

50 to 200 kN (MC Series)

Maximum operating pressure	70 MPa
Maximum output	50/100/200 kN
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

- The piston and the inside of the cylinder tube are plated.
- A special head cover is included.
- Short type having a minimized overall length.

For cylinder and pump selections, see page 54.

Model code structure

MC **05** - **25** **VC**

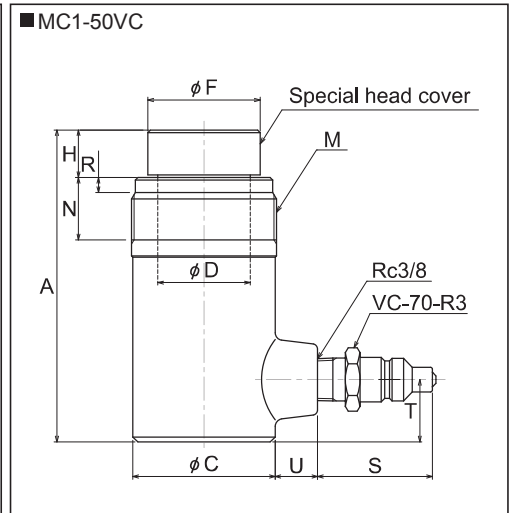
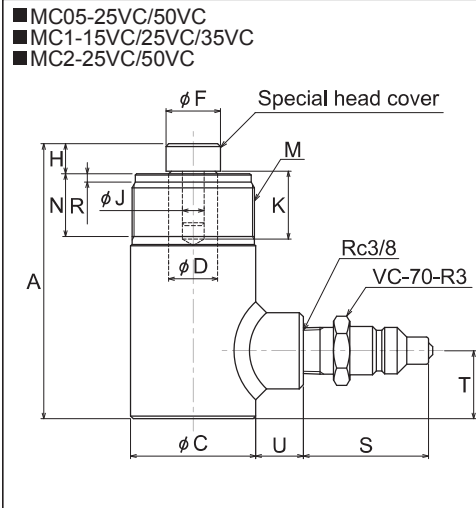
Single-acting cylinder
MC series

Maximum output
05 : 50kN
1 : 100kN
2 : 200kN

Stroke
(mm)

Attached coupler

VC : VC-70-R3
S : S-1R
T : ROC-13R
-NC : W/O coupler



Specifications

Model		MC05-25	MC05-50	MC1-15	MC1-25	MC1-35	MC1-50	MC2-25	MC2-50
Maximum output	kN	50		100				200	
Effective area	cm ²	7.16		14.52				28.74	
Stroke	mm	25	50	15	25	35	50	25	50
Minimum overall length	A	101	144	88	111	128	125	127	171
Cylinder internal diameter	φ	30.2		43				60.5	
Cylinder external diameter	φ C	46		57				82	
Piston diameter	φ D	18		28		37		38	
Head cover diameter	φ F	20		27		45		36	
Piston protrusion length	H	11		11		19		16	
Piston hole diameter	φ J	8		19		—		19	
Piston hole length	K	25		30		—		35	
Collar thread size	M	M45 x 1.5		M58 x 2				M82 x 2	
Collar thread length	N	23		25				50	
Incomplete thread length	R	3		6				6	
Coupler protrusion length	VC-70-R3	≈ 46		≈ 46				≈ 46	
	S-1R	≈ 53		≈ 53				≈ 53	
	ROC-13R	≈ 49		≈ 49				≈ 49	
Coupler position	T	25		21	25		25		
Boss length	U	18		17				19	
Required oil volume	cm ³	18	36	22	37	51	73	72	144
Approx. weight	kg	1.2	1.7	1.6	1.9	2.2	2.1	4.3	5.6

Compatible attachments

Attachment location	Cylinder parts	MC05-25	MC05-50	MC1-15	MC1-25	MC1-35	MC1-50	MC2-25	MC2-50
Piston	Tilt saddle	—		R-1020SP			—	R-1020SP	
Collar thread	Flange	5FM		10FM			20FM		

40 kN (S Series)

Maximum operating pressure	70 MPa
Maximum output	40 kN
Cylinder internal diameter	φ 28.6
Effective area	6.42 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

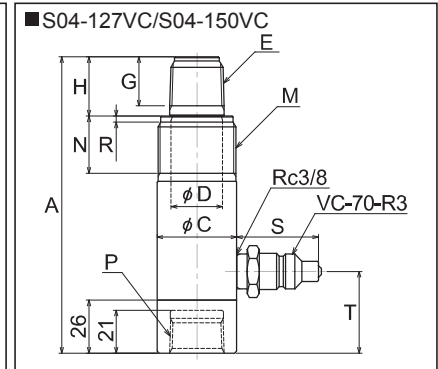
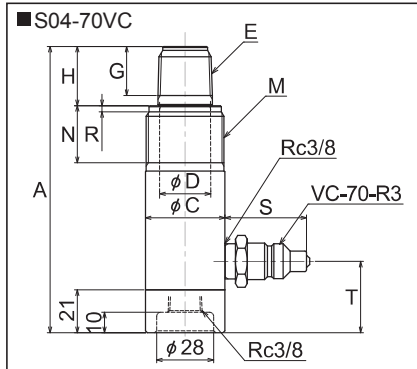
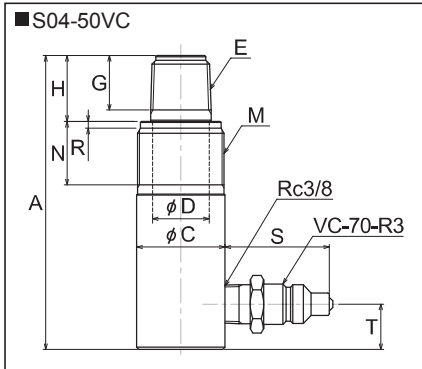
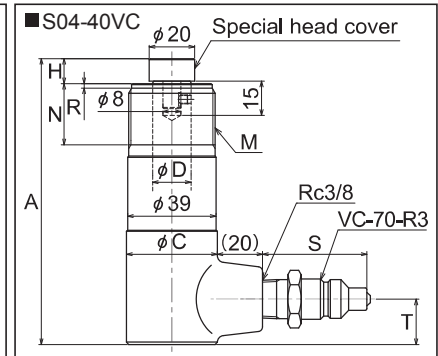
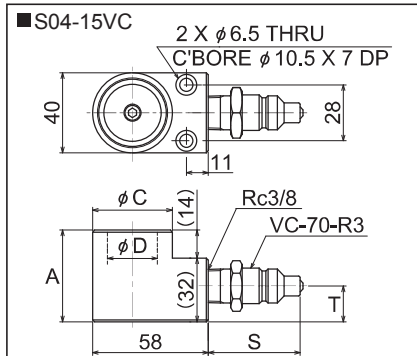
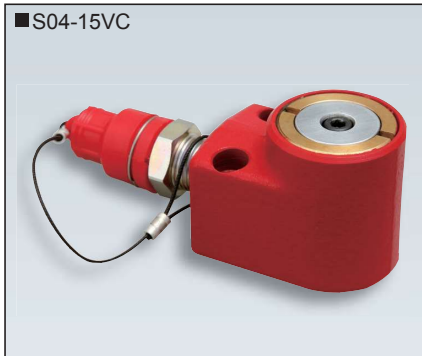
• The piston and the inside of the cylinder tube are plated.

👉 For cylinder and pump selections, see page 54.

Model code structure



S : Single-acting cylinder S series
04 : Maximum output 04 : 40 kN
15 : Stroke (mm)
VC : Attached coupler
 VC : VC-70-R3
 S : S-1R
 T : ROC-13R
 -NC : W/O coupler



Specifications

Model		S04-15	S04-40	S04-50	S04-70	S04-127	S04-150
Stroke	mm	15	40	50	70	127	150
Minimum overall length	A	46	126	148	190	252	288
Cylinder external diameter	φ C	40	40		39		
Piston diameter	φ D	25	17		25		
Piston thread size	E	—		3/4-14NPT			
Piston thread length	G	—		24			
Piston protrusion length	H	—	11		29		
Collar thread size	M	—		1 1/2-16NS			
Collar thread length	N	—	27		28		
Base thread size	P	—		3/4-14NPT			
Incomplete thread length	R	—	2		3		
Coupler protrusion length	VC-70-R3	—		≈ 46		≈ 40	
	S-1R	—		≈ 53		≈ 47	
	ROC-13R	—		≈ 49		≈ 43	
Coupler position	T	18	20	20	35	40	
Required oil volume	cm ³	10	26	33	45	82	97
Approx. weight	kg	0.7	1.2	1.1	1.4	1.9	2.1

Compatible attachments

Attachment location	Cylinder parts	S04-15	S04-40	S04-50	S04-70	S04-127	S04-150
Piston	Cap	—	With special head cover	R-4P			
	Piston base	—	—	RB-4			
	Clevis	—	—	CLF-4-A (B)			
Collar thread	Flange	—	—	4FS			
Base thread	Cylinder base	—	—	CB-4			
	Clevis	—	—	CLM-4-A (B)			

50 kN (MS Series)

Maximum operating pressure	70 MPa
Maximum output	50 kN
Cylinder internal diameter	ϕ 30.2
Effective area	7.16 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

• The piston and the inside of the cylinder tube are plated.

 For cylinder and pump selections, see page 54.

Model code structure

MS **05** - **50** **VC**

Single-acting cylinder
MS series

Maximum output
05 : 50 kN

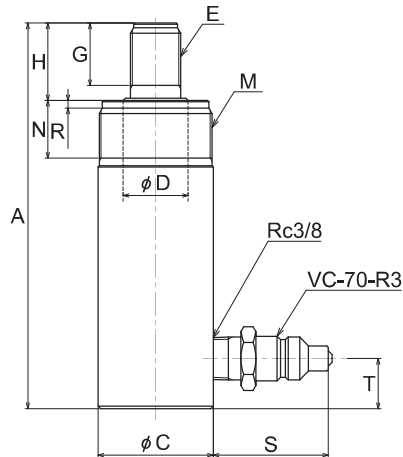
Stroke (mm)

Attached coupler
VC : VC-70-R3
S : S-1R
T : ROC-13R
-NC : W/O coupler

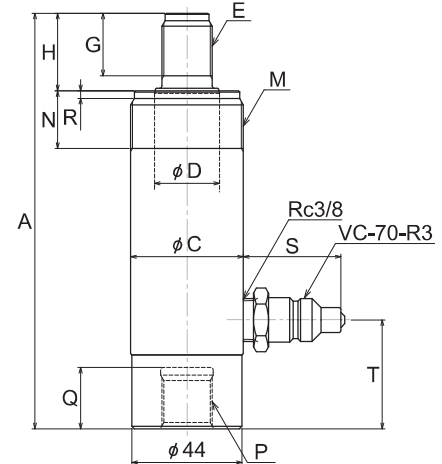
■ MS05-100VC



■ MS05-50VC



■ MS05-75VC/100VC/125VC/150VC



■ Specifications

Model		MS05-50	MS05-75	MS05-100	MS05-125	MS05-150
Stroke	mm	50	75	100	125	150
Minimum overall length	A	154	211	236	261	286
Cylinder external diameter	ϕ C	46	45			
Piston diameter	ϕ D	26				
Piston thread size	E	M20 x 1.5				
Piston thread length	G	25				
Piston protrusion length	H	31				
Collar thread size	M	M45 x 1.5				
Collar thread length	N	23				
Base thread size	P	—	M20 x 1.5			
Base thread depth	Q	—	24			
Incomplete thread length	R	3				
Coupler protrusion length	VC-70-R3	≈ 46	≈ 39			
	S-1R	≈ 53	≈ 46			
	ROC-13R	≈ 49	≈ 42			
Coupler position	T	20	43			
Required oil volume	cm ³	36	54	72	90	108
Approx. weight	kg	1.5	2.0	2.3	2.5	2.7

■ Compatible attachments

Attachment location	Cylinder parts	MS05-50	MS05-75	MS05-100	MS05-125	MS05-150
Piston thread	Cap	R-5PM				
	Piston base	RB-5M				
	Clevis	CLF-5-1 (2)				
Collar thread	Flange	5FM				
Base thread	Cylinder base	—	CB-5M			
	Clevis	—	CLM-5-1 (2)			

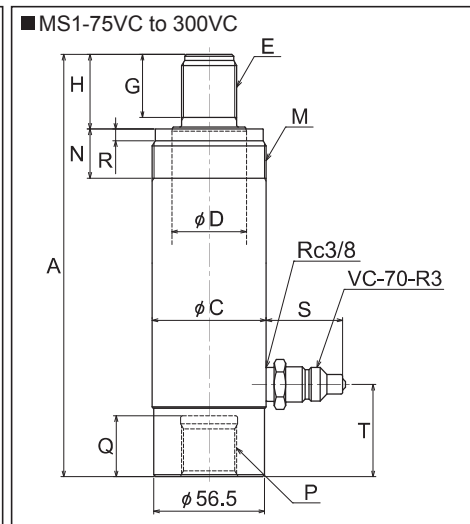
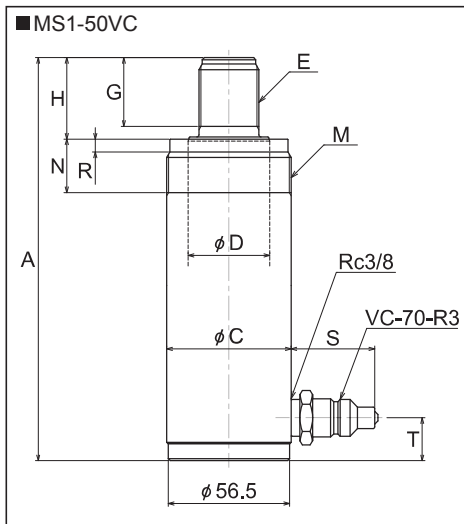
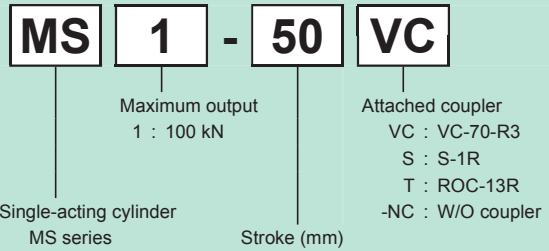
100 kN (MS Series)

Maximum operating pressure	70 MPa
Maximum output	100 kN
Cylinder internal diameter	φ 43
Effective area	14.52 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

● The piston and the inside of the cylinder tube are plated.

☞ For cylinder and pump selections, see page 54.

Model code structure



■ Specifications

Model		MS1-50	MS1-75	MS1-100	MS1-125	MS1-150	MS1-200	MS1-250	MS1-300
Stroke	mm	50	75	100	125	150	200	250	300
Minimum overall length	A	188	240	265	290	315	365	415	465
Cylinder external diameter	φ C	58							
Piston diameter	φ D	38							
Piston thread size	E	M28 x 2							
Piston thread length	G	32							
Piston protrusion length	H	38							
Collar thread size	M	M58 x 2							
Collar thread length	N	25							
Base thread size	P	—	M28 x 2						
Base thread depth	Q	—	31						
Incomplete thread length	R	6							
Coupler protrusion length	VC-70-R3	≈ 39							
	S-1R	≈ 45							
	ROC-13R	≈ 41							
Coupler position	T	20	47						
Required oil volume	cm ³	73	109	146	182	218	291	363	436
Approx. weight	kg	2.8	3.7	4.1	4.5	4.9	5.8	6.6	7.5

■ Compatible attachments

Attachment location	Cylinder parts	MS1-50	MS1-75	MS1-100	MS1-125	MS1-150	MS1-200	MS1-250	MS1-300
Piston thread	Cap	R-10PM							
	Tilt saddle	R-10SP							
	Piston base	RB-10M							
	Clevis	CLF-10-1 (2)							
Collar thread	Flange	10FM							
Base thread	Cylinder base	—	CB-10M						
	Clevis	—	CLM-10-1 (2)						

100 kN (S Series)

Maximum operating pressure	70 MPa
Maximum output	100 kN
Cylinder internal diameter	φ 43
Effective area	14.52 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

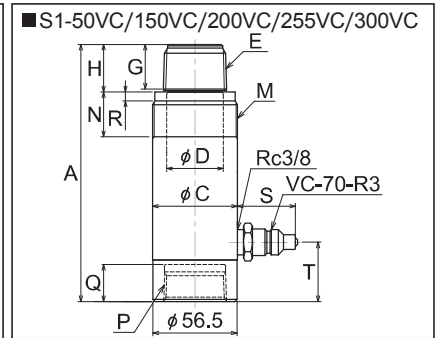
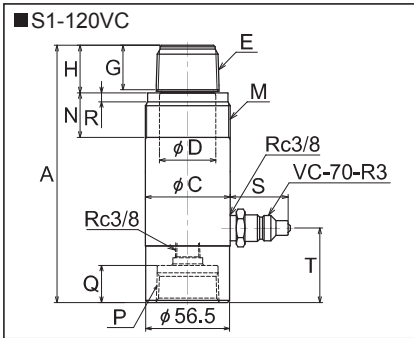
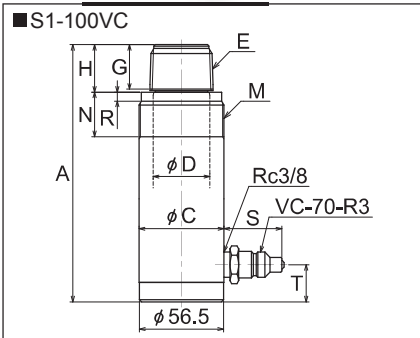
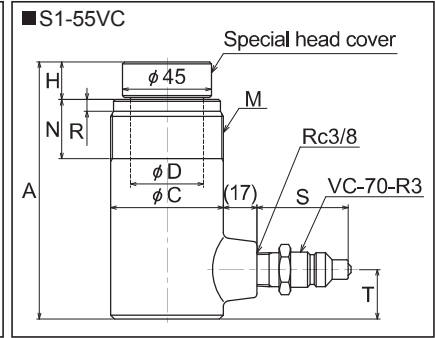
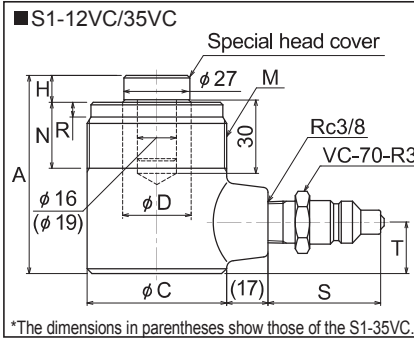
• The piston and the inside of the cylinder tube are plated.

👉 For cylinder and pump selections, see page 54.

Model code structure



S : Single-acting cylinder S series
1 : Maximum output 1 : 100 kN
12 : Stroke (mm)
VC : Attached coupler
 VC : VC-70-R3
 S : S-1R
 T : ROC-13R
 -NC : W/O coupler



Specifications

Model		S1-12	S1-35	S1-55	S1-100	S1-50	S1-120	S1-150	S1-200	S1-255	S1-300	
Stroke	mm	12	35	55	100	50	120	150	200	255	300	
Minimum overall length	A	81	136	130	235	201	280	300	369	414	471	
Cylinder external diameter	φ C	57										
Piston diameter	φ D	28		37	38							
Piston thread size	E	—				1 1/4-11.5NPT						
Piston thread length	G	—				30						
Piston protrusion length	H	11	10	19	32							
Collar thread size	M	2 1/4-14NS										
Collar thread length	N	27	—				30					
Base thread size	P	—				1 1/4-11.5NPT						
Base thread depth	Q	—				25						
Incomplete thread length	R	6										
Coupler protrusion length	VC-70-R3	≈ 46				≈ 39						
	S-1R	≈ 53				≈ 46						
	ROC-13R	≈ 49				≈ 42						
Coupler position	T	21	25	25	25	40	50	40				
Required oil volume	cm ³	18	51	80	146	73	175	218	291	371	436	
Approx. weight	kg	1.5	2.3	2.1	3.8	3.1	4.4	4.7	5.8	6.5	7.4	

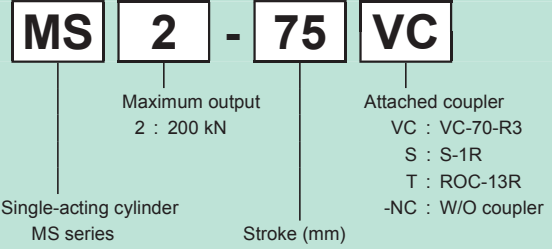
Compatible attachments

Attachment location	Cylinder parts	S1-12	S1-35	S1-55	S1-100	S1-50	S1-120	S1-150	S1-200	S1-255	S1-300	
Piston thread	Cap	With special head cover				R-10P						
	Piston base	—				RB-10						
	Clevis	—				CLF-10-A (B)						
Collar thread	Flange	10F										
Base thread	Cylinder base	—				CB-10						
	Clevis	—				CLM-10-A (B)						

200 kN (MS Series)

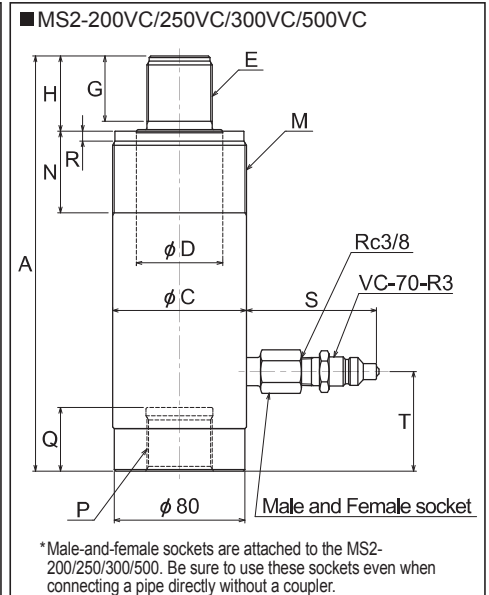
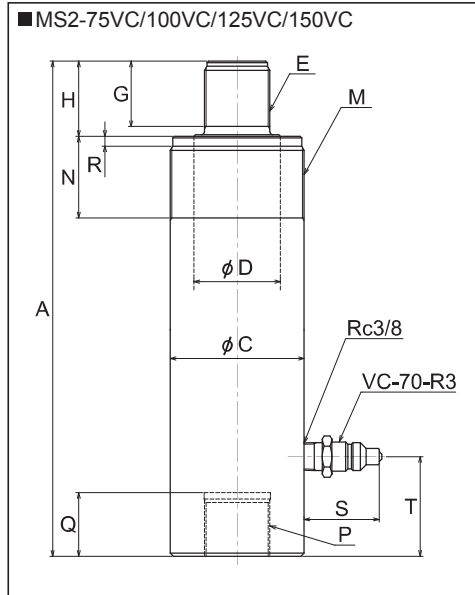
Maximum operating pressure	70 MPa
Maximum output	200 kN
Cylinder internal diameter	φ 60.5
Effective area	28.74 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

Model code structure



• The piston and the inside of the cylinder tube are plated.

👉 For cylinder and pump selections, see page 54.



Specifications

Model		MS2-75	MS2-100	MS2-125	MS2-150	MS2-200	MS2-250	MS2-300	MS2-500
Stroke	mm	75	100	125	150	200	250	300	500
Minimum overall length	A	269	294	319	372	410	460	510	710
Cylinder external diameter	φ C	82							
Piston diameter	φ D	53							
Piston thread size	E	M40 x 2							
Piston thread length	G	40							
Piston protrusion length	H	46							
Collar thread size	M	M82 x 2							
Collar thread length	N	50							
Base thread size	P	M40 x 2							
Base thread depth	Q	39							
Incomplete thread length	R	6							
Coupler protrusion length	VC-70-R3	≈ 46				≈ 80			
	S-1R	≈ 53				≈ 87			
	ROC-13R	≈ 49				≈ 83			
Coupler position	T	61							
Required oil volume	cm ³	216	288	360	432	575	719	863	1437
Approx. weight	kg	8.2	9.0	9.8	11.7	12.5	14.1	16.0	21.3

Compatible attachments

Attachment location	Cylinder parts	MS2-75	MS2-100	MS2-125	MS2-150	MS2-200	MS2-250	MS2-300	MS2-500
Piston thread	Cap	R-20PM							
	Tilt saddle	R-20SP							
	Piston base	RB-20M							
	Clevis	CLF-20-1 (2)							
Collar thread	Flange	20FM							
Base thread	Cylinder base	CB-20M							
	Clevis	CLM-20-1 (2)							

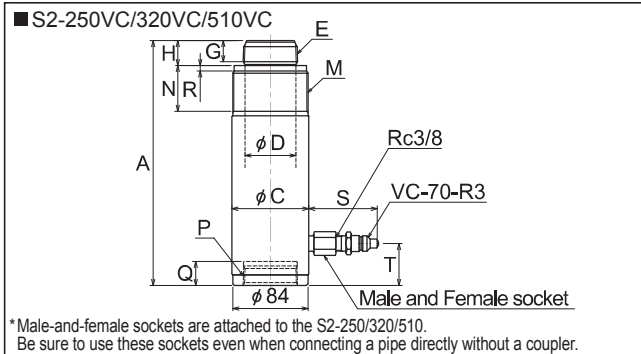
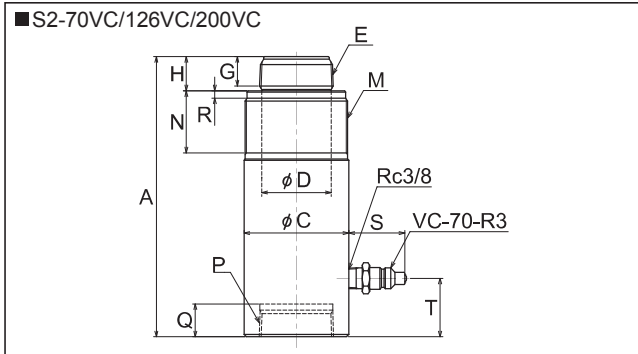
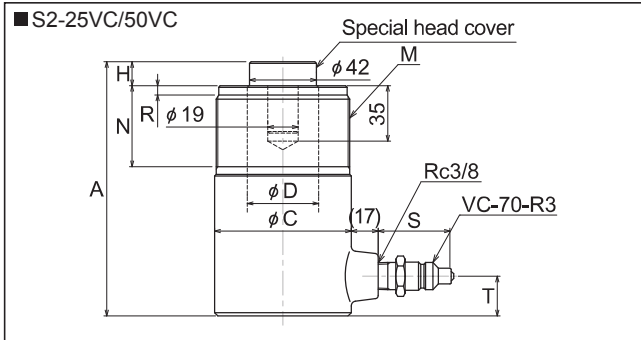
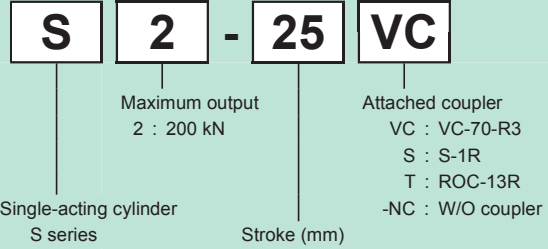
200 kN (S Series)

Maximum operating pressure	70 MPa
Maximum output	200 kN
Cylinder internal diameter	φ 65
Effective area	33.18 cm ²
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

•The piston and the inside of the cylinder tube are plated.

For cylinder and pump selections, see page 54.

Model code structure



Specifications

Model		S2-25	S2-50	S2-70	S2-126	S2-200	S2-250	S2-320	S2-510
Stroke	mm	25	50	70	126	200	250	320	510
Minimum overall length	A	127	160	230	285	360	450	513	703
Cylinder external diameter	φ C	86							
Piston diameter	φ D	45		57					
Piston thread size	E	2-11.5NPT							
Piston thread length	G	27							
Piston protrusion length	H	16	15	28					
Collar thread size	M	3 5/16-12NS							
Collar thread length	N	51							
Base thread size	P	2-11.5NPT							
Base thread depth	Q	27							
Incomplete thread length	R	6							
Coupler protrusion length	VC-70-R3	≈ 46						≈ 76	
	S-1R	≈ 53						≈ 83	
	ROC-13R	≈ 49						≈ 79	
Coupler position	T	25		48			47		
Required oil volume	cm ³	83	166	233	419	664	830	1062	1693
Approx. weight	kg	4.6	5.8	8.0	9.7	12.3	14.5	17.0	25.0

Compatible attachments

Attachment location	Cylinder parts	S2-25	S2-50	S2-70	S2-126	S2-200	S2-250	S2-320	S2-510	
Piston thread	Cap	With special head cover				R-20P				
	Piston base	—				RB-20				
	Clevis	—				CLF-20-A (B)				
Collar thread	Flange	20F								
Base thread	Cylinder base	—				CB-20				
	Clevis	—				CLM-20-A (B)				

300 to 500 kN (S Series)

Maximum operating pressure	70 MPa
Maximum output	300/400/500 kN
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

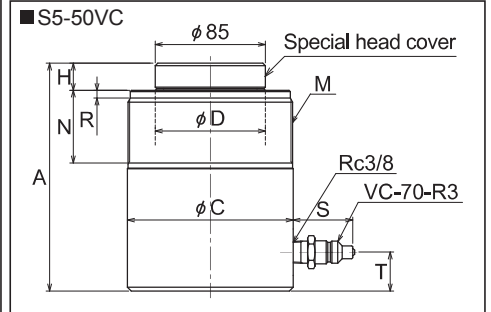
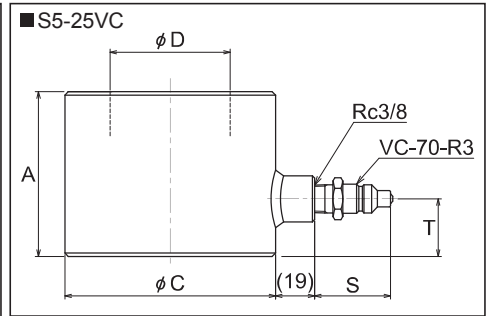
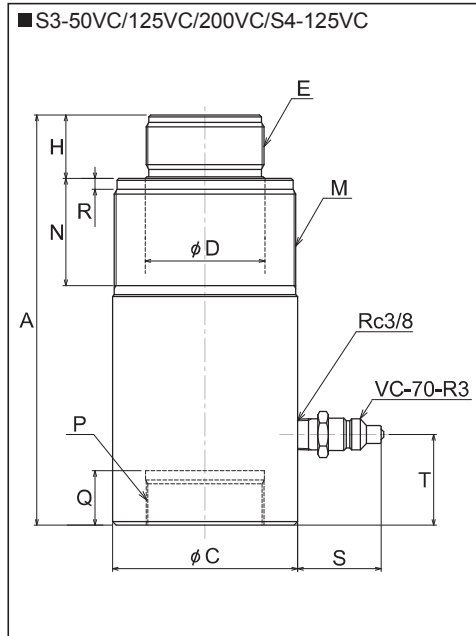
• The piston and the inside of the cylinder tube are plated.

 For cylinder and pump selections, see page 54.

Model code structure



Single-acting cylinder S series	Maximum output	Attached coupler	
	3 : 300 kN		VC : VC-70-R3
	4 : 400 kN		S : S-1R
	5 : 500 kN	T : ROC-13R	
		-NC : W/O coupler	
	Stroke (mm)		



Specifications

Model		S3-50	S3-125	S3-200	S4-125	S5-25	S5-50	
Maximum output	kN	300			400	500		
Effective area	cm ²	44.17			57.77	71.63		
Stroke	mm	50	125	200	125	25	50	
Minimum overall length	A	226	300	376	299	100	176	
Cylinder internal diameter	φ	75			85.77	95.5		
Cylinder external diameter	φ C	102			117	128		
Piston diameter	φ D	66			75	73	85	
Piston thread size	E	M65 x 2			M70 x 2	—		
Piston protrusion length	H	35			35	—	21	
Collar thread size	M	M100 x 2			M115 x 2	—	M127 x 2.5	
Collar thread length	N	59			60	—	55	
Base thread size	P	M65 x 2			M70 x 2	—		
Base thread depth	Q	30			30	—		
Incomplete thread length	R	6			6	—	6	
Coupler protrusion length	VC-70-R3	S	≈ 46			≈ 46	≈ 46	
			≈ 53			≈ 53	≈ 53	
			≈ 49			≈ 49	≈ 49	
Coupler position	T	50		52	52	35	30	
Required oil volume	cm ³	221	553	884	723	180	359	
Approx. weight	kg	11.7	15.3	19.0	19.5	9.4	13.8	

Compatible attachments

Attachment location		Cylinder parts	S3-50	S3-125	S3-200	S4-125	S5-25	S5-50
Piston thread	Cap		R-30P			R-40P	—	With special head cover
	Piston base		RB-30			RB-40	—	
Collar thread	Flange		30F			—	—	50F
Base thread	Cylinder base		CB-30			CB-40	—	

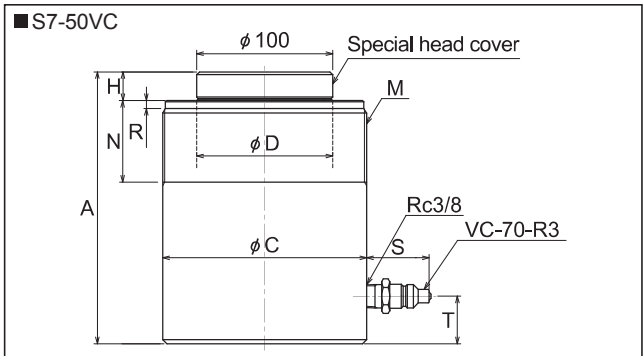
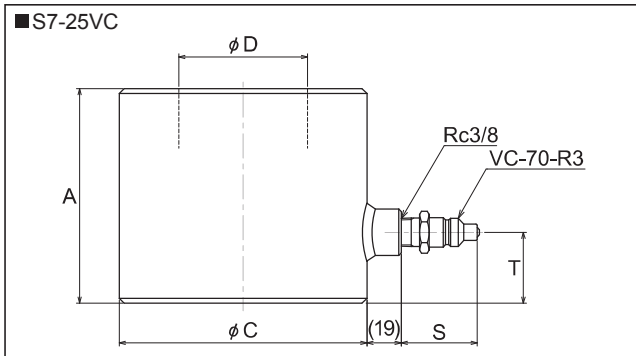
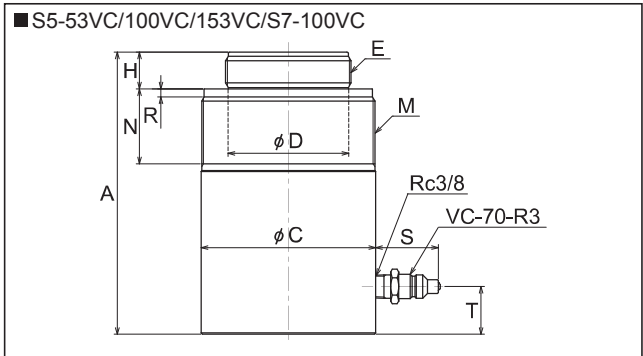
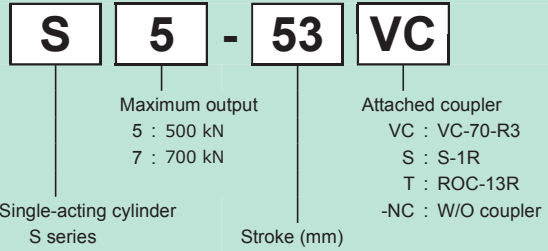
500 to 700 kN (S Series)

Maximum operating pressure	70 MPa
Maximum output	500/700 kN
Cylinder system	Single-acting
Return system	Spring-return
Coupler connection port size	Rc3/8

• The piston and the inside of the cylinder tube are plated.

 For cylinder and pump selections, see page 54.

Model code structure



Specifications

Model		S5-53	S5-100	S5-153	S7-25	S7-50	S7-100
Maximum output	kN	500			700		
Effective area	cm ²	71.63			102.69		
Stroke	mm	53	100	153	25	50	100
Minimum overall length	A	207	254	307	130	200	278
Cylinder internal diameter	φ	95.5			114.35		
Cylinder external diameter	φ C	128			150		151
Piston diameter	φ D	88.5			78	100	95
Piston thread size	E	M92 x 2.5			—		M90 x 2
Piston protrusion length	H	27			—	21	35
Collar thread size	M	M127 x 2.5			M150 x 3		
Collar thread length	N	55			—	60	
Incomplete thread length	R	6			—	6	
Coupler protrusion length	VC-70-R3	≈ 46			≈ 46		
	S-1R	≈ 53			≈ 53		
	ROC-13R	≈ 49			≈ 49		
Coupler position	T	35			43	35	32
Required oil volume	cm ³	380	717	1096	257	514	1027
Approx. weight	kg	18.0	22.0	26.0	16.5	22.6	31.5

Compatible attachments

Attachment location	Cylinder parts	S5-53	S5-100	S5-153	S7-25	S7-50	S7-100
Piston thread	Cap	R-50P			—	With special head cover	R-70P
	Piston base	RB-50			—		
Collar thread	Flange	50F			—		
	Lifting handle	TH-127			—		