

Reed Auto Switch

Specifications

Model	Snap Shot	Applicable load	Voltage(Load Range)	Contact Protection Circuit	Internal Voltage Drop	Indicator Lamp	Applicable Cylinder	Note	
D-A54K		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA) AC220V(5~12.5mA)	Built In	≤2.4V	Red LED illuminates when turned ON.	ACM Ø40~Ø100 ACL Ø125~Ø160 KP70/140HL Ø40~Ø80		
D-A56K		IC Circuit	DC4~8V(20mA)	None	≤0.8V				
D-A64K		Relay, PLC, IC Circuit	DC24V(50mA) AC110V(25mA) AC220V(12.5mA)	Built In	100Ω	None			
D-C72K		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA) AC220V(5~12.5mA)	None	≤2.4V	Red LED illuminates when turned ON.	ACP Ø6~Ø16 ACS2/3 Ø20~Ø40		
D-C73K		IC Circuit	DC4~8V(20mA)		≤0.8V				
D-C76K		Relay, PLC, IC Circuit	DC24V(50mA) AC110V(20mA)		0V	None			
D-C80K		Relay, PLC, IC Circuit	DC24V(50mA) AC110V(20mA)		≤2.4V	Red LED illuminates when turned ON.			
D-A72K		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA) AC220V(5~12.5mA)	None	≤2.4V	Red LED illuminates when turned ON.	ADF Ø20~Ø125		
D-A73K		Relay, PLC, IC Circuit	DC24V(50mA) AC110V(25mA)		0V			None	
D-A80K		Relay, PLC	DC24V(50mA) AC110V(20mA)		≤2.7V	Red LED illuminates when turned ON.		ADF Ø20~Ø125 ACM Ø40~Ø100 ACL Ø125~Ø160 KP70/140HL Ø40~Ø80	V is vertical type. (ex. D-A93VK)
D-A90(V)K	IC Circuit	DC4~8V(20mA)	≤0.8V						
D-A93(V)K		Relay, PLC	DC24V(5~40mA) AC110V(5~20mA)	None	≤2.4V	Red LED illuminates when turned ON.	KP125A/160A Ø20~Ø80		
D-A96(V)K		IC Circuit	DC4~8V(20mA)		≤0.8V				
D-Z72K D-Z82K		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA) AC220V(5~12.5mA)	None	≤2.4V	Red LED illuminates when turned ON.	KP125A/160A Ø20~Ø80	D-Z82K(□□□)	
D-Z73K		IC Circuit	DC4~8V(20mA)		≤0.8V				
D-Z76K		Relay, PLC, IC Circuit	DC24V(50mA) AC110V(20mA)		0V	None			
D-Z80K		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA)		≤2.4V	Red LED illuminates when turned ON.			
MA-1	IC Circuit	DC4~8V(≤20mA)	≤0.8V						
MA-2H		Relay, PLC, IC Circuit	DC24V(≤20mA) AC110V(≤20mA)	None	0V	None			
MD-3		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA)		≤2.4V	Red LED illuminates when turned ON.			
MR		IC Circuit	DC4~8V(≤20mA)		≤0.8V				
R0		Relay, PLC	DC24V(5~50mA) AC110V(5~25mA) AC220V(5~12.5mA)	Built In	≤2.4V	Red LED illuminates when turned ON.			
R5		Relay, PLC, IC Circuit	DC24V(≤50mA) AC110V(≤20mA) AC220V(≤20mA)	None	≤0V	None			
S0		Relay, PLC	DC24V(5~50mA) AC110V(5~50mA)	Built In	≤2.4V	Red LED illuminates when turned ON.			
S5		Relay, PLC, IC Circuit	DC24V(≤50mA) AC110V(≤20mA) AC220V(≤20mA)	None	≤0V	None			

※ 2-wire wiring.

※ Lead wire length 1m(Standard), 3m & 5m(Semi standard).

Symbol



Solid State Auto Switch

Specifications

Model	Snap Shot	Wiring Type	Output Type	Applicable load	Power Supply Voltage	Current Consumption	Load Voltage	Load Current	Internal Voltage Drop	Applicable Cylinder		
D-F59K		3Wire	NPN	Relay, PLC, IC Circuit	DC5, 12, 24V (DC4.5~28V)	≤8mA	≤DC28V	≤150mA	≤0.8V	ACM Ø40~Ø100 ACL Ø125~Ø160 KP70/140HLØ40~Ø80		
D-F5PK			PNP			≤10mA	-	≤100mA				
D-J59K		2Wire	-	DC24V Relay, PLC	-	-	DC24V (DC10~28V)	5~150mA	≤3V			
D-J51K			-	AC Relay, PLC	-	-	AC80~260V	5~80mA	≤14V			
D-H7A1K		3Wire	NPN	Relay, PLC, IC Circuit	DC5, 12, 24V (DC4.5~28V)	≤8mA	≤DC28V	≤150mA	≤0.8V		ACP Ø6,Ø~Ø16 ACS2/3 Ø20~Ø40	
D-H7A2K			PNP			≤10mA	-	≤100mA				
D-H7BK		2Wire	-	DC24V Relay, PLC	-	-	DC24V (DC10~28V)	5~150mA	≤3V			
D-F7NVK		3Wire	NPN	Relay, PLC, IC Circuit	DC5, 12, 24V (DC4.5~28V)	≤8mA	≤DC28V	≤150mA	≤0.8V			ADF Ø20~Ø125
D-F7PVK			PNP			≤10mA	-	≤100mA				
D-F7BVK		2Wire	-	DC24V Relay, PLC	-	-	DC24V (DC10~28V)	5~150mA	≤3V			
D-F9N(V)K		3Wire	NPN	DC24V Relay, PLC	DC5, 12, 24V (DC4.5~28V)	≤8mA	≤DC28V	≤80mA	≤0.4V	ADF Ø20~Ø125 ACM Ø40~Ø100 ACL Ø125~Ø160 KP70/140HLØ40~Ø80		
D-F9P(V)K	PNP		≤10mA			-	≤100mA	≤1.5V				
D-F9B(V)K	2Wire		-			-	-	DC24V (DC10~28V)	5~30mA		≤4.5V	
D-Y59AK		3Wire	NPN	Relay, PLC, IC Circuit	DC5, 12, 24V (DC4.5~28V)	≤12mA	≤DC28V	≤150mA	≤0.8V		KP125A/160A Ø20~Ø80	
D-Y7PK			PNP			≤15mA	-	≤100mA				
D-Y59BK		2Wire	-	DC24V Relay, PLC	-	-	DC24V (DC10~28V)	5~150mA	≤3V			

* Red LED is attached as indicator lamp.

* Lead wire length 1m(Standard), 3m & 5m(Semi standard).

CYLINDER FOR TIEROD MOUNT

Specifications

Snap Shot	Applicable Cyl. Series	Bore Size (mm)	Model	Applicable Auto Switch	Model	Applicable Auto Switch		
 D-A54 MOUNT D-A93 MOUNT	ACM	Ø40	D-A54 MOUNT 40/50/63	Reed Type D-A54K Solid State Type D-F59K, D-F5PK, D-J59K, D-J51K	D-A93 MOUNT 40/50/63	Reed Type D-A93(V)K Solid State Type D-F9N(V)K, D-F9P(V)K, D-F9B(V)K		
		Ø50					D-A54 MOUNT 80/100	D-A93 MOUNT 80/100
		Ø63	D-A54 MOUNT 125/140		D-A93 MOUNT 125/140			
		Ø80						D-A54 MOUNT 150/160
		Ø100	KP70HL/140HL		Ø40		D-A54 MOUNT 80/100	
	Ø125	D-A54 MOUNT 125/140			D-A93 MOUNT 125/140			
	Ø140						D-A54 MOUNT 150/160	D-A93 MOUNT 150/160
	Ø150	D-A54 MOUNT 80/100			D-A93 MOUNT 80/100			
	Ø160							
	Ø80	D-A54 MOUNT 150/160	D-A93 MOUNT 150/160					
Cylinder of other company (S○○, T○○)	Ø63	D-A54 MOUNT 63	D-A93 MOUNT 63					

* D-A54 MOUNT 63 & D-A93 MOUNT 63 are adapted to the medium size cylinder of other company. (S○○, T○○)

CYLINDER FOR FREE BAND & EXCLUSIVE BAND

Specifications

Snap Shot	Applicable Cyl. Series	Bore Size (mm)	Model	Applicable Auto Switch	Model	Applicable Auto Switch	Applicable Auto Switch	
 Exclusive band for D-72/73 Free band for MA-1, D-72	ACP	10	D-C72/73 BAND-ACP B10	D-C72/73 FREE BAND * For Ø10~Ø40	Reed type D-C72K D-C73K Solid state type D-H7A1K, D-H7A2K, D-H7BK	MA-1 FREE BAND * Ø10~Ø40 Use	Reed Type MA-1K MA-2HK	
		16	D-C72/73 BAND-ACP B16					
		20	D-C72/73 BAND-ACS2 B20					
	ACS2	25	D-C72/73 BAND-ACS2 B25					
		32	D-C72/73 BAND-ACS2 B32					
		40	D-C72/73 BAND-ACS2 B40					
		ACS3	20					D-C72/73 BAND-ACS3 B20
			25					D-C72/73 BAND-ACS3 B25
	32		D-C72/73 BAND-ACS3 B32					
	40	D-C72/73 BAND-ACS3 B40						

Flow Switch

How to Order

SFS - 20 A

① ② ③



SFS-25A

① Series
SFS : Flow Switch

② Thread
20 : Rc(PT) 3/4
25 : Rc(PT) 1

③ Thread Material
A : PVC(Standard)
B : Brass(Order Made)

Symbol



Operating Pressure	10kgf/cm ²
Withstand Pressure	17.5kgf/cm ²
Insulating Resistance	≥100Ω, DC500VM
Withstand Voltage	AC1500V/MIN
Contact Point Life	1000K Cycle
Bellows Life	500K Cycle
Temperature of Fluid	Max. 100°C

- The paddle type SFS water flow switch series are designed to provide excellent performance where accuracy, reliability, and rugged construction are required used in liquid flow lines carrying water or any fluid neither harmful to brass and phosphor bronze nor classified as a hazardous fluid.
- These series may be wired so that one circuit can be closed and the other circuit can be open when the speed of a fluid is faster or slower than the required speed.
- SFS series are suitable for liquid pressure and temperature in accordance with specifications. They should not be used for the line of a fluid whose temperature is lower than 0°C.
- It can be used outdoors, but it must be protected from water or weathering.
- It is designed to use only the operating control device.
- Because the failure of the operating control may cause injuries or losses of properties, the user should use a safety device to protect himself or herself or a warning monitoring system for control failure.

HS series

Pressure Switch

How to Order

HS - 210

① ②



HS-210



HS-306

① Series
HS : Pressure Switch

② Pressure Range

Symbol



203	-50cmHg~3kgf/cm ²	
206	-50cmHg~6kgf/cm ²	
210	1~10kgf/cm ²	
220	5~20kgf/cm ²	
230	5~30kgf/cm ²	
306	LOW: -50cmHg~6kgf/cm ² HIGH: 8~30kgf/cm ²	2-Contact, Common connection
306M		M:Manual Reset
606		2-Contact
606M		M:Manual Reset

- Applicable to air, water and fluoride refrigerant.
- Various access function.
- Mounting bracket is provided.
- Micro-switch ensures reliable conversion.

Specifications

Model	Range(kgf/cm ²)		Differential(kgf/cm ²)		Factory Setting		Max. Bellows Pressure (kgf/cm ²)	Fluid	Temperature	Weight (kg)
	Min.	Max.	Min.	Max.	ON	OFF				
HS-203	-50cmHg	3	0.35	2	0.5	1.5	11	Non-corrosive Water, Air, Liquid, Inertness Gas, Steam	-10°C~ 120°C	0.42
HS-206	-50cmHg	6	0.6	4	2	3	16.5			
HS-210	1	10	1	3	4	6	16.5			
HS-220	5	20	3	5	12	15	40			
HS-230	5	30	3	10	20	25	40			
HS-306	LOW SIDE	-50cmHg	6	4	3	2	16.5			
	HIGH SIDE	8	30	Applox. 4 Fixed		16	20			40
HS-306M	LOW SIDE	-50cmHg	6	4	2	2	16.5			
	HIGH SIDE	8	30	Manual Reset	Manual Reset	20	40			
HS-606	LOW SIDE	-50cmHg	6	4	3	2	16.5			
	HIGH SIDE	8	30	Applox. 4 Fixed		16	20	40		
HS-606M	LOW SIDE	-50cmHg	6	4	3	2	16.5			
	HIGH SIDE	8	30	Manual Reset	Manual Reset	20	40			

Others

KTD-600 series

OTHERS

Digital Pressure Sensor Switch



- Multi indicate positive pressure and negative pressure.
- Compact designed and light weight.
- With one touch zero adjustment function. (kPa,bar,psi)
- Return function of automatic operating mode.
- Independent 2-channel output according to user settings.
- Using high precision semiconductor pressure sensor. It is widely used in industrial which require precise pressure control such as semiconductor manufacturing line, medical equipment, automation line and etc.

Specifications

Model	KTD-600	KTD-600V (Vacuum Type)
Pressure Type	□□□	Negative pressure
Display Pressure Range	-0.95 ~ 9kgf/cm ²	-0.99 ~ 0kgf/cm ²
Rated Pressure Range	-0.95 ~ 9kgf/cm ²	-0.97 ~ 0kgf/cm ²
Max Pressure Range	2 Times of rating pressure	1.5 Times of rating pressure
Fluid	Air, Non-corrosive gas	
Power Supply	12~24VDC ± 10% Ripple (P-P)	
Current Consumption	Max. 30mA	
Ambient Temperature	0℃~50℃ (No dew)	
Storage Temperature	-40℃~125℃ (No freezing)	
Ambient Humidity	30~80%RH (No freezing)	
Temperature Coefficient of Span	-0.1~-0.2% Span/℃ (-20℃~100℃)	-0.2~-0.3% Span/℃ (-20℃~100℃)
Linearity	≤±0.3% Span	
Reponse Time	Selectable from 1 to 99 Step (1Step = 5msec)	
Control Output	NPN Open Collector 2 Output (Max. load current ≤100mA)	
Analog Output	Select Analog Mode (0~6 Step Mode)	Select Analog Mode (0~4 Step Mode)
	Resolution : 1~5V (≥1/800) 0~5V (≥1/1000)	
Display Method	- 1LED (±display), 3 Digit FND 7 Segment	
	- (OUT1, OUT2) displayed by 2 LED	
Material	- Front case, Pannel bracket : PC	
	- Pressure port : M5 (Built in)	
Wire	Ø4.2 / 24AWG X 5Core / Approx. 1.5m (±5%)	
Accessory	Manual, Mounting bracket, Bracket set for pannel	
Display Pressure Unit	kPa, bar, psi	kPa, mbar, psi
Weight	156g	

KTD-1000 series

Digital Pressure Sensor Switch



- Multi indicate positive pressure and negative pressure.
- Compact designed and light weight.
- With one touch zero adjustment function. (kPa,bar,psi)
- Return function of automatic operating mode.
- Independent 2-channel output according to user settings.
- Analog output(1~5V)

Specifications

Model	KTD - 1000	
	A103-L	102P, 102V, 203, 503, 104
Pressure Type	Guige Pressure (Ductile Pressure)	102P : 0 ~ 1kgf/cm ² 102V : 0 ~ -1kgf/cm ² 203 : 0 ~ 20kgf/cm ² 503 : 0 ~ 50kgf/cm ² 104 : 0 ~ 100kgf/cm ²
Rated Pressure Range	-0.99 ~ 9kgf/cm ²	
Max Pressure Range	2 times of rating pressure	
Fluid	SUS316L, Liquid and gases compatible with Titanium	
Power Supply	12 ~ 24VDC ± 10% Ripple (P-P)	
Current Consumption	Max. 40mA (No load)	
Linearity	≤±0.2% FS	
Reponse Time	Selectable from 5 to 495msec (1 ~ 99Step / 1Step = 5msec)	
Operating Temperature	-40℃ ~ 125℃	
Temperature compensation	0℃ ~ 50℃	
Output Characteristic Depending on Temperature	≤±0.75% FS (-20℃~85℃)	
Control Output	NPN open collector 4 Output	
Analog Output	1 ~ 5V (Resolution : Linear)	
Display Method	- High intensity 4 digit 7 segment display (Red)	
	- Unit displayed by 3LED (Green)	
Wire	Ø4.8 / 6C / Approx. 2m	
Body Material	- From case : PC - Rear case : PC	
Port Size	R(PT) 1/4 & M5	
Port Material	SUS316L	
Reference	- Communication cables and analog cables are sold separately	
Weight	300g	

Digital Pressure Sensor Switch

How to Order



KDPC-L



KDPC-HL

- Can be used with both new type or old type refrigerant.
- Available for high pressure and low pressure for pneumatic and hydraulic use.
- Can be applied to oil pump, water pump, air pump, thermo-hygrostat, condenser, heater pump, air dryer and etc.
- Inverter control and remote-access is possible with RS-485, 4~20mA output.
- Accurate pressure setting and digital display.

KDPC - **L** **050** **A** **C** - **220V**

① ② ③ ④ ⑤

- ① Type
L : SINGLE
HL : DUAL
DIF : DIFFERENCE
- ② Pressure Range
06 : 600mmAg
010 : 10kgf//cm²
030 : 30kgf//cm²
050 : 50kgf//cm² (Standard)
100 : 100kgf//cm²
200 : 200kgf//cm²
- ③ Output Type
Nil : None
A : 4~20mA
- ④ Interface
Nil : None
L : RS-485
- ⑤ Voltage
12V : 12VDC
24V : 24VDC
220V : 220VAC

Specifications

Type	L (SINGLE)	HL (DUAL)	DIF (DIFFERENCE)
Display	3 DIGIT FND		
Accuracy	±1% F.S		
Proof Pressure	100kgf//cm ²		
Temperature	-20~60℃		
Humidity	0~80% R . H		
Fluid	Air, Non-Corrosive Gas, Water, Oil		
Sensor Material	Ceramic Diaphragm		
Port Size	7/16 - 20UNF		
Pressure Range	-1.0~50kgf//cm ²	-1.0~5, 10, 20, 30, 50, 100kgf//cm ²	
Control Output	3 Point Relay Output (CONTACT:250V/3A SPDT)		
Power Supply	AC230V±10% 50/60Hz 0.2A		
Accessory	Bracket		
Interface	RS-485 (Option)		
Case Material	ABS		
Weight	490g	510g	

SRJ series

Air, Water for Rotary Joint



SRJ2000A-02R

- Easy to install with compact design and light weight.
- Low rotating resistance
- Non-lubricated type

How to Order

SRJ **2000** **A** - **02** **R** **D**

① ② ③ ④ ⑤ ⑥

- ① Series
SRJ : Air, Water for Rotary Joint
- ② Body Size
2000 : 1/4 Standard
3000 : 3/8 Standard
4000 : 1/2 Standard
5000 : 3/4 Standard
6000 : 1 Standard
7000 : 1 1/4 Standard
8000 : 1 1/2 Standard
9000 : 2 Standard
- ③ Fluid
A : Air
W : Water
- ④ Thread
01 : Rc(PT) 1/8
02 : Rc(PT) 1/4
03 : Rc(PT) 3/8
04 : Rc(PT) 1/2
06 : Rc(PT) 3/4
10 : Rc(PT) 1
12 : Rc(PT) 1 1/4
14 : Rc(PT) 1 1/2
20 : Rc(PT) 2
- ⑤ Thread Direction
R : Right Thread (Standard)
L : Left Thread
- ⑥ Type
Nil : Single Type
D : Double Type

Specifications

Max. Pressure	9.9kgf//cm ²
Max. Temperature	80℃
Max. Number of Rotations	1200rpm
Fluid	Air, Water
Material	Aluminum

Others

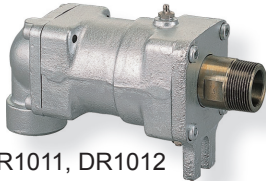
DR1000 series

OTHERS

Bellow-fitted Flat Seal
Rotary Joint



DR1001, DR1002



DR1011, DR1012

With a specially developed air-tight, carbon sealing mechanism, sophisticated bellows and rugged ball bearings the DR-1000 series rotary joint ensure not only outstanding sealing ability but are also versatile. they operate at peak performance at high speed, temperature and pressure and do not leak even when high and low temperature operation is conducted alternatively.

How to Order

DR10 ① ② 0 ③ 1 - ④ 10A

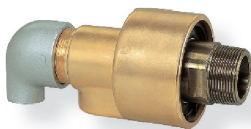
- ① Series
DR10 : Bellows-Fitted Flat Seal
- ② Type of Head Compartment
0 : Duplex with Fixed Internal Pipe
1 : Simplex L
2 : Duplex with Rotating Internal Pipe
- ③ Socket or Beveled for Welding
1 : Right-Hand Screw
2 : Left-Hand Screw
5 : Flange
- ④ Shaft Size
10A : R(PT) 3/8
15A : R(PT) 1/2
20A : R(PT) 3/4
25A : R(PT) 1
32A : R(PT) 1 1/4
40A : R(PT) 1 1/2
50A : R(PT) 2
65A : R(PT) 2 1/2
80A : R(PT) 3

Specifications

Max. Pressure	15kgf/cm ² G	
Max. Temperature	180℃	
Max. Number of Rotations	15A~40A	300rpm
	50A~80A	150rpm
Fluid	Steam, Water, Hot Water, Oil, Air, Thermal Media	

DR2000 series

Aluminium, Brass, SUS type
Rotary Joint



DR2201, DR2202,
DR2221, DR2222



DR2011,
DR2012

The DR2000 Series rotary joints have low rotation resistance at high speed operation and are economical to operate. their unique sealed ball bearing mechanism eliminates the need for lubrication and they have a high resistance to corrosion in the area that comes in contact with fluid due to the use of a teflon coated, aluminum alloy, specially formulated resins, a copper alloy and stainless steel, their special design allows for easy maintenance and the joints are lighter and more compact.

How to Order

DR20 ① ② 0 ③ 1 - ④ 10A

- ① Series
DR20 : Aluminum Body
DR22 : Brass Body
DR25 : SUS Body
- ② Type of Head Compartment
0 : Duplex with Fixed Internal Pipe
1 : Simplex L
2 : Duplex with Rotating Internal Pipe
- ③ Socket or Beveled for Welding
1 : Right-Hand Screw
2 : Left-Hand Screw
5 : Flange
6 : Metric, Right-Hand Screw
7 : Metric, Left-Hand Screw
- ④ Shaft Size

Shaft	R(PT)	Shaft	Metric
6A	1/8	M10	M10xP1.25
8A	1/4	M14	M14xP1.5
10A	3/8	M16	M16xP1.5
15A	1/2	M18	M18xP1.5
20A	3/4	M22	M22xP1.5
25A	1	M26	M26xP1.5
32A	1 1/4	M30	M30xP1.5
40A	1 1/2	M42	M42xP2.0
50A	2	M48	M48xP2.0
65A	2 1/2		

※ In case of Metric, it applies to DR2206, DR2207, DR2216, and DR2217.

Specifications

Max. Pressure	10kgf/cm ² (7kgf/cm ²)	
Max. Temperature	100℃ (80℃)	
Max. Number of Rotations	6A~25A	1500rpm
	32A~65A	1000rpm
Fluid	Water, Air, Chemical, Oil	

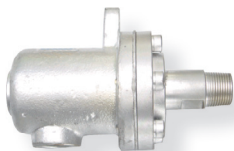
DR3000 series

OTHERS

Lubrication Free Double Seal for High Temperature Fluids Rotary Joint



DR3001, DR3002
DR3101, DR3102



DR3011, DR3012
DR3111, DR3112

The DR3000 series rotary joint are lubrication-free, easy maintenance type with a spherical double seal structure which has a stable capacity to handle easy-to-leak fluid in high-pressure and high temperature conditions.

How to Order

DR30 ① ② ③ ④ - 10A

- ① Series
DR30 : Lubrication Free, Double Seal
DR31 : Lubrication Free, Double Seal, High Temperature Fluid
- ② Type of Head Compartment
0 : Duplex with Fixed Internal Pipe
1 : Simplex L
- ③ Socket or Beveled for Welding
1 : Right-Hand Screw
2 : Left-Hand Screw
5 : Flange
- ④ Shaft Size
15A : R(PT) 1/2
20A : R(PT) 3/4
25A : R(PT) 1
32A : R(PT) 1 1/4
40A : R(PT) 1 1/2
50A : R(PT) 2
65A : R(PT) 2 1/2
80A : R(PT) 3
100A : R(PT) 4

Specifications

Model	DR30	DR31
Max. Pressure	15kgf/cm ² G	7kgf/cm ² G
Max. Temperature	180℃	250℃
Max. Number of Rotations	15A~40A	300rpm
	50A~100A	100rpm
Fluid	Steam, Water, Warm Water, Hot Water, Heat Media	

DR3700 series

Lubrication Free Ductile Cast Iron Body Rotary Joint



DR3701, DR3702



DR3705

The DR3700 series are high performance, no-lubrication type rotary joints that guarantee efficient operation in high temperature and high pressure conditions. given the widest possible supporting area and distance between the fulcra, the two bearings enhance the stabilized sealing effect facilitate maintenance.

How to Order

DR37 ① ② ③ ④ - 10A

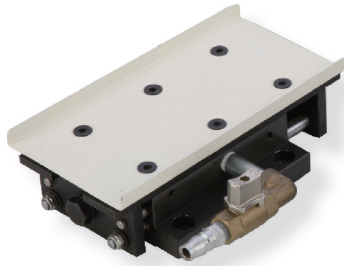
- ① Series
DR37 : Lubrication Free Ductile Cast Iron Body
- ② Type of Head Compartment
0 : Duplex with Fixed Internal Pipe
1 : Simplex L
2 : Duplex with Rotating Internal Pipe
- ③ Socket or Beveled for Welding
1 : Right-Hand Screw
2 : Left-Hand Screw
5 : Flange
- ④ Shaft Size
15A : R(PT) 1/2
20A : R(PT) 3/4
25A : R(PT) 1
32A : R(PT) 1 1/4
40A : R(PT) 1 1/2
50A : R(PT) 2
65A : R(PT) 2 1/2
80A : R(PT) 3

Specifications

Max. Pressure	15kgf/cm ² G	
Max. Temperature	300℃	
Max. Number of Rotations	10A~25A	300rpm
	50A~80A	150rpm
Fluid	Steam, Hot Water, Thermal Media, Water, Coolant, Oil, Air	

Others

Air Transporter



- Less mechanical noise.
- Simple and convenient installation.
- Provides efficient transport and feed through air intake and emission using spool valve.
- Maximum 8° upward transport depending on weight and frictional coefficient, using inertia.
- Applicable in various working environments (press, injection, product screening, product transport).
- Convenient re-installation with tray structure.
- Effective for narrow (minimum 15 mm), deep and wide areas with tray structure.
- Capable of installing several trays with one machine.
- Convenient post-management with simple components.

How to Order

KSM - 12

①

②

① Series
KSM : Air Transporter

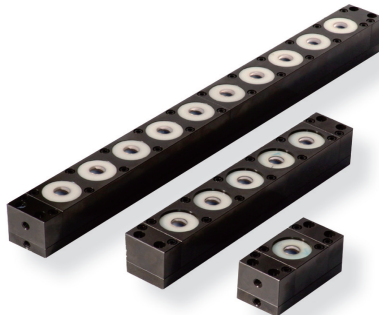
② Mechanical Capacity
12 : 12kg
48 : 48kg
100 : 100kg

Specifications

Model		KSM12	KSM48	KSM100
Operating Pressure	kgf/cm ²	4.5~5.5		
Mechanical Capacity	kg	12	48	100
Air Pressure Consumption	L/min	12	46	130
Noise	db-A	68	68	69
Max. Stroke Length	mm	24	26	27
Max. Tray Weight	kg	2.9	5.8	20
Recommended Strokes Per Minute	SPM	120	110	110
Weight	kg	2.5	6.5	18.2

KABL series

Air Ball Lifter



How to Order

KABL 50D - 5B

①

②

① Series
KABL : Air Ball Lifter

② Number of Balls
1B : 1pcs
2B : 2pcs
~
20B : 20pcs

- Pneumatic type - no hydraulic pump needed
- Easy installation and use
- Less cost compared with hydraulic lifter
- Convenient maintenance
- Aluminum body - light weight
- Superior directionality using balls
- Block joint type - changeable assemblage
- Forced ascent and descent possible
- Adaptation of ball cover improve ball service life

Specifications

Model	Num. of Balls	Ascending Force kN (kgf)				Descending Force kN (kgf)			
		Pressure of Compressed Air MPa (kgf/cm ²)				Pressure of Compressed Air MPa (kgf/cm ²)			
		0.4 (4.08)	0.5 (5.10)	0.6 (6.12)	0.7 (7.14)	0.4 (4.08)	0.5 (5.10)	0.6 (6.12)	0.7 (7.14)
KABL50D-1B	1	1.10 (112)	1.37 (140)	1.64 (168)	1.92 (196)	0.10 (10.3)	0.13 (12.8)	0.15 (15.4)	0.18 (17.9)
KABL50D-2B	2	2.19 (224)	2.74 (279)	3.29 (335)	3.84 (391)	0.20 (20.5)	0.25 (25.6)	0.30 (30.8)	0.35 (35.9)
KABL50D-3B	3	3.29 (335)	4.11 (419)	4.93 (503)	5.76 (587)	0.30 (30.8)	0.38 (38.5)	0.45 (46.1)	0.53 (53.8)
KABL50D-4B	4	4.39 (447)	5.48 (559)	6.58 (671)	7.67 (783)	0.40 (41.0)	0.50 (51.3)	0.60 (61.5)	0.70 (71.8)
KABL50D-5B	5	5.48 (559)	6.85 (699)	8.22 (838)	9.59 (978)	0.50 (51.3)	0.63 (64.1)	0.75 (76.9)	0.88 (89.7)
KABL50D-6B	6	6.58 (671)	8.22 (838)	9.87 (1006)	11.5 (1174)	0.60 (61.5)	0.75 (76.9)	0.91 (92.3)	1.06 (108)
KABL50D-7B	7	7.67 (783)	9.59 (978)	11.5 (1174)	13.4 (1369)	0.70 (71.8)	0.88 (89.7)	1.06 (108)	1.23 (126)
KABL50D-8B	8	8.77 (894)	11.0 (1118)	13.2 (1342)	15.3 (1565)	0.80 (82.0)	1.01 (103)	1.21 (123)	1.41 (144)
KABL50D-9B	9	9.87 (1006)	12.3 (1258)	14.8 (1509)	17.3 (1761)	0.91 (92.3)	1.13 (115)	1.36 (138)	1.58 (162)
KABL50D-10B	10	11.0 (1118)	13.7 (1397)	16.4 (1677)	19.2 (1956)	1.01 (103)	1.26 (128)	1.51 (154)	1.76 (179)
KABL50D-11B	11	12.1 (1230)	15.1 (1537)	18.1 (1845)	21.1 (2152)	1.11 (113)	1.38 (141)	1.66 (169)	1.94 (197)
KABL50D-12B	12	13.2 (1342)	16.4 (1677)	19.7 (2012)	23.0 (2348)	1.21 (123)	1.51 (154)	1.81 (185)	2.11 (215)
KABL50D-13B	13	14.3 (1453)	17.8 (1817)	21.4 (2180)	24.9 (2543)	1.31 (133)	1.63 (167)	1.96 (200)	2.29 (233)
KABL50D-14B	14	15.3 (1565)	19.2 (1956)	23.0 (2348)	26.9 (2739)	1.41 (144)	1.76 (179)	2.11 (215)	2.46 (251)
KABL50D-15B	15	16.4 (1677)	20.6 (2096)	24.7 (2515)	28.8 (2935)	1.51 (154)	1.89 (192)	2.26 (231)	2.64 (269)
KABL50D-16B	16	17.5 (1789)	21.9 (2236)	26.3 (2683)	30.7 (3130)	1.61 (164)	2.01 (205)	2.41 (246)	2.82 (287)
KABL50D-17B	17	18.6 (1900)	23.3 (2376)	28.0 (2851)	32.6 (3326)	1.71 (174)	2.14 (218)	2.56 (261)	2.99 (305)
KABL50D-18B	18	19.7 (2012)	24.7 (2515)	29.6 (3018)	34.5 (3521)	1.81 (185)	2.26 (231)	2.72 (277)	3.17 (323)
KABL50D-19B	19	20.8 (2124)	26.0 (2655)	31.2 (3186)	36.5 (3717)	1.91 (195)	2.39 (244)	2.87 (292)	3.34 (341)
KABL50D-20B	20	21.9 (2236)	27.4 (2795)	32.9 (3354)	38.4 (3913)	2.01 (205)	2.51 (256)	3.02 (306)	3.52 (359)

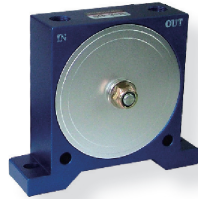
Others

Air Vibrator

How to Order



SB 3-B



SB 3-R

- Uniform vibration and is easy to install.
- Minimizing noise.
- No risk of gas explosion by using air.
- Vibration control is easy.

SB - 2 B

① ②

① Body Size

- 2 : 1/4 Small Type
- 3 : 1/4 Medium Type

② Vibration Method

- B : Ball Type
- R : Rotor Type

Specifications

Model		SB-2B	SB-3B	SB-2R	SB-3R
Vibration Frequency (Hz)	3kgf/cm ²	145	38	85	83
	4kgf/cm ²	152	44	104	110
	5kgf/cm ²	156	48	111	119
Num. of Rotation (rpm)	3kgf/cm ²	8700	2280	5100	4980
	4kgf/cm ²	9120	2640	6240	8800
	5kgf/cm ²	9360	2880	6660	7140
Vibration Acceleration (m/s ²)	3kgf/cm ²	221	41	140	302
	4kgf/cm ²	133	55	255	536
	5kgf/cm ²	156	57	257	643
Fluid		Air			
Operating Pressure		2~9.9kgf/cm ²			

KPV series

Air Vibrator



- Strong vibration
- Transfer of local vibration
- Little noise, Light

Specifications

Model		KPV-10	KPV-16	KPV-22	KPV-30	KPV-40	KPV-50
Tube Diameter		Ø10	Ø16	Ø22	Ø30	Ø40	Ø50
Forward Thrust(kgf)	4kg/cm ²	3.1	8.0	15.2	28.3	50.3	78.5
	7kg/cm ²	5.5	14.0	26.6	49.4	87.9	137.4
Backward Thrust(kgf)	4kg/cm ²	2.2	5.5	10.3	19.2	34.4	53.9
	7kg/cm ²	3.8	9.6	18.0	33.6	60.1	94.3
Frequency (reciprocations /minute)	4kg/cm ²	4,000	3,800	3,300	2,600	1,800	1,600
	7kg/cm ²	5,800	4,800	4,200	3,300	2,300	2,000
Air Consumption (liters/minute)	4kg/cm ²	8	20	38	69	102	166
	7kg/cm ²	17	41	77	140	209	331
Weight (kg)		0.08	0.19	0.44	0.92	1.88	3.35

KVT series

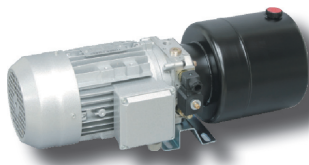
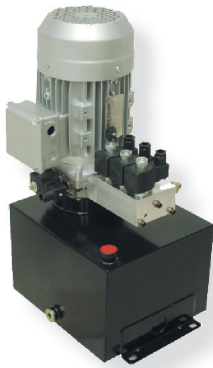
Vortex Cooler



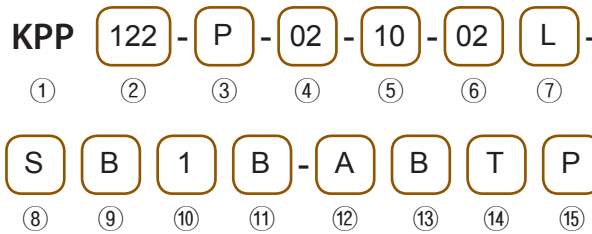
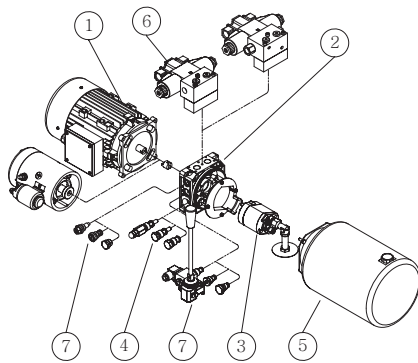
- Rapid cooling by air.
- Desired temperature and flow rate is adjustable.

Specifications

Model	KVT45-60	KVT60-75	KVT-1000
Thread	Rc(PT) 1/8	Rc(PT) 1/4	Rc(PT) 3/8
Pressure range	3~7kg/cm ²	4~7kg/cm ²	5~7kg/cm ²
Compressed air Consumption	260~60 l/mm	660~380 l/mm	1,650~1,150 l/mm
Cooling air / Air Consumption	15~80%	15~80%	15~75%
Lowest Cooling Air Temperature	-45℃	-60℃	-50℃
Maximum temperature difference	60℃	75℃	65℃
Conversion heat quantity	100kcal/116W	400kcal/465W	1000kcal/1,160W
Pipelines	Inner Dia. ≥4mm	Inner Dia. ≥5.5mm	Inner Dia. ≥8mm
Compressor capacity	≥2kw	≥5kw	≥11kw
Weight	160g	400g	2.5 kg



- Compact designed hydraulic generator.
- Various configuration is available with lift type and general circuit type.
- System can be optimized by combination of various equipments such as motor, tank, hydraulic block and etc.



① Model

KPP	Hydraulic Power Pack
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② Motor

Symbol	Voltage	Output
M11	DC 12V	0.2KW
M21		0.5KW
011		0.8KW
021		1.6KW
031		2.0KW
M12		DC 24V
M22	0.5KW	
012	0.8KW	
022	2.2KW	
032	3.0KW	
102	AC ø1 220V	
112		0.75KW
122		1.5KW
112S		0.75KW
122S		1.8KW
132		2.2KW
303	AC ø3 220/380V	0.5KW
313		0.75KW
323		1.5KW
323S		1.8KW
333		2.2KW
353		3.7KW

③ Circuit

P	PT circuit
L	Lift circuit

④ Pump

Symbol	Discharge Rate(cc/rev)	Input Limit(Pmax)
M1	0.25	250
M2	0.5	250
M3	0.75	240
M4	1	220
M5	1.25	220
M6	1.5	180
01	1.0	250
02	1.25	250
03	1.6	250
04	2.0	250
05	2.5	250
06	3.15	230
07	3.65	210
08	4.2	170
09	5.0	155
10	5.7	130
11	6.1	120
12	8.0	95
13	9.8	75

⑤ Pressure

0~25	0~250kgf/cm ² / 10
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⑥ Tank Capacity

1	ø120 Round box	1 Liter
2		2 Liter
4		4 Liter
6		6 Liter
8	ø200 Round box	8 Liter
10		10 Liter
12		12 Liter
15	Square vertical type	15 Liter
25		25 Liter

⑦ Tank Type

H	Horizontal type
V	Vertical type (Rectangular tank only available for vertical type.)

⑧ Additional Circuit

S	Sub Block + Solenoid Valve
P	Pilot Check Block + Solenoid Valve
B	Sub Block (N2 side)
D	Pilot Check Block (N2 side)
A	Cartridge Valve Block (NC)
O	Cartridge Valve Block (NO)
L	Cartridge Valve Block (Dual Locks)
R	Without Additional Circuit

⑨ Control Voltage

N	DC 12V
P	DC 24V
B	AC220V

⑩ Number of Solenoid Valve

1~3	1~3 pcs
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⑪ Control Circuit

B	All Block
C	PT Bypass
S	Single Valve
P	P-Block
O	All Open

⑫ Descent Valve Type

A	Solenoid Valve (NC)
O	Solenoid Valve (NO)
L	Solenoid Valve (Dual Locks)
M	Manual Valve (Dual Locks)

⑬ Control Voltage

N	DC 12V
P	DC 24V
B	AC220V

⑭ Descent Speed Control Valve Type

Nil	None
T	Standard
P	Pressure Compensation

⑮ Flow Rate (Only for "L" circuit)

1~11	1~11 Liter/min
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