500 mm	nut, technopolymer piston	

● Supplied with aluminium piston

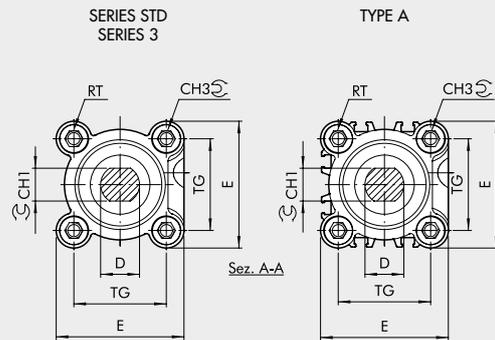
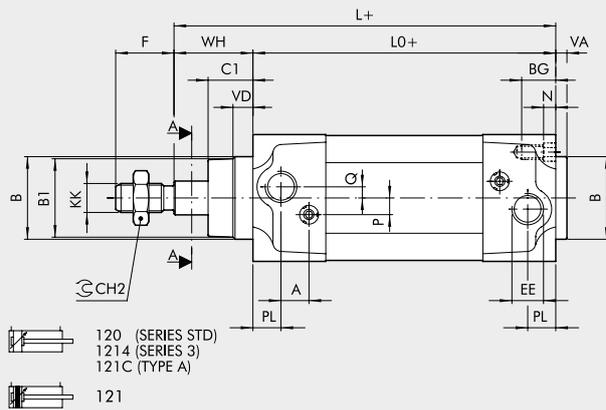
+ Maximum recommended strokes. Higher values can create operating problems

▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

DIMENSIONS

STANDARD VERSION

+ = ADD THE STROKE

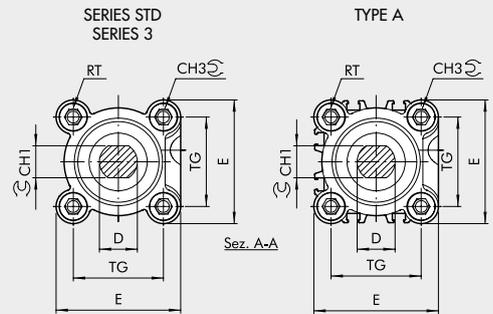
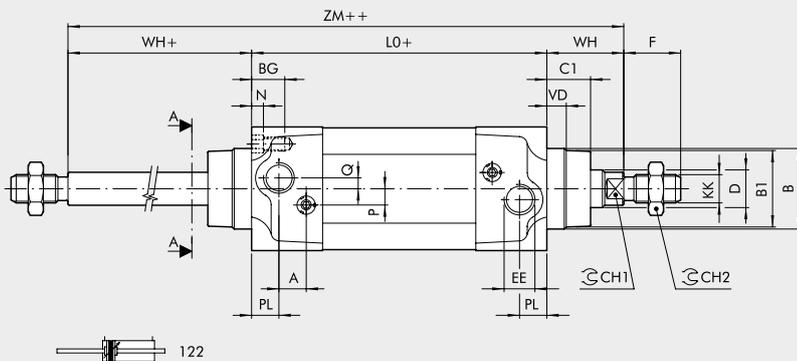


- 120 (SERIES STD)
- 1214 (SERIES 3)
- 121C (TYPE A)
- 121

THROUGH-ROD VERSION

+ = ADD THE STROKE

++ = ADD TWICE THE STROKE



- 122

Ø	PL	VD	A	B	B ₁	WH	C ₁	CH ₁	CH ₂	CH ₃	KK	D	TG	VA	F	EE	RT	E	L	L ₀	ZM	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	6	M10x1.25	12	32.5	4	22	G1/8	M6	46	120	94	146	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	6	M12x1.25	16	38	4	24	G1/4	M6	54	135	105	165	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	8	M16x1.5	20	46.5	4	32	G1/4	M8	64.5	143	106	180	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	8	M16x1.5	20	56.5	4	32	G3/8	M8	75.5	158	121	195	17.5	5.5	6	6

ISO 15552 CYLINDER WITH END-OF-STROKE STOP

The cylinders in this series are designed with a unit that mechanically locks the piston rod at the end of stroke.

When extended, the piston rod can be locked at the front head; when retracted, it is locked either at the rear head or in both positions.

With the cylinder pneumatically powered, the locking unit releases automatically, so no additional piloting is required.

The locking unit can be released manually by inserting a screw into a thread.

This cylinder complies with ISO 15552, except for the length, which is greater than the standard.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100			
Max operating pressure	bar						10			
	MPa						1			
	psi						145			
Temperature range	POLYURETHANE	°C						-25 to +80		
		NBR	°C						-10 to +80	
		FKM/FPM	°C						-10 to +150	
		Low Temperature	°C						-40 to +80	
Design		Heads with Tap Tite screws								
Fluid		Unlubricated air. Lubrication, if used, must be continuous								
Standard stroke +	mm	30 to 2800			35 to 2600					
Versions		Double-acting cushioned, Through-rod cushioned, No stick-slip.								
Sensor magnet		YES								
Static retention force	N	500	500	2000	2000	5000	5000			
Maximum axial clearance in the lock position	mm	1.5	1.5	1.5	1.5	1.5	1.5			
Minimum release pressure	bar	≥ 2.5	≥ 2.5	≥ 2.5	≥ 2.5	≥ 2	≥ 2			
Maximum locking pressure	bar	≤ 0.5								
Forces generated at 6 bar thrust/retraction		See cylinder "General technical data" at the beginning of the chapter								
Weights										
Only one stop, with piston rod extended or retracted, stroke = 0	g	573	860	1367	1793	3515	5197			
Stops either with piston rod extended or retracted, stroke = 0	g	713	1060	1647	2143	4215	6497			
Every mm of stroke, cylinder with piston rod cylinder	g	2.20	2.15	4.57	5.03	7.49	8.79			
Every mm of stroke, through-rod cylinder	g	3.09	4.73	7.04	7.44	10.16	12.33			
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.								
		+ Maximum recommended strokes. Higher values can create operating problems								

FUNCTIONING DIAGRAM

LOCKED VERSION WITH EXTENDED PISTON ROD

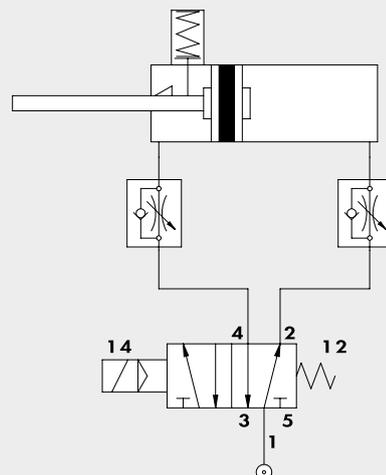
When the piston rod extends at the end of stroke, the spring-actuated locking piston enters the slot of the coupling bushing.

When the piston rod retracts, the pressure inside the front chamber overcomes the force of the spring and causes the locking piston to move away; the piston rod can now move freely and retracts.

N.B.: The rear chamber must be pressurized before activating piston rod retraction, otherwise the locking unit will not be disengaged. When the control valve is switched over, by the time the rear chamber relieves, sufficient pressure is created in the front chamber to release the locking unit before the piston rod starts retracting.

The version with locking with piston rod retracted works in the same way.

Precautions: Do not use 3-position solenoid valves. Use MRF flow regulators that choke the output (type C). Do not use with multiple cylinders moving in a synchronized sequence. Pneumatic cushioning must be adjusted properly; it must not be closed, neither fully nor partially.

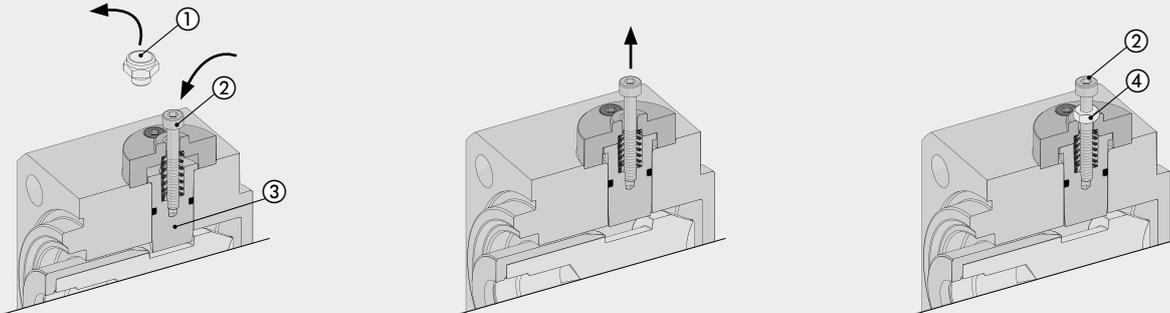


MANUAL RELEASE (WITH NO PRESSURE)

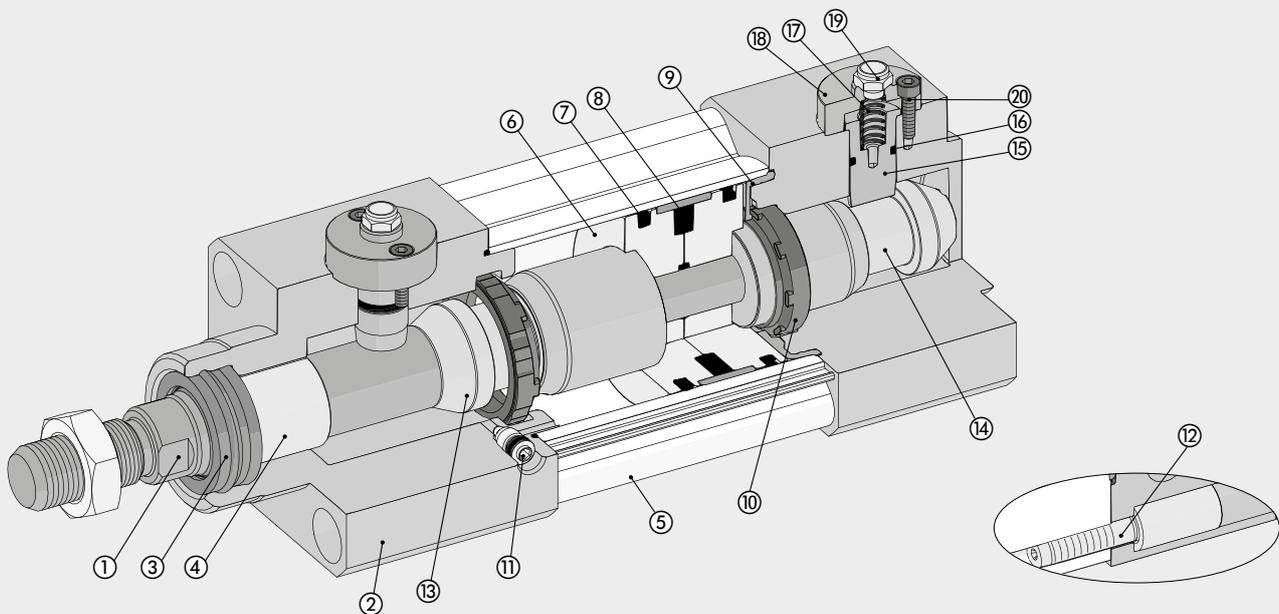
Remove the silencer ①. Tighten one of the screws ② into the locking piston ③.

Pull it upwards to release the locking piston.

You can disengage the locking unit permanently by fitting a nut ④ to the screw ② and tightening it until the piston is disengaged.



COMPONENTS



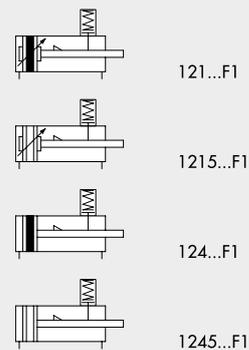
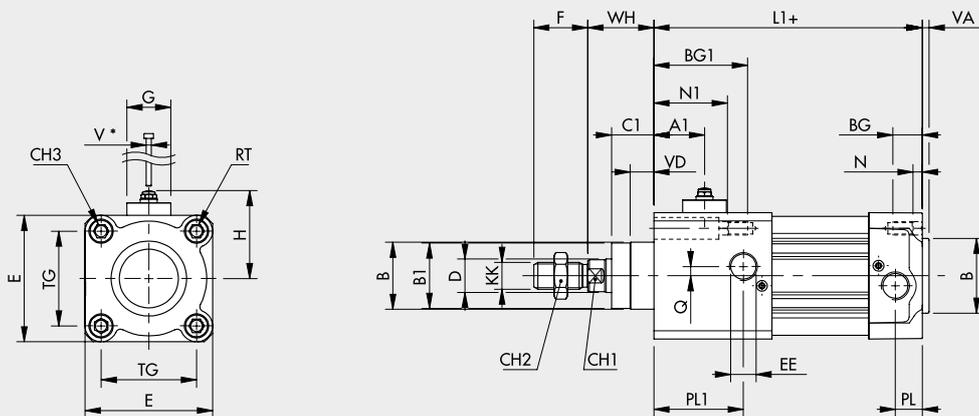
- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: aluminium
- ③ PISTON ROD GASKET: polyurethane, NBR or FKM/FPM
- ④ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑤ BARREL: drawn anodized calibrated aluminium
- ⑥ SEMI-PISTON: made of self-lubricating technopolymer with built-in cushioning olives or in aluminum
- ⑦ PISTON GASKET: polyurethane, NBR or FKM/FPM
- ⑧ MAGNET: plastoferrite
- ⑨ BUFFER + Static O-rings: NBR or FKM/FPM
- ⑩ CUSHIONING GASKET: polyurethane, NBR or FKM/FPM

- ⑪ CUSHIONING NEEDLE: OT 58 with needle out movement safety system even when fully open
- ⑫ SCREWS: Tap Tite for assembly
- ⑬ FRONT COUPLING BUSHING: hardened alloy steel
- ⑭ REAR COUPLING BUSHING: hardened alloy steel
- ⑮ LOCKING PISTON: tempered and chromed alloy steel
- ⑯ GASKET: NBR or FKM/FPM
- ⑰ SPRING: stainless steel
- ⑱ COVER: anodized aluminium
- ⑲ SILENCER: nickel-plated brass with stainless steel wire
- ⑳ SCREWS: zinc-plated steel

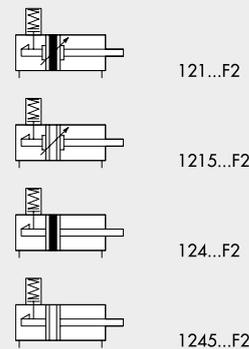
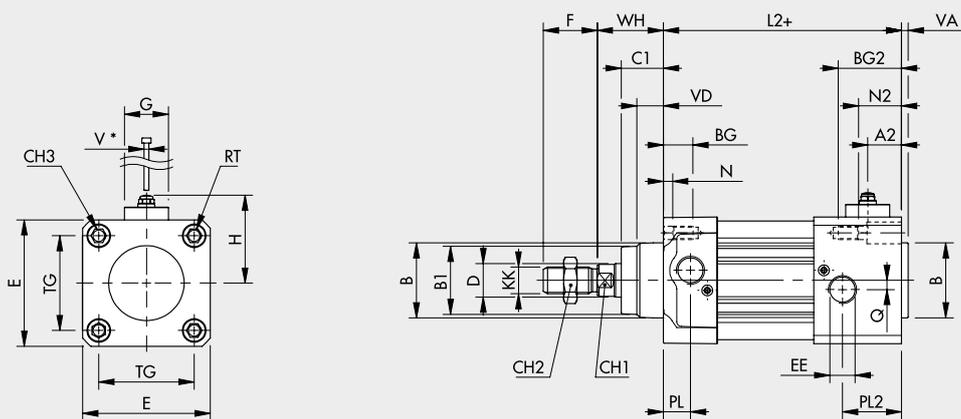
DIMENSIONS OF SINGLE PISTON ROD VERSIONS

LOCKING WITH EXTENDED PISTON ROD

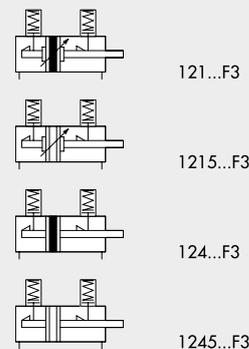
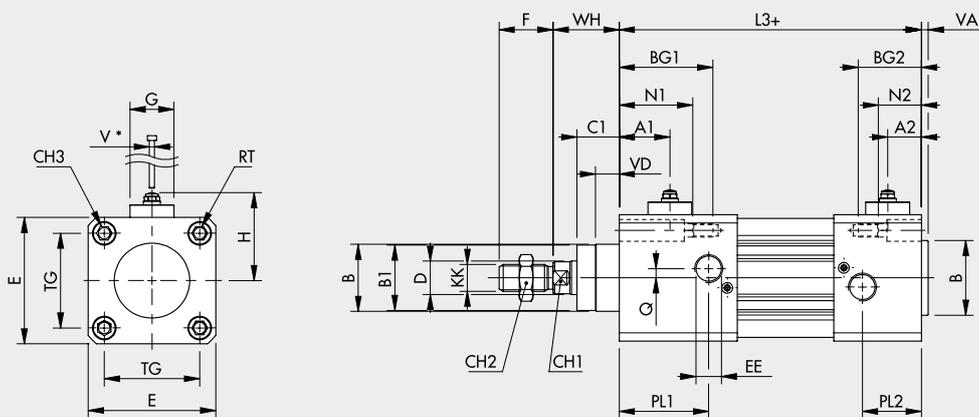
* = THREADING FOR MANUAL RELEASE SCREW
+ = ADD STROKE



LOCKING WITH RETRACTED PISTON ROD



LOCKING WITH EXTENDED AND RETRACTED PISTON ROD

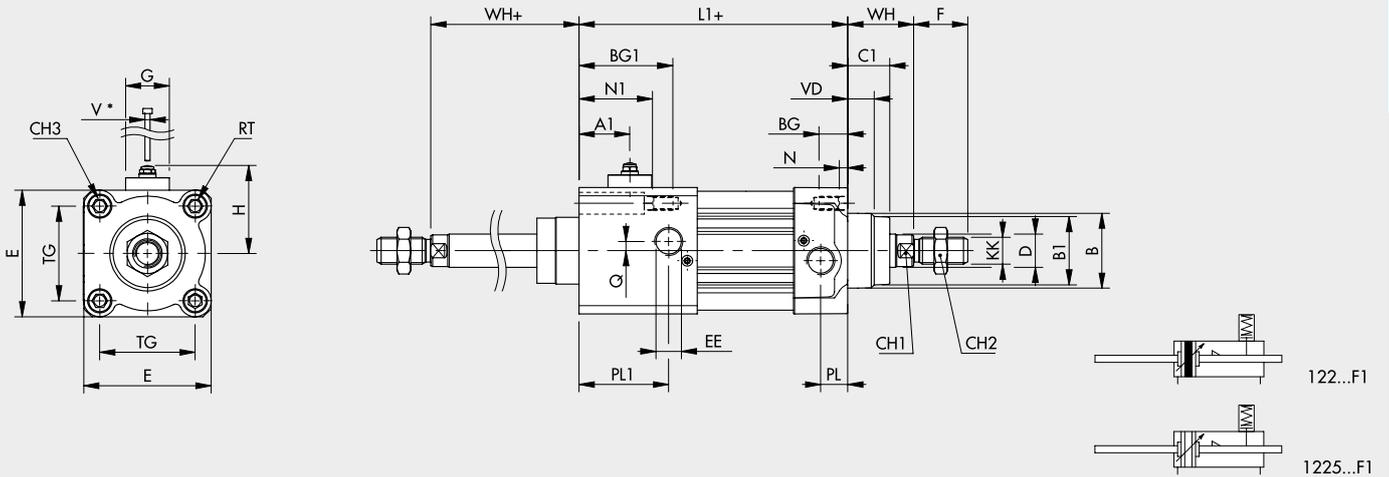


Ø	A1	A2	B	B1	BG	BG1	BG2	C1	CH1	CH2	CH3	D	E	EE	F	G	H	KK	L1	L2	L3	N	N1	N2	PL	PL1	PL2	Q	RT	TG	V*	VA	VD	WH
32	24	15	30	28	14.5	25.5	25.5	16	10	17	6	12	46	1/8	22	24	40	M10x1.25	105	105	116	4.5	15.5	15.5	10	21	21	4	M6	32.5	M3	4	6.5	26
40	26	17	35	33	14.5	39.5	28.5	20	13	19	6	16	54	1/4	24	24	45	M12x1.25	129	119	143	4.5	29.5	18.5	12	35	26	4	M6	38	M3	4	8	30
50	28	20	40	38	17.5	44.5	35.5	25	17	24	8	20	64.5	1/4	32	26	48	M16x1.5	133	124	151	5.5	32.5	23.5	14	41	32	6	M8	46.5	M3	4	13	37
63	28	21	45	40	17.5	43.5	36.5	25	17	24	8	20	75.5	3/8	32	26	55	M16x1.5	147	140	166	5.5	31.5	24.5	16	42	35	6	M8	56.5	M3	4	14	37
80	31.5	24.5	45	43	21.5	50.5	45.5	33	22	30	10	25	94	3/8	40	29	63	M20x1.5	157	152	181	5.5	34.5	29.5	18	47	42	7	M10	72	M3	4	12	46
100	25.5	24.5	55	49	21.5	58.5	46.5	38	22	30	10	25	111	1/2	40	29	72	M20x1.5	161	162	185	5.5	42.5	30.5	20	43	44	7	M10	89	M3	4	14	51

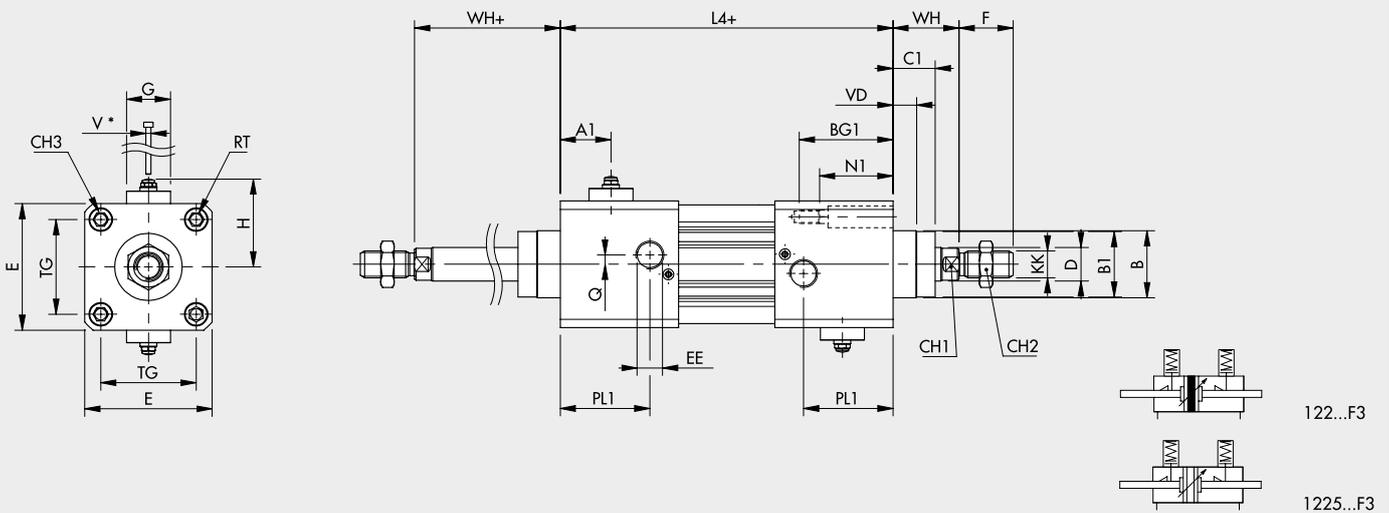
DIMENSIONS OF THROUGH-ROD VERSIONS

LOCKING ON ONE SIDE ONLY

* = THREADING FOR MANUAL RELEASE SCREW
 + = ADD STROKE



LOCKING WITH EXTENDED AND RETRACTED PISTON ROD



Ø	A1	B	B1	BG	BG1	C1	CH1	CH2	CH3	D	E	EE	F	G	H	KK	L1	L4	N	N1	PL	PL1	Q	RT	TG	V*	VD	WH
32	24	30	28	14.5	25.5	16	10	17	6	12	46	1/8	22	24	40	M10x1.25	105	116	4.5	15.5	10	21	4	M6	32.5	M3	6.5	26
40	26	35	33	14.5	39.5	20	13	19	6	16	54	1/4	24	24	45	M12x1.25	129	153	4.5	29.5	12	35	4	M6	38	M3	8	30
50	28	40	38	17.5	44.5	25	17	24	8	20	64.5	1/4	32	26	48	M16x1.5	133	160	5.5	32.5	14	41	6	M8	46.5	M3	13	37
63	28	45	40	17.5	43.5	25	17	24	8	20	75.5	3/8	32	26	55	M16x1.5	147	173	5.5	31.5	16	42	6	M8	56.5	M3	14	37
80	31.5	45	43	21.5	50.5	33	22	30	10	25	94	3/8	40	29	63	M20x1.5	157	186	5.5	34.5	18	47	7	M10	72	M3	12	46
100	25.5	55	49	21.5	58.5	38	22	30	10	25	111	1/2	40	29	72	M20x1.5	161	184	5.5	42.5	20	43	7	M10	89	M3	14	51

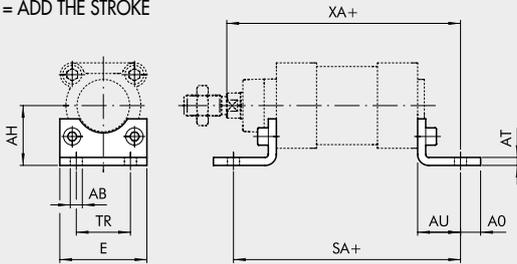
ACCESSORIES FOR ISO 15552 STD, TYPE A, SERIES 3, TWO-FLAT:



FIXINGS

FOOT - MODEL A

+ = ADD THE STROKE

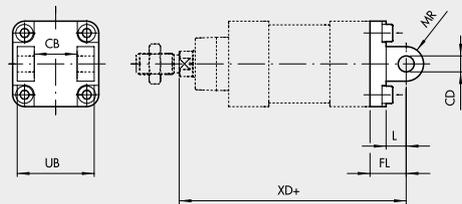


Code	Ø	Ø AB	AH	AO	AT	AU	TR	E	XA	SA	Weight [g]
W0950322001	32	7	32	11	4	24	32	45	144	142	76
W0950402001	40	9	36	15	4	28	36	52	163	161	100
W0950502001	50	9	45	15	5	32	45	65	175	170	162
W0950632001	63	9	50	15	5	32	50	75	190	185	266
W0950802001	80	12	63	20	6	41	63	95	215	210	456
W0951002001	100	14	71	25	6	41	75	115	230	220	572
W0951252001	125	16	90	15	8	45	90	140	270	250	1130

Note: Individually packed with 2 screws

FEMALE HINGE - MODEL B

+ = ADD THE STROKE

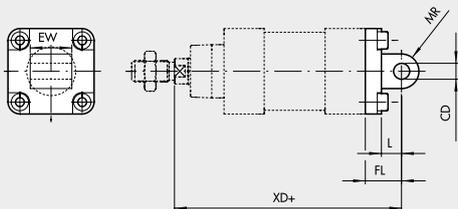


Code	Ø	UB	CB ^{H14}	FL	CD ^{H9}	XD	MR	L	Weight [g]
W0950322003	32	45	26	22	10	142	10	12	116
W0950402003	40	52	28	25	12	160	12	15	160
W0950502003	50	60	32	27	12	170	12	15	252
W0950632003	63	70	40	32	16	190	16	20	394
W0950802003	80	90	50	36	16	210	16	20	670
W0951002003	100	110	60	41	20	230	20	25	1085
W0951252003	125	130	70	50	25	275	25	30	2000

Note: Supplied with 4 screws, 4 washers, 2 snap-rings, 1 pin

MALE HINGE - MODEL BA

+ = ADD THE STROKE

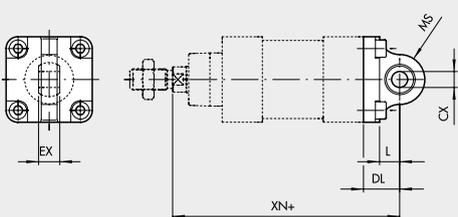


Code	Ø	EW	FL	MR	CD ^{H9}	L	XD	Weight [g]
W0950322004	32	26	22	10	10	13	142	94
W0950402004	40	28	25	12	12	16	160	124
W0950502004	50	32	27	12	12	16	170	220
W0950632004	63	40	32	16	16	22	190	316
W0950802004	80	50	36	16	16	22	210	578
W0951002004	100	60	41	20	20	27	230	850
W0951252004	125	70	50	25	25	30	275	1590

Note: Supplied with 4 screws

ARTICULATED MALE HINGE - MODEL BAS

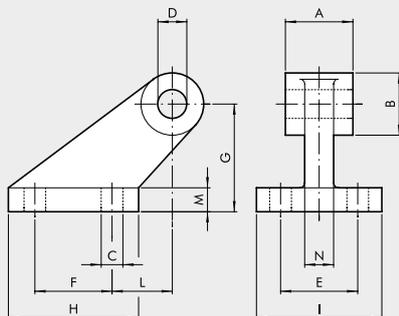
+ = ADD THE STROKE



Code	Ø	DL	MS	L	XN	CX ^{H9}	EX	Weight [g]
W0950322006	32	22	16	12	142	10	14	106
W0950402006	40	25	18	15	160	12	16	142
W0950502006	50	27	21	15	170	12	16	236
W0950632006	63	32	23	20	190	16	21	336
W0950802006	80	36	28	20	210	16	21	572
W0951002006	100	41	30	25	230	20	25	840
W0951252006	125	50	40	30	275	25	31	1520

Note: Supplied with 4 screws

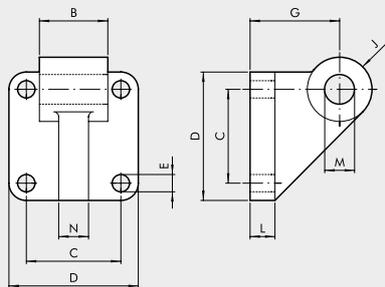
CETOP HINGE FOR MODEL B - MODEL GL



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	Weight [g]
W0950322008	32	26	19	7	10	25	20	32	37	41	18	8	10	96
W0950402008	40	28	26	9	12	32	32	45	54	52	25	10	12	216
W0950502008	50	32	26	9	12	32	32	45	54	52	25	10	12	212
W0950632008	63	40	33	11	16	40	50	63	75	63	32	12	15	440
W0950802008	80	50	33	11	16	40	50	63	75	63	32	12	15	464
W0951002008	100	60	44	14	20	50	70	90	103	80	40	16	22	985
W0951252008	125	70	44	14	25	50	70	90	103	80	40	16	22	1000

Note: Supplied with 4 screws, 4 washers

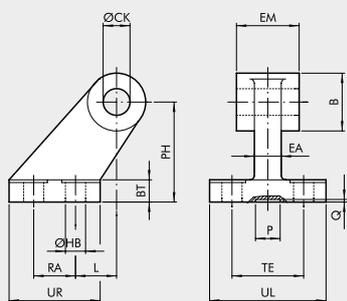
COUNTER-HINGE FOR MODEL B - MODEL GS



Code	Ø	B	C	D	E	G	J	L	M	N	Weight [g]
W0950322108	32	26	32.5	45	7	32	11	10	10	10	106
W0950402108	40	28	38	52	7	36	13	10	12	12	138
W0950502108	50	32	46.5	65	9	45	13	12	12	12	252
W0950632108	63	40	56.5	75	9	50	17	12	16	15	350
W0950802108	80	50	72	95	11	63	17	16	16	15	655
W0951002108	100	60	89	115	11	73	21	16	20	22	980

Note: Supplied with 4 screws, 4 washers

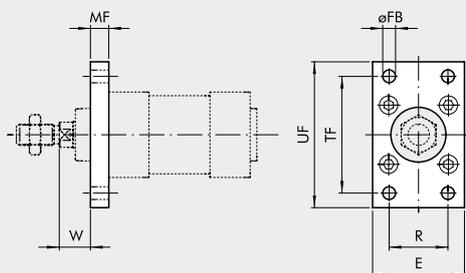
ISO 15552 COUNTER-HINGE FOR MODEL B - MODEL AB7



Code	Ø	EM	B	ØHB	ØCK	TE	RA	PH	UR	UL	L	BT	EA	P	Q	Weight [g]
W0950322017	32	26	20	6.6	10	38	18	32	31	51	3	8	10	21	3	60
W0950402017	40	28	22	6.6	12	41	22	36	35	54	2	10	15*	21	3	85
W0950502017	50	32	26	9	12	50	30	45	45	65	3	12	16	21	3	162
W0950632017	63	40	30	9	16	52	35	50	50	67	2	14*	16	21	3	191
W0950802017	80	50	30	11	16	66	40	63	60	86	7	14	20	21	3	332
W0951002017	100	60	38	11	20	76	50	71	70	96	5	17*	20	11	3	522
W0951252017	125	70	45	14	25	94	60	90	90	124	10	20	30	21	3	960

* Dimensions not to ISO 15552

FRONT FLANGE - MODEL C

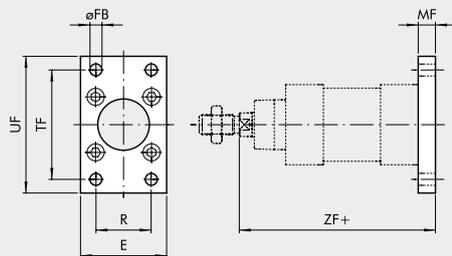


Code	Ø	TF	UF	E	MF	R	øFB	W	Weight [g]
W0950322002	32	64	80	50	10	32	7	16	246
W0950402002	40	72	90	55	10	36	9	20	290
W0950502002	50	90	110	65	12	45	9	25	522
W0950632002	63	100	120	75	12	50	9	25	670
W0950802002	80	126	150	95	15	63	12	30	1420
W0951002002	100	150	178	115	15	75	14	35	2040
W0951252002	125	180	220	140	20	90	16	45	4300

Note: Supplied with 4 screws

REAR FLANGE - MODEL C

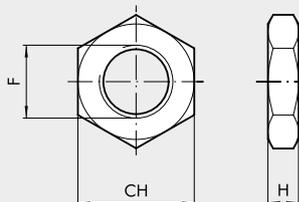
+ = ADD THE STROKE



Code	Ø	TF	UF	E	MF	R	øFB	ZF	Weight [g]
W0950322002	32	64	80	50	10	32	7	130	246
W0950402002	40	72	90	55	10	36	9	145	290
W0950502002	50	90	110	65	12	45	9	155	522
W0950632002	63	100	120	75	12	50	9	170	670
W0950802002	80	126	150	95	15	63	12	190	1420
W0951002002	100	150	178	115	15	75	14	205	2040
W0951252002	125	180	220	140	20	90	16	245	4300

Note: Supplied with 4 screws.

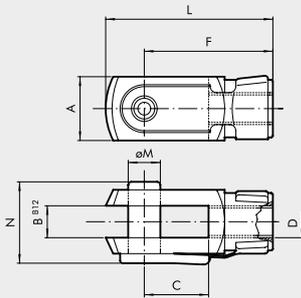
ROD NUT - MODEL S



Code	Ø	F	H	CH	Weight [g]
0950322010	32	M10x1.25	6	17	6
0950402010	40	M12x1.25	7	19	12
0950502010	50/63	M16x1.5	8	24	20
0950802010	80/100	M20x1.5	9	30	32
0951252010	125	M27x2	12	41	74

Note: Individually packed

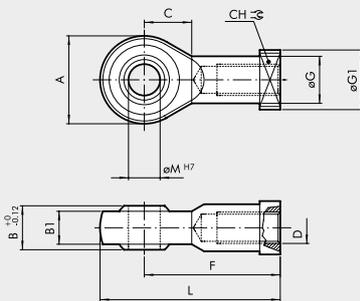
FORK MODEL GK-M



Code	Ø	øM	C	B	A	L	F	D	N	Weight [g]
W0950322020	32	10	20	10	20	52	40	M10x1.25	26	92
W0950402020	40	12	24	12	24	62	48	M12x1.25	32	148
W0950502020	50	16	32	16	32	83	64	M16x1.5	40	340
W0950502020	63	16	32	16	32	83	64	M16x1.5	40	340
W0950802020	80	20	40	20	40	105	80	M20x1.5	48	690
W0950802020	100	20	40	20	40	105	80	M20x1.5	48	690
W0951252020	125	30	54	30	55	148	110	M27x2	65	1835

Note: Ø32÷100 Supplied complete with 1 pin and 1 clip; Ø125 Supplied complete with 1 pin and 2 seeger

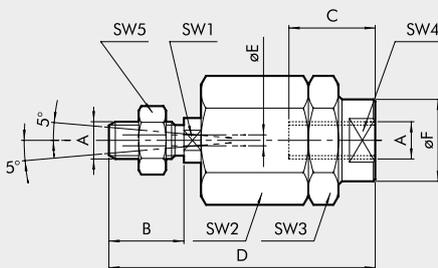
ROD EYE - MODEL GA-M



Code	Ø	øM	C	B1	B	A	L	F	D	øG	CH	øG1	Weight [g]
W0950322025	32	10	15	10.5	14	28	57	43	M10x1.25	15	17	19	78
W0950402025	40	12	17	12	16	32	66	50	M12x1.25	17.5	19	19	116
W0950502025	50	16	22	15	21	42	85	64	M16x1.5	22	22	22	226
W0950502025	63	16	22	15	21	42	85	64	M16x1.5	22	22	22	226
W0950802025	80	20	26	18	25	50	102	77	M20x1.5	27.5	30	27	404
W0950802025	100	20	26	18	25	50	102	77	M20x1.5	27.5	30	27	404
W0951252025	125	30	36	25	37	70	145	110	M27x2	40	41	50	1190

Note: Individually packed

SELF ALIGNING ROD COUPLER - MODEL GA-K



Code	Ø	A	B	C	D	øF	øE	SW ₁	SW ₂	SW ₃	SW ₄	SW ₅	Weight [g]
W0950322030	32	M10x1.25	20	20	71	22	4	12	30	30	19	17	216
W0950402030	40	M12x1.25	24	20	75	22	4	12	30	30	19	19	220
W0950502030	50	M16x1.5	32	32	103	32	4	20	41	41	30	24	620
W0950502030	63	M16x1.5	32	32	103	32	4	20	41	41	30	24	620
W0950802030	80	M20x1.5	40	40	119	32	4	20	41	41	30	30	680
W0950802030	100	M20x1.5	40	40	119	32	4	20	41	41	30	30	680

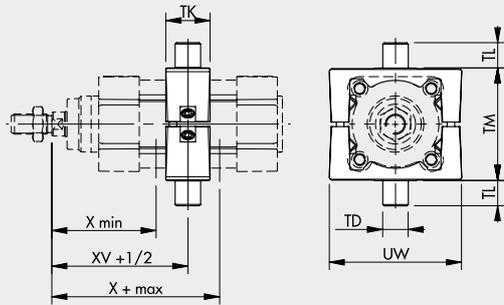
Note: Individually packed

NOTES

ACCESSORIES FOR ISO 1552 CYLINDERS: INTERMEDIATE HINGE

INTERMEDIATE HINGE - MODEL EN, FOR STD AND STD TWO-FLAT SERIES

+ = ADD THE STROKE
+ 1/2 = ADD HALF THE STROKE

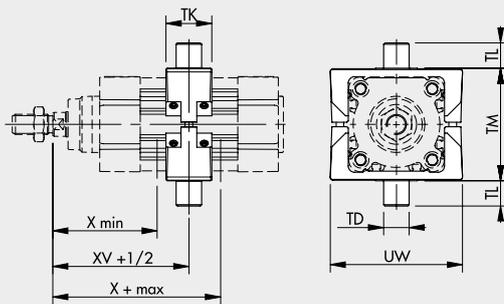


Code	Ø	X _(min)	XV	X _(max)	TM	TL	TD _{e9}	TK	UW	Weight [g]	T [Nm] ♦
0950322007	32	63	73	83	50	12	12	22	65	282	4
0950402007	40	72	82.5	93	63	16	16	28	75	582	10
0950502007	50	83	90	97	75	16	16	32	95	870	15
0950632007	63	86.5	97.5	108.5	90	20	20	35	105	1192	20
0950802007	80	104	110	116	110	20	20	40	130	1950	20
0951002007	100	113.5	120	126.5	132	25	25	45	145	2690	25
0951252007	125	135	145	155	160	25	25	50	175	3927	30

Note: Supplied with 4 grub screws, 2 pins
♦ Recommended tightening torque of grub screws

INTERMEDIATE HINGE - MODEL EN, FOR TYPE A AND TYPE A TWO-FLAT SERIES

+ = ADD THE STROKE
+ 1/2 = ADD HALF THE STROKE

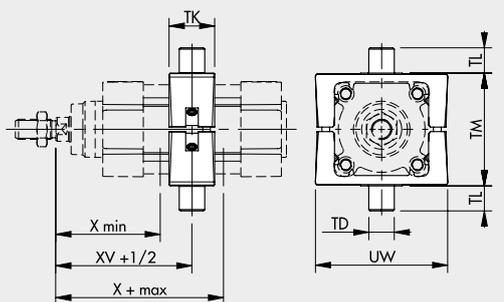


Code	Ø	X _(min)	XV	X _(max)	TM	TL	TD _{e9}	TK	UW	Weight [g]	T [Nm] ♦
0950322107	32	63	73	83	50	12	12	22	65	170	2
0950402107	40	72	82.5	93	63	16	16	28	75	360	5
0950502107	50	83	90	97	75	16	16	28	95	595	6
0950632107	63	86.5	97.5	108.5	90	20	20	36	105	960	10
0950802107	80	104	110	116	110	20	20	36	130	1530	10
0951002107	100	113.5	120	126.5	132	25	25	45	145	2417	20
0951252107	125	135	145	155	160	25	25	50	175	3480	25

Note: Supplied with 8 grub screws, 2 pins
♦ Recommended tightening torque of grub screws

INTERMEDIATE HINGE - MODEL EN, FOR SERIES 3 AND TWO-FLAT SERIES 3

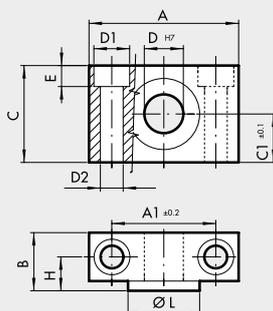
+ = ADD THE STROKE
+ 1/2 = ADD HALF THE STROKE



Code	Ø	X _(min)	XV	X _(max)	TM	TL	TD _{e9}	TK	UW	Weight [g]	T [Nm] ♦
0950322207	32	63	73	83	50	12	12	22	65	212	3
0950402207	40	72	82.5	93	63	16	16	28	75	440	8
0950502207	50	83	90	97	75	16	16	28	95	644	15
0950632207	63	86.5	97.5	108.5	90	20	20	36	105	1080	15
0950802207	80	104	110	116	110	20	20	36	130	1654	15
0951002207	100	113.5	120	126.5	132	25	25	45	145	2550	20
0951252207	125	135	145	155	160	25	25	50	175	3726	20

Note: Supplied with 4 grub screws, 2 pins
♦ Recommended tightening torque of grub screws

COUNTER-HINGE FOR MODEL EN - MODEL EL



Code	Ø	A	A ₁	B	C	C ₁	D ₁	D ₂	D	E	H	øL	Weight [g]
W0950322009	32	46	32	18	30	15	11	7	12	6.5	10.5	22	162
W0950402009	40	55	36	21	36	18	15	9	16	8.5	12	28	278
W0950402009	50	55	36	21	36	18	15	9	16	8.5	12	28	278
W0950632009	63	65	42	23	40	20	18	11	20	10.5	13	35	414
W0950632009	80	65	42	23	40	20	18	11	20	10.5	13	35	414
W0951002009	100	75	50	28.5	50	25	20	13	25	12.5	16	40	715
W0951002009	125	75	50	28.5	50	25	20	13	25	12.5	16	40	715

Note: 2-pieces pack with 4 screws

ACCESSORIES FOR ISO 15552 CYLINDERS: PROTECTIVE BELLOWS

The protective bellows is designed to prevent the piston rod and gasket from coming into contact with external agents in applications characterised by the presence of pollutants such as dust, oils or other contaminants. The design and material chosen (NBR) ensure a long service life of the bellows, compatibly with the operating conditions.

In addition to the bellows as such, other elements are also included in the supply to ensure correct assembly on the cylinder and a tight fit.

Depending on the cylinder size and stroke, three versions are available:

- single, consisting of one collar for the standard cylinder head, one collar for the piston rod (which must be special) and bellows;
- double, which in addition to the collars, includes two bellows and one gasket;
- triple made up of three bellows and two gaskets.

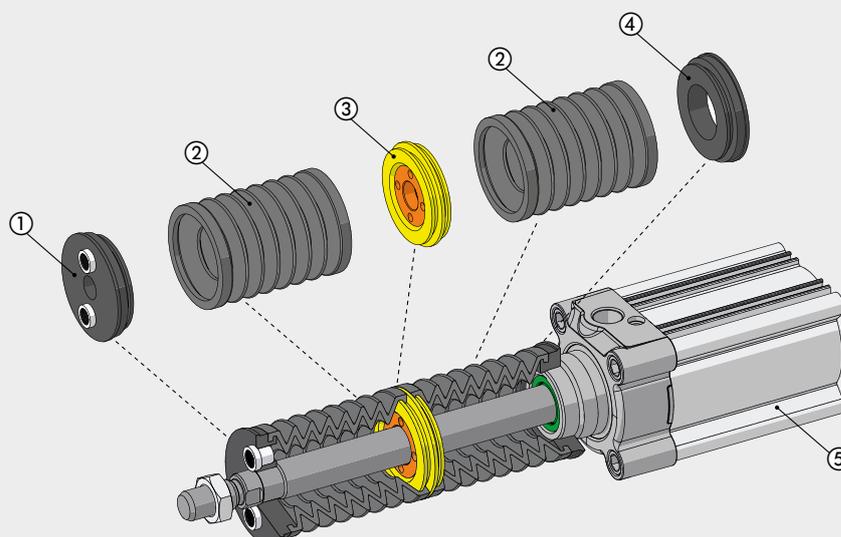
The range offered includes two sizes that cover all ISO 15552 Metal Work cylinders, with Ø32 to Ø125 bores, in versions with a suitably designed piston rod.



TECHNICAL DATA			SIZE 60			SIZE 83		
			SINGLE	DOUBLE	TRIPLE	SINGLE	DOUBLE	TRIPLE
Continuous duty temperature		°C	-10 to +50					
Cylinder strokes †	Ø32 to 63	mm	1 to 230	231 to 475	476 to 720	-	-	-
	Ø80 to 125	mm	-	-	-	1 to 270	271 to 555	556 to 840
Maximum recommended speed		m/s	1					
Weights		g	120	210	300	850	1020	1190
Notes	Can only be fitted to predisposed cylinders, code 154... to be purchased separately It's possible to order cylinder code 156... with already mounted bellows.							
	† For higher stroke values, please contact our sales department.							

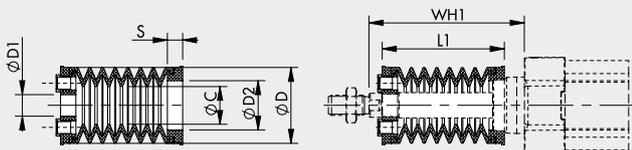
COMPONENTS

- ① ROD COLLAR: NBR with stainless steel filter
- ② BELLOWS: NBR
- ③ JUNCTION: NBR with a POM core (only for double or triple kit)
- ④ HEAD COLLAR: NBR
- ⑤ ISO 15552 CYLINDER DESIGNED FOR BELLOWS



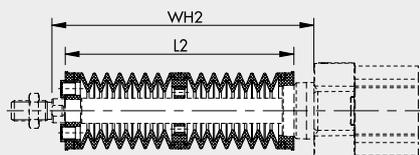
BELLOWS OVERALL DIMENSIONS AND ORDERING CODES

SINGLE



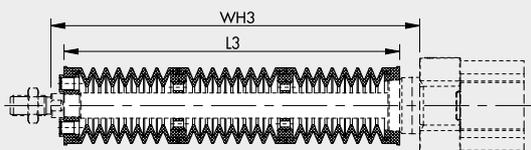
Code	Ø	Cylinder						L1		WH1
		stroke	Ø D	Ø C	S	Ø D1	Ø D2	closed	open	
0950322103	32	1 to 230	60	30	12	10	27	70	300	86
0950402103	40	1 to 230	60	30	12	13	32	70	300	86
0950502103	50	1 to 230	60	30	12	17	37	70	300	93
0950632103	63	1 to 230	60	30	12	17	39	70	300	94
0950802103	80	1 to 270	83	50	12	22	42	80	350	103
0951002103	100	1 to 270	83	50	12	22	48	80	350	105
0951252103	125	1 to 270	83	50	12	29	53	80	350	117

DOUBLE



Code	Ø	Cylinder						L2		WH2
		stroke	Ø D	Ø C	S	Ø D1	Ø D2	closed	open	
0950322203	32	231 to 475	60	30	12	10	27	125	600	141
0950402203	40	231 to 475	60	30	12	13	32	125	600	141
0950502203	50	231 to 475	60	30	12	17	37	125	600	148
0950632203	63	231 to 475	60	30	12	17	39	125	600	149
0950802203	80	271 to 555	83	50	12	22	42	145	700	168
0951002203	100	271 to 555	83	50	12	22	48	145	700	170
0951252203	125	271 to 555	83	50	12	29	53	145	700	182

TRIPLE



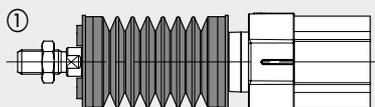
Code	Ø	Cylinder						L3		WH3
		stroke	Ø D	Ø C	S	Ø D1	Ø D2	closed	open	
0950322303	32	476 to 720	60	30	12	10	27	180	900	196
0950402303	40	476 to 720	60	30	12	13	32	180	900	196
0950502303	50	476 to 720	60	30	12	17	37	180	900	203
0950632303	63	476 to 720	60	30	12	17	39	180	900	204
0950802303	80	556 to 840	83	50	12	22	42	210	1050	233
0951002303	100	556 to 840	83	50	12	22	48	210	1050	235
0951252303	125	556 to 840	83	50	12	29	53	210	1050	247

Refer to standard cylinders for other values.

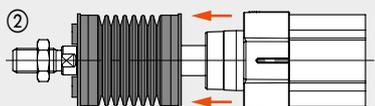
N.B.: Also order the cylinder designed for protective bellows (code 154...)

ASSEMBLY ONTO CYLINDERS Ø32 - Ø40 - Ø50

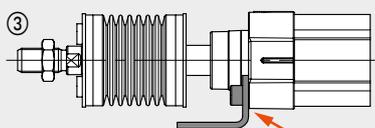
For fixing the cylinder through the front head, in case of bores 32, 40 and 50 the bellows can be mounted **only after having fixed the cylinder**.
For versions 156... with mounted bellows:



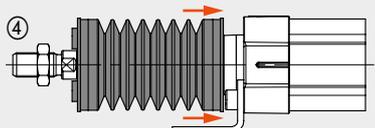
Cylinder supplied with already mounted bellows.



Remove the bellows from the front head, acting on the head collar.

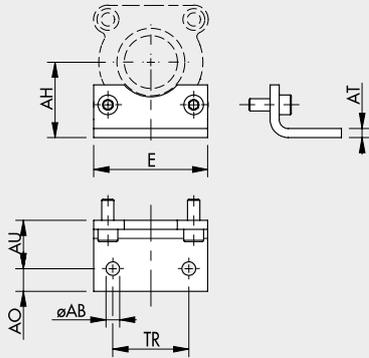


Fix the cylinder to the machine (for example with foot model A).



Reinsert the bellows on the front head, by pressing the head collar on the conical surface of the front cylinder head until it reaches the shoulder.

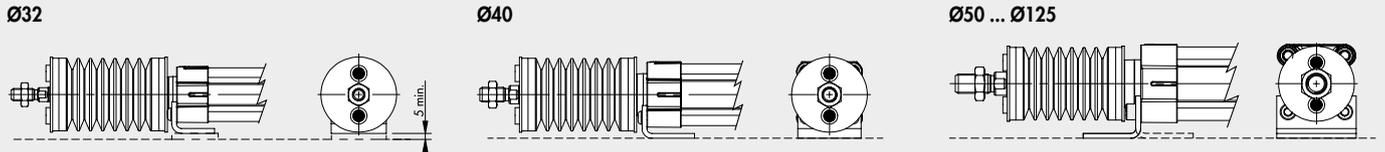
FOOT MODEL A



Code	Ø	Ø AB	AH	AO	AT	AU	TR	E	Weight [g]
W0950322507 *	32	7	32	11	4	24	32	45	76
W0950402507 *	40	9	36	15	4	28	36	52	100
W0950502001	50	9	45	15	5	32	45	65	162
W0950632001	63	9	50	15	5	32	50	75	266
W0950802001	80	12	63	20	6	41	63	95	456
W0951002001	100	14	71	25	6	41	75	115	572
W0951252001	125	16	90	15	8	45	90	140	1130

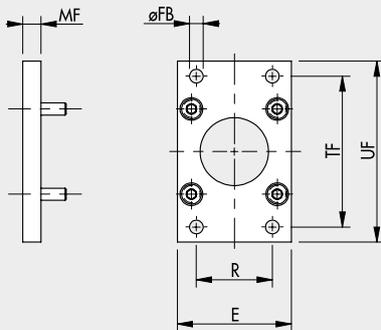
* Version with button head screws to be used in place of standard feet codes W0950322001 and W0950402001. They can be mounted only inwards.

Note: Individually packed with 2 screws



In the case of the Ø32 bore, the foot must be raised to avoid rubbing the bellows on the support surface.

FRONT FLANGE - MODEL C



Code	Ø	TF	UF	E	MF	R	øFB	Weight [g]
W0950502002	50	90	110	65	12	45	9	522
W0950632002	63	100	120	75	12	50	9	670
W0950802002	80	126	150	95	15	63	12	1420
W0951002002	100	150	178	115	15	75	14	2040
W0951252002	125	180	220	140	20	90	16	4300

Note: Supplied with 4 screws

For bores Ø32 and Ø40 it's not possible to use the front flanges codes W0950322002 and W0950402002 because they prevent effective assembly of the collar on the cylinder head.

NOTES

Refer to ISO 15552 cylinders for other accessories.

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

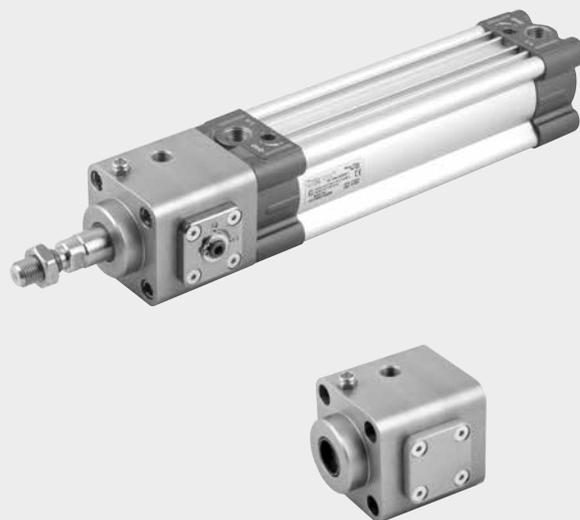
A new series of in-line locking devices by Metal Work with superior characteristics. Performances are guaranteed by a system of springs and conical sliding and ball bearings which, combined with carefully selected materials, ensure reliable and accurate locking of the system, which can be released by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

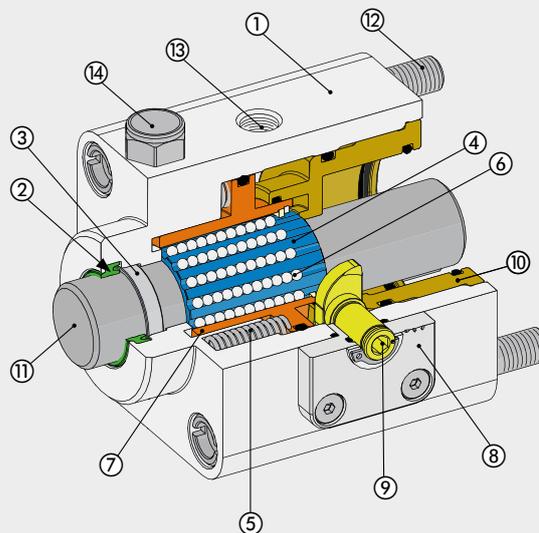
With the optional cam-operated manual release function, the rod lock can be disengaged mechanically merely by rotating a pin using a standard Allen wrench. When the pin is released, it automatically returns to the "rod locked" position.



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.						
		The cylinder rod must be chromed and in f7 tolerance.						

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

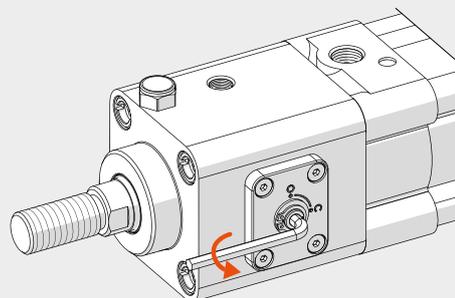


MANUAL RELEASE

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

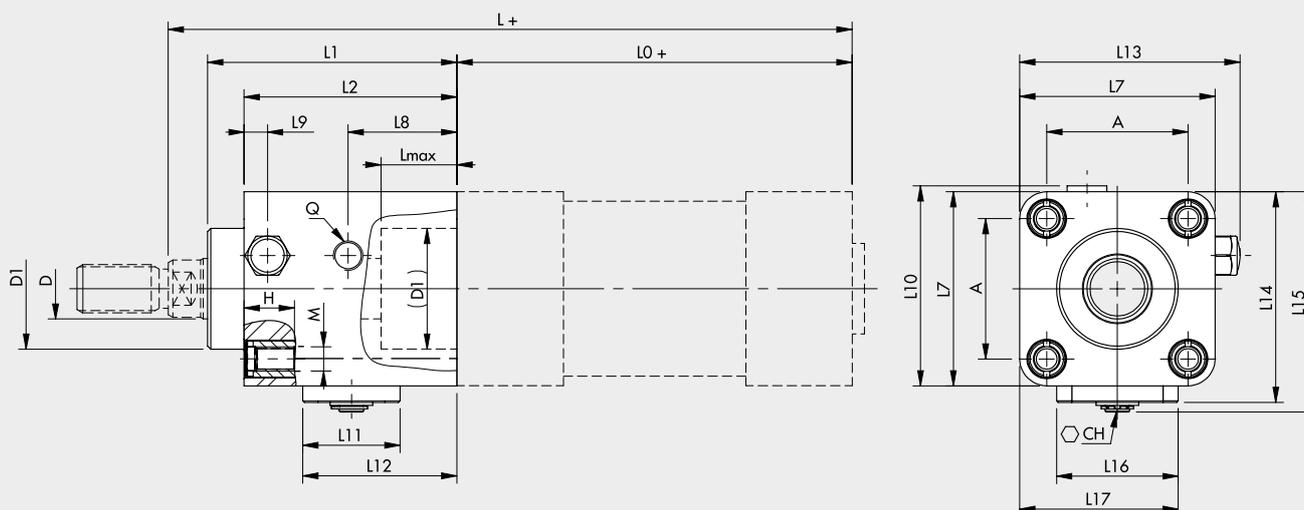
The hex key must be inserted in the hexagonal seat of the pin for the manual control (component 9 in the list of components) and used for the rotation of the same as shown in the figure.

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



DIMENSIONS

+ = ADD STROKE



VERSION WITH MANUAL CONTROL

Code	Ø	Lmax	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	16	58	48	46	25.2	9.5	48	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	20	65	55	54	26.9	6	56.5	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	25	82	70	64.3	35.8	7.7	66.5	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	25	82	70	76	34.6	8.7	78.5	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	33	110	90	94	41.3	14.7	96.5	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	38	115	100	111	49.8	18.2	113.5	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	45	167	122	135	67.5	23	137	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	Lmax	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	16	58	48	46	25.2	9.5	48	30	41.2	50.7	51.5	-	28	37	12	30	32.5	14.5	M6	M5	-	94	162	290
W5010020103	40	20	65	55	54	26.9	6	56.5	32	43.9	58.7	59.5	-	33	43.5	16	35	38	14.5	M6	G1/8	-	105	180	432
W5010020104	50	25	82	70	64.3	35.8	7.7	66.5	32	50.7	72.5	69.8	-	40	52.2	20	40	46.5	17.5	M8	G1/8	-	106	200	814
W5010020105	63	25	82	70	76	34.6	8.7	78.5	32	50.5	84.2	81.5	-	40	58	20	45	56.5	17.5	M8	G1/8	-	121	215	1044
W5010020106	80	33	110	90	94	41.3	14.7	96.5	47	66.1	102.2	103	-	65	79.5	25	45	72	21.5	M10	G1/8	-	128	251	2220
W5010020107	100	38	115	100	111	49.8	18.2	113.5	47	73.6	119.2	120	-	65	88.5	25	55	89	21.5	M10	G1/8	-	138	266	3350
W5010020108	125	45	167	122	135	67.5	23	137	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

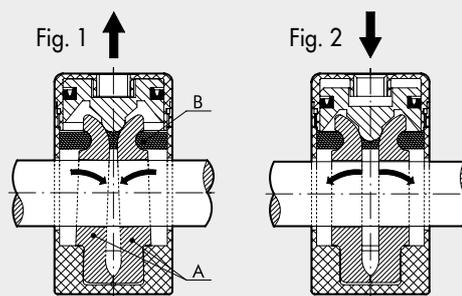
ACCESSORIES FOR ISO 15552 CYLINDERS

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
MATERIAL								
body		Aluminium						
pad		Brass						
spring		NBR						
piston		Synthetic material with added Teflon®						
gasket		NBR						
pilot port		M5 o 1/8"						



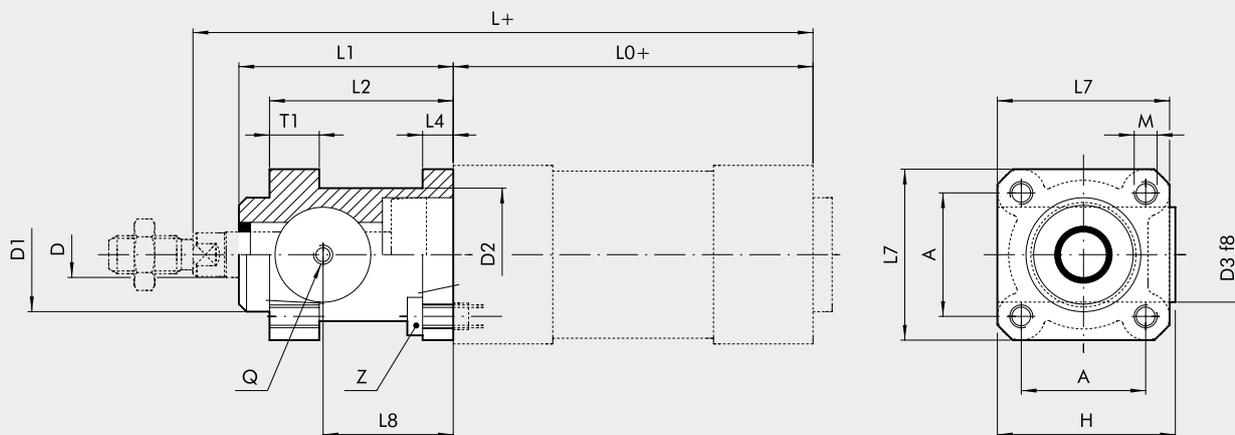
OPERATING PRINCIPLE

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 ₁	L ₂	L ₄	L ₇	L ₈	D	D ₁	D ₂	D ₃	H	A	T ₁	M	Z	Q	L ₀	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

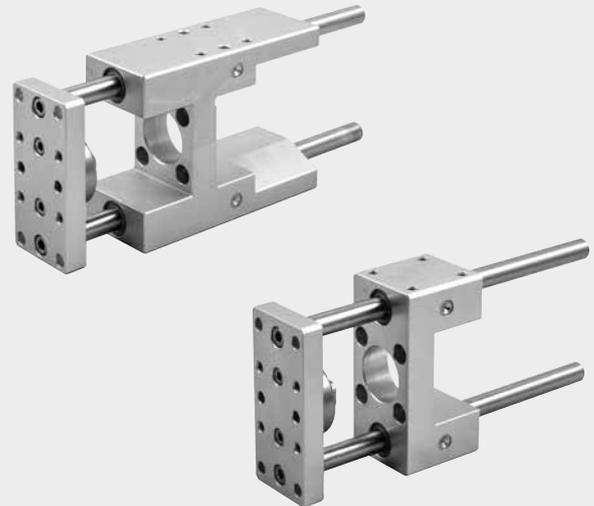
H PROFILE (GDM)**: for high speeds

* 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.



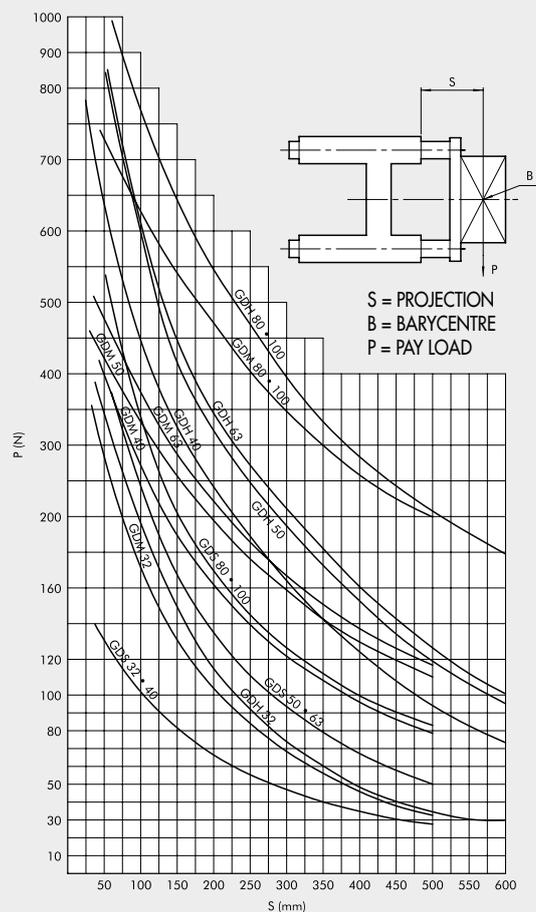
ACTUATORS

ACCESSORIES FOR ISO 15552 CYLINDERS

COMPONENTS

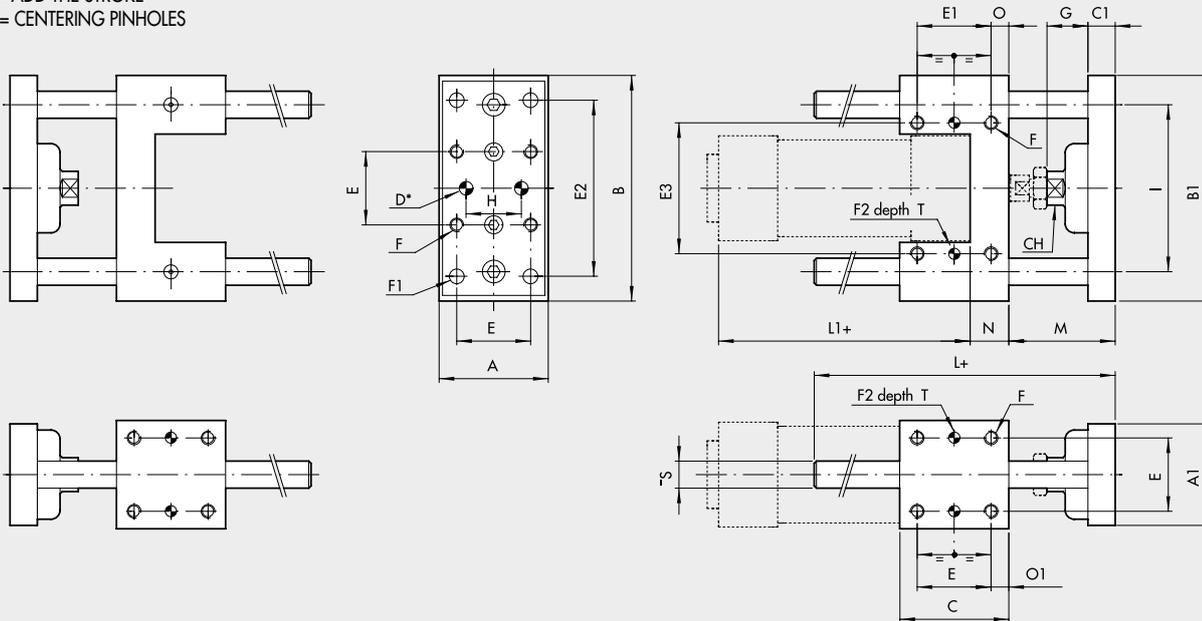
SERIES GDS-GDH	Body:	aluminium alloy
	Guide bushing:	self-lubricating sintered bronze and wiper rings
	Piston rod:	grinded chromed steel
SERIES GDM	Body:	aluminium alloy
	Guide bushing:	ball linear bearings and scraper ring
	Piston rod:	hardened, chromed and grinded steel

GRAPH OF GUIDE UNIT LOADS



DIMENSIONS TYPE GDS

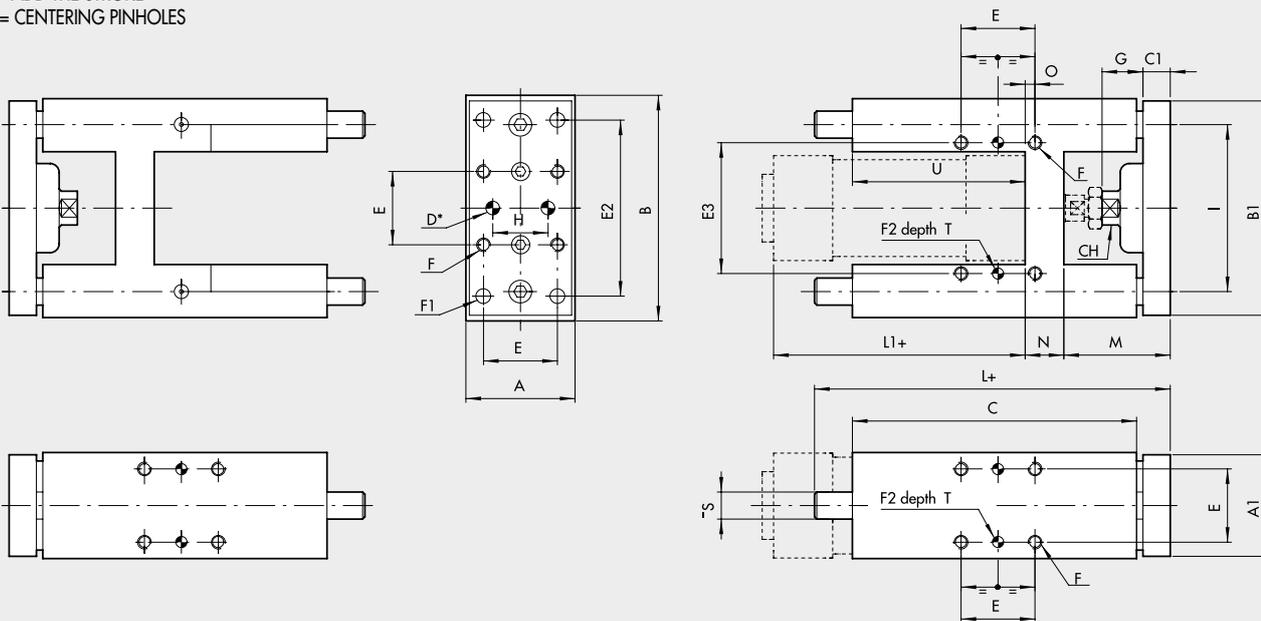
+ = ADD THE STROKE
* = CENTERING PINHOLES



Ø	A	A ₁	B	B ₁	C	C ₁	D ^{H7}	E	E ₁	E ₂	E ₃	F	F ₁	F ₂ ^{H7}	G	H	I	L	L ₁	M	N	O	O ₁	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	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

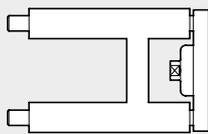
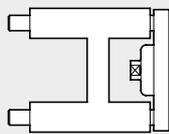
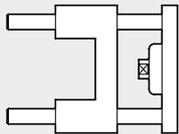
+ = ADD THE STROKE
* = CENTERING PINHOLES



Ø	A	A ₁	B	B ₁	C	C ₁	CH	D ^{H7}	E	E ₁	E ₂	E ₃	F	F ₁	F ₂ ^{H7}	G	H	I	L	L ₁	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

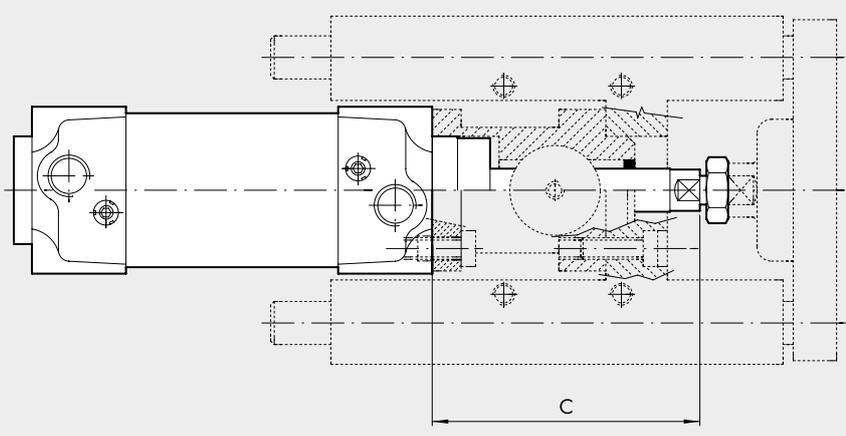
Version	Code	Bore	Type
Sliding on bronze bushings (GDS)	W0700321...	32	UNIT MW DS 032...
	W0700401...	40	UNIT MW DS 040...
	W0700501...	50	UNIT MW DS 050...
	W0700631...	63	UNIT MW DS 063...
	W0700801...	80	UNIT MW DS 080...
	W0701001...	100	UNIT MW DS 100...
Sliding on bronze bushings (GDH)	W0700322...*	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

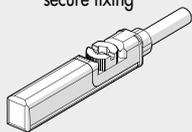
Ø	C
32	74
40	85
50	107
63	107
80	136
100	143



ACCESSORIES FOR ISO 15552 CYLINDERS: MAGNETIC SENSORS AND POSITION SENSOR

RETRACTABLE SENSOR

A SENSOR, SQUARE TYPE 
Latest generation,
secure fixing



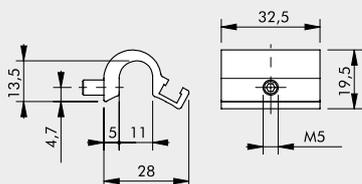
B SENSOR, OVAL TYPE 
Traditional



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

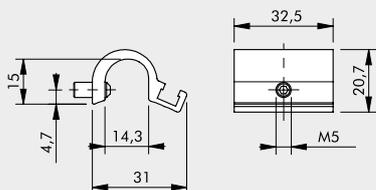
D SENSOR SUPPORT BRACKETS FOR SENSORS SQUARE TYPE AND OVAL TYPE

Ø 32 to 40



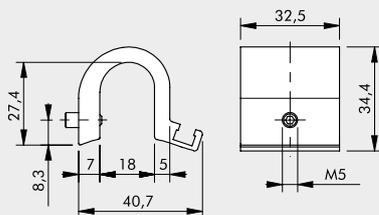
Code W0950001711
Description Bracket D.32-40

Ø 50 to 63



Code W0950001712
Description Bracket D.50-63

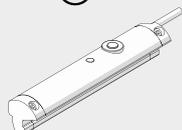
Ø 80 to 125



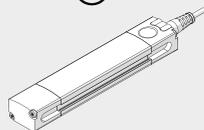
Code W0950001713
Description Bracket D.80-100-125-160

POSITION SENSOR

G LTS 



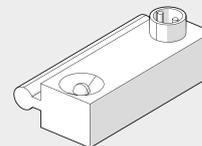
H LTL 



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

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

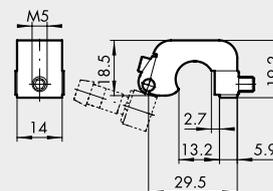
C SENSOR SERIES DSM



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

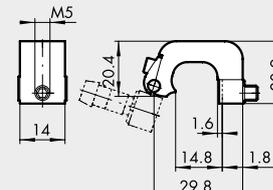
E SENSOR SUPPORT BRACKETS FOR SENSORS DSM

Ø 32 to 40



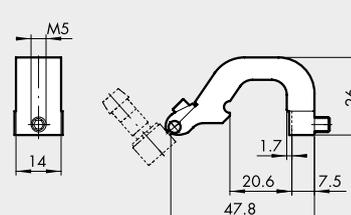
Code W0950000711
Description Bracket D.32-40 DST 80

Ø 50 to 63



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

Ø 80 to 125

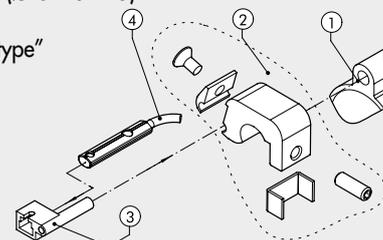


Code W0950000713
Description Bracket D.80-100-125 DST 82

F ADAPTER FOR OVAL TYPE RETRACTABLE SENSORS

ASSEMBLY DIAGRAM

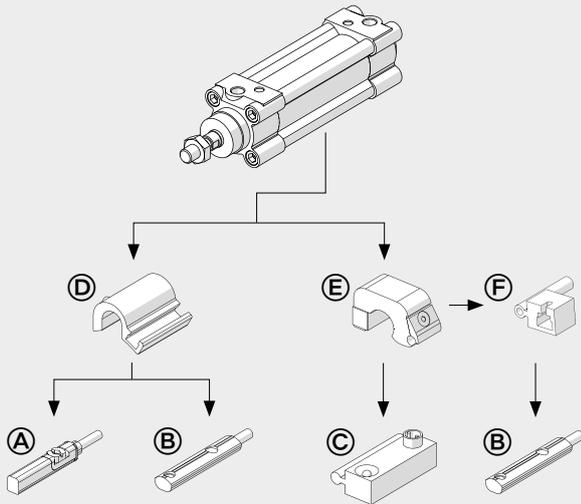
- ① ISO 15552 cylinder with serie STD or serie 3 barrel
- ② Sensor bracket mod. DST (Ø 32 to 125)
- ③ Adaptor
- ④ Retractable sensor "oval type"



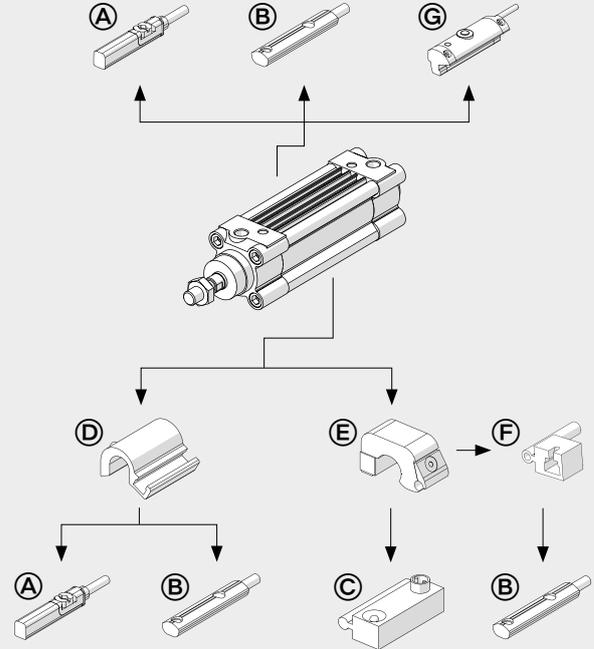
Code W0950001001
Description Adaptor DSS005 for DST/ST brackets

USE SENSORS

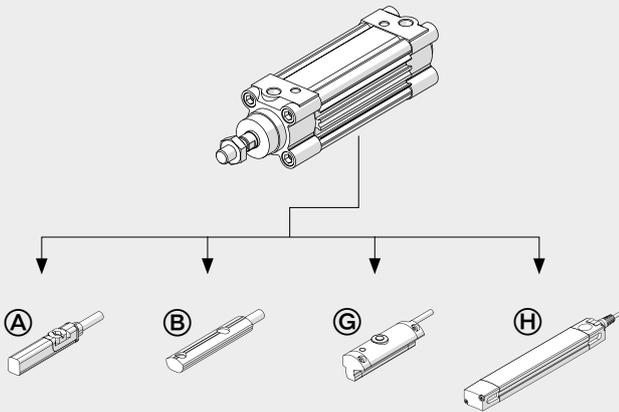
SERIES STD



SERIES 3



TYPE A



NOTES

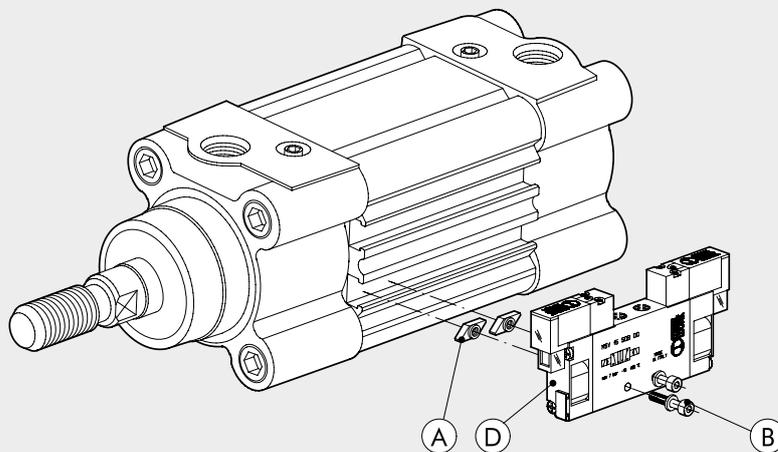
Blank area for notes.

VALVE ASSEMBLY ON CYLINDER FOR TYPE A AND SERIES 3 CYLINDERS

With this type of cylinder, the valves (D) can be mounted directly using the retracting sensor slot, without requiring the use of intermediate brackets.

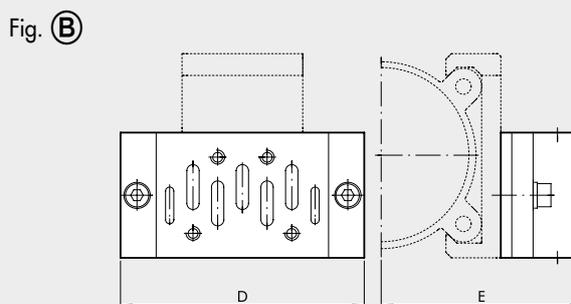
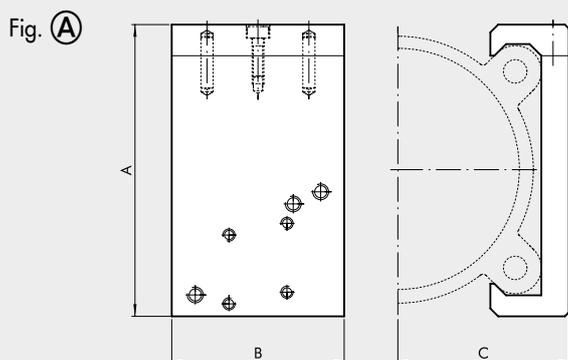
This can be done using the special plates (A), which come with both the M3 and M4 threads, and screws (B) of the size, type and quantity shown in the table below.

For ISO 1 and ISO 2 valves, the kit on which the valve is to be mounted (codes shown in the tables) will be fitted to the cylinder using the special plates (A) and the screws (B) listed in the table.



Type of valve to mount (D)	M3 fixing plate (A) code 0950003002	M4 fixing plate (A) code 0950003001	Screw (B) for connection to cylinder (one per plate)	Washer (B) (one per screw)	Valve assembly kit
MINIMACH	n° 2	-	M3x16 UNI 5931 (DIN 912)	A3.2 UNI 1751 (DIN 127A)	-
MACH 11	n° 2	-	M3x16 UNI 5931 (DIN 912)	A3.2 UNI 1751 (DIN 127A)	-
SERIE 70 1/8	-	n° 2	M4x25 UNI 5931 (DIN 912)	-	-
SERIE 70 1/4	-	n° 2	M4x30 UNI 5931 (DIN 912)	A4.3 UNI 1751 (DIN 127A)	-
SERIE 70 1/2	-	n° 2	M4x45 UNI 5931 (DIN 912)	A4.3 UNI 1751 (DIN 127A)	-
ISO 1	-	n° 2	M4x8 UNI 7688 (DIN 965A)	-	0950002001
ISO 2	-	n° 2	M4x8 UNI 7688 (DIN 965A)	-	0950002002

FIXING BRACKET SERIES KCV FOR TYPE STD AND SERIES 3 CYLINDERS



VALVE FIXING BRACKET - CYLINDER (Fig. A)

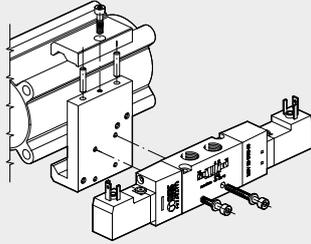
Code	Ø	A	B	C	D	ISO 1		ISO 2		Applicable valves	Weight [g]
						E	D	E			
0950322090	32	54	40	29.5	110	64.5	124	70.5	MACH 16 Series 70 1/8-1/4 ISO 1 - ISO 2	80	
0950402090	40	59.5	40	32.2	110	67.2	124	73.2	MACH 16 Series 70 1/8-1/4 ISO 1 - ISO 2	86	
0950502090	50	71.5	40	37	110	72	124	78	MACH 16 Series 70 1/8-1/4 ISO 1 - ISO 2	93	
0950632090	63	81.5	40	42	110	77	124	83	MACH 16 Series 70 1/8-1/4 ISO 1 - ISO 2	101	
0950802090	80	99	60	53.5	110	88.5	124	94.5	Series 70 1/8-1/4-1/2 ISO 1 - ISO 2	222	
0951002090	100	119.5	60	63.5	110	98.5	124	104.5	Series 70 1/8-1/4-1/2 ISO 1 - ISO 2	258	
0951252090	125	148	60	76.5	110	111.5	124	117.9	Series 70 1/8-1/4-1/2 ISO 1 - ISO 2	298	

KIT FOR FIXING VALVES TO BRACKETS, FOR SERIES KCV BRACKETS

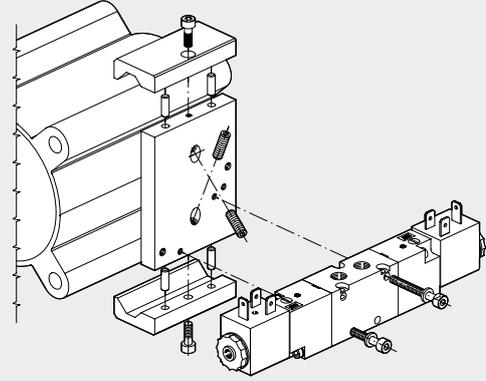
Code	Valve kit	Composition	Weight [g]
0950002003	MACH 16	2 hex. screws M3x25 with washer	4
0950002004	Series 70 1/8-1/4	2 hex. screws M4x30 with washer	8
0950002006	Series 70 1/2	2 hex. screws M5x50 with washer	20
0950002001	ISO 1	Adaptor + ISO 1 BASE SIDE + screws + washers (Fig.B)	230
0950002002	ISO 2	Adaptor + ISO 2 BASE SIDE + screws + washers (Fig.B)	350

VALVE ASSEMBLY ON CYLINDER

FOR Ø 32-40-50-63



FOR Ø 80-100-125



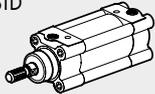
NOTES

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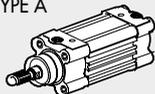
SPARE PARTS

CYLINDERS ISO 15552

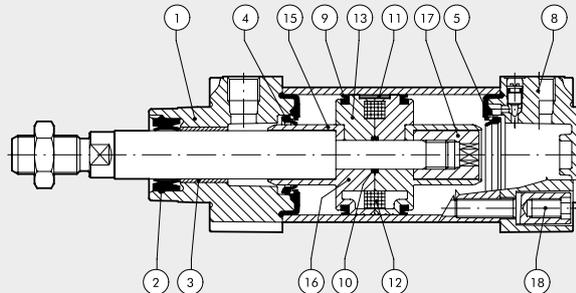
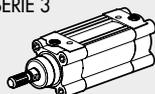
STD



TYPE A



SERIE 3



Code	Bore	Type	Parts
009 ... 0101	Ø 32 to 125	Complete set of polyurethane gaskets	2-4-5-9-10
009 ... 0103	Ø 32 to 125	Complete set of (high temperature) FKM/FPM gaskets	2-4-5-9-10
009 ... 0502	Ø 32 to 125	Complete set of NBR gaskets	2-4-5-9-10
009 ... 1651	Ø 32 to 125	Polyurethane piston rod gasket kit	2
009 ... 1652	Ø 32 to 125	NBR piston rod gasket kit + seeger	2
009 ... 1653	Ø 32 to 125	FKM/FPM piston rod gasket kit + seeger	2
009 ... 0110N	Ø 32 to 125	Complete polyurethane front head kit	1-2-3-4-5-18
009 ... 0304N	Ø 32 to 125	Complete NBR front head kit	1-2-3-4-5-18
009 ... 0122N	Ø 32 to 125	Complete R front head kit	1-2-3-4-5-18
009 ... 0120N	Ø 40 to 125	Complete M front head kit	1-2-3-4-5-18
009 ... 0111N	Ø 32 to 125	Complete polyurethane rear head kit	4-5-8-18
009 ... 0305N	Ø 32 to 125	Complete NBR rear head kit	4-5-8-18
009 ... 0604	Ø 32 to 63	Complete polyurethane piston kit	9-10-16-17
009 ... 0604	Ø 80 to 125	Complete polyurethane piston kit	9-10-11-13-15-17
009 ... 0602	Ø 32 to 63	Complete NBR piston kit	9-10-16-17
009 ... 0602	Ø 80 to 125	Complete NBR piston kit	9-10-11-13-15-17
009 ... 0704N	Ø 32 to 63	Complete polyurethane head front + rear + piston kit	1-2-3-4-5-8-9-10-16-17-18
009 ... 0704N	Ø 80 to 125	Complete polyurethane head front + rear + piston kit	1-2-3-4-5-8-9-10-11-13-15-17-18
009 ... 0702N	Ø 32 to 63	Complete NBR head front + rear + piston kit	1-2-3-4-5-8-9-10-16-17-18
009 ... 0702N	Ø 80 to 125	Complete NBR head front + rear + piston kit	1-2-3-4-5-8-9-10-11-13-15-17-18
009 ... 0800	Ø 32 to 125	Magnet	12

Notes

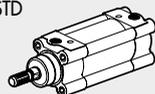
Cylinders in the R and M versions do not come with the single piston rod gasket.

When replacing all the gaskets in the R version cylinders, use the complete set of the R front head, code 009...0122N and the complete set of polyurethane gaskets code 009...0101 (the front head gaskets are in excess).

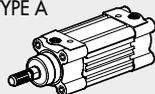
When replacing all the gaskets in the M version cylinders, use the complete set of the M front head, code 009...0120N and the complete set of FKM/FPM, code 009...0103 (the front head gaskets are in excess).

CYLINDERS ISO 15552 TWO-FLAT

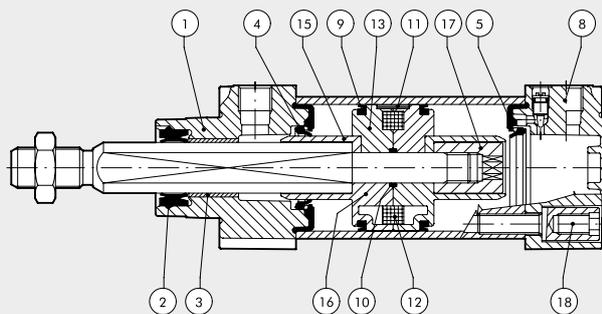
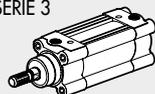
STD



TYPE A



SERIE 3



Code	Bore	Type	Parts
009 ... 0101F	Ø 32 to 63	Set of polyurethane gaskets	4-5-9-10
009 ... 0110FN	Ø 32 to 63	Complete polyurethane front head kit	1-2-3-4-5-18
009 ... 0111N	Ø 32 to 63	Complete polyurethane rear head kit	4-5-8-18
009 ... 0604	Ø 32 to 63	Complete polyurethane piston kit	9-10-16-17
009 ... 0704FN	Ø 32 to 63	Complete polyurethane head front+rear+piston kit	1-2-3-4-5-8-9-10-16-17-18
009 ... 0800	Ø 32 to 63	Magnet	12

ISO 15552 CYLINDER – SERIES MCR (Medium Corrosion Resistance)



In some applications, cylinders are exposed to certain environments that may shorten the life of surface treatments normally used for heads and screws. For example, this is the case in outdoor applications, where UV-rays, weathering and sometimes chemical agents cause damage to the coating of the cylinder heads and the screw zinc-plating. MCR series cylinders have been designed for such applications, with an anodized head, chemically nickel-plated clamping screws and a stainless steel cushioning pin.

MCR cylinders are made to ISO 15552. They come either with a STD or Series 3 liner, chromium-plated and polished stainless steel piston rod, and are fitted with the main seals recommended for ISO 15552 cylinders.

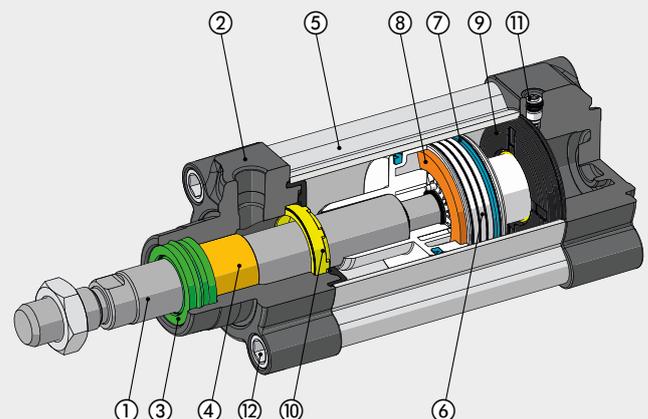
They can be fitted with the accessories usually recommended for ISO 15552 cylinders and those specific to the HCR series.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Max operating pressure	bar				10			
	MPa				1			
	psi				145			
Temperature range	POLYURETHANE °C				-25 to +80			
	NBR °C				-10 to +80			
	FKM/FPM °C				-10 to +150 (non-magnetic cylinders)			
	Low temperature °C				-40 to +80			
	Other piston rod gasket °C				See page A1.27			
Resistance in corrosive environments at 20°C					Basic solution (sodium hydroxide - pH max 9) Acid solution (hydrochloric acid - pH min. 5.5) Salt mist testing to DIN 50021-SS, 300 hours			
Fluid					Unlubricated air. Lubrication, if used, must be continuous			
Standard strokes	mm				1 to 2800		1 to 2600	
Versions					Double-acting cushioned, Double-acting non-cushioned, Through-rod cushioned			
Sensor magnet					Available magnetic and non-magnetic versions			
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			

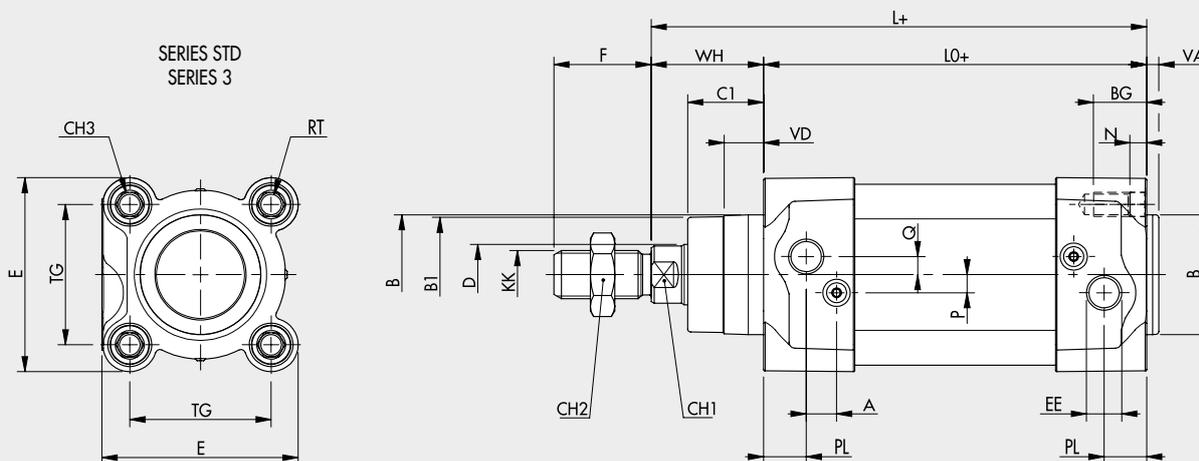
COMPONENTS

- ① PISTON ROD: stainless steel, thickness-chromed
- ② HEAD: anodized pressure die-cast aluminium
- ③ PISTON ROD GASKET: polyurethane, NBR or FKM/FPM
- ④ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑤ BARREL: drawn anodized calibrated aluminium
- ⑥ SEMI-PISTON: made of self-lubricating technopolymer with built-in cushioning olives (aluminium with technopolymer pad for Ø 80, 100 and 125)
- ⑦ PISTON GASKET: polyurethane, NBR or FKM/FPM
- ⑧ MAGNET: plastoferrite
- ⑨ BUFFER + Static O-rings: NBR or FKM/FPM
- ⑩ CUSHIONING GASKET: polyurethane, NBR or FKM/FPM
- ⑪ CUSHIONING NEEDLE: stainless steel
- ⑫ SCREWS: tap Tite for assembly, chemically nickel-plated



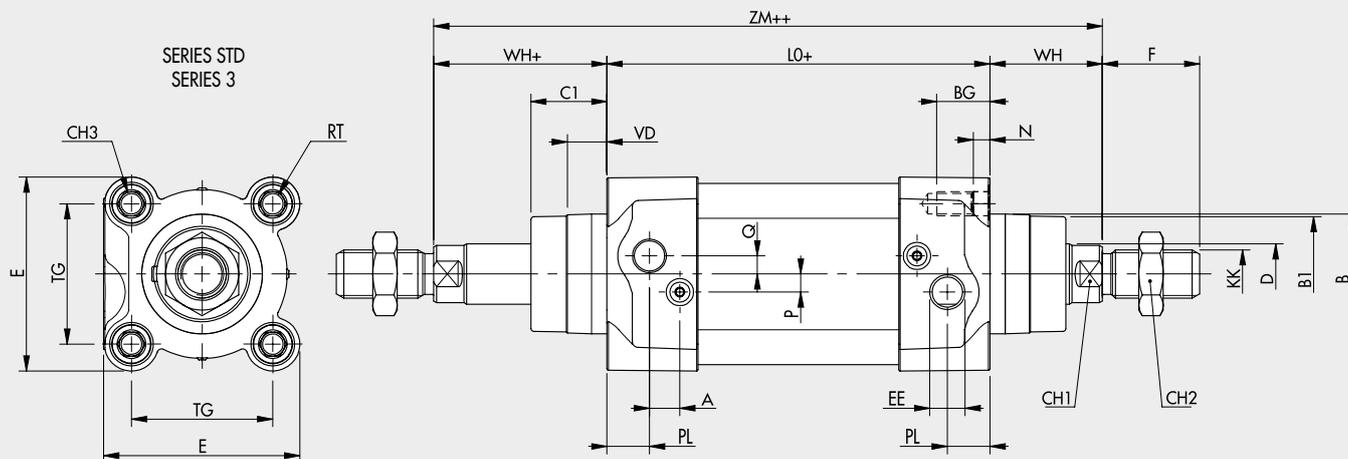
DIMENSIONS

STANDARD VERSION



THROUGH-ROD VERSION

+ = ADD STROKE
 ++ = ADD TWICE THE STROKE



Ø	PL	VD	A	B	B ₁	WH	C ₁	CH ₁	CH ₂	CH ₃	KK	D	TG	VA	F	EE	RT	E	L	L ₀	ZM	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	6	M10x1.25	12	32.5	4	22	G1/8	M6	46	120	94	146	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	6	M12x1.25	16	38	4	24	G1/4	M6	54	135	105	165	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	8	M16x1.5	20	46.5	4	32	G1/4	M8	64.5	143	106	180	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	8	M16x1.5	20	56.5	4	32	G3/8	M8	75.5	158	121	195	17.5	5.5	6	6
80	18	12	12	45	43	46	33	22	30	10	M20x1.5	25	72	4	40	G3/8	M10	94	174	128	220	21.5	5.5	10	7
100	20	14	12	55	49	51	38	22	30	10	M20x1.5	25	89	4	40	G1/2	M10	111	189	138	240	21.5	5.5	10	7
125	25	20	10	60	54	65	45	27	41	12	M27x2	32	110	6	54	G1/2	M12	135	225	160	290	25.5	6.5	12	8

KEY TO CODES

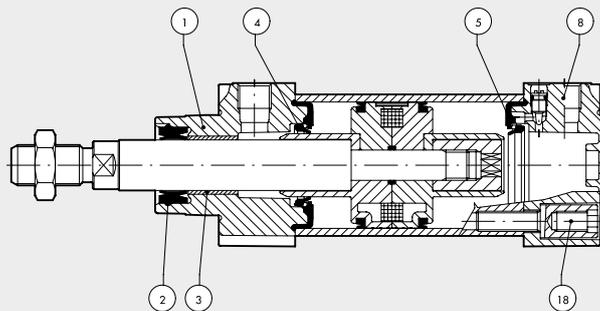
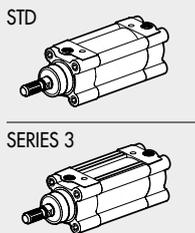
CYL	1 2 1 TYPE	0	32 BORE	0050 STROKE	E MATERIAL	P GASKETS
	121 Double-acting, cushioned	0 Diameter	32	Ø 32 to 80	E AISI 303 piston rod, technopolymer piston: standard for cylinders of Ø32 to Ø63	N NBR gaskets
▲	122 Through-rod	5 Standard	40	stroke 1 to 2800 mm	Y AISI 303 piston rod, aluminium piston: standard for all cylinders from Ø80 to Ø125, from Ø32 to Ø63 with strokes > 999 and Ø32 to 125 for through piston rod versions	P Polyurethane gaskets
	124 Double-acting, non-cushioned	3 Series 3	50	Ø 100 to 125		▲ V FKM/FPM gaskets
		5 Series 3	63	stroke 1 to 2600 mm		▲ B Low temperature
		Non-magnetic	80			C "Combi" piston rod gasket
		Non-magnetic	■ 100			R "Hard PU" piston rod gasket
			■ 125			

- ▲ Only available for versions with aluminium piston (Y)
- In the code of cylinder with digit 3, 4 or 5 in fourth position bore 100 becomes A1; bore 125 becomes A2

ACCESSORIES

They can be fitted with the accessories recommended for ISO 15552 cylinders and those specific to HCR ISO 15552 cylinders.

SPARE PARTS



Code	Bore	Type	Parts
009 ... 0129N	Ø 32 to 125	Complete polyurethane MCR front head kit	1-2-3-4-5-18
009 ... 0131N	Ø 32 to 125	Complete NBR MCR front head kit	1-2-3-4-5-18
009 ... 0130N	Ø 32 to 125	Complete polyurethane MCR rear head kit	4-5-8-18
009 ... 0132N	Ø 32 to 125	Complete NBR MCR rear head kit	4-5-8-18

Notes
Cylinders in the R version do not come with the single piston rod gasket.

NOTES

Blank lined area for notes.

ISO 15552 CYLINDER – SERIES HCR (High Corrosion Resistance)



In some applications, the cylinders are exposed to aggressive environments (e.g. the dairy, fruit & vegetable and food industry) or to substances and washings with aggressive detergents (e.g. caustic soda, hydrochloric acid and lactic acid).

Under these conditions, the HCR series cylinders ensure better corrosion resistance.

Cylinders made to ISO 15552, designed and built with materials and/or surface treatments that are highly resistant to corrosion.

They come in various versions and with a specific range of accessories:

- with or without magnet
- with single or through piston rod

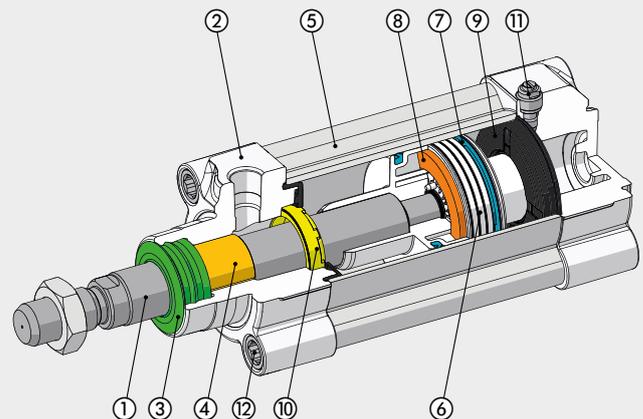
Also available with liner in the STD series or series 3.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Max operating pressure	bar				10			
	MPa				1			
	psi				145			
Temperature range	°C				-10 to +60			
Resistance in corrosive environments at 20°C					Basic solution (sodium hydroxide - pH max 12)			
					Acid solution (hydrochloric acid - pH min. 2.5)			
					Salt mist testing to DIN 50021-SS, 500 hours			
Fluid					Unlubricated air. Lubrication, if used, must be continuous			
Standard strokes	mm				1 to 2800		1 to 2600	
Versions					Double-acting, Double-acting cushioned, Through-rod cushioned			
Sensor magnet					Available magnetic and non-magnetic versions.			
Gaskets					Piston rod gaskets made of polyurethane, other gaskets in NBR			
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			

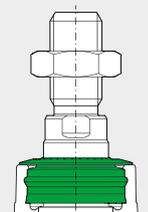
COMPONENTS

- PISTON ROD: AISI 316, thickness-chromed
- HEAD: anodized pressure die-cast aluminium, polyurethane coating
- PISTON ROD GASKET: special polyurethane
- GUIDE BUSHING: steel strip with bronze and PTFE insert
- BARREL: drawn anodized calibrated aluminium
- SEMI-PISTON: made of self-lubricating technopolymer with built-in cushioning olives (aluminium with technopolymer pad for Ø 80, 10 and 125)
- PISTON GASKET: NBR
- MAGNET: plastoferrite
- BUFFER + Static O-rings: NBR
- CUSHIONING GASKET: NBR
- NEEDLE: AISI 316
- SCREWS: AISI 316



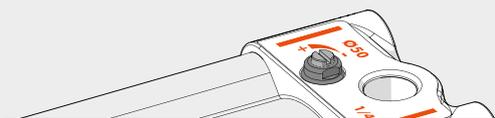
PISTON ROD GASKET FOR HYGIENICALLY-SENSITIVE APPLICATIONS

No fluid stagnation, not even with cylinder in upward direction. This type of gasket is not available for Ø 125.



CUSHIONING PINS WITHOUT RECESSES

Anti-ejection pin and bushing made of AISI 316 stainless steel, protruding from the head and with a pass-through screwdriver slot to prevent fluid stagnation.



DOUBLE HEAD PROTECTION

POLYURETHANE COATING

ANODISATION

HEAD MADE OF PRESSURE DIE-CAST ALUMINIUM ALLOY

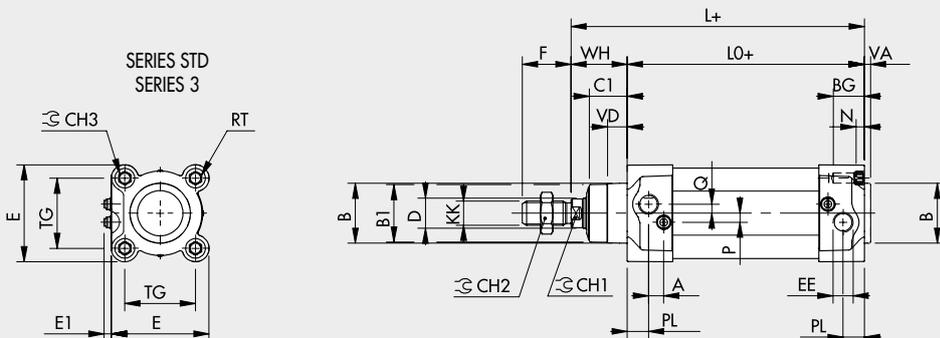
FOOD GRADE GREASE

NSF H1 certified. Adhesive, waterproof.

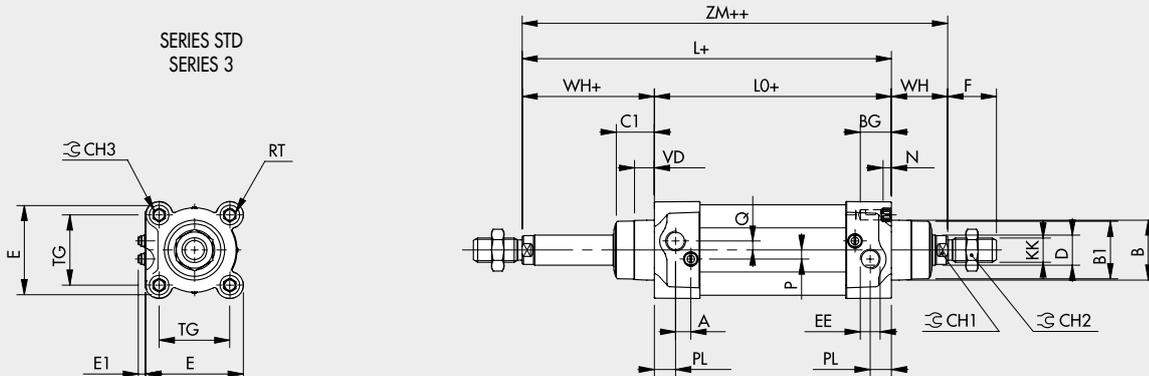


DIMENSIONS

STANDARD VERSION



THROUGH-ROD VERSION



+ = ADD STROKE
++ = ADD TWICE THE STROKE

Ø	PL	VD	A	B	B1	WH	C1	CH1	CH2	CH3	KK	D	TG	VA	F	EE	RT	E	E1 min	E1 max	L	LO	ZM	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	6	M10x1.25	12	32.5	4	22	G1/8	M6	46	5.5	8.4	120	94	146	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	6	M12x1.25	16	38	4	24	G1/4	M6	54	4.5	8.4	135	105	165	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	8	M16x1.5	20	46.5	4	32	G1/4	M8	64.5	4.5	8.9	143	106	180	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	8	M16x1.5	20	56.5	4	32	G3/8	M8	75.5	4.1	9.5	158	121	195	17.5	5.5	6	6
80	18	12	12	45	43	46	33	22	30	10	M20x1.5	25	72	4	40	G3/8	M10	94	6.2	12.2	174	128	220	21.5	5.5	10	7
100	20	14	12	55	49	51	38	22	30	10	M20x1.5	25	89	4	40	G1/2	M10	111	6.7	12.2	189	138	240	21.5	5.5	10	7
125	25	20	10	60	54	65	45	27	41	12	M27x2	32	110	6	54	G1/2	M12	135	5.7	12.7	225	160	290	25.5	6.5	12	8

KEY TO CODES

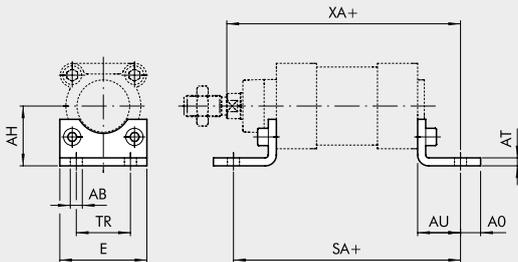
CYL	1 2 1 TYPE	0	32 BORE	0050 STROKE	B MATERIAL	L GASKETS
	121 Double-acting, cushioned	0 Diameter	32	For the maximum	B AISI 316 piston rod, technopolymer piston: standard for cylinders of Ø32 to Ø63	L Piston rod gaskets made of special polyurethane; other gaskets made of NBR
	▲ 122 Through-rod	5 Standard Non-magnetic	40	suppliable strokes, look at the technical data	W AISI 316 piston rod, aluminium piston: standard for all cylinders from Ø80 to 125, Ø32 to 63 with strokes > 999 and Ø32 to 125 for through piston rod versions	
	124 Double-acting, non-cushioned	3 Series 3	50			
		5 Series 3 Non-magnetic	63			
			80			
			■ 100			
			■ 125			

- ▲ Only available for versions with aluminium piston (W)
- In the code of cylinder with digit S, 3 or 5 in fourth position bore 100 becomes A1; bore 125 becomes A2

ACCESSORIES: FIXINGS

STAINLESS STEEL SHORT FOOT MOUNTING (AISI 304)

+ = ADD THE STROKE

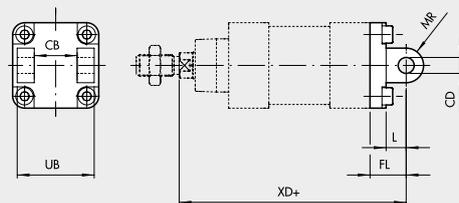


Code	Ø	øAB	AH	AO	AT	AU	TR	E	XA	SA	Weight [g]
W095X322001	32	7	32	11	4	24	32	45	144	142	85
W095X402001	40	10	36	8	4	28	36	52	163	161	95
W095X502001	50	10	45	15	5	32	45	65	175	170	200
W095X632001	63	10	50	13	5	32	50	75	190	185	225
W095X802001	80	12	63	14	6	41	63	95	215	210	435
W095XA12001	100	14.5	71	16	6	41	75	115	230	220	555
W095XA22001	125	16.5	90	25	8	45	90	140	270	250	1145

Note: Individually packed with 2 screws

STAINLESS STEEL FEMALE HINGE - MODEL B (AISI 304)

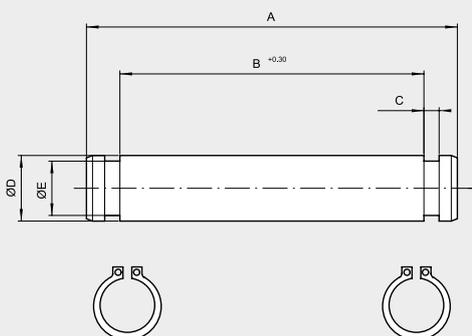
+ = ADD THE STROKE



Code	Ø	UB	CB ^{H14}	FL	CD ^{H9}	XD	MR	L	Weight [g]
W095X322003	32	45	26	22	10	142	10	13	175
W095X402003	40	52	28	25	12	160	12	16	250
W095X502003	50	60	32	27	12	170	12	16	425
W095X632003	63	70	40	32	16	190	16	21	635
W095X802003	80	90	50	36	16	210	16	22	1270
W095XA12003	100	110	60	41	20	230	20	27	2000
W095XA22003	125	130	70	50	25	275	25	30	3715

Note: Supplied with 4 screws. WITHOUT PIN.

STAINLESS STEEL FEMALE HINGE PIN (AISI 304)

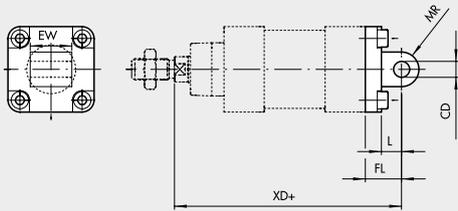


Code	Ø	A	B	C ^{H13}	ØD ^{e8}	ØE ^{h11}	Weight [g]
W095X322050	32	53	46	1.1	10	9.6	35
W095X402050	40	60	53	1.1	12	11.5	55
W095X502050	50	68	61	1.1	12	11.5	65
W095X632050	63	78	71	1.1	16	15.2	125
W095X802050	80	98	91	1.1	16	15.2	160
W095XA12050	100	118	111	1.3	20	19	295
W095XA22050	125	139	132	1.3	25	23.9	540

Note: Supplied with 2 snap-rings

STAINLESS STEEL MALE HINGE - MODEL BA (AISI 304)

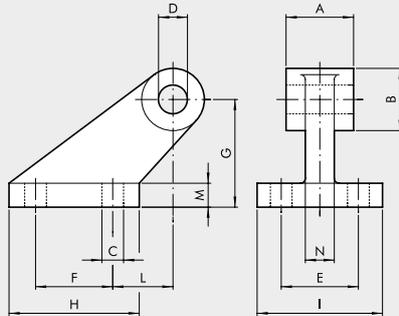
+ = ADD THE STROKE



Code	Ø	EW	FL	MR	CD ^{H9}	L	XD	Weight [g]
W095X322004	32	26	22	10	10	13	142	195
W095X402004	40	28	25	12	12	16	160	265
W095X502004	50	32	27	12	12	16	170	445
W095X632004	63	40	32	16	16	21	190	715
W095X802004	80	50	36	16	16	22	210	1375
W095XA12004	100	60	41	20	20	27	230	2165
W095XA22004	125	70	50	25	25	30	275	3800

Note: Supplied with 4 screws.

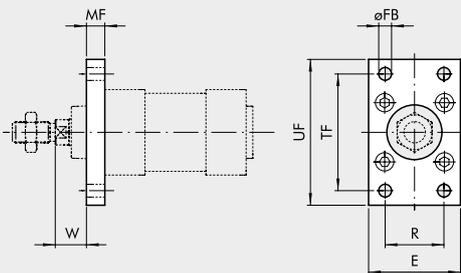
STAINLESS STEEL ISO COUNTER-HINGE FOR MODEL B - MODEL GL (AISI 304)



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	Weight [g]
W095X322008	32	26	20	6.6	10	38	18	32	31	51	3	8	10	165
W095X402008	40	28	22	6.6	12	41	22	36	35	54	2	10	15	235
W095X502008	50	32	26	9	12	50	30	45	45	65	3	12	16	460
W095X632008	63	40	30	9	16	52	35	50	50	67	2	14	16	590
W095X802008	80	50	30	11	16	66	40	63	60	86	7	14	20	1000
W095XA12008	100	60	38	11	20	76	50	71	70	96	5	17	20	1515
W095XA22008	125	70	45	14	25	94	60	90	90	124	10	20	30	3170

Note: Individually packed

STAINLESS STEEL FRONT FLANGE - MODEL C (AISI 304)

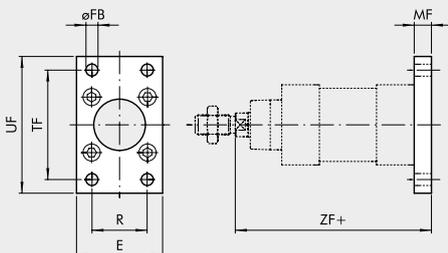


Code	Ø	UF	TF	E	R	MF	øFB	W	Weight [g]
W095X322002	32	80	64	45	32	10	7	16	220
W095X402002	40	90	72	52	36	10	9	20	280
W095X502002	50	110	90	65	45	12	9	25	540
W095X632002	63	120	100	75	50	12	9	25	680
W095X802002	80	150	126	95	63	16	12	30	1550
W095XA12002	100	170	150	115	75	16	14	35	2100
W095XA22002	125	205	180	140	90	20	16	45	3950

Note: Supplied with 4 screws

STAINLESS STEEL REAR FLANGE - MODEL C (AISI 304)

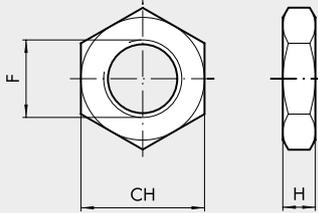
+ = ADD THE STROKE



Code	Ø	UF	TF	E	R	MF	øFB	ZF	Weight [g]
W095X322002	32	80	64	45	32	10	7	105	220
W095X402002	40	90	72	52	36	10	9	115	280
W095X502002	50	110	90	65	45	12	9	118	540
W095X632002	63	120	100	75	50	12	9	133	680
W095X802002	80	150	126	95	63	16	12	144	1550
W095XA12002	100	170	150	115	75	16	14	154	2100
W095XA22002	125	205	180	140	90	20	16	245	3950

Note: Supplied with 4 screws

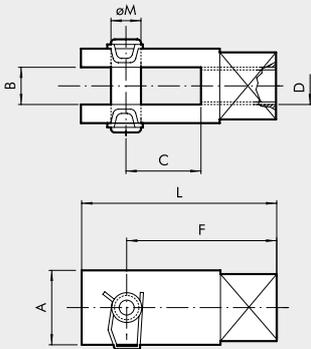
STAINLESS STEEL NUT FOR PISTON RODS (AISI 316)



Code	Ø	F	H	CH	Weight [g]
W095X322011	32	M10x1.25	6	17	8
W095X402011	40	M12x1.25	6	19	11
W095X502011	50	M16x1.5	8	24	18
W095X502011	63	M16x1.5	8	24	18
W095X802011	80	M20x1.5	10	30	31
W095X802011	100	M20x1.5	10	30	31
W095XA22011	125	M27x2	13.5	41	81

Note: Individually packed

STAINLESS STEEL FORK-MODEL GK-M (AISI 304)



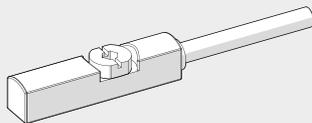
Code	Ø	A	B	C	D	F	L	øM	Weight [g]
W095X322020	32	20	10	20	M10x1.25	40	52	10	90
W095X402020	40	24	12	24	M12x1.25	48	62	12	145
W095X502020	50	32	16	32	M16x1.5	64	83	16	325
W095X502020	63	32	16	32	M16x1.5	64	83	16	325
W095X802020	80	40	20	40	M20x1.5	80	105	20	680
W095X802020	100	40	20	40	M20x1.5	80	105	20	680

Note: Individually packed

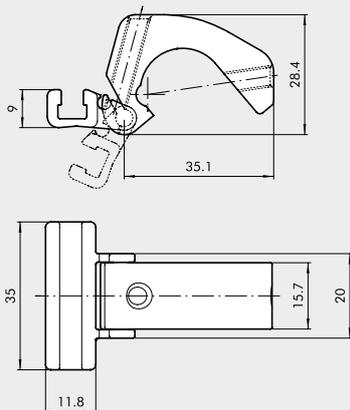
ACCESSORIES: MAGNETIC SENSORS

RETRACTABLE SENSOR, SQUARE TYPE (FOR CORROSIVE ENVIRONMENTS)

For codes and technical data, see [chapter A6](#).



SENSOR BRACKET



Code	Bore	Description
W0950001100	32 to 125	Sensor bracket

Note: Individually packed

MATERIAL
 Bracket: aluminium
 Sensor holder: aluminium
 Fixing screw: stainless steel

TWIN-ROD CYLINDER SERIES TWNC

Anti-rotation cylinders with axial dimensions to ISO 15552.

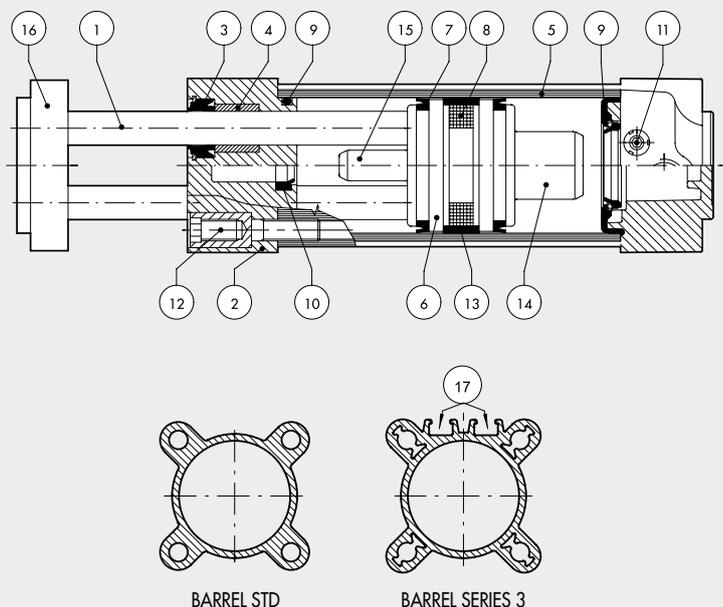
- standard configuration with magnet
- double-acting cushioned
- twinner rods, twinner rods and single through-rod
- rods in C45 steel or stainless steel, thick chromed
- available with STD or series 3 barrel.



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
Max operating pressure	bar				10		
	MPa				1		
	psi				145		
Temperature range	°C				-10 to +80		
Design					Extruded profile		
Fluid					Filtered, unlubricated air. Lubrication, if used, must be continuous.		
Standard strokes †	mm				25 to 500		
Versions					Double-acting cushioned, Double-acting cushioned single through-rod		
Sensor magnet					Available magnetic versions		
Forces generated at 6 bar thrust/retraction	N	434/350	678/597	1060/940	1683/1471	2714/2295	4241/3812
Weights					See cylinder "General technical data" at the beginning of the chapter		
Notes					† Maximum recommended strokes. Higher values can create operating problems		

COMPONENTS

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: aluminium alloy
- ③ PISTON ROD GASKET: polyurethane
- ④ GUIDE BUSHING: sintered bronze
- ⑤ BARREL: drawn anodized aluminium alloy
- ⑥ PISTON: aluminium alloy
- ⑦ PISTON GASKET: polyurethane
- ⑧ MAGNET: plastoferrite
- ⑨ BUFFER+STATIC O-rings: NBR
- ⑩ CUSHIONING GASKET: front NBR, rear polyurethane
- ⑪ NEEDLE: OT 58 brass
- ⑫ SCREWS: Tap Tite for fixing and assembly
- ⑬ GUIDE RING: special technopolymer
- ⑭ REAR CUSHIONING CONE: OT58 brass
- ⑮ FRONT CUSHIONING CONE: aluminium
- ⑯ FLANGE: zinc-plated steel
- ⑰ GROVES FOR SQUARE AND OVAL SENSORS

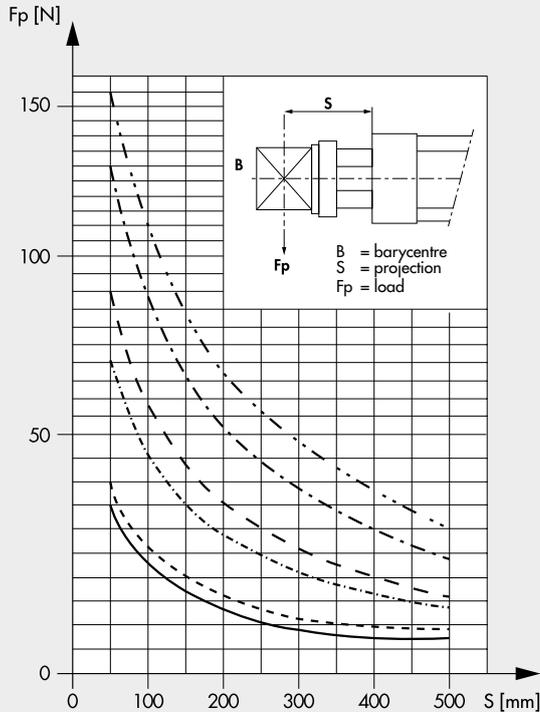


BARREL STD

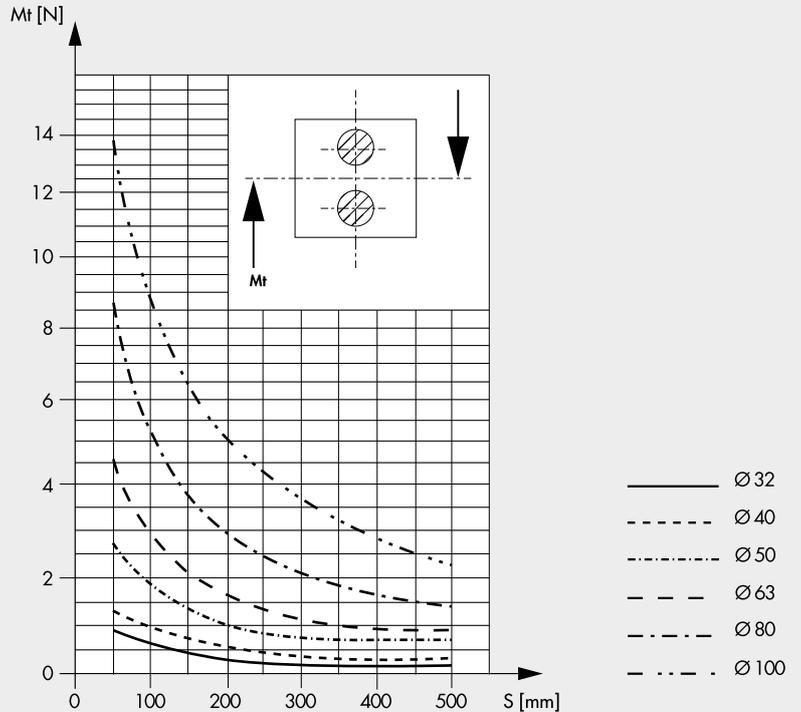
BARREL SERIES 3

PERMISSIBLE LOADS

FLEXION LOADS

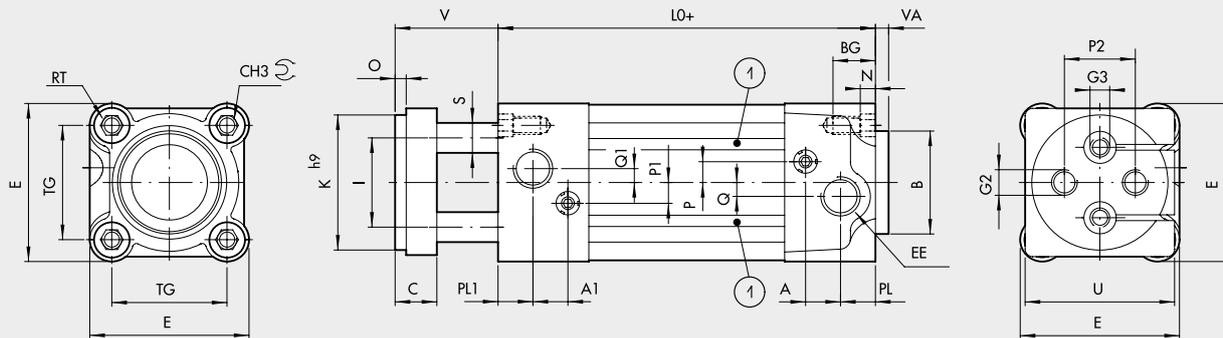


TWISTING MOMENTS

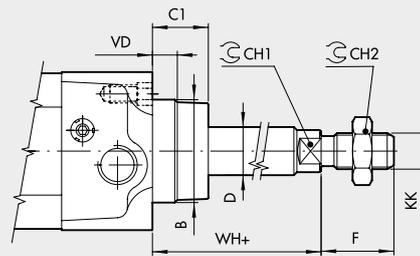


DIMENSIONS

TWIN ROD VERSION (W140)



SINGLE THROUGH-ROD VERSION (W142)



+ = ADD THE STROKE
 1 = GROVES FOR SQUARE AND OVAL SENSORS (only for series 3)

\varnothing	PL	PL1	A	A1	B	CH1	CH2	CH3	TG	VA	EE	RT	E	L0	BG	N	P	P1	P2	Q	QC	C1	D	F	I	K ^{h9}	KK	S	O	V	VD	U	G2	G3	WH	
32	10	13	10	10.5	30	10	17	6	32.5	4	G1/8	M6	46	100	14.5	4.5	6	8	19	4	-	15	16	12	22	18	32	M10x1.25	10	4	40	6.5	45	M6	-	26
40	12	12	10	10	35	13	19	6	38	4	G1/4	M6	54	100	14.5	4.5	6	6	22	4	4	15	20	16	24	22	40	M12x1.25	10	4	40	8	49	M8	-	30
50	14	14	10	10	40	17	24	8	46.5	4	G1/4	M8	64.5	106	17.5	5.5	6	6	30	6	6	18	25	20	32	30	50	M16x1.5	12	5	43	13	54	M8	M8	37
63	16	16	10	10	45	17	24	8	56.5	4	G3/8	M8	75.5	116	17.5	5.5	6	6	38	6	6	22	25	20	32	38	63	M16x1.5	16	5	47	14	69	M10	M10	37
80	18	18	12	12	45	22	30	10	72	4	G3/8	M10	94	131	21.5	5.5	10	10	50	7	7	25	33	25	40	48	80	M20x1.5	22	5	50	12	89	M12	M12	46
100	20	20	12	12	55	22	30	10	89	4	G1/2	M10	111	138	21.5	5.5	10	10	70	7	7	25	38	25	40	60	100	M20x1.5	22	5	50	14	109	M12	M12	51

KEY TO CODES VERSION STD

CYL	W 1 4 0 TYPE	0 3 2 BORES	0 0 2 5 STROKE	► X MATERIAL
	W140 Double-acting, magnetic, cushioned	032	+ 0025 to 0500 mm	X Piston rod AISI 303
	W142 Double-acting, magnetic, cushioned single through-rod	040		
		050		
		063		
		080		
		100		

- + Maximum recommended strokes. Higher values can create operating problems.
- Letter to be added only for the Stainless steel piston rod version

KEY TO CODES VERSION 3 SERIES

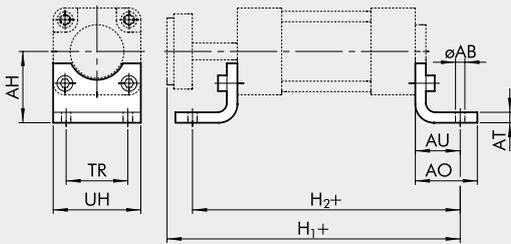
CYL	W 1 4 0 TYPE	3 EXECUTION	3 2 BORE	0 0 2 5 STROKE	► X MATERIAL
	W140 Double-acting, magnetic, cushioned	3 Series 3	32	+ 0025 to 0500 mm	X Piston rod AISI 303
	W142 Double-acting, magnetic, cushioned single through-rod		40		
			50		
			63		
			80		
			A1 = 100		

- + Maximum recommended strokes. Higher values can create operating problems.
- Letter to be added only for the Stainless steel piston rod version

ACCESSORIES: FIXINGS

FOOT - MODEL A/S

+ = ADD THE STROKE

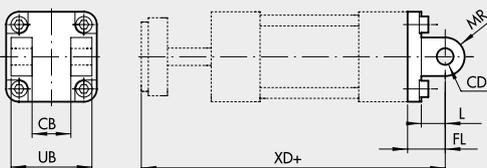


Code	Ø	AB	AH	AO	AT	AU	TR	UH	H ₁	H ₂	Weight [g]
W0950323001	32	7	32	35	4	24	32	45	164	148	76
W0950403001	40	9	36	43	4	28	36	52	168	156	98
W0950503001	50	9	45	47	4	32	45	65	181	170	156
W0950633001	63	9	50	47	6	32	50	75	195	180	246
W0950803001	80	12	63	61	6	41	63	95	222	213	406
W0951003001	100	14	71	66	6	41	75	115	229	220	540

Note: Individually packed with 2 screws
For fixing the leg to the supporting surface, it is advisable to use a DIN 7984 sunk-headed screw

FEMALE HINGE - MODEL B

+ = ADD THE STROKE

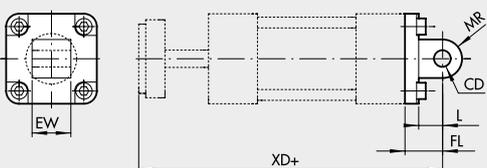


Code	Ø	CB ^{H14}	FL	MR	CD ^{H9}	L	XD	UB ^{H14}	Weight [g]
W0950322003	32	26	22	11	10	12	162	45	116
W0950402003	40	28	25	13	12	15	165	52	160
W0950502003	50	32	27	13	12	15	176	60	252
W0950632003	63	40	32	17	16	20	195	70	394
W0950802003	80	50	36	17	16	20	217	90	670
W0951002003	100	60	41	21	20	25	229	110	1085

Note: Supplied with 4 screws, 4 washers, 2 snap-rings and 1 pin

MALE HINGE - MODEL BA

+ = ADD THE STROKE

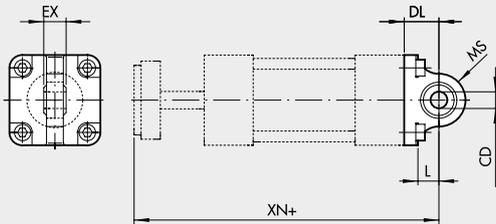


Code	Ø	EW	FL	MR	CD ^{H9}	L	XD	Weight [g]
W0950322004	32	26	22	10	10	13	162	94
W0950402004	40	28	25	12	12	16	165	124
W0950502004	50	32	27	12	12	16	176	220
W0950632004	63	40	32	16	16	22	195	316
W0950802004	80	50	36	16	16	22	217	578
W0951002004	100	60	41	20	20	27	229	850

Note: Supplied with 4 screws.

ARTICULATED MALE HINGE - MODEL BAS

+ = ADD THE STROKE

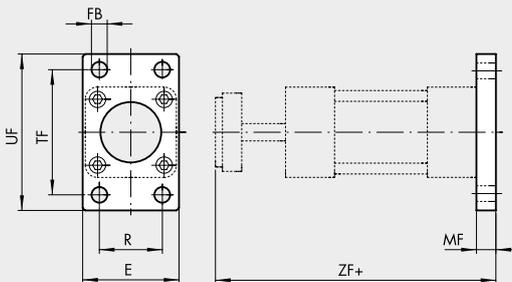


Code	Ø	EX	DL	MF	L	XN	CX ^{H9}	Weight [g]
W0950322006	32	14	22	16	12	162	10	106
W0950402006	40	16	25	18	15	165	12	142
W0950502006	50	16	27	21	15	176	12	236
W0950632006	63	21	32	23	20	195	16	336
W0950802006	80	21	36	28	20	217	16	572
W0951002006	100	25	41	30	25	229	20	840

Note: Supplied with 4 screws, 4 washers.

REAR FLANGE - MODEL C

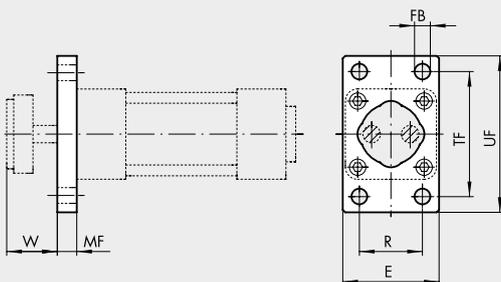
+ = ADD THE STROKE



Code	Ø	TF	UF	E	MF	R	FB	ZF	Weight [g]
W0950322002	32	64	80	50	10	32	7	150	246
W0950402002	40	72	90	55	10	36	9	150	290
W0950502002	50	90	110	65	12	45	9	161	522
W0950632002	63	100	120	75	12	50	9	175	670
W0950802002	80	126	153	95	16	63	12	197	1420
W0951002002	100	150	178	115	16	75	14	204	2040

Note: Supplied with 4 screws.

FRONT FLANGE - MODEL C/S



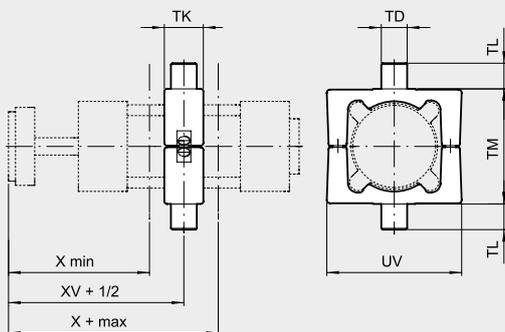
Code	Ø	TF	UF	E	MF	R	FB	W	Weight [g]
W0950323002	32	64	80	50	10	32	7	30	228
W0950403002	40	72	90	55	10	36	9	30	288
W0950503002	50	90	110	65	12	45	9	31	486
W0950633002	63	100	120	75	12	50	9	35	569
W0950803002	80	126	153	95	16	63	12	34	1145
W0951003002	100	150	178	115	16	75	14	34	1760

Note: Supplied with 4 screws.

INTERMEDIATE HINGE - MODEL EN, FOR SERIES STD

+ = ADD THE STROKE

+1/2 = ADD HALF THE STROKE



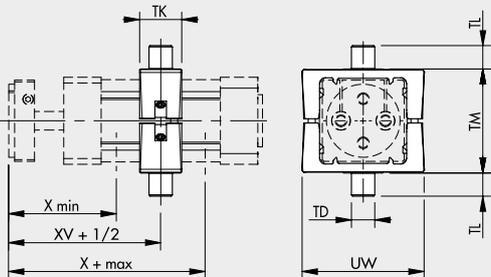
Code	Ø	TM	TL	TD _{e9}	TK	UW	X _(min)	XV	X _(max)	Weight [g]	T [Nm] ♦
0950322007	32	50	12	12	22	65	79	91	103	282	4
0950402007	40	63	16	16	28	75	82	90	98	582	10
0950502007	50	75	16	16	32	95	91.5	97.5	103.5	870	15
0950632007	63	90	20	20	35	105	95.5	104.5	113.5	1192	20
0950802007	80	110	20	20	40	130	108	115.5	123	1950	20
0951002007	100	132	25	25	45	145	110.5	119	127.5	2690	25

Note: Supplied with 4 screws, 2 pin

♦ Recommended tightening torque of grub screws

INTERMEDIATE HINGE - MODEL EN, FOR SERIES 3

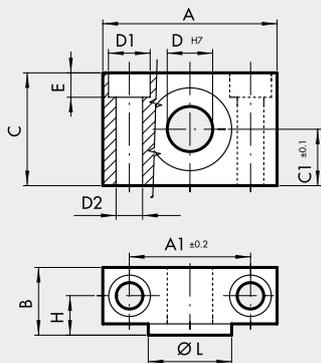
+ = ADD THE STROKE
 + 1/2 = ADD HALF THE STROKE



Code	Ø	X _(min)	XV	X _(max)	TM	TL	TD _{e9}	TK	UW	Weight [g]	T [Nm] ♦
0950322207	32	79	91	103	50	12	12	22	65	212	3
0950402207	40	82	90	98	63	16	16	28	75	440	8
0950502207	50	91.5	97.5	103.5	75	16	16	28	95	644	15
0950632207	63	95.5	104.5	113.5	90	20	20	36	105	1080	15
0950802207	80	108	115.5	123	110	20	20	36	130	1654	15
0951002207	100	110.5	119	127.5	132	25	25	45	145	2550	20

Note: Supplied with 4 grub screws, 2 pins
 ♦ Recommended tightening torque of grub screws

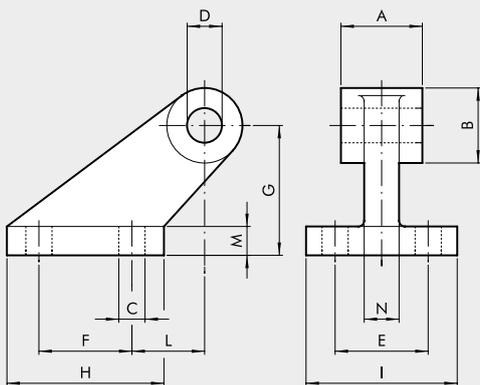
COUNTER-HINGE FOR MODEL EN - MODEL EL



Code	Ø	A	A ₁	B	C	C ₁	D ₁	D ₂	D	E	H	ØL	Weight [g]
W0950322009	32	46	32	18	30	15	11	7	12	6.5	10.5	22	162
W0950402009	40	55	36	21	36	18	15	9	16	8.5	12	28	278
W0950402009	50	55	36	21	36	18	15	9	16	8.5	12	28	278
W0950632009	63	65	42	23	40	20	18	11	20	10.5	13	35	414
W0950632009	80	65	42	23	40	20	18	11	20	10.5	13	35	414
W0951002009	100	75	50	28.5	50	25	20	13	25	12.5	16	40	715

Note: 2-pieces pack with 4 screws

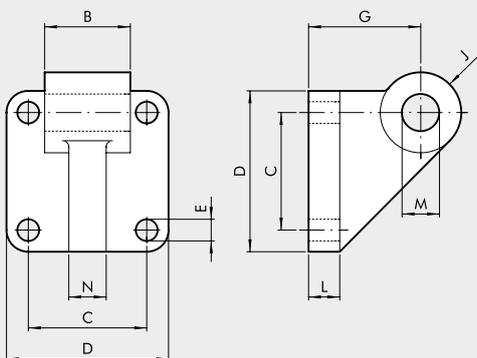
COUNTER-HINGE CETOP FOR MODEL B - MODEL GL



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	Weight [g]
W0950322008	32	26	19	7	10	25	20	32	37	41	18	8	10	96
W0950402008	40	28	26	9	12	32	32	45	54	52	25	10	12	216
W0950502008	50	32	26	9	12	32	32	45	54	52	25	10	12	212
W0950632008	63	40	33	11	16	40	50	63	75	63	32	12	15	440
W0950802008	80	50	33	11	16	40	50	63	75	63	32	12	15	464
W0951002008	100	60	44	14	20	50	70	90	103	80	40	16	22	985

Note: Supplied with 4 screws, 4 washers

COUNTER-HINGE FOR MODEL B - MODEL GS



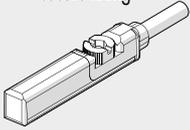
Code	Ø	B	C	D	E	G	J	L	M	N	Weight [g]
W0950322108	32	26	32.5	45	7	32	11	10	10	10	106
W0950402108	40	28	38	52	7	36	13	10	12	12	138
W0950502108	50	32	46.5	65	9	45	13	12	12	12	252
W0950632108	63	40	56.5	75	9	50	17	12	16	15	350
W0950802108	80	50	72	95	11	63	17	16	16	15	655
W0951002108	100	60	89	115	11	73	21	20	20	22	980

Note: Supplied with 4 screws, 4 washers

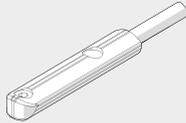
ACCESSORIES FOR TWIN-ROD CYLINDERS: MAGNETIC SENSORS AND POSITION SENSOR

RETRACTABLE SENSOR

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



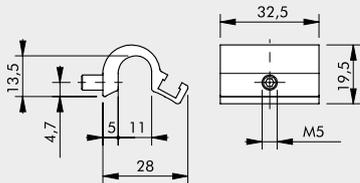
B **SENSOR, OVAL TYPE**
Traditional



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

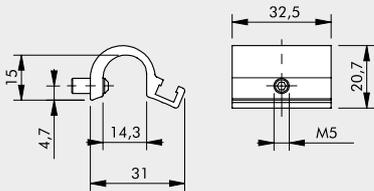
D SENSOR SUPPORT BRACKETS FOR SENSORS SQUARE TYPE AND OVAL TYPE

Ø 32 to 40



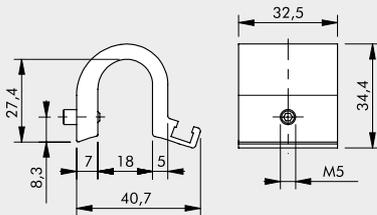
Code W0950001711
Description Bracket D.32-40

Ø 50 to 63



Code W0950001712
Description Bracket D.50-63

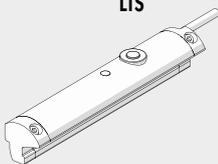
Ø 80 to 100



Code W0950001713
Description Bracket D.80-100-125-160

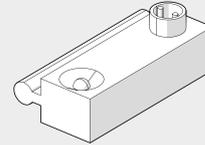
G POSITION SENSOR

LTS



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

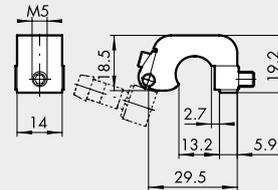
C SENSOR SERIES DSM



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

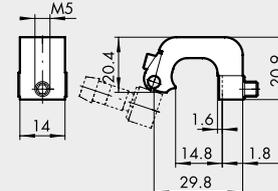
E SENSOR SUPPORT BRACKETS FOR SENSORS DSM

Ø 32 to 40



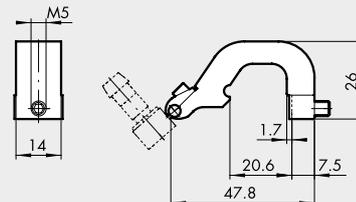
Code W0950000711
Description Bracket D.32-40 DST 80

Ø 50 to 63



Code W0950000712
Description Bracket D.50-63 DST 81

Ø 80 to 100

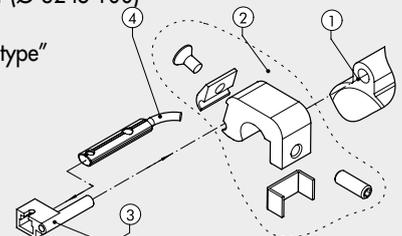


Code W0950000713
Description Bracket D.80-100-125 DST 82

F ADAPTER FOR OVAL TYPE RETRACTABLE SENSORS

ASSEMBLY DIAGRAM

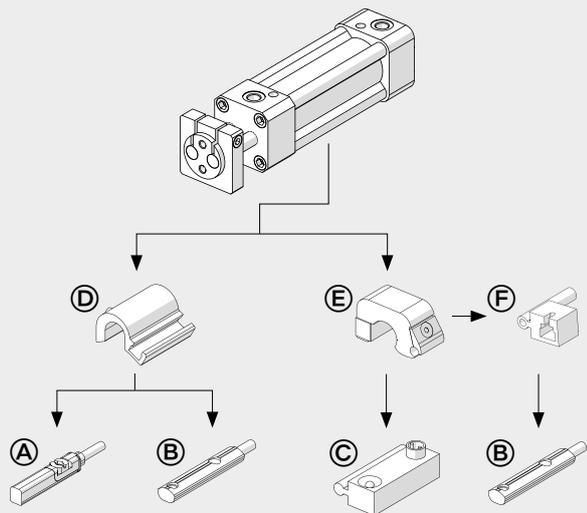
- ① Twin-rod cylinder with serie STD or serie 3 barrel
- ② Sensor bracket mod. DST (Ø 32 to 100)
- ③ Adaptor
- ④ Retractable sensor "oval type"



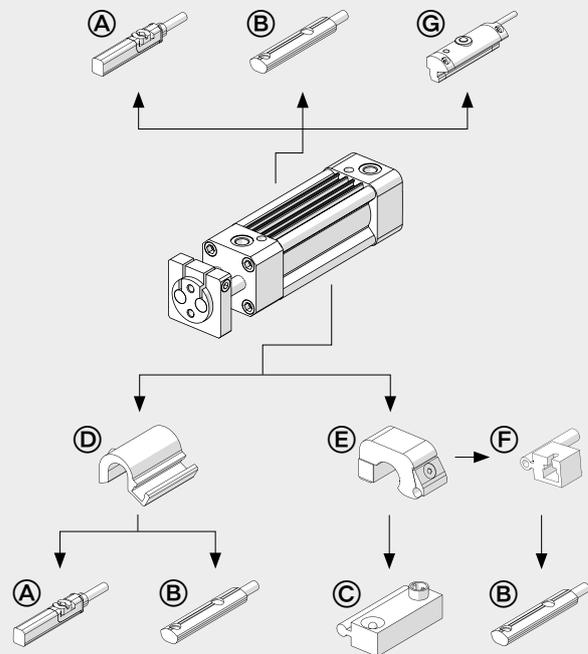
Code W0950001001
Description Adaptor DSS005 for DST/ST brackets

USE SENSORS

SERIES STD



SERIES 3



NOTES

Blank area for notes.



NOTES

ACTUATORS

ISO 15552 CYLINDER Ø 160-200 WITH ROUND BARREL

Cylinders made to ISO 15552 available in various versions and with a wide range of accessories:

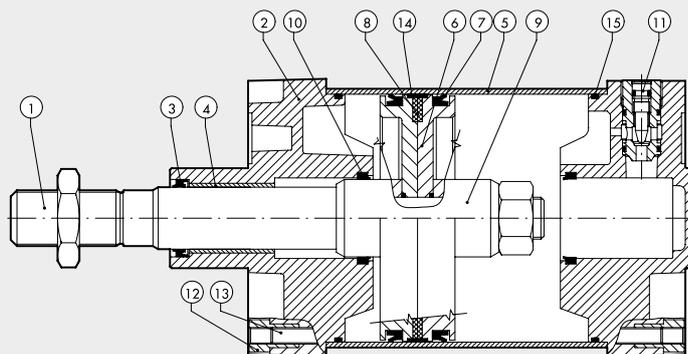
- configuration with or without magnet
- double-acting – single- or through-rod
- wide choice of NBR and FKM/FPM (for high temperature)
- piston rod scrapers for use in hostile environments available
- available with mounted intermediate hinge
- special configurations on request



TECHNICAL DATA		Ø160	Ø200
Max operating pressure	bar		10
	MPa		1
	psi		145
Temperature range	NBR °C		-20 to +80
	FKM/FPM °C		-10 to +150
	Other piston rod gasket °C		See next page
Design		Round barrel with tie rods	
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Standard strokes	mm	25 to 2800	
Versions		Double-acting, Cushioned or non-cushioned, Single piston rod or cushioned through piston rod, High-temperature, No stick-slip Available magnetic and non-magnetic versions.	
Sensor magnet		See cylinder "General technical data" at the beginning of the chapter	
Forces generated at 6 bar thrust/retraction		See cylinder "General technical data" at the beginning of the chapter	
Weights			
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.	

COMPONENTS

- PISTON ROD: C45 steel or stainless steel, thick chromed (rod nut in zinc-plated steel)
- HEAD: die cast aluminium
- PISTON ROD GASKET: NBR, FKM/FPM, FKM/FPM with metal scraper
- GUIDE BUSHING: sintered bronze
- BARREL: drawn anodized aluminium alloy
- PISTON: aluminium
- PISTON GASKET: NBR or FKM/FPM
- MAGNET: plastroferrite
- CUSHIONING CAP: aluminium
- CUSHIONING GASKET: polyurethane or FKM/FPM
- CUSHIONING NEEDLE: OT 58 with needle out movement safety system even when fully open
- SCREWS: zinc-plated steel
- TIE RODS: stainless steel
- GUIDE BELT: technopolimer
- STATIC O-RINGS: NBR or FKM/FPM

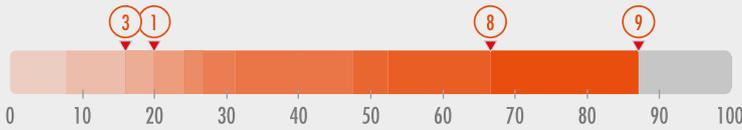


OVERVIEW OF SEALS AND SCRAPERS

	Code identifier	Key feature	Applications	Gasket material	Temperature range
①	....	General use.	Standard applications, also with humidity.	NBR	-20 to + 80 °C
③	....V	High temperatures - chemicals.	Industrial applications with chemical agents and/or at high temperatures.	FPM/FKM	-10 to + 150 °C
⑧	....R	Dirt and low temperatures. Reference name: HARD PU	Medium-Heavy duty applications, with presence of dirt and low temperatures, such as in agriculture or in transport sector.	Piston rod seal made of hard polyurethane, the other seals are made of NBR.	-20 to + 80 °C
⑨	....M	Dirt and high temperature. Reference name: METAL	Heavy duty applications, in presence of hard dirt and high temperatures, like in cement plants, foundries or in transport sector.	Metal scraper, the other seals are made of FKM/FPM.	-10 to + 150 °C

Anti-contamination Effect Indicators

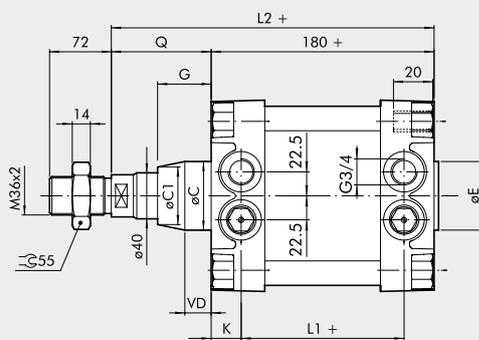
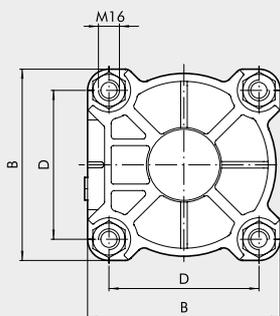
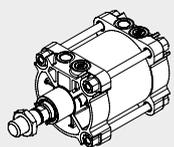
An index of protection against the dirt that settles and adheres to the piston rod is provided for each version, on a 1 to 100 scale.



NOTES

DIMENSIONS OF STANDARD VERSION

+ = ADD THE STROKE

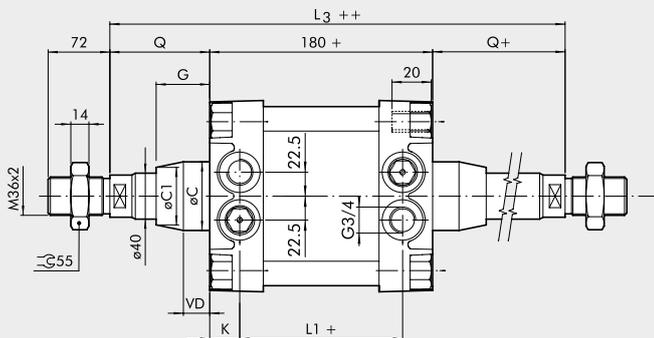
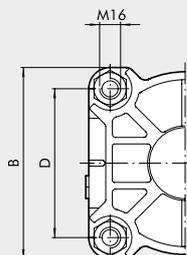
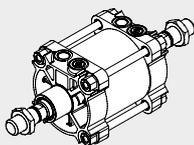


Ø	B	øC	øC1	øE	D	G	L ₁	L ₂	Q	VD	K
160	180	65	-	65	140	50	124	260	80	-	28
200	220	75	~ 65	75	175	60	122	275	95	~ 15	29

DIMENSIONS OF THROUGH-ROD VERSION

+ = ADD THE STROKE

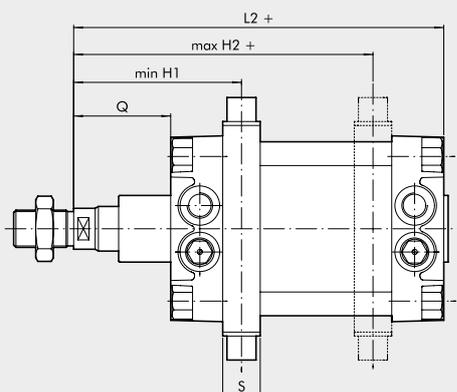
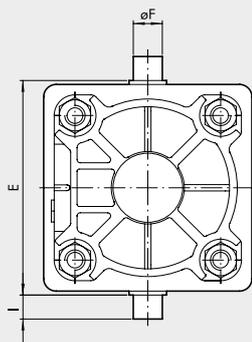
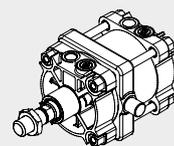
++ = ADD TWICE THE STROKE



Ø	B	øC	øC1	D	G	L ₁	L ₃	Q	VD	K
160	180	65	-	140	50	124	340	80	-	28
200	220	75	~ 65	175	60	122	370	95	~ 15	29

DIMENSIONS OF VERSION WITH INTERMEDIATE HINGE

+ = ADD THE STROKE



Ø	E	øF	H1	H2	I	L2	Q	S
160	200	32	150	190	32	260	80	40
200	250	32	165	205	32	275	95	40

For the missing values, refer to standard cylinders. In your order, please specify the desired value for H1

KEY TO CODES FOR ROUND BARREL

CIL	W 1 2 1 TYPE	1 6 0 DIAMETER-EXECUTION	0 0 5 0 STROKE	▼ R SPECIAL SCRAPER
W120	Double-acting, cushioned, non magnetic	160 160 200 200	+ 0025 to 2800 mm	◆ R Hard PU ■ M Metal
W121	Double-acting, cushioned	XA3 160 stainless steel piston rod		
W122	Double-acting, cushioned, through-rod	XA4 200 stainless steel piston rod		
W123	Double-acting, cushioned, through-rod, non magnetic	VA3 160 FKM/FPM gasket, stainless steel piston rod		
W124	Double-acting, non-cushioned	VA4 200 FKM/FPM gasket, stainless steel piston rod		
		KA3 160 FKM/FPM gasket, C45 piston rod		
		KA4 200 FKM/FPM gasket, C45 piston rod		
		● GA3 160 No stick-slip		
		● GA4 200 No stick-slip		

+ Maximum recommended strokes. Higher values can create operating problems.

● For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.

▼ Letter to be added only for versions with a special scraper.

◆ To be matched with NBR execution: 160, 200, XA3, XA4

■ To be matched with FKM/FPM execution: VA3, VA4, KA3, KA4

KEY TO CODES FOR CONFIGURATION WITH INTERMEDIATE HINGE

CIL	W 1 2 1 TYPE	A A 3 DIAMETER-EXECUTION	0 0 5 0 STROKE	0 2 0 0 EXECUTION	▼ R SPECIAL SCRAPER
W120	Double-acting, cushioned, non magnetic	AA3 160 + intermediate hinge	+ 0025 to 2800 mm	H1 dimension (hinge position, see drawing on the previous page)	R Hard PU
W121	Double-acting, cushioned	AA4 200 + intermediate hinge			
W122	Double-acting, cushioned, through-rod				
W123	Double-acting, cushioned, through-rod, non magnetic				
W124	Double-acting, non-cushioned				

+ Maximum recommended strokes. Higher values can create operating problems.

▼ Letter to be added only for versions with a special scraper.

Note: Type M scraper only on request.

For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only. For coding please contact our sales support department.

VERSION WITH SHAPED BARREL

An alternative to the round barrel version is a version with a shaped barrel.

The technical data, components and dimensions are the same as for the round barrel version.

Note: Type with intermediate hinge not available.



KEY TO CODES FOR SHAPED BARREL

CYL	1 2 1 TYPE	1 6 0 DIAMETER-EXECUTION	0 0 5 0 STROKE	A MATERIAL	N GASKETS
120	Double-acting, cushioned, non-magnetic	160 160 200 200	+ 0025 to 2800 mm	A C45 chromed, piston rod	N NBR gaskets
121	Double-acting, cushioned	SA3 160 non magnetic		Z Stainless steel chromed, piston rod	V FKM/FPM gaskets
122	Double-acting, cushioned, through-rod	SA4 200 non magnetic			
124	Double-acting, non-cushioned	● GA3 160 No stick-slip			
		● GA4 200 No stick-slip			

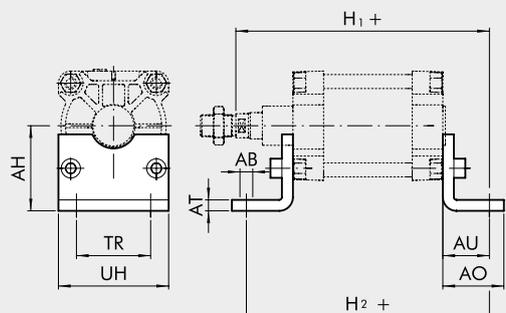
+ Maximum recommended strokes. Higher values can create operating problems

● For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

ACCESSORIES FOR ISO 15552 CYLINDERS Ø 160-200: FIXINGS

FOOT - MODEL A

+ = ADD THE STROKE

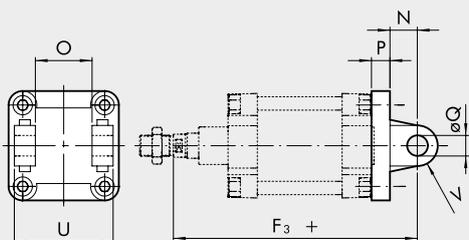


Code	Ø	AB	AH	AO	AT	AU	H ₁	H ₂	TR	UH	Weight [g]
W0951602001	160	18	115	80	10	60	319	300	115	180	2400
W0952002001	200	22	135	100	12	70	345	320	135	220	4000

Note: Individually packed with 2 screws

FEMALE HINGE - MODEL B

+ = ADD THE STROKE

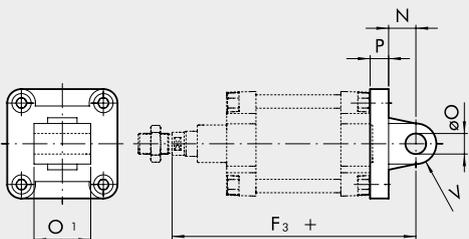


Code	Ø	U	O	øQ	P	N	F ₃	V	Weight [g]
W0951602003	160	170	90	30	20	35	314	25	3300
W0952002003	200	170	90	30	25	35	335	25	4300

Note: Supplied complete with 4 screws, 2 snap rings and 1 pin

MALE HINGE - MODEL BA

+ = ADD THE STROKE

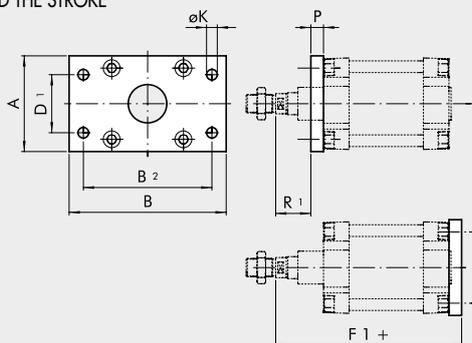


Code	Ø	O ₁	øO	P	N	F ₃	V	Weight [g]
W0951602004	160	90	30	20	35	314	25	2150
W0952002004	200	90	30	25	35	335	25	3550

Note: Supplied complete with 4 screws

FLANGE - MODEL C (FRONT AND REAR)

+ = ADD THE STROKE

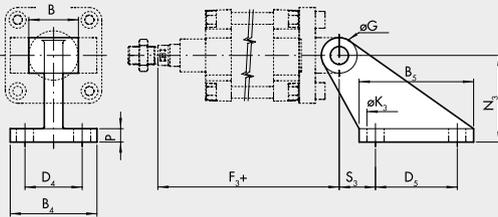


Code	Ø	A	B	B ₂	D ₁	øK	R ₁	P	F ₁	Weight [g]
W0951602002	160	180	270	230	115	18	59	20	279	6900
W0952002002	200	225	312	270	135	22	70	25	300	12800

Note: Individually packed with 4 screws

CETOP COUNTER-HINGE - MODEL GL

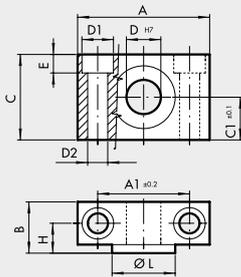
±= ADD THE STROKE



Code	Ø	B	B ₄	B ₅	D ₄	D ₅	øG	N ₃	S ₃	øK ₁	P	F ₃	Weight [g]
W0951602008	160	90	110	154	63	110	53	140	50	18	20	314	2300
W0951602008	200	90	110	154	63	110	53	140	50	18	20	335	2300

Note: Supplied complete with 4 screws, 4 washers

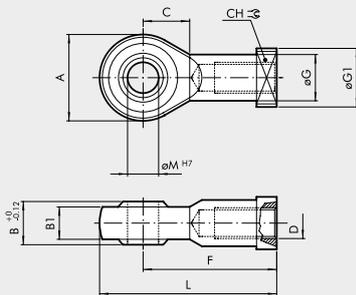
COUNTER-HINGE MODEL EL



Code	Ø	A	A ₁	B	C	C ₁	D ₁	D ₂	D	E	H	øL	Weight [g]
W0951602009	160	92	60	40	60	30	25	17	32	16.5	22.5	48	2740
W0951602009	200	92	60	40	60	30	25	17	32	16.5	22.5	48	2740

Note: 2-pieces pack with 4 screws

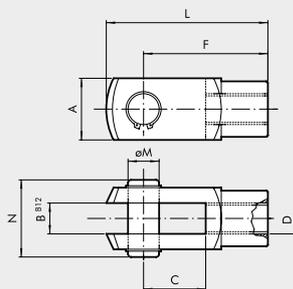
ROD EYE - MODEL GA-M



Code	Ø	øM	C	B ₁	B	A	L	F	D	øG	CH	øG ₁	Weight [g]
W0952002025	160	35	41	28	43	80	165	125	M36x2	46	50	58	1645
W0952002025	200	35	41	28	43	80	165	125	M36x2	46	50	58	1645

Note: Individually packed

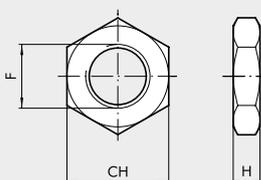
FORK - MODEL GK-M



Code	Ø	øM	C	B	A	L	F	D	N	Weight [g]
W0951602020	160	35	72	35	70	188	144	M36x2	84	3850
W0951602020	200	35	72	35	70	188	144	M36x2	84	3850

Note: Individually packed

ROD NUT - MODEL S



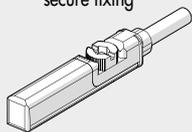
Code	Ø	F	H	CH	Weight [g]
W0951602010	160	M36x2	14	55	170
W0951602010	200	M36x2	14	55	170

Note: Individually packed

ACCESSORIES FOR ISO 15552 CYLINDERS Ø 160-200: MAGNETIC SENSORS

RETRACTABLE SENSOR

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



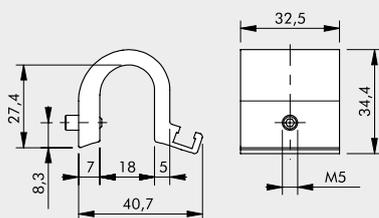
B **SENSOR, OVAL TYPE**
Traditional



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

F SENSOR SUPPORT BRACKETS FOR SENSORS SQUARE TYPE AND OVAL TYPE

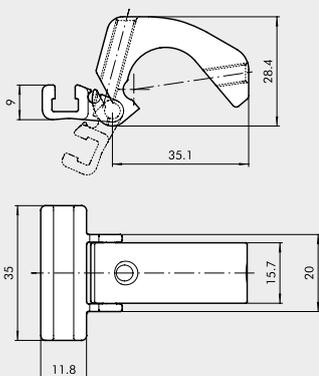
Ø 160



Code	Description
W0950001713	Bracket D.80-100-125-160

G SENSOR SUPPORT BRACKETS FOR SENSORS SQUARE TYPE AND OVAL TYPE

Ø 160-200

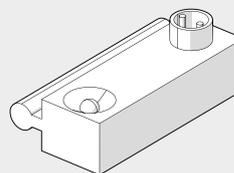


Code	Description
W0950001100	Sensor bracket

Note: Individually packed

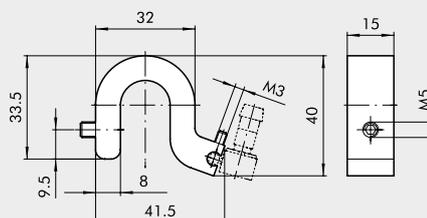
NOTES

C SENSOR SERIES DSM



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

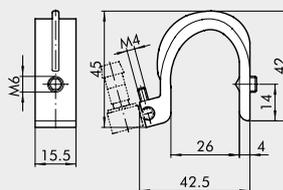
D SENSOR SUPPORT BRACKETS FOR SENSORS DSM (FOR ROUND BARREL VERSION)



Code	Description
0951602093	Supporto sensore 160-200

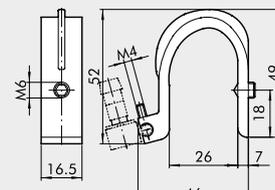
E SENSOR SUPPORT BRACKETS FOR SENSORS DSM (FOR SHAPED BARREL VERSION)

Ø 160



Code	Description
W0950000715	Bracket ST160

Ø 200

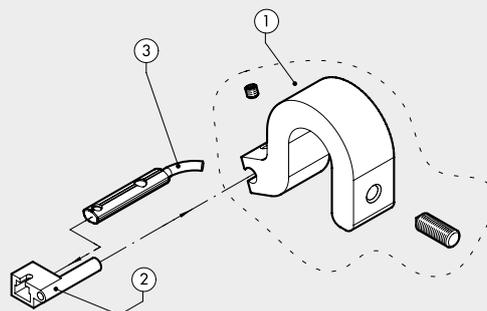


Code	Description
W0950000716	Bracket ST200

H ADAPTER FOR OVAL TYPE RETRACTABLE SENSORS

ASSEMBLY DIAGRAM

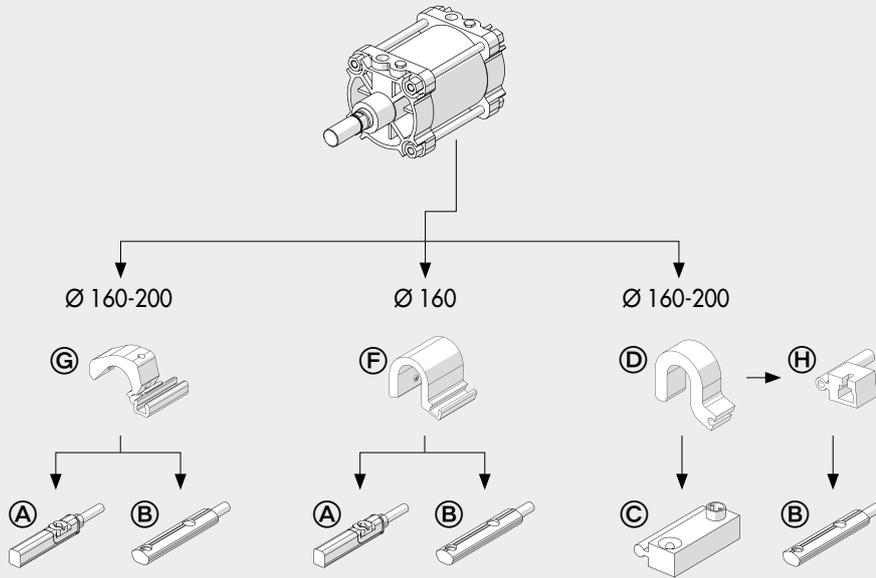
- 1 Sensor support bracket **D** or **E**
- 2 Adaptor
- 3 Retractable sensor "oval type"



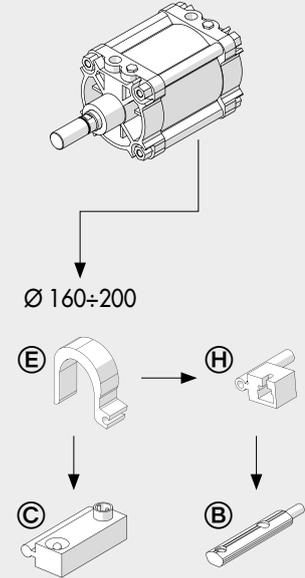
Code	Description
W0950001001	Adaptor DSS005 for DST/ST brackets

USE SENSORS

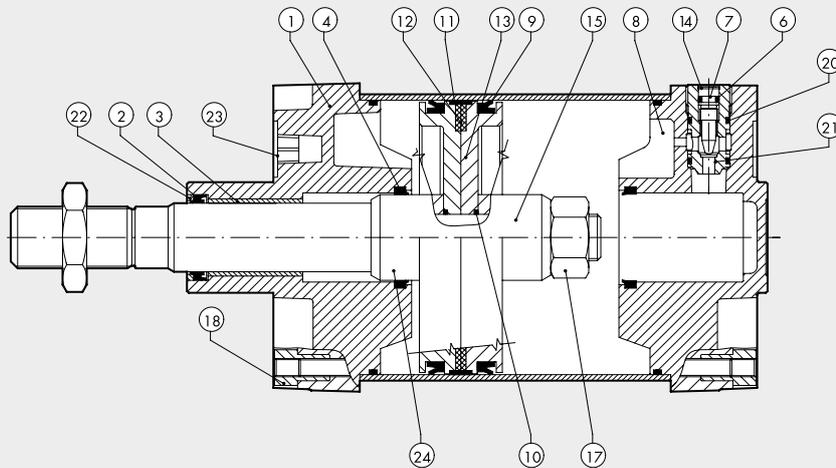
ROUND BARREL



SHAPED BARREL



CYLINDERS ISO 15552 Ø 160-200: SPARE PARTS



Code	Bores	Type	Parts
W095__2101	160 - 200	Complete set of gaskets	2-4-5-6-9-10-20-22
W0951602165	160 - 200	NBR piston rod gasket kit + seeger	2
W0951602166	160 - 200	FKM/FPM piston rod gasket kit + seeger	2
W095__2102	160 - 200	Complete set of (high temperature) FKM/FPM gaskets	2-4-5-6-9-10-20-22
W095__0104	160 - 200	Complete front head kit	1-2-3-4-5-6-7-14-18-20-21-22-23
W095__0122	160 - 200	Complete R front head kit	1-2-3-4-5-6-7-14-18-20-21-22-23
W095__0120	160 - 200	Complete M front head kit	1-2-3-4-5-6-7-14-18-20-21-22-23
W095__0105	160 - 200	Complete rear head kit	4-5-6-7-8-14-18-20-21-23
W095__2115	160 - 200	Complete magnetic piston kit	9-10-11-12-13-15-17-24
W095__2118	160 - 200	Complete non-magnetic piston kit	9-10-11-13-15-17-24
W095__2120	160 - 200	Complete head A + P + non-magnetic piston	1-2-3-4-5-6-7-8-9-10-11-13-14-15-17-18-20-21-22-23-24
W095__2119	160 - 200	Complete head A + P + magnetic piston	1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-17-18-20-21-22-23-24
W095__2300	160 - 200	Magnet	12

Notes

Cylinders in the R and M versions do not come with the single piston rod gasket.

When replacing all the gaskets in the R version cylinders, use the complete set of the R front head, code W095__0122, and the complete set of gaskets code W095__2101 (the front head gaskets are in excess).

When replacing all the gaskets in the M version cylinders, use the complete set of the M front head, code W095__0120 and the complete set of FKM/FPM, code W095__2102 (the front head gaskets are in excess).

ISO 15552 CYLINDER Ø 250-320

Cylinders made to ISO 15552 available in various versions and with a wide range of accessories:

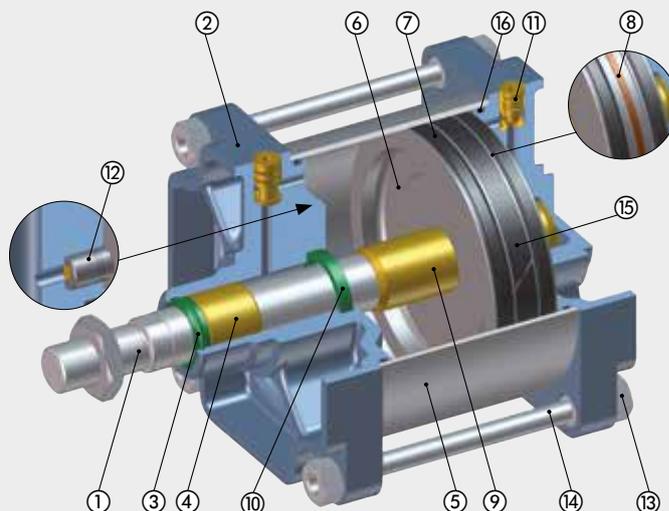
- double-acting – single- or through-rod
- with or without cushioning
- configuration with or without magnet
- with NBR gaskets, and polyurethane gasket for the piston rod only
- with FKM/FPM gaskets (high temperature versions)
- available with mounted intermediate hinge
- special configurations on request



TECHNICAL DATA		Ø250	Ø320
Max operating pressure	bar		10
	MPa		1
	psi		145
Temperature range	NBR °C		-20 to +80
	FKM/FPM °C		-10 to +150
Design		Round barrel with tie rods	
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Standard strokes	mm	1 to 2000	
Versions		Double-acting, Cushioned or non-cushioned, Single piston rod or cushioned through piston rod, High-temperature, No stick-slip Available magnetic and non-magnetic versions.	
Sensor magnet			
Inrush pressure	bar	0.2	0.15
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		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.	

COMPONENTS

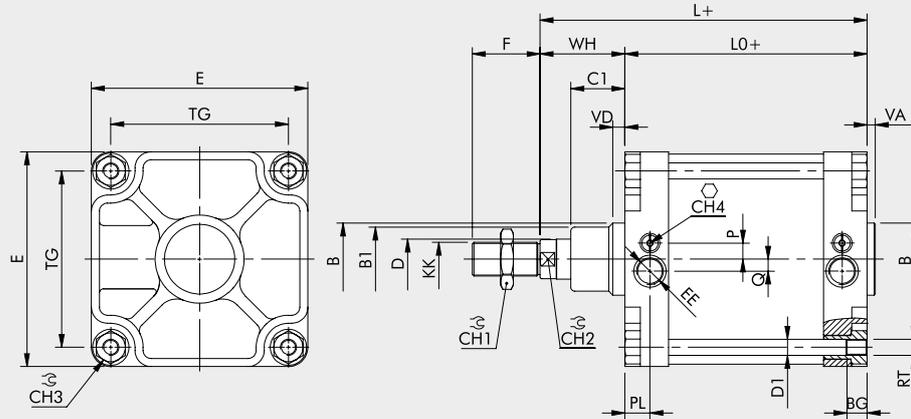
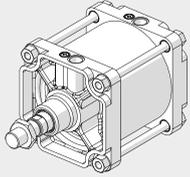
- PISTON ROD: High thickness C45 chrome steel or stainless steel (AISI 304)
- HEAD: fused aluminum painted
- PISTON ROD GASKET: polyurethane or FKM/FPM
- GUIDE BUSHING: sintered bronze
- BARREL: anodized aluminium
- PISTON: aluminium
- PISTON GASKET: NBR or FKM/FPM
- MAGNET: plastoferrite
- CUSHIONING CAP: aluminium
- CUSHIONING GASKET: NBR or FKM/FPM
- CUSHIONING NEEDLE: OT 58
- ONE-WAY VALVE for Ø 320 only: to speed up restart from end of stroke, bypassing the cushioning gasket
- SCREWS: zinc-plated steel
- TIE RODS: C45 steel, chromed
- GUIDE BELT: PTFE
- STATIC O-RINGS: NBR or FKM/FPM



DIMENSIONS

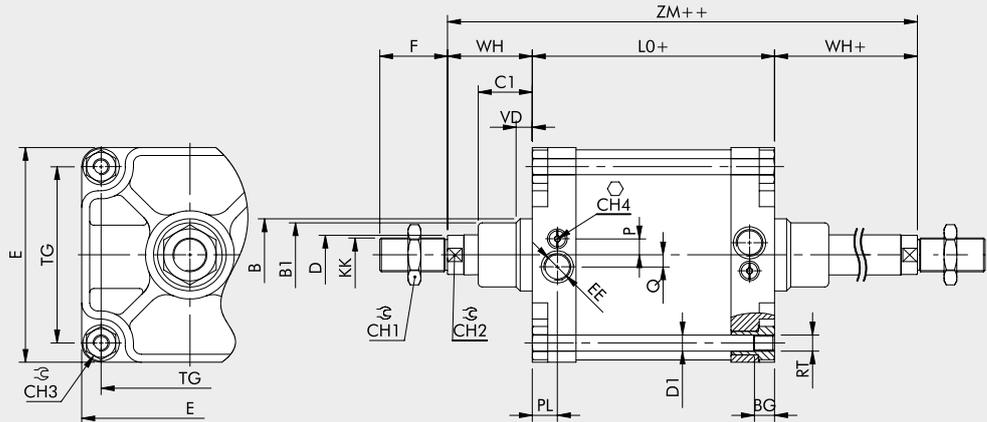
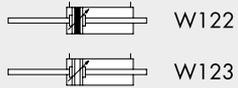
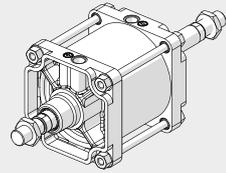
STANDARD VERSION

+ = ADD THE STROKE



THROUGH-ROD VERSION

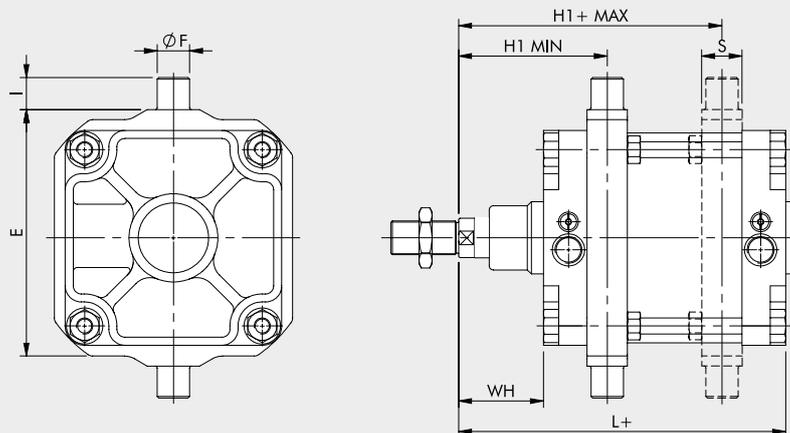
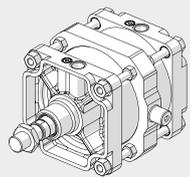
+ = ADD THE STROKE
++ = ADD TWICE THE STROKE



Ø	PL	VD	B	B ₁	WH	C ₁	CH ₁	CH ₂	CH ₃	CH ₄	KK	D	D ₁	TG	VA	EE	RT	E	L	L ₀	ZM	BG	P	Q	
250	31	20	90	80	105	67	65	46	36	6	M42x2	50	20	220	10	84	G1	M20	268	305	200	410	25	15	20
320	31	20	110	100	120	82	75	55	46	6	M48x2	63	25	270	10	96	G1	M24	340	340	220	460	28	36	-

DIMENSIONS OF VERSION WITH INTERMEDIATE HINGE

+ = ADD THE STROKE



Ø	E	ØF	H1 _{min}	H1 _{max}	I	L	WH	S
250	320	40	184	226	40	305	105	50
320	400	50	212	248	50	340	120	70

For the missing values, refer to standard cylinders. In your order, please specify the desired value for H1

KEY TO CODES

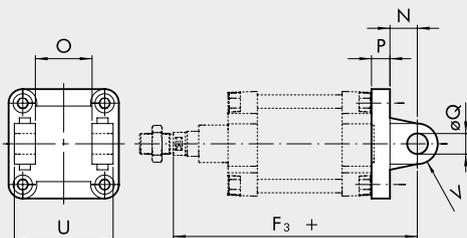
CIL	W 1 2 1 TYPE	2 5 0 DIAMETER-EXECUTION	0 3 0 0 STROKE	0 2 0 0 EXECUTION
W120	Double-acting, cushioned, non magnetic	250 250 320 320	0001 to 2000 mm	Specify H1 value ONLY for version with intermediate hinge
W121	Double-acting, cushioned	XA5 250 stainless steel piston rod and nut		
W122	Double-acting, cushioned, through-rod	XA6 320 stainless steel piston rod and nut		
W123	Double-acting, cushioned, through-rod, non magnetic	KA5 250 FKM/FPM gasket, C45 piston rod and nut		
W124	Double-acting, non-cushioned	VA5 250 FKM/FPM gasket, stainless steel piston rod and nut		
		AA5 250 + intermediate hinge AA6 320 + intermediate hinge		
		● GA5 250 no stick-slip ● GA6 320 no stick-slip		

● For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.

ACCESSORIES: FIXINGS

FEMALE HINGE - MODEL B

+ = ADD THE STROKE

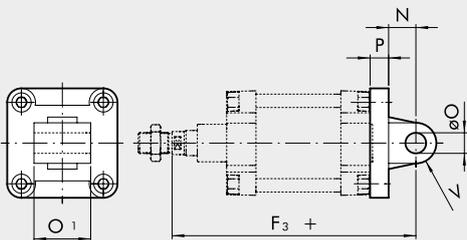


Code	Ø	U	O	øQ	P	N	F ₃	V	Weight [g]
W0952502003	250	200	110	40	25	45	375	40	7600
W0953202003	320	220	120	45	30	50	420	45	13200

Note: Supplied complete with 4 screws, 2 snap rings and 1 pin

MALE HINGE - MODEL BA

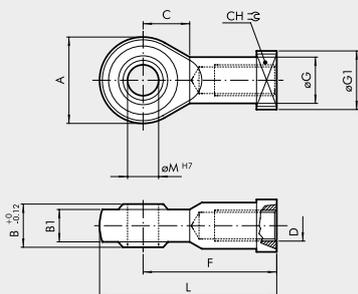
+ = ADD THE STROKE



Code	Ø	O ₁	øO	P	N	F ₃	V	Weight [g]
W0952502004	250	110	40	25	45	375	40	5910
W0953202004	320	120	45	30	50	420	45	10900

Note: Supplied complete with 4 screws

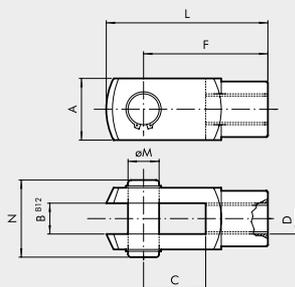
ROD EYE - MODEL GA-M



Code	Ø	øM	C	B ₁	B	A	L	F	D	øG	CH	øG ₁	Weight [g]
W0952502025	250	40	45	33	49	102	193	142	M42x2	56	55	69	2800
W0953202025	320	50	60	45	60	117	218.5	160	M48x2	66	65	75	5000

Note: Individually packed

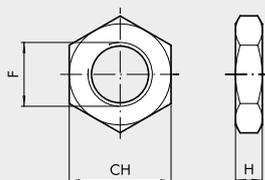
FORK - MODEL GK-M



Code	Ø	ØM	C	B	A	L	F	D	N	Weight [g]
W0952502020	250	42	84	42	85	232	168	M42x2	102	6400
W0953202020	320	50	96	50	95	265	192	M48x2	113	9600

Note: individually packed with 2 seeger and 1 pin

ROD NUT - MODEL S



ZINC-PLATED STEEL

Code	Ø	F	H	CH	Weight [g]
W0952502010	250	M42x2	16	65	285
W0953202010	320	M48x2	18	75	420

Note: Individually packed

STAINLESS STEEL (AISI 304)

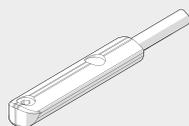
Code	Ø	F	H	CH	Weight [g]
W095XA52010	250	M42x2	16	65	285
W095XA62010	320	M48x2	18	75	420

Note: Individually packed

ACCESSORIES: MAGNETIC SENSORS

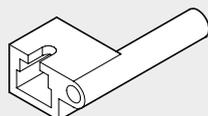
RETRACTABLE SENSOR

SENSOR, OVAL TYPE
Traditional



For codes and technical data, see [chapter A6](#).

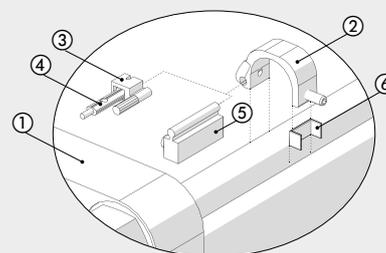
ADAPTOR FOR RETRACTABLE SENSOR



Code	Description
W0950001001	Adaptor DSS005 for DST/ST brackets

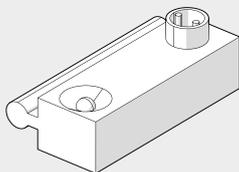
ASSEMBLY DIAGRAM

- ① ISO 15552 cylinder, round pipe with tie rods
- ② Sensor bracket mod. ST (Ø 250 and 320)
- ③ Adaptor for retractable sensor
- ④ Retractable sensor
- ⑤ Sensor DSM
- ⑥ Adaptor (only for Ø 250)



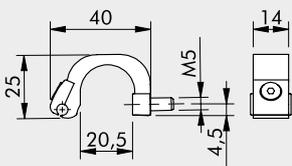
SENSOR SERIES DSM

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



SENSOR SUPPORT BRACKET

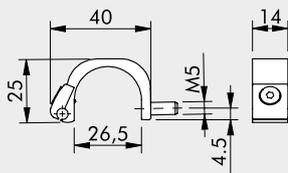
Ø 250



Code
W0950000722

Description
Bracket ST250

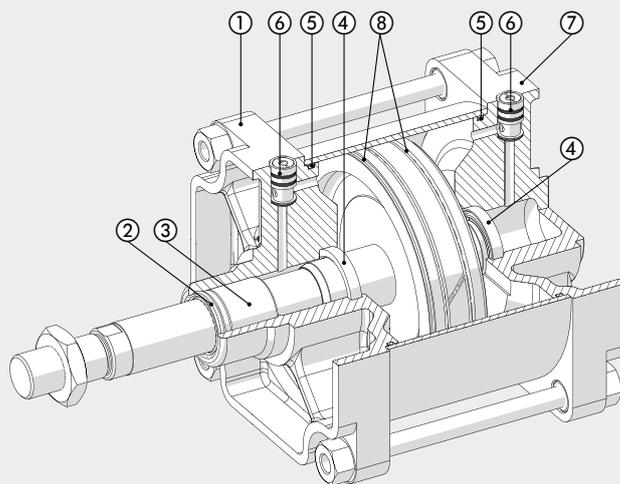
Ø 320



Code
W0950000723

Description
Bracket ST320

SPARE PARTS



Code	Bores	Type	Parts
W095 ... 2101	250 - 320	Complete set of gaskets	2-4-5-8
W0952502102	250	Complete set of (high temperature) FKM/FPM gaskets	2-4-5-8
W095 ... 0104	250 - 320	Complete front head kit	1-2-3-4-5-6
W095 ... 0105	250 - 320	Complete rear head kit	4-5-6-7