

# ISO 15552 CYLINDERS (EX ISO 6431)

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)
- Special versions on request
- Fixing accessories, guide units and mechanical piston 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.

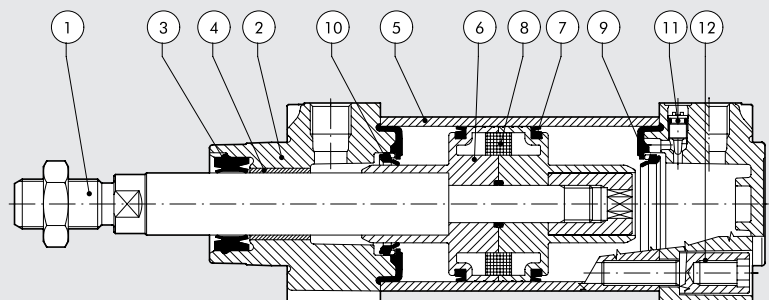
These cylinders are called series STD, type A, series 3.



TECHNICAL DATA		Polyurethane	NBR	FKM/FPM	Low Temperature
Max operating pressure	bar			10	
	MPa			1	
	psi			145	
Temperature range	°C	-10 to +80	-10 to +80	-10 to +150 (non-magnetic cyl.)	-35 to +80
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, Piston rod lock, Oil seal, Through-rod oil seal, Low friction, Non-stick-slip.			
Sensor magnet		All versions come complete with magnet. Supplied without magnet on request.			
Inrush pressure		Ø 32; 40: 0.4 bar Ø 50; 63 strokes < 1500 mm: 0.3 bar; strokes > 1500 mm: 0.4 bar Ø 80; 100; 125 strokes < 1500 mm: 0.2 bar; strokes > 1500 mm: 0.4 bar			
Notes		<b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b> † Maximum recommended strokes. Higher values can create operating problems			
Forces generated at 6 bar thrust/retraction		See page 1-7			
Weights		See page 1-8			

## COMPONENTS

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: 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 anodised 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



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	0 Diameter S Non-magnetic	32 40 50	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets	E Single-acting extended rod
	121 Double-acting, cushioned	▲ G No stick slip	63 80			● B Low temperature	
	122 Through-rod		■ 100		C C45 chromed rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes		
	124 Double-acting, non-cushioned		■ 125		Z Stainless steel piston rod and nut aluminium piston		
	125 Opposed				X Stainless steel piston rod and nut technopolymer piston		
+	126 Single-acting						
	127 Tandem						
	134 Rod lock version						
*	136 Version with piston rod lock						
* ♦	137 Piston rod lock + guide unit						

- 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
- ▼ Letter to be added only to the single acting extended rod version
- ▲ 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

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

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.	32	1 to 2600 mm	A C45 chromed rod, aluminium piston rod for all sizes	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets
		B 150 mm front/rear cushioning cone – 150 mm ext.	40		Z Stainless steel piston rod and nut aluminium piston	
		C 100 mm front/rear cushioning cone – 100 mm ext.	50			
		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.				

KEY TO CODES CYLINDER ISO 15552 TYPE "A"

CYL	1 2 1 TYPE	A	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	▼ E
	121 Double-acting, cushioned	A Standard	32	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets ● B Low temperature	E Single-acting extended rod
	122 Through-rod	▲ B No stick slip	40				
	124 Double-acting, non-cushioned	C Non-magnetic	50				
	125 Opposed		63				
	+ 126 Single-acting		80				
	127 Tandem		A1 = Ø 100 A2 = Ø 125				
	134 Rod lock version						
	* 136 Version with piston rod lock			C C45 chromed rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes			
	* ♦ 137 Piston rod lock + guide unit			Z Stainless steel piston rod and nut aluminium piston X Stainless steel piston rod and nut technopolymer piston			

- 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
- ▼ Letter to be added only to the single acting extended rod version
- ▲ 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

KEY TO CODES CYLINDER ISO 15552 LOW-FRICTION TYPE "A"

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

KEY TO CODES CYLINDER ISO 15552 LONG-CUSHIONING TYPE "A"

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 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
		B 150 mm front/rear cushioning cone – 150 mm ext.	40			
		C 100 mm front/rear cushioning cone – 100 mm ext.	50			
		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.				

# ISO 15552 CYLINDERS – SERIES 3 (EX ISO 6431)



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.

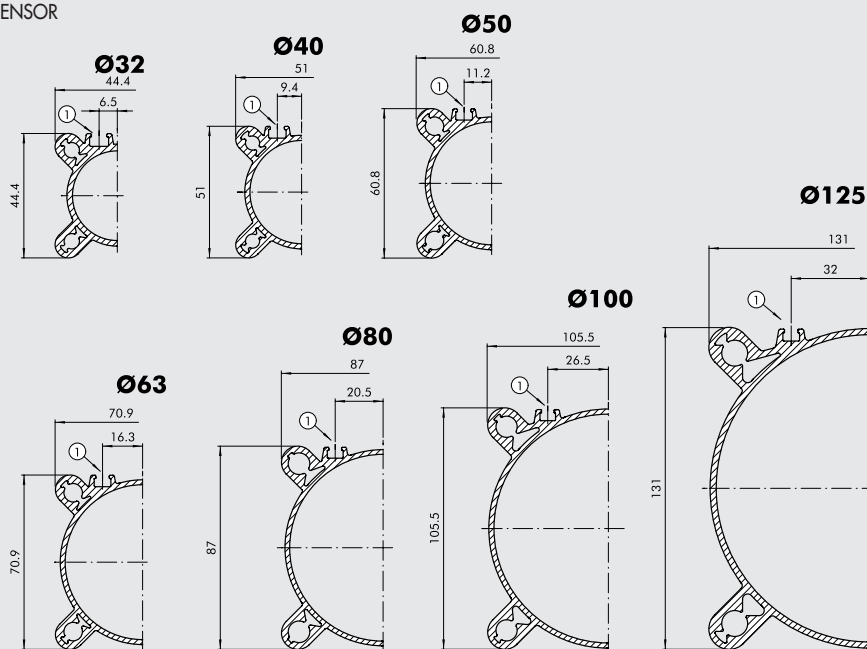


ACTUATORS

ISO 15552 CYLINDERS – SERIES 3

## BARREL CROSS SECTION

① SLOTS FOR RETRACTABLE SENSOR



## KEY TO CODES

CYL	1 2 1 TYPE	3	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	▼ E
	121 Double-acting, cushioned	3 Series 3	32	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with $\geq 1000$ mm-stroke cylinders and for cylinder with $\geq 80$ mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets ● B Low temperature	E Single-acting extended rod
	122 Through-rod	4 Series 3	40				
	124 Double-acting, non-cushioned	No stick slip	50				
	125 Opposed	5 Series 3	63		C C45 chromed rod, technopolymer piston: standard for cylinders of $\geq 80$ mm and over <1000 mm strokes		
+	126 Single-acting	Non-magnetic	80				
	127 Tandem		A1 = $\varnothing 100$ A2 = $\varnothing 125$		Z Stainless steel piston rod and nut aluminium piston		
■	134 Rod lock version				X Stainless steel piston rod and nut technopolymer piston		
■	136 Version with piston rod lock						
■*	137 Piston rod lock + guide unit						

● 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)  
126... Single-acting retracted rod  
126...E Single-acting extended rod

▼ Letter to be added only to the single acting extended rod version

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

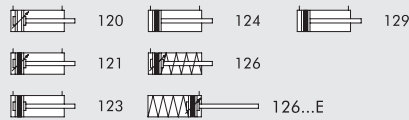
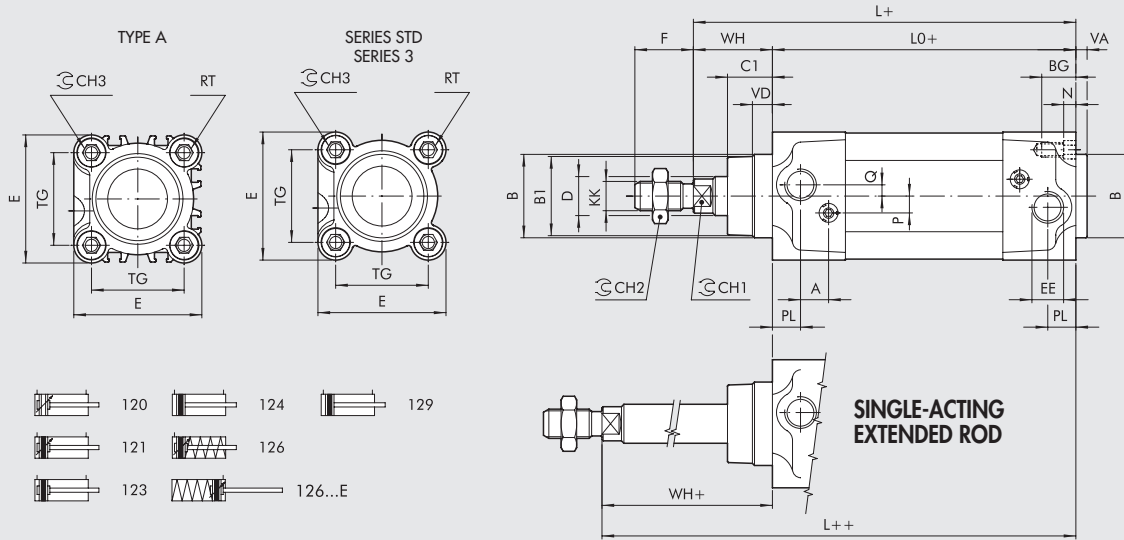
\* Available until  $\varnothing 100$

■ Not available for gasket V or B

# ISO 15552 CYLINDERS DIMENSIONS

## DIMENSIONS

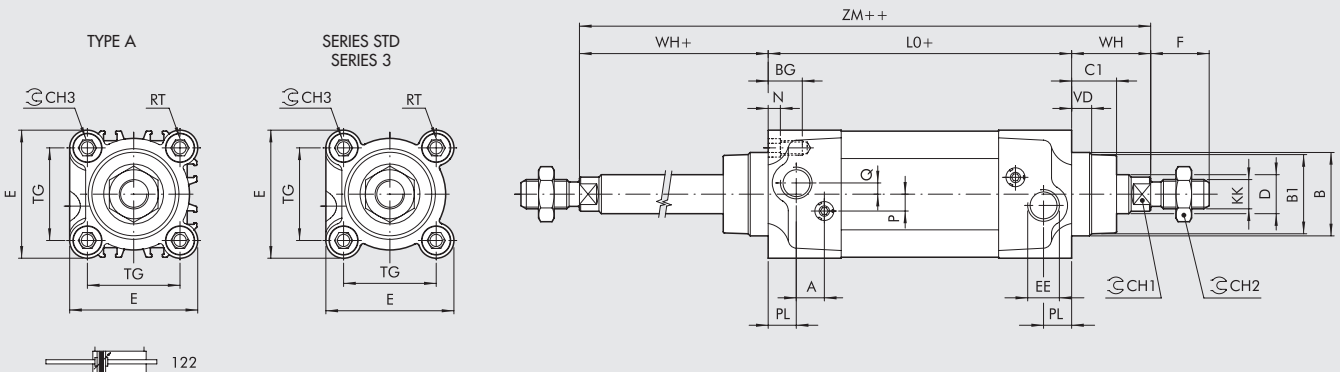
### STANDARD VERSION



**SINGLE-ACTING EXTENDED ROD**

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

### THROUGH-ROD VERSION



Ø	PL	VD	A	B	B <sub>1</sub>	WH	C <sub>1</sub>	CH <sub>1</sub>	CH <sub>2</sub>	CH <sub>3</sub>	KK	D	TG	VA	F	EE	RT	E	L	L <sub>0</sub>	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 126 ... (SINGLE-ACTING RETRACTED ROD)  
VERSION 126...E (SINGLE-ACTING EXTENDED ROD)

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