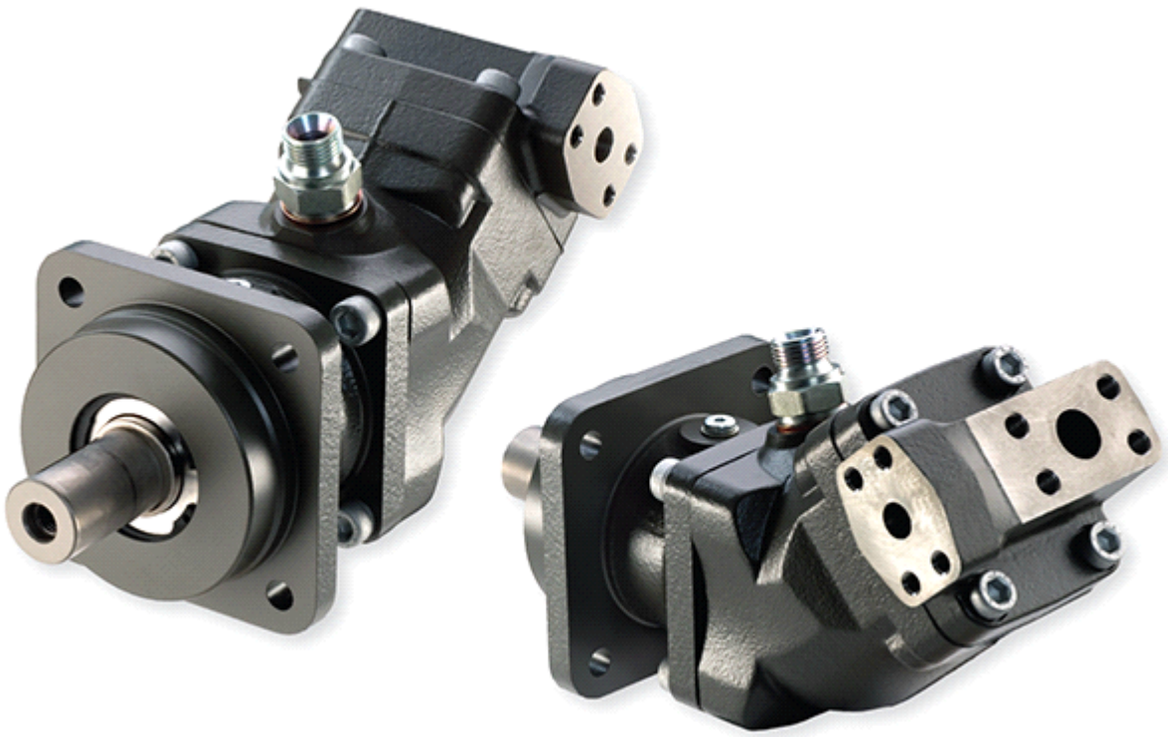
SCP 012-130 ISO



SCP 012-130 ISO is a series of piston pumps with a fixed displacement for mobile and stationary hydraulics.

SCP 012-130 ISO covers the entire displacement range 12-130 cm^3/rev. at a maximum pressure of 400 bar. The pump´s well dimensioned, double tapered roller bearings permit high shaft loads and lead to excellent speed characteristics. The pump is drained externally. It is speed-optimised and therefore supplied for either left (L) or right (R) rotation direction.

Other advantages:

- 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.

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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

1. Type

P	Pump

2. Displacement

012	017	025	034	040	047	056	064	084	090	108	130

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	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

10. Accessories

00	No accessories available

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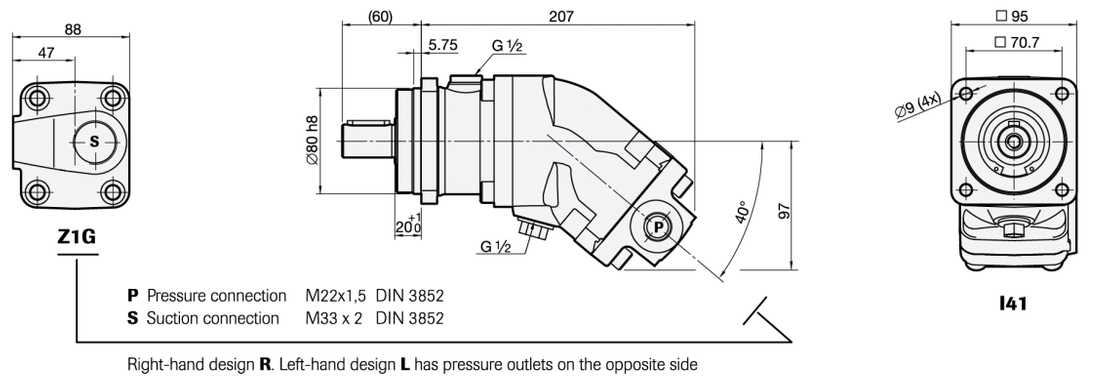
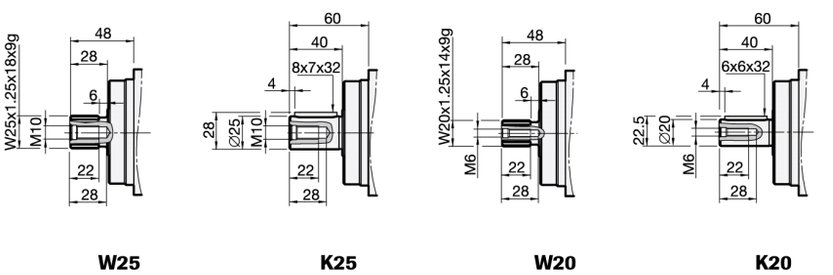
Pump SCP 012-130 ISO			012	017	025	034	040	047	056	064	084	090	108	130
Theoretical oil flow									l/min					
at pump speed	rpm	500	6.3	8.5	12.7	17.1	20.6	23.5	28.0	31.8	41.5	45.4	54.0	65.0
		1000	12.6	17.0	25.4	34.2	41.2	47.1	56.0	63.6	83.6	90.7	108.0	130.0
		1500	18.9	25.5	38.1	51.3	61.8	70.6	84.0	95.4	125.4	136.1	162.0	195.0
Displacement	cm^3/rev		12.6	17.0	25.4	34.2	41.2	47.1	56.0	63.6	83.6	90.7	108.0	130.0
Max working pressure	bar		400	400	400	400	400	400	400	400	400	400	400	350
Max pump speed	$n_{max\ (1)}$ rpm		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	kW		25	35	40	50	55	65	75	85	90	95	120	120
Weight	kg		7.5	7.5	8.5	8.5	15.5	15.5	15.5	15.5	27.0	27.0	29.5	29.5
Mass moment of inertia (x 10^{-3})	$kg\ m^2$		0.9	0.9	1.1	1.1	2.6	2.6	2.6	2.6	7.4	7.4	7.4	7.4
Direction of rotation	Left (L) or Right (R)													

(1) The values shown are valid for an absolute pressure of 1 bar 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



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



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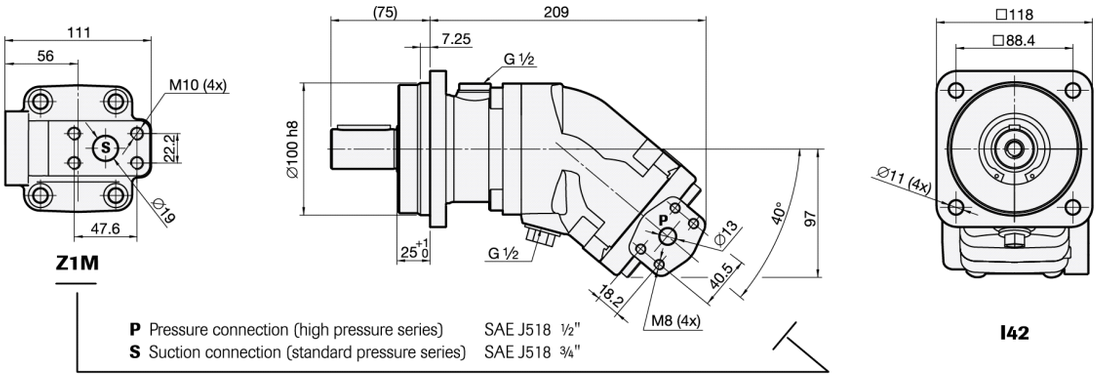
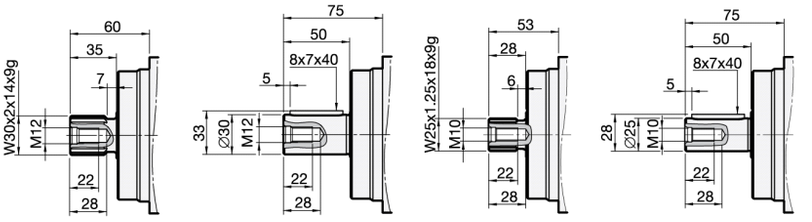
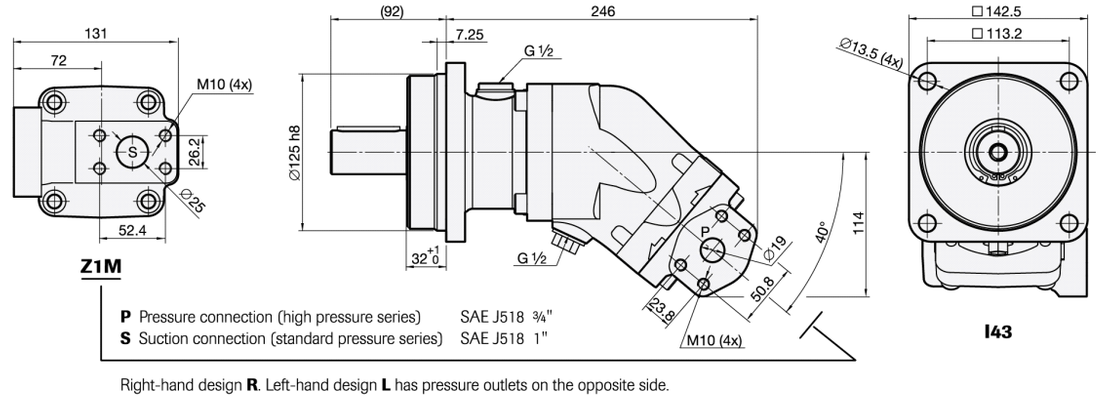
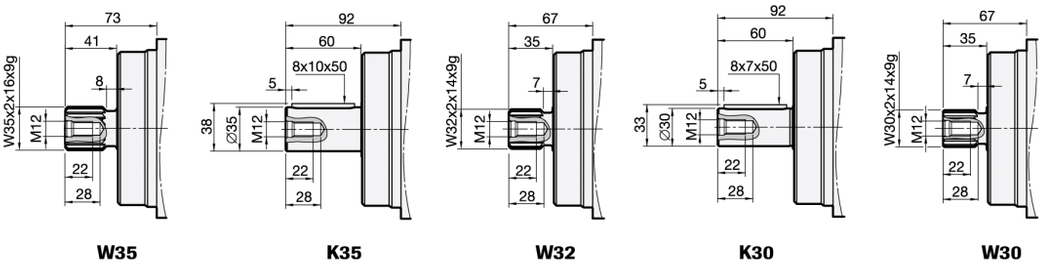
SCP 025-034





SCP 040-064





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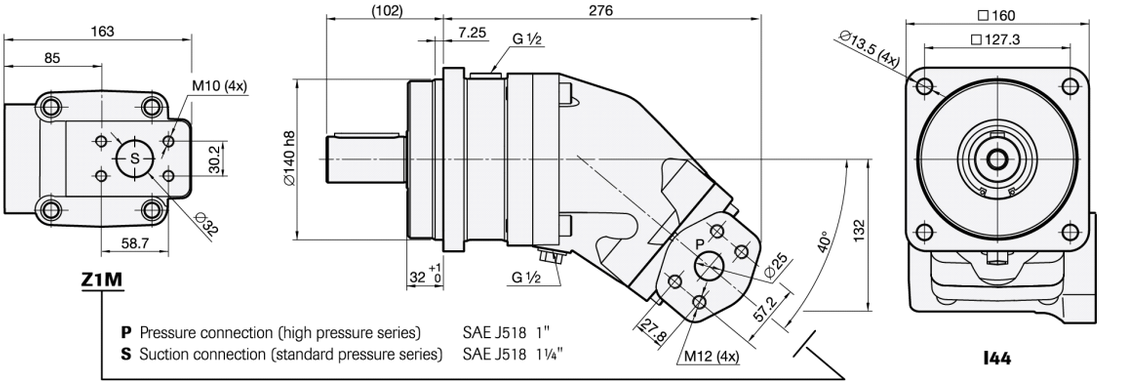
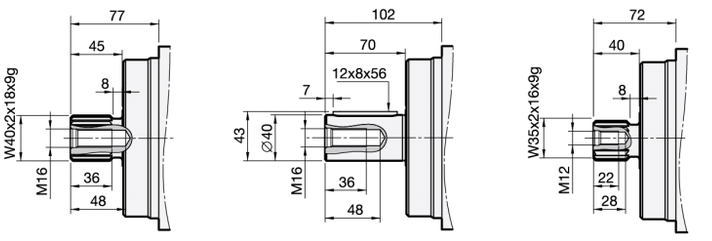
SCP 084-090

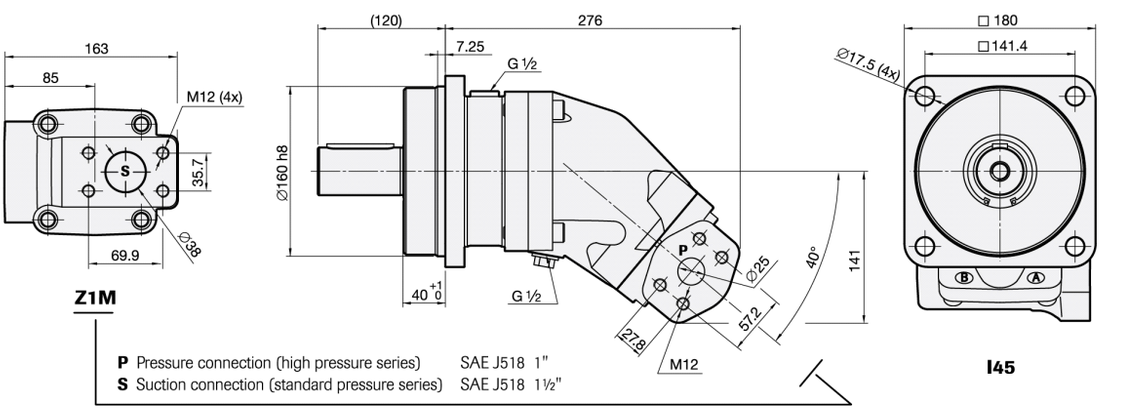


P Pressure connection (high pressure series) SAE J518 1"
S Suction connection (standard pressure series) SAE J518 1¼"

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

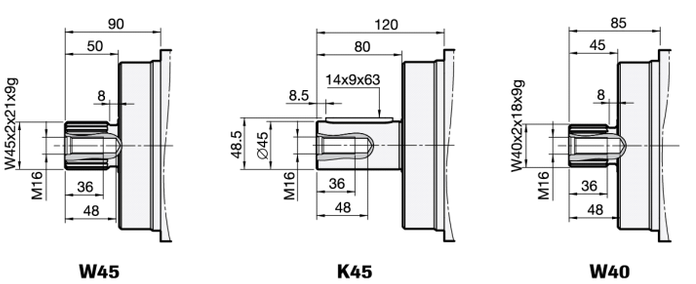


SCP 108



P Pressure connection (high pressure series) SAE J518 1"
S Suction connection (standard pressure series) SAE J518 1½"

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



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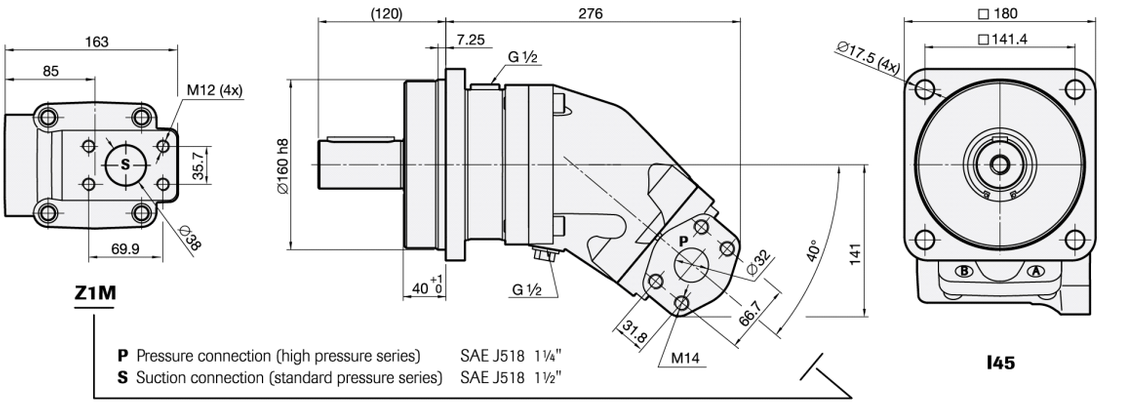
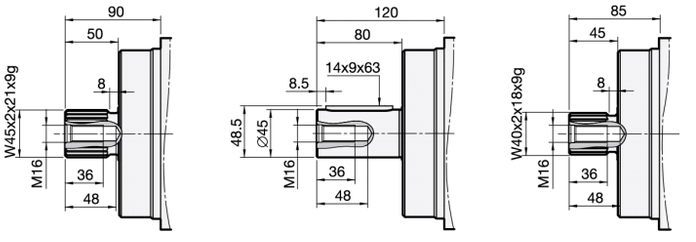
SCP 130



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



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General instructions

Choice of shaft seal

Pump SCP ISO	Code	Temp. °C	Max. housing pressure MPa at rpm 500	1000	1500	2000	2500	3000
012-034	N	75	1.09	0.55	0.36	0.27	0.22	0.18
	H	75	4.91	2.46	1.64	1.23	0.98	0.82
	V	90	1.09	0.55	0.36	0.27	0.22	0.18
040-064	N	75	1.09	0.55	0.36	0.27	0.22	0.18
	H	75	4.91	2.46	1.64	1.23	0.98	0.82
	V	90	1.09	0.55	0.36	0.27	0.22	0.18
084-130	N	75	0.76	0.38	0.25	0.19	0.15	0.13
	H	75	3.44	1.72	1.15	0.86	0.69	0.57
	V	90	0.76	0.38	0.25	0.19	0.15	0.13

Code according to page 2, Versions, main data

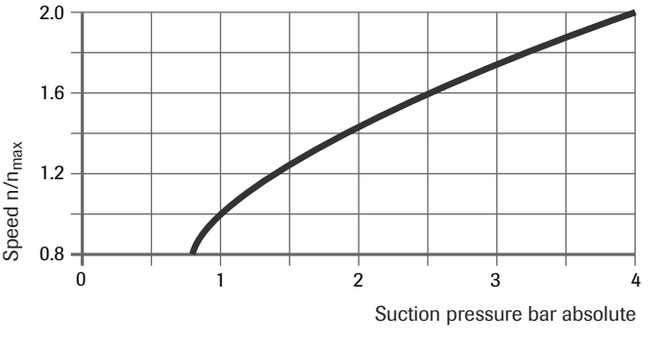
Factors affecting the choice of shaft seal include the hydraulic pump housing pressure and the drainage oil temperature.

The drainage oil should have a maximum temperature of 75 °C with a Nitrile shaft seal and 90 °C 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.

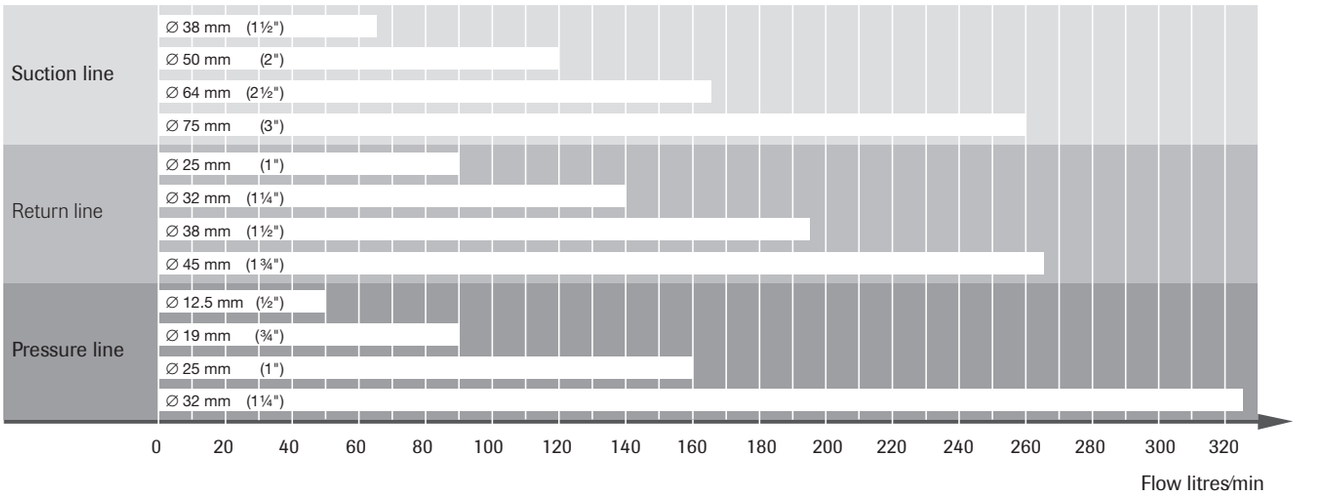
Hydraulic fluids

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

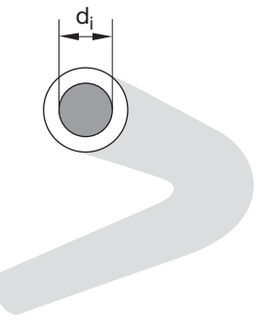
A min. viscosity of 10 cSt is required to keep the lubrication at a safe level.

The ideal viscosity is 20 - 40 cSt.

Recommended line size (d_i)

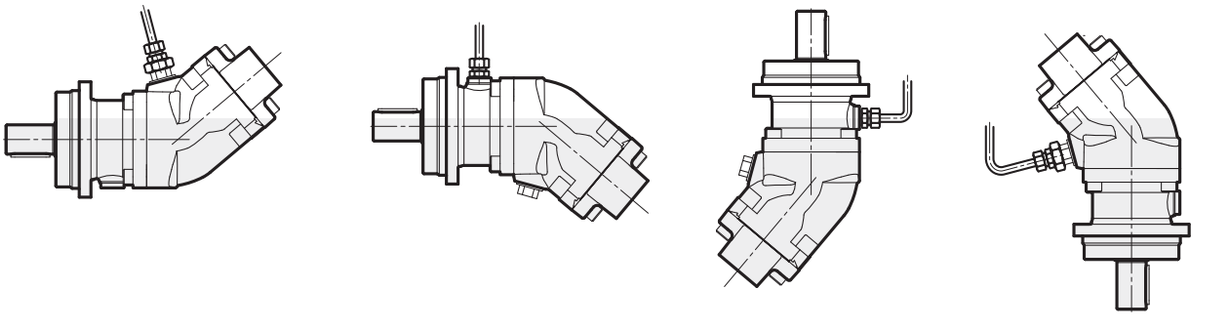


If the suction line is more than 2 m long the internal diameter must be increased by 10 mm for each meter extension.



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.



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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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