

ALUMINIUM TANK AND COMPENSATOR - SERIES 09

Series 09 has been extended with the addition of an air/oil compensator.

The Ø100 air/oil compensator consists of two aluminium flanges and an anodized jacket with an ISO profile, all joined together by means of eight screws.

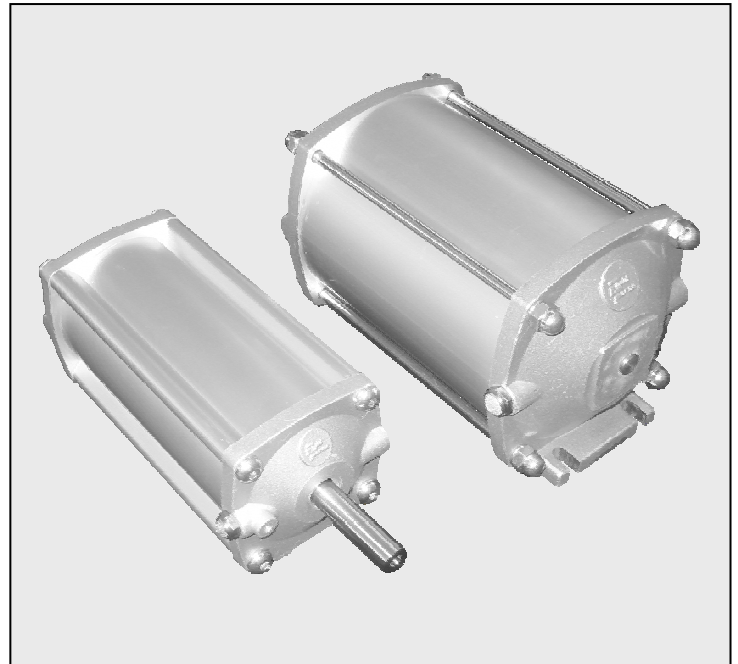
The Ø160 compensator consists of 2 aluminium flanges, 4 steel tie rods and a Ø160 anodized pipe.

A fixed or moving piston rod and a magnetic or non-magnetic piston are mounted inside.

The operating principle is very simple. It uses the pressure of incoming air to move the piston, which in turn pushes oil into the circuit.

The application and the space available will determine which model to use.

Standard models with a Ø100 jacket are available in capacities 1-2-3 litres. Models with a Ø160 jacket are available in capacities 4-5-8-10 litres.



The Ø100 tank also consists of two aluminium flanges and an anodized jacket with an ISO profile, all joined together by means of eight screws.

The Ø160 tank consists of 2 aluminium flanges, 4 steel tie rods and an anodized pipe.

The tank is supplied complete with a filter on the air intake side, a liquid filter inside and a ½ G filling cap.

Ø100 models have four M8 holes on the flanges for fixing to the equipment, and Ø160 have four 12mm slots.

Standard models can take such optionals as an internal electromagnetic level gauge or a pressure regulator and gauge.

Standard models with a Ø100 jacket are available in capacities 1-2-3 litres. Models with a Ø160 jacket are available in capacities 4-5-8-10 litres.



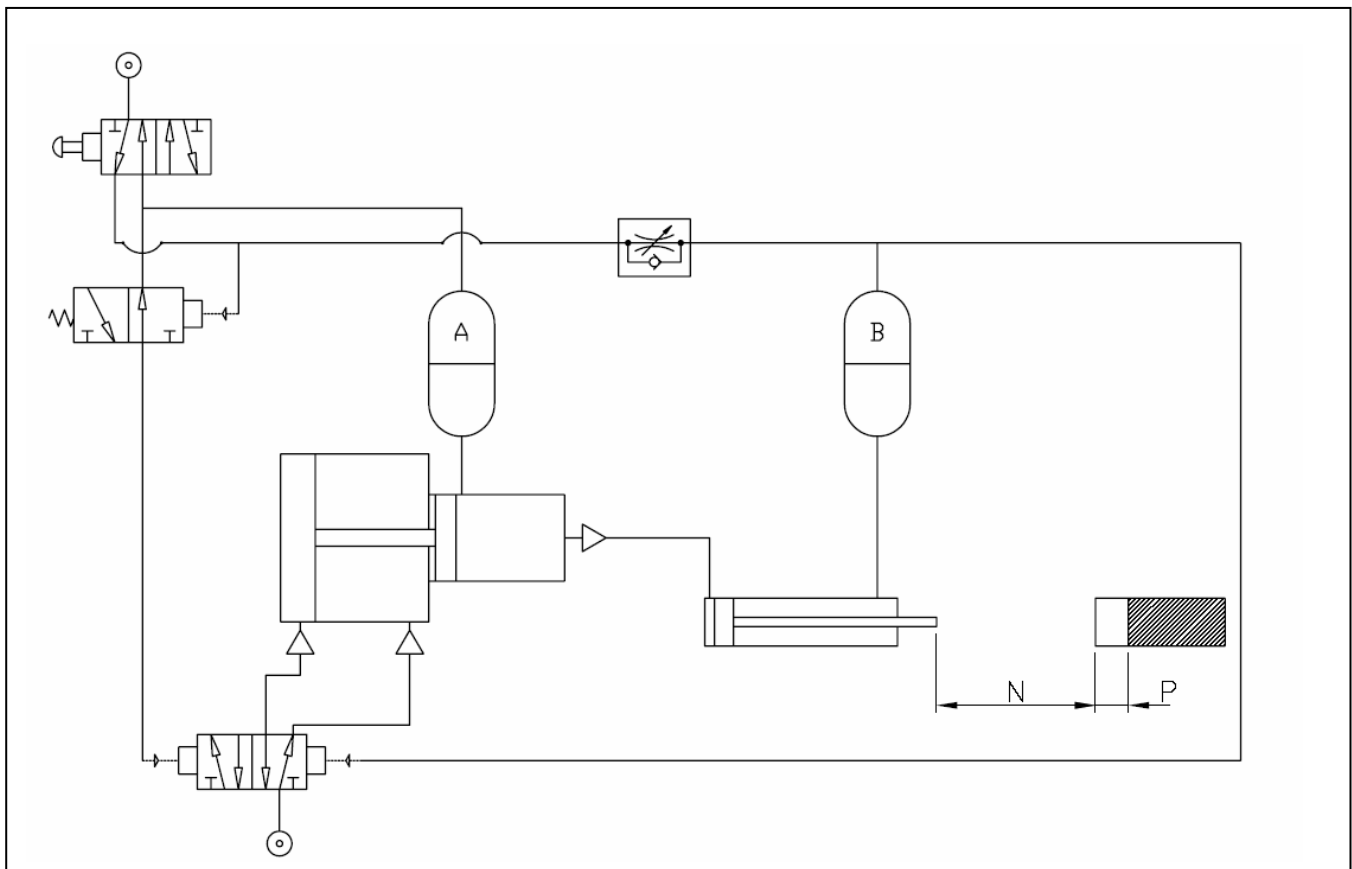
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APPLICATIONS

The application of the tank is fairly intuitive – it is mainly used to increase the amount of oil in a system when small leaks occur.

The compensator has numerous applications as it also exploits a compressed air input. It can be used as a normal tank, or as an air/oil cylinder for instance.

The diagram below shows a typical application of a compensator.



The oil in compensator A, which is compressed by the air, passes into the chamber of the multiplier and then into the double-acting cylinder with a long stroke. The cylinder performs the approach stroke (N) and stops.

A command then pressurises the multiplier, which intervenes on the work stroke (P), which requires a greater force and hence a higher pressure, and performs the last part of the stroke.

Cylinder retraction is given by compensator B, which is operated by a set pressure and sends oil into the cylinder chamber.

The piston retracts, pushing oil into the multiplier and hence back into compensator A. In this case, the multiplier alone would not have enough oil to perform the cylinder approach stroke (N), which is why the two compensators have been added.

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TECHNICAL DATA

		TANK		COMPENSATOR	
Bore	mm	100	160	100	160
Oil volume	l	1-2-3	4-5-8-10	1-2-3	4-5-8-10
Outer jacket		Aluminium		Aluminium	
Supply pressure	bar	2-8			
Temperature range	°C	-10 to +70			
Recommended oil		Not aggressive			
Fluid		Lubricated or unlubricated filtered air. If lubricated air is used, lubrication must be continuous.			

KEY TO CODES

Ø100 - Ø160

Z52	09	160	1	0400	E
	SERIES	BORE	MODEL	CAPACITY (cl)	OPTIONALS
	09	100	1 Tank	0100 0200 0300	0 None L Electromag. level R Press. regulator E Level + regulator
		160	2 Mobile piston rod compensator	0400 0500 0800 1000	M Magnetic N Non-magnetic
			3 Fixed piston rod compensator		M Magnetic

OPTIONALS AND SPECIAL APPLICATIONS

Our standard models of tanks and compensators have capacities ranging from 1 to 10 litres, but intermediate or greater capacities are available on request.

If special requirements are expressed, the quotation will be accompanied by a new identification code a drawing showing the maximum dimensions.

EXTERNAL SURFACE TREATMENT

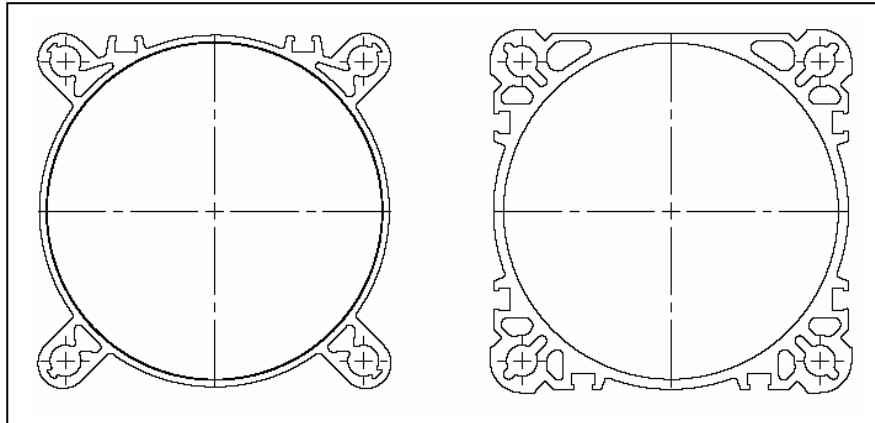
If the compensators or tanks are intended for use in special sectors, such as the food industry, the outer surface can undergo chemical nickel-plating treatment..

This is a heat treatment that increases the hardness of the material to 650±50 HV. The thickness of the nickel plating makes them extremely wear resistant. This gives the product a nickel-white colour.

SPECIAL PROFILES

With 100 magnetic tanks or compensators, which require external sensors, the profile of the jacket can be altered. The diagram below shows two possible profiles.

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SERIES 3 ISO PROFILE

TYPE A ISO PROFILE

TANK OPTIONS

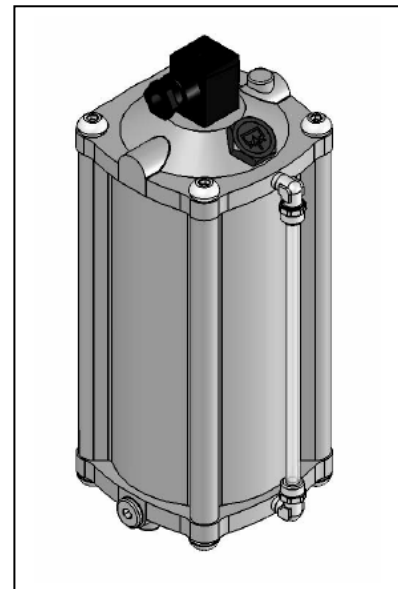
As you can see under key to codes, tanks can be purchased with three options: an electromagnetic level sensor, an input air pressure regulator or both.

ELECTROMAGNETIC LEVEL SENSOR

One of the tank accessories available is an electromagnetic level sensor. It exploits the force of the magnet in the float to change the electrical condition of a reed contact. Main technical features of our level sensors:

- APPLICATION: mineral oil
- FIXING ELEMENT: anodized aluminium
- PISTON ROD: brass
- FLOAT: foam nylon
- O-RING SEALS: NBR
- CONNECTOR: DIN43650
- CONTACT: NO/NC reed (SPDT)
- MAX. SWITCHING POWER: 80W
- MAX. SWITCHING CURRENT: 1 A
- MAX. SWITCHING VOLTAGE: 250VAC
- TEMPERATURE RANGE: -15°C to +80°C

Level sensors for particular applications, such as the food Industry, are available on request.

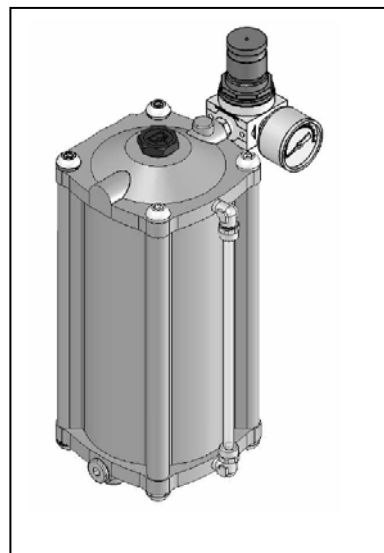


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PRESSURE REGULATOR

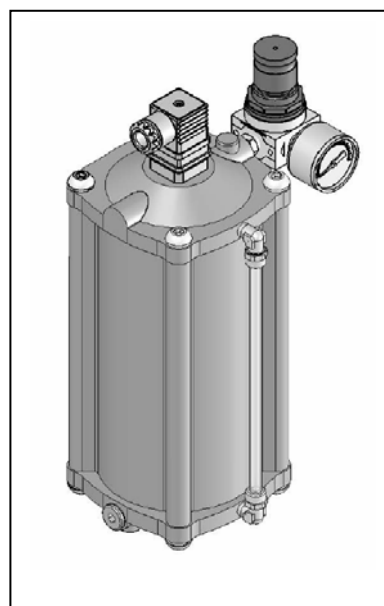
If the tank needs to be pressurised, it is advisable to apply a pressure regulator with a 12 bar gauge at the air inlet.

Tank		Fitting
Z52091001	R	1/8
Z52091601	R	1/4



PRESSURE REGULATOR + ELECTROMAGNETIC LEVEL SENSOR

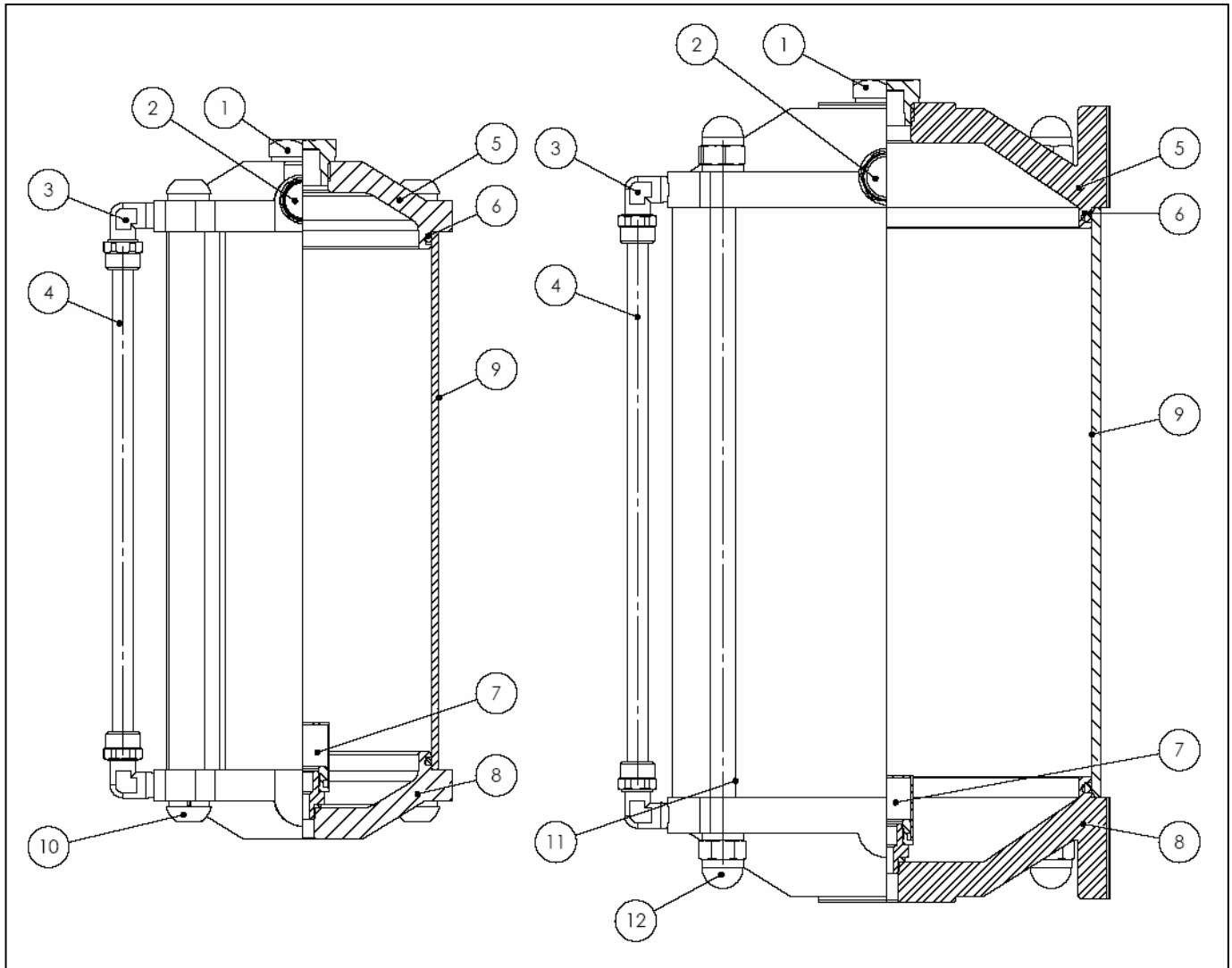
The last option is a tank complete with a pressure regulator and gauge plus an electromagnetic level sensor.



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COMPONENTS

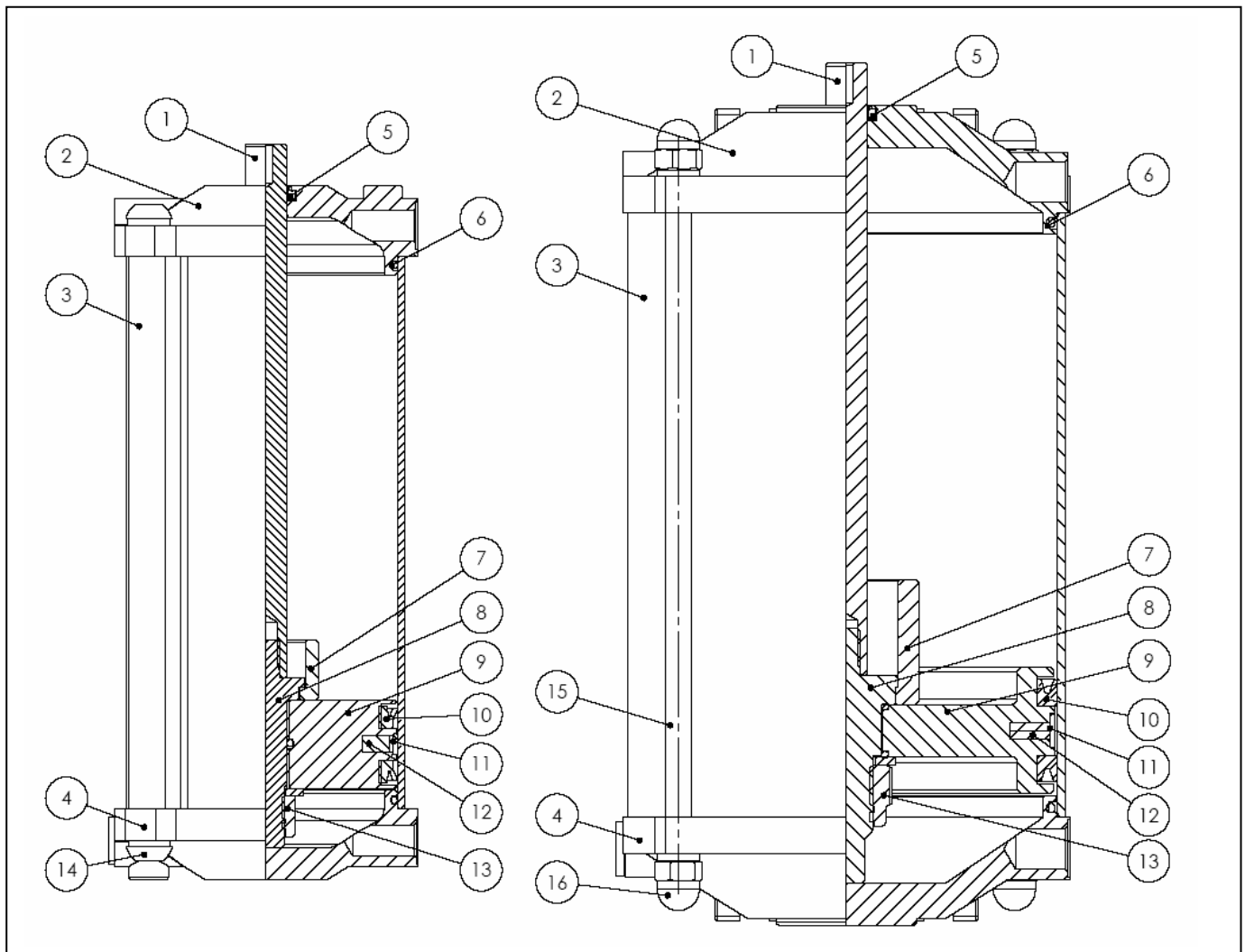
TANKS Ø100 – Ø160



1. CAP: plastic
2. SILENCER: nickel-plated brass
3. ELBOWS: nickel-plated brass
4. OIL LEVEL: 8/6 Rilsan clear pipe
5. UPPER HEAD: diecast aluminium
6. O-RING SEAL: NBR
7. OIL FILTER: neutral anodized aluminium
8. LOWER HEAD: diecast aluminium
9. JACKET: profiled and anodized aluminium Ø100 – neutral anodized aluminium Ø160
10. NUTS AND SCREWS: white galvanised steel (model Ø100)
11. TIE RODS: white galvanised steel (model Ø160)
12. BLIND NUTS: white galvanised steel (model Ø160)

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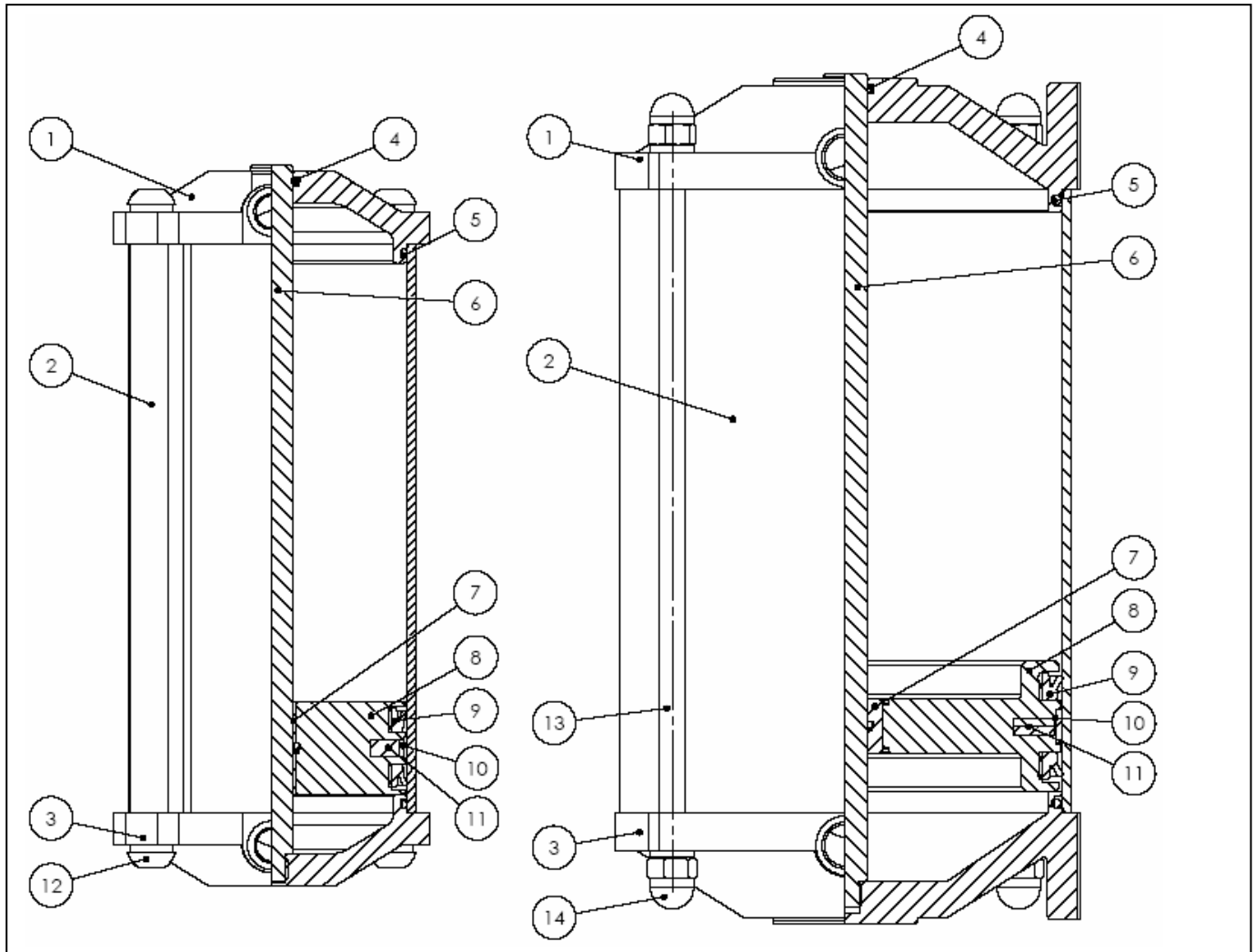
MOVING PISTON ROD COMPENSATOR Ø100 – Ø160



1. PISTON ROD Ø16: chromed steel - ground
2. UPPER HEAD: diecast aluminium
3. JACKET: profiled and anodized aluminium Ø100 – neural anodised aluminium Ø160
4. LOWER HEAD: diecast aluminium
5. PISTON ROD SCRAPER SEAL: NBR
6. O-RING SEAL: NBR
7. SPACER: neutral anodized aluminium
8. PISTON ROD EXTENSION: white galvanised steel
9. PISTON Ø100 – Ø160: aluminium alloy 2011
10. PISTON GASKET: NBR
11. GUIDING RING: special technopolymer
12. MAGNET: plastoferrite (version with magnet only)
13. SELF-LOCKING NUT: white galvanised steel
14. TCB HEX SCREW: white galvanised steel (model Ø100)
15. TIE RODS: white galvanised steel (model Ø160)
16. BLIND NUTS: white galvanised steel (model Ø160)

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FIXED PISTON ROD COMPENSATOR Ø100 – Ø160

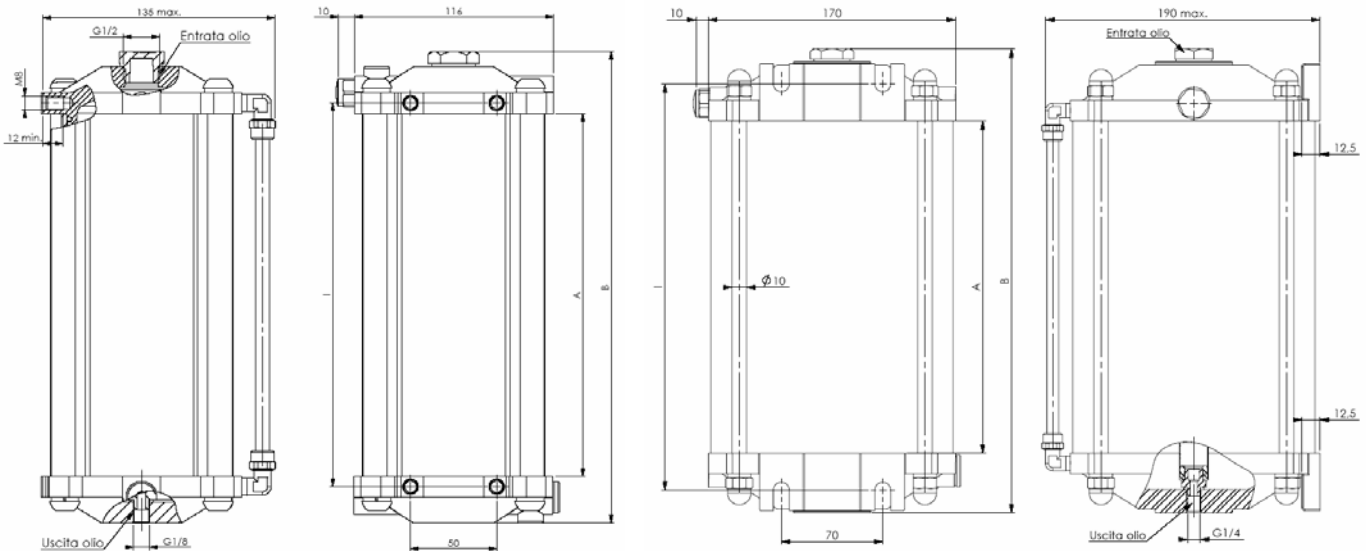


1. TESTATA SUPERIORE: Alluminio da fusione
2. CAMICIA: All.profilato ed anodizzato Ø100 – All. anodizzato neutro Ø160
3. TESTATA INFERIORE: Alluminio da fusione
4. GUARNIZIONE OR STELO: Gomma NBR
5. GUARNIZIONE OR TESTATA: Gomma NBR
6. STELO Ø16: Acciaio cromato – rettificato
7. BOCCOLA GUIDA STELO: Bronzo
8. PISTON ROD Ø100 - Ø160: aluminium alloy 2011
9. PISTON ROD GASKET: NBR
10. GUIDING RING: special technopolymer
11. MAGNET: plastoferrite
12. TCB HEX. SCREW: white galvanised steel (model Ø100)
13. TIE RODS: white galvanised steel (model Ø160)
14. BLIND NUTS: white galvanised steel (model Ø160)

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DIMENSIONS

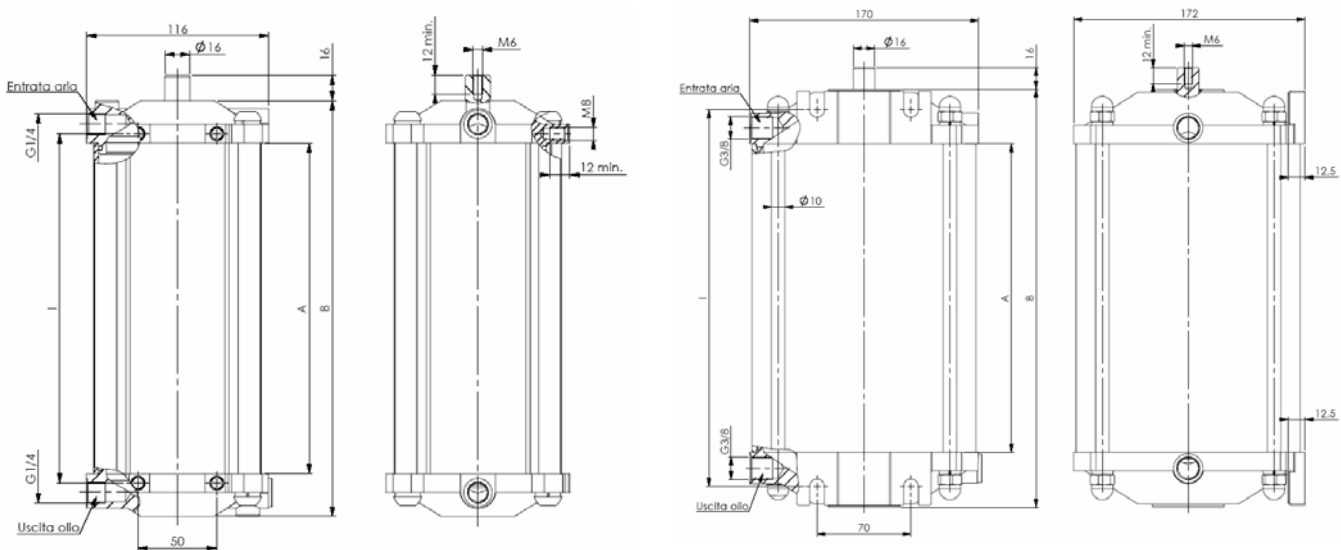
TANK Ø100 - Ø160



Tank Ø100	A(mm)	B(mm)	l(mm)
Z520910010100	210	273	222
Z520910010200	340	403	352
Z520910010300	460	523	472

Tank Ø160	A(mm)	B(mm)	l(mm)
Z5209160104000	280	371	331
Z5209160105000	330	421	381
Z5209160108000	480	571	531
Z5209160110000	580	671	631

MOVING PISTON ROD COMPENSATOR Ø100 - Ø160



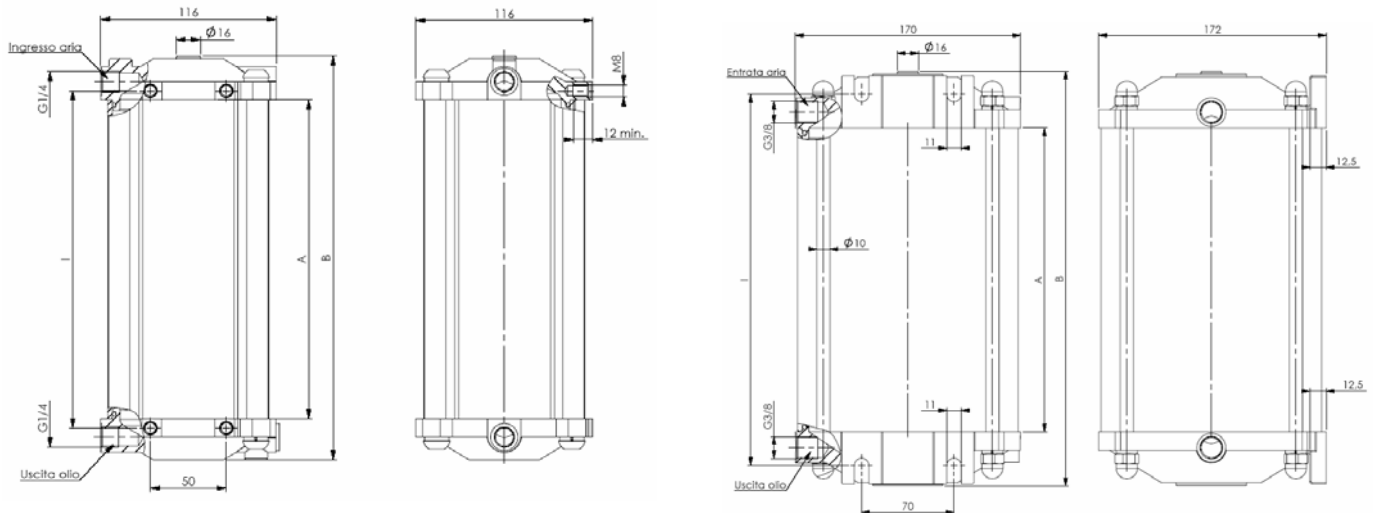
Compensator Ø100	A(mm)	B(mm)	l(mm)
Z520910020100N/M	210	264	222
Z520910020200N/M	340	394	352
Z520910020300N/M	460	514	472

Compensator Ø160	A(mm)	B(mm)	l(mm)
Z520916020400N/M	280	362	331
Z520916020500N/M	330	412	381
Z520916020800N/M	480	562	531
Z520916021000N/M	580	662	631

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FIXED PISTON ROD COMPENSATOR Ø100 – Ø160

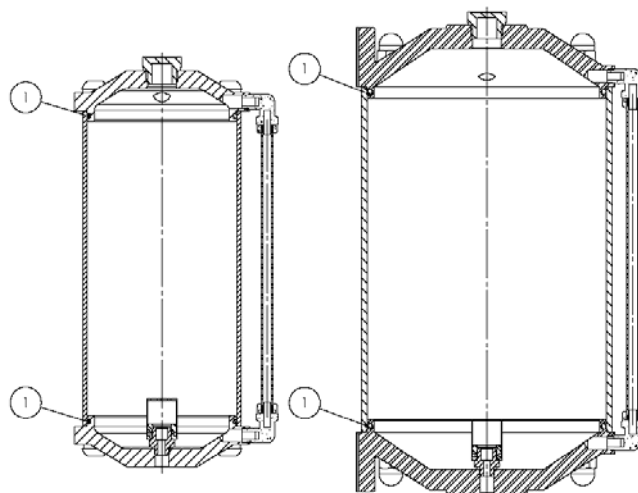


Compensator Ø100	A(mm)	B(mm)	l(mm)
Z520910030100N/M	210	266	222
Z520910030200N/M	340	396	352
Z520910030300N/M	460	516	472

Compensator Ø160	A(mm)	B(mm)	l(mm)
Z520916030400N/M	280	364	331
Z520916030500N/M	330	414	381
Z520916030800N/M	480	564	531
Z520916031000N/M	580	664	631

SPARE GASKET KIT

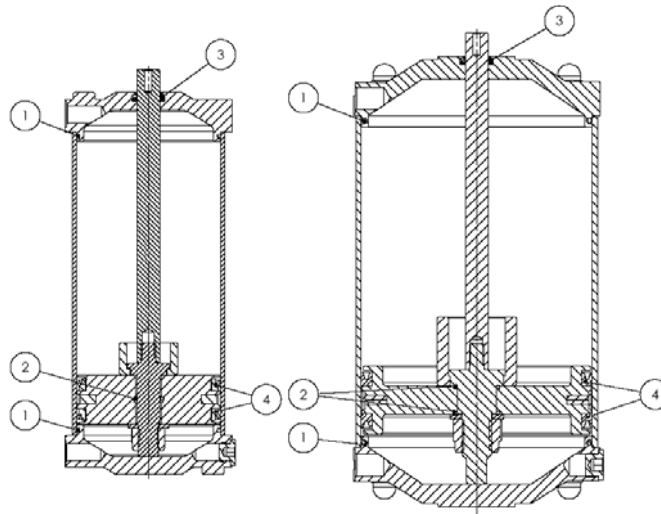
Tank Ø100 – Ø160



Callout no.	Z5209K10001	Q.ty	Z5209K16001	Q.ty	Material
1	C1023300	2	C1019660	2	NBR

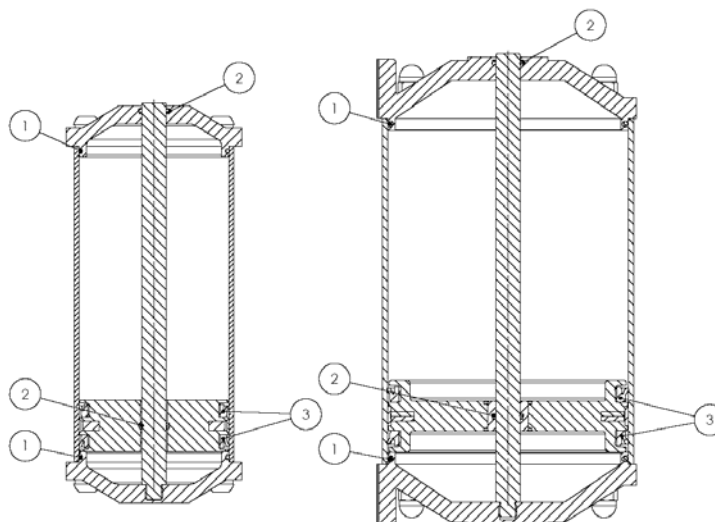
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Moving piston rod compensator Ø100 – Ø160



Callout no.	Z5209K10002	Q.ty	Z5209K16002	Q.ty	Material
1	C1023300	2	C1019660	2	NBR
2	C1019100	1	C1011400	2	NBR
3	C1084490	1	C1084490	1	NBR
4	C1069011	2	C1069716	2	NBR

Fixed piston rod compensator Ø100 – Ø160



Callout no.	Z5209K10003	Q.ty	Z5209K16003	Q.ty	Material
1	C1023300	2	C1019660	2	NBR
2	C1019100	2	C1019100	2	NBR
3	C1069011	2	C1069716	2	NBR