ISO 15552 CYLINDER

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

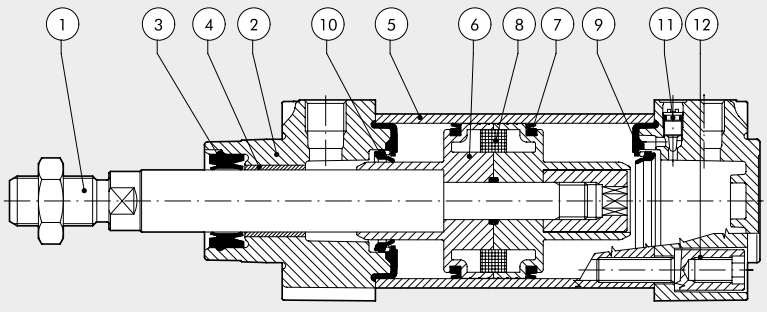
- Configuration with or without magnet
- Single-or double acting – single-or through-rod
- Wide choice of NBR, POLYURETHANE and FKM/FPM gaskets (for high temperatures), for LOW TEMPERATURE
- Piston rod scrapers for use in hostile environments available
- Special versions on request
- Fixing accessories,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

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

TECHNICAL DATA		Polyurethane	NBR	FKM/FPM	Low Temperature	Other piston rod gasket
Max operating pressure	bar	10				
	MPa	1				
	psi	145				
Temperature range	°C	–25 to +80	–10 to +80	–10 to +150 (non-magnetic cyl.)	–35 to +80	See next page
Fluid		Unlubricated air. Lubrication, if used, must be continuous				
Bore	mm	32; 40; 50; 63; 80; 100; 125				
Design		Heads with Tap Tite screws				
Standard stroke ✚	mm	Single-acting: for bores 32 to 63 strokes from 1 to 250				
		Double-acting: for bores 32 to 80 strokes from 1 to 2800				
		for bores 100 to 125 strokes from 1 to 2600				
Versions		Double-acting cushioned, Single-acting extended or retracted rod cushioned, Through-rod cushioned, Long cushioning, High-temperature, 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		Ø 32; 40: 0.4 bar				For type-R gasket:
		Ø 50; 63 strokes < 1500 mm: 0.3 bar; strokes > 1500 mm: 0.4 bar				Ø 32: 1.5 bar
		Ø 80; 100; 125 strokes < 1500 mm: 0.2 bar; strokes > 1500 mm: 0.4 bar				Ø 40; 50: 1 bar
						Ø 63: 0.8 bar
						Ø 80; 100; 125: 0.5 bar
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				
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: C45 steel or stainless steel, thick chromed
② HEAD: die cast aluminium
③ PISTON ROD GASKET: polyurethane, NBR, FKM/FPM, FKM/FPM with metal scraper
④ GUIDE BUSHING: steel strip with bronze and PTFE insert
⑤ BARREL: drawn anodized calibrated aluminium
⑥ HALF-PISTON: self-lubricating technopolymer with built-in cushioning olives (aluminium with PTFE pad for diameters 80-100-125)
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: OT 58 with needle out movement safety system even when fully open
⑫ SCREWS: Tap Tite for assembly



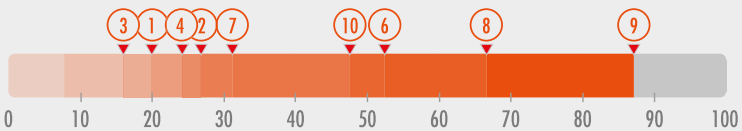
METAL WORK PNEUMATIC

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	-35 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 agricolture 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.	-35 to + 80 °C	

Anti-contamination Effect Indicators

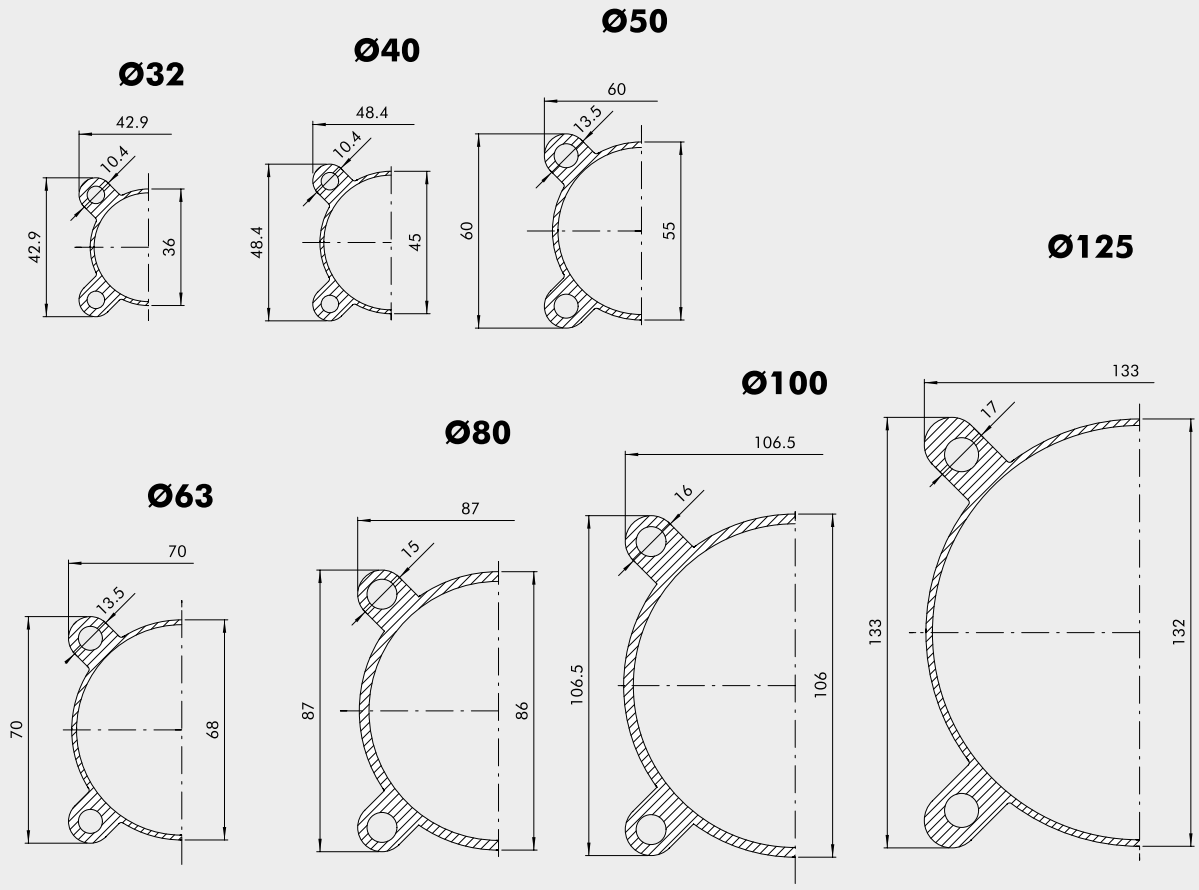
An index of protection against the dirt that settles and adheres to the piston rod is provided for each version, on a 1 to 100 scale.



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



METAL WORK PNEUMATIC

KEY TO CODES CYLINDER ISO 15552 STD

CYL	1 2 1	0	3 2	0 0 5 0	C	P	E
	TYPE		BORE	STROKE	MATERIAL	GASKETS	
	120 Double-acting, cushioned, non-magnetic **121** Double-acting, cushioned ● **122** Through-rod **124** Double-acting, non-cushioned **125** Opposed ✚ **126** Single-acting **127** Tandem **134** Version suitable for rod lock ✱ **136** Version with rod lock ✱ ◆ **137** Version suitable for rod lock + guide unit	**0** Diameter **S** Non-magnetic ▲ **G** No stick-slip	32 40 50 63 80 ■ 100 ■ 125	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 Ø 80 mm and over **C** C45 chromed piston rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes **Z** Stainless steel piston rod and nut aluminium piston **X** Stainless steel piston rod and nut technopolymer piston	**N** NBR gaskets **P** Polyurethane gaskets **V** FKM/FPM gaskets ● **B** Low temperature **C** "Combi" piston rod gasket ▶ **R** "Hard PU" piston rod gasket ● ◘ **M** "Metal" piston rod gasket	▼ **E** Single-acting extended rod ★ **1** + Secure Lock with manual control ★ **2** + Secure Lock without manual control

■ In the code of cylinder with letter in fourth position Ø 100 becomes A1; Ø 125 becomes A2
● Only available for versions with aluminium piston (A or Z)
✚ Available until Ø 63 and only the versions with piston in aluminum (A or Z)
126... Single-acting retracted rod
126...E Single-acting extended rod
◘ Not available in Ø 32

▲ **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
▼ Letter to be added only to the single acting extended rod version
★ Extra digit to be added only for types 136 with the "Secure Lock" device
▶ The 126 (single-action) type and the (No-stick-slip) version G are not available

KEY TO CODES CYLINDER ISO 15552 STD 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 **B** Low friction, type B **C** Low friction, type C **D** Low friction, type D **E** Low friction, type E **F** Low friction, type F	32 40 50 63 80 A1 = Ø 100 A2 = Ø 125	Ø 32 to 80 stroke 1 to 2800 mm Ø 100 to 125 stroke 1 to 2600 mm	**A** C45 chromed piston rod, aluminium piston: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over **C** C45 chromed piston rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes **Z** Stainless steel piston rod and nut aluminium piston **X** Stainless steel piston rod and nut technopolymer piston	**N** NBR gaskets **P** Polyurethane gaskets **V** FKM/FPM gaskets

KEY TO CODES CYLINDER ISO 15552 STD 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. **B** 150 mm front/rear cushioning cone – 150 mm ext. **C** 100 mm front/rear cushioning cone – 100 mm ext. **D** 150 mm front/rear cushioning cone – 200 mm ext. **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.	32 40 50 63	1 to 2600 mm	**A** C45 chromed rod, aluminium piston rod for all sizes **Z** Stainless steel piston rod and nut aluminium piston	**N** NBR gaskets **P** Polyurethane gaskets ✱ **V** FKM/FPM gaskets

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