



ROTARY CYLINDER

短寸中実回転油圧シリンダ

M series

短寸、小型、軽量

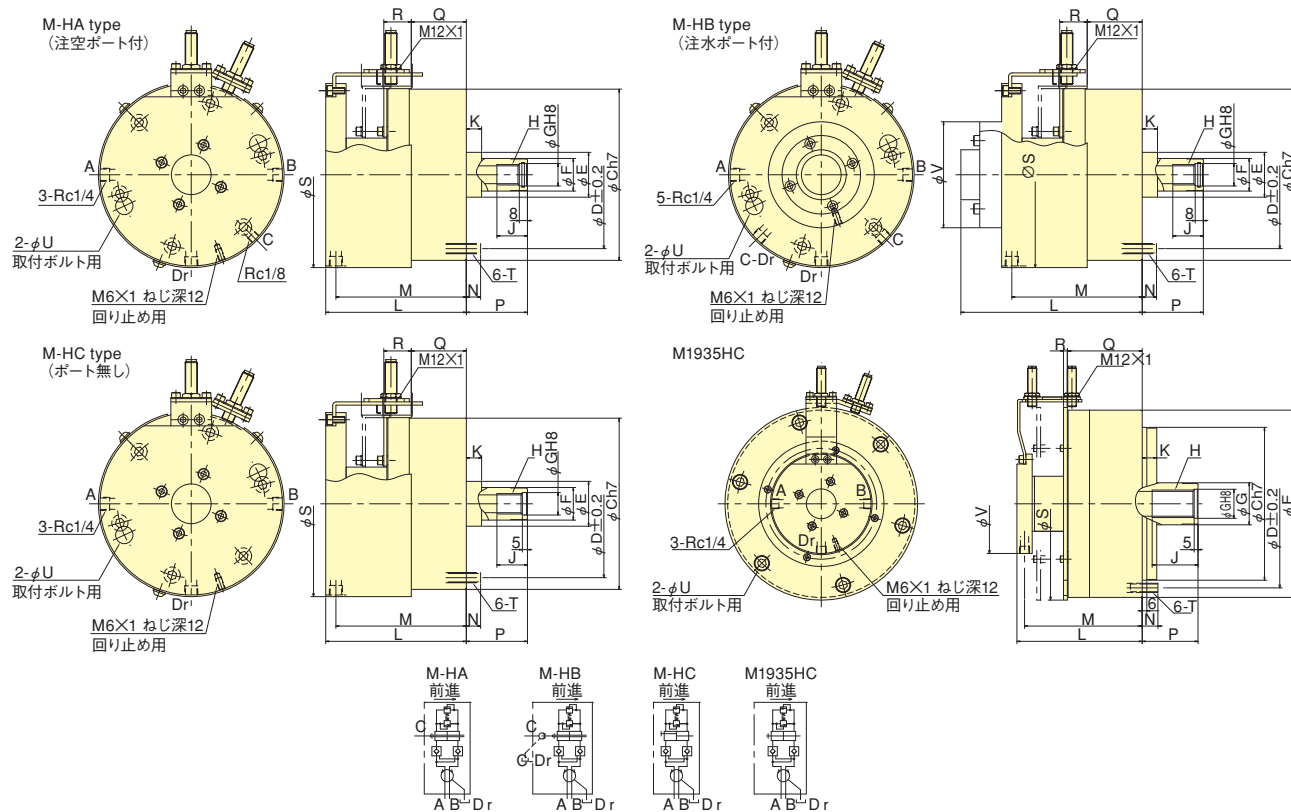
ロックバルブ、リリーフバルブ内蔵、さらに近接スイッチ取付可能仕様



近接スイッチは付属していません。
お客様の制御装置に合わせて、寸法図を参考に
ご用意願います。

- 超小型、軽量化を追求しました
 - ロックバルブ、リリーフバルブ内蔵、さらに近接スイッチ取付可能仕様
- *CE対応品

■寸法図



■寸法表

寸法	C (h7)		D	E	F	G (H8)		H	J	K	L	M	N	P max.	P min.	Q max.	Q min.	R	S	T	U	V
M1120HA21D	145	128	42	30	22	M20	30	15	135	125	14	60	40	72	52	26	159.2	M 8	14	-	-	-
M1120HB21N	145	128	42	30	22	M20	30	15	175	125	14	60	40	72	52	26	159.2	M 8	14	104	-	-
M1120HC21D	145	128	42	30	22	M20	30	15	135	125	14	60	40	72	52	26	159.2	M 8	14	-	-	-
M1221HA21D	168	145	44	32	22	M20	30	15	138	128	14	60	39	75	54	27	182.2	M10	17	-	-	-
M1221HB21N	168	145	44	32	22	M20	30	15	178	128	14	60	39	75	54	27	182.2	M10	17	104	-	-
M1221HC21D	168	145	44	32	22	M20	30	15	138	128	14	60	39	75	54	27	182.2	M10	17	-	-	-
M1330HA21D	168	150	51	36	26	M24	35	15	144	134	18	60	30	79	49	37	182.2	M10	17	-	-	-
M1330HB21N	168	150	51	36	26	M24	35	15	184	134	18	60	30	79	49	37	182.2	M10	17	104	-	-
M1330HC21D	168	150	51	36	26	M24	35	15	144	134	18	60	30	79	49	37	182.2	M10	17	-	-	-
M1935HC	200	220	245	55	38	M36	60	19	164	154	20.5	73	38	133	98	5	252	M12	20	130	-	-

■仕様表

*ピストン推力：最高使用油圧力M1120H ϕ 3.5MPa、M1221H ϕ 4.0MPa、M1330H ϕ 4.0MPa
*ドレン量は油圧3.0MPa、油温50℃の時 ※近接スイッチ：Model BES M12MI-PSC20B-BV02(バルブ付)DC24V 200mA PNP

仕様	ピストンストローク mm	ピストン表面積		ピストン推力		最高使用油圧力 MPa	ドレン量 ℓ/min	許容最高回転速度 min ⁻¹	質量 kg	慣性モーメント kg·m ²
		押側 cm ²	引側 cm ²	押側 kN	引側 kN					
M1120HA21D	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.2	0.016
M1120HB21N	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.5	0.016
M1120HC21D	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.2	0.016
M1221HA21D	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.2	0.028
M1221HB21N	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.5	0.028
M1221HC21D	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.2	0.028
M1330HA21D	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.3	0.029
M1330HB21N	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.6	0.029
M1330HC21D	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.3	0.029
M1935HC	35	274	252	103	94.6	4.0	1.2	6000	23	0.15



**ROTARY
CYLINDER**

Compact Hydraulic Cylinder with Non-Through-Hole

M series

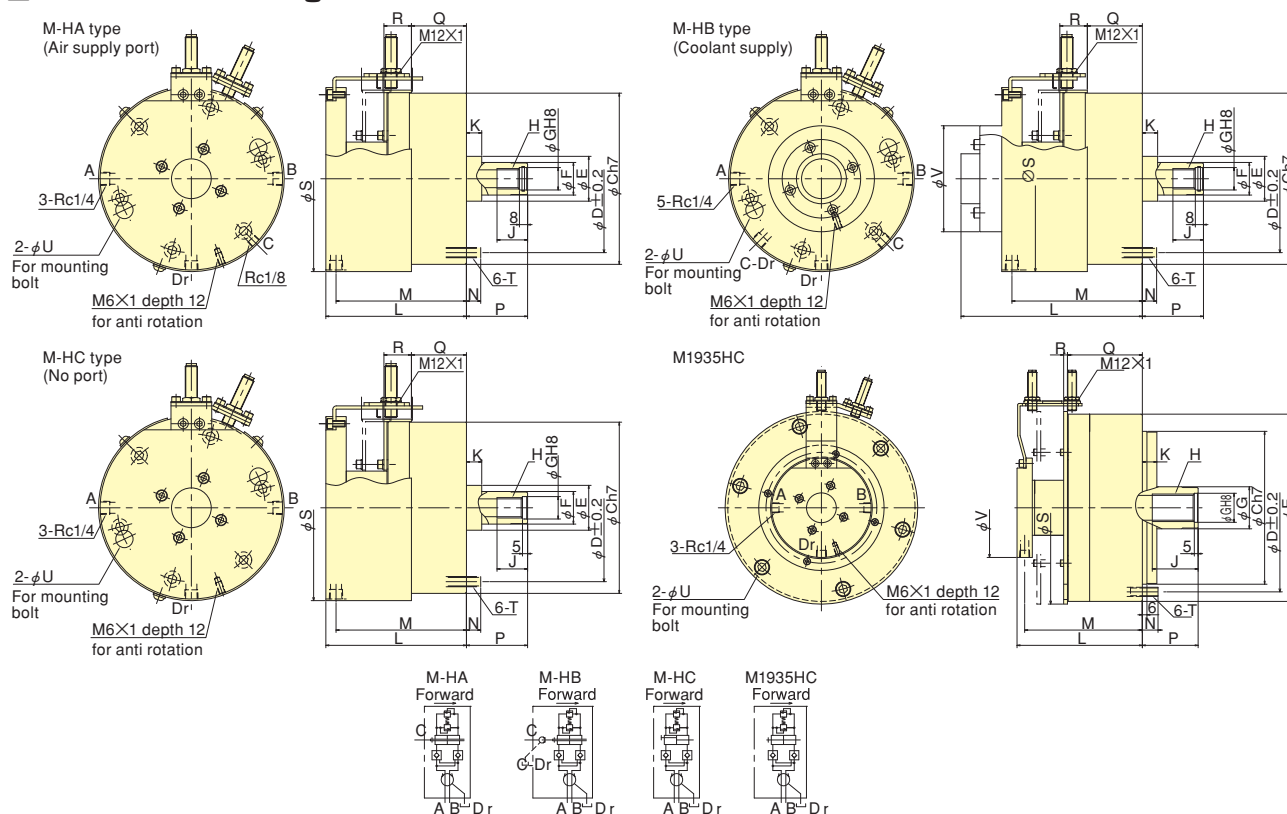


Short, Compact, and Light
Built-in check valve and pressure relief valve,
and proximity switches can be attached

- Compact and lightweight
 - Built-in check valve and pressure relief valve, and proximity switches can be attached
- *CE correspondence

The proximity switch is optional.
Determine the appropriate type according to the controller type and dimension drawing.

Dimensional Drawings



コンパクト
シリンダー

Dimensions

Dimensions	C (h7)	D	E	F	G (H8)	H	J	K	L	M	N	P max.	P min.	Q max.	Q min.	R	S	T	U	V
M1120HA21D	145	128	42	30	22	M20	30	15	135	125	14	60	40	72	52	26	1592	M 8	14	-
M1120HB21N	145	128	42	30	22	M20	30	15	175	125	14	60	40	72	52	26	1592	M 8	14	104
M1120HC21D	145	128	42	30	22	M20	30	15	135	125	14	60	40	72	52	26	1592	M 8	14	-
M1221HA21D	168	145	44	32	22	M20	30	15	138	128	14	60	39	75	54	27	1822	M10	17	-
M1221HB21N	168	145	44	32	22	M20	30	15	178	128	14	60	39	75	54	27	1822	M10	17	104
M1221HC21D	168	145	44	32	22	M20	30	15	138	128	14	60	39	75	54	27	1822	M10	17	-
M1330HA21D	168	150	51	36	26	M24	35	15	144	134	18	60	30	79	49	37	1822	M10	17	-
M1330HB21N	168	150	51	36	26	M24	35	15	184	134	18	60	30	79	49	37	1822	M10	17	104
M1330HC21D	168	150	51	36	26	M24	35	15	144	134	18	60	30	79	49	37	1822	M10	17	-
M1935HC	200	220	245	55	38	M36	60	19	164	154	20.5	73	38	133	98	5	252	M12	20	130

*Piston thrust : Max. Operation Pressure M1120H 3.5MPa, M1221H 4.0MPa, M1330H 4.0MPa
*Leakage : Pressure 3.0MPa and oil temperature 50°C. *Proximity switch : Model BES M12MI-PSC20B-BV02 (manufactured by Balluff) DC24V 200mA PNP

Specifications

Specifications	Piston stroke mm	Piston Area		Piston thrust		Max. Operation Pressure MPa	Leakage μ /min	Max. Speed min ⁻¹	Net Weight kg	Moment of inertia kg·m ²
		Push Side cm ²	Pull Side cm ²	Push Side kN	Pull Side kN					
M1120HA21D	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.2	0.016
M1120HB21N	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.5	0.016
M1120HC21D	20	87.6	84	28.0	27.0	3.5	1.2	6000	8.2	0.016
M1221HA21D	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.2	0.028
M1221HB21N	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.5	0.028
M1221HC21D	21	105.7	102	39.0	38.0	4.0	1.2	6000	10.2	0.028
M1330HA21D	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.3	0.029
M1330HB21N	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.6	0.029
M1330HC21D	30	125.3	119	47.0	45.0	4.0	1.2	6000	10.3	0.029
M1935HC	35	274	252	103	94.6	4.0	1.2	6000	23	0.15