

TANAIR PNEUMATICS

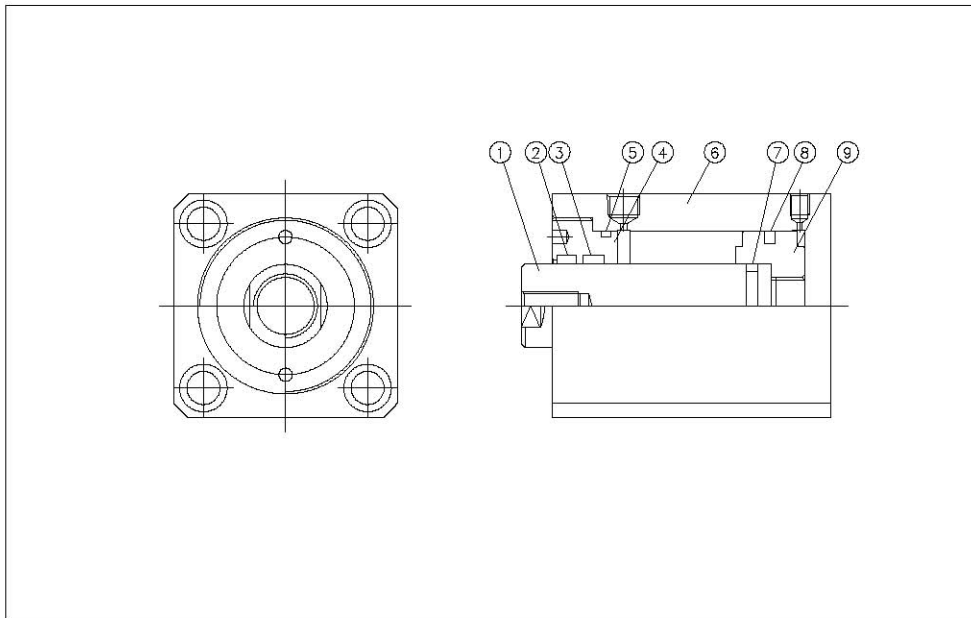
ISH40S COMPACT TYPE HYDRAULIC CYLINDER TECHNICAL SPECIFICATIONS

► Cylinder Specification

Type	Standard type				Switch-mounted type	
	Double-acting type		Double rod type		Double-acting type	Double rod type
Supporting type	Basic type(SD type)	Foot type(LA type)	Basic type(SD type)	Foot type(LW type)	Basic type(SDL type)	Basic type(LDWL type)
Inside diameter of pressure	Ø32, Ø40, Ø50, Ø63, Ø80	Ø32, Ø40, Ø50, Ø63	Ø32, Ø40, Ø50, Ø63, Ø80	Ø32, Ø40, Ø50, Ø63	Ø32, Ø40, Ø50, Ø63, Ø80	
Max. working pressure	140kgf/cm ² (12.729Mpa)					
Bearing pressure	210kgf/cm ² (20.594Mpa)					
Range of working speed	3kgf/cm ² (0.294Mpa)					
Range of working speed	8~100mm/sec					
Range of working temperature	-10~+80°C(Ambient temperature oil temperature)			-10~+70°C(Ambient temperature and oil temperature)		
Cushion tool	None					
Working oil	General mineral working oil(For other working oil, give instruction)					
Screw tolerance						
Allowance of stroke length	0~+0.8mm					

- Notes) 1. Oil pressure that is generated inside of the cylinder by the inertia of load should be the bearing pressure.
2. The foot type is equipped with balancing key.

► Inside Structure Drawing



► Part List

No.	Name	Materials	Quantity
1	ROD	S45C	1
4	ROD COVER	BC3	1
6	TUBE BODY	SS41(S45C)	1
9	PISTON	BC3	1

► Packing List

No.	2	3	5	7	8
Materials	URETHANE or NBR	URETHANE or NBR	NBR	NBR	NBR+URETHANE
Name	DUST SEAL	ROD PACKING	COVER O-RING	ROD O-RING	PISTON PACKING
Quantity	1	1	1	1	1 SET
Ø32	WD1700180	RU210 018	P26	P14	PW4100320
Ø40	WD1700220	RU2300220	G35	P18	PW4200400
Ø50	WD1700280	RU2100280	G45	P22	PW4200500
Ø63	WD1700350	RU2000350	G58	G30	PW4200630
Ø80	WD1700450	RU2100450	G75	G40	PW4200800
Ø100	WD1700550	RU2100550	G95	G50	PW4301000

* Packing

*Upper Packing Items can be changed by order.

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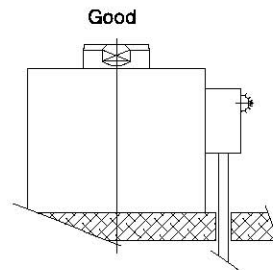
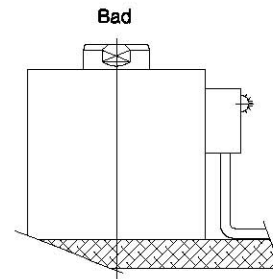
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1. Stick slip
2. Improper speed control
3. Damage to packing due to temperature rising by adiabatic compression.
4. Shock or vibration to the outside.

► How to handle the switch

If the cylinder stroke is short, the switch and the fitting surface are close to each other, and the switch code are forced to be excessively bent, take an action as shown in the below figure.

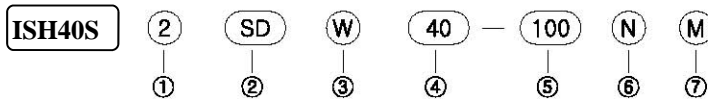
1. Use Four sets of hexagonal wrench bolts (JIS B1176, Strength Classification: 12.9) to mount the cylinder.
2. If the output of the rod forward side is used, make necessary jigs so that the screws are fastened to the rod end side without a force being applied to the screw part of the piston rod.
3. When making the fitting areas, attention should be given so that the piston rod does not have lateral (eccentric) load.
4. When starting cylinder for the first time, be sure to drain air at low pressure. After the air drainage is completed, start the cylinder at low pressure and then slowly raise the pressure to the working pressure.
5. Supply the oil of low pressure (the pressure at which the cylinder moves at a low speed of 10mm/sec) to the cylinder. When the piston of the cylinder moves forward, unfasten the air vent plug in the rod side by one or two turns (turn clockwise) to drain air.
6. Air is collected in the side of the cylinder, milk-white working oil leaks from the air vent plug, therefore, repeat air draining air until no milk-white working oil comes out.
7. When the air drainage is completed, fasten the air vent plug (turn counter clockwise) and check for any leak of oil.
8. Drain the air collected in the piping as well as in the inside of the cylinder. If air still remains, the following troubles may occur:



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ISH40S COMPACT TYPE HYDRAULIC CYLINDER ORDERING GUIDE

► Cylinder Type Notation



① Packing materials

None(standard)	NBR, URETHANE
1	NBR
2	Viton

② Supporting type

SD	Basic Type
LA	Foot Type

③ Cylinder Type

None	Single-rod
W	Double-rod
L	Switch-mounted Type
WL	Double-rod Switch-mounted Type

④ Inside diameter of cylinder

⑤ Cylinder Stroke

Refer to the below table

⑥ Cushion Type

None	No-Cushion
B	Both-side Cushion
R	Rod-side Cushion
H	Head-side Cushion

⑦

Rod end (for a male screw, give separate instructions)

None	Female screw
M	Male screw

► Range of standard stroke

Kind	Structure	Supporting type	F-D(mm)	Stroke(mm)										
				5	10	15	20	25	30	35	40	45	50	
Standard Type	Double-acting type	Basic type	Ø32	○	○	○	○	○	○	○	-	-	-	-
			Ø40	○	○	○	○	○	○	○	○	○	-	-
			Ø50	○	○	○	○	○	○	○	○	○	○	○
			Ø63	○	○	○	○	○	○	○	○	○	○	○
	Double-rod type	Foot type	Ø60	○	○	○	○	○	○	○	○	○	○	○
			Ø32	○	○	○	○	○	○	-	-	-	-	
			Ø40	○	○	○	○	○	○	○	○	-	-	
			Ø50	○	○	○	○	○	○	○	○	○	○	○
Switch set	Double-acting type	Basic type	Ø63	○	○	○	○	○	○	○	○	○	○	○
			Ø32	○	○	○	○	○	○	-	-	-	-	
			Ø40	-	○	○	○	○	○	○	○	-	-	
			Ø50	-	○	○	○	○	○	○	○	○	○	○
			Ø63	-	○	○	○	○	○	○	○	○	○	○
Double-rod type		Ø80	-	○	○	○	○	○	○	○	○	○	○	

►Quantity of switch sets to be mounted

- For all strokes of Ø32 and 10mm stroke of Ø40, Ø50, Ø63, Ø80, it is possible to mount one switch set.
- The cylinder delivered are with the switch mounted.
- For 5-30 mm strokes of Ø32(5st-30st) and 10mm stroke of Ø40, Ø50, Ø63, Ø80(10st), it is possible to mount one switch set, and the switch is delivered through detection in the head side.