



Application

Large bore work in machines with limited clearance

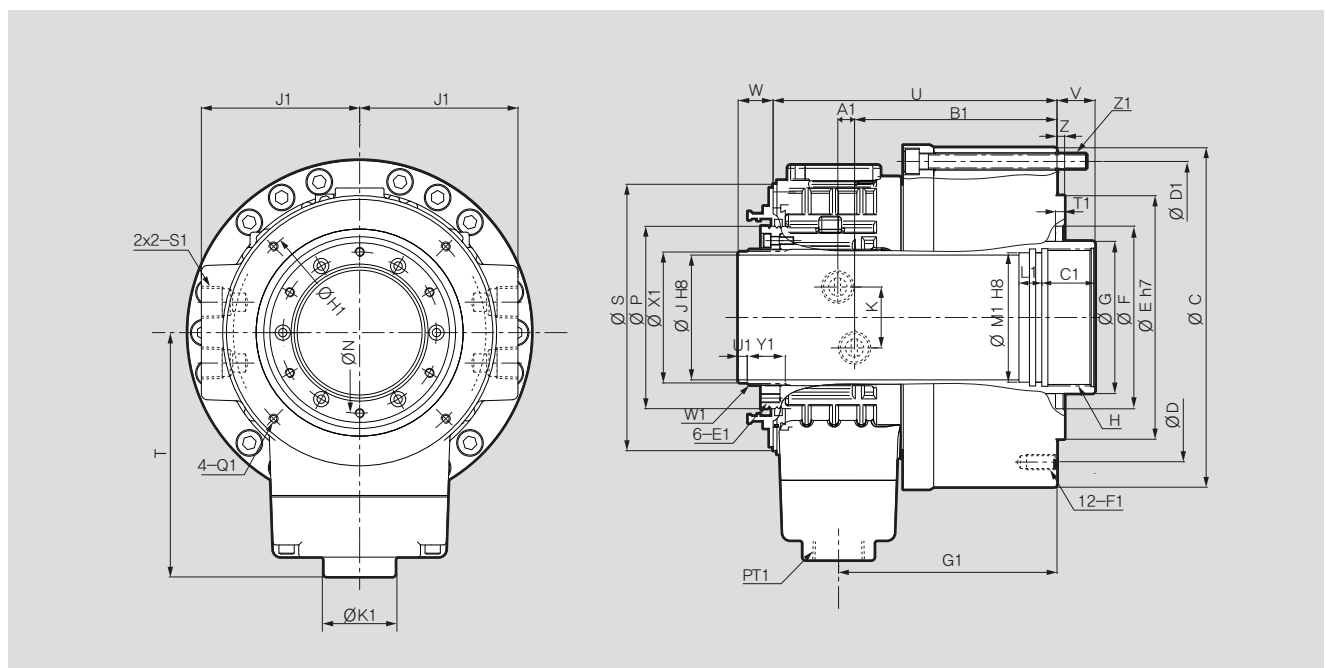
Technical features

Low drain rate reduces heat generation

SPECIFICATIONS

	SD-13546	SD-15452	SD-17568	SD-18577	SD-18582	SD-20591	SD-21510	SD-25411
Available I.D. [mm]	46	52	68	77	82	91	103	117.5
Piston Dia. [mm]	132	156	170	185	185	205	220	250
Piston Stroke [mm]	25	25	29	29	30	34	35	23
Piston Surface Area (Push) [cm ²]	108	151	172	201	195	233	238	356
Piston Surface Area (Pull) [cm ²]	97	142	160	187	180	215	230	325
Piston Force (Push) [kN(kgf)]	47(4800)	67(6800)	75(7656)	89(9000)	85(8700)	105(10700)	105(10700)	138(14100)
Piston Force (Pull) [kN(kgf)]	44(4500)	63(6400)	70(7050)	82(8300)	79(8100)	95(9690)	101(10300)	126(12900)
Max. Operating Pressure [MPa(kgf/cm ²)]	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.0(40)
Max. r.p.m. [min ⁻¹]	7000	6200	5600	5000	4800	4000	3600	3000
Moment of inertia [kg-m ²]	0.03	0.045	0.07	0.097	0.11	0.17	0.25	0.5
Weight [kg]	10	14	18	23	26	29	37	54
Total Leakage [ℓ/min]	2.5	3	3.2	3.5	3.5	5	4.5	6

※ Maximum turning speed is based upon actual measurement.
 ※ Specifications are subject to change without notice.



※ See the product dimension Table on the right.

DIMENSIONS

	SD-13546	SD-15452	SD-17568	SD-18577	SD-18582	SD-20591	SD-21510	SD-25411
ΦC	165	190	210	218	223	245	266	310
ΦD	130	170	190	190	190	215	225	275
ΦD1	147	170	190	200	205	227	240	275
ΦE	100	130	160	160	160	180	200	230
ΦF	80	85	120	120	120	140	160	166
ΦG	65	70	85	95	100	110	125	140
H	M52x2.0	M60x2.0	M75x2.0	M85x2.0	M90x2.0	M100x2.0	M112x2.0	M130x2.0
ΦJ	46	52	68	77	82	91	103	117.5
K	36	36	40	40	40	40	48	46
N	63	76	92	102	106	124	128	138
ΦP	79.8	89.8	105.8	115.8	119.8	137.8	173.5	170
ΦS	116	135	154	164	175	188	208	230
T	125	134	141	149.5	160.5	153	174.5	204
U	159.5	149.5	173	180.5	186.5	214	216.5	231
V max	15	22	25	25	25	30	35	24
V min	-10	-3	-4	-4	-5	-4	0	1
W max	41.5	51	58.5	57.5	53	59	63	48
W min	16.5	26	29.5	28.5	23	25	28	25
Z	5	5	5	5	5	5	5	6
A1	8.5	8.5	11	11	11	13	14	18
B1	117.5	107.5	122.5	129.5	133	153	153.5	151.5
C1	30	30	30	35	35	35	30	45
E1	M6	M6	M6	M6	M6	M6	M6	M6
F1	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M12 TAP DP'24	M12 TAP DP'20	M16 TAP DP'32
G1	125.5	115.5	132.5	139.5	143.5	161	163	167.5
H1	105	118	145	155	160	168	190	206
J1	75	80	90	95	104	116	120	135
K1	47	47	47	47	47	47	47	47
L1	15	15	21	15	15	15	15	20
M1	48	55	71	80	85	95	106	123
Q1	M5 TAP DP'10	M6 TAP DP'10	M6 TAP DP'10	M6 TAP DP'10	M6 TAP DP'13	M6 TAP DP'8	M6 TAP DP'10	M6 TAP DP'12
S1	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
T1	7	7	8	5	8	6	6	6
W1	M52x1.5	M58x1.5	M74x1.5	M84x2.0	M89x2.0	M99x2.0	M120x2.0	M124x2.0
ΦX1	50	56	71.5	81	86	96	117	121.5
Y1	21	27	28	26	25	27	34	29
U1	4	9	8	9	6	9	6	9
Z1	6-M8x95	6-M8x85	6-M10x100	8-M8x110	6-M10x110	6-M10x120	6-M12x120	8-M12x110