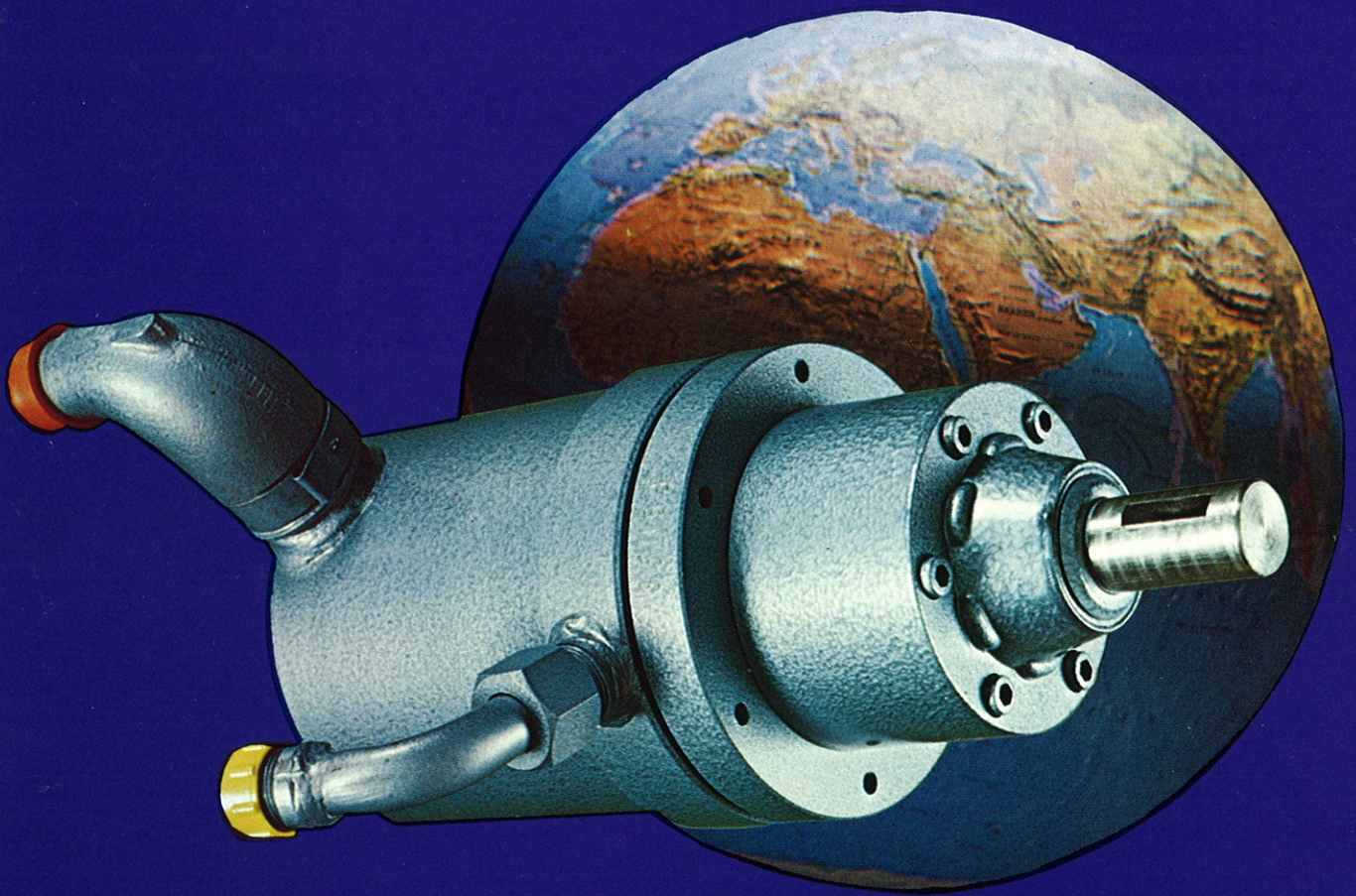


SUNFAB

Hydraulic Piston Pumps



25 years all over the world

THE SUNFAB PUMP

Silent Rugged Reliabel

To meet the demands of high working pressure at continuous operation we have developed a new pump type 9-17 SR.

9-17 SR



Displacement. 65 cm³/rev (3,96 cu.inch/rev)
Max. working pressure. 23 MPa (230 bar).
Speed range. 100-1500 R.P.M.
Weight. 22 kg (48,4 lbs)
Oblique plate thrust bearings of roller type.

Application: Loaders and lorry tipping devices or other units at continuous operation.
Bracket. Typ 1 or 2
Recommended drive shaft. B1 or B2

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)			23 (230)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	31	2,9	4	30,5	5,7	7,8	30	8,5	11,5	29,5	11,1	15,1	29	12,5	17
750	47	4,4	6	46,5	8,7	11,9	46	13	17,6	45,5	17,1	23,3	45	19,4	26,5
1000	62	5,8	7,9	61,5	11,6	15,7	60,5	17	23,2	60	22,5	30,7	59,5	25,7	35
1200	73,5	6,9	9,4	72,5	13,6	18,5	71,5	20,1	27,4	70,5	26,5	36	70	30,2	41,1
1500	85	8	10,9	84	15,8	21,5	83	23,3	31,8	82	30,8	41,9	81,5	35,1	47,7

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

9-17 S



Displacement. 65 cm³/rev (3,96 cu.inch/rev)
Max. working pressure. 20 MPa (200 bar)
Speed range. 100-1200 R.P.M.
Weight. 22 kg (48,4 lbs)

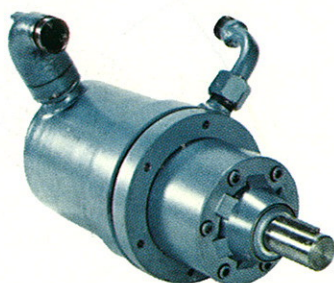
Application: Piece goods handling loaders and lorry tipping devices or equal applications for low oil flows.
Bracket. Typ 1 or 2
Recommended drive shaft. B1

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	31	2,9	4	30,5	5,7	7,8	30	8,5	11,5	29,5	11,1	15,1
750	47	4,4	6	46,5	8,7	11,9	46	13	17,6	45,5	17,1	23,3
1000	62	5,8	7,9	61,5	11,6	15,7	60,5	17	23,2	60	22,5	30,7
1200	73,5	6,9	9,4	72,5	13,6	18,5	71,5	20,1	27,4	70,5	26,5	36

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

10-17 SR



Displacement. 88 cm³/rev (5,37 cu.inch/rev)
Max. working pressure. 28 MPa (280 bar)
Speed range. 100-1500 R.P.M.
Weight. 27 kg (59,4 lbs)
Oblique plate thrust bearings of roller type.

Application: Loaders and tipping devices at continuous operation or other applications where high working pressure are required.
Bracket. Typ 1 or 2
Recommended drive shaft. B2 or B1

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)			23 (230)			28 (280)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	41,5	3,9	5,3	41,2	7,7	10,5	40,7	11,5	15,6	40,2	15,1	20,5	39,3	17	23,1	39	20,5	27,9
750	62,5	5,9	8	61,5	11,6	15,7	60,7	17,1	23,3	60,2	22,6	30,8	59,1	22,2	30,2	58,5	30,8	41,9
1000	81,2	7,6	10,4	80,2	15,1	20,5	79,2	22,3	30,4	78	29,3	39,9	77,2	33,4	45,4	76,5	40,2	54,7
1200	93,5	8,8	11,9	92,2	17,3	23,6	91	25,6	34,9	89,5	33,6	45,7	87	37,6	51,1	86	45,2	61,5
1500	108,5	10,2	13,9	107	20,1	27,3	106,5	30	40,8	102	38,3	52,1	99	42,8	58,2	98	51,5	70,1

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

5-17 S



Displacement. 36 cm³/rev (2,2 cu. inch/rev)
Max. working pressure. 23 MPa (230 bar)
Speed range. 100-1200 R.P.M.
Weight. 22 kg (48,4 lbs)

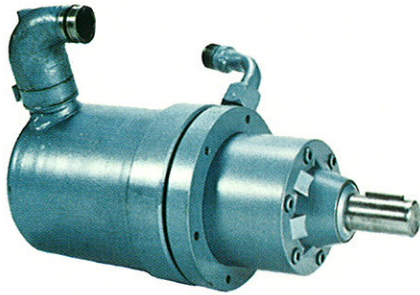
Application: Piece goods handling loaders or other units for low oil flows.
Bracket. Type 1 or 2
Recommended drive shaft. B1

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)			23 (230)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	17,2	1,6	2,2	17	3,2	4,3	16,7	4,7	6,4	16,4	6,2	8,4	16,1	7	9,5
750	26,1	2,5	3,3	25,8	4,8	6,6	25,5	7,2	9,8	25,3	9,5	12,9	25	10,8	14,7
1000	34,4	3,2	4,4	34,2	6,4	8,7	33,6	9,5	12,9	33,3	12,5	17	32,7	14,1	19,2
1200	40,8	3,8	5,2	40,2	7,6	10,3	39,4	11,1	15,1	38,9	14,6	19,9	38,3	16,5	22,5

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

100/275



Displacement.

107 cm³/rev
(6,53 cu.inch/rev)

Max. working pressure.

28 MPa (280 bar)

Speed range.

100-1200 R.P.M.

Weight.

35 kg (77 lbs)

Oblique plate thrust bearings of roller type.

Application: Loaders and tipping devices at continuous operation or other applications where big flows and high working pressures are required.

Bracket.

Recommende drive shaft.

Type 3.

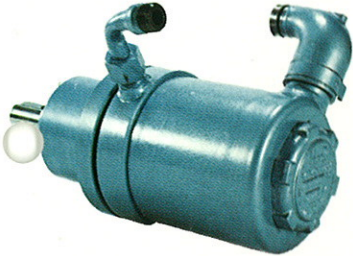
B2

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)			23 (230)			28 (280)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	48	4,5	6,1	44,5	8,4	11,4	43	12,1	16,5	41	15,4	21	40	17,3	23,5	38,5	20,2	27,5
750	72,5	6,8	9,3	69,5	13,1	17,8	67,5	19	25,9	64,5	24,2	33	63	27,2	37	62	32,6	44,4
1000	95	8,9	12,1	90,5	17	23,1	87,5	24,7	33,5	84,5	31,7	43,2	83	35,9	48,8	81,5	42,9	58,3
1200	115	10,8	14,7	111	20,8	28,4	108,5	30,6	41,6	104,5	39,3	53,4	103	44,5	60,5	101	53,1	72,3

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

11-17 S



Displacement.97 cm³/rev (5,92 cu.inch/rev)

Max working pressure.

18 MPa (180 bar)

Speed range.

100-1200 R.P.M.

Weight.

26,5 kg (58.4 lbs)

Application: Lorry tipping devices or other units for intermittent operation.

Not to be recommended for loader application

Bracket.

Recommended drive shaft.

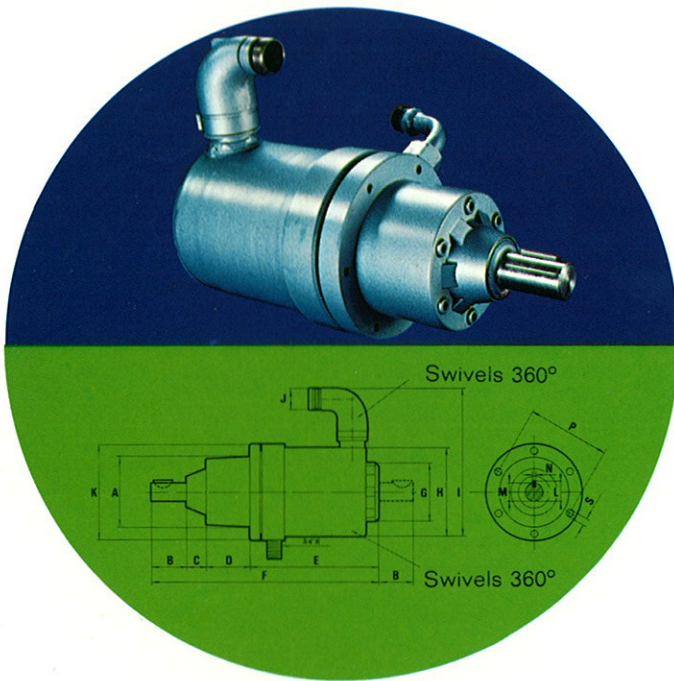
Type 1 or 2

B1 or B2

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			18 (180)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	45	4,2	5,8	44	8,3	11,2	43	12,1	16,5	42,7	14,4	19,6
750	67,5	6,3	8,6	66,5	12,5	17	65	18,3	24,9	64,7	21,9	29,8
1000	88,5	8,3	11,3	86,5	16,2	22,1	85,5	24,1	32,8	85,2	28,8	39,2
1200	103,5	9,7	13,2	101	19	25,8	99	27,9	38	98,7	33,4	45,4

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.



Main measures for the pump types

9-17 SR

9-17 S

10-17 SR

5-17 S

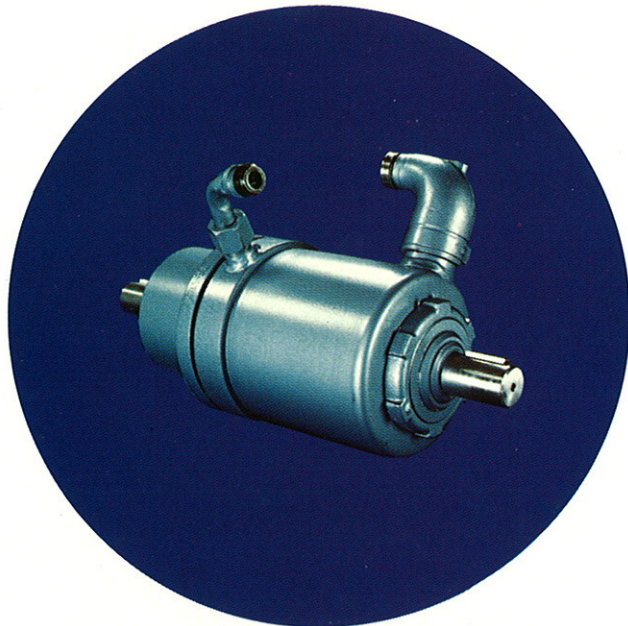
100/275

11-17 S

Main dimensions for all types, all measures in mm.

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
9-17 SR 9-17 S	117	60	32	72	227	391	105	152	259	32,5 38*	161	33,5	30h8	8		140			M8
10-17 SR	135	60	32	80	233	405	117	164	266	32,5 38*	175	38,5	35h8	10		155			M8
5-17 S	117	60	32	72	227	391	105	152	259	32,5 38*	161	33,5	30h8	8		140			M8
100/275	150	60	37	81	252	430	117	184	291	32,5* 38	188	43,5	40h8	10		169			M8
11-17 S	135	60	32	80	233	405	117	164	266	32,5 38*	175	33,5	30h8	8		155			M8
10-17 SRD		60			630	690	117	164	360	32,5 38*	175	38,5	35h8	10	128,5		145	241	
G 2	145	45		22	193	280		171			174		28						

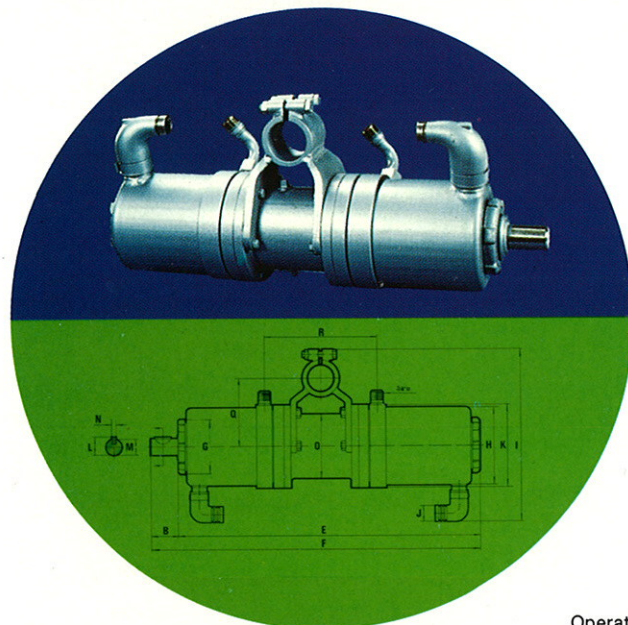
* = Not standard



Twin pump application

For dual-circuits operation all pumps except for the type G2 can be equipped with passing through shaft. The type specification is than altered into:

9-17 SR GA
9-17 S GA
10-17 SR GA
5-17 S GA
100/275 GA
11-17 S GA



10-17 SRD

Displacement. $2 \times 88 \text{ cm}^3/\text{rev}$ ($2 \times 5,37 \text{ cu.inch/rev}$)
Max. working pressure. 28 MPa (280 bar)
Speed range. 100-1200 rpm.
Weight. 65 kg (143 lbs)

A dual-circuit pump with two from each other separated flows.

Oblique plate thrust bearings of roller type.

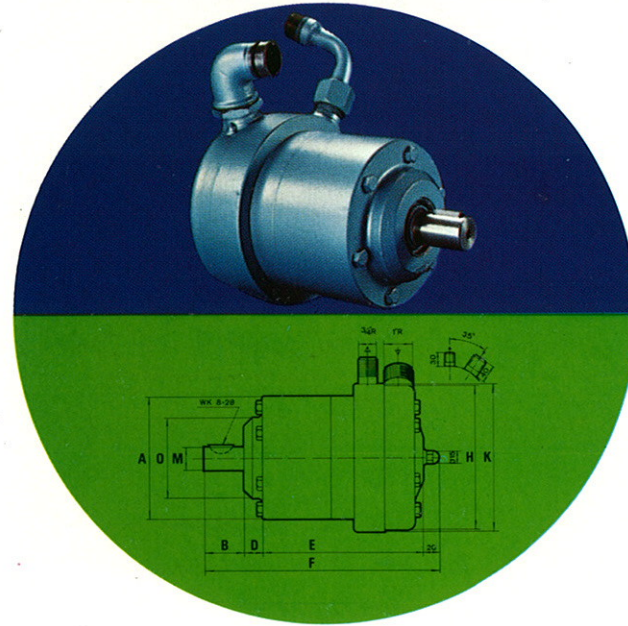
Application: Self-loading machines and forestry loaders or other applications where 2 separated oil flows or one big flow is needed.

Bracket: Type 3
Recommended drive shaft. B2

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)			23 (230)			27,5 (275)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	2x41,5	2x3,9	2x 5,3	2x41,2	2x 7,7	2x10,5	2x40,7	2x11,5	2x15,6	2x40,2	2x15,1	2x20,5	2x39,3	2x17	2x23,1	2x39	2x20,5	2x27,9
750	2x62,5	2x5,9	2x 8	2x61,5	2x11,6	2x15,7	2x60,7	2x17,1	2x23,3	2x60,2	2x22,6	2x30,8	2x59,1	2x22,2	2x30,2	2x58,5	2x30,8	2x41,9
1000	2x81,2	2x7,6	2x10,4	2x80,2	2x15,1	2x20,5	2x79,2	2x22,3	2x30,4	2x78	2x29,3	2x39,9	2x77,2	2x33,4	2x45,4	2x76,5	2x40,2	2x54,7
1200	2x93,5	2x8,8	2x11,9	2x92,2	2x17,3	2x23,6	2x91	2x25,6	2x34,9	2x89,5	2x33,6	2x45,7	2x87	2x37,6	2x51,1	2x86	2x45,2	2x61,5

l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.



G2

Displacement. $67 \text{ cm}^3/\text{rev}$ ($4,1 \text{ cu.inch/rev}$)
Max. working pressure. 20 MPa (200 bar)
Speed range. 100-1500 R.P.M.
Weight. 18 kg (39,6 lbs)

Application: tipping devices and loaders or other units for low oil flows.

To be recommended: Tractor mountings.

Recommended drive shaft. B1

Operating pressure in MPa (bar)

Speed rpm	5 (50)			10 (100)			15 (150)			20 (200)		
	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp	l/min	kW	hp
500	32	3	4,1	31,4	5,9	8	30,9	8,7	11,8	30,4	11,4	15,5
750	48,4	4,5	6,2	47,9	9	12,2	47,4	13,4	18,1	46,9	15,3	20,8
1000	63,9	6	8,2	63,4	11,9	16,2	62,3	17,6	23,9	61,8	23,2	31,6
1200	75,8	7,1	9,7	74,7	14	19,1	73,7	20,8	28,3	72,7	27,3	37,2
1500	87,6	8,2	11,2	86,5	16,2	22,1	85,5	24,1	32,8	84,5	31,7	43,2

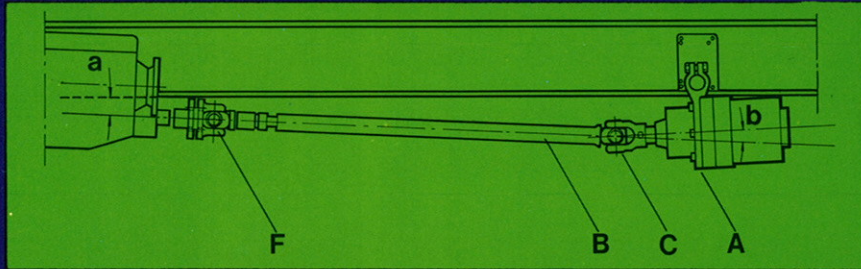
l/min = Oilflow liter/min. kW = Power required kilowatt. hp = Power required hp.

MOUNTING INSTRUCTIONS

Single mounted SUNFAB piston pump

Two universal joints (C and F) must be used as shown on the principle sketch below. Make sure that the angle (b) is equally divided at the two joints. The difference must not exceed 2° and the joint angle must not be bigger than 7° . The joints must be mounted in line to each other. The bracket type 1 is suitable for applications where drilling to the chassis frame is allowed. The bracket type 2 fits most truck types and can be mounted without prior drilling to the chassis frame.

The intermediate shaft's sliding universal joint (F) shall be mounted to the flange of the power take-off. Push the intermediate shaft together as far as possible, then pull it back 15-20 mm. (approx. 0,75 in.) Mark the position of the universal joint (C) on the intermediate shaft. Remove the intermediate shaft and weld together.

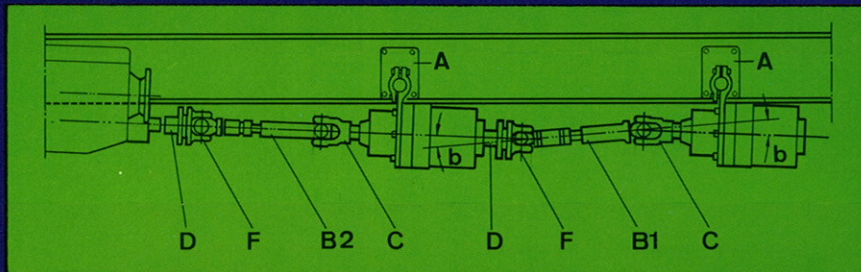


Dual mounted SUNFAB piston pump

Two brackets (A) and two intermediate shaft (B1 and B2) with adherent universal joints (C and F) are required. If the two pumps shall be used for different hydraulic functions, the pump which requires the higher power shall be mounted next to the power take-off. Make sure that the alignment and the welding is properly carried out and that the joint angle does not exceed 7° . The difference between the angle of the two pumps must not exceed 2° .

Generally: All pumps at single application, the B2 drive shaft shall be used at powers over 18 kW (25 HP).

At dual-mountings, the B2 size can be used on both shafts.



Mounting on a tractor or similar vehicle

The SUNFAB-pump can be mounted for direct drive via a flexible coupling from the engine shaft. Alternatively the pump can be driven by a V-belt from the engine shaft or power take-off. A chain drive can also be used if space does not permit V-belt drive. Regarding diameters of V-belt pulley or sprocket wheels, contact SUNFAB for further information.

Pipe and hose connections

Nipples of supply lines and hoses between the oil tank and pump shall have a bore of at least 25 mm (1 in.) Hose and pipe bores shall be at least 32 mm (1 1/4 in.) For long lines the nipple bores shall be 32 mm (1 1/4 in.) The required hose and pipe bore shall then be at least 38 mm (1 1/2 in.). The suction line shall be mounted so that no air bubbles can be trapped in it and there shall be absolutely no leaks to ensure a smooth and trouble-free operation of the pump. The length of the suction line between pump and oil tank must not exceed 2.500 mm (8 ft. 2 in.).

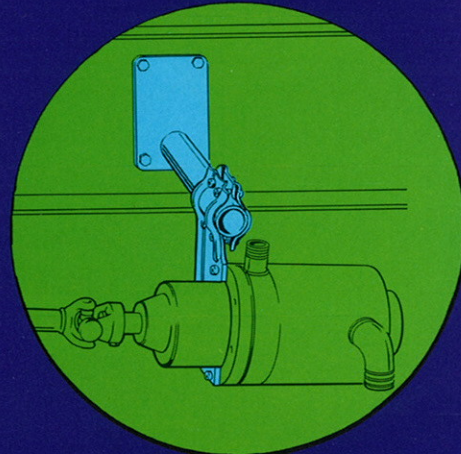
When testing a hydraulic system where a SUNFAB-pump is installed the following should be checked.

- ☐ The pump shall operate at a speed sufficient to provide the desired rate of oil flow.
- ☐ The line between oil tank and pump shall not leak and at no points shall its dimension be less than those specified.
- ☐ The suction hose shall not be pinched or folded.
- ☐ Possible suction filter in the hydraulic system must be checked for obstructions.
- ☐ The oil tank must be filled with a light hydraulic oil e.g BP SHF 60 or 80 – Shell T Oil 23 or 27. In extreme cold weather conditions BP HLP 40/1 – Shell T Oil 17 or equivalent oils are recommended.

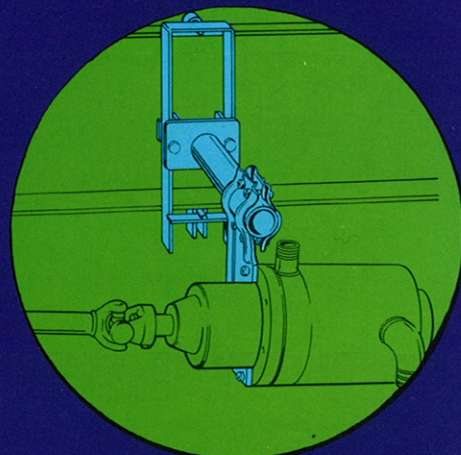
Right to design changes reserved.

Three types of brackets

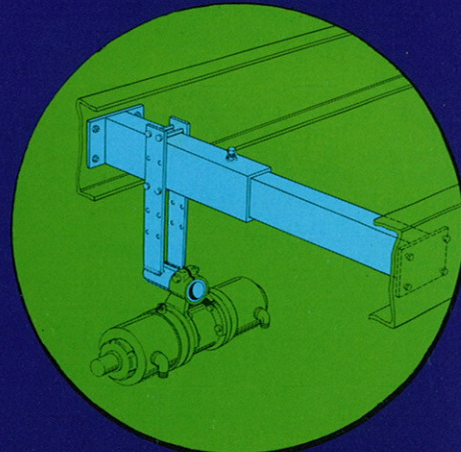
SUNFAB supplies complete equipment for pump installations as shown on illustrations below.



Bracket type 1 Weight 5 kg (11 lbs)



Bracket type 2 Weight 8,5 kg (18,7 lbs)



Bracket type 3 Weight 16 kg (35,2 lbs)

Facts about the SUNFAB-pumps

SUNFAB is the largest manufacturer in Scandinavia of hydraulic piston pumps with export all over the world.

SUNFAB -pumps have been on the market for more than 25 years and are well known for being silent-rugged and reliable.

For Loaders on lorries, the SUNFAB-pump leads the world market.

The pumps are of doublefaced axial piston type, have a large built-in strainer and a magnetic plug at the suction inlet, preventing impurities to enter the oil circuit.

The pumps are equipped with seat type valves manufactured from hardened quality steel, which means a silent run, high class sealing quality and durability.

The pumps work in either direction of rotation and do not require any separate draining line.



SUNDINS
SUNDINS FABRIKER AB

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