

DR1000 series



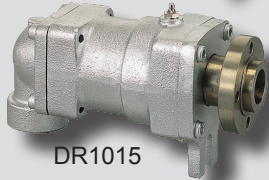
DR1001, DR1002



DR1011, DR1012



DR1005



DR1015



DR1021, DR1022



DR1025

How to Order

DR10 0 1 - 10A
 ① ② ③ ④

① Series

DR10	Bellow-fitted Flat Seal Rotary Joint
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② Head compartment

0	Duplex with fixed internal pipe
1	Simplex L
2	Duplex with rotating internal pipe

③ Connection type

1	Right-hand screw
2	Left-hand screw
5	Flange

④ Shaft size

	R(PT)
10A	3/8
15A	1/2
20A	3/4
25A	1
32A	1 1/4
40A	1 1/2
50A	2
65A	2 1/2
80A	3

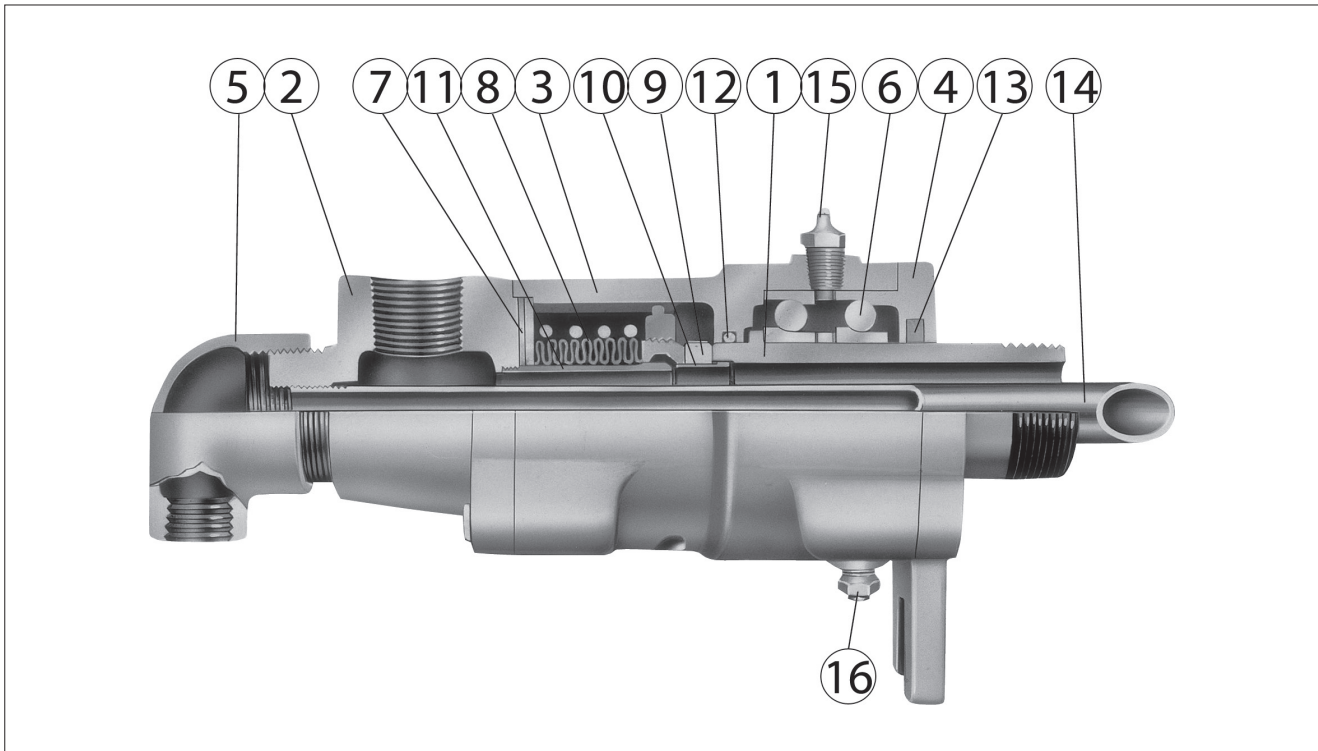
Specifications

Max. pressure	15kgf/cm ² G	
Max. temperature	180°C	
Max. rotation	15A~40A	300rpm
	50A~80A	150rpm
Fluid	Steam, Water, Hot water, Oil, Air, Thermal Media	

Features

With a specially developed air-tight, carbon sealing mechanism, sophisticated bellows and rugged ball bearings the DR-1000 Series Rotary Joints 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.

Structure



Part no.	Parts	Part no.	Parts
1	Shaft	9	Carbon
2	Head	10	Inner Ring
3	Body	11	Protecting Tube
4	Cover	12	O-Ring
5	Elbow	13	Felt Ring
6	Bearing	14	Inner Pipe
7	Gasket	15	Grease Nipple
8	Bellows	16	Relief Nipple

SHAFT

The shaft is made to rotate by attaching it by either a screw or a flange to a rotating roll or drum. With the screw-in method, the Korean Standards (KS) "taper pipe thread" is used. The screws must be allowed to tighten freely against the direction of rotation of the roll or drum to which the shaft is connected. The left-hand screw is used when the roll or drum rotates clockwise when viewed from the rotary joint installation position. Likewise, the right-hand screw is used when the roll or drum rotates counterclockwise when viewed from the rotary joint installation position. When the flange method is used, the end of the rotating shaft not in contact with the roll or drum is lapped finished after quench hardening.

HEAD

The head block is where the fluid feed inlet and discharge outlet join. With the duplex type, the internal pipe is fitted to this block using the KS right hand taper pipe thread when the shaft is fitted with a right-hand screw, and the left-hand KS taper pipe thread with a left-hand screw, allowing the screws to tighten freely. When the internal pipe is fitted with a flange, the KS parallel pipe thread (usually the right-hand screw) is used. To prevent the screw from loosening, no matter which direction the internal pipe is made to rotate, lock nuts are installed on the internal pipe side where it juts out to the side of the elbow.

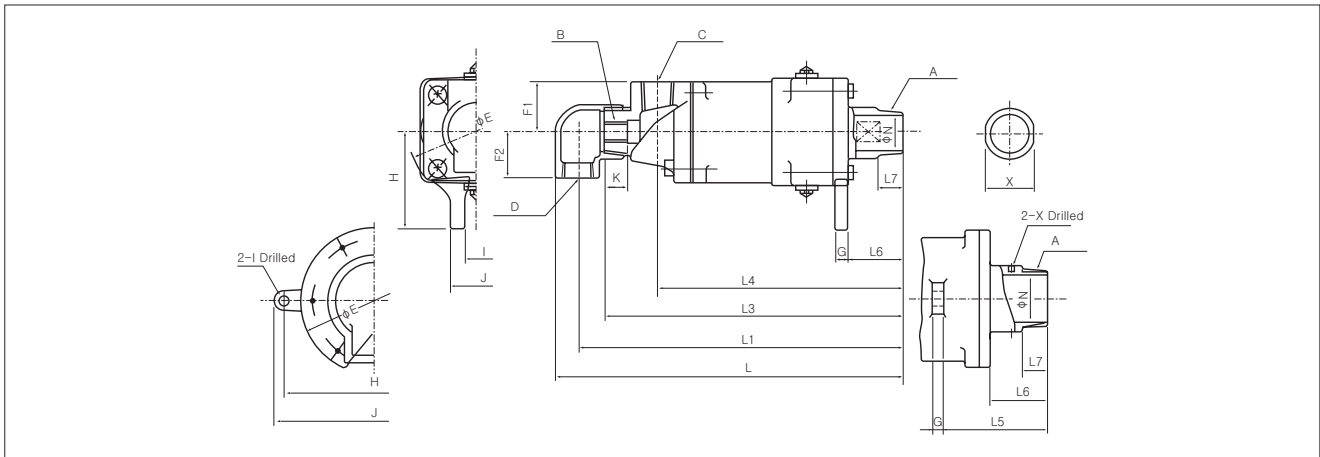
BODY

The body has built-in Ball Bearings and a sealing mechanism that consisting of the Floating Ring and the Bellows Set, and other parts. The bellows set gives appropriate initial sealing face pressure to the floating ring and the seal surface of the rotating shaft. By automatically increasing or decreasing seal surface pressure with a force generated in proportion to changes taking place in the inner fluid pressure, the bellows set not only performs the functions of keeping the rotary joint airtight, but of compensating for seal surface wear and absorbing fine vibrations.

COVER

The cover is used to steady the movement of the ball bearings built into the body. It is fitted with a felt ring and other devices to prevent bearing lubricant grease leaks.

Dimensions-DR1001, DR1002 (Duplex With Fixed Internal Pipe)

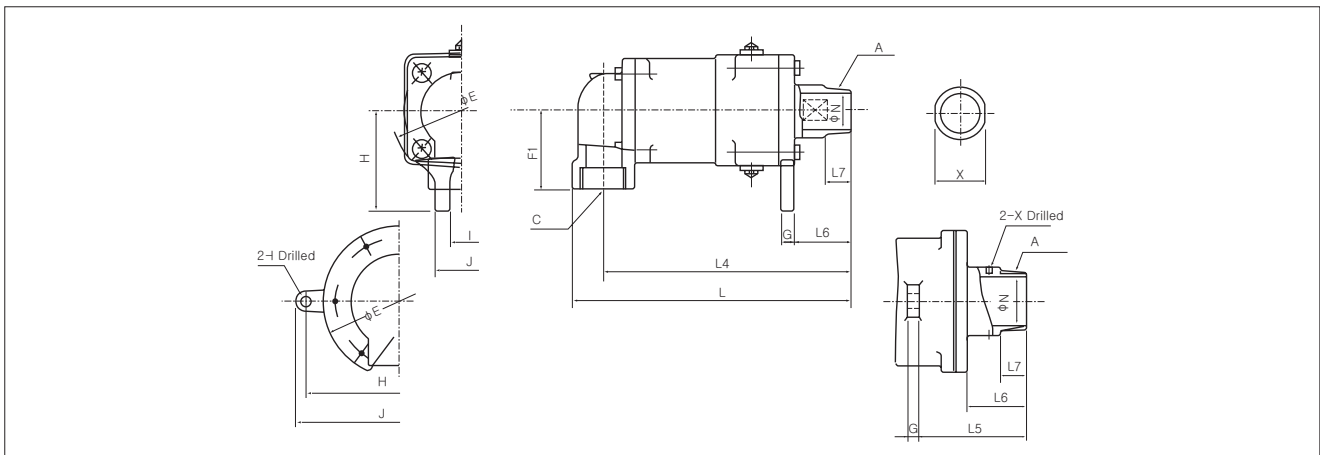


Size	A R(PT)	B	C Rc(PT)	D Rc(PT)	E	F1	F2	G	H	I	J	K	L	L1	L3	L4	L5	L6	L7	N	X	Weight kg
15A	1/2	PT 1/8	1/2	1/2	78	27	27	8	55	14	34	17	231	217	201	169	-	40	18	12	21	2.0
20A	3/4	1/8~1/4	3/4	3/4	90	45	35	10	65	20	40	15	260	243	223	183	-	38	20	18	26	3.7
25A	1	1/4~3/8	1	3/4	110	60	40	10	73	20	40	15	297	280	258	207	-	49	25	24	32	5.9
32A	1 1/4	1/2	1	1	130	48	43	13	95	20	50	20	336	315	290	239	-	53	25	30	46	9.7
40A	1 1/2	1/2~3/4	1	1	130	48	43	13	95	20	50	20	336	315	290	239	-	53	25	34	46	9.7
50A	2	3/4~1	1 1/2	1	138	55	51	14	100	20	55	25	370	349	324	254	-	49	30	48	Ø10	12.6
65A	2 1/2	1~1 1/4	2	1 1/2	180	65	62	18	120	25	60	24	418	390	356	291	-	53	30	60	Ø10	23.0
80A	3	1 1/4~2	2	2	194	85	80	25	230	Ø18	266	26	481	441	392	313	140	61	35	73	Ø10	27.0

Unit:mm

※ For all sizes from 50A up, the inlet (outlet) shown by symbol 'C' is usually fitted downward.

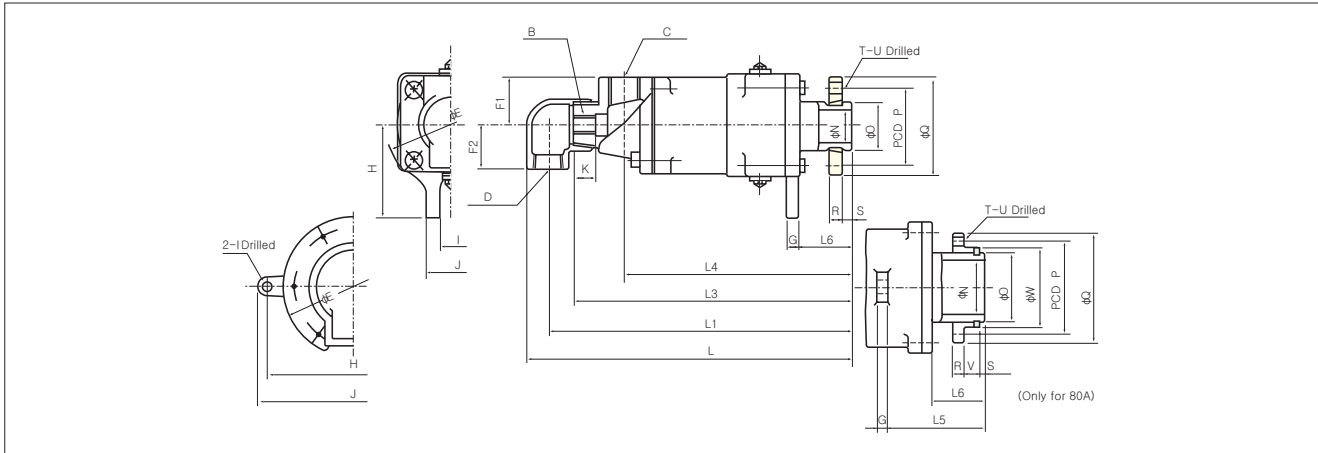
Dimensions-DR1011, DR1012 (Simplex L)



Size	A R(PT)	C Rc(PT)	E	F1	G	H	I	J	L	L4	L5	L6	L7	N	X	Weight kg
10A	3/8	1/2	78	43	8	55	14	34	184	169	-	40	18	8	21	1.9
15A	1/2	1/2	78	43	8	55	14	34	184	169	-	40	18	12	21	1.9
20A	3/4	3/4	90	45	10	65	20	40	203	183	-	38	20	18	26	3.2
25A	1	1	110	60	10	73	20	40	231	207	-	49	25	24	32	5.4
32A	1 1/4	1 1/4	130	75	13	95	20	50	270	239	-	53	25	30	46	9.4
40A	1 1/2	1 1/2	130	75	13	95	20	50	270	239	-	53	25	34	46	9.4
50A	2	2	138	83	14	100	20	55	292	253	-	49	30	48	Ø10	12.0
65A	2 1/2	2 1/2	180	95	18	120	25	60	342	295	-	53	30	60	Ø10	22.0
80A	3	3	194	100	25	230	Ø18	266	370	315	61	140	35	73	Ø10	25.0

Unit:mm

Dimensions-DR1005 (Duplex With Fixed Internal Pipe, Flange)

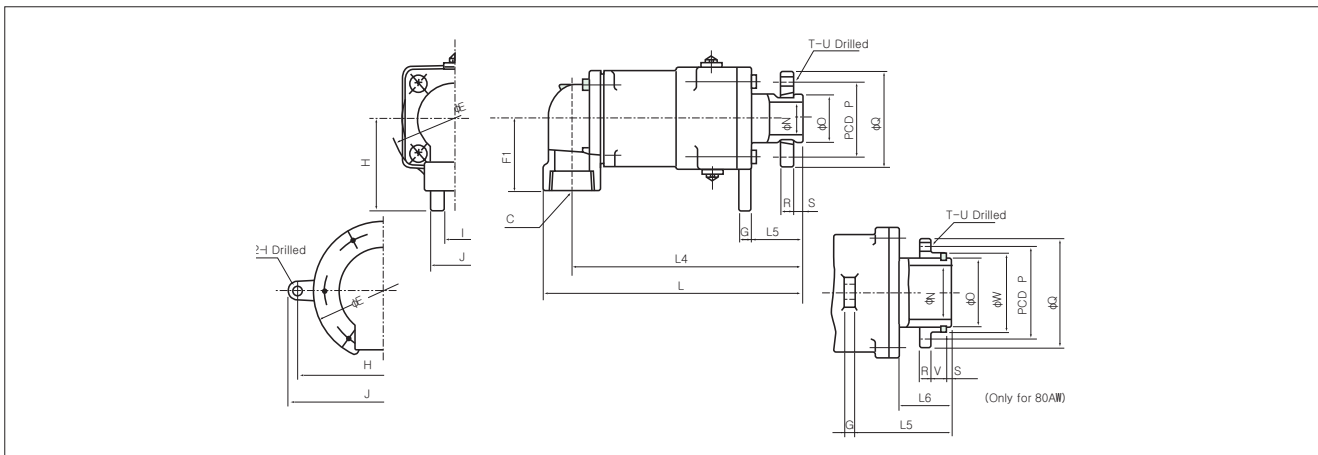


Unit:mm

Size	B(PF)	C Rc(PT)	D Rc(PT)	E	F1	F2	G	H	I	J	K	L	L1	L3	L4	L5	L6	N	O	P	Q	R	S	T	U	V	W	Weight kg
15A	1/8	1/2	1/2	78	27	27	8	55	14	34	17	231	217	201	169	-	40	12	25	45	62	11	8	4	Ø9	-	-	2.45
20A	1/8~1/4	3/4	3/4	90	45	35	10	65	20	40	15	264	247	227	187	-	42	18	30	54	74	13	8	4	Ø11	-	-	3.85
25A	1/4~3/8	1	3/4	110	60	40	10	73	20	40	15	295	278	256	205	-	47	24	35	60	80	14	9	4	Ø11	-	-	6.20
40A	1/2~3/4	1	1	130	48	45	13	95	20	50	20	333	312	287	236	-	50	34	50	75	96	16	9	4	Ø11	-	-	10.20
50A	3/4~1	1 1/2	1	138	55	51	14	100	20	55	25	381	360	335	265	-	60	48	65	95	120	19	10	4	Ø14	-	-	13.30
65A	1~1 1/4	2	1 1/2	180	65	62	18	120	25	60	24	427	399	365	300	-	62	60	80	110	136	20	12	4	Ø14	-	-	23.50
80A	1 1/4~2	2	2	194	85	80	25	230	Ø18	266	26	508	468	419	340	88	167	73	90	125	154	19	12	6	Ø14	20	102	29.65

※ For all sizes from 50A up, the inlet (outlet) shown by symbol 'C' is usually fitted downward.

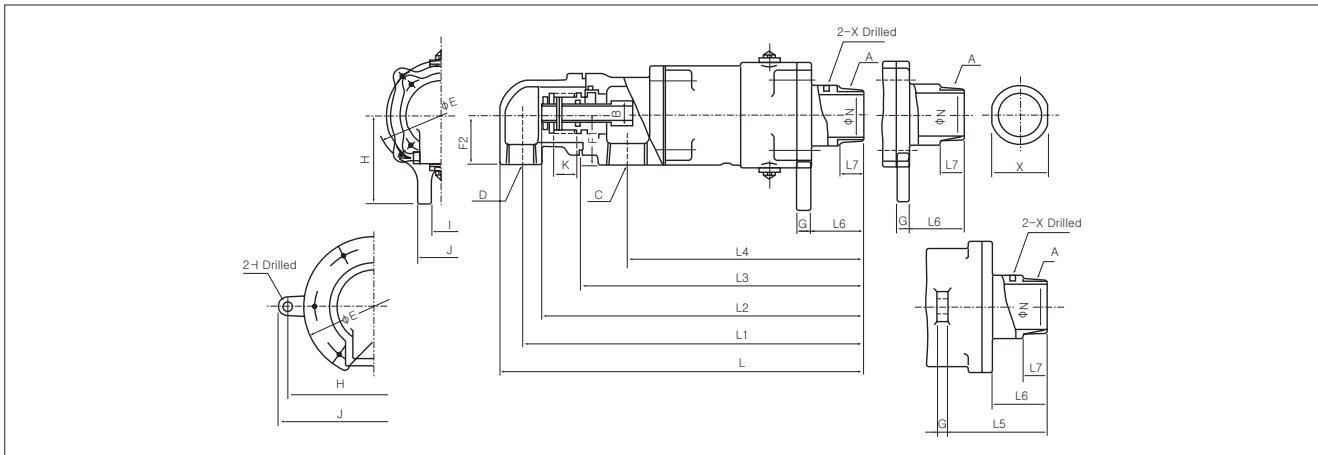
Dimensions-DR1015 (Simplex L, Flange)



Unit:mm

Size	C Rc(PT)	E	F1	G	H	I	J	L	L4	L5	L6	N	O	P	Q	R	S	T	U	V	W	Weight kg
15A	1/2	78	43	8	55	14	34	184	169	-	40	12	25	45	62	11	8	4	Ø9	-	-	2.30
20A	3/4	90	45	10	65	20	40	207	187	-	42	18	30	54	74	13	8	4	Ø11	-	-	3.60
25A	1	110	60	10	73	20	40	229	205	-	47	24	35	60	80	14	9	4	Ø11	-	-	5.75
40A	1 1/2	130	75	13	95	20	50	267	236	-	50	34	50	75	96	16	9	4	Ø11	-	-	9.70
50A	2	138	83	14	100	20	55	303	264	-	60	48	65	95	120	19	10	4	Ø14	-	-	12.40
65A	2 1/2	180	95	18	120	25	60	351	304	-	62	60	80	110	136	20	12	4	Ø14	-	-	24.04
80A	3	194	100	25	230	Ø18	266	397	342	88	167	73	90	125	154	19	12	6	Ø14	20	102	27.65

Dimensions-DR1021, DR1022 (Duplex With Rotating Internal Pipe)



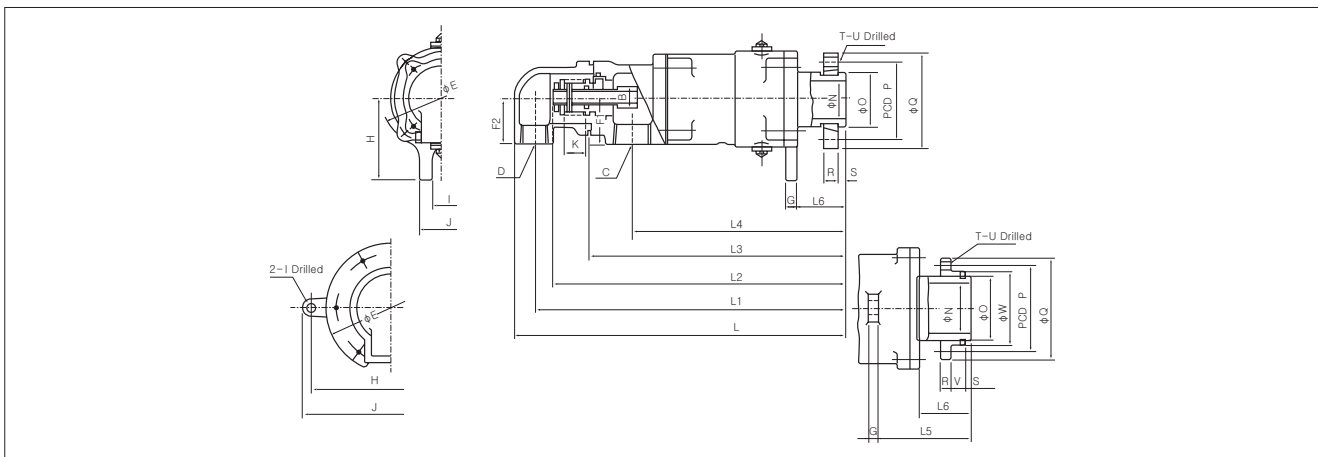
Unit:mm

Size	A R(PT)	B	C Rc(PT)	D Rc(PT)	E	F1	F2	G	H	I	J	K	L	L1	L2	L3	L4	L5	L6	L7	N	X	Weight kg
20A	3/4	1/4	3/4	3/4	90	45	43	10	65	20	40	20	284	267	259	245	183	-	38	20	18	26	2.70
25A	1	3/8	1	3/4	110	60	49	10	73	20	40	20	311	294	291	272	207	-	49	25	24	32	6.25
32A	1 1/4	1/2	1	1	130	47	61	13	95	20	50	25	361	340	336	313	243	-	53	25	30	46	10.63
40A	1 1/2	1/2~3/4	1	1	130	47	61	13	95	20	50	25	361	340	336	313	243	-	53	25	34	46	10.63
50A	2	3/4~1	1 1/2	1	138	55	55	14	100	20	55	25	397	374	355	306	254	-	49	30	48	Ø10	14.81
65A	2 1/2	1~1 1/2	1 1/2	1 1/2	180	65	65	18	120	25	60	25 30	455	424	397 412	352	286	-	53	30	60	Ø10	26.31
80A	3	1 1/2~2	2	1 1/2~2	194	85	65	25	230	Ø18	266	30 35	495 487	464 452	422 449	382	313 309	61	140	35	73	Ø10	28.80

※ In 65A the upper figures show the length when B is 1" and the lower figures the length when B is 1 1/4", 1 1/2".

※ In 80A the upper figures show the length when B is 1 1/2" and the lower figures the length when B is 2".

Dimensions-DR1025 (Duplex with rotating internal pipe, Flange)



Unit:mm

Size	B	C Rc(PT)	D Rc(PT)	E	F1	F2	G	H	I	J	K	L	L1	L2	L3	L4	L5	L6	N	O	P	Q	R	S	T	U	V	W	Weight kg
20A	1/4	3/4	3/4	90	45	43	10	65	20	40	20	288	271	263	249	187	-	42	18	30	54	74	13	8	4	Ø11	-	-	3.06
25A	3/8	1	3/4	110	60	60	10	73	20	40	20	309	292	289	270	205	-	47	24	35	60	80	14	9	4	Ø11	-	-	6.68
40A	1/2~3/4	1	1	130	47	47	13	95	20	50	25	358	337	333	310	240	-	50	34	50	75	96	16	9	4	Ø11	-	-	11.27
50A	3/4~1	1 1/2	1	138	55	55	14	100	20	55	25	408	385	366	317	265	-	60	48	65	95	120	19	10	4	Ø11	-	-	16.21
65A	1~1 1/2	1 1/2	1 1/2	180	65	65	18	120	25	60	25 30	464	433	406 420	361	295	-	62	60	80	110	136	20	12	4	Ø14	-	-	28.30
80A	1 1/2~2	2	1 1/2~2	194	85	85	25	230	Ø18	266	30 35	522 514	491 479	469 476	409	340 336	88	167	73	90	125	154	19	12	6	Ø14	20	102	31.45

※ In 65A the upper figures show the length when B is 1" and the lower figures show the length when B is 1 1/4", 1 1/2".

※ In 80A the upper figures show the length when B is 1 1/2" and the lower figures show the length when B is 2".