SFE1001201

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SFORCE

Hydraulic Solution

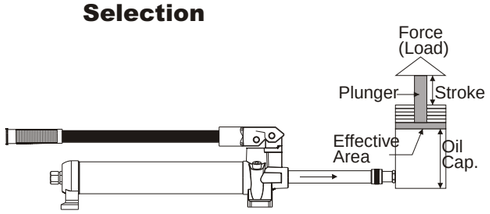
SFORCE Enterprise Co.,Ltd

SFORCE are built tough with strict ISO 9001 manufacturing processes.
We also works hard to maintain the ISO 9001 quality rating, in its ongoing pursuit of excellence.

SFORCE hydraulic cylinder complete with the criteria set forth in the American Society of Mechanical Engineers standards Institute ASME B30.1 ：

1. Cylinder are designed to have minimum of a 2-to-1 safety factor on typical material yield strength; and/or
2. Cylinder design is
   A. operated through a minimum of 10 cycles of full travel at 110% of rated load, and
   B. Pressurized 3 times at 150% of pressure with the cylinder extended to approximately 90% of full stroke, after which the cylinder must be functional at rated load for full stroke and free of leaks.

Selection



Require usable oil capacity =2 X oil capacity (Cyl. or tool)

Flow = is created by the pump

Pressure = is created by resistance to flow.
This resistance is usually the result of a load.

$$\text{Force (metric tons)} = \frac{\text{Cyl. Eff. Area } (cm^2) \times \text{Working pressure (Hydraulic Pump) } (bar/\ kgf/cm^2)}{1000kg}$$

$$\text{Extended Height (in)} = \text{Cyl.stroke (in)} + \text{Cyl. Collapsed height (in)}$$

$$\text{Cyl. oil Cap. } (in^3) = \text{Cyl. Eff. Area } (in^2) \times \text{Cyl. Stroke (in)}$$

$$\text{Usable oil (system) } (in^3) = \text{Cyl. Oil Cap. } (in^3) \times \text{Quantity of Cyl. In system}$$

$$\text{Speed (Cyl. Plg.) (Sec/in)} = \frac{\text{Cyl. Eff. Area } (in^2)}{\text{Pump flow per minute } (in^3/min)} \times 60sec$$

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SF Single-Acting General Cylinder Spring return 03

SFCLS Single-Acting High Tonnage Cylinder Load return 35

SFQB 700bar Couplers 49

SFRAC Single-Acting Aluminum Cylinder Spring return 05

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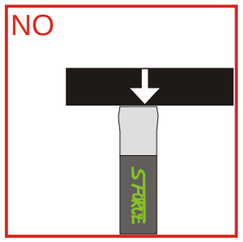
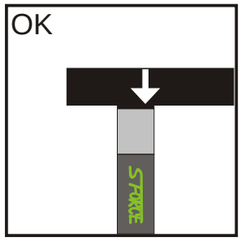
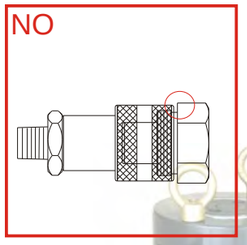
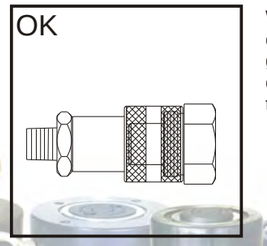
80% Manufacturer's rating of load and stroke are maximum safe limits. Best using situation is 80% of these ratings!



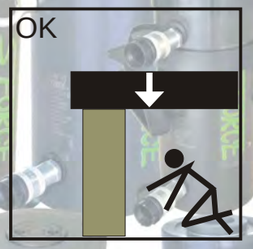


Don't use cylinder without saddle. This will cause plunger to "mushroom". Saddle distribute load evenly on the plunger.

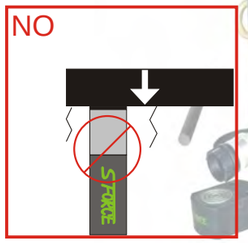


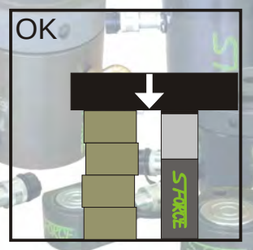


When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections such as fittings, gauges, etc. must be securely tightened and leak free. Never use excessive tightening force that may distort the fittings or strip the thread profile.

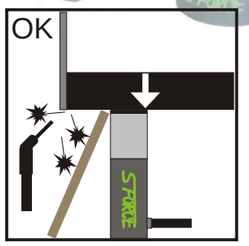


As with jacks, never place any part of your body under the load. Load must be on cribbing before venturing under.

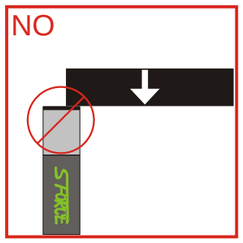


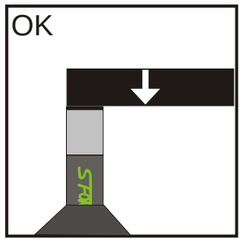


Place blocking or cribbing under the loads as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body part between the load and the cribbing.

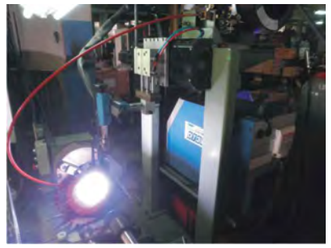


Weld splatter will damage plunger rods and hose. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.





The load must be centered on the ram, or equally distributed on multiple rams. Off center loading can result in the ram slipping out and loss of the load.



Corporate Office

SFORCE includes sales, marketing, technical service and professional engineer, assuring that any customer require and can be addressed seamlessly and in a timely manner.

Manufacturing

SFORCE has latest CNC technology is used to improve product availability along with providing service excellence in the competitive market we share.

Quality

All SFORCE vendors are held to the same high quality standards that SFORCE has come to expect. All SFORCE products meet or exceed ASME B30.1 safety standards where applicable.

SF Series

Single-Acting

General Cylinder
Spring return

Capacity:
10-200 ton

Stroke:
25-150mm

Maximum Operating Pressure:
700 bar

SF Single-Acting, General Cylinders

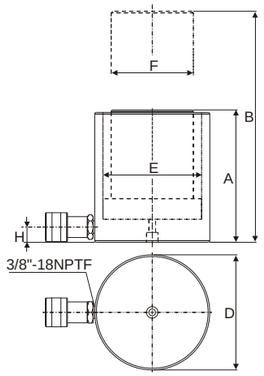
- Designed for use in all positions.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion, it also be more closed and extending cylinder life.
- Maximum sized springs speed piston return and increase spring life.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

SF10-50

SF20-50

SF50-100

Handle type	
(S) : Standard equipped	
(C) : Customer order	
W	Weldable
E	Eyebolt
R	Removable strap handles
T	Thread



SF10-25,
SF20-25,
SF30-25,
SF50-25,
SF100-25
&
SF10-50,
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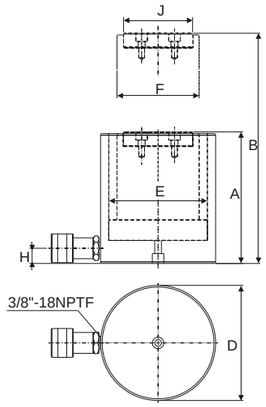
SF50-50



SF10-75~SF10-150
SF20-75~SF20-150
SF30-75~SF30-150
SF50-75~SF50-150
SF100-50~SF100-150
SF150-50~SF150-150
SF200-50~SF200-150

Handle type (C)	Handle type (S)	Model Number	Cylinder Capacity ton (kN)	Stroke (mm)	Effective Area (cm^2)	Oil Capacity (cm^3)	Close Height A (mm)	Extended Height B (mm)	Outside Diam. D (mm)	Cylinder Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Adv. Port H (mm)	Saddle Diam. J (mm)	Wt. (kg)
		SF10-25	10 (101)	25.0	14.46	36.1	80.0	105.0	70.0	42.93	38.1	19.5	—	2.4
		SF10-50		50.0	14.46	72.3	130.0	180.0	57.0	42.93	38.1	19.5	—	2.5
		SF10-75		75.0	14.46	108.4	155.0	230.0	57.0	42.93	38.1	19.5	35	3.1
		SF10-100		100.0	14.46	144.6	180.0	280.0	57.0	42.93	38.1	19.5	35	3.4
		SF10-125		125.0	14.46	180.7	205.0	330.0	57.0	42.93	38.1	19.5	35	4.0
		SF10-150		150.0	14.46	216.9	230.0	380.0	57.0	42.93	38.1	19.5	35	4.2
		SF20-25	20 (198)	25.0	28.26	70.7	80.0	105.0	90.0	60.00	50.00	17.0	—	3.7
	W	SF20-50		50.0	28.26	141.3	135.0	185.0	79.0	60.00	50.00	22.0	—	4.9
	W	SF20-75		75.0	28.26	212.0	160.0	235.0	79.0	60.00	50.00	22.0	40	5.6
	W	SF20-100		100.0	28.26	282.6	185.0	285.0	79.0	60.00	50.00	22.0	40	6.3
	W	SF20-125		125.0	28.26	353.3	210.0	335.0	79.0	60.00	50.00	22.0	40	7.0
	W	SF20-150		150.0	28.26	423.9	235.0	385.0	79.0	60.00	50.00	22.0	40	7.7
		SF30-25	30 (294)	25.0	42.00	105.0	85.0	110.0	100.0	73.15	57.15	18.0	—	5.0
	W	SF30-50		50.0	42.00	210.0	145.0	195.0	100.0	73.15	57.15	22.5	—	7.6
	W	SF30-75		75.0	42.00	315.0	170.0	245.0	100.0	73.15	57.15	22.5	49.5	7.8
	W	SF30-100		100.0	42.00	420.0	195.0	295.0	100.0	73.15	57.15	22.5	49.5	8.9
	W	SF30-125		125.0	42.00	525.0	220.0	345.0	100.0	73.15	57.15	22.5	49.5	10.0
	W	SF30-150		150.0	42.00	630.0	245.0	395.0	100.0	73.15	57.15	22.5	49.5	11.0
	W	SF50-25	50 (498)	25.0	71.21	178.0	95.0	120.0	127.0	95.25	79.50	24.0	—	8.8
	W	SF50-50		50.0	71.21	356.0	120.0	170.0	127.0	95.25	79.50	24.0	—	10.5
	W	SF50-75		75.0	71.21	534.0	190.0	265.0	127.0	95.25	79.50	32.0	70	16.8
	W	SF50-100		100.0	71.21	712.0	215.0	315.0	127.0	95.25	79.50	32.0	70	18.2
	W	SF50-125		125.0	71.21	890.1	240.0	365.0	127.0	95.25	79.50	32.0	70	19.9
	W	SF50-150		150.0	71.21	1068.1	265.0	415.0	127.0	95.25	79.50	32.0	70	21.4
R	W	SF100-25	100 (933)	25.0	133.27	333.1	100.0	125.0	177.0	130.30	104.90	20.0	—	16.9
R	W	SF100-50		50.0	133.27	666.3	160.0	210.0	177.0	130.30	104.90	30.0	84	26.8
R	W	SF100-100		100.0	133.27	1332.7	204.0	304.0	177.0	130.30	104.90	30.0	84	36.8
R	W	SF100-125		125.0	133.27	1665.8	235.0	360.0	177.0	130.30	104.90	30.0	84	40.6
R	W	SF100-150		150.0	133.27	1999.0	260.0	410.0	177.0	130.30	104.90	30.0	84	44.3
R	E	SF150-50	150 (1407)	50.0	200.96	1004.8	200.0	250.0	215.0	160.00	115.00	50.0	99	50.2
R	E	SF150-100		100.0	200.96	2009.6	250.0	350.0	215.0	160.00	115.00	50.0	99	60.0
R	E	SF150-150		150.0	200.96	3014.4	300.0	450.0	215.0	160.00	115.00	50.0	99	68.9
R	E	SF200-50	200 (1984)	50.0	283.38	1416.9	200.0	250.0	255.0	190.00	135.00	50.0	115	71.6
R	E	SF200-100		100.0	283.38	2833.0	250.0	350.0	255.0	190.00	135.00	50.0	115	85.0
R	E	SF200-150		150.0	283.38	4250.7	300.0	450.0	255.0	190.00	135.00	50.0	115	98.5

SFRAC Series

Single-Acting

Aluminum Cylinder
Spring return

Capacity:
20-150 ton

Stroke:
50-200 mm

Maximum Operating Pressure:
700 bar

Aluminum vs. Steel

- Aluminum different from steel in that it has a lower finite fatigue life. This means aluminum cylinders should not be used in high-cycle applications such as production.
  The SFORCE line of aluminum cylinders are designed to provide 5,000 cycles at their recommended pressure. This limit should not be exceeded. In normal lifting and many mainten ance applications, this should provide a lifetime of use.

SFRAC Single-Acting, Aluminum Cylinders

- Lightweight, aluminum design for maximum portability.
- 7075-T6 Aluminum alloy components for maximum strength and minimum weight.
- Steel baseplate and saddle for protection against load-induced damage.
- Anodizing treatment plunger, surfaces and inner of barrel resists damage and extends cylinder life.
- Maximum sized springs speed piston return and increase spring life.
- Composite bearings prevent metal-to-metal contact,increasing cylinder life and resistance to side-load.
- Stop ring for piston blow-out protection.
- SFQB-3/8UF coupler and dust cap are included on all models.

SFRAC-204

SFRAC-304

SFRAC-504

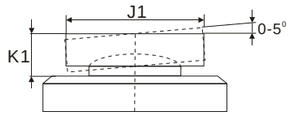
Handle type (S)	Model Number
	SFRAC-202
T	SFRAC-204
T	SFRAC-206
T	SFRAC-302
T	SFRAC-304
T	SFRAC-306
T	SFRAC-502
T	SFRAC-504
T	SFRAC-506
T	SFRAC-1004
T	SFRAC-1006
T	SFRAC-1008
T	SFRAC-1506

Handle type
(S)： Standard equipped
(C)： Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

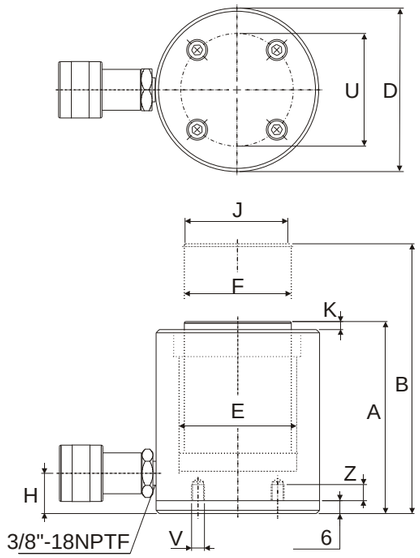
Saddle

All SFRAC-Series are equipped with removable saddles of hardened steel.



Optional Bolt Tilt Saddle Dimensions (mm)

Cylinder Model/Cap. (ton)	Model Number	Saddle Diameter J1	Saddle Protrusion from Base K1
SFRAC-50	SFXKCATRAC-50	50.0	25.9
SFRAC-100	SFXKCATRAC-100	91.2	33.0
SFRAC-150	SFXKCATRAC-150	118.1	37.0



Steel Base Plate

- The steel base plate protects the cylinder base from damage, it should not be removed.
- Do not use the base holes in these aluminum cylinders to attach any device to the cylinder.

Steel Base Plate Mounting Holes

Cylinder Model/ Capacity (ton)	Bolt Circle U (mm)	Thread V (mm)	Thread Depth Z (mm)
SFRAC-20	70.0	M6	12
SFRAC-30	80.0	M6	12
SFRAC-50	110.0	M6	12
SFRAC-100	160.0	M6	12
SFRAC-150	200.0	M6	12

*Including Base Plate Height of 6mm.
*4 base plate bolts:M6X1.0X0.24

	Cylinder Capacity ton (kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diam. D (mm)	Cylinder Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Adv. Port H (mm)	Saddle Diam. J (mm)	Saddle Protrusion from Plngr. K (mm)	Weight (kg)
	20 (218)	50	31.2	156	174	224	85	63	50	27	40	3	3.6
		100	31.2	312	224	324	85	63	50	27	40	3	4.1
		150	31.2	468	274	424	85	63	50	27	40	3	4.6
	30 (309)	50	44.2	221	181	231	100	75	60	33	40	3	4.5
		100	44.2	442	231	331	100	75	60	33	40	3	5.2
		150	44.2	663	281	431	100	75	60	33	40	3	5.9
	50 (496)	50	70.9	354	186	236	130	95	80	30	50	3	8.5
		100	70.9	709	236	336	130	95	80	30	50	3	9.8
		150	70.9	1063	286	436	130	95	80	30	50	3	11.1
	100 (1002)	100	143.1	1431	271	371	188	135	110	46	94	3	19.6
		150	143.1	2147	321	471	188	135	110	46	94	3	21.9
		200	143.1	2863	371	571	188	135	110	46	94	3	24.2
	150 (1589)	150	227.0	3405	343	493	230	170	140	51	113	3	33.3

SFCLP Series

Single-Acting

Pancake Lock Nut Cylinder
Load return

Capacity:
60-520 ton

Stroke:
45-50 mm

Maximum Operating Pressure:
700 bar

SFCLP Single-Acting, Pancake Lock Nut Cylinders

- Flat design for use in confined area.
- Special coating on piston and stop ring improves corrosion and abrasion resistance.
- Safety lock nut for mechanical load holding.
- Integral tilt saddle standard improves performance under side load.
- Overflow port functions as a stroke limiter.
- Single-acting load return.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

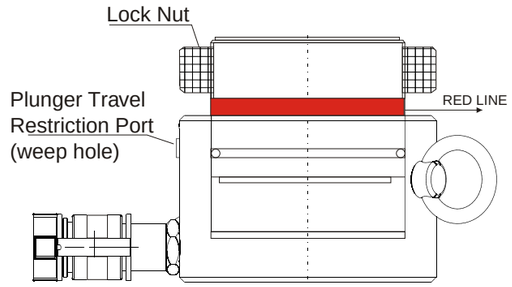
SFCLP-1002

Handle type
(S) : Standard equipped
(C) : Customer order

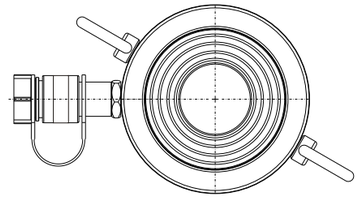
W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

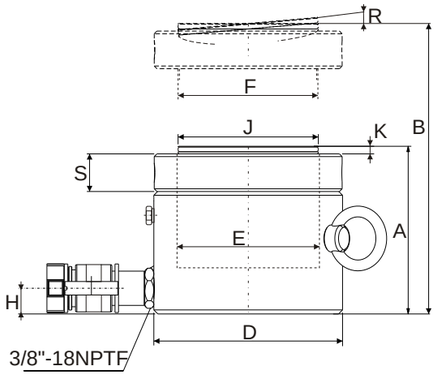
SFCLP-602

Handle type (S)	Model Number	Cylinder Capacity ton (kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)	Collapsed Height A (mm)	Extended Height B (mm)
E	SFCLP-602	60 (606)	50	86.6	432	125	175
E	SFCLP-1002	100 (1027)	50	146.8	734	137	187
E	SFCLP-1602	160 (1619)	45	231.3	1040	148	193
E	SFCLP-2002	200 (1999)	45	285.6	1285	155	200
E	SFCLP-2502	260 (2567)	45	366.8	1650	159	204
E	SFCLP-4002	400 (3916)	45	559.5	2517	178	223
E	SFCLP-5002	520 (5114)	45	730.6	3287	192	237



Plunger show at maximum extension





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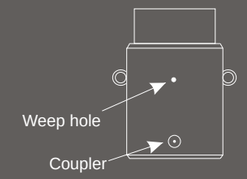


Apply to Single-acting, High tonnage cylinder SFCLP, SFCLL and SFCLS series

When stroke limit is reached; overflow port ("weep hole") spurt oil to prevents piston from being overextended.

Saddle

All SFCLP-Series include integral tilt saddles with maximum tilt angles up to 5°.

Control Valve

Fitting needle valve such as SFV-82 is used to control cylinder speed during lifting and lowering. (See SFV-Series)

Outside Diameter D (mm)	Cyl. Bore Diameter E (mm)	Plunger Diameter F (mm)	Base to Advance Port H (mm)	Saddle Diameter J (mm)	Saddle Protrusion from Plngr K (mm)	Saddle Max. Tilt Angle R	Lock Nut Height S (mm)	Weight (kg)
140	105.0	Tr104X4	19	96	6	5°	28	15
175	136.7	Tr136X6	21	126	8	5°	31	26
220	171.6	Tr171X6	27	160	9	5°	40	44
245	190.7	Tr190X6	30	180	10	5°	43	57
275	216.1	Tr216X6	32	200	11	5°	44	74
350	266.9	Tr266X6	39	250	11	4°	55	134
400	305.0	Tr305X6	48	290	10	3°	62	189

SFRC Series

Single-Acting

Collar threads Cylinder
Spring return

Capacity:
5-100 ton

Stroke:
16-362mm

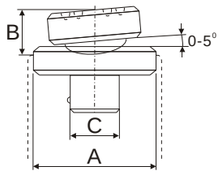
Maximum Operating Pressure:
700 bar

SFRC Single-Acting, Collar threads Cylinders

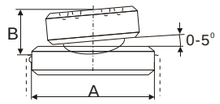
- Collar threads, plunger threads and base mounting holes enable easy fixturing (see page 12)
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Maximum sized springs speed piston return and increase spring life.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- All collar threads have a cap for protection.
- SFQB-3/8UF coupler and dust cap are included on all models.

Saddle

SFRC-Series are equipped with hardened removablegrooved saddles.
For tilt saddle to fit.



SFXKCAT-10,50



SFXKCAT-100

選配墊塊尺寸 Optional Saddle Dimensions (mm)

Cylinder Model/Cap. (ton)	Model Number Type : Tilt	A	B	C
SFRC-10 , SFRC-15 Except SFRC-101	SFXKCAT-10	35	15	22
SFRC-25 , SFRC-30	SFXKCAT-50	50	23	35
SFRC-50 , SFRC-75 SFRC-100	SFXKCAT-100	71	24	-

SFRC-152

SFRC-252

SFRC-102

Handle type
(S) : Standard equipped
(C) : Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

80%

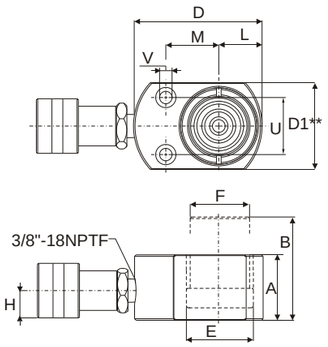
Think Safety

- Manufacturer's rating of load and stroke are maximum safe limits.
- Good practice encourages using only 80% of these ratings!

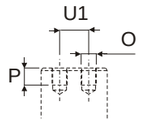
QUICK SELECTION CHART

Handle type (C)	Handle type (S)	Model Number	Cylinder Capacity ton (kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)	Collapsed Height A (mm)	Plunger internal Thread O (in)	Weight (kg)
		SFRC-50	5 (45)	16	6.5	10	41	* *	1.0
		SFRC-51		25	6.5	16	110	3/4"-16	1.0
		SFRC-53		76	6.5	50	165	3/4"-16	1.5
		SFRC-55		127	6.5	83	215	3/4"-16	1.9
		SFRC-57		177	6.5	115	273	3/4"-16	2.4
		SFRC-59		232	6.5	151	323	3/4"-16	2.8
		SFRC-101	10 (101)	26	14.5	38	89	#10-24UN	1.8
		SFRC-102		54	14.5	78	121	1"-8	2.3
		SFRC-104		105	14.5	152	171	1"-8	3.3
		SFRC-106		156	14.5	226	247	1"-8	4.4
		SFRC-108		203	14.5	294	298	1"-8	5.4
		SFRC-1010		257	14.5	373	349	1"-8	6.4
		SFRC-1012		304	14.5	441	400	1"-8	6.8
		SFRC-1014		356	14.5	516	450	1"-8	8.2
		SFRC-151	15 (142)	25	20.3	51	124	1"-8	3.3
		SFRC-152		51	20.3	104	149	1"-8	4.1
		SFRC-154		101	20.3	205	200	1"-8	5.0
		SFRC-156		152	20.3	308	271	1"-8	6.8
		SFRC-158		203	20.3	411	322	1"-8	8.2
		SFRC-1510		254	20.3	516	373	1"-8	9.5
		SFRC-1512		305	20.3	619	423	1"-8	10.9
		SFRC-1514		356	20.3	723	474	1"-8	11.8
		SFRC-251	25 (232)	26	33.2	86	139	1 1/2"-16	5.9
		SFRC-252		50	33.2	166	165	1 1/2"-16	6.4
		SFRC-254		102	33.2	339	215	1 1/2"-16	8.2
		SFRC-256		158	33.2	525	273	1 1/2"-16	10.0
		SFRC-258		210	33.2	697	323	1 1/2"-16	12.2
		SFRC-2510		261	33.2	867	374	1 1/2"-16	14.1
		SFRC-2512		311	33.2	1033	425	1 1/2"-16	16.3
		SFRC-2514		362	33.2	1202	476	1 1/2"-16	17.7
		SFRC-308	30(295)	209	42.1	880	387	—	18.1
	T	SFRC-502	50 (498)	51	71.2	362	176	—	15.0
	T	SFRC-504		101	71.2	719	227	—	19.1
	R	SFRC-506		159	71.2	1131	282	—	23.1
	R	SFRC-5013		337	71.2	2399	460	—	37.6
	R	SFRC-756	75 (718)	156	102.6	1601	285	—	29.5
	W	SFRC-7513		333	102.6	3417	492	—	59.0
R	E	SFRC-1004	100 (933)	102	133.3	1355	204	—	33.1
R	E	SFRC-1006		168	133.3	2239	357	—	59.0
R	E	SFRC-1008		203	133.3	2709	357	—	59.0
R	E	SFRC-10010		260	133.3	3466	449	—	72.6

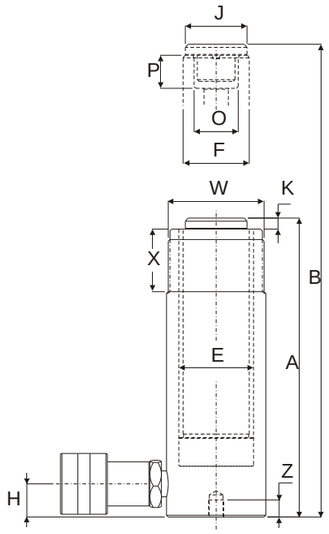
* SFRC-50 cylinder has non-removable grooved saddle and no collar thread.

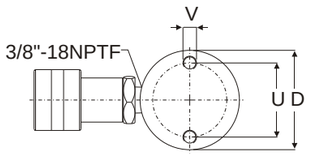


SFRC-50

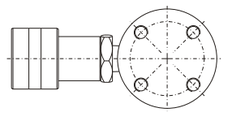


SFRC-101 only U1=19mm





SFRC-51 to SFRC-5013 models
(see page12)



SFRC-1006 and SFRC-10010 models

Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diam. D (mm)
SFRC-50	5 (45)	16	6.5	10	41	57	58
SFRC-51		25	6.5	16	110	135	38
SFRC-53		76	6.5	50	165	241	38
SFRC-55		127	6.5	83	215	342	38
SFRC-57		177	6.5	115	273	450	38
SFRC-59		232	6.5	151	323	555	38
SFRC-101	10 (101)	26	14.5	38	89	115	57
SFRC-102		54	14.5	78	121	175	57
SFRC-104		105	14.5	152	171	276	57
SFRC-106		156	14.5	226	247	403	57
SFRC-108		203	14.5	294	298	501	57
SFRC-1010		257	14.5	373	349	606	57
SFRC-1012		304	14.5	441	400	704	57
SFRC-1014		356	14.5	516	450	806	57
SFRC-151	15 (142)	25	20.3	51	124	149	69
SFRC-152		51	20.3	104	149	200	69
SFRC-154		101	20.3	205	200	301	69
SFRC-156		152	20.3	308	271	423	69
SFRC-158		203	20.3	411	322	525	69
SFRC-1510		254	20.3	516	373	627	69
SFRC-1512		305	20.3	619	423	728	69
SFRC-1514		356	20.3	723	474	830	69
SFRC-251	25 (232)	26	33.2	86	139	165	85
SFRC-252		50	33.2	166	165	215	85
SFRC-254		102	33.2	339	215	317	85
SFRC-256		158	33.2	525	273	431	85
SFRC-258		210	33.2	697	323	533	85
SFRC-2510		261	33.2	867	374	635	85
SFRC-2512		311	33.2	1033	425	736	85
SFRC-2514		362	33.2	1202	476	838	85
SFRC-308	30(295)	209	42.1	880	387	596	101
SFRC-502	50 (498)	51	71.2	362	176	227	127
SFRC-504		101	71.2	719	227	328	127
SFRC-506		159	71.2	1131	282	441	127
SFRC-5013		337	71.2	2399	460	797	127
SFRC-756	75 (718)	156	102.6	1601	285	441	146
SFRC-7513		333	102.6	3417	492	825	146
SFRC-1004	100 (933)	102	133.3	1355	204	306	177
SFRC-1006		168	133.3	2239	357	525	177
SFRC-1008		203	133.3	2709	357	576	177
SFRC-10010		260	133.3	3466	449	709	177

*SFRC-50 cylinder has non-removable grooved saddle and no collar thread.

Cyl. Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Adv. Port H (mm)	Saddle Diam. J (mm)	Saddle Protrusion from Plngr. K (mm)	Plunger Internal Thread O (in)	Plunger Thread Length P (mm)	Base Mounting Holes: Bolt Circle U (mm)	Base Mounting Holes: Thread V (in)	Base Mounting Holes: Thread Depth Z (mm)	Collar Thread W (in)	Collar Thread Length X (mm)	Wt. (kg)	Model Number
28.7	25.4	19	*	*	* *	*	28	5.6mm	—	—	—	1.0	SFRC-50
28.7	25.4	19	25	6	3/4"-16	14	25	1/4"-20UN	14	1 1/2"-16	28	1.0	SFRC-51
28.7	25.4	19	25	6	3/4"-16	14	25	1/4"-20UN	14	1 1/2"-16	28	1.5	SFRC-53
28.7	25.4	19	25	6	3/4"-16	14	25	1/4"-20UN	14	1 1/2"-16	28	1.9	SFRC-55
28.7	25.4	19	25	6	3/4"-16	16	25	1/4"-20UN	14	1 1/2"-16	28	2.4	SFRC-57
28.7	25.4	19	25	6	3/4"-16	16	25	1/4"-20UN	14	1 1/2"-16	28	2.8	SFRC-59
42.9	38.1	19	—	—	#10-24UN	6	39	5/16"-18UN	12	2 1/4"-14	26	1.8	SFRC-101
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	2.3	SFRC-102
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	3.3	SFRC-104
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	4.4	SFRC-106
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	5.4	SFRC-108
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	6.4	SFRC-1010
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	6.8	SFRC-1012
42.9	38.1	19	35	6	1"-8	19	39	5/16"-18UN	12	2 1/4"-14	26	8.2	SFRC-1014
50.8	41.4	19	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	3.3	SFRC-151
50.8	41.4	19	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	4.1	SFRC-152
50.8	41.4	19	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	5.0	SFRC-154
50.8	41.4	25	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	6.8	SFRC-156
50.8	41.4	25	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	8.2	SFRC-158
50.8	41.4	25	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	9.5	SFRC-1510
50.8	41.4	25	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	10.9	SFRC-1512
50.8	41.4	25	38	9	1"-8	25	47	3/8"-16UN	12	2 3/4"-16	30	11.8	SFRC-1514
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	5.9	SFRC-251
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	6.4	SFRC-252
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	8.2	SFRC-254
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	10.0	SFRC-256
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	12.2	SFRC-258
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	14.1	SFRC-2510
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	16.3	SFRC-2512
65.0	57.2	25	50	10	1 1/2"-16	25	58	1/2"-13UN	19	3 5/16"-12	49	17.7	SFRC-2514
73.2	57.2	57	50	10	1 1/2"-16	25	—	—	—	3 5/16"-12	49	18.1	SFRC-308
95.2	79.5	33	71	2	—	—	95	1/2"-13UN	19	5"-12	55	15.0	SFRC-502
95.2	79.5	33	71	2	—	—	95	1/2"-13UN	19	5"-12	55	19.1	SFRC-504
95.2	79.5	35	71	2	—	—	95	1/2"-13UN	19	5"-12	55	23.1	SFRC-506
95.2	79.5	35	71	2	—	—	95	1/2"-13UN	19	5"-12	55	37.6	SFRC-5013
114.3	95.2	30	71	5	—	—	—	—	—	5 3/4"-12	44	29.5	SFRC-756
114.3	95.2	30	71	5	—	—	—	—	—	5 3/4"-12	44	59.0	SFRC-7513
130.3	104.9	41	71	2	—	—	—	—	—	6 7/8"-12	44	33.1	SFRC-1004
130.3	104.9	41	71	2	—	—	139	3/4"-10UN	25	6 7/8"-12	44	59.0	SFRC-1006
130.3	104.9	41	71	2	—	—	139	3/4"-10UN	25	6 7/8"-12	44	59.0	SFRC-1008
130.3	104.9	41	71	2	—	—	139	3/4"-10UN	25	6 7/8"-12	44	72.6	SFRC-10010

**D1=41mm ; L=20mm ; M=25mm

SFRSM Series

Single-Acting

Low Height, Flat Cylinder
Spring return

Capacity: 5-150 ton
Stroke: 6-16 mm
Maximum Operating Pressure: 700 bar

SFRSM-100 SFRSM-200 SFRSM-300

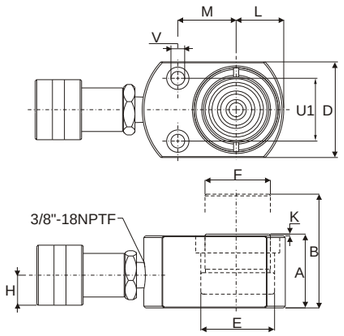
SFRSM Single-Acting, Low Height, Flat Cylinders

- Compact and flat design for use where in a narrow space.
- Mounting holes permit easy fixturing.
- Grooved plunger ends require no saddle.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Maximum sized springs speed piston return and increase spring life.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

SFRSM-50

SFRSM-50 is fitting with a SFQB-3/8UF.

Handle type		
(S) : Standard equipped (C) : Customer order		
W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread



Handle type (S)	Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Cap. (cm^3)	Collapsed Height A (mm)	Ext. Height B (mm)
	SFRSM-50	5 (45)	6	6.5	4	32	38
	SFRSM-100	10 (101)	12	14.5	18	43	54
	SFRSM-200	20 (201)	11	28.7	32	51	62
	SFRSM-300	30 (295)	13	42.1	55	58	71
	SFRSM-500	45 (435)	16	62.1	99	66	82
W	SFRSM-750	75 (718)	16	102.6	164	79	95
W	SFRSM-1000	90 (887)	16	126.7	203	85	101
W	SFRSM-1500	150 (1386)	16	198.1	317	100	116

Outside Diameter D (mm)	Cylinder Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Adv. Port H (mm)	Plunger Protrusion from Base K (mm)	Plunger to Base L (mm)	Plunger to Mtg. Hole M (mm)	Weight (kg)	Base Mounting Hole: Hole Pitch. U1(mm)	Hole Diam. V(mm)	Counter Bore Diam. (mm)	Counter Bore Depth (mm)	Model Number
58 x 41	28.7	25.4	16	1	20	22	1.0	28.5	5.5	7.9	4.3	SFRSM-50
82 x 55	42.9	38.1	19	1	27	34	1.4	36.6	7.1	10.7	7.9	SFRSM-100
101x 76	60.5	50.8	19	1	39	39	3.1	49.3	10.0	15.1	9.9	SFRSM-200
117 x 95	73.2	63.4	19	2	47	44	4.5	52.3	10.0	15.9	11.2	SFRSM-300
140 x 114	88.9	69.8	19	2	57	53	6.8	66.5	11.9	19.0	12.7	SFRSM-500
165 x 139	114.3	82.6	19	2	69	66	11.3	76.2	13.5	20.6	14.2	SFRSM-750
178 x 153	127.0	92.2	19	2	76	74	14.5	76.2	13.5	20.6	14.2	SFRSM-1000
215 x 190	158.8	114.3	23	2	95	82	26.3	117.3	13.5	20.6	14.2	SFRSM-1500

SFRCS Series

Single-Acting

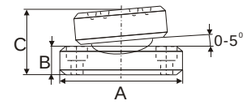
Low Height Cylinder
Spring return

Capacity: 10-90 ton
Stroke: 38-62 mm
Maximum Operating Pressure: 700 bar

SFRCS-101 SFRCS-201 SFRCS-302

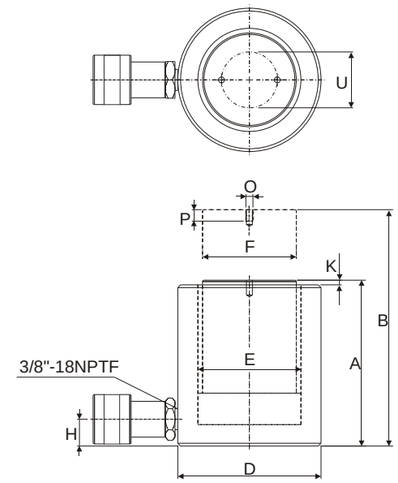
SFRCS Single-Acting, Low Height Cylinders

- Lightweight, low profile design for use in confined spaces ,but stroke higher than SFRSM.
- Grooved plunger end with threaded holes for mounting tilt saddles.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Maximum sized springs speed piston return and increase spring life.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.



Optional Bolt Tilt Saddle Dimensions (mm)				
Cylinder Model/Cap. ton(kN)	Model Number	A	B	*C
SFRCS-101	SFXKCATRCS-10	35	11	21
SFRCS-201,302,502	SFXKCATRCS-20	50	15	29
SFRCS-1002	SFXKCATRCS-100	71	17	35

*C dimension equals saddle protrusion from plunger. Mounting screws are included.



Handle type (S)	Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)
	SFRCS-101	10(101)	38	14.5	55
	SFRCS-201	20(201)	45	28.7	129
	SFRCS-302	30(295)	62	42.1	261
W	SFRCS-502	45(435)	60	62.1	373
W	SFRCS-1002	90(887)	57	126.7	722

Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Adv. Port H (mm)	Plunger Protrusion from Base K (mm)	Thread O (mm)	Thread Depth P (mm)	Bolt Circle U (mm)	Weight (kg)	Model Number
88	126	69	42.9	38.1	17	5	M4	8	26	4.1	SFRCS-101
98	143	92	60.5	50.8	17	3	M5	8	39	5.0	SFRCS-201
117	179	101	73.2	66.5	19	3	M5	8	39	6.8	SFRCS-302
122	182	124	88.9	69.8	23	2	M5	8	39	10.9	SFRCS-502
141	198	165	127.0	92.2	31	1	M8	10	55	22.7	SFRCS-1002

SFRCH Series

Single-Acting

Hollow Plunger Cylinder
Spring return

Capacity:
13-95 ton

Stroke:
8-155 mm

Center Hole Diameter:
19.6-79.0 mm

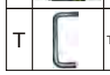
Maximum Operating Pressure:
700 bar

SFRCH-120 includes SQB-3/8UF coupler and has 1/4 NPTF port.

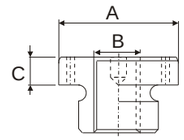
SFRCH Single-Acting, Hollow Plunger Cylinders

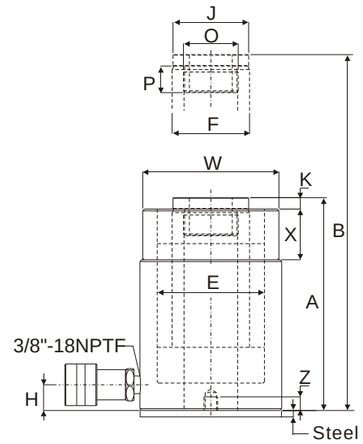
- Hollow plunger design allows for both pull and push forces.
- Low profile and longer strokes fit in the tightest space.
- Withstands full "dead-end" loads.
- Collar threads for easy fixturing and all collar threads have a cap for protection.
- Special center tube protect plunger and inner of cylinder increases product life.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Spring returing.
- Wiper rings protect the piston,bore & tube from contamination.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

Handle type
(S)：Standard equipped
(C)：Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

Handle type (S)	Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Cylinder Effective Area (cm^2)	Oil Cap. (cm^3)	Collapsed Height A (mm)	Ext. Height B (mm)	Out. Diam. D (mm)	Cylinder Bore Diam. E (mm)	Plngr. Diam. F (mm)
	SFRCH-120	13(125)	8	17.9	14	55	63	69	54.1	35.1
	SFRCH-121		42	17.9	75	120	162	69	54.1	35.1
	SFRCH-1211		42	17.9	75	120	162	69	54.1	35.1
	SFRCH-123		76	17.9	136	184	260	69	54.1	35.1
W	SFRCH-202	20(215)	49	30.7	150	162	211	98	73.1	54.1
W	SFRCH-204		102	30.7	311	242	344	98	73.1	54.1
W	SFRCH-206		155	30.7	476	306	461	98	73.1	54.1
W	SFRCH-302	30(326)	64	46.6	298	178	242	114	88.9	63.5
W	SFRCH-304		102	46.6	473	233	335	114	88.9	63.5
W	SFRCH-306		155	46.6	722	330	485	114	88.9	63.5
R	SFRCH-603	60(576)	76	82.3	626	247	323	159	123.9	91.9
R	SFRCH-606		153	82.3	1259	323	476	159	123.9	91.9
R	SFRCH-1003	95(931)	76	133.0	1011	254	330	212	165.1	127.0

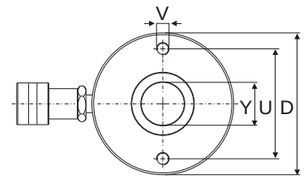




Optional Heat Treated Hollow Saddles

Cylinder Model/Cap. (ton)	Model No.	Saddle Dimensions A (mm)	B (in)	C (mm)
SFRCH-202,206	SFXKHCH-20	53	1"-8	9
SFRCH-302,306	SFXKHCH-30	63	1-1/4"-7	9
SFRCH-603,606	SFXKHCH-60	91	1-5/8"-5-1/2	12
SFRCH-1003	SFXKHCH-100	126	2-1/2"-8	13

※Smooth hollow saddles are standard on all SFRCH series.
(12ton models are not equipped with saddles.)



This drawing show the base mounting holes of barrel before setting steel base plate.

Cyl. Base to Advance Port H (mm)	Saddle Diam. J (mm)	Saddle Protr. from Plngr. K (mm)	Plunger Internal Thread O (in)	Plunger Thread Length P (mm)	Collar Thread W (in)	Collar Thread Length X (mm)	Center Hole Diam. Y (mm)	Base Mounting Holes: Bolt Circle U (mm)	Thread V (in)	Thread Depth Z (mm)	Weight (kg)
9	—	—	3/4"-16UN	16	$2^3/_4$"-16	30	19.6	50.8	5/16"-18UNC	9.0	1.5
19	—	—	—	—	$2^3/_4$"-16	30	19.6	—	—	—	2.8
19	—	—	3/4"-16UN	16	$2^3/_4$"-16	30	19.6	—	—	—	2.8
19	—	—	—	—	$2^3/_4$"-16	30	19.6	50.8	5/16"-18UNC	12.7	4.4
19	54	6.9	$1^9/_{16}$"-16UN	19	$3^7/_8$"-12	38	26.9	82.6	3/8"-16UNC	9.4	7.7
19	54	6.9	$1^9/_{16}$"-16UN	19	$3^7/_8$"-12	38	26.9	82.6	3/8"-16UNC	9.4	10.0
19	54	6.9	$1^9/_{16}$"-16UN	19	$3^7/_8$"-12	38	26.9	82.6	3/8"-16UNC	9.4	14.1
22	63	9.7	$1^{13}/_{16}$"-16UN	22	$4^1/_2$"-12	42	33.3	92.2	3/8"-16UNC	14.0	10.9
22	63	9.7	$1^{13}/_{16}$"-16UN	22	$4^1/_2$"-12	42	33.3	92.2	3/8"-16UNC	14.0	14.1
25	63	9.7	$1^{13}/_{16}$"-16UN	22	$4^1/_2$"-12	42	33.3	92.2	3/8"-16UNC	14.0	21.8
31	91	12.7	$2^3/_4$"-16UN	19	$6^1/_4$"-12	48	53.8	130.3	1/2"-13UNC	14.0	28.1
31	91	12.7	$2^3/_4$"-16UN	19	$6^1/_4$"-12	48	53.8	130.3	1/2"-13UNC	14.0	35.4
38	126	12.7	4"-16UN	25	$8^3/_8$"-12	60	79.0	177.8	5/8"-11UNC	19.0	63.0

SFRRH Series

Double-Acting

Hollow Plunger Cylinder
Hydraulic return

Capacity:
30-145 ton

Stroke:
38-258 mm

Center Hole Diameter:
33.3~79.5 mm

Maximum Operating Pressure:
700 bar

SFRRH-603

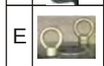
SFRRH-1003

SFRRH-3010

SFRRH Double-Acting, Hollow Plunger Cylinders

- Hollow plunger design allows for both pull and push forces.
- Relief valves protect against over pressurizing.
- Withstands full "dead-end" loads.
- Collar threads for easy fixturing(Except SFRRH-1001 & SFRRH-1508) and all collar threads have a cap for protection.
- Special center tube protect plunger and inner of cylinder increases product life.
- Hard chrome plated plunger resists wear and corrosion.
- Wiper rings protect the piston,bore & tube from contamination.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

Handle type
(S)： Standard equipped
(C)： Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

Handle type (S)	Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Max. Cyl. Capacity Push (kN)	Max. Cyl. Capacity Pull (kN)	Cyl. Effect. Area Push (cm^2)	Cyl. Effect. Area Pull (cm^2)	Oil Capacity Push (cm^3)	Oil Capacity Pull (cm^3)	Coll. Height A (mm)	Ext. Height B (mm)	Out. Diam. D (mm)
R	SFRRH-307	30(326)	178	326	213	46.6	30.4	829	541	330	508	114
R	SFRRH-3010		258	326	213	46.6	30.4	1202	784	431	689	114
R	SFRRH-603	60(576)	89	576	380	82.3	54.2	733	482	247	336	159
R	SFRRH-606		166	576	380	82.3	54.2	1366	900	323	489	159
R	SFRRH-6010		257	576	380	82.3	54.2	2115	1393	438	695	159
R	SFRRH-1001	95(931)	38	931	612	133.0	87.4	505	333	165	203	212
R	SFRRH-1003		76	931	612	133.0	87.4	1011	666	254	330	212
R	SFRRH-1006		153	931	612	133.0	87.4	2035	1337	342	495	212
R	SFRRH-10010		257	931	612	133.0	87.4	3420	2246	460	717	212
R	SFRRH-1508	145(1429)	203	1429	718	204.1	102.6	4144	2083	349	552	247

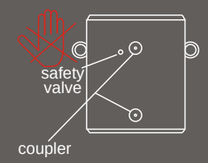
WARNING

Don't adjust safety valve pressure!

Apply to double-acting cylinder

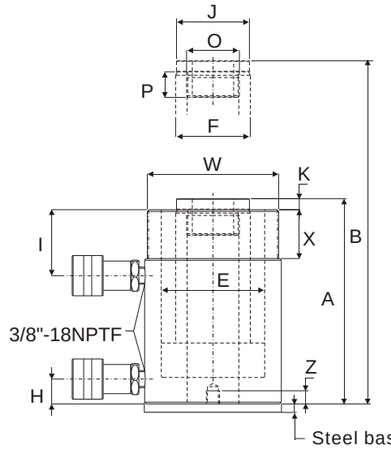
SFRR, SFRRH, SFCLRG series

Most double-acting cylinder safety valve pressure setting 10000psi(700bar).
As surpasses the original factory hypothesis pressure safety valve will spurt oil to protect cylinder.
Leaking from safety valve, inspect connection of coupler at first.

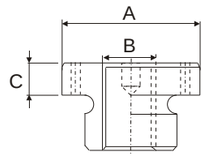


Pump Selection

A double-acting cylinder must be powered by a pump with a 4-way valve.



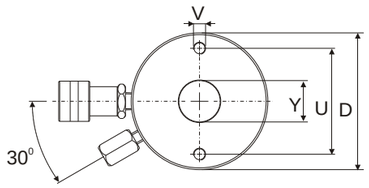
Steel baseplate：
12ton serial：8mm
20~30ton serial：10mm
60ton serial：12mm
100ton serial：16mm



Optional Heat Treated Hollow Saddles

Cylinder Model/Cap. ton(kN)	Model No.	Saddle Dimensions A (mm)	B (in)	C (mm)
SFRRH-307,3010	SFXKHCH-30	63	1-1/4"-7	9
SFRRH-603,606,6010	SFXKHCH-60	91	1-5/8"-5-1/2	12
SFRRH-1001,1003 1006,10010	SFXKHCH-100	126	2-1/2"-8	13

※ Smooth hollow saddles are standard on all SFRRH series.



This drawing show the base mounting holes of barrel before setting steel base plate.

Cyl. Bore Diam. E (mm)	Plngr. Diam. F (mm)	Cyl. Base to Adv. Port H (mm)	Cyl. Top to Return Port I (mm)	Saddle Diam. J (mm)	Saddle Protr. Fr. Plngr. K (mm)	Plunger Internal Thread O (in)	Plunger Thread Length P (mm)	Collar Thread W (in)	Collar Thread Length X (mm)	Center Hole Diam. Y (mm)	Base Mounting Holes Bolt Circle U (mm)	Base Mounting Holes Thread V (in)	Base Mounting Holes Thread Depth Z (mm)	Weight (kg)
88.9	63.5	25	60	63	9	1 13/16"-16	22	4 1/2"-12	42	33.3	92.2	3/8"-16	15.7	21
88.9	63.5	25	60	63	9	1 13/16"-16	22	4 1/2"-12	42	33.3	92.2	3/8"-16	15.7	27
123.9	92.2	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	54.1	130.0	1/2"-13	14.0	28
123.9	92.2	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	54.1	130.0	1/2"-13	14.0	35
123.9	92.2	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	54.1	130.0	1/2"-13	14.0	45
165.1	127.0	38	44	126	12	4"-16	25	—	—	79.5	177.8	5/8"-11	19.0	33
165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.5	177.8	5/8"-11	19.0	61
165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.5	177.8	5/8"-11	19.0	79
165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.5	177.8	5/8"-11	19.0	106
190.5	152.4	38	60	127	4	4 1/4"-12	25	—	—	79.5	214.0	5/8"-11	15.0	111

SFRR Series

Double-Acting

Long stroke Cylinder
Hydraulic return

Capacity:
10-520 ton

Stroke:
57-1219 mm

Maximum Operating Pressure:
700 bar

SFRR Double-Acting Cylinders

- Double-acting design allows for both pull and push forces
- Relief valves protect against over pressurizing.
- Collar threads, plunger threads and base mounting holes for easy fixturing. (See chart)
- Hard chrome plated plunger resists wear and corrosion.
- Wiper rings protect the piston and bore from contamination.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

※SFRR series cylinders are perfect for bridge lifting, building reconstruction, shipyard, utility and mining equipment maintenance.
※As need power and precise positioning of heavy loads, SFRR series are the best solution.

SFRR-308

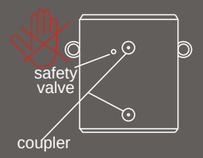
SFRR-506

SFRR-756

SFRR-756
standard eyebolt

WARNING

Don't adjust safety valve pressure!
Apply to double-acting cylinder
SFRR, SFRRH, SFCLRG series
Most double-acting cylinder safety valve pressure setting 10000psi(700bar).
As surpasses the original factory hypothesis pressure safety valve will spurt oil to protect cylinder.
Leaking from safety valve, inspect connection of coupler at first.



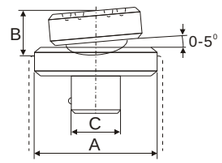
Pump Selection
A double-acting cylinder must be powered by a pump with a 4-way valve.

Handle type (C)	Handle type (S)	Model Number	Cylinder Capacity ton(kN)	Stroke (mm)	Max. Cylinder Capacity push (kN)	Max. Cylinder Capacity pull (kN)	Coll. Height A (mm)	Weight (kg)
		SFRR-1010	10(101)	254	101	33	409	12
		SFRR-1012		305	101	33	457	14
		SFRR-308	30(295)	209	295	133	387	18
		SFRR-3014		368	295	133	549	29
	R	SFRR-506	50(498)	156	498	150	331	30
	R	SFRR-5013		334	498	150	509	52
	R	SFRR-5020		511	498	150	733	68
	R	SFRR-756	75(718)	156	718	220	347	41
	R	SFRR-7513		333	718	220	525	68
	E R	SFRR-1006	95(933)	168	933	435	357	61
	E R	SFRR-10013		333	933	435	524	93
R	E	SFRR-10018		460	933	435	687	117
	E R	SFRR-1502	140(1386)	57	1386	668	196	49
R	E	SFRR-1506		156	1386	668	385	93
R	E	SFRR-15013		333	1386	668	563	124
R	E	SFRR-15032		815	1386	668	1116	238
R	E	SFRR-2006	200(1995)	152	1995	1017	430	147
R	E	SFRR-20013		330	1995	1017	608	199
R	E	SFRR-20018		457	1995	1017	765	204
R	E	SFRR-20024		610	1995	1017	917	279
R	E	SFRR-20036		914	1995	1017	1222	383
R	E	SFRR-20048		1219	1995	1017	1527	483
	E	SFRR-3006	325(3201)	153	3201	1703	485	200
	E	SFRR-30012		305	3201	1703	638	312
	E	SFRR-30018		457	3201	1703	790	385
	E	SFRR-30024		609	3201	1703	943	469
	E	SFRR-30036		915	3201	1703	1247	628
	E	SFRR-30048		1219	3201	1703	1552	780
	E	SFRR-4006	440(4292)	152	4292	2297	538	303
	E	SFRR-40012		305	4292	2297	690	399
	E	SFRR-40018		457	4292	2297	843	453
	E	SFRR-40024		610	4292	2297	995	597
	E	SFRR-40036		914	4292	2297	1300	792
	E	SFRR-40048		1219	4292	2297	1605	980
	E	SFRR-5006	520(5108)	153	5108	2838	577	432
	E	SFRR-50012		305	5108	2838	730	589
	E	SFRR-50018		457	5108	2838	882	680
	E	SFRR-50024		609	5108	2838	1035	816
	E	SFRR-50036		915	5108	2838	1339	1002
	E	SFRR-50048		1219	5108	2838	1644	1224

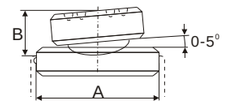
SFRR-1010 and SFRR-1012：N=32mm；SFRR-308 and SFRR-3014：N=55mm.

Handle type
(S)： Standard equipped
(C)： Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread



SFXKCAT-10 , 50

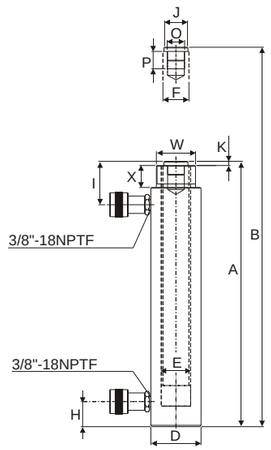


SFXKCAT-100

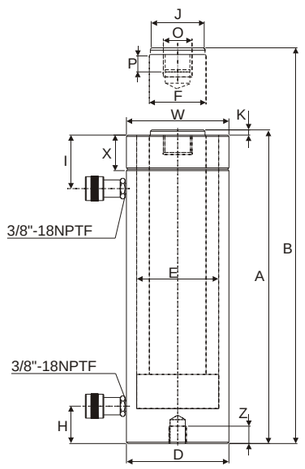
Optional Tilt Saddle Dimensions (mm)

Cylinder Model/Cap. (ton)	Model No. Type : Tilt	A	B	C
SFRR-1010、1012	SFXKCAT-10	35	20	22
SFRR- 308、3014	SFXKCAT-50	50	21	35
SFRR- 506、5013 5020、756 7513	SFXKCAT-100	71	24	—

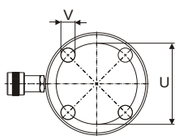
SFRR -Series up to 75 tons have plunger thread for installation of SFXKCAT-Series tilt saddles.



SFRR-1010 to SFRR-3014 models

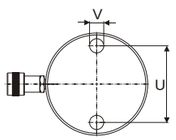


SFRR-506 to SFRR-50048 models



SFRR-1006 to SFRR-30048 models

No mounting hole on
SFRR-506/ 5013 / 5020 /
756 / 7513 / 1502 / 15032



SFRR-4006 to SFRR-50048 models

Model Number	Cylinder Capacity	Stroke	Max. Cylinder Capacity		Cylinder Effective Area		Oil Capacity		Coll. Height
			push	pull	push	pull	push	pull	
	ton(kN)	(mm)	(kN)		(cm^2)		(cm^3)		A (mm)
SFRR-1010	10 (101)	254	101	33	14.5	4.8	368	122	409
SFRR-1012		305	101	33	14.5	4.8	442	147	457
SFRR-308	30 (295)	209	295	133	42.1	19.1	879	400	387
SFRR-3014		368	295	133	42.1	19.1	1549	703	549
SFRR-506	50 (498)	156	498	150	71.2	21.5	1111	335	331
SFRR-5013		334	498	150	71.2	21.5	2378	718	509
SFRR-5020		511	498	150	71.2	21.5	3638	1099	733
SFRR-756	75 (718)	156	718	220	102.6	31.4	1601	490	347
SFRR-7513		333	718	220	102.6	31.4	3417	1046	525
SFRR-1006	95 (933)	168	933	435	133.3	62.2	2238	1045	357
SFRR-10013		333	933	435	133.3	62.2	4439	2071	524
SFRR-10018		460	933	435	133.3	62.2	6132	2861	687
SFRR-1502	140 (1386)	57	1386	668	198.1	95.4	1129	544	196
SFRR-1506		156	1386	668	198.1	95.4	3090	1488	385
SFRR-15013		333	1386	668	198.1	95.4	6597	3177	563
SFRR-15032		815	1386	668	198.1	95.4	16145	7775	1116
SFRR-2006	200 (1995)	152	1995	1017	285.0	145.3	4332	2209	430
SFRR-20013		330	1995	1017	285.0	145.3	9405	4795	608
SFRR-20018		457	1995	1017	285.0	145.3	13025	6640	765
SFRR-20024		610	1995	1017	285.0	145.3	17385	8863	917
SFRR-20036		914	1995	1017	285.0	145.3	26049	13280	1222
SFRR-20048		1219	1995	1017	285.0	145.3	34741	17712	1527
SFRR-3006	325 (3201)	153	3201	1703	457.3	243.2	6997	3721	485
SFRR-30012		305	3201	1703	457.3	243.2	13947	7418	638
SFRR-30018		457	3201	1703	457.3	243.2	20889	11114	790
SFRR-30024		609	3201	1703	457.3	243.2	27850	14811	943
SFRR-30036		915	3201	1703	457.3	243.2	41843	22253	1247
SFRR-30048		1219	3201	1703	457.3	243.2	55745	29646	1552
SFRR-4006	440 (4292)	152	4292	2297	613.1	328.1	9319	4987	538
SFRR-40012		305	4292	2297	613.1	328.1	18700	10007	690
SFRR-40018		457	4292	2297	613.1	328.1	28018	14995	843
SFRR-40024		610	4292	2297	613.1	328.1	37400	20014	995
SFRR-40036		914	4292	2297	613.1	328.1	56037	29988	1300
SFRR-40048		1219	4292	2297	613.1	328.1	74737	39996	1605
SFRR-5006	520 (5108)	153	5108	2838	729.7	405.4	11164	6203	577
SFRR-50012		305	5108	2838	729.7	405.4	22256	12365	730
SFRR-50018		457	5108	2838	729.7	405.4	33347	18526	882
SFRR-50024		609	5108	2838	729.7	405.4	44440	24689	1035
SFRR-50036		915	5108	2838	729.7	405.4	66768	36973	1339
SFRR-50048		1219	5108	2838	729.7	405.4	88951	49418	1644

SFRR-1010 and SFRR-1012：N=32mm；SFRR-308 and SFRR-3014：N=55mm

Ext. Height	Out. Diam.	Cyl. Bore Diam.	Plngr. Diam.	Base to Adv. Port	Top to Return Port	Saddle Diam.	Saddle Protr. fr. Plngr.	Plunger Internal Thread	Plunger Thread Length	Base Mounting Holes			Collar Thread	Collar Thread Length	Weight
										Bolt Circle Diam.	Thread	Thread Depth			
B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	I (mm)	J (mm)	K (mm)	O (mm)	P (mm)	U (mm)	V (in)	Z (mm)	W (in)	X (mm)	(kg)
663	73	42.9	34.9	36	57	35	6	1"-8	25	—	—	—	$2^{1}/_{4}$"-14	26	12
762	73	42.9	34.9	36	57	35	6	1"-8	25	—	—	—	$2^{1}/_{4}$"-14	26	14
596	101	73.2	54.1	57	81	50	10	$1^{1}/_{2}$"-16	25	—	—	—	$3^{5}/_{16}$"-12	49	18
917	101	73.2	54.1	57	81	50	10	$1^{1}/_{2}$"-16	25	—	—	—	$3^{5}/_{16}$"-12	49	29
487	127	95.2	79.5	28	76	71	2	1"-12	25	—	—	—	5"-12	50	30
843	127	95.2	79.5	28	76	71	2	1"-12	25	—	—	—	5"-12	50	52
1244	127	95.2	79.5	57	76	71	2	1"-12	25	76	$^{1}/_{2}$"-13	25	5"-12	50	68
503	146	114.3	95.2	30	76	71	6	1"-12	38	—	—	—	$5^{3}/_{4}$"-12	38	41
858	146	114.3	95.2	30	81	71	6	1"-12	38	—	—	—	$5^{3}/_{4}$"-12	38	68
525	177	130.3	95.2	38	71	76	3	$1^{3}/_{4}$"-12	35	139	$^{3}/_{4}$"-10	25	$6^{7}/_{8}$"-12	50	61
857	177	130.3	95.2	38	71	76	3	$1^{3}/_{4}$"-12	35	139	$^{3}/_{4}$"-10	25	$6^{7}/_{8}$"-12	50	93
1147	177	130.3	95.2	41	92	76	3	$1^{3}/_{4}$"-12	35	139	$^{3}/_{4}$"-10	25	$6^{7}/_{8}$"-12	50	117
253	203	158.8	114.3	22	66	93	19	—	—	—	—	—	—	—	49
541	203	158.8	114.3	49	84	114	19	$3^{3}/_{8}$"-16	**35**	158	$^{3}/_{4}$"-16	28	8"-12	60	93
897	203	158.8	114.3	49	84	114	19	$3^{3}/_{8}$"-16	**35**	158	$^{3}/_{4}$"-16	28	8"-12	60	124
1931	203	158.8	114.3	76	88	114	19	$3^{3}/_{8}$"-16	**35**	—	—	—	8"-12	60	238
582	247	190.5	133.4	57	96	133	22	—	—	127	1"-8	25	—	—	147
938	247	190.5	133.4	57	96	133	22	$2^{1}/_{2}$"-12	**63**	127	1"-8	25	$9^{3}/_{4}$"-12	54	199
1222	247	190.5	133.4	85	101	133	22	$2^{1}/_{2}$"-12	**63**	127	1"-8	25	$9^{3}/_{4}$"-12	54	204
1527	247	190.5	133.4	85	101	133	22	$2^{1}/_{2}$"-12	**63**	127	1"-8	25	$9^{3}/_{4}$"-12	54	279
2136	247	190.5	133.4	85	101	133	22	$2^{1}/_{2}$"-12	**63**	127	1"-8	25	$9^{3}/_{4}$"-12	54	383
2746	247	190.5	133.4	85	101	133	22	$2^{1}/_{2}$"-12	**63**	127	1"-8	25	$9^{3}/_{4}$"-12	54	483
638	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	200
943	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	312
1247	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	385
1552	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	469
2162	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	628
2771	311	241.3	165.1	88	114	165	28	$2^{1}/_{2}$"-12	**82**	158	$1^{1}/_{4}$"-7	44	$12^{1}/_{4}$"-12	58	780
690	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	303
995	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	399
1300	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	453
1605	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	597
2214	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	792
2824	358	279.4	190.5	108	133	190	28	3"-12	**95**	203	$1^{1}/_{2}$"-6	50	$14^{1}/_{8}$"-8	65	980
730	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	432
1035	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	589
1339	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	680
1644	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	816
2254	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	1002
2863	397	304.8	203.2	120	152	203	28	$3^{1}/_{4}$"-12	**108**	203	$1^{3}/_{4}$"-5	54	$15^{5}/_{8}$"-8	79	1224

SFCLSG Series

Single-Acting

High Tonnage Cylinder
Load return

Capacity:
50-1,000 ton

Stroke:
50-300 mm

Maximum Operating Pressure:
700 bar

SFCLSG Single-Acting, High Tonnage Cylinders

- Base mounting holes standard on all models.
- Single-acting, load return
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Plunger wiper reduces contamination, extending cylinder life.
- Integral stop ring provides piston blow-out protection
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

Mounting Hole Orientation

- Top mounting hole orientation is maintained to port location.
- Bases mounting hole orientation is not maintained to port location.

Cylinder Capacity

- More above 1000 tons cylinder capacity are also available.
- Please contact your distributor or the SFORCE office nearest to you for advice and technical as sistance in the layout of your ideal Lift System.

SFCLSG-506

SFCLSG-1006

Feature

- SFCLSG-series are equipped with interchangeable, hardened grooved saddles. (Except capacity above 1000tons)
- SFQB-3/8UF coupler and dust cap.
- Top and side mount lifting eye capability.

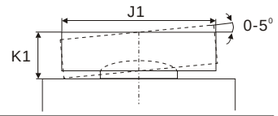
Low Height-High Tonnage

- When low height with high force is required, pancake cylinders with lock nut offer the solutionto lift the first few inches.

Handle type

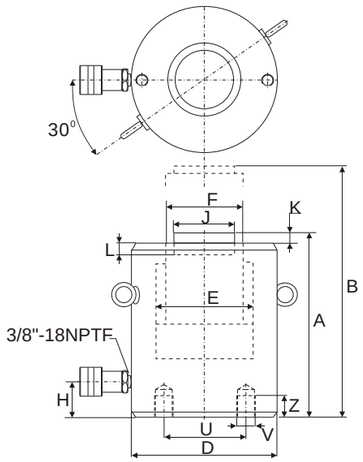
(S)：Standard equipped
(C)：Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

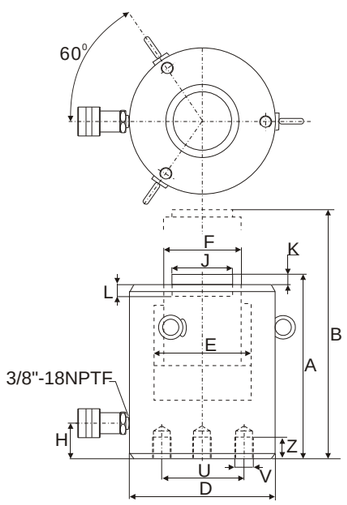


Handle type	Model Number	Cylinder Cap.	Stroke	Effective Area	Coll. Height	Wt.	Optional Tilt Saddle		
							Model Number	Diam.	Ht.
(S)		ton(kN)	(mm)	(cm^2)	A (mm)	(kg)		J1(mm)	K1(mm)
E	SFCLSG-502	50 (539)	50	77.0	162	17	SFXKCATG-50	50	24
E	SFCLSG-504		100	77.0	212	20	SFXKCATG-50	50	24
E	SFCLSG-506		150	77.0	262	23	SFXKCATG-50	50	24
E	SFCLSG-508		200	77.0	312	27	SFXKCATG-50	50	24
E	SFCLSG-5010		250	77.0	362	31	SFXKCATG-50	50	24
E	SFCLSG-5012		300	77.0	412	34	SFXKCATG-50	50	24
E	SFCLSG-1002	100 (929)	50	132.7	182	19	SFXKCATG-100	73	29
E	SFCLSG-1004		100	132.7	232	29	SFXKCATG-100	73	29
E	SFCLSG-1006		150	132.7	282	40	SFXKCATG-100	73	29
E	SFCLSG-1008		200	132.7	332	50	SFXKCATG-100	73	29
E	SFCLSG-10010		250	132.7	382	61	SFXKCATG-100	73	29
E	SFCLSG-10012		300	132.7	432	71	SFXKCATG-100	73	29
E	SFCLSG-1502	150 (1390)	50	198.6	196	39	SFXKCATG-150	91	31
E	SFCLSG-1504		100	198.6	246	52	SFXKCATG-150	91	31
E	SFCLSG-1506		150	198.6	296	65	SFXKCATG-150	91	31
E	SFCLSG-1508		200	198.6	346	78	SFXKCATG-150	91	31
E	SFCLSG-15010		250	198.6	396	92	SFXKCATG-150	91	31
E	SFCLSG-15012		300	198.6	446	105	SFXKCATG-150	91	31
E	SFCLSG-2002	200 (1861)	50	265.9	216	55	SFXKCATG-200	118	35
E	SFCLSG-2006		150	265.9	316	91	SFXKCATG-200	118	35
E	SFCLSG-20012		300	265.9	466	146	SFXKCATG-200	118	35
E	SFCLSG-2502	250 (2565)	50	366.4	235	102	SFXKCATG-250	144	46
E	SFCLSG-2506		150	366.4	335	136	SFXKCATG-250	144	46
E	SFCLSG-25012		300	366.4	485	207	SFXKCATG-250	144	46
E	SFCLSG-3002	300 (3193)	50	456.2	312	184	SFXKCATG-300	160	62
E	SFCLSG-3006		150	456.2	412	232	SFXKCATG-300	160	62
E	SFCLSG-30012		300	456.2	562	303	SFXKCATG-300	160	62
E	SFCLSG-4002	400 (3919)	50	559.9	375	270	SFXKCATG-400	193	51
E	SFCLSG-4006		150	559.9	475	330	SFXKCATG-400	193	51
E	SFCLSG-40012		300	559.9	625	421	SFXKCATG-400	193	51
E	SFCLSG-5002	500 (5114)	50	730.6	419	401	SFXKCATG-500	228	63
E	SFCLSG-5006		150	730.6	519	480	SFXKCATG-500	228	63
E	SFCLSG-50012		300	730.6	669	599	SFXKCATG-500	228	63
E	SFCLSG-6002	600 (5987)	50	855.3	429	474	SFXKCATG-600	241	76
E	SFCLSG-6006		150	855.3	529	565	SFXKCATG-600	241	76
E	SFCLSG-60012		300	855.3	679	701	SFXKCATG-600	241	76
E	SFCLSG-8002	800 (8234)	50	1176.3	474	741	SFXKCATG-800	297	101.6
E	SFCLSG-8006		150	1176.3	574	880	SFXKCATG-800	287	75
E	SFCLSG-80012		300	1176.3	724	1058	SFXKCATG-800	287	75
E	SFCLSG-10002	1000 (10260)	50	1465.7	564	1062	* —	314	93
E	SFCLSG-10006		150	1465.7	664	1213	* —	311	93
E	SFCLSG-100012		300	1465.7	814	1439	* —	311	93

* Capacity above 1000tons cylinders are equipped with tilt saddle.
If you want to opt fixed grooved saddle please connect to us order **SFXKCSLRG-1000.**



SFCLSG-50 to SFCLSG-150 models



SFCLSG-200 to SFCLSG-1000models

Model Number	Cylinder Cap. ton(kN)	Stroke (mm)	Effective Area (cm^2)	Oil Cap. (cm^3)	Coll. Height A (mm)	Ext. Height B (mm)	Outside Diam. D (mm)	Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Advance Port H (mm)	Standard Saddle Diam. J (mm)	Saddle Protrusion from Plngr. K (mm)	Depth of plunger Hole L (mm)	Base Mounting Holes: Bolt Cir. Diam. U (mm)	Base Mounting Holes: Thread V (mm)	Base Mounting Holes: Thread Depth Z (mm)	Weight (kg)
SFCLSG-502	50 (539)	50	77.0	385	162	212	130	98.6	70.0	42	50	1	19	65	2xM12	22	17
SFCLSG-504		100	77.0	770	212	312	130	98.6	70.0	42	50	1	19	65	2xM12	22	20
SFCLSG-506		150	77.0	1155	262	412	130	98.6	70.0	42	50	1	19	65	2xM12	22	23
SFCLSG-508		200	77.0	1540	312	512	130	98.6	70.0	42	50	1	19	65	2xM12	22	27
SFCLSG-5010		250	77.0	1924	362	612	130	98.6	70.0	42	50	1	19	65	2xM12	22	31
SFCLSG-5012		300	77.0	2309	412	712	130	98.6	70.0	42	50	1	19	65	2xM12	22	34
SFCLSG-1002	100 (929)	50	132.7	664	182	232	165	130.0	95.0	54	75	1	19	95	2xM12	22	19
SFCLSG-1004		100	132.7	1327	232	332	165	130.0	95.0	54	75	1	19	95	2xM12	22	29
SFCLSG-1006		150	132.7	1991	282	432	165	130.0	95.0	54	75	1	19	95	2xM12	22	40
SFCLSG-1008		200	132.7	2655	332	532	165	130.0	95.0	54	75	1	19	95	2xM12	22	50
SFCLSG-10010		250	132.7	3318	382	632	165	130.0	95.0	54	75	1	19	95	2xM12	22	61
SFCLSG-10012		300	132.7	3982	432	732	165	130.0	95.0	54	75	1	19	95	2xM12	22	71
SFCLSG-1502	150 (1390)	50	198.6	993	196	246	205	159.0	114.0	61	94	1	19	130	2xM12	22	39
SFCLSG-1504		100	198.6	1986	246	346	205	159.0	114.0	61	94	1	19	130	2xM12	22	52
SFCLSG-1506		150	198.6	2978	296	446	205	159.0	114.0	61	94	1	19	130	2xM12	22	65
SFCLSG-1508		200	198.6	3971	346	546	205	159.0	114.0	61	94	1	19	130	2xM12	22	78
SFCLSG-15010		250	198.6	4964	396	646	205	159.0	114.0	61	94	1	19	130	2xM12	22	92
SFCLSG-15012		300	198.6	5957	446	746	205	159.0	114.0	61	94	1	19	130	2xM12	22	105
SFCLSG-2002	200 (1861)	50	265.9	1330	216	266	235	184.0	133.0	67	113	1	24	165	4xM12	22	68
SFCLSG-2006		150	265.9	3989	316	466	235	184.0	133.0	67	113	1	24	165	4xM12	22	91
SFCLSG-20012		300	265.9	7977	466	766	235	184.0	133.0	67	113	1	24	165	4xM12	22	146
SFCLSG-2502	250 (2565)	50	366.4	1832	235	285	275	216.0	165.0	73	145	1	24	190	3xM12	22	102
SFCLSG-2506		150	366.4	5497	335	485	275	216.0	165.0	73	145	1	24	190	3xM12	22	136
SFCLSG-25012		300	366.4	10993	485	785	275	216.0	165.0	73	145	1	24	190	3xM12	22	207
SFCLSG-3002	300 (3193)	50	456.2	2281	312	362	310	241.0	197.0	101	177	1	19	180	3xM16	36	184
SFCLSG-3006		150	456.2	6843	412	562	310	241.0	197.0	101	177	1	19	180	3xM16	36	232
SFCLSG-30012		300	456.2	13685	562	862	310	241.0	197.0	101	177	1	19	180	3xM16	36	303
SFCLSG-4002	400 (3919)	50	559.9	2800	375	425	350	267.0	216.0	114	196	3	27	205	3xM16	36	270
SFCLSG-4006		150	559.9	8399	475	625	350	267.0	216.0	114	196	3	27	205	3xM16	36	330
SFCLSG-40012		300	559.9	16797	625	925	350	267.0	216.0	114	196	3	27	205	3xM16	36	421
SFCLSG-5002	500 (5114)	50	730.6	3653	419	469	400	305.0	248.0	114	228	3	27	250	3xM24	38	401
SFCLSG-5006		150	730.6	10959	519	669	400	305.0	248.0	114	228	3	27	250	3xM24	38	480
SFCLSG-50012		300	730.6	21918	669	969	400	305.0	248.0	114	228	3	27	250	3xM24	38	599
SFCLSG-6002	600 (5987)	50	855.3	4276	429	479	430	330.0	267.0	114	247	3	27	275	3xM24	38	474
SFCLSG-6006		150	855.3	12829	529	679	430	330.0	267.0	114	247	3	27	275	3xM24	38	565
SFCLSG-60012		300	855.3	25659	679	979	430	330.0	267.0	114	247	3	27	275	3xM24	38	701
SFCLSG-8002	800 (8234)	50	1176.3	5881	474	524	505	387.0	317.0	149	297	3	27	330	3xM24	38	741
SFCLSG-8006		150	1176.3	17644	574	724	505	387.0	317.0	149	297	3	27	330	3xM24	38	880
SFCLSG-80012		300	1176.3	35288	724	1024	505	387.0	317.0	149	297	3	27	330	3xM24	38	1058
SFCLSG-10002	1000 (10260)	50	1465.7	7329	564	614	560	432.0	343.0	174	323	3	27	375	3xM24	38	1062
SFCLSG-10006		150	1465.7	21986	664	814	560	432.0	343.0	174	323	3	27	375	3xM24	38	1213
SFCLSG-100012		300	1465.7	43972	814	1114	560	432.0	343.0	174	323	3	27	375	3xM24	38	1439

SFCLRG Series

Double-Acting

High Tonnage Cylinder
Hydraulic return

Capacity:
50-1,600 ton

Stroke:
50-300 mm

Maximum Operating Pressure:
700 bar

SFCLRG Double-Acting, High Tonnage Cylinders

- Base mounting holes standard on all models.
- Double-acting, for push and pull.
- Hard chrome plated plunger resists wear and corrosion.
- Safety valve in retract side of cylinder helps to prevent damage in case of accidental over-pressurization.
- Interchangeable, hardened grooved saddles are standard.
- Plunger wiper reduces contamination, extending cylinder life.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

SFCLSG-506

SFCLSG-1006

Mounting Hole Orientation

- Top mounting hole orientation is maintained to port location.
- Bases mounting hole orientation is not maintained to port location.

Cylinder Capacity

- More above 1000 tons cylinder capacity are also available.
- Please contact your distributor or the SFORCE office nearest to you for advice and technical as sistance in the layout of your ideal Lift System.

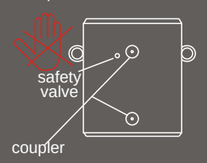
WARNING

Don't adjust safety valve pressure!

Apply to double-acting cylinder

SFRR, SFRRH, SFCLRG series

Most double-acting cylinder safety valve pressure setting 10000psi(700bar).
As surpasses the original factory hypothesis pressure safety valve will spurt oil to protect cylinder.
Leaking from safety valve, inspect connection of coupler at first.



Feature

- SFCLRG-series are equipped with interchangeable, hardened grooved saddles. (Except capacity above 1000tons)
- SFQB-3/8UF coupler and dust cap.
- Top and side mount lifting eye capability.

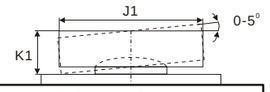
Pump Selection

A double-acting cylinder must be powered by a pump with a 4-way valve.

Handle type

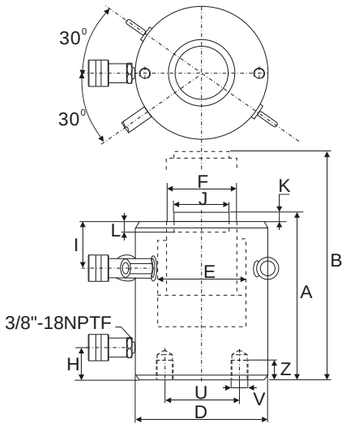
(S)： Standard equipped
(C)： Customer order

W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

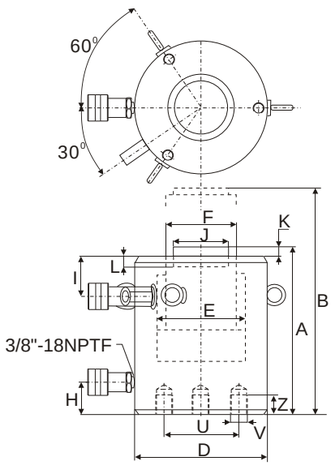


Handle type	Model Number	Cylinder	Stroke	Max. Cyl. Cap.		Coll. Height	Wt.	Optional Tilt Saddle		
				Push	Pull			Model Number	Diam.	Height
(S)		ton(kN)	(mm)	(kN)		A (mm)	(kg)		J1 (mm)	K1 (mm)
E	SFCLRG-502	50 (539)	50	539	269	162	17	XKCATG-50	50	24
E	SFCLRG-504		100	539	269	212	20	XKCATG-50	50	24
E	SFCLRG-506		150	539	269	262	23	XKCATG-50	50	24
E	SFCLRG-508		200	539	269	312	27	XKCATG-50	50	24
E	SFCLRG-5010		250	539	269	362	31	XKCATG-50	50	24
E	SFCLRG-5012		300	539	269	412	34	XKCATG-50	50	24
E	SFCLRG-1002	100 (929)	50	929	433	182	19	XKCATG-100	73	29
E	SFCLRG-1004		100	929	433	232	29	XKCATG-100	73	29
E	SFCLRG-1006		150	929	433	282	40	XKCATG-100	73	29
E	SFCLRG-1008		200	929	433	332	50	XKCATG-100	73	29
E	SFCLRG-10010		250	929	433	382	61	XKCATG-100	73	29
E	SFCLRG-10012		300	929	433	432	71	XKCATG-100	73	29
E	SFCLRG-1502	150 (1390)	50	1390	675	196	39	XKCATG-150	91	31
E	SFCLRG-1504		100	1390	675	246	52	XKCATG-150	91	31
E	SFCLRG-1506		150	1390	675	296	65	XKCATG-150	91	31
E	SFCLRG-1508		200	1390	675	346	78	XKCATG-150	91	31
E	SFCLRG-15010		250	1390	675	396	92	XKCATG-150	91	31
E	SFCLRG-15012		300	1390	675	446	105	XKCATG-150	91	31
E	SFCLRG-2002	200 (1861)	50	1861	889	216	55	XKCATG-200	118	35
E	SFCLRG-2006		150	1861	889	316	91	XKCATG-200	118	35
E	SFCLRG-20012		300	1861	889	466	146	XKCATG-200	118	35
E	SFCLRG-2502	250 (2565)	50	2565	1068	235	102	XKCATG-250	144	46
E	SFCLRG-2506		150	2565	1068	335	136	XKCATG-250	144	46
E	SFCLRG-25012		300	2565	1068	485	207	XKCATG-250	144	46
E	SFCLRG-3002	300 (3193)	50	3193	1060	312	184	XKCATG-300	160	62
E	SFCLRG-3006		150	3193	1060	412	232	XKCATG-300	160	62
E	SFCLRG-30012		300	3193	1060	562	303	XKCATG-300	160	62
E	SFCLRG-4002	400 (3919)	50	3919	1354	375	270	XKCATG-400	193	51
E	SFCLRG-4006		150	3919	1354	475	330	XKCATG-400	193	51
E	SFCLRG-40012		300	3919	1354	625	421	XKCATG-400	193	51
E	SFCLRG-5002	500 (5114)	50	5114	1733	419	401	XKCATG-500	228	63
E	SFCLRG-5006		150	5114	1733	519	480	XKCATG-500	228	63
E	SFCLRG-50012		300	5114	1733	669	599	XKCATG-500	228	63
E	SFCLRG-6002	600 (5987)	50	5987	2068	429	474	XKCATG-600	241	76
E	SFCLRG-6006		150	2987	2068	529	565	XKCATG-600	241	76
E	SFCLRG-60012		300	5987	2068	679	701	XKCATG-600	241	76
E	SFCLRG-8002	800 (8234)	50	8234	2709	474	741	XKCATG-800	287	75
E	SFCLRG-8006		150	8234	2709	574	880	XKCATG-800	287	75
E	SFCLRG-80012		300	8234	2709	724	1058	XKCATG-800	287	75
E	SFCLRG-10002	1000 (10260)	50	10260	3792	564	1062	* —	314	93
E	SFCLRG-10006		150	10260	3792	664	1213	* —	311	93
E	SFCLRG-100012		300	10260	3792	814	1439	* —	311	93
E	SFCLRG-16006	1600 (16024)	155	16024	4891	825	2179	* —	385	125

* Capacity above 1000tons cylinders are equipped with tilt saddle.
If you want to opt fixed grooved saddle please connect to us order **SFXKCSLRG-1000.**



SFCLRG-50 to
SFCLRG-150 model



SFCLRG-200 to
SFCLRG-1600 model

Model Number	Cylinder Cap.	Stroke	Max. Cylinder Cap.		Cytinder Effective Area		Oil Cap.		Coll. Height	Ext. Height	Outside Diam.	Cyl. Bore Diam.	Plunger Diam.	Base to Advance Port	Top to Retract Port	Standard Saddle Diam.	Saddle Protrusion from plngr.	Depth of Plunger Hole	Base Mounting Hole Dimensions			Weight
			Push	Pull	Push	Pull	Push	Pull											Bolt Cir. Diam.	Thread	Thread Depth	
	ton(kN)	(mm)	(kN)		(cm^2)		(cm^3)		A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)	U (mm)	V (mm)	Z (mm)	(kg)
SFCLRG-502	50 (539)	50	539	269	76.2	37.7	385	192	162	212	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	17
SFCLRG-504		100	539	269	76.2	37.7	770	385	212	312	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	20
SFCLRG-506		150	539	269	76.2	37.7	1155	577	262	412	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	23
SFCLRG-508		200	539	269	76.2	37.7	1540	770	312	512	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	27
SFCLRG-5010		250	539	269	76.2	37.7	1924	962	362	612	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	31
SFCLRG-5012		300	539	269	76.2	37.7	2309	1155	412	712	130	98.6	70.0	42	33	50	1	19	65	2xM12	22	34
SFCLRG-1002	100 (929)	50	929	433	132.7	61.9	664	309	182	232	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	19
SFCLRG-1004		100	929	433	132.7	61.9	1327	619	232	332	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	29
SFCLRG-1006		150	929	433	132.7	61.9	1991	928	282	432	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	40
SFCLRG-1008		200	929	433	132.7	61.9	2655	1237	332	532	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	50
SFCLRG-10010		250	929	433	132.7	61.9	3318	1546	382	632	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	61
SFCLRG-10012		300	929	433	132.7	61.9	3982	1856	432	732	165	130.0	95.0	54	48	75	1	19	95	2xM12	22	71
SFCLRG-1502	150 (1390)	50	1390	675	198.6	96.5	993	482	196	246	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	39
SFCLRG-1504		100	1390	675	198.6	96.5	1986	965	246	346	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	52
SFCLRG-1506		150	1390	675	198.6	96.5	2978	1447	296	446	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	65
SFCLRG-1508		200	1390	675	198.6	96.5	3971	1930	346	546	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	78
SFCLRG-15010		250	1390	675	198.6	96.5	4964	2412	396	646	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	92
SFCLRG-15012		300	1390	675	198.6	96.5	5957	2895	446	746	205	159.0	114.0	61	56	94	1	19	130	2xM12	22	105
SFCLRG-2002	200 (1861)	50	1861	889	265.9	127.0	1330	635	216	266	235	184.0	133.1	67	56	113	1	24	165	4xM12	22	55
SFCLRG-2006		150	1861	889	265.9	127.0	3989	1905	316	466	235	184.0	133.1	67	56	113	1	24	165	4xM12	22	91
SFCLRG-20012		300	1861	889	265.9	127.0	7977	3809	466	766	235	184.0	133.1	67	56	113	1	24	165	4xM12	22	146
SFCLRG-2502	250 (2565)	50	2565	1068	366.4	152.6	1832	763	235	285	275	216.0	165.1	73	78	145	1	24	190	3xM12	22	102
SFCLRG-2506		150	2565	1068	366.4	152.6	5497	2289	335	485	275	216.0	165.1	73	78	145	1	24	190	3xM12	22	136
SFCLRG-25012		300	2565	1068	366.4	152.6	10993	4578	485	785	275	216.0	165.1	73	78	145	1	24	190	3xM12	22	207
SFCLRG-3002	300 (3193)	50	3193	1060	456.2	151.4	2281	757	312	362	310	241.0	197.1	101	75	177	1	19	180	3xM16	36	184
SFCLRG-3006		150	3193	1060	456.2	151.4	6843	2270	412	562	310	241.0	197.1	101	75	177	1	19	180	3xM16	36	232
SFCLRG-30012		300	3193	1060	456.2	151.4	13685	4541	562	862	310	241.0	197.1	101	75	177	1	19	180	3xM16	36	303
SFCLRG-4002	400 (3919)	50	3919	1354	559.9	193.5	2800	967	375	425	350	267.0	216.0	114	105	196	3	27	205	3xM16	36	270
SFCLRG-4006		150	3919	1354	559.9	193.5	8399	2902	475	625	350	267.0	216.0	114	105	196	3	27	205	3xM16	36	330
SFCLRG-40012		300	3919	1354	559.9	193.5	16797	5804	625	925	350	267.0	216.0	114	105	196	3	27	205	3xM16	36	421
SFCLRG-5002	500 (5114)	50	5114	1733	730.6	247.6	3653	1238	419	469	400	305.0	248.0	114	135	228	3	27	250	3xM24	38	401
SFCLRG-5006		150	5114	1733	730.6	247.6	10959	3713	519	669	400	305.0	248.0	114	135	228	3	27	250	3xM24	38	480
SFCLRG-50012		300	5114	1733	730.6	247.6	21918	7427	669	969	400	305.0	248.0	114	135	228	3	27	250	3xM24	38	599
SFCLRG-6002	600 (5987)	50	5987	2068	855.3	295.4	4276	1477	429	479	430	330.0	267.0	114	135	247	3	27	275	3xM24	38	474
SFCLRG-6006		150	2987	2068	855.3	295.4	12829	4431	529	679	430	330.0	267.0	114	135	247	3	27	275	3xM24	38	565
SFCLRG-60012		300	5987	2068	855.3	295.4	25659	8862	679	979	430	330.0	267.0	114	135	247	3	27	275	3xM24	38	701
SFCLRG-8002	800 (8234)	50	8234	2709	1176.3	387.0	5881	1935	474	524	505	387.0	317.0	149	135	297	3	27	330	3xM24	38	741
SFCLRG-8006		150	8234	2709	1176.3	387.0	17644	5806	574	724	505	387.0	317.0	149	135	297	3	27	330	3xM24	38	880
SFCLRG-80012		300	8234	2709	1176.3	387.0	35288	11611	724	1024	505	387.0	317.0	149	135	297	3	27	330	3xM24	38	1058
SFCLRG-10002	1000 (10260)	50	10260	3792	1465.7	541.7	7329	2709	564	614	560	432.0	343.0	174	170	323	3	27	375	3xM24	38	1062
SFCLRG-10006		150	10260	3792	1465.7	541.7	21986	8126	664	814	560	432.0	343.0	174	170	323	3	27	375	3xM24	38	1213
SFCLRG-100012		300	10260	3792	1465.7	541.7	43972	16252	814	1114	560	432.0	343.0	174	170	323	3	27	375	3xM24	38	1439
SFCLRG-16006	1600 (16024)	155	16024	4891	2289.1	699.3	35495	10845	825	980	710	540.0	450.0	205	170	—	—	—	400	3xM24	30	2179

SFCLL Series

Single-Acting

High Tonnage Lock Nut Cylinder
Load return

Capacity:
50-1,000 ton

Stroke:
50-300 mm

Maximum Operating Pressure:
700 bar

SFCLL-502

SFCLL-1002

SFCLL Single-Acting, High Tonnage, Lock Nut Cylinders

- Hard chrome plated inner of barrel resistes wear and corrosion.
- Safety lock nut for mechanical load holding.
- Interchangeable, hardened grooved saddles are standard.
- Single-acting load return.
- Overflow port functions as a stroke limiter.
- Special coating on piston and lock nut improves corrosion and abrasion resistance.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

Cylinder Capacity

- More above 1000 tons cylinder capacity are also available.
- Please contact your distributor or the SFORCE office nearest to you for advice and technical as sistance in the layout of your ideal Lift System.

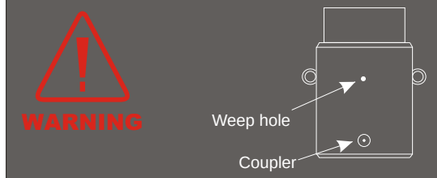
SFCLLR Optional Features

SFCLL series cylinder can be designed in Double-acting, please connect to SUN RUN.

Double-acting : SFCLLR

Feature

- SFCLL-series are equipped with interchangeable, hardened grooved saddles. (Except capacity above 1000tons)
- SFQB-3/8UF coupler and dust cap.
- Top and side mount lifting eye capability.



Apply to Single-acting, High tonnage cylinder SFCLP, SFCLL and SFCLS series

When stroke limit is reached; overflow port ("weep hole") spurt oil to prevents piston from being overextended.

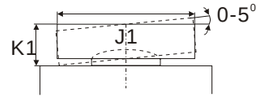
Optional Features

To add optional features to your cylinder, add the follow suffixes to the end of the model number.

Spring return : XF

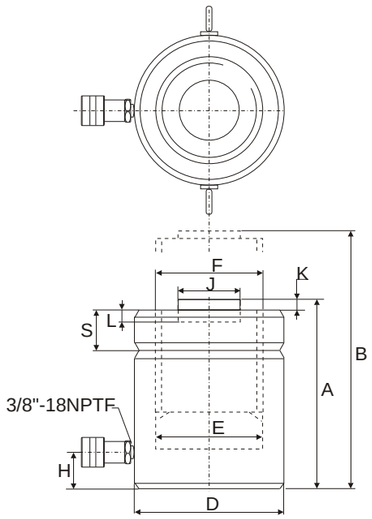
Example :
SFCLL-502 with spring return, order: SFCLL-502XF
Technical specifications for these features are available from SUN RUN.

Handle type		
(S) : Standard equipped		
(C) : Customer order		
W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

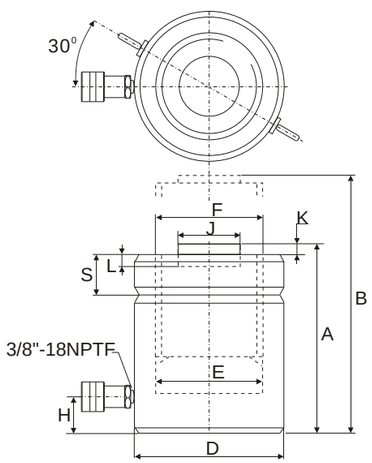


Handle type (S)	Model Number	Cylinder Cap. ton(kN)	Stroke (mm)	Effective Area (cm^2)	Coll. Height A (mm)	Wt. (kg)	Optional Tilt Saddle Model Number	Diam. J1(mm)	Height K1(mm)
E	SFCLL-502	50 (496)	50	70.9	164	15	XKCAT-100	71	24
E	SFCLL-504		100	70.9	214	20	XKCAT-100	71	24
E	SFCLL-506		150	70.9	264	25	XKCAT-100	71	24
E	SFCLL-508		200	70.9	314	30	XKCAT-100	71	24
E	SFCLL-5010		250	70.9	364	35	XKCAT-100	71	24
E	SFCLL-5012		300	70.9	414	40	XKCAT-100	71	24
E	SFCLL-1002	100 (929)	50	132.7	187	30	XKCAT-100	71	24
E	SFCLL-1004		100	132.7	237	39	XKCAT-100	71	24
E	SFCLL-1006		150	132.7	287	48	XKCAT-100	71	24
E	SFCLL-1008		200	132.7	337	56	XKCAT-100	71	24
E	SFCLL-10010		250	132.7	387	64	XKCAT-100	71	24
E	SFCLL-10012		300	132.7	437	73	XKCAT-100	71	24
E	SFCLL-1502	150 (1390)	50	198.6	209	53	XKCAT-200	130	20
E	SFCLL-1504		100	198.6	259	66	XKCAT-200	130	20
E	SFCLL-1506		150	198.6	309	78	XKCAT-200	130	20
E	SFCLL-1508		200	198.6	359	92	XKCAT-200	130	20
E	SFCLL-15010		250	198.6	409	104	XKCAT-200	130	20
E	SFCLL-15012		300	198.6	459	117	XKCAT-200	130	20
E	SFCLL-2002	200 (1859)	50	265.6	243	83	XKCAT-200	130	20
E	SFCLL-2006		150	265.6	343	117	XKCAT-200	130	20
E	SFCLL-20012		300	265.6	493	170	XKCAT-200	130	20
E	SFCLL-2502	250 (2562)	50	366.1	249	116	XKCAT-250	150	21
E	SFCLL-2506		150	366.1	349	162	XKCAT-250	150	21
E	SFCLL-25012		300	366.1	499	234	XKCAT-250	150	21
E	SFCLL-3002	300 (3193)	50	456.2	295	173	XKCAT-300	195	75
E	SFCLL-3006		150	456.2	395	233	XKCAT-300	195	75
E	SFCLL-30012		300	456.2	545	323	XKCAT-300	195	75
E	SFCLL-4002	400 (3919)	50	559.9	335	250	XKCAT-400	225	85
E	SFCLL-4006		150	559.9	435	327	XKCAT-400	225	85
E	SFCLL-40012		300	559.9	585	441	XKCAT-400	225	85
E	SFCLL-5002	500 (5118)	50	731.1	375	367	XKCAT-500	250	91
E	SFCLL-5006		150	731.1	475	466	XKCAT-500	250	91
E	SFCLL-50012		300	731.1	625	617	XKCAT-500	250	91
E	SFCLL-6002	600 (5983)	50	854.8	395	446	XKCAT-600	275	96
E	SFCLL-6006		150	854.8	495	562	XKCAT-600	275	96
E	SFCLL-60012		300	854.8	645	737	XKCAT-600	275	96
E	SFCLL-8002	800 (8238)	50	1176.9	455	709	XKCAT-800	320	123
E	SFCLL-8006		150	1176.9	555	870	XKCAT-800	320	123
E	SFCLL-80012		300	1176.9	705	1110	XKCAT-800	320	123
E	SFCLL-10002	1000 (10260)	50	1466.4	495	949	* —	360	136
E	SFCLL-10006		150	1466.4	595	1141	* —	360	136
E	SFCLL-100012		300	1466.4	745	1430	* —	360	136

* Capacity above 1000tons cylinders are equipped with tilt saddle.
If you want to opt fixed grooved saddle please connect to us order **SFXKCSLL-1000.**



SFCLL-50 to SFCLL-250 models



SFCLL-300 to SFCLL-1000models

Model Number	Cylinder Cap. ton(kN)	Stroke (mm)	Effective Area (cm^2)	Oil Cap. (cm^3)	Coll. Height A (mm)	Ext. Height B (mm)	Outside Diam. D (mm)	Bore Diam. E (mm)	Plunger Diam. (threaded) F (mm)	Base to Advance Port H (mm)	Stand. Saddle Diam. J (mm)	Saddle Protrusion from Plgr K (mm)	Depth of Plunger Hole L (mm)	Lock Nut Height S (mm)	Weight (kg)
SFCLL-502	50 (496)	50	70.9	355	164	214	125	95.0	Tr95x4	30	71	2	15	36	15
SFCLL-504		100	70.9	709	214	314	125	95.0	Tr95x4	30	71	2	15	36	20
SFCLL-506		150	70.9	1064	264	414	125	95.0	Tr95x4	30	71	2	15	36	25
SFCLL-508		200	70.9	1418	314	514	125	95.0	Tr95x4	30	71	2	15	36	30
SFCLL-5010		250	70.9	1773	364	614	125	95.0	Tr95x4	30	71	2	15	36	35
SFCLL-5012		300	70.9	2127	414	714	125	95.0	Tr95x4	30	71	2	15	36	40
SFCLL-1002	100 (929)	50	132.7	664	187	237	165	130.0	Tr130x6	30	71	2	15	44	30
SFCLL-1004		100	132.7	1327	237	337	165	130.0	Tr130x6	30	71	2	15	44	39
SFCLL-1006		150	132.7	1991	287	437	165	130.0	Tr130x6	30	71	2	15	44	48
SFCLL-1008		200	132.7	2654	337	537	165	130.0	Tr130x6	30	71	2	15	44	56
SFCLL-10010		250	132.7	3318	387	637	165	130.0	Tr130x6	30	71	2	15	44	64
SFCLL-10012		300	132.7	3981	437	737	165	130.0	Tr130x6	30	71	2	15	44	73
SFCLL-1502	150 (1390)	50	198.6	993	209	259	205	159.0	Tr159x6	39	130	2	25	44	53
SFCLL-1504		100	198.6	1986	259	359	205	159.0	Tr159x6	39	130	2	25	44	66
SFCLL-1506		150	198.6	2979	309	459	205	159.0	Tr159x6	39	130	2	25	44	78
SFCLL-1508		200	198.6	3972	359	559	205	159.0	Tr159x6	39	130	2	25	44	92
SFCLL-15010		250	198.6	4965	409	659	205	159.0	Tr159x6	39	130	2	25	44	104
SFCLL-15012		300	198.6	5958	459	759	205	159.0	Tr159x6	39	130	2	25	44	117
SFCLL-2002	200 (1859)	50	265.6	1330	243	293	235	184.0	Tr184x6	50	130	2	25	50	83
SFCLL-2006		150	265.6	3989	343	493	235	184.0	Tr184x6	50	130	2	25	50	117
SFCLL-20012		300	265.6	7995	493	793	235	184.0	Tr184x6	50	130	2	25	50	170
SFCLL-2502	250 (2562)	50	366.1	1832	249	299	275	216.0	Tr216x6	50	150	2	25	56	116
SFCLL-2506		150	366.1	5496	349	499	275	216.0	Tr216x6	50	150	2	25	56	162
SFCLL-25012		300	366.1	10976	499	799	275	216.0	Tr216x6	50	150	2	25	56	234
SFCLL-3002	300 (3193)	50	456.2	2281	295	345	310	241.0	Tr241x6	59	139	5	25	60	173
SFCLL-3006		150	456.2	6843	395	545	310	241.0	Tr241x6	59	139	5	25	60	233
SFCLL-30012		300	456.2	13740	545	845	310	241.0	Tr241x6	59	139	5	25	60	323
SFCLL-4002	400 (3919)	50	559.9	2800	335	385	350	267.0	Tr266x6	70	159	5	25	70	250
SFCLL-4006		150	559.9	8399	435	585	350	267.0	Tr266x6	70	159	5	25	70	327
SFCLL-40012		300	559.9	16800	585	885	350	267.0	Tr266x6	70	159	5	25	70	441
SFCLL-5002	500 (5118)	50	731.1	3653	375	425	400	305.0	Tr305x6	80	179	5	25	80	367
SFCLL-5006		150	731.1	10967	475	625	400	305.0	Tr305x6	80	179	5	25	80	466
SFCLL-50012		300	731.1	21930	625	925	400	305.0	Tr305x6	80	179	5	25	80	617
SFCLL-6002	600 (5983)	50	854.8	4277	395	445	430	330.0	Tr330x6	85	194	5	25	85	446
SFCLL-6006		150	854.8	12830	495	645	430	330.0	Tr330x6	85	194	5	25	85	562
SFCLL-60012		300	854.8	25650	645	945	430	330.0	Tr330x6	85	194	5	25	85	737
SFCLL-8002	800 (8238)	50	1176.9	5882	455	505	505	387.0	Tr387x6	100	224	5	25	100	709
SFCLL-8006		150	1176.9	17645	555	705	505	387.0	Tr387x6	100	224	5	25	100	870
SFCLL-80012		300	1176.9	35370	705	1005	505	387.0	Tr387x6	100	224	5	25	100	1110
SFCLL-10002	1000 (10260)	50	1466.4	7329	495	545	560	432.0	Tr432x6	110	249	5	25	110	949
SFCLL-10006		150	1466.4	21986	595	745	560	432.0	Tr432x6	110	249	5	25	110	1141
SFCLL-100012		300	1466.4	43980	745	1045	560	432.0	Tr432x6	110	249	5	25	110	1430

SFCLS Series

Single-Acting

High Tonnage Cylinder
Load return

Capacity:
50-1,000 ton

Stroke:
50-300 mm

Maximum Operating Pressure:
700 bar

SFCLS-1006

SFCLS-502

SFCLS Single-Acting, High Tonnage Cylinder

- Lowest collapsed height for use in confined spaces.
- Interchangeable, hardened grooved saddles are standard.
- Single-acting, load return.
- Overflow port functions as a stroke limiter.
- Hard chrome plated plunger resists wear and corrosion.
- Plunger wiper reduces contamination, extending cylinder life.
- Powder coat finish for increased corrosion resistance and antirust.
- SFQB-3/8UF coupler and dust cap are included on all models.

Cylinder Capacity

- More above 1000 tons cylinder capacity are also available.
- Please contact your distributor or the SFORCE office nearest to you for advice and technical as sistance in the layout of your ideal Lift System.

SFCLSR Optional Features

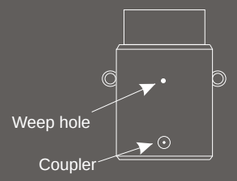
SFCLSR series cylinder can be designed in Double-acting, please connect to SFORCE.

Double-acting : SFCLSR

Feature

- SFCLS-series are equipped with interchangeable, hardened grooved saddles. (Except capacity above 1000tons)
- SFQB-3/8UF coupler and dust cap.
- Top and side mount lifting eye capability.

WARNING



Apply to Single-acting, High tonnage cylinder SFCLR, SFCLL and SFCLS series

When stroke limit is reached; overflow port ("weep hole") spurt oil to prevents piston from being overextended.

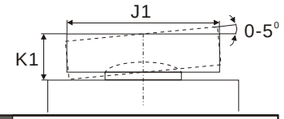
Optional Features

To add optional features to your cylinder, add the follow suffixes to the end of the model number.

Spring return : XF

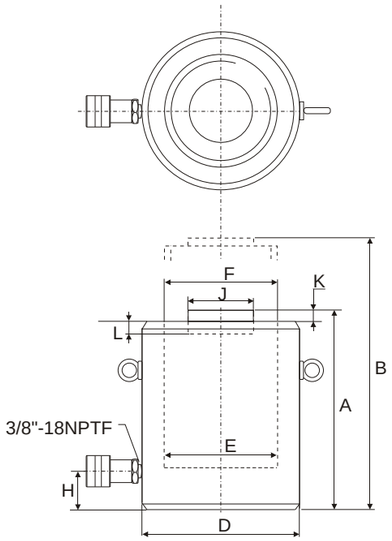
Example :
SFCLS-502 with spring return, order: SFCLS-502XF
Technical specifications for these features are available from SFORCE.

Handle type		
(S) : Standard equipped		
(C) : Customer order		
W		Weldable
E		Eyebolt
R		Removable strap handles
T		Thread

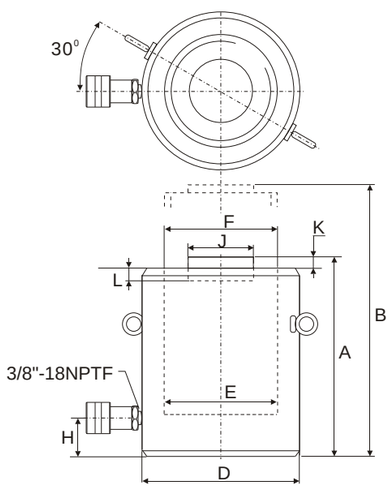


Handle type (S)	Model Number	Cylinder Cap. ton(kN)	Stroke (mm)	Effective Area (cm^2)	Coll. Height A (mm)	Wt. (kg)	選配傾斜墊塊 Optional Tilt Saddle Model Number	Diam. J1 (mm)	Height K1 (mm)
E	SFCLS-502	50 (496)	50	70.9	128	14	XKCAT-100	71	24
E	SFCLS-504		100	70.9	178	18	XKCAT-100	71	24
E	SFCLS-506		150	70.9	228	23	XKCAT-100	71	24
E	SFCLS-508		200	70.9	278	28	XKCAT-100	71	24
E	SFCLS-5010		250	70.9	327	33	XKCAT-100	71	24
E	SFCLS-5012		300	70.9	378	38	XKCAT-100	71	24
E	SFCLS-1002	100 (929)	50	132.7	143	24	XKCAT-100	71	24
E	SFCLS-1004		100	132.7	193	32	XKCAT-100	71	24
E	SFCLS-1006		150	132.7	243	40	XKCAT-100	71	24
E	SFCLS-1008		200	132.7	293	49	XKCAT-100	71	24
E	SFCLS-10010		250	132.7	343	58	XKCAT-100	71	24
E	SFCLS-10012		300	132.7	392	66	XKCAT-100	71	24
E	SFCLS-1502	150 (1390)	50	198.6	165	43	XKCAT-200	130	20
E	SFCLS-1504		100	198.6	215	55	XKCAT-200	130	20
E	SFCLS-1506		150	198.6	265	69	XKCAT-200	130	20
E	SFCLS-1508		200	198.6	315	82	XKCAT-200	130	20
E	SFCLS-15010		250	198.6	365	95	XKCAT-200	130	20
E	SFCLS-15012		300	198.6	414	108	XKCAT-200	130	20
E	SFCLS-2002	200 (1859)	50	265.6	193	66	XKCAT-200	130	20
E	SFCLS-2006		150	265.6	293	101	XKCAT-200	130	20
E	SFCLS-20012		300	265.6	443	154	XKCAT-200	130	20
E	SFCLS-2502	250 (2562)	50	366.1	193	90	XKCAT-250	150	21
E	SFCLS-2506		150	366.1	293	137	XKCAT-250	150	21
E	SFCLS-25012		300	366.1	443	208	XKCAT-250	150	21
E	SFCLS-3002	300 (3193)	50	456.2	235	137	XKCAT-300	195	75
E	SFCLS-3006		150	456.2	335	198	XKCAT-300	195	75
E	SFCLS-30012		300	456.2	485	288	XKCAT-300	195	75
E	SFCLS-4002	400 (3919)	50	559.9	265	200	XKCAT-400	225	85
E	SFCLS-4006		150	559.9	365	275	XKCAT-400	225	85
E	SFCLS-40012		300	559.9	515	390	XKCAT-400	225	85
E	SFCLS-5002	500 (5118)	50	731.1	295	289	XKCAT-500	250	91
E	SFCLS-5006		150	731.1	395	390	XKCAT-500	250	91
E	SFCLS-50012		300	731.1	545	540	XKCAT-500	250	91
E	SFCLS-6002	600 (5983)	50	854.8	310	350	XKCAT-600	275	96
E	SFCLS-6006		150	854.8	410	465	XKCAT-600	275	96
E	SFCLS-60012		300	854.8	560	640	XKCAT-600	275	96
E	SFCLS-8002	800 (8238)	50	1176.9	355	549	XKCAT-800	320	123
E	SFCLS-8006		150	1176.9	455	709	XKCAT-800	320	123
E	SFCLS-80012		300	1176.9	605	950	XKCAT-800	320	123
E	SFCLS-10002	1000 (10260)	50	1466.4	385	729	* —	360	136
E	SFCLS-10006		150	1466.4	485	921	* —	360	136
E	SFCLS-100012		300	1466.4	635	1210	* —	360	136

* Capacity above 1000tons cylinders are equipped with tilt saddle.
If you want to opt fixed grooved saddle please connect to us order **SFXKCSLL-1000.**



SFCLS-502 to SFCLS-25012



SFCLS-3002 to SFCLS-100012

Model Number	Cylinder Cap. ton(kN)	Stroke (mm)	Effective Area (cm^2)	Oil Cap. (cm^3)	Coll. Height A (mm)	Ext. Height B (mm)	Outside Diam. D (mm)	Bore Diam. E (mm)	Plunger Diam. F (mm)	Base to Advance Port H (mm)	Standard Saddle Diam. J (mm)	Saddle Protrusion from Plngr. K (mm)	Depth of plunger Hole L (mm)	Weight (kg)
SFCLS-502	50 (496)	50	70.9	355	128	178	125	95.0	95.0	30	71	2	15	14
SFCLS-504		100	70.9	709	178	278	125	95.0	95.0	30	71	2	15	18
SFCLS-506		150	70.9	1064	228	378	125	95.0	95.0	30	71	2	15	23
SFCLS-508		200	70.9	1418	278	478	125	95.0	95.0	30	71	2	15	28
SFCLS-5010		250	70.9	1773	327	578	125	95.0	95.0	30	71	2	15	33
SFCLS-5012		300	70.9	2127	378	678	125	95.0	95.0	30	71	2	15	38
SFCLS-1002	100 (929)	50	132.7	664	143	193	165	130.0	130.0	30	71	2	15	24
SFCLS-1004		100	132.7	1327	193	293	165	130.0	130.0	30	71	2	15	32
SFCLS-1006		150	132.7	1991	243	393	165	130.0	130.0	30	71	2	15	40
SFCLS-1008		200	132.7	2654	293	493	165	130.0	130.0	30	71	2	15	49
SFCLS-10010		250	132.7	3318	343	593	165	130.0	130.0	30	71	2	15	58
SFCLS-10012		300	132.7	3981	392	693	165	130.0	130.0	30	71	2	15	66
SFCLS-1502	150 (1390)	50	198.6	993	165	215	205	159.0	159.0	39	130	2	25	43
SFCLS-1504		100	198.6	1986	215	315	205	159.0	159.0	39	130	2	25	55
SFCLS-1506		150	198.6	2979	265	415	205	159.0	159.0	39	130	2	25	69
SFCLS-1508		200	198.6	3972	315	515	205	159.0	159.0	39	130	2	25	82
SFCLS-15010		250	198.6	4965	365	615	205	159.0	159.0	39	130	2	25	95
SFCLS-15012		300	198.6	5958	414	715	205	159.0	159.0	39	130	2	25	108
SFCLS-2002	200 (1859)	50	265.6	1330	193	243	235	183.9	183.9	50	130	2	25	66
SFCLS-2006		150	265.6	3989	293	443	235	183.9	183.9	50	130	2	25	101
SFCLS-20012		300	265.6	7977	443	743	235	183.9	183.9	50	130	2	25	154
SFCLS-2502	250 (2562)	50	366.1	1832	193	243	275	215.9	215.9	50	150	2	25	90
SFCLS-2506		150	366.1	5496	293	443	275	215.9	215.9	50	150	2	25	137
SFCLS-25012		300	366.1	10996	443	743	275	215.9	215.9	50	150	2	25	208
SFCLS-3002	300 (3193)	50	456.2	2281	235	285	310	241.0	241.0	59	139	5	25	137
SFCLS-3006		150	456.2	6843	335	485	310	241.0	241.0	59	139	5	25	198
SFCLS-30012		300	456.2	13710	485	785	310	241.0	241.0	59	139	5	25	288
SFCLS-4002	400 (3919)	50	559.9	2800	265	315	350	267.0	267.0	70	159	5	25	200
SFCLS-4006		150	559.9	8399	365	515	350	267.0	267.0	70	159	5	25	275
SFCLS-40012		300	559.9	16770	515	815	350	267.0	267.0	70	159	5	25	390
SFCLS-5002	500 (5118)	50	731.1	3656	295	345	400	305.1	305.1	80	179	5	25	289
SFCLS-5006		150	731.1	10967	395	545	400	305.1	305.1	80	179	5	25	390
SFCLS-50012		300	731.1	21900	545	845	400	305.1	305.1	80	179	5	25	540
SFCLS-6002	600 (5983)	50	854.8	4277	310	360	430	329.9	329.9	85	194	5	25	350
SFCLS-6006		150	854.8	12830	410	560	430	329.9	329.9	85	194	5	25	465
SFCLS-60012		300	854.8	25710	560	860	430	329.9	329.9	85	194	5	25	640
SFCLS-8002	800 (8238)	50	1176.9	5882	355	405	505	387.1	387.1	100	224	5	25	549
SFCLS-8006		150	1176.9	17645	455	605	505	387.1	387.1	100	224	5	25	709
SFCLS-80012		300	1176.9	35370	605	905	505	387.1	387.1	100	224	5	25	950
SFCLS-10002	1000 (10260)	50	1466.4	7329	385	435	560	432.1	432.1	110	249	5	25	729
SFCLS-10006		150	1466.4	21986	485	635	560	432.1	432.1	110	249	5	25	921
SFCLS-100012		300	1466.4	43950	635	935	560	432.1	432.1	110	249	5	25	1210

SFPH/ SFP Series

Manual Pump

Light Weight /
Steel hand pump

Reservoir Capacity:
400-7,400 cm^3

Flow at Rated Pressure:
1.25-4.75 cm^3

Maximum Operating Pressure:
700 bar

Optional Features

To add optional features to your pump, add the follow suffixes to the end of the model number.

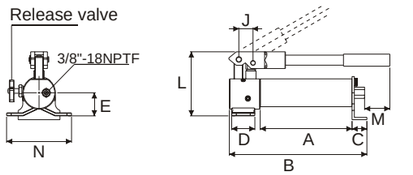
4 ways control Valve : Model D

Example :

SFPH-2000 with 4 ways control valve, order: SFPH-2000D.Technic
SFPecifications for these features are available from SFORCE.

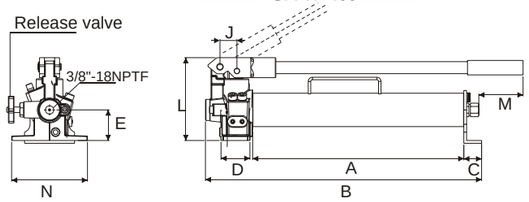
SFPH Steel Hand Pump

- Internal pressure relief valve for overload protection.
- Large oil capacity, suitable for wide application.
- Two speed auto-switch reduces manpower and increase efficiency.



SFPH -400

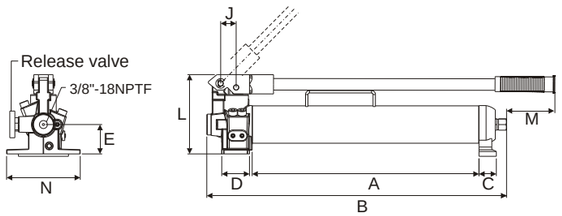
SFPH-400



SFPH-900 SFPH -2000

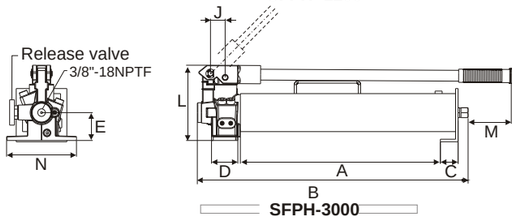
SFPH-900

SFPH-2000



SFPH -1200

SFPH-1200



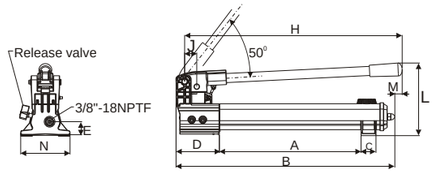
SFPH-3000

SFPH-3000

Model Number	Pump Type	Usable Oil Capacity	Pressure Rating		Oil DiSFPlacement per Stroke		Piston Stroke	Dimensions(mm)									Weight (include oil)
			1st stage	2nd stage	1st stage	2nd stage		A	B	C	D	E	J	L	M	N	
		(cm^3)	(bar)		(cm^3)		(mm)										(kg)
SFPH-400	單速 S/S	400	14	700	2.5	1.25	22	200	296	32.0	50	50	29	142	45	140	5.0
SFPH-900	雙速 Two - SFPeed	900	14	700	12.5	2.8	21	410	510	32.5	45	55	29	150	60	136	7.5
SFPH-1200		1200	14	700	12.5	2.8	19	425	536	32.5	48	55	29	150	65	137	9.0
SFPH-2000		2000	14	700	14.5	2.8	21	425	536	32.5	45	55	29	150	60	136	10.5
SFPH-3000		3000	14	700	14.5	2.8	21	425	562	45.0	48	55	29	150	65	137	13.6

SFP-392 Light Weight, Two-SFPeed Hand Pump

- Internal pressure relief valve for overload protection.
- Durable glass-filled nylon reservoir and nylon encapsulated aluminum pump baser for maximum corrosion resistance.
- Two SFPeed operation reduces handle strokes by as much as 78% over single SFPeed pumps.
- Lower handle effort to minimize operator fatigue.
- Handle lock and lightweight construction for easy carrying.
- Non-conductive fiberglass handle for operator safety.

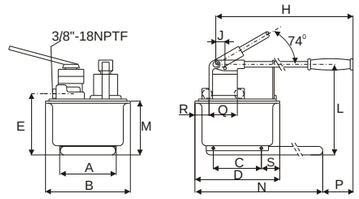


SFP-392

SFP-392

SFP-46 Steel, Two-SFPeed Hand Pump

- Internal pressure relief valve for overload protection.
- 4-Way valving on the SFP-464 for operation of double-acting cylinder.
- External load release valve on the SFP-46 series.
- Large oil capacity to power a wide range of cylinders or tools.



SFP-462 / SFP-464

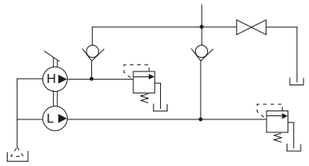
SFP-462 SFP-464

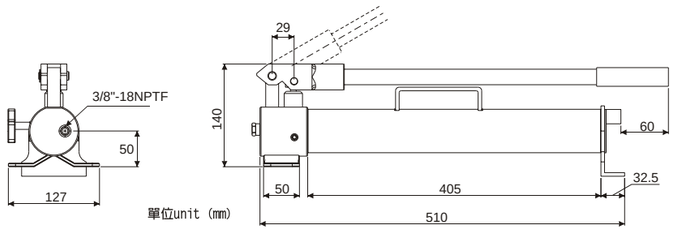
Model Number	Pump Type	Usable Oil Capacity	Pressure Rating		Oil DiSFPlacement per Stroke		Max. Handle Effort	Piston Stroke	Dimensions(mm)		
			1st stage	2nd stage	1st stage	2nd stage					
		(cm^3)	(bar)		(cm^3)		(kg)	(mm)	A	B	C
SFP-392	雙 速 Two - SFPeed	901	13	700	11.26	2.47	42.2	25.4	344	533	36
SFP-462		7423	14	700	126.20	4.75	50.0	38.1	210	308	163
SFP-464		7423	14	700	126.20	4.75	50.0	38.1	210	308	163

Model Number	Dimensions(mm)											Weight
	D	E	H	J	L	M	N	P	Q	R	S	
												(kg)
SFP-392	99	33	522	30	177	16	120	—	—	—	—	4.1
SFP-462	320	195	671	25	270	175	650	92	—	—	80	27.7
SFP-464	320	195	671	25	270	175	650	92	89	68	80	27.7

SFPHW Water/ Hydraulic Manual Pump

- Manual pump whose hydraulic fluid is "water" and can increase the pressure up to 700bar.
- Special rust-proof treatment is performed to the stainless-steel materials or special steel where the pump contacts water.
- Can be used in a place where the usage of oil is hesitated.
- A safe mechanism incorporating a safety valve like other time-tested 700 bar series.
- Automatic high-low pressure switching pump for improved work efficiency.

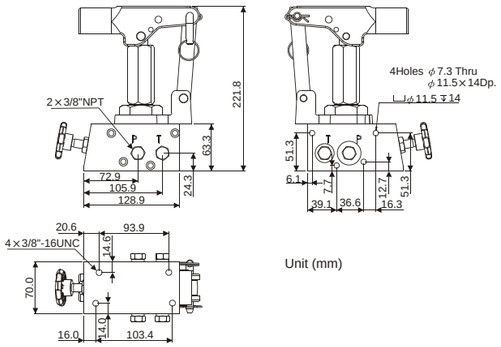




Model Number	Pressure Rating (psi)/(bar)		Output flow rate (c.c/stroke)		Water capacity	Weight (No water)
	1st stage	2nd stage	1st stage	2nd stage	(c.c)	(kg)
SFPHW-900	290(20)	10,000(700)	13.0	2.3	900	5.7

SFPHP Special Application Pump Head

- Adjustable linkage for reduced handle force.
- Swivel pump head for flexible fixturing.
- Wide range of operating pressures to select from.
- Design for tight mounting space, backup manual power or lower pressure and high flows.
- Desing for applications when pumps oil tank need to be changed.



Model No.	Pressure Rating (psi)/(bar)	Volume (c.c/stroke)	Max. Handle Eff. (kgf)	Weight (kg)
SFPHP-50	750(50)	75	36	5
SFPHP-70	1,000(70)	35	48	5
SFPHP-210	3,000(210)	22	54	4
SFPHP-450	6,500(450)	9	54	4
SFPHP-700	10,000(700)	5	54	4

SFPE-3000 Hydraulic Electric Pump

- Requires less energy, simple and easy to operate.
- Suitable for any industrial application.
- Handle and casing built together.
- Equipped with 10ft remote line
- Carbon brushless motor, working frequently.

SFPE-3000 Series

Electric Pump

Light Weight pump

Reservoir Capacity:	3000-6000c.c
Flow at rated pressure:	4-0.4 L
Motor Size:	0.37kW(0.5 hp)
Maximum Operating Pressure:	700 bar

Custom build your Electric Pump:

SFPE-3000 A 1 5 1 LT PG
(1 2 3 4 5 6)

1.Valve
- **A. 3way/ 2position built-in Solenoid Valve**：Advance Hold Return
- **B. Remote Release Pressure**：Advance Return (Ideal for punching, crimping and cutting)
- **C.3way/ 2position Manual Valve**：Advance Hold Manual return
- **D.4way/ 3position Manual Valve**：Advance Hold Manual return

2.Voltage/A
- 1=115V/7.5A
- 2=230V/2.8A

3.Hz
- 5=50/60Hz

4.Phase
- 1=1ph

5.Reservoir
- No word=3000c.c PU reservoir
- LT=6000c.c Iron reservoir
- ★User can order suitable reservoir.

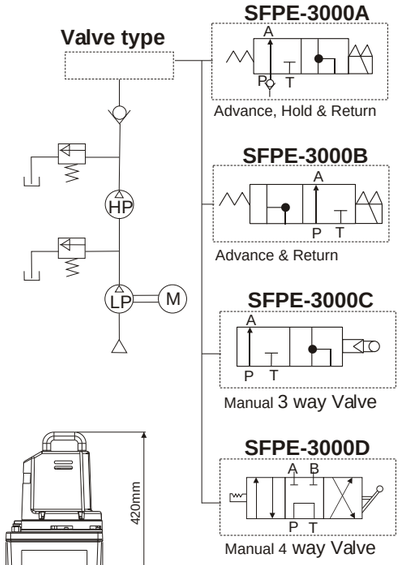
6.fitting
- P=Pressure adjust switch
- G=Pressure gauge

SFPE-3000A & SFPE-3000B

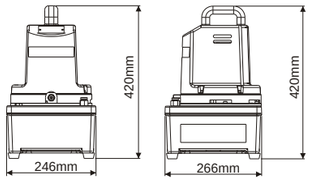
Control Valve

A single-acting cylinder must be powered by a pump with a 3-way solenoid (built-in) or manual valve.
Compare Model：**SFPE-3000APS (solenoid) or SFPE-3000CPS (manual)**

A double-acting cylinder must be powered by a pump with a 4-way valve. **Compare Model**：**SFPE-3000D**



BASIC PUMP VALVE	Used with cylinder		Valve Function		
Manual 3 way Valve	●		●	●	●
Manual 4 way Valve		●	●	●	●



Model Number	Motor	Max.Pressure	Pressure Rating (psi)/(bar)		Output flow rate (L/min)		DBA at Idle and 700bar	Weight (include oil)	Dimension
	kW(hp)	(psi)/(bar)	1st stage	2nd stage	1st stage	2nd stage		(kg)	(mm)
SFPE-3000	0.37(0.5)	10,000(700)	200(14)	10,000(700)	4	0.4	85-90	14.5	250*270*400
SFPE-3000 LT	0.37(0.5)	10,000(700)	200(14)	10,000(700)	4	0.4	85-90	28	300*350*460

SFPE-554TQJ Series

Electric Pump

Industrial Application
Electric Pump

Reservoir Capacity:
8-20L

Flow at rated pressure:
11.3-0.9 L

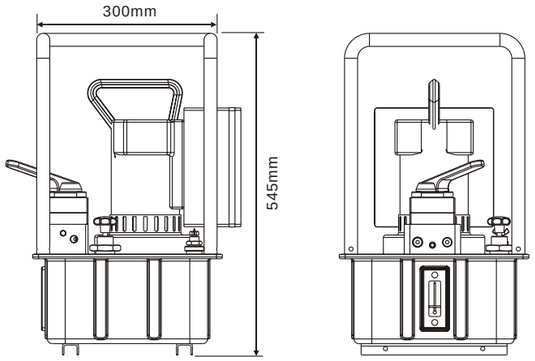
Motor Size:
0.84kW(1-1/8 hp)

Maximum Operating Pressure:
700 bar

SFPE-554TQJ Hydraulic Electric Pump

- External adjustable pressure regulator.
- SPE-554TQ series: just use with Hydraulic Torque Wrench(see page79).
- SFPE-554TQJ series: just use with Hydraulic lift applications.
- 3M(10 ft) remote motor control .
- Stainless frame easy to carry.

SFPE-554TQJ



Custom build your Electric Pump:

SFPE-554TQJ 1 5 1 8 4 WO
0 1 2 3 4 5 6

0.Type
TQ= just use in Torque Wrench
TQJ= using in lift applications

1.Voltage
1=115V
2=230V

2.Hz
5=50Hz
6=60Hz

3.Phase
1=1ph

4.Reservoir (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★User can order suitable reservoir.

5.Valve (just use in TQJ series)
3=Manual 3Way
4=Manual 4Way

6.Optional
W=Castor wheel
O=Cool system

Model Number	Rpm	DBa at Idle and 700bar	Motor kW (hp)	Amp at 700bar	Flow rate @230VAC(L/min) 0 (bar)	50 (bar)	350 (bar)	700 (bar)	Oil tank (L)	Usable oil (L)	Weight (with oil) (kg)
SPE-554	12000	80	0.84 (1-1/8)	25 /110V 10.7 /230V	11.3	7.1	1.2	0.9	8	7	32

SFPE-2 Hydraulic Electric Pump

- Two stage models for reduced cycle times and improved productivity.
- Easy to customize with modular accessory kits.
- User adjustable external relief valve with a factory set upper limit prevents system overload.
- Easy to read integrated oil level sight glass.
- Totally enclosed fan-cooled motors are ideal for outdoor use in many environments.

SFPE-2 Series

Electric Pump

Industrial Application
Electric Pump

Reservoir Capacity:
20-60L

Flow at rated pressure:
10.5-1 L

Motor Size:
1.5kW(2 hp)

Maximum Operating Pressure:
700 bar

SFPE-2153202

Custom build your Electric Pump:

SFPE-2 2 3 3 20 3 CW
1 2 3 4 5 6 7

1.Motor
2=2Hp(1.5kw)

2.Voltage
2=230V
3=380V

3.Hz
5=50Hz
6=60Hz

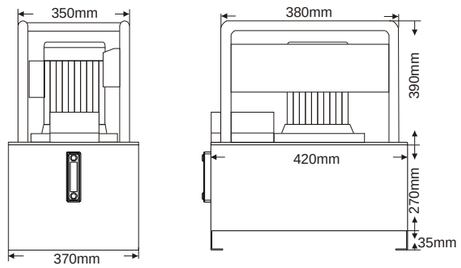
4.Phase
1=1ph
3=3ph

5.Reservoir (Lx0.26=gal)
20=20L(5.2gal)
40=40L(10.5gal)
60=60L(15.8gal)
★User can order suitable reservoir.

6.Valve
3=Manual 3Way
4=Manual 4Way
5=Solenoid 3way
6=Solenoid 4Way

7.Optional
C=Remote control
W=Wheel

Optional



BASIC PUMP VALVE	Used with cylinder		Valve Function		
Manual 3 way Valve	●		●	●	●
Manual 4 way Valve		●	●	●	●

Model Number	Motor kW (hp)	Operation	Flow Rate (L/min) 1st stage	2nd stage	Pressure Rating (bar) 1st stage	2nd stage	Rpm	DBA at Idle and 700bar	Weight (20Lreservoir no oil) (kg)
SFPE-2	1.5 (2)	Two-stage 雙速操作	10.5	1	55	700	1725	70-79	55.5

※型錄標示重量及尺寸為20L空油箱範例，其他油箱高度及重量依實品略有不同。
Product weight and reservoir high will be changed by different reservoir.
Catalog sample is 20L no oil reservoir.

SFPA-70 Series

Air Pump

Light Weight, Pedal Pump

Reservoir Capacity:
800-1200 c.c

Flow at rated pressure:
450 c.c/min (no load)

Air press.:
6-10 kgf/cm²

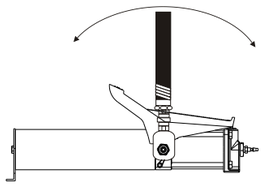
Maximum Operating Pressure:
700 bar

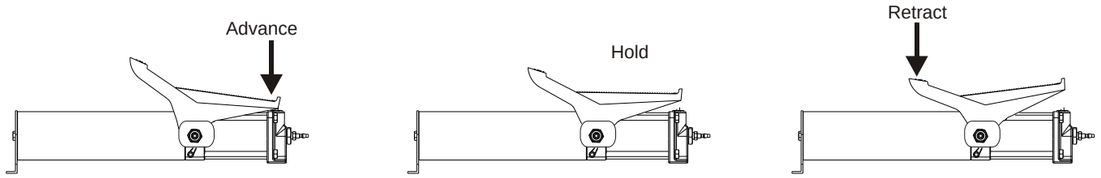
SFPA Air Hydraulic Pumps

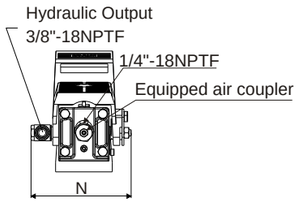
- High efficiency in pressure buildup, low breakdown.
- High pressure output, light weight by aluminum Alloy design.
- Extensive use for customers and lower noise.
- Multi-filters reduce contamination and damage.
- Swivel coupling simplifies hydraulic connection and pump operation.
- Three-position treadle provides cylinder advance, hold and retract operation.
- Equipped with air coupler, easy for using.

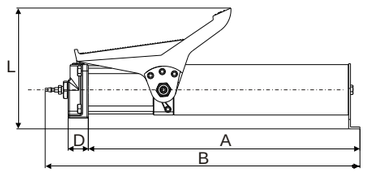
SFPA-70FL

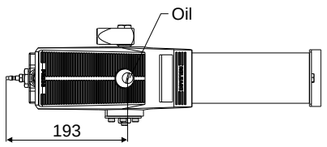
SFPA-70F







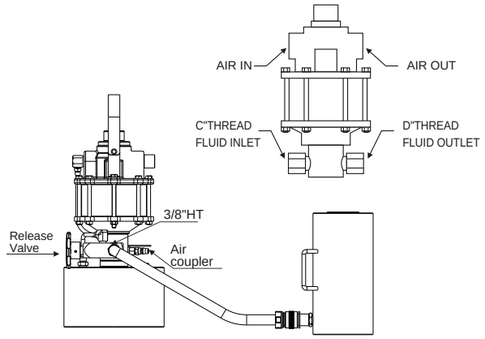




Model Number	Used with Cylinder	Usable Oil Capacity	Pressure Rating		Air Pressure Range	Output Flow Rate (noload)	Dimensions(mm)					Compression Ratio
		(c.c.)	(bar)	(psi)	(kgf/cm²)	(c.c/min)	A	B	D	L	N	
SFPA-70F	單動 Single Acting	800	700	10,000	6-10	450	432	500	32	192	159	1:100
SFPA-70FL		1200	700	10,000	6-10	450	542	610	32	192	159	1:100

SFPAT

Portable Air Pump



SFPAT-130-700

SFPAT/ Q/ W Series

Air Pump

High Effect Air Pump

Reservoir Capacity:
2-5.6 L

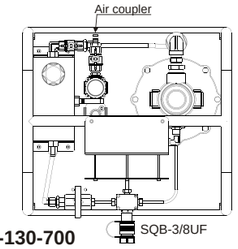
Flow at rated pressure:
2.5-9.5 c.c/ per stroke

Air press:
5-7 kg/cm²

Maximum Operating Pressure:
300-700 bar

SFPAQ

Frame Air Pump



SFPAQ-130-700

SFPAQ

- Steel base and frame.
- Easy to carry.

SFPAW

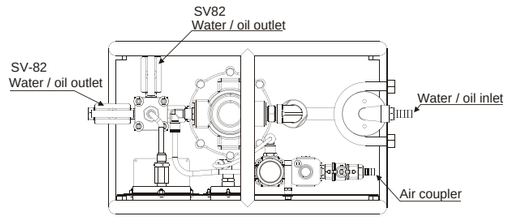
- Air units (F.R.L.Unit) provide filter、regulator and lubricate
- Input water filter which provide protect.
- Steel base.
- Liquid can be oil or water.

SFPAW

Hydrostatic Pump

Steel frame

Standard type



SFPAW-130-300F

SFPAW-130-700F

Description	Model Number	Compress Ratio	Output oil	Work press.	Air press.	Equipped reservoir	Weight	Dimensions		
			(cm³/per stroke)	(bar)	(kgf/cm²)	(c.c)	(kg)	C	D	(mm)
Portable	SFPAT-130-700	1:150	2.5	700	5~7	2000	9	—	1/2"PT-14	Ø220x420L
Steel Frame	SFPAQ-130-700F	1:150	2.5	700	5~7	5600	25	1/2"PT	1/2"PT	400*400*420
Steel Frame	SFPAQ-180-700F	1:150	9.5	700	5~7	5600	28	1/2"PT	1/2"PT	500*500*520
Standard type	SFPAW-130-300L	1:60	6.4	300	5~7	—	25	1/2"PT	1/2"PT	650*300*300
Steel Frame	SFPAW-130-300F	1:60	6.4	300	5~7	—		1/2"PT	1/2"PT	500*300*420
Steel Frame	SFPAW-130-700F	1:150	2.5	700	5~7	—		1/2"PT	1/2"PT	

※Reservoir will be changed by user. ※Weight and dimension will be changed by reservoir alter.

SFPEGM Series

Gasoline Pump

Pump

Reservoir Capacity:
8 L

Flow at rated pressure:
0.78-5.5 L

Motor size:
3.2 Kw (4hp)

Maximum Operating Pressure:
700 bar

SFPEGM Hydraulic Gasoline Pump

- Vary reservoirs for use with a wide range of cylinders and application.
- All pumps feature sturdy Roll Cages for use in tough environments.
- High by-pass pressure improve productivity on all model.

Custom build your Electric Pump:

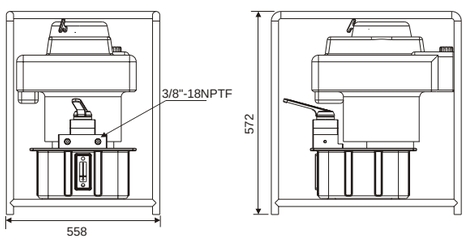
SFPEGM-4 8 4 CW
1 2 3 4

1.Motor
4=4hp(3.2kw)

2.Reservoir (Lx0.26=gal)
8=8L(2.1gal)
★User can order suitable reservoir.

3.Valve
3=Manual 3Way
4=Manual 4Way

4.Optional
C=Remote control
W=Wheel



單位 unit (mm)

BASIC PUMP VALVE	Used with cylinder		Valve Function		
Manual 3 way Valve	●		●	●	●
Manual 4 way Valve		●	●	●	●

Model Number	Motor Type/ size	Flow Rate (L/min) 1st stage	Flow Rate (L/min) 2nd stage	Valve Function	DBA at Idle and 700bar	Weight (kg)
SFPEGM	Honda-4hp	5.5	0.78	Advance/Hold/ Retract	90	54

SFPSC Synchronous Lift System

- 4 to 64 points, load and stroke monitored and controlled.
- Capacities from 10 up to 1000 ton per lifting point.
- Up to 1mm accuracy over full plunger stroke.
- PLC-control unit with user-friendly touch screen.
- Automatic data storage.
- System secured with warning and stop features to achieve optimal safety.

SFPSC Series

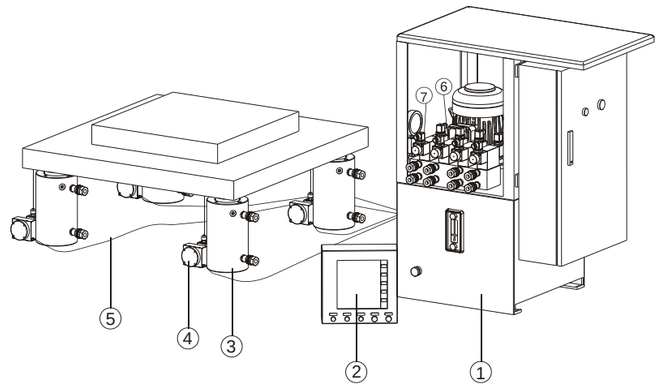
Synchronous Lift System

Capacity per Lifting point:
10-1000 tons

Max. Stroke:
5000mm

Maximum Operating Pressure:
700 bar

System Options:
Load and force measurement.
Load cell for precise force measurement up to 0.1% of full scale.
Digital stroke sensors for:
up to 0.1mm accuracy over full stroke.
up to max. 1km distance between control unit and lifting points.
Two-axis tilting control to level structures.
Oil heater or heat exchange for extreme conditions.



1.Hydraulic Pump
2.PLC-control screen
3.Hydraulic Cylinder
4.Stroke sensors
5.Sensor cables
6.Solenoid control valves
7.Pressure transducer

Features	Basic	Premium
Analog stroke sensors	×	×
Digital stroke sensors	–	○
Stroke controlled movement	×	×
Load controlled movement	–	×
Max. Accuracy (depends on components)	±1.0mm	±0.1mm
Recording capabilities	–	×
Graphical representation	–	○
Intercommunication capabilities	–	○
Sensor cables	×	×

Basic & Premium System Management & Control Features
X=Standard, O=Optional

Alarms	Basic	Premium
Stroke limitation	×	×
Load limitation	–	×
Low oil level	–	×
Oil filter warning	–	×
Oil temperature warning	–	×

SFQB Series

Couplers

Maximum Flow Capacity:
41L/min

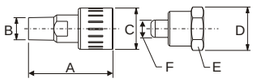
Thread:
1/4"-3/8" NPTF

Maximum Operating Pressure:
700 bar

SFQB Hydraulic Couplers

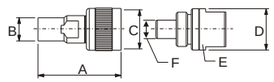
- High flow rate and high pressure resistance.
- Dust cap include on all models.

Female Male



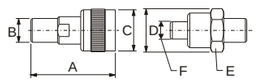
SFQB-1/4T

Female Male



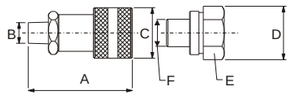
SFQB-3/8J

Female Male



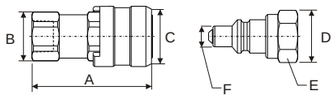
SFQB-3/8T

Female Male



SFQB-3/8U

Female Male



SFQB-37

Model Number	Female Model	Male Model	Dimension(mm)					
			A	B NPTF / PT	C	D	E	F
SFQB-1/4T	SFQB-1/4TF	SFQB-1/4TM	58.5	1/4"-18NPT	28.6	30.0	26.0	φ10.0
SFQB-3/8J	SFQB-3/8JF	SFQB-3/8JM	59.0	3/8"-19PT	30.5	28.0	24.0	φ12.7(1/2")
SFQB-3/8T	SFQB-3/8TF	SFQB-3/8TM	58.5	3/8"-18NPTF/PT	28.5	33.0	28.0	φ12.0
SFQB-3/8U	SFQB-3/8UF	SFQB-3/8UM	72.0	3/8"-18NPTF/PT	35.0	37.0	32.0	φ19.05(3/4")
SFQB-37	SFQB-371F	SFQB-372M	64.0	3/8"-18NPTF/PT	32.0	28.5	24H	φ11.25(7/16")

SFXU Heigh Pressure Hydraulic Hoses

- Tube：Oil resistan synthetic rubber.
- Cover：Oil, abrasion and weather aging resistant synthetic rubber.
- Temp.Range：-40˚C~+93˚C
- Max. change in length：-4%~+2%(under W.P.)
- Reinforcement：Two layers of steel wire braids.

◎ Operating temperature in excess of 93˚C may materially reduce the service life of hose assembly.

How is a hydraulic hose model number is built up:

SFXU2-1.6M3NM3NM-S
1 2 3 4 5

1.Tube dimension
2=1/4in (6.4mm)
3=3/8in(9.5mm)

2.Length
1ft≒0.3Meter
1Meter≒3.3ft

3.End one
3NM=3/8NPTF(Male)
3PM=3/8PTF(Male)

4.End two
3NM=3/8NPTF(Male)
3NF=3/8NPTF(Female)
3PM=3/8PTF(Male)
3PF=3/8PTF(Female)

5.Spring circle S=Spring circle

1/4"NPTF(Male)

1/4"NPTF(Female)

3/8"NPTF(Male)

3/8"NPTF(Female)

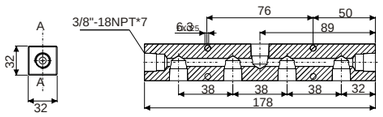
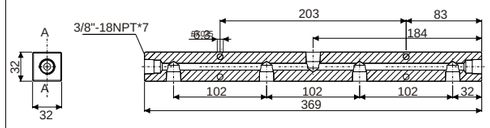
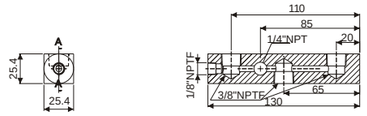
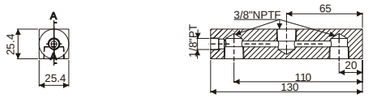
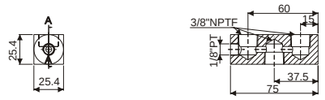
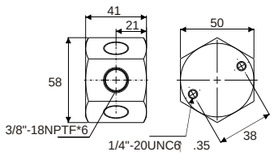
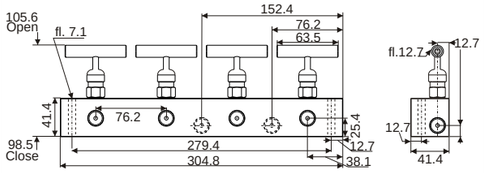
Model Number	Tube dimension (I.D)	Hose End Assemblies		Length	Work pressure	Broken pressure	Min. B.R.	Weight
	(in/mm)	End one	End two	M	(bar)	(bar)	(mm)	(kg/m)
SFXU2-1.6M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	1.6	700	1400	100	0.4
SFXU2-1.8M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	1.8	700	1400	100	0.4
SFXU2-2M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	2	700	1400	100	0.4
SFXU2-3M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	3	700	1400	100	0.4
SFXU2-4M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	4	700	1400	100	0.4
SFXU2-5M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	5	700	1400	100	0.4
SFSFXU2-6M3NM3NM-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	6	700	1400	100	0.4
SFXU2-1.6M3NM3NF-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Female)	1.6	700	1400	100	0.4
SFXU2-2M3NM3NF-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"NPTF(Female)	2	700	1400	100	0.4
SFXU2-3M3NM3PF-S	1/4 (6.4)	3/8"NPTF(Male)	3/8"PTF(Female)	3	700	1400	100	0.4
SFXU2-1.8M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	1.8	700	1400	100	0.4
SFXU2-2M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	2	700	1400	100	0.4
SFXU2-2.5M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	2.5	700	1400	100	0.4
SFXU2-3M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	3	700	1400	100	0.4
SFXU2-5.5M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	5.5	700	1400	100	0.4
SFXU2-6M3PM3PM-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Male)	6	700	1400	100	0.4
SFXU2-1.8M3PM3PF-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Female)	1.8	700	1400	100	0.4
SFXU2-2M3PM3PF-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Female)	2	700	1400	100	0.4
SFXU2-3M3PM3PF-S	1/4 (6.4)	3/8"PTF(Male)	3/8"PTF(Female)	3	700	1400	100	0.4
SFXU3-2M3NM3NM-S	3/8 (9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	2	700	1400	100	0.4
SFXU3-3M3NM3NM-S	3/8 (9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	3	700	1400	100	0.4
SFXU3-4M3NM3NM-S	3/8 (9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	4	700	1400	100	0.4
SFXU3-5M3NM3NM-S	3/8 (9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	5	700	1400	100	0.4
SFXU3-6M3NM3NM-S	3/8 (9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	6	315	1260	127	0.67
SFXU3-2M3PM3PF-S	3/8 (9.5)	3/8"PTF(Male)	3/8"PTF(Male)	2	315	1260	127	0.67
SFXU3-3M3PM3PM-S	3/8 (9.5)	3/8"PTF(Male)	3/8"PTF(Male)	3	315	1260	127	0.67

SFA Series

Manifolds

Maximum Operating Pressure:
700 bar

SFA Manifolds

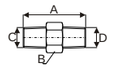
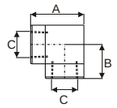
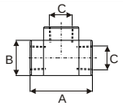
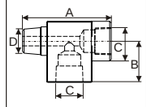
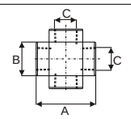
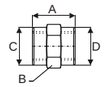
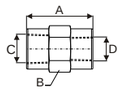
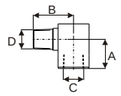
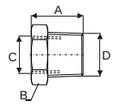
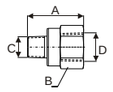
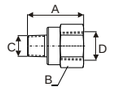
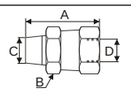
	Model Number	Description	Dimensions (mm)
SFA-65 SFA-64	SFA-64	178mmLong Manifold with 7 female ports.	
	SFA-65	369mmLong Manifold with 7 female ports	
SFA-25G	SFA-25G	130mmLong Manifold 3/8"-18NPTF Female port：3 1/8"NPT Female port：1 1/4"NPT Female port：1	
SFA-25	SFA-25	130mmLong Manifold 3/8"-18NPTF Female port：3 1/8"NPT Female port：1	
SFA-23	SFA-23	75mmLong Manifold 3/8"-18NPTF Female port：3 1/8"NPT Female port：1	
SFA-66	SFA-66	6-Port Hexagon Manifold Plugs furnished for all ports 3/8"-18NPTF	
SFASM-2	SFASM-2 2 control bars SFASM-4 4 control bars	**Premounted Manifold** Functions as split-flow valve to control 2~4 single-acting cylinders simultaneously. All ports 3/8"-18NPTF	

SFZ Fitting

SFZ Series

Fitting

Maximum Operating Pressure:
700 bar

	Model No.	Description From	Description To		Dimension(mm) A	B	C	D
Hex Nipple	SFZ-1608	1/4"-NPTF Male	1/4"-NPTF Male		38	16	1/4"-18NPTF	1/4"-18NPTF
	SFZ-1617	3/8"-NPTF Male	3/8"-NPTF Male		37	19	3/8"-18NPTF	3/8"-18NPTF
	SFZ-1618	1/4"-NPTF Male	3/8"-NPTF Male		37	19	1/4"-18NPTF	3/8"-18NPTF
	SFZ-1619	3/8"-NPTF Male	3/8"-NPTF Male		51	19	3/8"-18NPTF	3/8"-18NPTF
Elbow	SFZ-1610	3/8"-NPTF Female	3/8"-NPTF Female		33	20	3/8"-18NPTF	—
	SFZ-1638	1/4"-NPTF Female	1/4"-NPTF Female		36	24	1/4"-18NPTF	—
T connector	SFZ-1612	3/8"-NPTF Female	3/8"-NPTF Female		45	25	3/8"-18NPTF	—
	SFZ-1637	1/4"-NPTF Female	1/4"-NPTF Female		45	24	1/4"-18NPTF	—
Street Tee	SFZB-16312	3/8"-NPTF Female	3/8"-NPTF Male		56	26	3/8"-18NPTF	3/8"-18NPTF
Cross	SFZ-1613	3/8"-NPTF Female	3/8"-NPTF Female		45	25	3/8"-18NPTF	—
Coupling	SFZ-1614	3/8"-NPTF Female	3/8"-NPTF Female		29	23	3/8"-18NPTF	3/8"-18NPTF
	SFZ-1605	1/4"-NPTF Female	1/4"-NPTF Female		29	19	1/4"-18NPTF	1/4"-18NPTF
Reducing Connector	SFZ-1615	3/8"-NPTF Female	1/4"-NPTF Female		28	25	3/8"-18NPTF	1/4"-18NPTF
	SFZ-1625	1/2"-NPTF Female	3/8"-NPTF Female		47	29	1/2"-14NPTF	3/8"-18NPTF
Street Elbow	SFZ-1616	3/8"-NPTF Male	3/8"-NPTF Female		23	33	3/8"-18NPTF	3/8"-18NPTF
Bushing	SFZ-1630	1/4"-NPTF Female	3/8"-NPTF Male		19	19	1/4"-18NPTF	3/8"-18NPTF
	SFZB-1630	1/4"-NPTF Female	1/2"-NPTF Male		28	22	1/4"-18NPTF	1/2"-18NPTF
	SFZB-16301	G1/4" Female	3/8"-NPTF Male		19	19	G1/4"	3/8"-18NPTF
Adaptor	SFZB-16411	1/4"-18NPTF Male	G1/4" Female		35	19	1/4"-18NPTF	G1/4"
	SFZB-16421	1/8"-27NPTF Male	G1/4" Female		31	19	1/8"-27NPTF	G1/4"
	SFZB-16323	1/4"-18NPTF Male	G3/8" Female		43	24	1/4"-18NPTF	G3/8"
	SFZB-16324	3/8"-18NPTF Male	G3/8" Female		43	24	3/8"-18NPTF	G3/8"
Adaptor	SFZ-1055	1/4"-18NPTF Male	3/8"-18NPTF Female		44	23	1/4"-18NPTF	3/8"-18NPTF
	SFZ-1633	1/4"-18NPTF Male	1/2"-14NPTF Female		43	29	1/4"-18NPTF	1/2"-14NPTF
	SFZ-1634	3/8"-18NPTF Male	1/2"-14NPTF Female		43	29	3/8"-18NPTF	1/2"-14NPTF
	SFZ-1642	1/8"-27NPTF Male	1/4"-18NPTF Female		30	19	1/8"-27NPTF	1/4"-18NPTF
Swivel Fitting	SFZ-1660	3/8"-NPTF Male	3/8"-NPTF Female		40	22	3/8"-18NPTF	3/8"-18NPTF

SFXH Hydraulic Pressure /Force Gauges

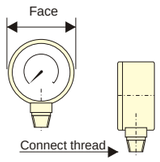
CBM
Center back mount

CBMFF
Center back mount with front frange

LM
Lower mount

LMBF
frange back with mount Lower

-M
Max. Indicator Pointer



Pressure range：0~15,000psi
Accuracy：±1%

How is a hydraulic hose model number is built up:

S F X H O 2.5 C B M F F 2P 1K - M
1 2 3 4 5 6

1. Gauge style
   O=Oil
   V=Vacuum(no stock)
2. Face
   2.5=2.5"
   4=4"
   6=6"
3. Connect style
   CBM=
   Center back mount
   CBMFF=
   Center back mount with front frange
   LM=
   Lower mount
   LMBF=
   Frange back with mount lower
4. Connect thread
   2P=1/4PT
   2N=1/4NPT
   3P=3/8PT
   3N=3/8NPT
   4P=1/2PT
   4N=1/2NPT
5. Pressure range
   1,000 for count radix and then show unit
   30P=30,000psi
   1K=1,000kg
   1B=1,000bar
   0.15K=150kg
6. Special
   M=Max. Indicator pointer

Model Number	Face (mm)	Style	Connect thread	Pressure range
SFXHO2.5CBMFF2P1K	60	Center back mount with front fringe	1/4PT	0~1,000kg
SFXHO2.5LM2N1B	60	Lower mount	1/4NPT	0~1,000bar
SFXHO2.5LM2N1K	60	Lower mount	1/4NPT	0~1,000kg
SFXHO2.5LM2P0.15K	60	Lower mount	1/4PT	0~150kg
SFXHO2.5LM2P1K	60	Lower mount	1/4PT	0~1,000kg
SFXHO2.5LM2P0.7K-M	60	Max. Indicating pointer	1/4PT	0~700kg
SFXHO4CBM2P0.7K	100	Center back mount	1/4PT	0~700kg
SFXHO4CBM2P1K	100	Center back mount	1/4PT	0~1,000kg
SFXHO4CBM3P1K	100	Center back mount	3/8PT	0~1,000kg
SFXHO4CBMFF3P0.35K	100	Center back mount	3/8PT	0~350kg
SFXHO4CBMFF3P0.4K	100	Center back mount	3/8PT	0~400kg
SFXHO4LM2N1B	100	Lower mount	1/4NPT	0~1000bar
SFXHO4LM3P0.15K	100	Lower mount	3/8PT	0~150kg
SFXHO4LM3P0.25K	100	Lower mount	3/8PT	0~250kg
SFXHO4LM3P0.35K	100	Lower mount	3/8PT	0~350kg
SFXHO4LM3P1K	100	Lower mount	3/8PT	0~1,000kg
SFXHO4LM3P0.15K-M	100	Max. Indicating pointer	3/8PT	0~150kg
SFXHO4LM3P0.1K-M	100	Max. Indicating pointer	3/8PT	0~100kg
SFXHO4LM3P0.25K-M	100	Max. Indicating pointer	3/8PT	0~250kg
SFXHO4LM3P0.35K-M	100	Max. Indicating pointer	3/8PT	0~350kg
SFXHO4LM3P0.5K-M	100	Max. Indicating pointer	3/8PT	0~500kg
SFXHO4LM3P0.7K-M	100	Max. Indicating pointer	3/8PT	0~700kg
SFXHO4LM3P1K-M	100	Max. Indicating pointer	3/8PT	0~1,000kg
SFXHO6LMBF4N30P	100	Lower mount with back fringe	1/2NPT	0~30000psi

SFXHD
Digital, Hydraulic Force & Pressure Gauges

Power：AC110~220V
Accuracy：±0.2%
Pressure range 15,000 psi.
Displays in psi , bar, Map, kg, lb..or user order.

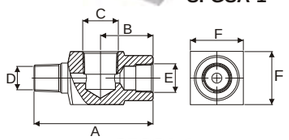
Model Number	Description	Pressure range (psi)
SFXHD-1	Max. Indicating keep	0~15,000
SFXHD-2	Max. Indicating not keep	0~15,000

SFGSA Gauge Accessories

- Easy mounting of pressure gauge into hydraulic system.
- Male end screw into pump or cylinder port, female end accepts hose or coupler, third port is for gauge connection.

SFGSA Series
Gauge Accessory
Maximum Operating Pressure:
700 bar

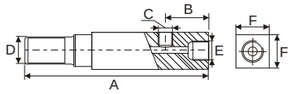
SFGSA-1



SFGSA-1

Tetragon

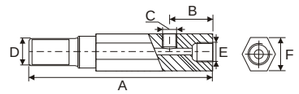
SFGSA-2
SFGSA-3
SFGSA-4



SFGSA-2、3、4

Hexagon

SFGSA-3H & SFGSA-3H3



SFGSA-H

Model Number	Gauge port C(NPTF)	Male end D(NPTF)	Female end E(NPTF)	Dimensions(mm) A	B	C	D	E	F
SFGSA-1	1/2	3/8	3/8	71	31	1/2NPTF	3/8NPTF	3/8NPTF	32
SFGSA-2	1/2	3/8	3/8	155	35	1/2NPTF	3/8NPTF	3/8NPTF	32
SFGSA-3	1/4	3/8	3/8	133	48	1/4NPTF	3/8NPTF	3/8NPTF	32
SFGSA-4	1/2	1/4	3/8	111	35	1/2NPTF	1/4NPTF	3/8NPTF	32
SFGSA-3H	1/4	3/8	3/8	90	28	1/4NPTF	3/8NPTF	3/8NPTF	26H
SFGSA-452	1/4	1/4	1/4	50	—	1/4NPTF	1/4NPTF	1/4NPTF	38
SFGSA-453	1/4	3/8	3/8	50	—	1/4NPTF	3/8NPTF	3/8NPTF	38

SFO Hydraulic Oil

4L

5L

High wear-resisting
Hydraulic oil (Lower temperature area use) Gf10

- Main ingredients is composed by high quality basic oil and additive.
- Include HL hydraulic oil (fit in with DIN51525 or 51524 standard.)
- Include additive which can resisting combustion, rust and wear.
- It also reduce low load pump damage as continuous using which become sticky to result air foam.
- Main application as hydraulic control and/or power transit system and machine.

High grade hydraulic oil AW22/ 32/ 46/ 68/ 100/ 150

- Include special additive that prevent combustion, air foam and increase oil life and protect machine.
- High sticky which used in most application. Additive which can resisting combustion, rust and wear.
- Easy separate oil and water that can increase machine life.
- Use in all application such as industry hydraulic machine, injection machine and mid/ high pressure large hydraulic presses machine.

Model No.	SFOW22-4L SFOW22-5L	SFOW32-4L SFOW32-5L	SFOW46-4L SFOW46-5L	SFOW68-4L SFOW68-5L
ISO	22	32	46	68
Gravity, SP.GR g/ml	0.868	0.872	0.874	0.879
40°C Viscosity cSt	22.2	32.1	46.7	68.9
100°C Viscosity cSt	4.4	5.5	6.9	9.0
Viscosity Index	107	107	103	105
Flash Point.°C	200	205	216	221
Pour Point.°C	-26	-22	-24	-26

Model No.	SFOGF10-4L SFOGF10-5L
ISO - H-LP	10
Gravity, SP.GR 15°C g/ml	0.855
0°C Viscosity cSt	50
40°C Viscosity cSt	10
100°C Viscosity cSt	2.8
Viscosity Index	98
Flash Point.°C	160
Pour Point.°C	-39

SFV/W Series

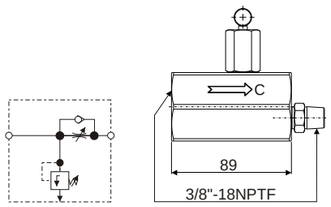
Valve

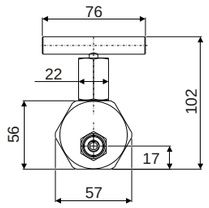
Maximum Operating Pressure:
700 bar

※unit (mm)

Manually Operated Check Valve

- Valve is manually opened to allow oil to flow back to tank when cylinder retracts.
- Used for load holding applications with single and double acting cylinder.

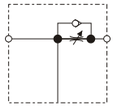


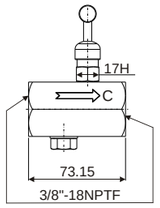


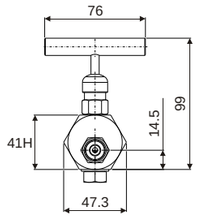
SFV-66

Manually Operated Check Valve

- Valve is manually opened to allow oil to flow back to tank when cylinder retracts.
- Used for load holding applications with single and double acting cylinder.



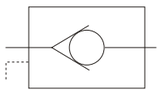


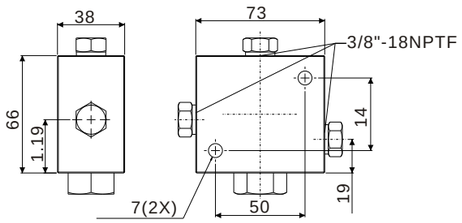


SFV-66-3

Pilot Operated Check Valve

- Can be mounted at the cylinder to hold the load in case of system pressure loss.
- Normally used with double-acting cylinders where pilot port receives pressure from a T-fitting in the cylinder retract line.
- 3/8" NPTF female ports.
- Pilot pressure ratio 14% (6.5:1)

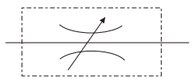


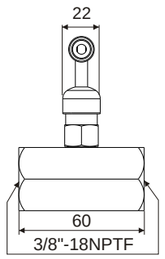


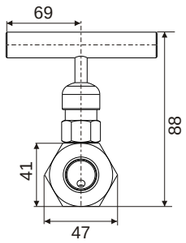
SFV-42

Needle Valve

- 3/8"-18NPTF female ports.
- To control cylinder speed.
- Also be used as shut-off valve for temporary load holding.







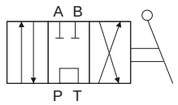
SFV-82

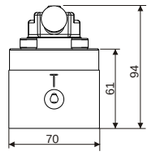
Control Valves

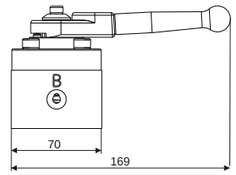
SW-700 : Tandem center

- 4-way/3-position
- Lever operated, detent positioned.
- Application :Single- or double-acting cylinders.
- Provides"advance", "hold"and "return".

SFW-700

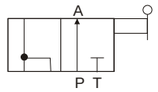


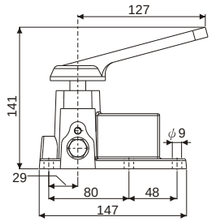


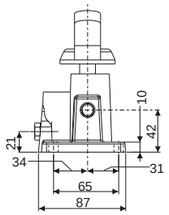


Control Valves

- 3-way/2-position manual control valve.
- Provides"advance"and "return".
- For use with single-acting cylinder.



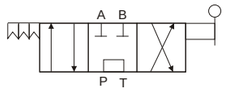


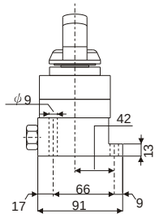


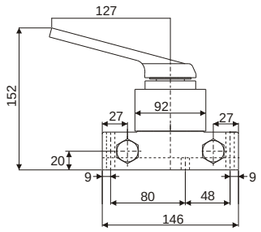
SFVM-S2

Control Valves

- 4-way/3-position manual control valve.
- Tandem center, lever operated, detent positioned.
- Provides"advance","hold"and "return".
- For use with double-acring or two single-acting cylinder.



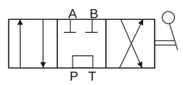


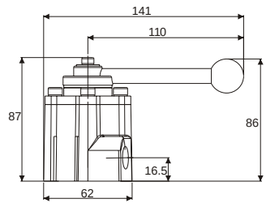


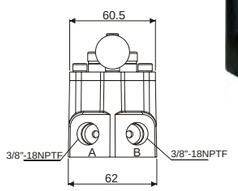
SFVM-D4

Control Valves

- 4-way/3-position manual control valve.
- Tandem center, lever operated, detent positioned.
- Provides"advance","hold"and "return".
- For use with double-acring or two single-acting cylinder.





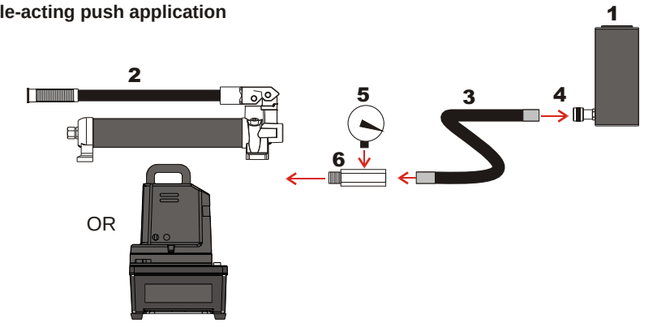


SFVR-D4

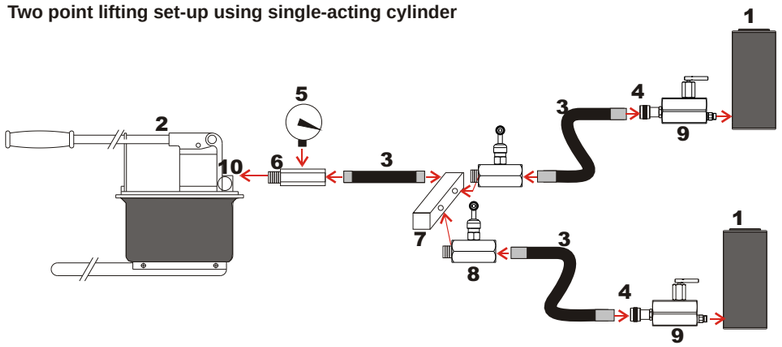
Basic System Set-up

These are just a few basic systems possible with SUN RUN hydraulic components.
Countless applications are possible: In presses, for lifting or jacking applications or in production or maintenance setups.
The pump shown is a typical electric/hydraulic unit. Electric or air driven pumps are available.

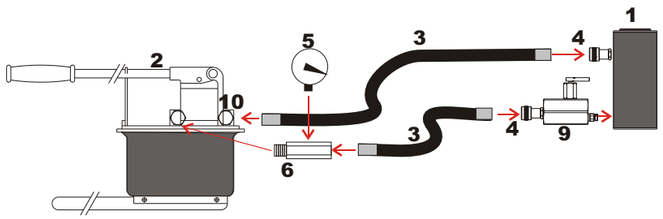
Single-acting push application



Two point lifting set-up using single-acting cylinder

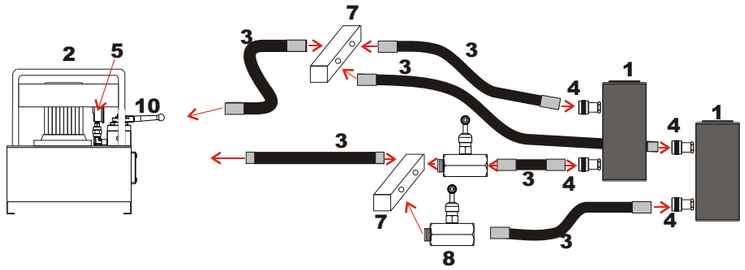


Double-acting cylinder set-up



Two point set-up with Double-acting cylinder

used in a push/pull application.



1 Cylinder
Applies hydraulic force.
Page 3~38

2 Pump
Provides hydraulic flow.
Page39~40,49~50,53

3 Hose
Transports hydraulic fluid.
Page 54

4 Quick Coupling
"hose half" and "cylinder half" couplings are used for quick connection and fluid flow check when separated.
Page 55

5 Gauge
To monitor pressure of the cylinder circuit.
Page 57

6 Gauge Adaptor
For quick and easy gauge installation.
Page 58

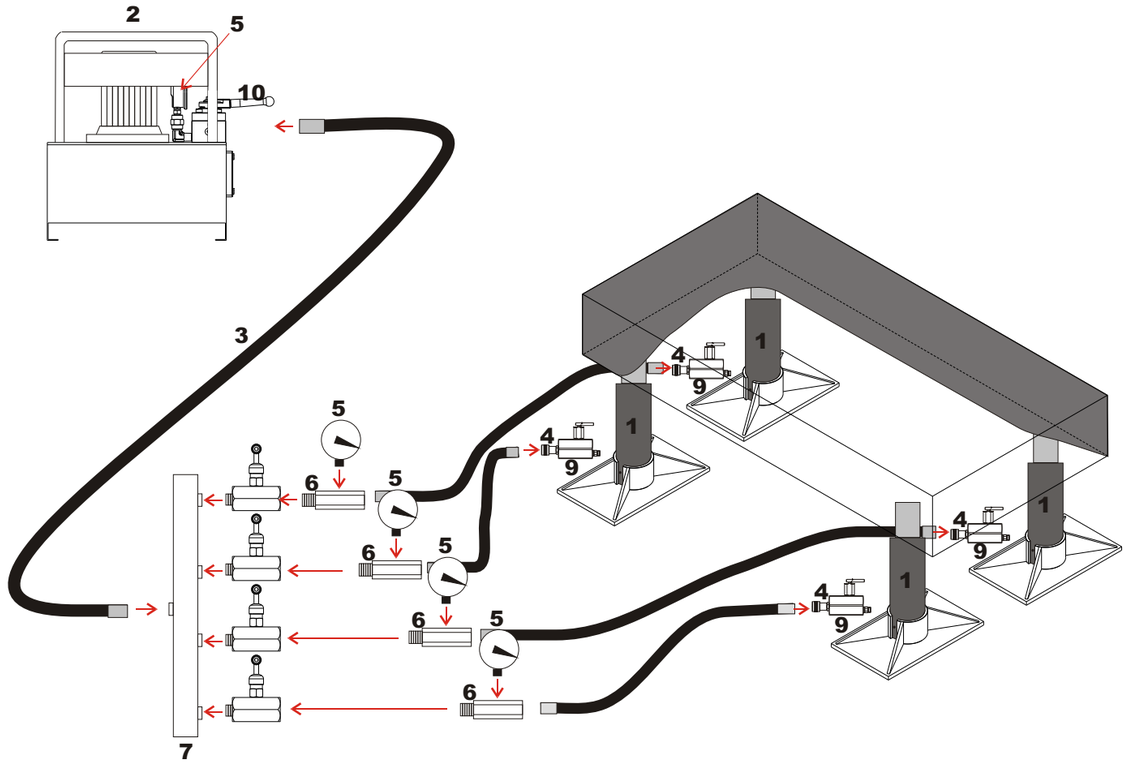
7 Manifold
Allows distribution of hydraulic fluid from one power source to several cylinder.
Page 55

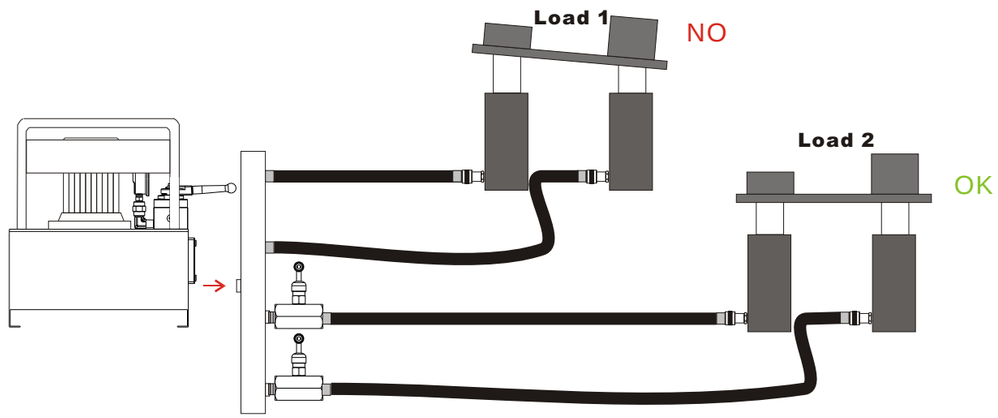
8 Needle Valve
Regulates the flow of hydraulic fluid to or from the cylinder such as SFV-82.
Page 59~60

9 Safety Holding Valve
Controls load descent in lifting applications such as SFV-66-3.
Page 59~60

10 Control Valve
3-way direction by songle-action
4-way direction by double-action
such as SFW or SFVM series.
Page 59~60

Single-acting push application



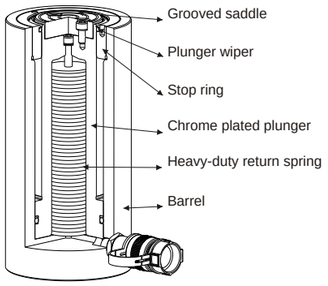


When more than one hydraulic cylinder is being used, each cylinder will lift at its own rate, depending on the force required to move the load at that point.

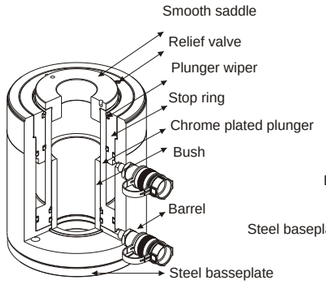
Cylinder with the lightest load will move first, and cylinders with the heaviest load will move last (Load 1), as long as the cylinders have the same capacity.

To have all cylinders operate uniformly so that the load is being lifted at the same rate at each point, either control valves or synchronous lift system components must be added to the system.

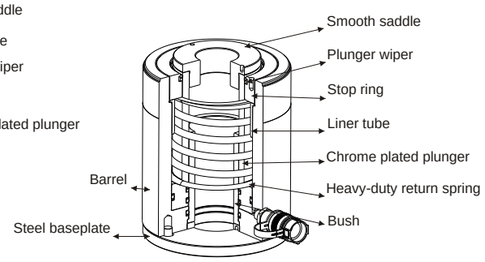
剖面圖示 sectional drawing



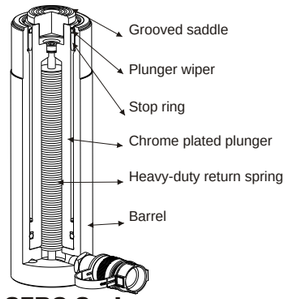
SF Series



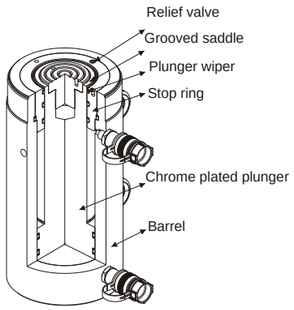
SFRRH Series



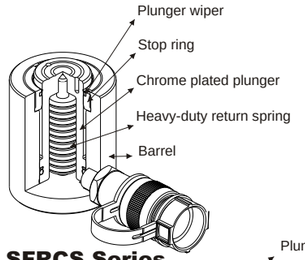
SFRCH Series



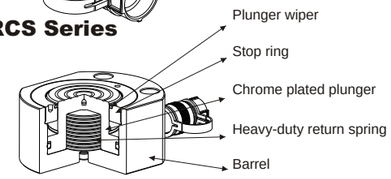
SFRC Series



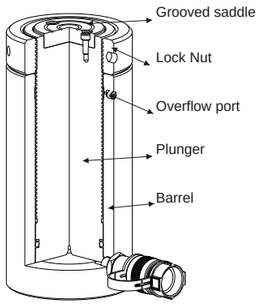
SFRR Series



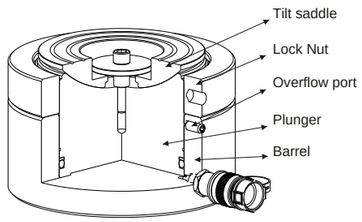
SFRCS Series



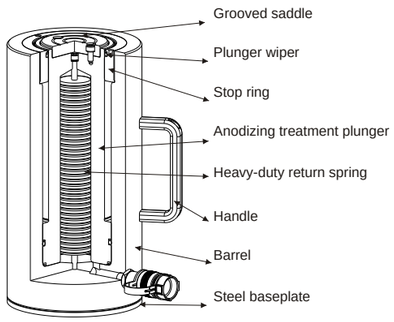
SFRSM Series



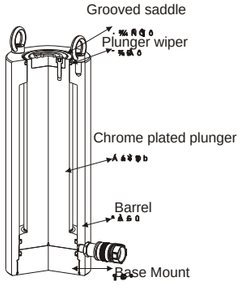
SFCLL Series



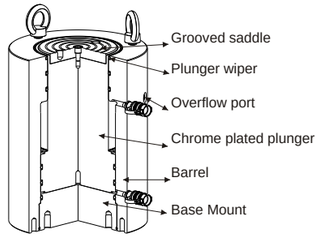
SFCLP Series



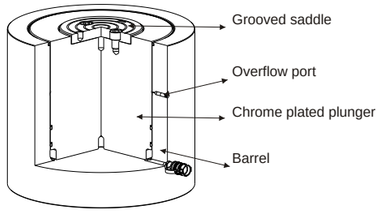
SFRAC Series



SFCLSG Series



SFCLRG Series



SFCLS Series

Capacity lower than 500 tons, General cylinder: SF, SFRC, SFRSM, SFRCS, SFRCH, SFRRH, SFRR-Series
Saddle：help stabilze the load, heat treated.
Most cylinders are equipped with hardened removable grooved saddles
,but will have exception as below：
1.SFRC series 5、15、25 tons are snap-in & grooved saddle.
2.Center hollow cylinders are equipped with bolt-on smooth saddle.
3.Optional tilt saddle.
Plunger wiper：reduces contaminant.
Stop ring：prevents plunger over-extension.
Most cylinder's stop ring are coated with wear-resisting.
Chrome plated plunger：all model cylinder will be and which resists wear and corrosion.
Heavy-duty return spring：wound steel spring provides fast and complete retraction on single-acting cylinder.
Barrel：powder coat finish for increased corrosion resistance. Chrome plated inner for single-acting cylinder.

Aluminum cylinder：SFRAC-Series
Saddle：help stabilze the load, heat treated.
All cylinders are equipped with hardened removable grooved saddles.
Plunger wiper：reduces contaminant.
Stop ring：prevents plunger over-extension.
It is capable of withstanding the full cylinder capacity.
Anodizing treatment plunger：resist wear and prevent galling.
Heavy-duty return spring：wound steel spring provides fast and complete retraction on single-acting cylinder.
Handle：All SFRAC-cylinders are equipped with handle.
Barrel：Anodizing treatment of aluminum not only surfaces but also inner.
Steel baseplate：for protection against load-induced damage.

High Tonnage, Lock Nut & Pancake Lock Nut Cylinder: SFCLP, SFCLSG, SFCLRG, SFCLL, SFCLS-Series
Saddle：help stabilze the load, heat treated.
Most cylinders are equipped with hardened removable grooved saddles
,but will have exception as below：
1.SFCLP integral tilt saddle.
2.Optional tilt saddle.
Plunger wiper：reduces contaminant.
Stop ring：prevents plunger over-extension.
Most cylinder's stop ring are coated with wear-resisting,
but SFCLL & SFCLP will be processed different formula.
Plated plunger：All model cylinder's plunger will be chrome plated plunger which resists wear and corrosion, but SFCLL & SFCLP will be processed different formula.
Barrel：powder coat finish for increased corrosion resistance. Chrome plated inner for single-acting cylinder.

Key to measurements

LENGTH				
mm	×0.03937	=in	×25.4	=mm
cm	×0.3937	=in	×2.54	=cm
m	×3.28	=foot	×0.305	=m
AREA				
mm^2	×0.00155	=in^2	×645	=mm^2
cm^2	×0.155	=in^2	×6.45	=cm^2
m^2	×10.8	=$foot^2$	×0.0929	=m^2
VOLUME				
cm^3	×0.061	=in^3	×16.4	=cm^3
liter(L)	×61	=in^3	×0.016	=L
milliliter(ml)	×0.034	=oz-liq	×29.6	=ml=cm^3
liter(L)	×1.06	=quart	×0.946	=L
liter(L)	×0.26	=gallon	×3.79	=L
MASS				
g	×0.035	=ounce	×28.3	=g
kg	×2.2	=pound	×0.454	=kg
metric ton(t)	×1.1	=ton(short)	×0.907	=t
metric ton(t)	×9.8	=kN	×0.102	=metric(t)
FORCE				
newton(N)	×0.225	=pound	×4.45	=N
kilonewton(kN)	×225	=pound	×0.00445	=KN
TORQUE				
newton meter(Nm)	x8.9	=lb.in	x0.113	=Nm
newton meter(Nm)	x0.74	=lb.ft	x1.36	=Nm
PRESSURE (Pa=N/m2)				
kilopascal(kPa)	x0.145	=p.s.i	x6.89	=kPa
kgf/cm^2	x14.23	=p.s.i	x0.07	=kgf/cm^2
Bar	x14.5	=p.s.i	x0.0689	=Bar
Bar	x1.02	=kgf/cm^2	x0.981	=Bar
POWER (w=J/s)				
kw	x1.34	=hp	x0.746	=kw
watt(w)	x0.74	=ft.lb/s	x1.36	=w

※ Cylinder Oil Cap.=Cylinder Effective Area x Cylinder Stroke
※ Force=Hydraulic Working Pressure x Cylinder Effective Area

◎ Most cylinder capacity in this catalog are ton(short).