

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 0.77–7.93 cu in/rev. at a maximum working pressure of 5800 psi. 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.

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	R	Right
	L	Left

4. Shaft seal	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
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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
W45	W45x2x21x9g	-	-	-	-	-	-	-	-	O	O	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
K45	Ø 45 k6	-	-	-	-	-	-	-	-	O	O	X

- = Not available
 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		Optimised + External drainage										

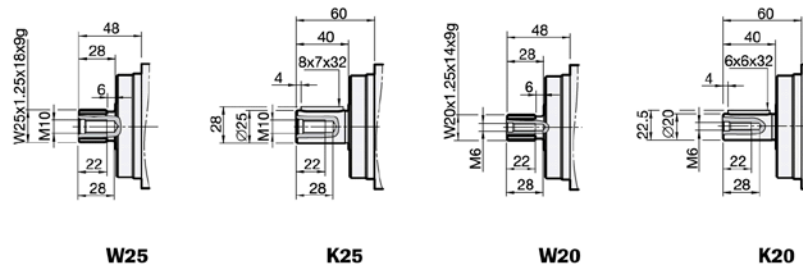
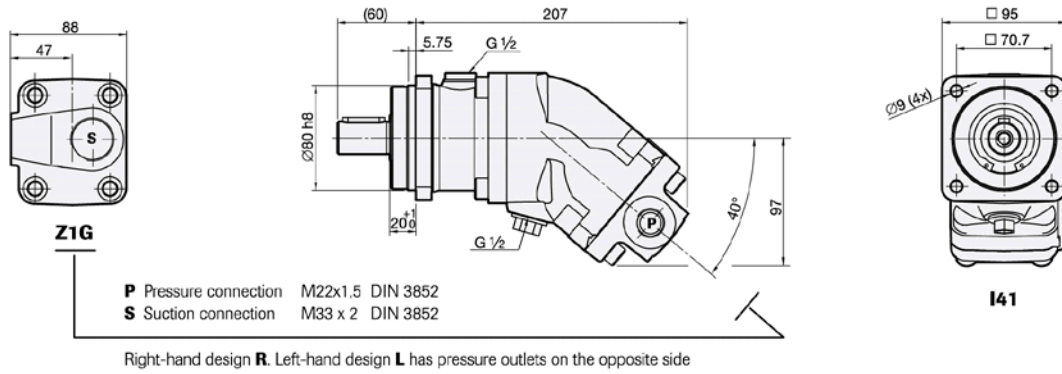
10. Accessories												
00		No accessories available										

SCP 012-130 ISO		012	017	025	034	040	047	056	064	084	090	108	130
rpm													
	500	1.7	2.2	3.4	4.5	5.4	6.2	7.5	8.4	11.0	12.0	14.3	17.2
	1000	3.3	4.5	6.7	9.0	10.9	12.4	15.0	16.8	22.1	24.0	28.5	34.3
	1500	5.0	6.7	10.1	13.6	16.3	18.7	22.5	25.2	33.1	35.9	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	5075
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	3350	3350	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 (x 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)													

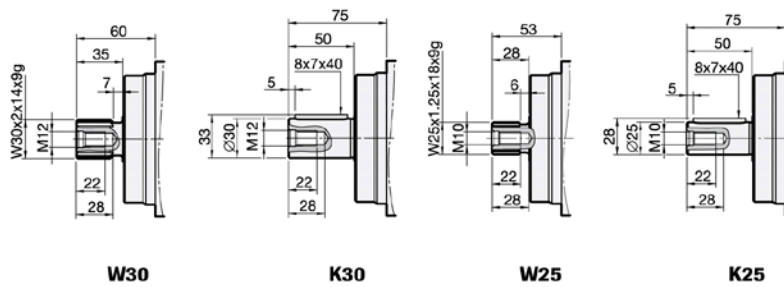
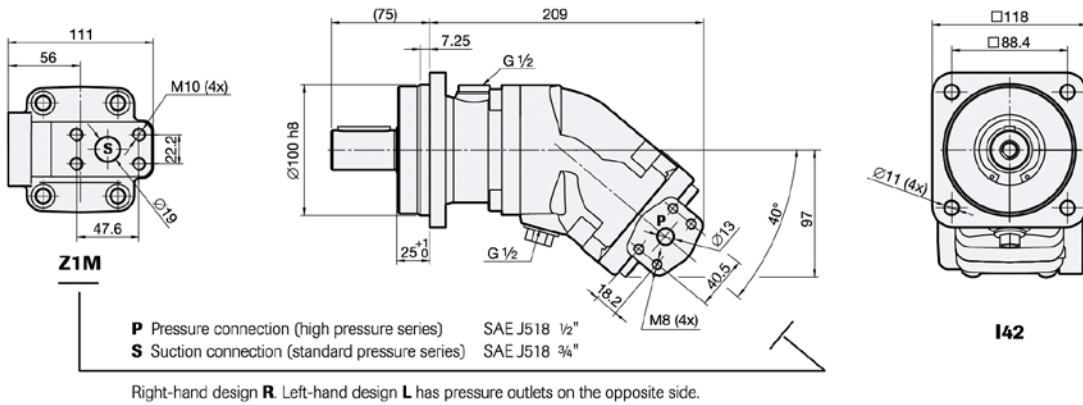
(1) The values shown are valid for an absolute pressure of 14,5 psi at the suction inlet.

(2) By increase of the input pressure the rotational speeds can be increased to the max. admissible speed, n max limit.

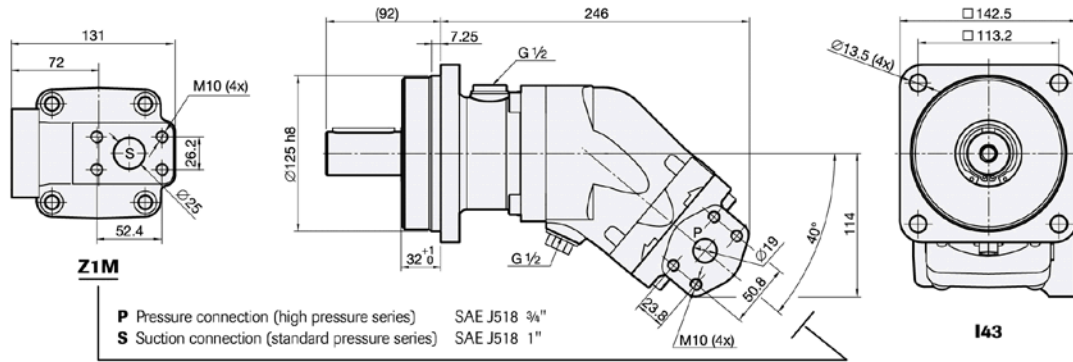
Dimensions SCP 012-017



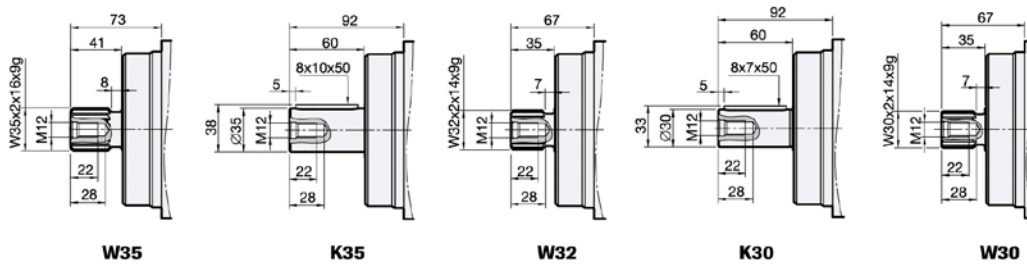
SCP 025-034



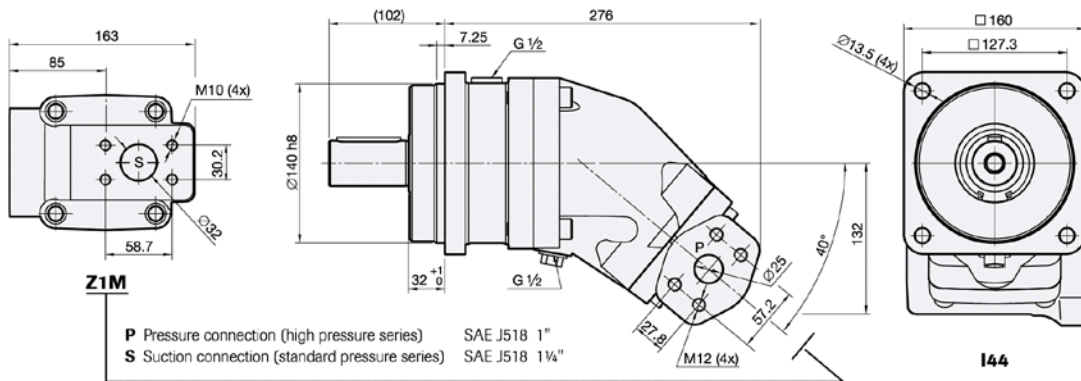
SCP 040-064



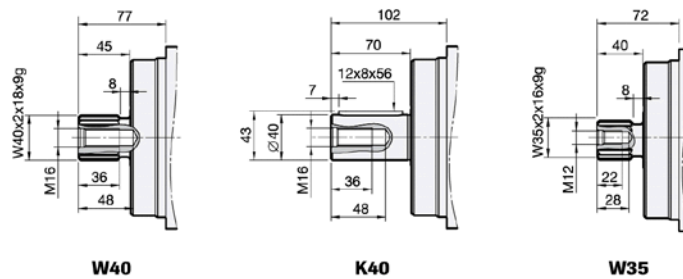
Right-hand design **R**. Left-hand design **L** has pressure outlets on the opposite side.



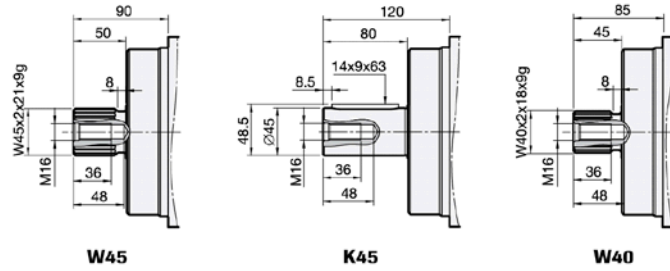
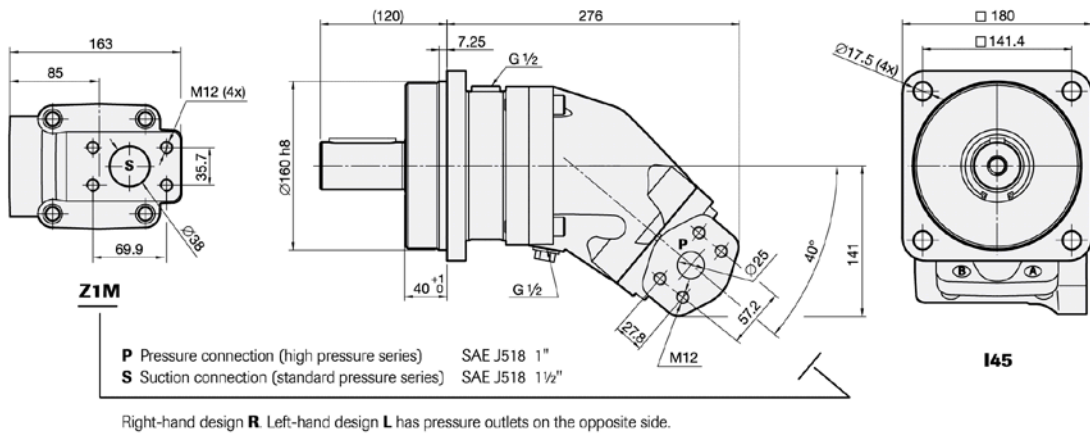
SCP 084-090



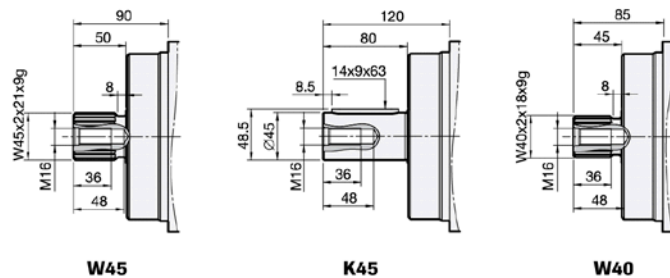
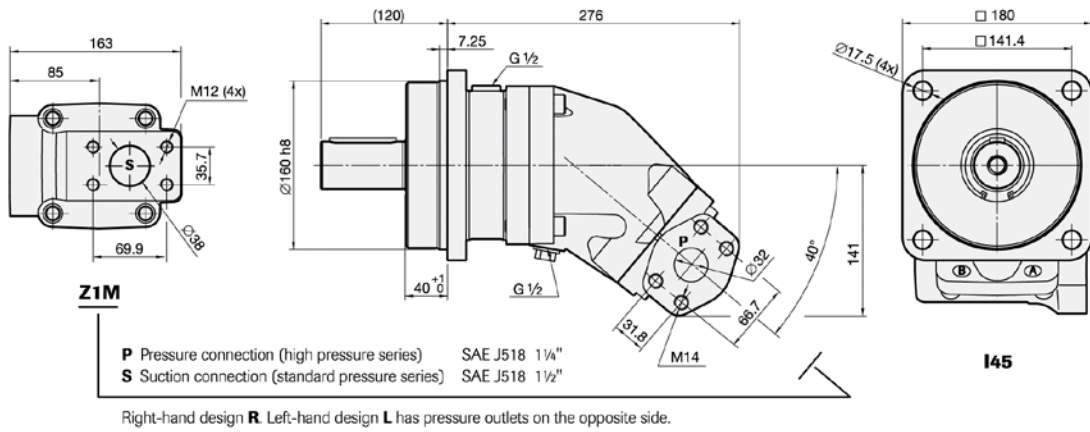
Right-hand design **R**. Left-hand design **L** has pressure outlets on the opposite side.



SCP 108



SCP 130



Choice of shaft seal

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

Code according to page 2, Versions, main data

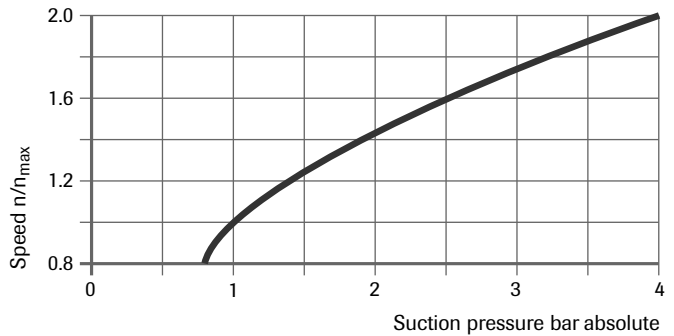
Factors affecting the choice of shaft seal include the hydraulic pump housing pressure and the drainage oil temperature.

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

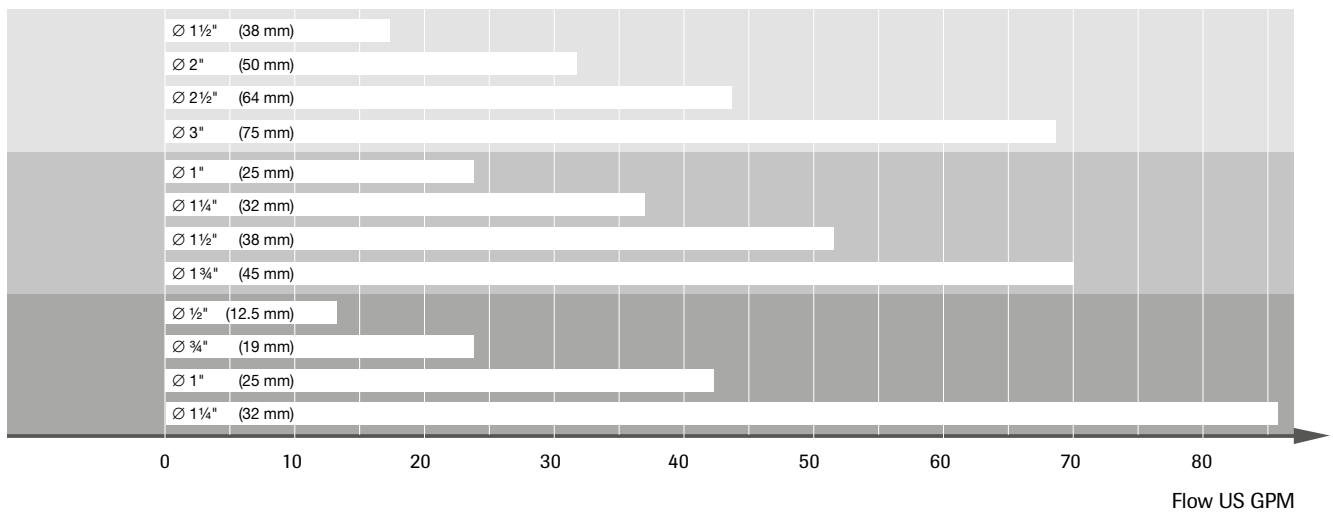
Cleanliness according to ISO norm 4406, code 16/13.

Hydraulic fluids

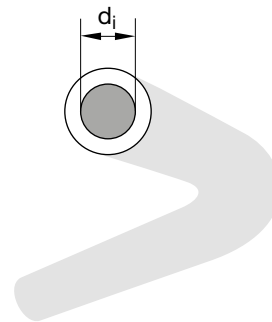
High performance oils meeting ISO specifications – such as HM, DIN 51524-2 HLP, or better – must be used.

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

The ideal viscosity is 20 - 40 cSt.

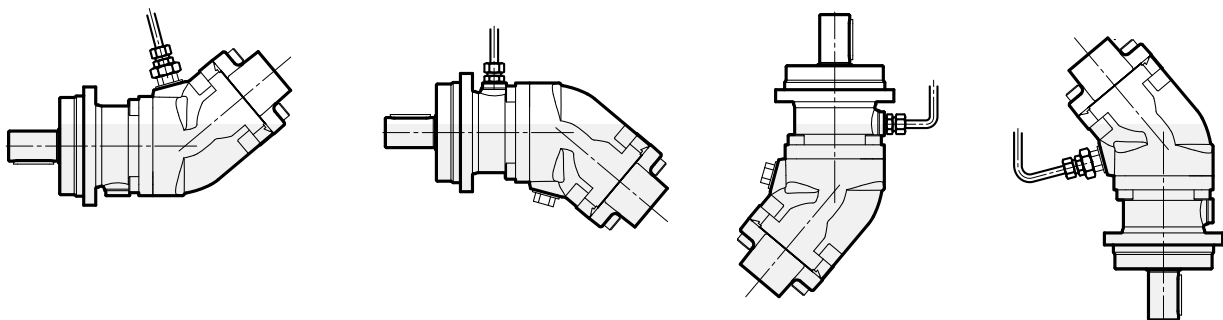


If the suction line is more than 78.4 inch long the internal diameter must be increased by 0.39 inch for each meter extension.



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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