



## ROTARY CYLINDER

Samchully cylinders buttress the high face value of our reputable chucks from within the machines. We have reached far and wide in becoming the industry standard thanks to our high quality, wide selection and compatibility with competing German and Japanese brands.



## SD

Mega-Bore Short  
body Open Center  
Hydraulic Cylinder

104 P



## YS-RA

Ultra Compact Closed  
Center Hyd. Cylinder  
with Proximity Bracket  
& Built in Rotary Union

122 P



## SH

Standard Mega Bore  
Short Body Open  
Center Hyd. Cylinder

106 P



## DY

Double Piston  
Hyd. Cylinder

124 P



## SHL (Long Stroke)

Mega Bore Short  
Body Open Center  
Hyd. Cylinder

108 P



## DYV

Double Piston Hyd.  
Cylinder with Lock  
Valve

126 P



## SYH

Standard Open  
Center Hyd. Cylinder

110 P



## AY-R

Closed Center  
Pneumatic Cylinder

128 P



## SYHL (Long Stroke)

Open Center Hyd.  
Cylinder

112 P



## Y-R

Standard Closed  
Center Hyd. Cylinder

114 P



## Y-RE

Closed Center  
Hyd. Cylinder with  
Proximity Bracket

116 P



## YH-RE

Ultra Compact Closed  
Center Hyd. Cylinder  
with Proximity Bracket

120 P

# SD Mega-Bore Short body Open Center Hydraulic Cylinder



## Application / Benefits

- Low drain rate
- Compact design
- Large bore for work requiring through hole

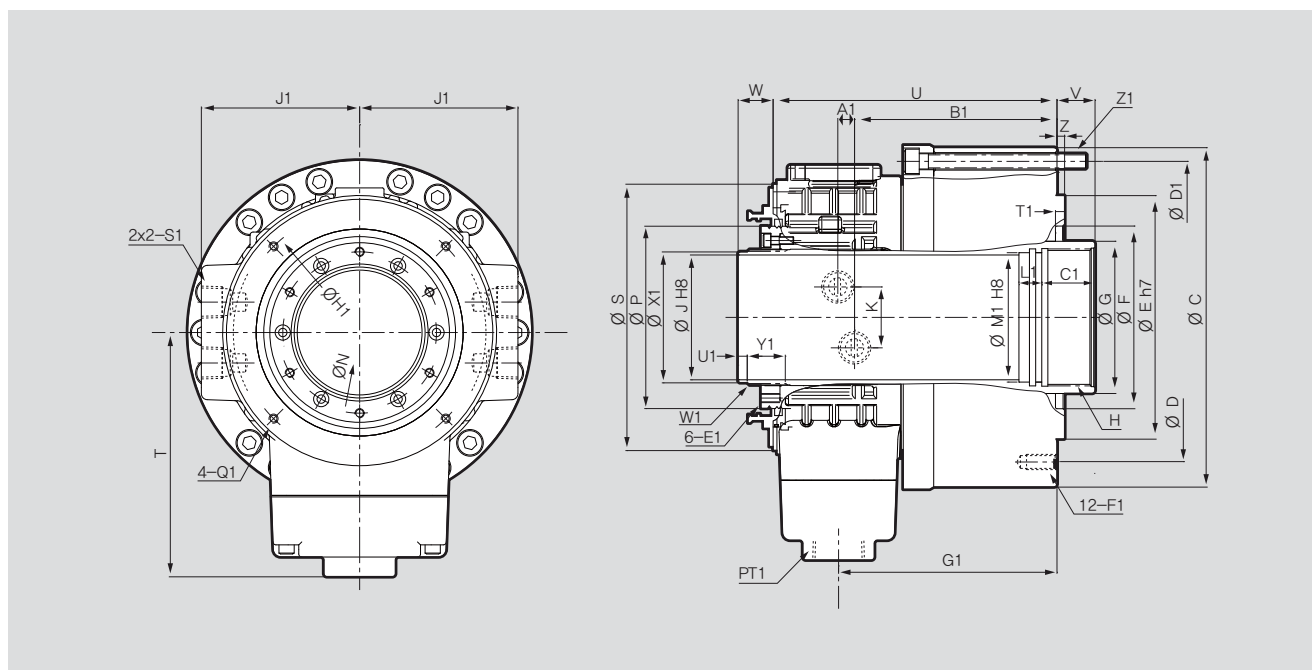
## Technical features

- Low leakage minimizes heat
- Check valve maintains pressure during power outage

## SPECIFICATIONS

	SD-13546	SD-15452	SD-17568	SD-18577	SD-18582	SD-21510	SDL-25411	SDL-30516
Available I.D. [mm]	46	52	68	77	82	103	117.5	166.5
Piston Dia. [mm]	132	156	170	185	185	215	250	305
Piston Stroke [mm]	25	25	29	29	30	35	50	51
Piston Force (Push) [kN(kgf)]	47(4800)	67(6800)	75(7656)	89(9000)	85(8700)	105(10700)	138(14100)	152(15483)
Piston Force (Pull) [kN(kgf)]	44(4500)	63(6400)	70(7050)	82(8300)	79(8100)	101(10300)	126(12900)	138(14060)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.5(45bar)	4.5(45bar)	4.5(45bar)	4.5(45bar)	4.5(45bar)	4.5(45bar)	4.0(40bar)	3.3(33bar)
Max. r.p.m. [min <sup>-1</sup> ]	7000	6200	5600	5000	4800	3500	3000	2000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.021	0.045	0.07	0.097	0.11	0.188	0.50	1.45
Weight [kg]	10	14	18	23	26	37	54	90
Total Leakage [l /min]	2.5	3	3.2	3.5	3.5	4.5	6	8.4

- ※ 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-21510	SDL-25411	SDL-30516
ΦC	165	190	210	218	223	266	310	370
ΦD	130	170	190	190	190	225	275	290
ΦD1	147	170	190	200	205	240	275	345
ΦE(기준경)	100	130	160	160	160	200	230	260
ΦF	80	85	120	120	120	160	166	240
ΦG	65	70	85	95	100	125	140	190
H	M52x2.0p	M60x2.0p	M75x2.0p	M85x2.0p	M90x2.0p	M112x2.0p	M130x2.0p	M180x3.0p
ΦJ	46.5	52	68	77	82	103	117.5	166.5
K	36	36	40	40	40	48	46	42
N	63	76	92	102	106	128	138	188
ΦP	78.8	89.8	105.8	115.8	119.8	157.8	170	222
ΦS	116	135	154	164	175	205	230	278
T	119	134	141	149.5	160.5	174.5	204	230
U	159	150.5	172.5	182	186.5	203	258	290
V max	15	22	25	25	25	35	46	51
V min	-10	-3	-4	-4	-5	0	-4	0
W max	55	50	59	56	53	60	75	76
W min	30	25	30	27	23	25	25	25
Z	5	5	5	8	5	5	6	5
A1	8.5	8.5	11	11	11	14	18	17.5
B1	117.5	107.5	122.5	129.5	133	140	178.5	206
C1	30	30	30	35	35	30	45	45
E1	M6	M6	M6	M6	M6	M6	M6	M6
F1DP'	M10x20	M10x20	M10x20	M10x20	M10x20	M12x20	M16x32	M16x32
G1	125.5	115.5	132.5	139.5	143.5	152.5	194.5	221
H1	105	118	145	155	160	190	206	256
J1	75	80	90	95	104	120	135	160
K1	47	47	47	47	47	47	47	47
L1	15	15	21	15	15	15	20	20
M1	48	55	71	80	85	106	123	170
Q1	M5x10	M6x10	M6x10	M6x10	M6x12	M6x12	M6x12	M6x12
S1	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2
T1	7	7	8	8	8	6	6	7
W1	M52x1.5p	M58x1.5p	M74x1.5p	M84x2.0p	M89x2.0p	M119x2.0p	M124x2.0p	M180x3.0p
ΦX1	50	56	71.5	81	86	116	121.5	170.5
Y1	24	20	28	26	25	38	29	45
U1	9	9	8	9	6	9	9	8
Z1	6-M8x90	6-M8x90	6-M10x95	8-M8x110	6-M10x110	6-M12x120	8-M12x140	6-M10x95

# SH Standard Mega-Bore Short-Body Open Center Hydraulic Cylinder



## Application / Benefits

Large bore for work requiring through hole  
Compact design

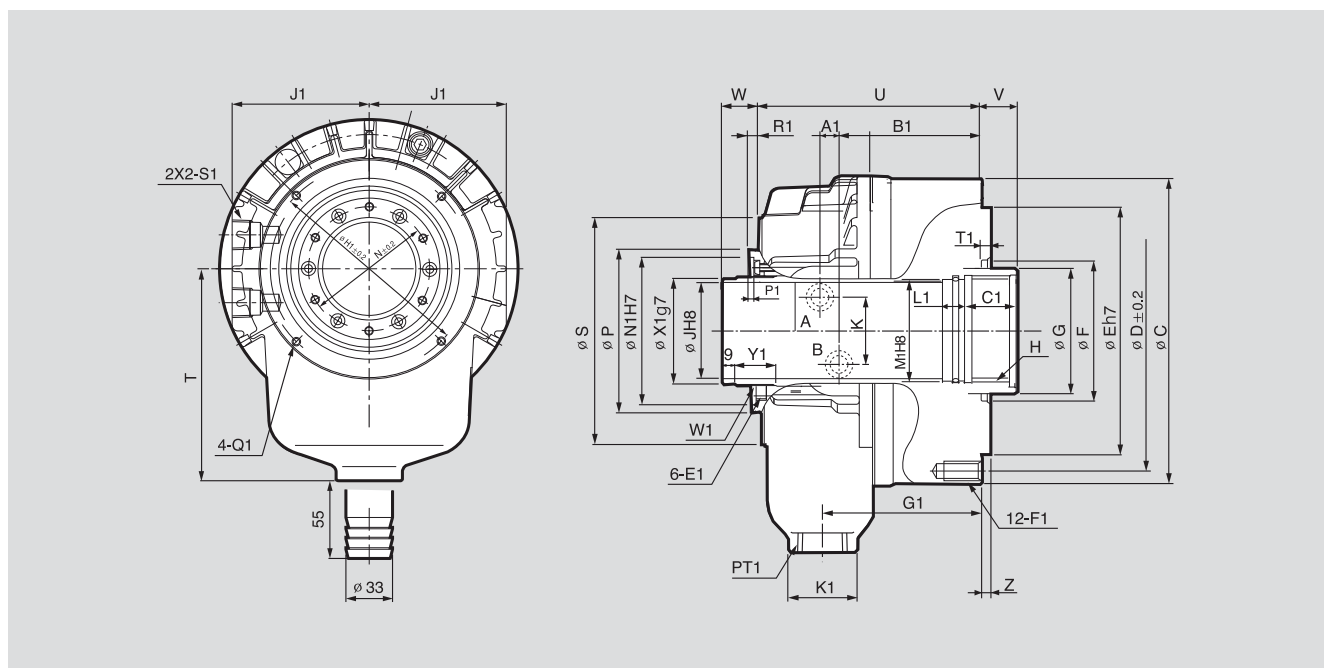
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	SH-10036	SH-13046	SH-15052	SH-17068	SH-18077	SH-19082	SH-21010	SH-25011
Available I.D. [mm]	36	46	52	68	77	82	106	117.5
Piston Dia. [mm]	105	135	156	170	185	190	215	255
Piston Stroke [mm]	12	15	22	25	25	25	30	23
Piston Force (Push) [kN(kgf)]	25(2549)	42.3(4285)	60(6118)	63(6531)	75.3(7632)	78.1(7924)	91.8(9357)	132(13390)
Piston Force (Pull) [kN(kgf)]	24(2447)	38.1(3865)	56(5710)	59.8(6060)	69.6(7087)	72.5(7350)	87.8(8952)	121(12305)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	8000	7000	6200	5600	5000	4800	3500	3000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.43(0.044)	0.2(0.021)	0.44(0.045)	0.65(0.067)	0.83(0.084)	0.95(0.097)	1.84(0.188)	1.9(0.193)
Weight [kg]	8.4	10	14	16.5	18	25	37	50
Total Leakage [l /min]	3.0	3.0	3.9	4.0	4.2	4.5	6.0	7.0

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



※ See the product dimension Table on the right.

## DIMENSIONS

	SH-10036	SH-13046	SH-15052	SH-17068	SH-18077	SH-19082	SH-21010	SH-25011
ΦC	135	165	190	210	218	223	263	310
ΦD	115	130	170	190	190	190	225	275
ΦE (기준경)	100	100	130	160	160	160	200	230
ΦF	65	80	85	120	120	120	160	166
ΦG	48	65	70	85	95	100	125	140
Hmax.	M42x1.5	M52x2.0	M60x2.0	M75x2.0	M85x2.0	M90x2.0	M115x2.0	M130x2.0
ΦJ	36	46	52	68	77	82	106	117.5
K	30	40	40	48	48	58	48	46
N	55	64	73	88	98	103	142	138
ΦP	73	85	96	111	121	126	157.8	170
ΦS	104	116	135	154	164	175	205	230
T	115	120	130	150	165	166	195	107.5
U	130	142	136	155	167	174	199.7	231
V max.	15	15	22	25	25	25	30	18
V min.	3	0	0	0	0	0	0	-5
W max.	37	40	47	50	50	44	55	48
W min.	25	25	25	25	25	19	25	25
Z	5	5	5	5	5	5	5	6
A1	9	8.5	9	10	10	11.5	14	19
B1	90	103	97.5	108	119.5	122	136.5	150
C1	25	30	30	35	35	35	35	45
E1	M5	M6	M6	M6	M6	M6	M6	M6
F1DP'	M10x17	M10x20	M10x20	M10x20	M10x20	M12x20	M12x20	M16x32
G1	93.5	111	101	113	125	129.5	151	163.5
H1	96	105	118	145	155	160	190	206
J1	73	82	92	97	102	105	120	140
K1	47	47	47	47	47	47	47	55
L1	15	15	15	15	15	15	15	20
ΦM1	38	48	55	70	80	85	110	123
ΦN1	64	76	85	100	108	113	128	150
P1	4	4	4	4	4	4	4	5.5
Q1	M5x7	M5x6	M6x7	M6x10	M6x10	M6x10	M6x10	M6x12
R1	5	6	7	7	7	7	7	7.5
S1	PT 1/2	PT 1/2	PT 1/2	PT 1/2	PT 1/2	PT 1/2	PT 1/2	PT 1/2
T1	6	6	5.5	5	5	6	6	6
W1	M44x1.5	M52x1.5	M58x1.5	M74x1.5	M84x2.0	M89x2.0	M119x2.0	M124x2.0
ΦX1	42	50	56	72.5	81	86	116	122
Y1	30	24	20	26	26	26	38	29

# SHL Mega-Bore Short-Body Long-Stroke Open Center Hydraulic Cylinder



## Application / Benefits

For work requiring through hole and long stroke

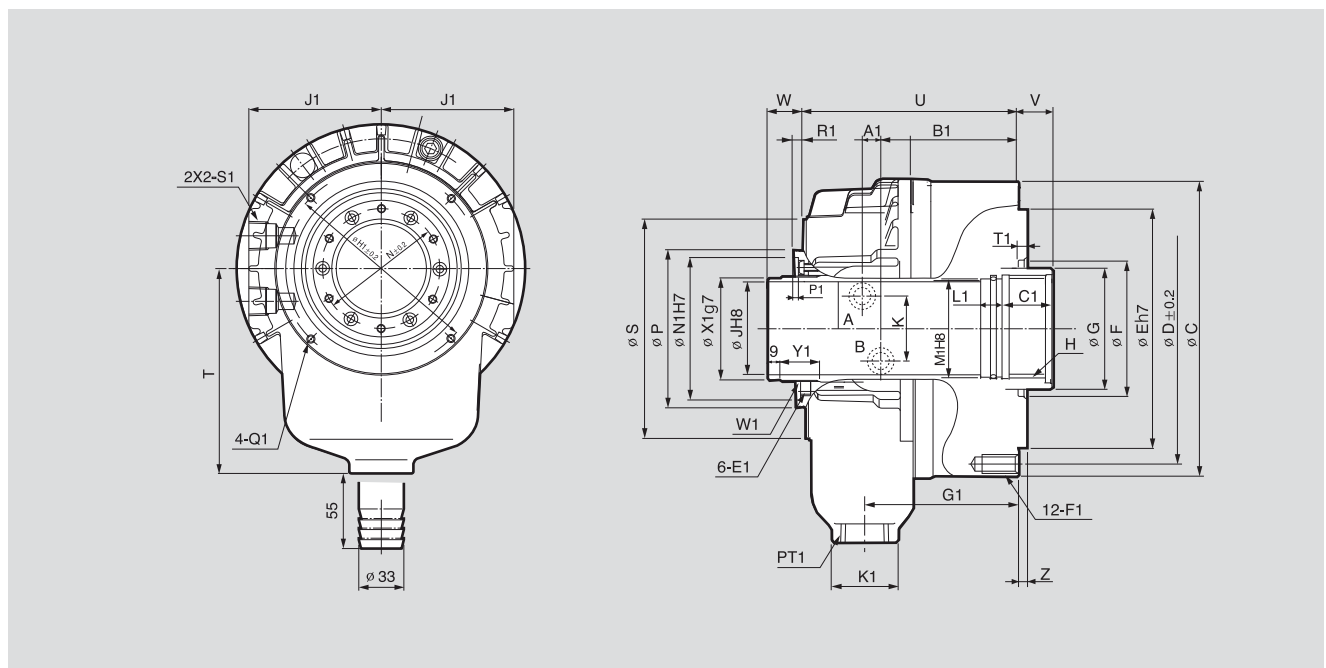
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	SHL-17068	SHL-18077	SHL-25011	SHL-39024
Available I.D. [mm]	68	77	117.5	240
Piston Dia. [mm]	170	185	255	390
Piston Stroke [mm]	40	40	50	51
Piston Force (Push) [kN(kgf)]	63(6531)	75.3(7632)	132(13390)	152.5(15570)
Piston Force (Pull) [kN(kgf)]	59.8(6060)	69.6(7087)	121(12305)	138.7(14152)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	2.5(25)
Max. r.p.m. [min <sup>-1</sup> ]	5600	5000	3000	1500
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.69(0.070)	0.86(0.088)	1.9(0.193)	39.64(4.045)
Weight [kg]	17.8	18.5	54	140
Total Leakage [l /min]	4	4.2	7	22

※ Specifications are subject to change without notice.



※ See the product dimension Table on the right.

## DIMENSIONS

	SHL-17068	SHL-18077	SHL-25011	SHL-39024
ΦC	210	218	310	450
ΦD	190	190	275	420
ΦE (기준경)	160	160	230	320
ΦF	120	120	166	280
ΦG	85	95	140	265
H max.	M75x2.0	M85x2.0	M130x2.0	M250x3.0
ΦJ	68	77	117.5	240
K	48	48	46	30
ΦN	88	98	138	268
ΦP	111	121	170	310
ΦS	154	164	230	370
T	150	165	107.5	340
U	175	182	258	302.5
V max.	35	35	46	50
V min.	-5	-5	-4	-1
W max.	65	65	87	76
W min.	25	25	37	25
Z	5	5	6	6
A1	10	10	19	22
B1	128	134.5	176.5	199
C1	35	35	45	45
E1	M6	M6	M6	M6
F1DP'	M10x20	M10x20	M16x32	M16x40
G1	133	140	190.5	215
H1	145	155	206	350
J1	97	102	140	215
K1	47	47	55	75
L1	15	15	120	20
M1	71	80	123	243
N1	100	108	150	284
P1	4	4	5.5	5.5
Q1	M6x10	M6x10	M6x12	M6x12
R1	7	7	7.5	7.5
S1	PT 1/2	PT 1/2	PT 1/2	PT 1/2
T1	5	5	6	6
W1	M74x1.5	M84x2.0	M124x2.0	M253x2.0
ΦX1	72.5	81	122	249
Y1	26	26	29	38



# SYH Standard Open Center Hydraulic Cylinder



## Application / Benefits

Compact and lightweight  
For work requiring through hole

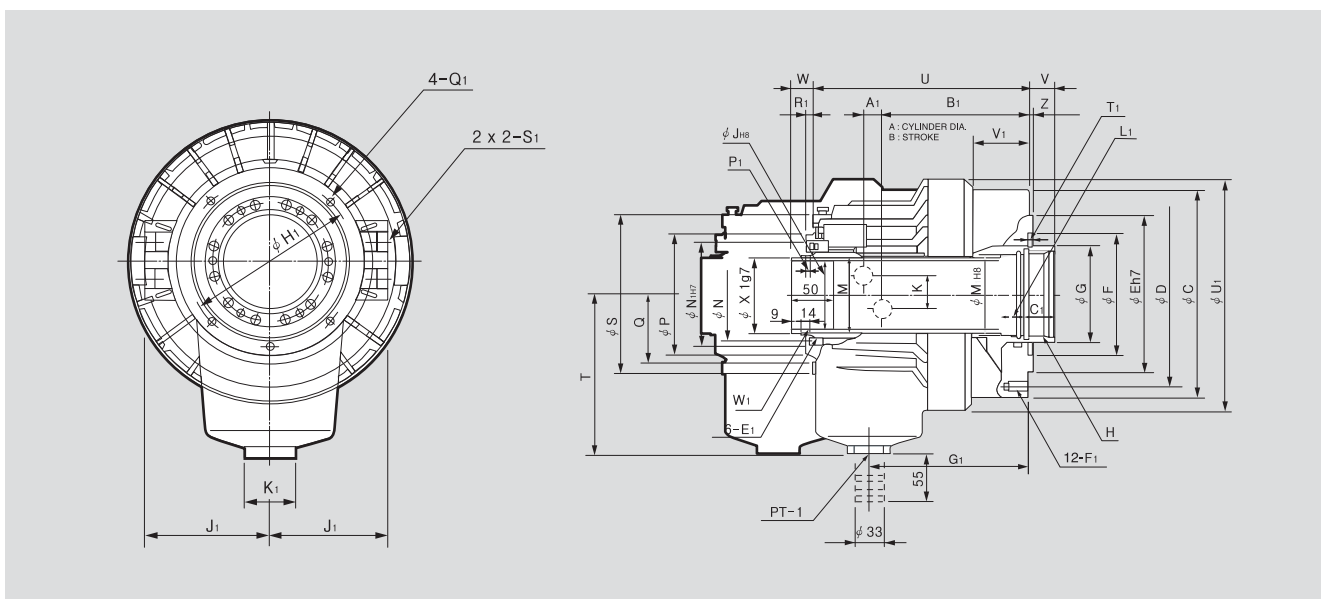
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	SYH-1036	SYH-1246	SYH-1552	SYH-1877	SYH-2091
Available I.D. [mm]	36	36,39,40,41,43,45,46	46,52,69	68,69,75,77	78,91
Piston Dia. [mm]	105	125	155	180	205
Piston Stroke [mm]	15	15	22	25	30
Piston Surface Area (Push) [cm <sup>2</sup> ]	67	100	161	198	252
Piston Surface Area (Pull) [cm <sup>2</sup> ]	64.5	89	150	183	234
Piston Force (Push) Push [kN(kgf)]	25(2549)	38(3875)	60(6118)	74(7546)	94(9584)
Piston Force (Pull) Push [kN(kgf)]	24(2447)	33(3365)	56(5710)	69(7036)	88(8973)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	8000	8000	6200	4700	3800
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.10(0.011)	0.18(0.019)	0.52(0.053)	0.93(0.095)	1.45(0.153)
Weight [kg]	8.6	12	16.8	26	33
Total leakage [l /min]	3	3	3.9	4.2	4.5
KITAGAWA® Model	S-1036	S-1246	S-1552	S-1875	S-2091

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



※ See the product dimension Table on the right.

## DIMENSIONS

	SYH-1036	SYH-1246	SYH-1552	SYH-1877	SYH-2091
ΦC	135	155	190	215	240
ΦD	115	130	170	190	215
ΦE	100	100	130	160	180
ΦF	65	80	85	120	140
ΦG	48	65	70	95	110
H max.	M42x1.5	M52x2.0	M60x2.0	M85x2.0	M100x2.0
ΦJ	36	46	52	77	91
K	30	36	36	36	34
ΦM	44.6	52.9	59.6	84.6	99.6
ΦN	55	64	73	98	108
ΦP	73	85	96	121	138
ΦQ	45	51.5	57	70	79
ΦS	104	118	137	166	182
T	115	115	130	160	185
U	156	184	191	230	253
V max.	15	15	22	25	30
V min.	0	0	0	0	0
W max.	40	40	47	50	55
W min.	25	25	25	25	25
Z	5	5	5	5	5
A1	11	11.5	12	17.5	21
B1	102.5	126.5	136	153.5	168
C1	25	30	30	35	35
E1	M5x11	M6x9	M6x9	M6x9	M6x14
F1	6-M10x17	12-M10x20	12-M10x20	12-M10x20	12-M12x24
G1	98	135	145	166.5	183
H1	88	98	110	155	165
J1	73	76	86	101	110
K1	47	47	47	47	47
L1	15	15	15	15	15
M1	38	50	55	80	95
ΦN1	64	76	85	108	120
P1	4	4	4	4	4
Q1	M5x10	M5x10	M6x12	M6x12	M6x12
R1	5	6	7	7	7
S1	PT3/8	PT1/2	PT1/2	PT1/2	PT1/2
T1	6	6	6	6	6
ΦU1	158	200	220	242	267
V1	28	46	51	58	66
W1	M44x1.5	M52x1.5	M58x1.5	M84x2.0	M99x2.0
ΦX1	42	50	56	81	96

# SYHL Open Center Long-Stroke Hydraulic Cylinder



## Application / Benefits

For work requiring through hole and long stroke

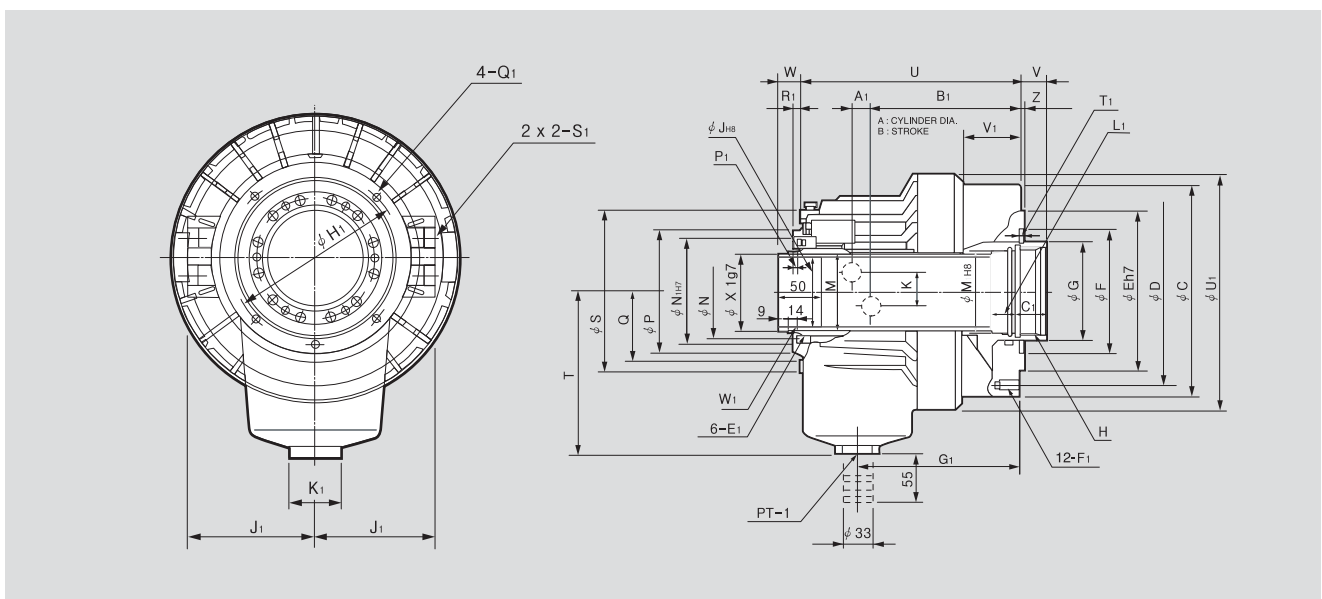
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	SYHL-1246	SYHL-1552	SYHL-1877	SYHL-2091	SYHL-2816
Available I.D. [mm]	46	52	68,75,77	91	166.5
Piston Dia. [mm]	125	155	180	205	280
Piston Stroke [mm]	32	34	40	50	51
Piston Surface Area (Push) [cm <sup>2</sup> ]	100	161	198	252	377
Piston Surface Area (Pull) [cm <sup>2</sup> ]	89	150	183	234	332
Piston Force (Push) [kN(kgf)]	38(3875)	60(6118)	74(7546)	94(9585)	113(11522)
Piston Force (Pull) [kN(kgf)]	33(3365)	56(5710)	69(7063)	88(8973)	100(10196)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	3.3(33.6)
Max. r.p.m. [min <sup>-1</sup> ]	7000	6200	4700	3800	2000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.21(0.022)	0.56(0.058)	0.10(0.098)	1.56(0.160)	35.5(3.31)
Weight [kg]	12.8	17	26.8	34.1	101
Total leakage [l /min]	3	3.9	4.2	4.5	8.4
KITAGAWA® Model	S-1246L	S-1552L	S-1875L	S-2091L	S-2816L

- ※ Specifications are subject to change without notice.
- ※ Certain models have several thru-hole sizes available.
- ※ The bore threading varies by model. H max represents the largest possible threading.



※ See the product dimension Table on the right.

## DIMENSIONS

	SYHL-1246	SYHL-1552	SYHL-1877	SYHL-2091	SYHL-2816
ΦC	155	190	215	240	325
ΦD	130	170	190	215	290
ΦE	100	130	160	180	260
ΦF	80	85	120	140	240
ΦG	65	70	95	110	190
H max.	M55x2.0	M60x2.0	M85x2.0	M100x2.0	M180x3.0
ΦJ	46	52	77	91	166.5
K	36	36	36	34	30
ΦM	52.9	59.6	84.6	99.6	174.6
ΦN	64	73	98	108	188
ΦP	85	96	121	138	222
Q	51.5	57	70	79	120
ΦS	118	137	166	182	282
T	115	130	160	185	250
U	205	208	246	273	370
V	27	29	35	50	51
V	-5	-5	-5	0	0
W	57	59	65	75	76
W	25	25	25	25	25
Z	5	5	5	5	5
A1	11.5	12	17.5	21	28
B1	147.5	153	169.5	188	259
C1	30	30	35	35	45
E1	M6x9	M6x9	M6x9	M6x14	M6x12
F1	M10x20	M10x20	M10x20	M12x24	M16x32
G1	156	162	182.5	203	276
H1	98	110	155	165	256
J1	76	86	101	110	162
K1	47	47	47	47	47
L1	15	15	15	15	20
M1	50	55	80	95	170
ΦN1	76	85	108	120	200
P1	4	4	4	4	4
Q1	M5x10	M6x12	M6x12	M6x12	M6x12
R1	6	7	7	7	7
S1	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2
T1	12	12	12	12	7
ΦU1	200	220	242	267	352
V1	67	68	74	86	123
W1	M52x1.5	M58x1.5	M84x2.0	M99x2.0	M173x2.0
ΦX1	50	56	81	96	170.5

# Y-R Standard Closed-Center Hydraulic Cylinder



## Application / Benefits

For closed center chucks and work not requiring spindle through

## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	Y-0715R	Y-1020R	Y-1225R	Y-1530R	Y-2035R
Piston Stroke [mm]	15	20	25	30	35
Piston Surface Area (Push) [cm <sup>2</sup> ]	44	86	122	176	314
Piston Surface Area (Pull) [cm <sup>2</sup> ]	37	79	113	160	290
Piston Force (Push) [kN(kgf)]	16.6(1693)	32.0(3264)	46.0(4692)	66.0(6732)	117.0(11934)
Piston Force (Pull) [kN(kgf)]	13.9(1417)	29(2957)	42(4283)	60(6118)	108(11013)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	6000	6000	6000	5500	5500
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.118(0.012)	0.49(0.05)	0.88(0.09)	1.86(0.19)	3.82(0.39)
Weight [kg]	4	7.1	10	13.5	22
Total leakage [l /min]	0.8	0.8	0.8	0.8	0.8
KITAGAWA® Model	Y-0715R	Y-1020R	Y-1225R	Y-1530R	Y-2035R

- ※ Specifications are subject to change without notice.
- ※ Piston forces measured at max pressure of 4.0MPa (40.8 kgf/cm<sup>2</sup>)
- ※ Total leakage measured at cylinder pressure of 3.0MPa(30.6 kgf/cm<sup>2</sup>) and oil temperature at
- ※ Samchully Machinery Co., Ltd. is no longer an OEM manufacturer for kitagawa Iron Works Co., Ltd



# Y-RE Closed-Center Hydraulic Cylinder with Proximity Bracket (75mm~125mm)



## Application / Benefits

For work not requiring through spindle  
Includes brackets for proximity switches (switches not included)

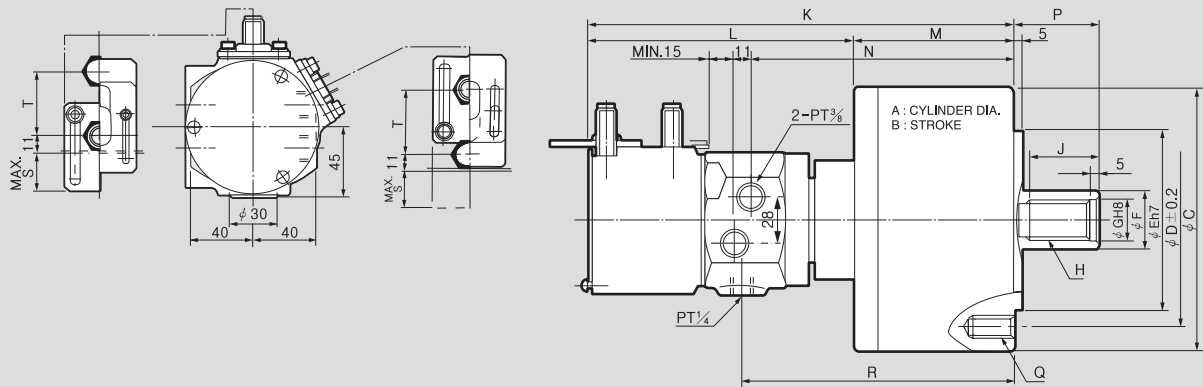
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	Y-0715RE	Y-1020RE	Y-1025RE	Y-1225RE	Y-1240RE
Piston Stroke [mm]	15	20	25	25	40
Piston Surface Area (Push) [cm <sup>2</sup> ]	44	84	84	120	120
Piston Surface Area (Pull) [cm <sup>2</sup> ]	37	79	79	113	113
Piston Force (Push) [kN(kgf)]	16.6(1693)	32.0(3264)	32.0(3264)	46.0(4692)	46.0(4692)
Piston Force (Pull) [kN(kgf)]	13.9(1417)	29(2957)	29(2957)	42(4283)	42(4283)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	6000	6000	6000	6000	6000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.118(0.012)	0.46(0.05)	0.49(0.05)	0.88(0.09)	0.88(0.09)
Weight [kg]	4.5	7.6	7.7	10.5	11
Total leakage [ℓ /min]	0.8	0.8	0.8	0.8	0.8
KITAGAWA® Model	Y-0715RE	Y-1020RE	Y-1025RE	Y-1225RE	Y-1240RE

- ※ Specifications are subject to change without notice.
- ※ Piston forces measured at max pressure of 4.0MPa (40.8 kgf/cm<sup>2</sup>)
- ※ Total leakage measured at cylinder pressure of 3.0MPa(30.6 kgf/cm<sup>2</sup>) and oil temperature at
- ※ Samchully Machinery Co., Ltd. is no longer an OEM manufacturer for kitagawa Iron Works Co., Ltd



## DIMENSIONS

	Y-0715RE	Y-1020RE	Y-1025RE	Y-1225RE	Y-1240RE
A	75	105	105	125	125
B	15	20	25	25	40
$\phi C$	104	135	135	160	160
$\phi D$	90	100	100	130	130
$\phi E$	65	80	80	110	110
$\phi F$	30	30	30	35	35
$\phi G$	21	21	21	25	25
H	M20x2.5	M20x2.5	M20x2.5	M24x3.0	M24x3.0
J	32	35	35	44	44
K	227	252	257	260	306
L	161	163	163	163	194
M	66	89	94	97	112
N	127	152	157	160	175
P max.	46	45	45	51	65
P min.	31	25	20	26	25
Q	6-M6x20	6-M10x20	6-M10x20	6-M12x24	6-M12x24
R	133	158	163	166	181
S	23	23	23	23	-
T	41	41	41	41	-



# Y-RE Closed-Center Hydraulic Cylinder with Proximity Bracket (150mm~250mm)



## Application / Benefits

For work not requiring through spindle  
Includes brackets for proximity switches (switches not included)

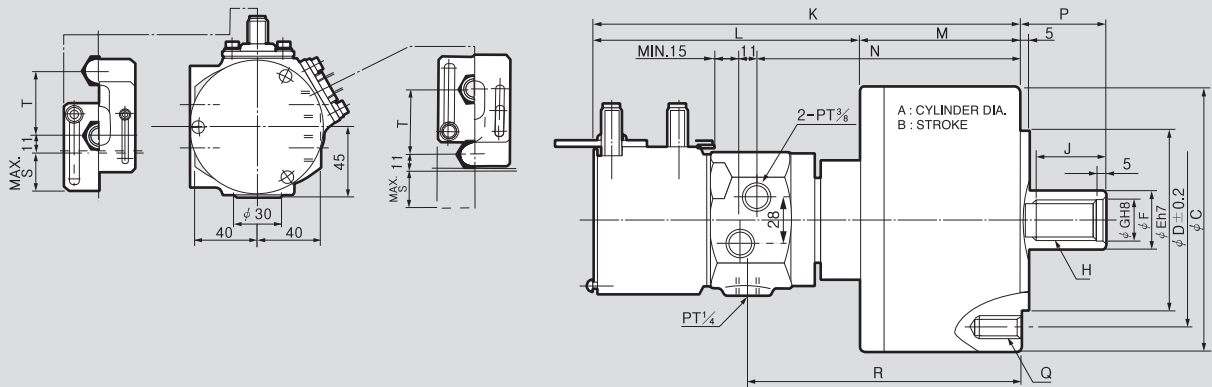
## Technical features

Check valve maintains pressure during power outage

## SPECIFICATIONS

	Y-1530RE	Y-1550RE	Y-2035RE	Y-2050RE	Y-2560RE
Piston Stroke [mm]	30	50	35	50	60
Piston Surface Area (Push) [cm <sup>2</sup> ]	174	174	312	312	515
Piston Surface Area (Pull) [cm <sup>2</sup> ]	160	160	290	290	482
Piston Force (Push) [kN(kgf)]	66.0(6732)	66.0(6732)	117.0(11934)	117.0(11934)	193(19541)
Piston Force (Pull) [kN(kgf)]	60(6118)	60(6118)	108(11013)	108(11013)	180(18289)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	5500	5500	5500	5500	2000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	1.86(0.19)	1.96(0.20)	3.82(0.39)	4.12(0.42)	9.0(0.92)
Weight [kg]	14	14.8	22.5	23.5	85
Total leakage [ℓ /min]	0.8	0.8	0.8	0.8	0.8
KITAGAWA® Model	Y-1530RE	Y-1550RE	Y-2035RE	Y-2050RE	-

- ※ Specifications are subject to change without notice.
- ※ Piston forces measured at max pressure of 4.0MPa (40.8 kgf/cm<sup>2</sup>)
- ※ Total leakage measured at cylinder pressure of 3.0MPa(30.6 kgf/cm<sup>2</sup>) and oil temperature at
- ※ Samchully Machinery Co., Ltd. is no longer an OEM manufacturer for kitagawa Iron Works Co., Ltd



## DIMENSIONS

	Y-1530RE	Y-1550RE	Y-2035RE	Y-2050RE	Y-2560RE
A	150	150	200	200	250
B	30	50	35	50	60
ΦC	190	190	245	245	305
ΦD	130	130	145	145	220
ΦE	110	110	120	120	160
ΦF	45	45	55	55	65
ΦG	31	31	37	37	44
H	M30x3.5	M30x3.5	M36x4.0	M36x4.0	M42x3.0
J	45	55	60	60	65
K	269	320	288	333	379
L	163	194	166	192	207
M	106	126	122	141	172
N	169	189	183	202	227
P max.	56	80	69	80	85
P min.	26	30	34	30	25
Q	6-M12x24	6-M12x24	12-M16x30	12-M16x30	12-M20x35
R	175	195	189	208	233
S	23	-	28	-	-
T	41	-	46	-	-

# YH-RE

## Ultra-Compact Closed-Center Hydraulic Cylinder with Proximity Bracket



### Application / Benefits

Ultra compact closed center cylinder with brackets for proximity switches (switches not included)

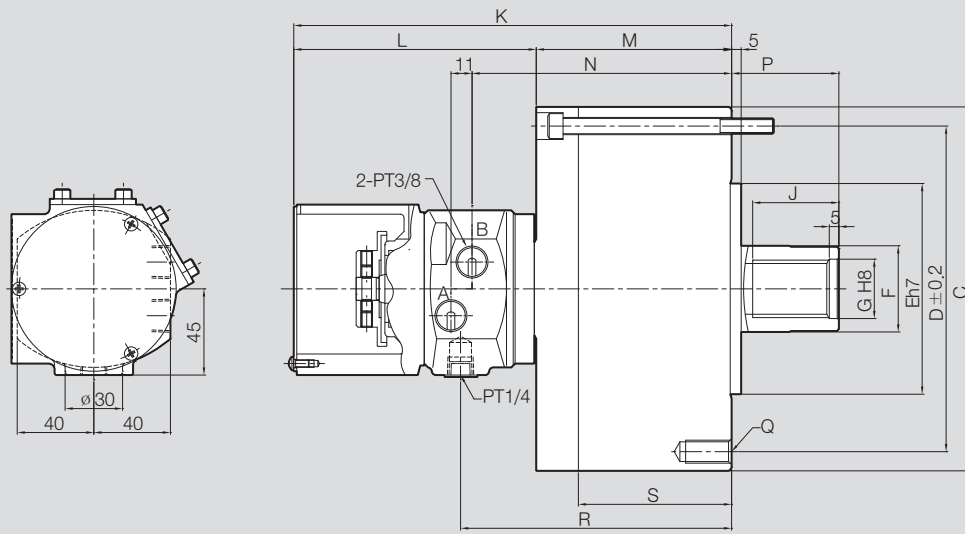
### Technical features

Check valve maintains pressure during power outage

### SPECIFICATIONS

	YH-10120RE	YH-10125RE	YH-12125RE	YH-12140RE	YH-15130RE	YH-15150RE	YH-20135RE	YH-20150RE	YH-25160RE
Piston Stroke [mm]	20	25	25	40	30	50	35	50	60
Piston Surface Area (Push) [cm <sup>2</sup> ]	78	78	114	114	168	168	305	305	515
Piston Surface Area (Pull) [cm <sup>2</sup> ]	73	73	106	106	154	154	283	283	482
Piston Force (Push) [kN(kgf)]	29(2960)	29(2960)	42(4326)	42(4326)	63(6375)	63(6375)	114(11573)	114(11573)	193(19541)
Piston Force (Pull) [kN(kgf)]	27(2770)	27(2770)	39(4022)	39(4022)	57(5843)	57(5843)	105(10738)	105(10738)	180(18289)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	40(40.8)	40(40.8)	40(40.8)	40(40.8)	40(40.8)	40(40.8)	40(40.8)	40(40.8)	40(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	6000	6000	6000	6000	5500	5500	5500	5500	2000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.49(0.05)	0.49(0.05)	0.88(0.09)	0.88(0.09)	1.86(0.19)	1.96(0.2)	3.82(0.39)	4.12(0.42)	9(0.92)
Weight [kg]	7.6	7.7	10.5	11	14	14.5	22.5	23.5	88
Total leakage [ℓ /min]	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

※ Specifications are subject to change without notice.



## DIMENSIONS

	YH-10120RE	YH-10125RE	YH-12125RE	YH-12140RE	YH-15130RE	YH-15150RE	YH-20135RE	YH-20150RE	YH-25160RE
ΦC	135	135	160	160	190	190	245	245	305
ΦD	118	118	142	142	170	170	222	222	275
ΦE	80	80	110	110	110	110	120	120	160
ΦF	30	30	35	35	45	45	55	55	65
ΦG	21	21	25	25	31	31	37	37	44
J	35	35	44	44	45	55	60	60	65
K	209.6	214.6	220.6	267.1	228.6	280.1	240.6	280.1	310
L	126.6	126.6	126.6	156.6	126.6	158.1	133.6	158.1	136
M	83	88	94	109	102	122	107	122	142.5
N	116.5	121.5	127.5	142.5	135.5	155.5	140.5	155.5	176
P max.	45	45	51	65	56	80	69	80	85
P min.	25	20	26	25	26	30	34	30	25
Q	6-M10x20	6-M10x20	12-M12x24	12-M12x24	12-M12x24	12-M12x24	12-M16x30	12-M16x30	12-M20x35
R	122.5	127.5	133.5	148.5	141.5	161.5	146.5	161.5	182
S	67	72	72	87	80	100	85	100	120.5

# YS-RA

Ultra-Compact Closed-Center Hydraulic Cylinder  
with Proximity Bracket and Built-in Rotary joint



### Application / Benefits

Compact cylinder for work not requiring spindle through  
Built-in rotary union for air through

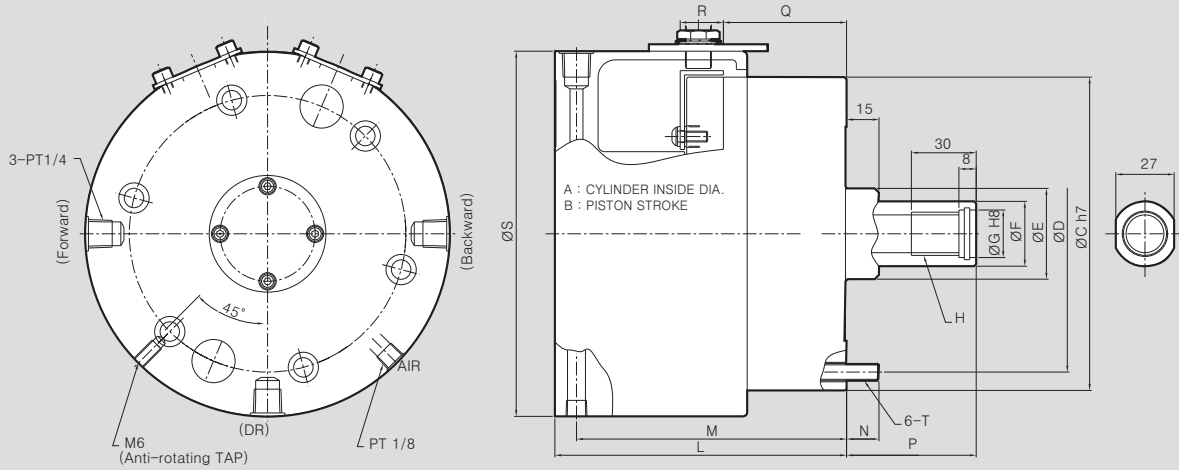
### Technical features

Check valve maintains pressure during power outage  
Built in rotary joint

## SPECIFICATIONS

	YS-11020RA	YS-12021RA	YS-13030RA
Piston Stroke [mm]	20	21	30
Piston Surface Area (Push) [cm <sup>2</sup> ]	87.6	105.7	131.8
Piston Surface Area (Pull) [cm <sup>2</sup> ]	84	102	122.5
Piston Force (Push) [kN(kgf)]	28(2855)	39(3977)	47(4793)
Piston Force (Pull) [kN(kgf)]	27(2753)	38(3875)	45(4589)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	3.5(35.7)	4.0(40.8)	4.0(40.8)
Max. r.p.m. [min <sup>-1</sup> ]	6000	6000	6000
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.157(0.016)	0.274(0.028)	0.284(0.029)
Weight [kg]	8.2	10.2	10.3
Total leakage [l /min]	1.2	1.2	1.2

※ Specifications are subject to change without notice.



## DIMENSIONS

	YS-11020RA	YS-12021RA	YS-13030RA
A	110	120	130
B	20	21	30
ØC	145	168	168
ØD	128	145	150
ØE	42	42	51
ØF	30	30	36
ØG	22	22	26
H	M20x2.5	M20x2.5	M24x3.0
J	30	30	35
K	15	15	15
L	135	135	144
M	125	125	134
N	14	17	17
P max.	60	60	60
P min.	40	39	30
Q max.	77	78	90
Q min.	57	57	66
R	20	20	20
ØS	169	192	192
T	M8x80	M8x80	M10x80

# DY Double-Piston Hydraulic Cylinder



## Application / Benefits

For 2+2 chucks, face drivers, ejectors and applications requiring dual actuation

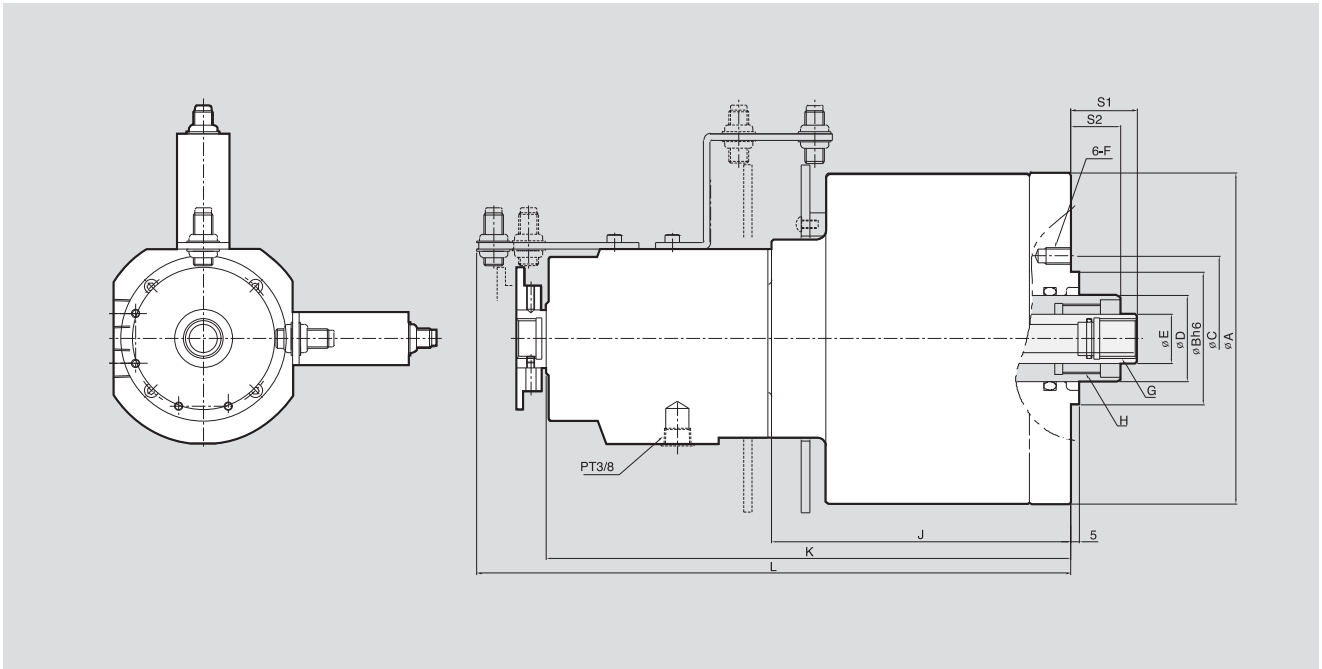
## Technical features

Double piston for dual actuation

## SPECIFICATIONS

	DY-12530		DY-16030	
	Piston A	Piston B	Piston A	Piston B
Piston Dia. [mm]	125	85	160	85
Piston Area [cm <sup>2</sup> ]	102	46	164	46
Piston Stroke. Max	49	38	60	48
Piston Stroke. Min	34	18	45	18
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	4(40.8)		4(40.8)	
Max. r.p.m. [min <sup>-1</sup> ]	5000		3000	
Weight [kg]	16.5		24.5	
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.441(0.045)		2.94(0.3)	

※ Specifications are subject to change without notice.



- ※ Piston A : Outer Piston
- ※ Piston B : Inner Piston

## DIMENSIONS

	DY-12530	DY-16030
ΦA	160	200
ΦB(h6)	110	125
ΦC	145	100
ΦD	50	52
ΦE	29	30
F	6-M12	6-M10
G	M20x1.5	M24x1.5
H	M42x1.5	M42x1.5
J	178	181
K	299	371
L	341	359





### Application / Benefits

For 2+2 chucks, face drivers, ejectors and applications requiring dual actuation

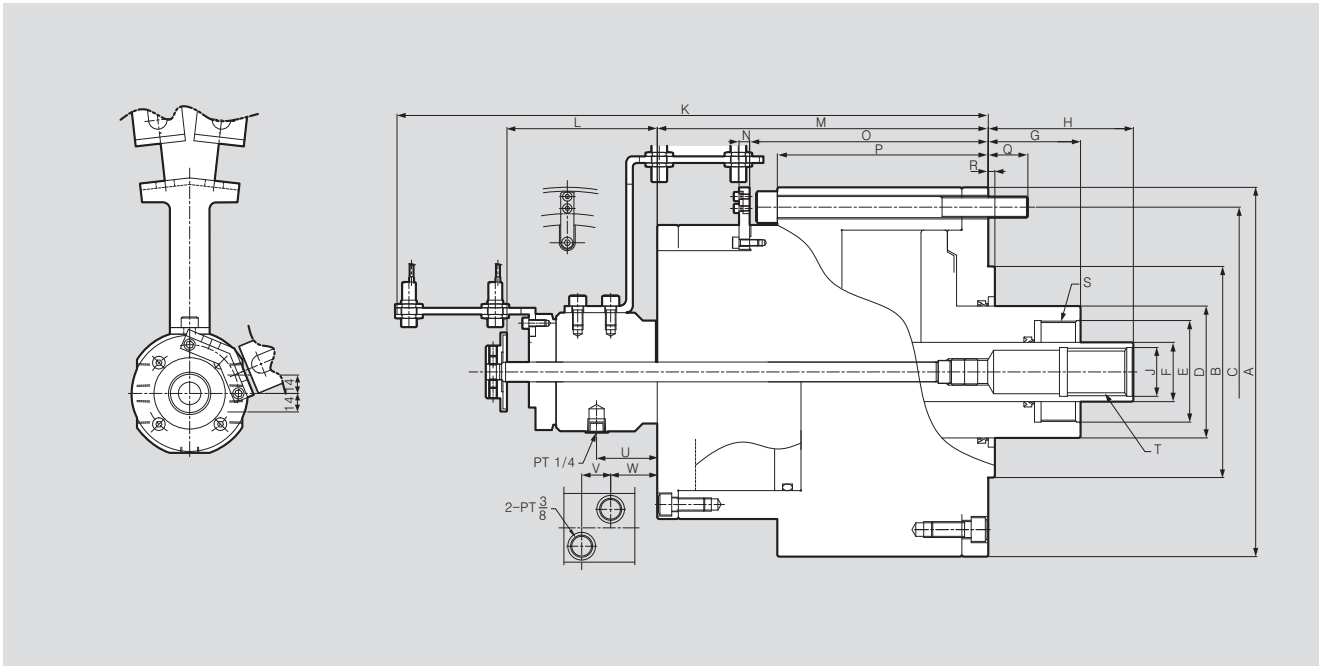
### Technical features

Built-in ports for air and coolant through

### SPECIFICATIONS

	DYV-21560	
	Piston A	Piston B
Piston Stroke	60	60
Piston Force (Push) [kN(kgf)]	16.9(1724)	11.8(1206)
Piston Force (Pull) [kN(kgf)]	13.9(1420)	11.1(1130)
Piston Surface Area (Push) [cm <sup>2</sup> ]	363	254
Piston Surface Area (Pull) [cm <sup>2</sup> ]	301	238
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	5.1(50)	
Max. r.p.m. [min <sup>-1</sup> ]	3200	
Weight [kg]	92	
Moment of inertia [N·m <sup>2</sup> (kgf·m <sup>2</sup> )]	0.89	

- ※ Specifications are subject to change without notice.
- ※ Piston Force : Hydraulic 4.0MPa (40.8 kgf/cm<sup>2</sup>)
- ※ Total leakage pressure : 3.0MPa(30.6 kgf/cm<sup>2</sup>) at 50° C
- ※ Samchully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa Iron Works Co., Ltd



- ※ Piston A : Outer Piston
- ※ Piston B : Inner Piston

## DIMENSIONS

DYV-21560			
ΦA	280	L	114
ΦB	160	M	251
ΦC	250	N	8
ΦD	100	O	181
ΦE	77	P	160
ΦF	45	Q	30
G max.	70	R	5
G min.	10	S	M75x2.0
H max.	110	T	M36x4.0
H min.	50	U	46
ΦJ	37	V	22
K	448.3	W	35.3

# AY-R Closed-Center Pneumatic Cylinder



## Application / Benefits

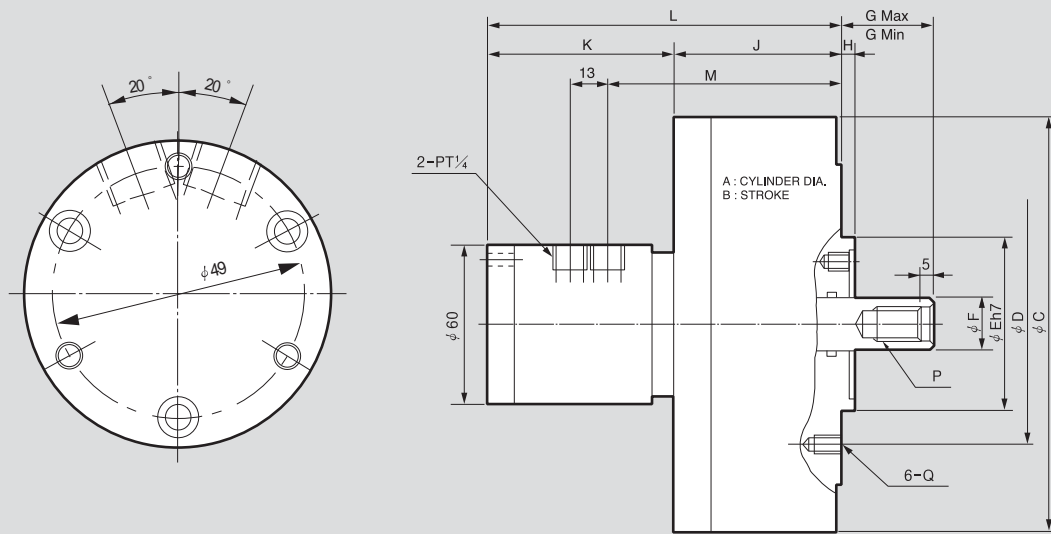
Closed-Center Pneumatic Cylinder  
Suitable for cutting thin material

## SPECIFICATIONS

	AY-1005R	AY-1315R	AY-1720R	AY-2225R	AY-2730R
Piston Stroke [mm]	5	15	20	25	30
Piston Surface Area (Push) [cm <sup>2</sup> ]	78.5	131	225	378	570.4
Piston Surface Area (Pull) [cm <sup>2</sup> ]	73.6	128	220.1	371.1	560.8
Piston Force (Push) [kN(kgf)]	5.4(552)	7.7(786)	13.23(1350)	22.2(2268)	33.5(3422)
Piston Force (Pull) [kN(kgf)]	5.1(518)	7.5(770)	12.9(1320)	21.8(2226)	33.0(3364)
Max. Operating Pressure [MPa(kgf/cm <sup>2</sup> )]	8(0.82)	8(0.82)	8(0.82)	8(0.82)	8(0.82)
Max. r.p.m. [min <sup>-1</sup> ]	5000	5000	5000	4000	3000
Weight [kg]	4.1	5.2	8.3	13.3	18.7
Moment of inertia [N · m <sup>2</sup> (kg · m <sup>2</sup> )]	0.686(0.07)	0.686(0.07)	1.078(0.11)	2.450(0.25)	7.350(0.75)

※ Maximum turning speed is based upon actual measurement.

※ Specifications are subject to change without notice.



## DIMENSIONS

	AY-1005R	AY-1315R	AY-1720R	AY-2225R	AY-2730R
A	100	130	170	220	270
B	5	15	20	25	30
ΦC	128	156	200	255	305
ΦD	90	90	100	130	130
ΦE(h7)	65	65	80	110	110
ΦF	20	20	25	30	35
G max.	30	35	65	71	76
G min.	25	20	45	46	46
H	5	5	5	5	5
J	53	63	82	93	103
K	70	70	70	70	74.5
L	123	133	152	163	177.5
M	79	89	108	119	133.5
N	M5	M6	M7	M8	M9
Q	M6x11	M6x11	M10x16	M12x20	M12x20
P	M12x22	M12x22	M16x30	M20x35	M24x40