

SUNFAB SCP ISO is a series of piston pumps with a fixed displacement for mobile and stationary hydraulics.

SUNFAB SCP ISO covers the displacement range 0.77–7.93 cu in/rev. at a maximum working pressure of 5800 psi. The pump is drained externally. SUNFAB SCP ISO is speed-optimized and therefore supplied in either left (L) or right (R) handed designs. SUNFAB SCP ISO's well dimensioned, double tapered roller bearings permit high shaft loads and lead to excellent speed characteristics.

SUNFAB SCP ISO's high level of reliability is based on the choice of materials, hardening methods, surface structures and the quality assured manufacturing process.

Other advantages of SUNFAB SCP ISO:

- High maximum speed while maintaining low noise levels
- Smooth operation over the entire speed range
- Long life due to high demands on material selection, such as bearings, seals, etc
- O-rings on all contact surfaces as well as double shaft seals eliminate oil leakage from the pump

Versions, main data

Example

SC	P	012	L	N	I41	W25	Z1	G	3	00
Line	1	2	3	4	5	6	7	8	9	10

Line	SC	Sunfab Compact, bent-axis design
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1. Type	P	Pump
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2. Displacement	012	017	025	034	040	047	056	064	084	090	108	130
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3. Direction of rotation	L	Left
	R	Right

4. Sealing	N	Nitrile
	H	High pressure, nitrile
	V	Viton

5. Mounting flange	ISO 3019-2	012	017	025	034	040	047	056	064	084	090	108	130
I41	ISO 4-h Ø80	X	X	-	-	-	-	-	-	-	-	-	-
I42	ISO 4-h Ø100	O	O	X	X	-	-	-	-	-	-	-	-
I43	ISO 4-h Ø125	-	-	-	-	X	X	X	X	-	-	-	-
I44	ISO 4-h Ø140	-	-	-	-	-	-	-	-	X	X	O	O
I45	ISO 4-h Ø160	-	-	-	-	-	-	-	-	O	O	X	X

6. Shaft		012	017	025	034	040	047	056	064	084	090	108	130
Spline DIN 5480													
W20	W20x1.25x14x9g	X	X	-	-	-	-	-	-	-	-	-	-
W25	W25x1.25x18x9g	X	X	X	O	-	-	-	-	-	-	-	-
W30	W30x2x14x9g	-	-	X	X	X	X	X	O	-	-	-	-
W32	W32x2x14x9g	-	-	-	-	X	X	X	O	-	-	-	-
W35	W35x2x16x9g	-	-	-	-	X	X	X	X	X	-	-	-
W40	W40x2x18x9g	-	-	-	-	-	-	-	-	X	X	X	X
W45	W45x2x21x9g	-	-	-	-	-	-	-	-	O	O	X	X
Key DIN 6885													
K20	Ø 20 k6	X	X	-	-	-	-	-	-	-	-	-	-
K25	Ø 25 k6	X	X	X	O	-	-	-	-	-	-	-	-
K30	Ø 30 k6	O	O	X	X	X	X	X	O	-	-	-	-
K35	Ø 35 k6	-	-	-	-	X	X	X	X	-	-	-	-
K40	Ø 40 k6	-	-	-	-	-	-	-	-	X	X	O	O
K45	Ø 45 k6	-	-	-	-	-	-	-	-	O	O	X	X

X = Standard, preferred
O = Contact Sunfab

7. Connection cover		012	017	025	034	040	047	056	064	084	090	108	130
Z1	Suction rear, pressure at side	X	X	X	X	X	X	X	X	X	X	X	X

8. Connections		012	017	025	034	040	047	056	064	084	090	108	130
G	ISO G*	X	X	-	-	-	-	-	-	-	-	-	-
M	Metric**	-	-	X	X	X	X	X	X	X	X	X	X

* Only threaded connections
** Only flanged connections

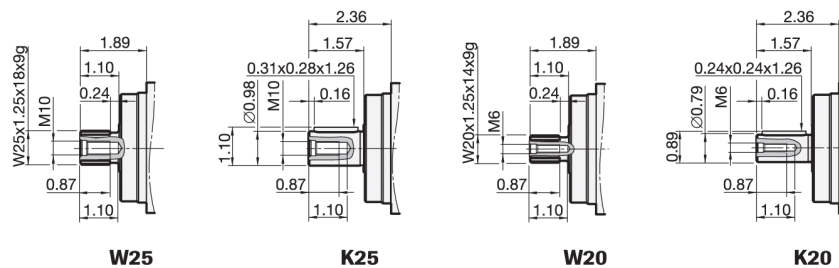
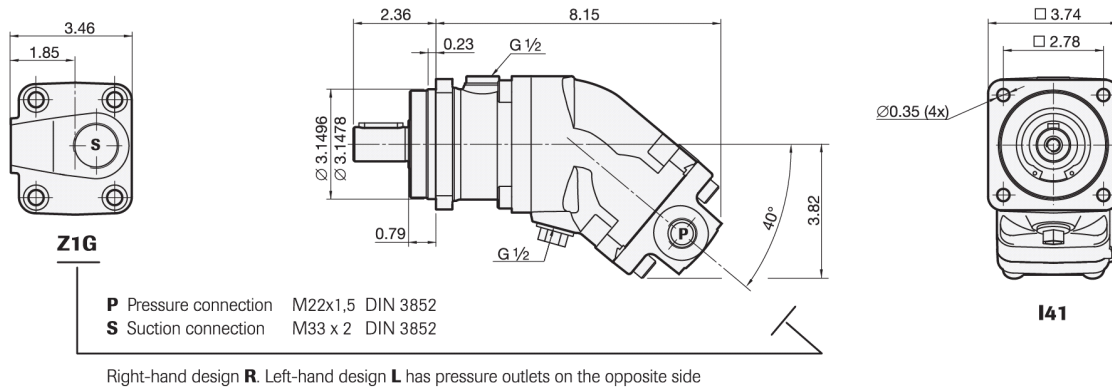
9. Additional	3	External drainage + optimized
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10. Accessories	00	No accessories available
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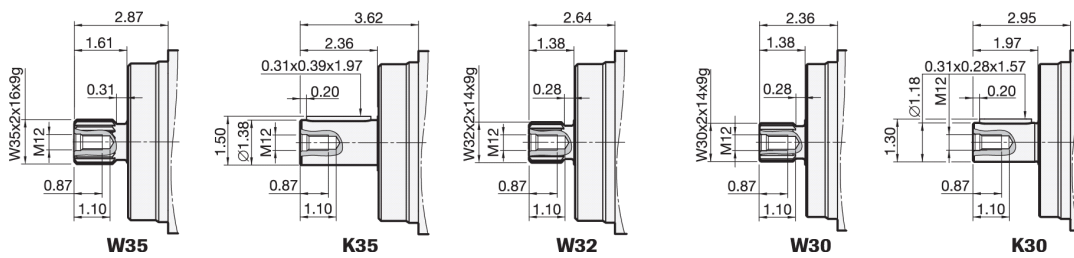
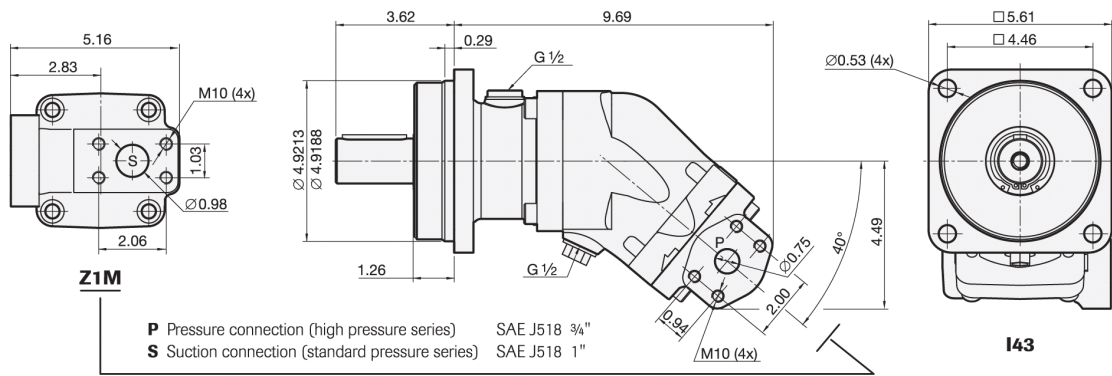
Pump SCP 012-130 ISO		012	017	025	034	040	047	056	064	084	090	108	130		
Nominal oil flow at pump speed	rpm		500	1.66	2.24	3.35	4.52	5.44	6.21	7.40	8.40	11.0	12.0	14.3	17.2
			1000	3.33	4.49	6.71	9.03	10.9	12.4	14.8	16.8	22.1	24.0	28.5	34.3
			1500	4.99	6.74	10.1	13.5	16.3	18.6	22.2	25.2	33.1	36.0	42.8	51.5
Displacement	cu in/rev	0.77	1.04	1.55	2.09	2.51	2.87	3.42	3.88	5.10	5.53	6.59	7.93		
Max working pressure	psi	5800	5800	5800	5800	5800	5800	5800	5800	5800	5800	5800	5800		
Max pump speed	rpm	n_{max} (1)	3300	3200	2550	2250	2200	2200	2100	2050	1700	1700	1700	1600	
		n_{max} limit (2)	6000	5700	4700	4550	4300	4300	3750	3700	3350	3000	3000	2900	
Max power	hp	34	47	54	67	74	87	101	114	121	127	161	161		
Weight	lb	16.5	16.5	18.7	18.7	34.2	34.2	34.2	34.2	59.5	59.5	65.0	65.0		
Mass moment of inertia ($\times 10^{-3}$)	lb-ft-sec ²	0.7	0.7	0.8	0.8	1.9	1.9	1.9	1.9	5.4	5.4	5.4	5.4		
Direction of rotation	Left (L) or Right (R)														

(1) The values shown are valid for an absolute pressure of 14,5 psi at the suction inlet.
 (2) By increase of the input pressure the rotational speeds can be increased to the max. admissible speed, n max limit.

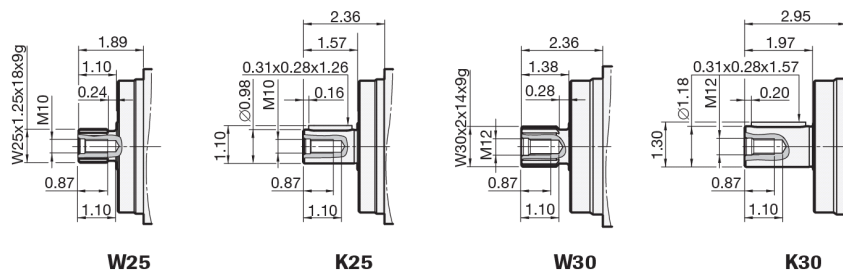
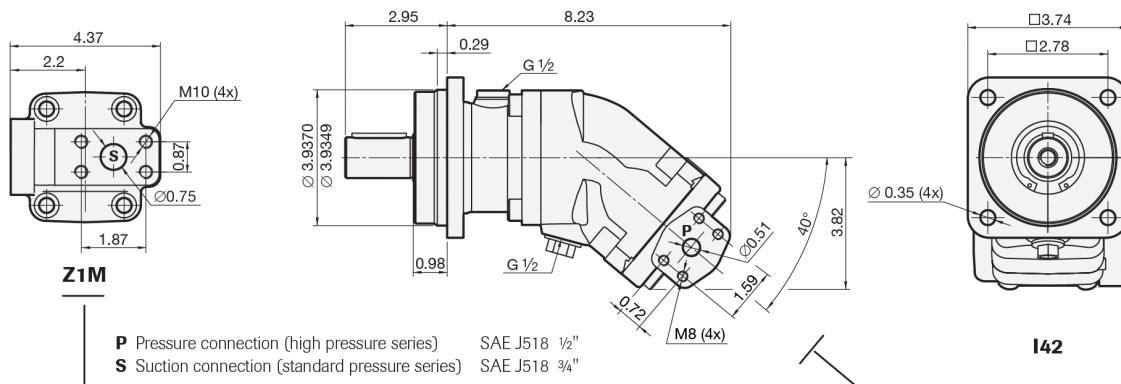
Dimensions SCP 012-017



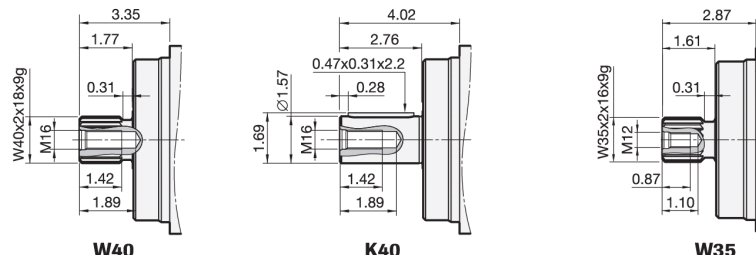
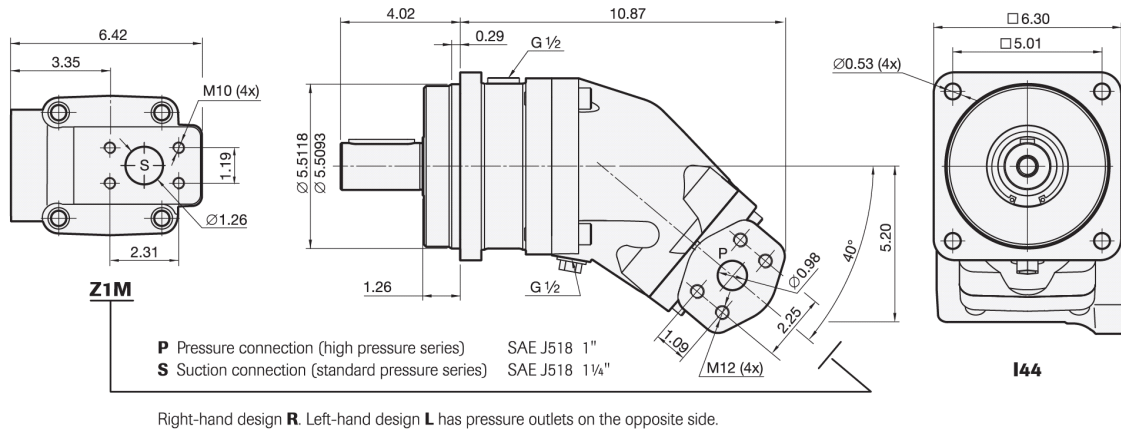
SCP 040-064



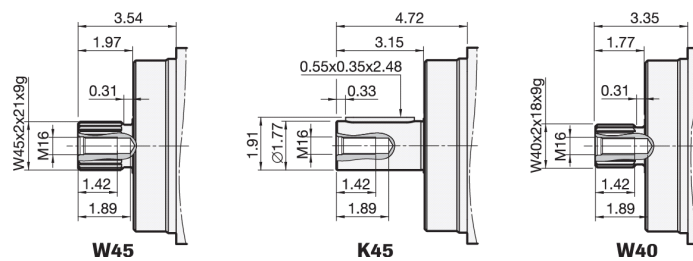
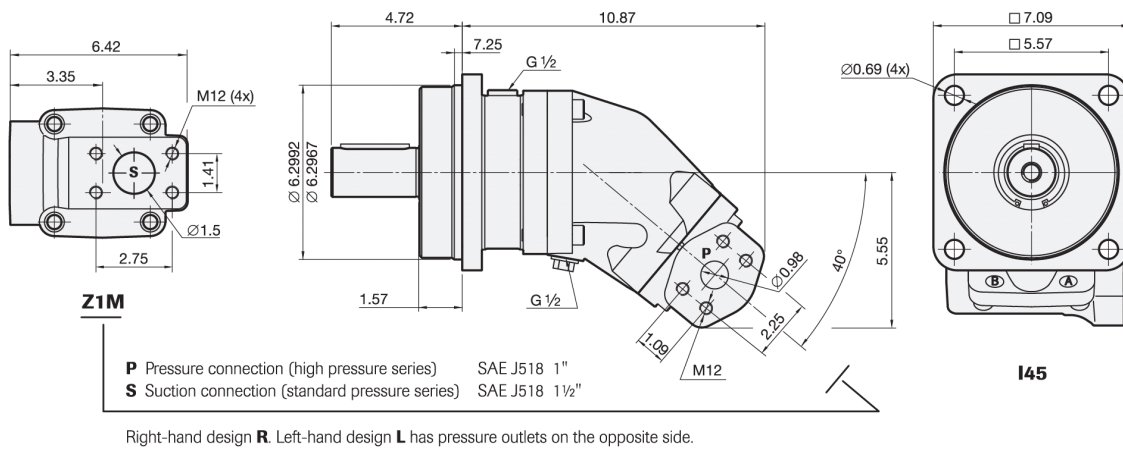
SCP 025-034



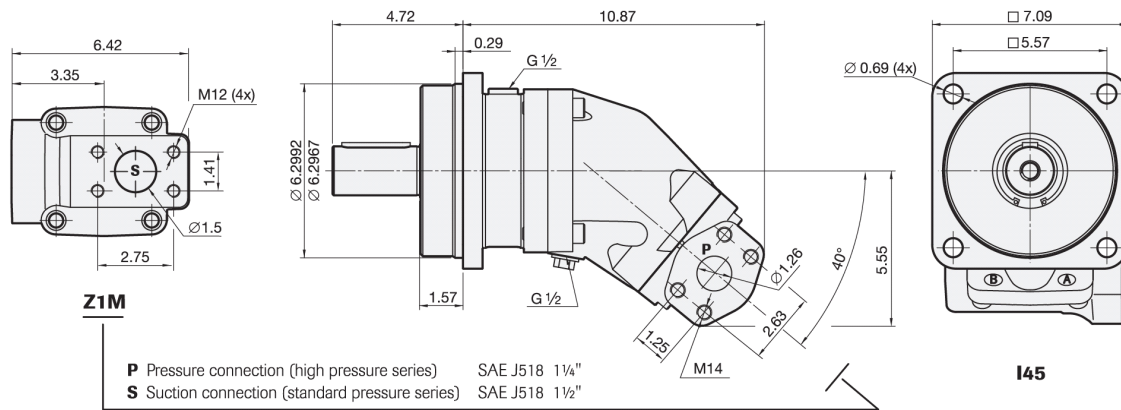
SCP 084-090



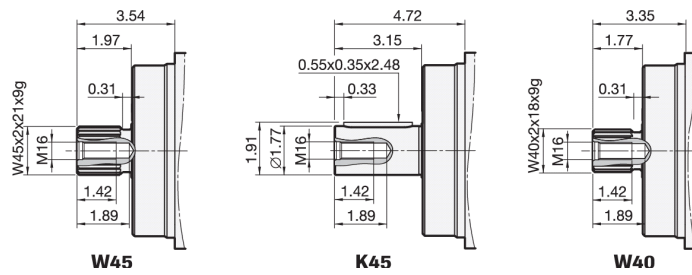
SCP 108



SCP 130



Right-hand design **R**. Left-hand design **L** has pressure outlets on the opposite side.



General instructions

Choice of shaft seal

Pump SCP ISO	Code	Temp. °F	Max. housing pressure psi at RPM					
			500	1000	1500	2000	2500	3000
012-034	N	167	158	80	52	39	32	26
	H	167	712	357	238	178	142	119
	V	194	158	80	52	39	32	26
047-064	N	167	158	80	52	39	32	26
	H	167	712	357	238	178	142	119
	V	194	158	80	52	39	32	26
084-130	N	167	110	55	36	28	27	19
	H	167	499	250	167	125	100	83
	V	194	110	55	36	28	27	19

Subject to design modifications without notice
Code according to page 2, Versions, main data

Factors affecting the choice of shaft seal include the hydraulic pump housing pressure and the drainage oil temperature.

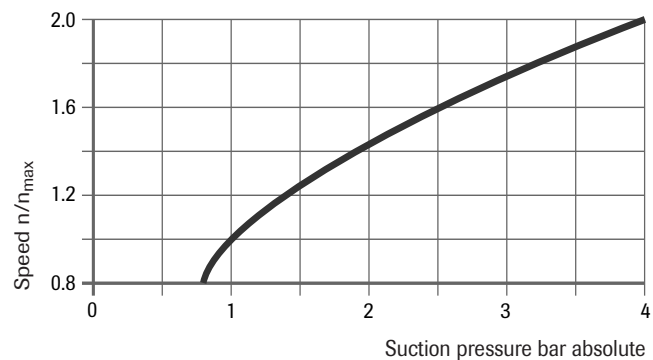
The drainage oil should have a maximum temperature of 167 °F with a Nitrile shaft seal and 194 °F with a Viton shaft seal. These temperatures must not be exceeded.

The housing pressure must be equal to or greater than the external pressure on the shaft seal.

Minimum inlet pressure at suction port with increased speed

Operating above the max. pump speed n_{max} requires increased inlet pressure.

Note that the max. permissible speed n_{max} limit must not be exceeded.



Filtering

Cleanliness according to ISO norm 4406, code 16/13.

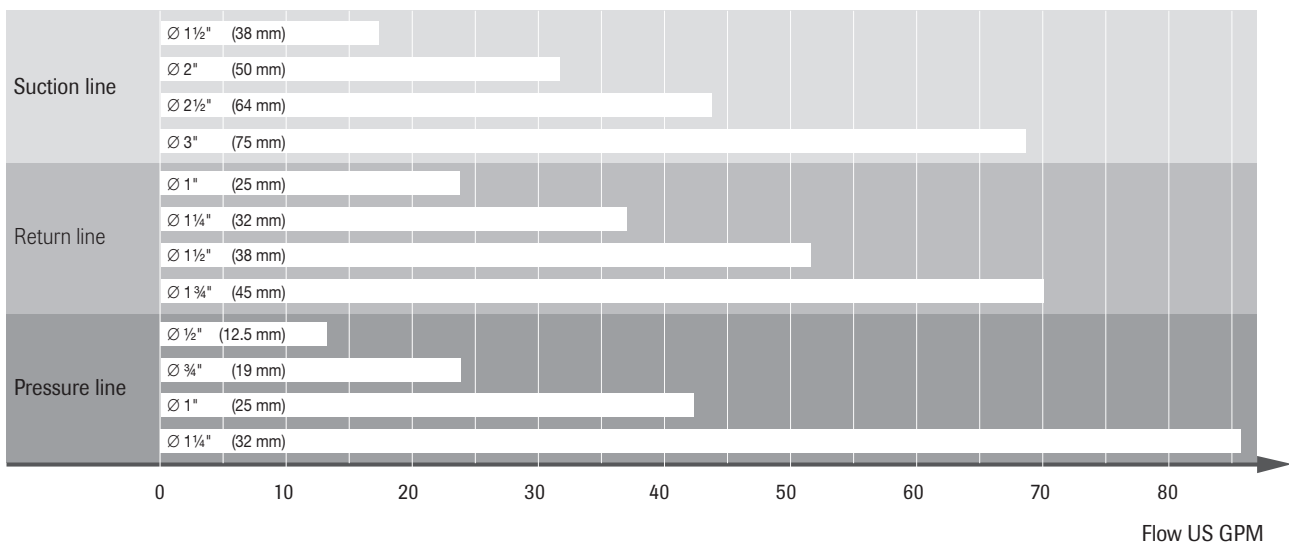
Hydraulic fluids

High performance oils meeting ISO specifications – such as HM, DIN 51524-2 HLP, or better – must be used.

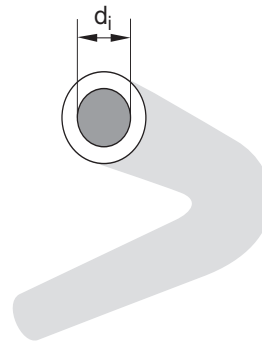
A min. viscosity of 10 cSt is required to keep the lubrication at a safe level.

The ideal viscosity is 20 - 40 cSt.

Recommended line size (d_i)

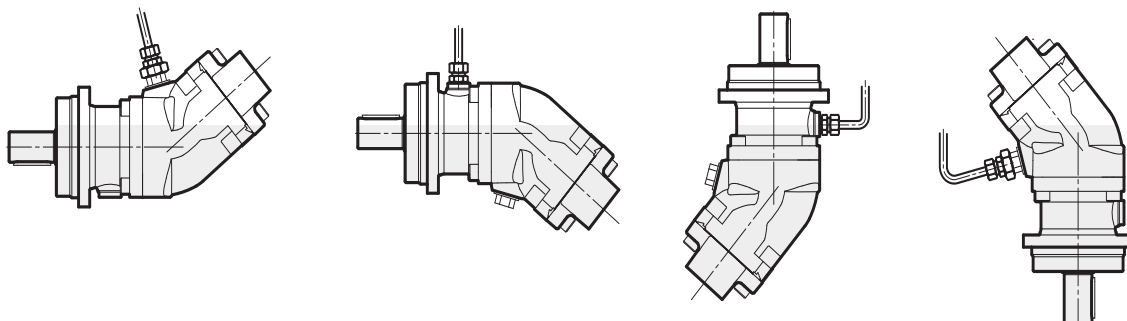


If the suction line is more than 78.4 inch long the internal diameter must be increased by 0.39 inch for each meter extension.



Installation

- The pump housing should be filled with oil to at least 50% before starting.
- The drainage line must be at least 1/2" (13 mm) internal diameter and should be connected to topmost drainage outlet.
- The other end of the line should be connected to the oil tank at a point below the oil level.





WARNING

When the pump is running:

1. Do not touch the pressure hose
2. Watch out for rotating parts
3. The pump and hoses may be hot

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