



**ROTARY  
CYLINDER**

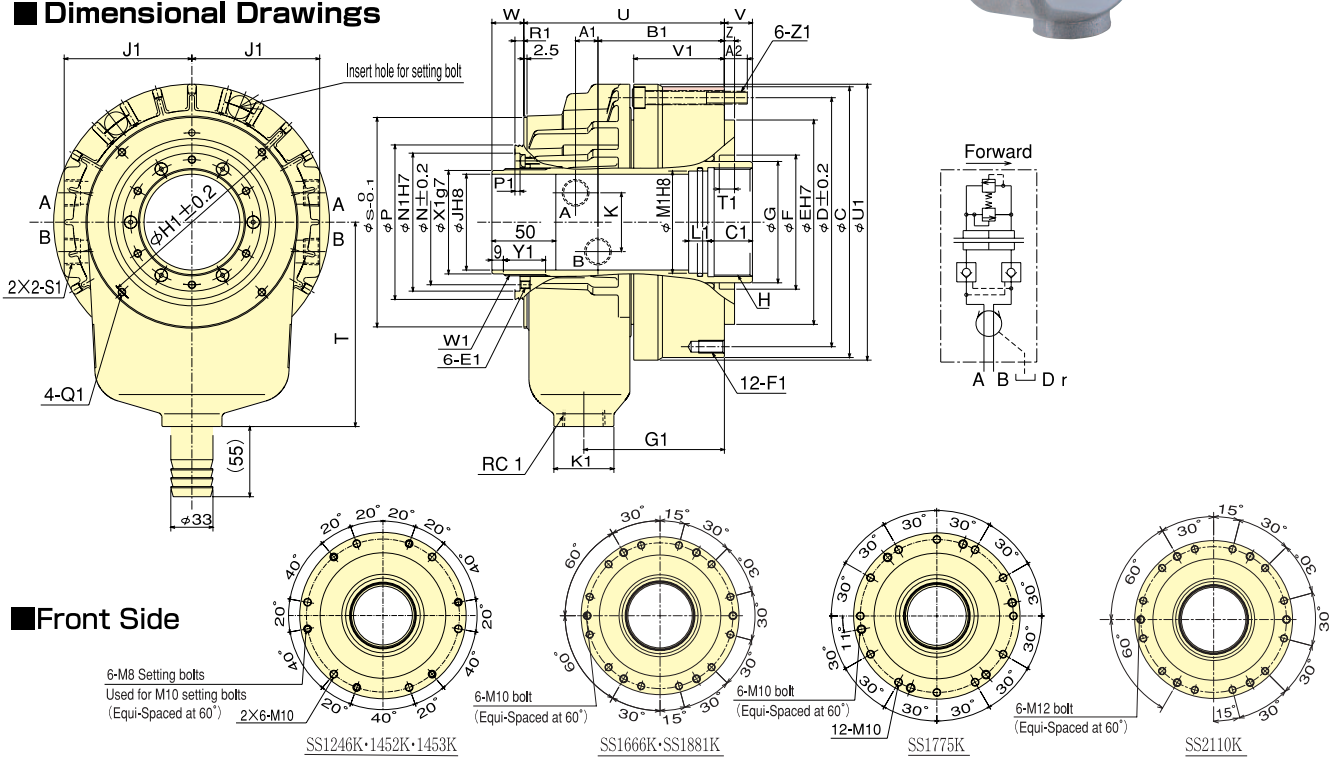
# Compact Style Hydraulic Cylinder with Open Center SS series

Accommodates BB200 and B-200 series  
Compact design advantages Lathes in full performance

- Compact : 30% reduction in length of current S series.
- Speed Increased
- One size large chuck is enabled to operate



## Dimensional Drawings



## Dimensions

Model	C	D	E	F	G	H	J	K	N	P	S	T	U	V max.	V min.	W max.	W min.	Z	A1	B1	C1
SS1246K	162	147	130	75	65	M55×2	46	40	64	85	116	120	120	13	-3	41	25	8	8.5	79.5	25
SS1452K	180	165	140	80	70	M60×2	52	40	73	96	135	130	130	19	-3	47	25	8	9.0	88	30
SS1453K	180	165	140	80	70	M60×2	53	40	73	96	135	130	130	19	-3	47	25	8	9.0	88	30
SS1666K	207	190	168	95	85	M75×2	66	48	88	111	154	150	150	22	-3	50	25	8	13.0	99.5	35
SS1775K	212	195	160	105	95	M85×2	75	46	98	121	164	160	157	22	-3	50	25	8	17.5	99	35
SS1881K	222	205	168	110	100	M90×2	81	46	103	126	175	175	167	23	-2	50	25	8	17.0	106	35
SS2110K	260	240	200	135	125	M115×2	106	46	133	160	210	200	192	27	-3	55	25	8	20.0	120.5	35

Model	E1 depth	F1 depth	G1	H1	J1	K1	L1	M1	N1	P1	Q1 depth	R1	S1	T1	U1	V1	W1	X1	Y1	Z1	A2
SS1246K	M6×6	M10×20	84	98	76	47	15	50	76	4	M5×6	6	Rc <sup>3</sup> / <sub>8</sub>	12	165	57.5	M52×1.5	50	29	M8	15
SS1452K	M6×7	M10×20	93	110	86	47	15	55	85	4	M6×6	7	Rc <sup>3</sup> / <sub>8</sub>	12	184	66.5	M58×1.5	56	29	M8	12
SS1453K	M6×7	M10×20	93	110	86	47	15	55	85	4	M6×6	7	Rc <sup>3</sup> / <sub>8</sub>	12	184	66.5	M58×1.5	56	29	M8	12
SS1666K	M6×7	M12×24	108	145	97	47	15	70	100	4	M6×10	7	Rc <sup>1</sup> / <sub>2</sub>	12	211	71	M74×1.5	71.5	33	M10	19
SS1775K	M6×8	M10×20	110	155	100	47	15	80	108	4	M6×10	7	Rc <sup>1</sup> / <sub>2</sub>	12	216	71	M84×2	81	33	M10	18
SS1881K	M6×8	M12×24	115	166	105	47	15	85	113	4	M6×10	7	Rc <sup>1</sup> / <sub>2</sub>	12	226	71	M89×2	86	33	M10	19
SS2110K	M6×8	M12×24	130	201	124	47	15	110	145	4	M6×10	7	Rc <sup>1</sup> / <sub>2</sub>	12	263	79.5	M118×2	115	38	M12	18

## Specifications

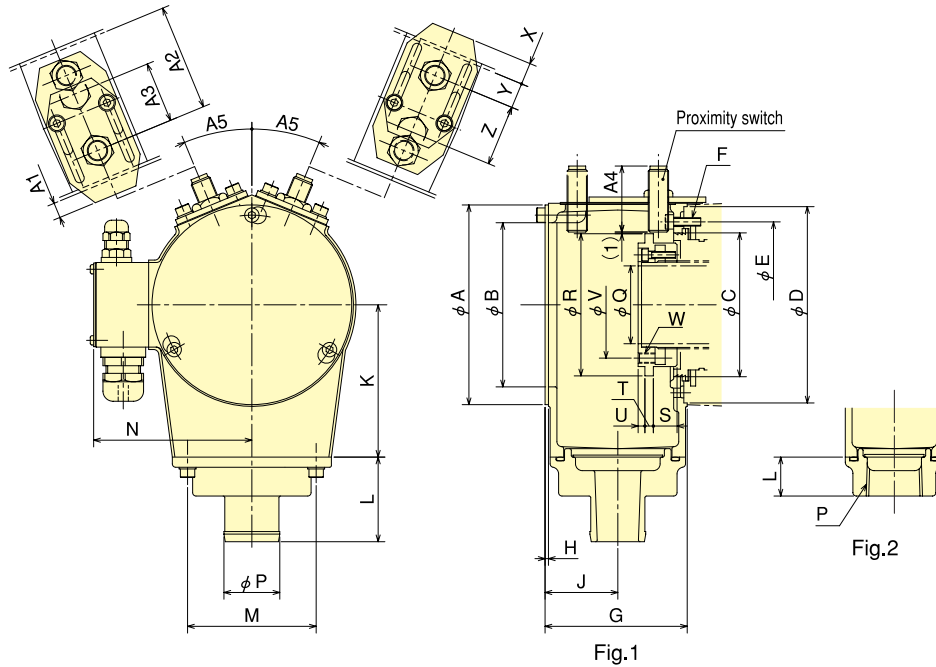
Model	Piston Dia. mm	Plunger Stroke mm	Draw bar		Max. Operation Pressure MPa (kgf/cm <sup>2</sup> )	Max. Speed (min <sup>-1</sup> r.p.m)	Moment of inertia kg·m <sup>2</sup>	Net Weight kg	Total leakage ℓ /min
			Push Side kN (kgf)	Pull Side kN (kgf)					
SS1246K	128	16	43.6(4466)	38.9(3967)	4.5(45.9)	8000	0.017	8.0	3.0
SS1452K	145	22	56.5(5761)	52.1(5313)	4.5(45.9)	6500	0.031	13.0	3.9
SS1453K	145	22	56.5(5761)	52.1(5313)	4.5(45.9)	6500	0.031	13.0	3.9
SS1666K	165	25	70.6(7199)	65.0(6628)	4.5(45.9)	5600	0.065	19.0	4.0
SS1775K	170	25	70.7(7209)	64.7(6587)	4.5(45.9)	5500	0.061	18.5	4.2
SS1881K	180	25	79.5(8107)	73.1(7454)	4.5(45.9)	4800	0.087	24.0	4.3
SS2110K	210	30	74.7(7617)	71.0(7240)	3.5(35.7)	3500	0.197	37.0	6.0



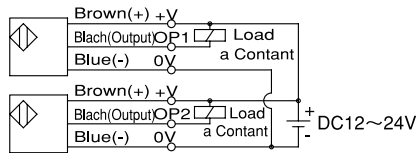
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# Coolant Collector

## Dimensional Drawings

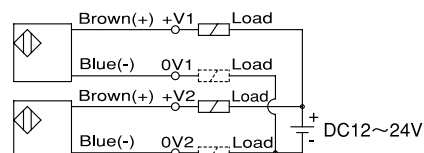


**Proximity Switch Type 1**  
manufactured by B & Plus KK  
BES516-329-E3R



Circuit Diagram for Proximity Switch Output  
NPN A Contact (Normally open)

**Proximity Switch Type 2**  
manufactured by Yamatake  
FL7M-3J6HD



Circuit Diagram for Proximity Switch Output  
DC two-wire system A Contact (Normally open)  
Lead = Both sides connectable

## Dimensions

\*The under bodies of CSK12Y2, CSK14Y2, CSK16Y2, CSK17Y2, CSK18Y2, CSK21Y2, and CS-25HW are based on Fig. 2.

Model	Cylinder	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
CS-S10BN	S1036	118	97	73	104	88	4-M5	84	2	43	90	50	76	93.5	33	36
CS-S12BN	S1246	118	97	85	116	98	4-M5	84	2	43	90	50	76	93.5	33	46
CS-S15BN	S1552	136	114	96	135	110	4-M6	84	2	43	100	50	76	103.5	33	52
CS-S18BN	S1875	181	154	121	164	155	4-M6	88	2	46	140	50	76	126.5	33	75
CS-S20BN	S2091	181	154	138	180	165	4-M6	104	2	44	140	50	76	126.5	33	91
CSK12Y2	SS1246K	118	97	85	116	98	4-M5	62	2	32	90	23	76	92	Rc 1	46
CSK14Y2	SS1453K	136	114	96	135	110	4-M6	84	2	35	100	23	76	102	Rc 1	53
CSK16Y2	SS1666K	171	144	111	154	145	4-M6	88	2	38	135	23	76	120	Rc 1	66
CSK17Y2	SS1775K	181	154	121	164	155	4-M6	71	2	37.5	140	23	76	125	Rc 1	75
CSK18Y2	SS1881K	191	165	126	175	166	4-M6	88	2	38	145	23	76	130	Rc 1	81
CSK21Y2	SS2110K	229	200	160	210	201	4-M6	84	2	35	163	23	76	150	Rc 1	106
CS-F08BN	F0933H	118	97	73	104	88	4-M5	84	2	43	90	50	76	93.5	26	33
CS-25HW	F2511H	232	200	179	-	206	4-M6	101.6	1.6	51.6	180	-	76	148.5	Rc3/4	117.5

Model	Cylinder	R	S	T	U	V	W	X <sub>max.</sub>	Y	Z	A1 <sub>max.</sub>	A2	A3	A4	A5	Proximity switch
CS-S10BN	S1036	84	14	5	4	52	4-M6	13	15	36	9	63	36	39	22.5°	TYPE.1
CS-S12BN	S1246	84	14	5	4	63	4-M6	13	15	36	9	63	36	39	22.5°	TYPE.1
CS-S15BN	S1552	99	14	5	4	70	4-M6	13	15	36	9	63	36	39	22.5°	TYPE.1
CS-S18BN	S1875	144	14	5	4	95	4-M6	15	15	39	15	71	39	39	15°	TYPE.1
CS-S20BN	S2091	144	21	5	2	108	4-M6	8	22	41	10	82	41	39	15°	TYPE.1
CSK12Y2	SS1246K	84	10	5	8	63	4-M6	10	15	27	7	42	27	35	22.5°	TYPE.2
CSK14Y2	SS1453K	99	4	5	11.5	70	4-M6	13	15	36	10	64	36	35	20°	TYPE.2
CSK16Y2	SS1666K	134	12.5	5	4	85.5	4-M6	8	15	55	7	70	55	35	15°	TYPE.2
CSK17Y2	SS1775K	144	14	5	4	95	4-M6	13.5	14.5	32.5	13.5	54.5	32.5	35	15°	TYPE.2
CSK18Y2	SS1881K	155	12.5	5	4	100	4-M6	8	15	55	7	70	55	35	15°	TYPE.2
CSK21Y2	SS2110K	190	14	5	4	130	4-M6	13	15	48	9	63	48	35	12°	TYPE.2
CS-F08BN	F0933H	72	25	7	-	-	-	13	15	36	9	63	36	39	22.5°	TYPE.1
CS-25HW	F2511H	192	12	12	-	-	-	18	17	52	11.4	85	36	39	22.5°	TYPE.1