

Trouble shooting

Trouble	Cause	Remedy
1. Cylinder does not function	a. Low inlet pressure b. Leak through Mainseal c. Leak through piston c. Leak through the end cover and the cylinder barrel.	a. Increase the inlet pressure. b. Replace the Mainseal (4.2.1) c. Replace Piston assembly (4.2) d. Replace 'O' ring (6)
2. Piston Jerks during forward stroke	a. Leak through Mainseal b. Leak through piston	a. Replace Mainseal (4.2.1) b. Replace Piston assembly (4.2)
3. Piston Jerks during Reverse stroke	a. Leak through the Main seal b. Leak through piston c. Leak through Nutring cum Wiper	a. Replace the Mainseal (4.2.1) b. Replace Piston assembly (4.2) c. Replace Nutring cum Wiper (8)
4. Leak at piston rod end	a. Defective Nutring cum Wiper.	a. Replace Nutring cum Wiper (8)
5. Dust inside the front end cover	a. Defective Nutring cum Wiper.	a. Replace Nutring cum Wiper (8)

Dismantling and Assembling

1. Remove the circlip (9) in the front end side using appropriate tools.
2. Remove the piston assembly along with the piston rod and check for the dirt and damages
3. Check for the damages in the cylinder barrel (1).
4. Check the Piston assembly (4.2), Main seal (4.2.1), Bearing bush (7), Nutring cum Wiper (8) and O ring (4.2.5, 6) for any damages and scratches.
5. Clean all the elements thoroughly.
6. Replace the required necessary spares.
7. Apply general purpose grease on all the rubber seals, cylinder bore, bearing bush and piston rod.
8. Reassemble the complete cylinder.
9. Check the performance of the cylinder using a suitable valve.

How to order for spare parts

Mention the spare parts numbers as given in the tables and mention the model number

Example:- 'O' ring (6) 12 Ø cylinder : **Ordering number 651007**

For further information contact our regional Marketing office or Registered office

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Subject to change

Installation / Operating / Maintenance Instructions Compact Cylinder

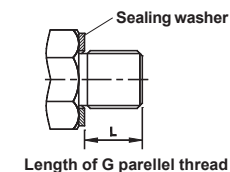
Specifications

Bore dia (mm)	12	16	20	25	32	40	50	63	80	100
Standard strokes (mm)	5, 10, 15, 20, 25, 30, 40	5, 10, 15, 20, 25, 30, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60	10, 20, 30, 40, 50, 60, 70, 80						
Medium	Compressed air - filtered - lubricated									
Working pressure range	0.5 - 10 bar									
Medium temperature	5 ° - 60 ° C									

Installation Instruction

1. Install in clean / acid free atmosphere.
2. Before installation of the cylinder check whether the unit is as per the specifications.
3. Check for proper fittings to be used on to the cylinder. Use only (R) taper thread nipples with teflon tape.
4. When using (G) parallel thread nipples, use sealing washer and check the length of the thread as below.

Thread Size	Tightening torque Nm	Length (L) of thread
M5	1 - 1.5	4mm Max.
G1/8	7 - 9	6mm Max.
G1/4	12 - 14	8mm Max.
G3/8	22 - 24	9mm Max.



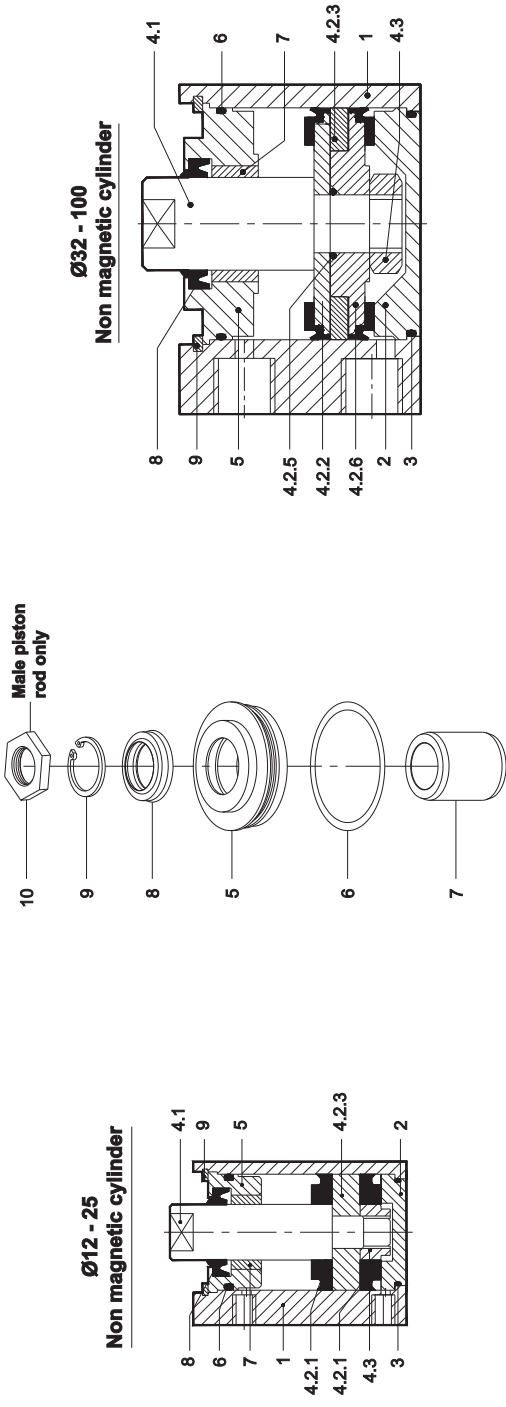
5. Tighten the pipings / nipples to the cylinder using proper tools. Do not give excess torque for tightening (See the above table for tightening torque)
6. Align the cylinder for your requirement such that no radial load is applied on the piston rod.
7. Ensure correct pressure and flow for proper functioning of the cylinder. Use correct size of tubings and fittings as required.

Maintenance Instructions

1. Before dismantling the unit, exhaust the air in the cylinder completely.
2. Remove the cylinder assembly from the machine and clean the assembly thoroughly.
3. Test the cylinder for operation using a suitable valve.
4. Note the problems / troubles and ascertain the probable causes and its remedies from the table on page 5.

**Spare Parts List
Compact Cylinder**

IS - A02, A03 - 01 - C

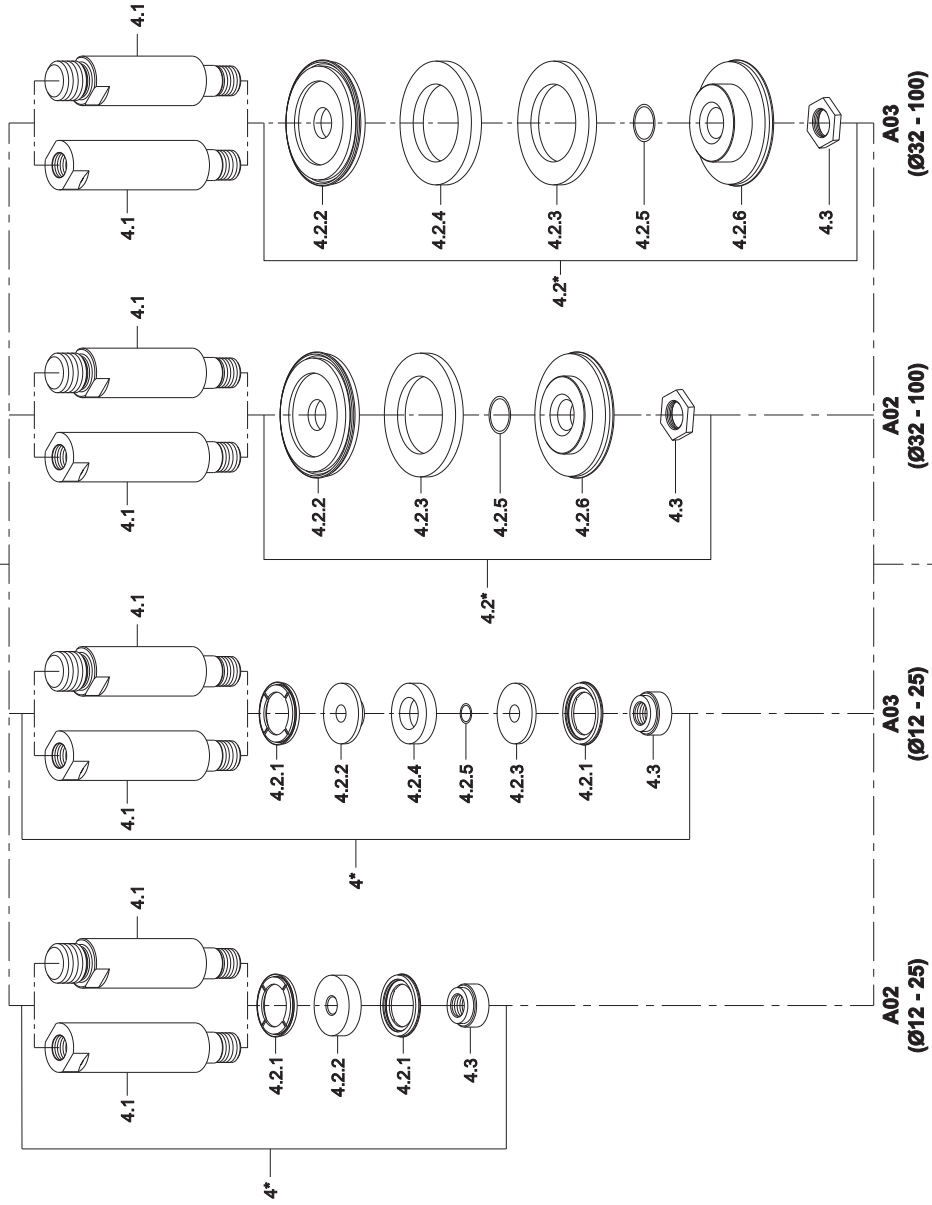


Ø12 - 25

Non magnetic cylinder

Ø32 - 100

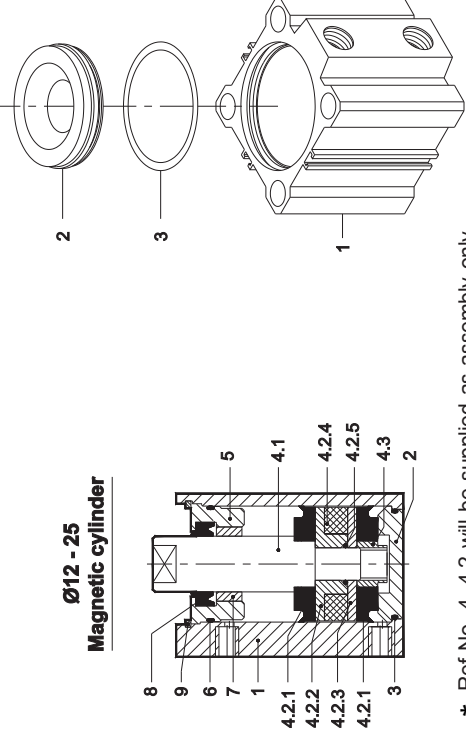
Non magnetic cylinder



**A03
(Ø12 - 25)**

**A02
(Ø32 - 100)**

**A03
(Ø32 - 100)**



Ø12 - 25

Magnetic cylinder

Ø32 - 100

Magnetic cylinder

Ref. No.	No. off	Part name	12 Ø	16 Ø	20 Ø	25 Ø	32 Ø	40 Ø	50 Ø	63 Ø	80 Ø	100 Ø
1	1	Cylinder barrel	-	-	-	-	-	-	-	-	-	-
2	1	Rear end cover	-	-	-	-	-	-	-	-	-	-
3	1	O ring	-	-	-	-	-	-	-	-	-	-
4	1	Piston & Piston rod assembly	A02 (Ø12 - 25)	SA00220000	SA00230000	SA00240000	-	-	-	-	-	-
			A02-M (Ø12 - 25)	SA00480000	SA00490000	SA00500000	-	-	-	-	-	-
			A03 (Ø12 - 25)	SA00260000	SA00270000	SA00280000	-	-	-	-	-	-
			A03-M (Ø12 - 25)	SA00520000	SA00530000	SA00540000	-	-	-	-	-	-
4.1	1	Piston rod	-	-	-	-	-	-	-	-	-	-
4.2	1	Piston assembly	-	-	-	-	-	-	-	-	-	-
4.2.1	2	Main seal (Ø12 - 25)	-	-	-	-	-	-	-	-	-	-
4.2.2	1	Piston B complete	-	-	-	-	610050	610034	610053	610055	610057	610059
4.2.3	1	Spacer	-	-	-	-	-	-	-	-	-	-
4.2.4		Washer	-	-	-	-	-	-	-	-	-	-
4.2.4		Magnet	-	-	-	-	-	-	-	-	-	-
4.2.5	1	O ring	-	-	-	-	-	-	-	-	-	-
4.2.6	1	Piston A complete	A02	-	-	-	650005	650005	650009	650009	650012	650025
			A03	-	-	-	610049	610051	610052	610054	610056	610058
4.3	1	Guide ring (Ø12 - 25)	-	-	-	-	610062	610063	610064	610065	610066	610067
		Lock nut (Ø32 - 100)	-	-	-	-	-	-	-	-	-	-
5	1	Front end cover	-	-	-	-	-	-	-	-	-	-
6	1	O ring	651007	651015	651020	650020	650015	650017	651101	651103	651105	651107
7	1	Bearing bush	-	-	-	-	-	-	-	-	-	-
8	1	Nutring cum wiper	640006	641514	641511	641516	641517	641517	641518	641518	641519	641520
9	1	Circlip-Light B (Int)	-	-	-	-	-	-	-	-	-	-
10	1	Nut (A02-M, A03-M)	-	-	-	-	-	-	-	-	-	-
Denotes for ordering items. Piston & Piston rod assembly SA00210000 (For example: Piston assembly SA0021 with 0000 please mention the stroke).												

Note : A02-M, A03-M - Male Piston Rod only

Spare Parts List Compact Cylinder

IS - A02, A03 - 01 - C

Though the ordering numbers have been given for individual seals, it is recommended to order as a **Seal kit** during major maintenance

Bore dia		12 Ø	16 Ø	20 Ø	25 Ø
Seal kit Ordering no	A02	SK00210000	SK00220000	SK00230000	SK00240000
	A02-M	SK00910000	SK00920000	SK00930000	SK00940000
	A03	SK00810000	SK00820000	SK00830000	SK00840000
	A03-M	SK00950000	SK00960000	SK00970000	SK00980000

Note : A02-M, A03-M - Male Piston Rod only

Bore Dia		32 Ø	40 Ø	50 Ø	63 Ø	80 Ø	100 Ø
Seal kit Ordering no	A02	SK0155	SK0156	SK0157	SK0158	SK0159	SK0160
	A03	SK0161	SK0162	SK0163	SK0164	SK0165	SK0166

Seal kit :

Consists of the following :

Ø12 - 25mm

- (4) Piston & Piston rod assembly - 1 no
- (6) 'O' ring - 1 no
- (8) Nutring cum wiper - 1 no

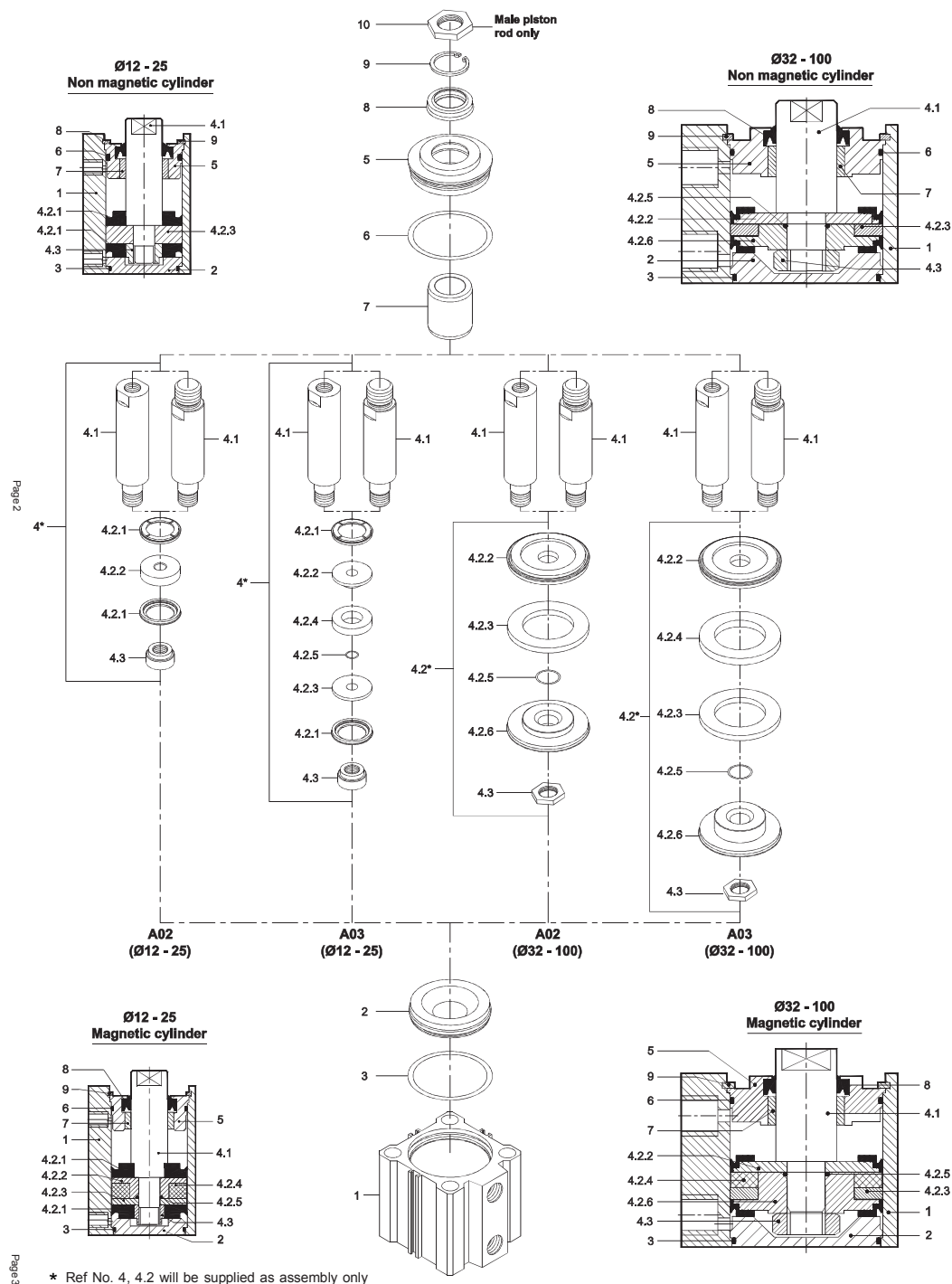
consists of the following :

Ø32 - 100mm

- (4.2.2) Piston B complete - 1 no
- (4.2.5) 'O' ring - 1 no
- (4.2.6) Piston A complete - 1 no
- (6) 'O' ring - 1 no
- (8) Nutring cum wiper - 1 no

Spare Parts List Compact Cylinder

IS - A02, A03 - 01 - C



Spare Parts List
Compact Cylinder

IS - A02, A03 - 01 - C

Though the ordering numbers have been given for individual seals, it is recommended to order as a **Seal kit** during major maintenance

Bore dia	12 Ø					16 Ø					20 Ø					25 Ø				
	A02					A02-M					A03					A03-M				
Seal kit	SK00210000	SK00220000	SK00230000	SK00240000	SK00250000	SK00910000	SK00920000	SK00930000	SK00940000	SK00950000	SK00810000	SK00820000	SK00830000	SK00840000	SK00850000	SK00950000	SK00960000	SK00970000	SK00980000	SK00990000
Ordering no	A02	A02-M	A03	A03-M		A02	A02-M	A03	A03-M		A02	A02-M	A03	A03-M		A02	A02-M	A03	A03-M	

Note : A02-M, A03-M - Male Piston Rod only

Bore Dia	32 Ø	40 Ø	50 Ø	63 Ø	80 Ø	100 Ø
Seal kit	SK0155	SK0156	SK0157	SK0158	SK0159	SK0160
Ordering no	A02	A03	SK0161	SK0162	SK0163	SK0164

Seal kit :

Consists of the following :

Ø12 - 25mm

- (4) Piston & Piston rod assembly - 1 no
(6) 'O' ring - 1 no
(8) Nutring cum wiper - 1 no

consists of the following :

Ø32 - 100mm

- (4,2,2) Piston B complete - 1 no
(4,2,5) 'O' ring - 1 no
(4,2,6) Piston A complete - 1 no
(6) 'O' ring - 1 no
(8) Nutring cum wiper - 1 no

Ref. No.	No. off	Part name		Ordering no. for									
				12 Ø	16 Ø	20 Ø	25 Ø	32 Ø	40 Ø	50 Ø	63 Ø	80 Ø	100 Ø
1	1	Cylinder barrel		-	-	-	-	-	-	-	-	-	
2	1	Rear end cover		-	-	-	-	-	-	-	-	-	
3	1	O ring		-	-	-	-	-	-	-	-	-	
4	1	Piston & Piston rod assembly	A02 (Ø12 - 25)	SA00210000	SA00220000	SA00230000	SA00240000	-	-	-	-	-	
			A02-M (Ø12 - 25)	SA00470000	SA00480000	SA00490000	SA00500000						
			A03 (Ø12 - 25)	SA00250000	SA00260000	SA00270000	SA00280000						
			A03-M (Ø12 - 25)	SA00510000	SA00520000	SA00530000	SA00540000						
4.1	1	Piston rod		-	-	-	-	-	-	-	-	-	
4.2	1	Piston assembly	A02 (Ø32 - 100)	-	-	-	-	-	-	-	-	-	
			A03 (Ø32 - 100)	-	-	-	-	-	-	-	-	-	
4.2.1	2	Main seal (Ø12 – 25)		-	-	-	-	-	-	-	-	-	
4.2.2	1	Piston B complete		-	-	-	-	610050	610034	610053	610055	610057	610059
4.2.3	1	Spacer		-	-	-	-	-	-	-	-	-	-
		Washer	A03 (Ø12 - 25)	-	-	-	-	-	-	-	-	-	-
4.2.4	1	Magnet		-	-	-	-	-	-	-	-	-	
4.2.5	1	O ring		-	-	-	-	650005	650005	650009	650009	650012	650025
4.2.6	1	Piston A complete	A02	-	-	-	-	610049	610051	610052	610054	610056	610058
			A03	-	-	-	-	610062	610063	610064	610065	610066	610067
4.3	1	Guide ring (Ø12 - 25)		-	-	-	-	-	-	-	-	-	
		Lock nut (Ø32 - 100)		-	-	-	-	-	-	-	-	-	
5	1	Front end cover		-	-	-	-	-	-	-	-	-	
6	1	O ring		651007	651015	651020	650020	650015	650017	651101	651103	651105	651107
7	1	Bearing bush		-	-	-	-	-	-	-	-	-	-
8	1	Nutring cum wiper		640006	641514	641511	641516	641517	641517	641518	641518	641519	641520
9	1	Circlip-Light B (Int)		-	-	-	-	-	-	-	-	-	-
10	1	Nut (A02-M, A03-M)		-	-	-	-	-	-	-	-	-	-
Denotes for ordering items. Piston & Piston rod assembly SA00210000 (For example: Piston assembly SA0021 with 0000 please mention the stroke).													

Note : A02-M, A03-M - Male Piston Rod only