MODEL	Capacity	PEACK PRESSURE		MAX WORKING PRESSURE		Maxi speed RPM	NOMINAL FLOW		Input power (kW) at 1000 RPM and 100 bar	Input torque at 100 bar and N.m	Approx. weight
							at 1500 RPM	at Maxi speed			
	cc / rev	bar	PSI	bar	PSI		l / min	l / min			Kg
1001	1,02	300	4350	255	3697	8000	1,53	8,16	0,32	0,30	0,9
1002	2,05	300	4350	255	3697	8000	3,07	16,4	0,48	0,46	
1003	3,07	300	4350	255	3697	7000	4,60	21,4	0,67	0,64	
1004	4,09	250	3625	215	3117	6000	6,13	24,5	0,87	0,83	1,1
1005	5,12	200	2900	170	2465	6000	7,68	30,7	1,07	1,02	
1006	6,14	150	2175	125	1812	6000	9,21	30,7	1,22	1,16	

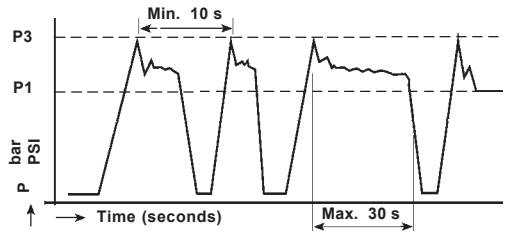
The pump can only run in one way rotation (Precise the direction of rotation on order).
The working cycles hereunder are possible with hydraulic mineral oil for viscosities between 12 and 150 cSt (65,2 and 700 SUS).
The minimum viscosity of 12 cSt (65,2 SUS) is available for a maximum temperature in the hydraulic circuit .
Working temperature: - 20 °C (4 °F) to + 80 °C (176 °F) (140 °C (284 °F) with Viton shaft seal).
Full flow filtration: 10 to 15 microns at the pressure port of the pump or on the return circuit.
Filtration on the suction side: 125 microns.
Pressure at the inlet of the pump:
- Minimum 0,7 bar absolute (Maxi depressure 300 millibar with regard to the air pressure).
- Maximum 2 bar absolute or 1 bar over the air pressure.

The hereabove characteristics concern the pumps driven by elastic couplings perfectly aligned without any external radial or axial force.
For any other coupling, see technical data sheet F.T R 0009.
For use at maximum working conditions and/or intensive cycles, thanks to consult our technical sales service for validation.

P1 *Maximum pressure in continuous duty.*

P3 *Allowable peack pressure.*

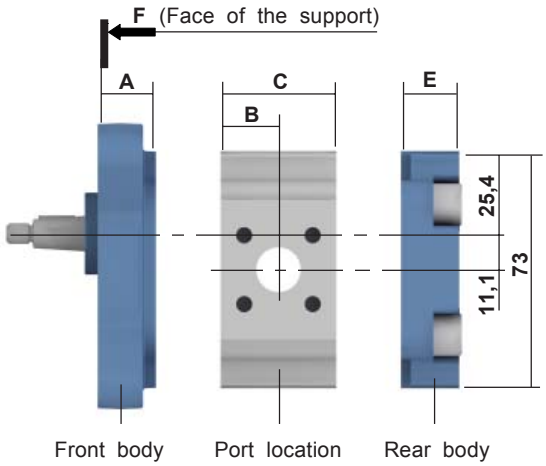
Maximum Pressure ⇒



Front bodies:	A
AAN / AAK - BAN - CBN / CBK DCN / DCK	18

Port location (capacity):	B	C
1001 - 1002 - 1003	17,9	35,8
1004 - 1005 - 1006	22,7	45,6

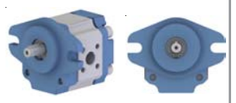
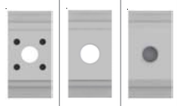
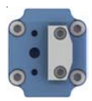
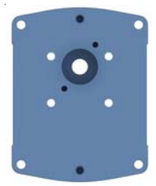
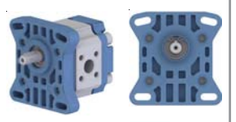
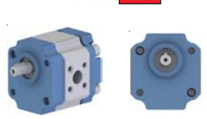
Rear bodies:	E
L - A - X - T - V - W	18



Consult us for availability

P	II Sign	III Sign	IV Sign	1	VI Sign	VII Sign	VIII Sign	IX Sign	X Sign	XI Sign	XII Sign

For CODIFICATION, see data sheet F.T R 0011

DIRECTION of ROTATION (II Sign) P1	P2	FLAT FRONT BODIES (III and IV Sign)	CAPACITY (V and VI Sign)	PORT LOCATION (VII Sign) C	F	X	REAR BODIES (VIII Sign) L	A	X	T	V	W	J*	DRIVING SHAFTS (IX, X and XI Sign) TAPERED 10	STRAIGHT KEYED 20	SPLINED 30	TANG 40
X	X	AAN / AAK 	1001 1002 1003 1004 1005 1006											 10 B01 10C01	 20 C01	 30 C01	 40 A01 40C02
X	X	BAN CBN / CBK 															
X	X	DCN / DCK 															

Dimensions readings and approximative characteristics subject to modifications.

LEGENDES

DIRECTION of ROTATION

P1 = Clockwise
P2 = Anti clockwise

FRONT BODIES

AA* = Fixing SAE and ISO
BA* = Fixing English and Italian
CB* = Fixing French
DC* = Fixing German

PORT LOCATION

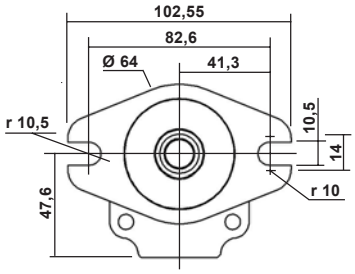
C = Square location
F = Threaded ports
X = without ports

REAR BODIES

L = Standard
A = with rear ports
X = high pressure relief valve, internal return
T = high pressure relief valve, external return
V = low pressure relief valve, internal return
W = low pressure relief valve, external return
J *= Pre-arrangement for assembling "Module 3" see F.T 10 1352 page

FRONT BODIES

AAN / AAK

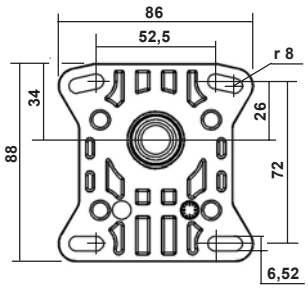


Centering: Ø 50,8 $^{0}_{-0,05}$
Thickness: 6

AAN: F.T 10 1294

AAK: F.T 10 1326

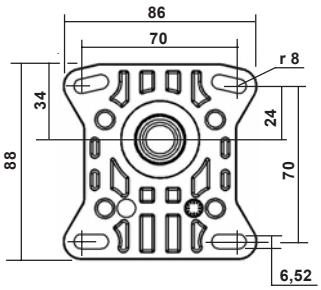
BAN



Centering: Ø 25,35 $^{-0,02}_{-0,041}$
Thickness: 4

BAN: F.T 10 1295

CBN / CBK

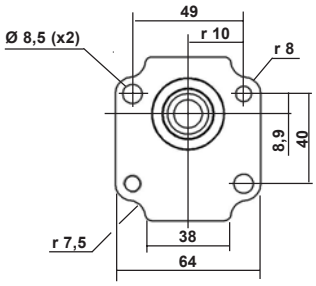


Centering: Ø 35 $^{-0,025}_{-0,05}$
Thickness: 4

CBN: F.T 10 1296

CBK: F.T 10 1327

DCN / DCK



Centering: Ø 32 $^{-0,025}_{-0,05}$
Thickness: 4

DCN: F.T 10 1297

DCK: F.T 10 1328

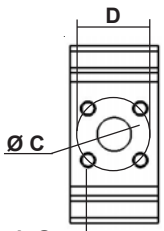
Dimensions readings and approximative characteristics subject to modifications.

F.T 10 1293 4/7

Consult us for availability

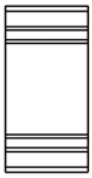
CHOICE of IMPLANTATIONS of PORTS and of RECOMMANDED FLANGES

C (Square)



F (Threaded)

X (with ports)



Capacity	INLET (T)					OUTLET (P)					CATALOGUE N° 70 Ref. of RECOMMANDÉD FLANGES (for speed 1500 rev / min)	
	ØC	D	E	ØF	G	ØC	D	E	ØF	G	INLET (T)	OUTLET (P)
1001 to 1003	14	30		M6	13	14	30		M6	13	1 / 4 " BSP N: 1.500292 V: 1.504770	1 / 4 " BSP N: 1.500292 V: 1.504770
1004 to 1006											3 / 8 " BSP N: 1.500293 V: 1.505027	1 / 4 " BSP N: 1.500292 V: 1.504770
1001 to 1003				3/8" BSP	12				3/8" BSP	12		
1004 to 1006				1/2" BSP	14				3/8" BSP	12		
1001 to 1006	Only with rear body Type A											

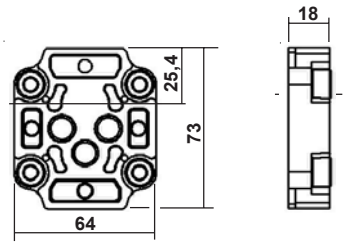
Dimensions readings and approximative characteristics subject to modifications.

F.T 10 1293 5/7

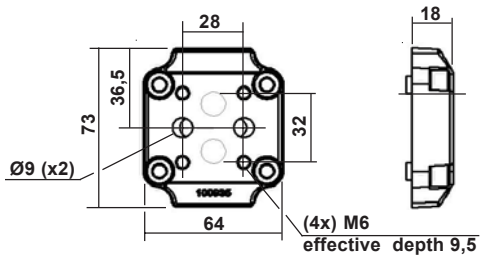
Consult us for availability

REAR BODIES

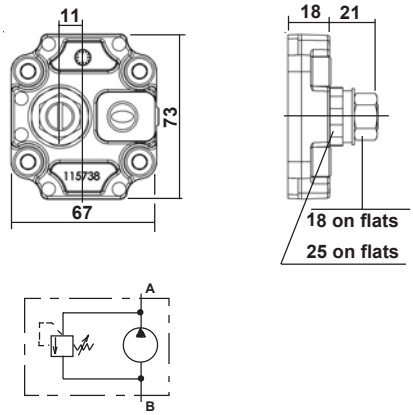
L
Standard



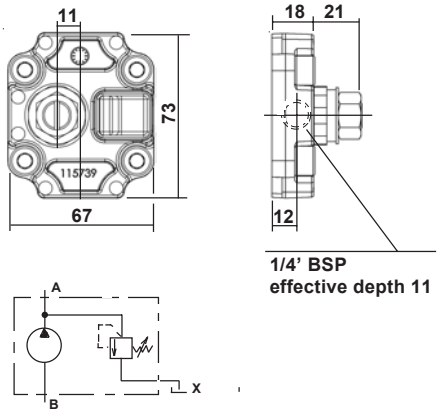
A
Rear ports



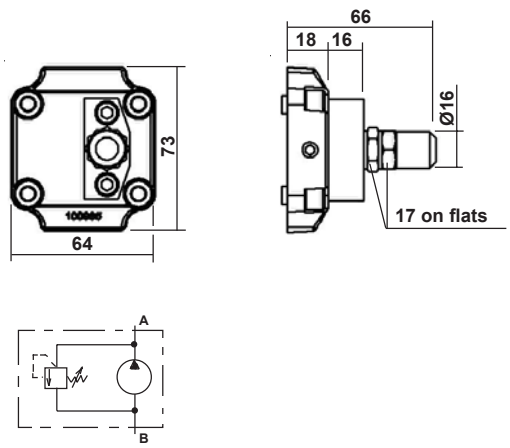
X
high pressure relief valve, internal return



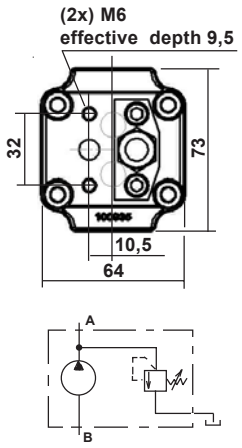
T
high pressure relief valve, external return



V
low pressure relief valve, internal return



W
low pressure relief valve, external return



Consult us for availability

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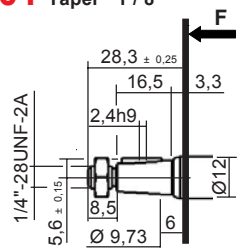
PUBLISHING 17 / 03 / 2011

Dimensions readings and approximative characteristics subject to modifications.

DRIVING SHAFTS

Tapered	Straight keyed	Splined	Tang
10	20	30	40

B01 Taper 1 / 8

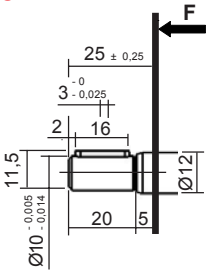


Delivered with nut: K101719

Max. transmissible torque

40 N.m

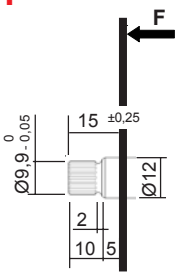
C01



Max. transmissible torque

25 Nm

C01

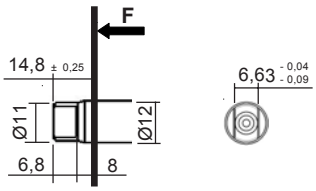


involute spline to shaft
10 x 18 x 0,5
to norm NF E 22 141 - BNA 455
Spigot on free flanks

Max. transmissible torque

25 N.m

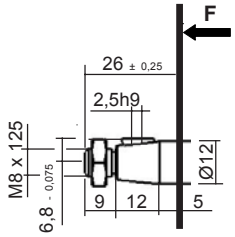
A01



Max. transmissible torque

30 N.m

C01 Taper 1 / 5

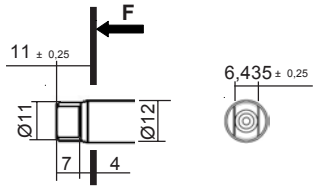


Delivered with nut: K105890

Max. transmissible torque

50 N.m

C02



Max. transmissible torque

30 N.m

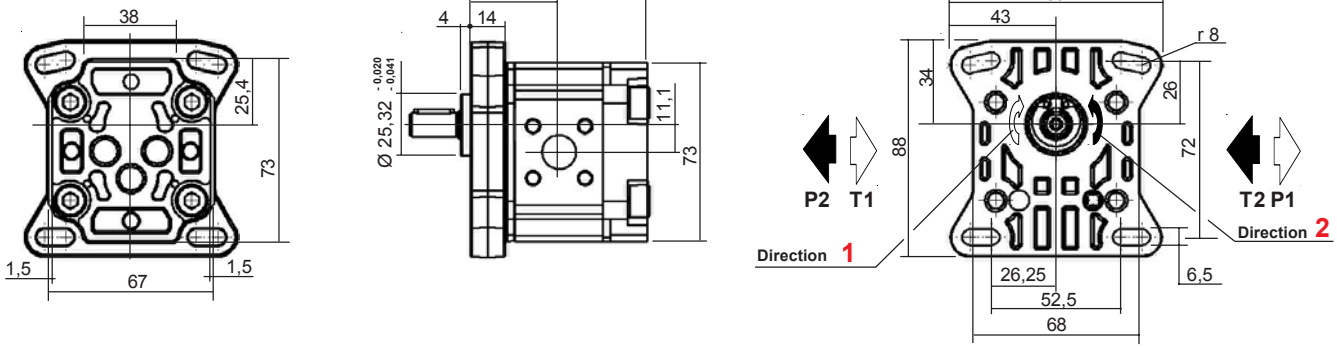
Dimensions readings and approximative characteristics subject to modifications.

F.T 10 1293 7/7

Consult us for availability

P	II Sign	BA	N	1	VI Sign	VII Sign	L	IX Sign	X Sign	XI Sign	XII Sign

For CODIFICATION, see data sheet F.T R 0011



CHOICE of the capacity	Dimensions A	Dimensions B
1001 1002 1003	71,8	35,9
1004 1005 1006	81,5	40,7

Multiple geared pumps, see data sheet F.T 10 1298

Seals kits:

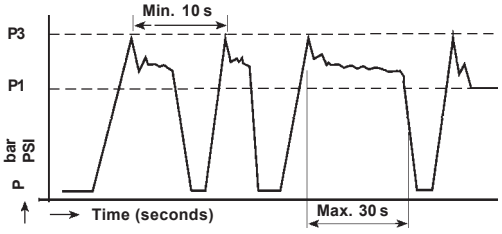
Nitrile: K5074037
Viton: K5074038
(For manufacture to since October 1991)

MODEL	Capacity cc / rev	PEAK PRESSURE bar	PEAK PRESSURE PSI	MAX WORKING PRESSURE bar	MAX WORKING PRESSURE PSI	Max. speed RPM	NOMINAL FLOW at 1500 RPM l / min	NOMINAL FLOW at Max. speed l / min	Input power (kW) at 1000 RPM and 100 bar	Input torque at 100 bar and N.m	Approx. weight Kg
1001	1,02	300	4350	255	3697	8000	1,53	8,16	0,32	0,30	0,9
1002	2,05	300	4350	255	3697	8000	3,07	16,4	0,48	0,46	
1003	3,07	300	4350	255	3697	7000	4,60	21,4	0,67	0,64	
1004	4,09	250	3625	215	3117	6000	6,13	24,5	0,87	0,83	1,1
1005	5,12	200	2900	170	2465	6000	7,68	30,7	1,07	1,02	
1006	6,14	150	2175	125	1812	6000	9,21	30,7	1,22	1,16	

P1 *Maximum pressure in continuous duty.*

P3 *Allowable peack pressure.*

Maximum Pressure ⇒

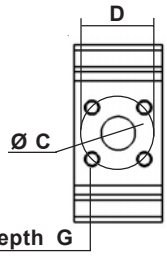


Dimensions readings and approximative characteristics subject to modifications.

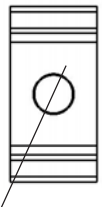
F.T 10 1295 1/4

CHOICE of IMPLANTATIONS of PORTS and of RECOMMANDED FLANGES

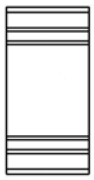
C (Square)



F (Threaded)



X (with ports)



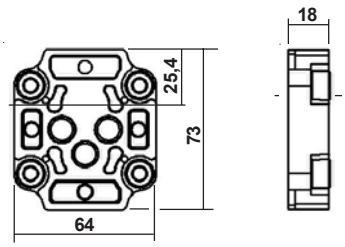
Capacity	INLET (T)					OUTLET (P)					CATALOGUE N° 70 Ref. of RECOMMANDÉD FLANGES (for speed 1500 rev / min)	
	ØC	D	E	ØF	G	ØC	D	E	ØF	G	INLET (T)	OUTLET (P)
1001 to 1003	14	30		M6	13	14	30		M6	13	1 / 4 " BSP N: 1.500292 V: 1.504770	1 / 4 " BSP N: 1.500292 V: 1.504770
1004 to 1006											3 / 8 " BSP N: 1.500293 V: 1.505027	1 / 4 " BSP N: 1.500292 V: 1.504770
1001 to 1003				3/8" BSP	12				3/8" BSP	12		
1004 to 1006				1/2" BSP	14				3/8" BSP	12		
1001 to 1006	Only with rear body Type A											

Cotes dimensionnelles et caractéristiques approximatives sous réserves de modifications

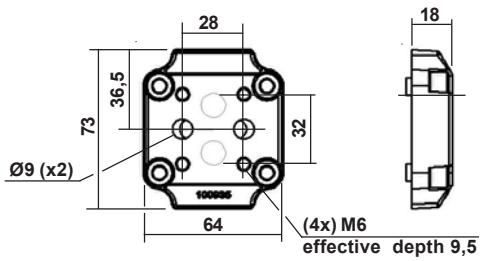
F.T 10 1295 2/4

REAR BODIES

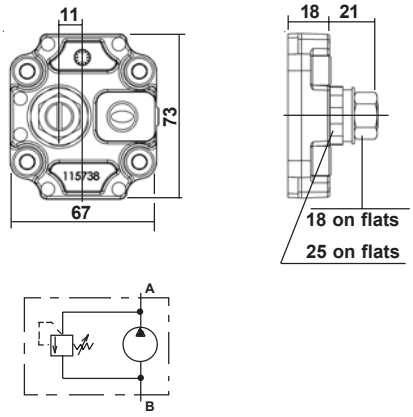
L
Standard



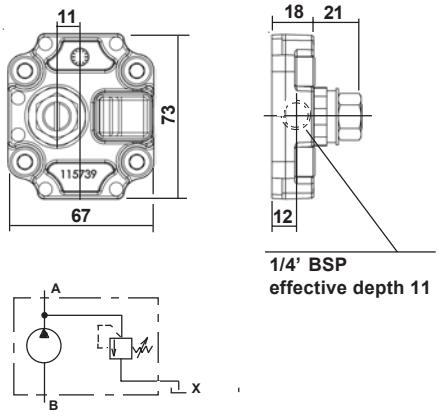
A
Rear ports



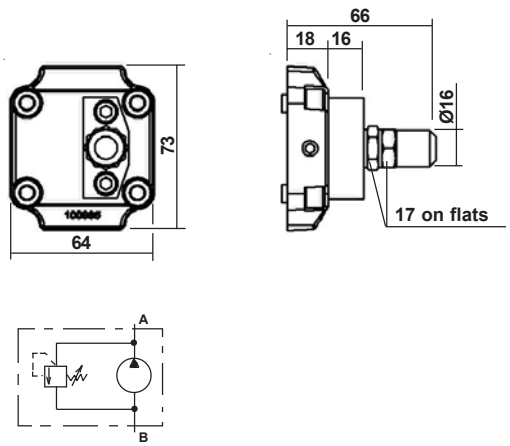
X
high pressure relief valve, internal return



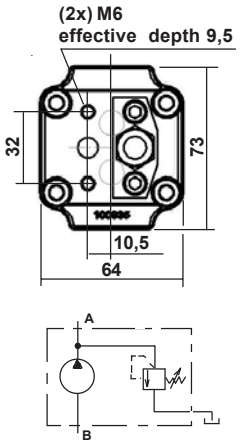
T
high pressure relief valve, external return



V
low pressure relief valve, internal return



W
low pressure relief valve, external return



Consult us for availability

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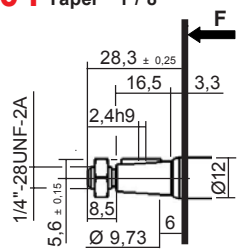
DRIVING SHAFTS

Tapered	Straight keyed	Splined	Tang
10	20	30	40

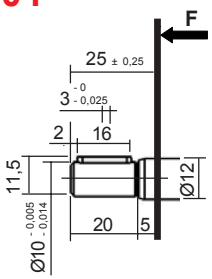
B01 Taper 1 / 8



Delivered with nut: K101719

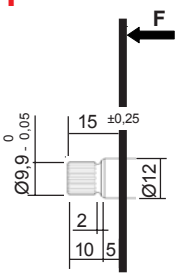
Max. transmissible torque
40 N.m

C01



Max. transmissible torque
25 Nm

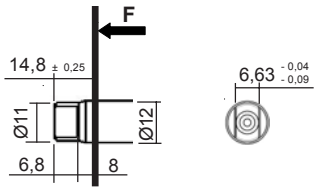
C01



involute spline to shaft
10 x 18 x 0,5
to norm NF E 22 141 - BNA 455
Spigot on free flanks

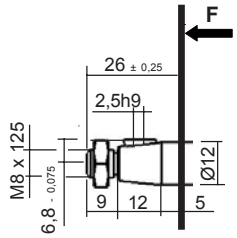
Max. transmissible torque
25 N.m

A01



Max. transmissible torque
30 N.m

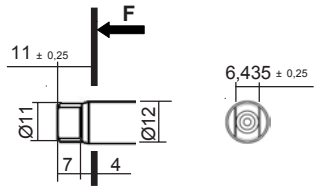
C01 Taper 1 / 5



Delivered with nut: K105890

Max. transmissible torque
50 N.m

C02



Max. transmissible torque
30 N.m

Cotes dimensionnelles et caractéristiques approximatives sous réserves de modifications

F.T 10 1295 4/4

Consult us for availability

Our pumps were studied and manufactured to bring you complete satisfaction. They were designed with first quality materials, produced according to modern processes and controlled by strict tests .
However, for the best use, it is absolutely necessary to make some arrangements when mounting and when using.
The major 10 are the following:

1- Mounting

On a rigid support, fixed to the driving motor, make sure of the perfect concentricity of the pump centering with the driving shaft (5/100 maximum, when reading), according to the series.
Pump can be placed in whatever position.

2- Driving

Apart from the driving torque, no radial nor axial effort must be applied on pump shaft to ensure a good efficiency and a good service.
See technical data sheet F.T R 0009 (pump with outrigger bearing excepted).
In an installation with:

- rapid duty cycle.
- frequent pressure variations.
- high working pressure.
- important variation of the hydraulic pump speed.

it is recommended to examin the pump coupling regulary and to slightly lubricate the shaft and the sleeve coupling to avoid frictional oxidation phenomena (fretting).

When the pump is driven with parallel keyed or splined shaft, it is recommended that the shaft be lubricated with bearing grease containing molybdenum disulphide.

3- Pipes

Selecting the correct pipe is very important . Apart from flexible hoses, use preferably cold drawn stel tubes, free from calamine and oxidation inside.

Alll hoses must be properly burred and cleaned. No trace of stranger bodies nor dust must be left; make sure of this before the mounting.

1) Never hot-bend hoses so as to avoid oxidation disposals.
2) Seal hose or pipe end during storage.
3) During the mounting, do not leave them on the floor.
4) Make sure of their cleanness until the final mounting.

Suction hose:
It must be made in such a manner so as to get a maximum oil speed of 2,5 m/s, less if possible, mostly for big flows.

Below are some flow indications according to the dimensions of hoses:

1 / 4 "	8 x 13	=	8 l / min
3 / 8 "	12 x 17	=	17 l / min
1 / 2 "	15 x 21	=	27 l / min
3 / 4 "	21 x 27	=	52 l / min
1 "	26 x 34	=	80 l / min
1 " 1 / 4	33 x 42	=	130 l / min
1 " 1 / 2	40 x 49	=	190 l / min
2 "	50 x 60	=	295 l / min
2 " 1 / 2	66 x 76	=	513 l / min
3 "	80 x 90	=	750 l / min

The hose must be as straight as possible. Avoid elbows and connections. Straight angle elbows are prohibited. Narrowing forbidden.

The suction hose must be as short as possible (inferior to 1,50 m); beyond this length, lower the flow speed and ask our Technical Departments for information.

The level between the suction port and the oil must not exceed 0,75 m when the tank is lower down. It is recommended to place the tank on load, that is to say above the pump.

Do not use soft materials to make hoses, depressure and temperature tending to bring sided closer and reduce the flow surface.

Take care of the good screwing of connections to avoid air inlet.

4- Tanks

Tank capacity must be so that in maximum duty, the oil temperature must stabilize at maximum 50 / 60 ° . The quantity of oil that can be taken to ensure the various cycles must be taken into account.

The purpose of a tank, in addition of being a receiver, is to quickly dissipate the calories stored by the circuit when there is no cooling device beside.

Furthermore, it must allow the oil to clarify from the possible emulsions and consequently to avoid the creation of emulsion.

All hoses leading to tank must dive into the fluid.

The fluid coming back to tank must come back to tank very slowly to avoid disturbances on the suction hose.

Tank must be perfectly clean, realized in teme plate or fitted with an hydrocarbon-resistant inside painting.

It must be designed in order that an inspection flap allows a careful cleaning before mounting and during maintenance.

It must be dustproof.

The shape must be simple, either parallelepipidal or cylindrical.

Level control (tightness of connections)

One of the maintenance factors is watching the tank level.

According to the tank capacity, a continuous hose or connector leakage may lead to significant pump oil loss.

Consequences are always damaging to the pump: possible air suction, increased circuit temperature, oil-aging, etc .....

It is therefore necessary to examine regularly all circuit connections to make sure that there is no leakag.

5- Oil filtration

To ensure the pump a good efficiency and a long life duration, the filtration of the hydraulic fluid is indispensabl .

Do not forget that the pump and the various components of the circuit are lubricated by the convoyad fluid.

At suction : Fit the suction hose with a suction strainer submerged in the tank, the filtration efficiency of which shall be 125 µ.

Do not use a suction strainer with a higher efficiency owing to possible underfeeding effects on the pump.

Flow capacity: 1 dm2 for a flow of 10 l / min.

At pressure or at tank return : Filter having a filtration capacity of 10 or 15 µ. A metal filter can be used.

6- Air filtration

Most of the pumps are prematurely aging due to abrasion coming from external elements to the tank . It is indispensable to fit the tank with a true air filter and not a simple breather.

The air filter must have a 5 µ filtration efficiency.

All othe parts of the tank must be airproo .

7- Pump Protection

All hydraulic installations must have a pressure relief valve to protect the pump, and this for each direction of rotation.

Several kinds can be employed:

- manually operated.
- differential.
- piloted.

Whatever the type, the following is required:

- quick opening.
- low opening range (lower than 20 bar)
- low closing range (lower than 10 bar)
- It must be pulsationfree.
- Make sure of the flow capacity of the pressure relief valve according to the pump flow.

8- Fluid to be employed

A good quality of oil is to be used.

The more important the duty cycle is, the higher the pressure and driving speed are, the more indispensable it is to choose a good quality of fluid.

An oil with viscosity 4 to 5 °E (30 to 40 cSt) to 40 °C must be used.

Take into account the fact that the higher the circuit temperature is, the more necessary it is to choose a high viscosity oil.

In many applications, motor oils can be used; they bring excellent results. For lubrication and life duration, choose class SAE 20 - 40 multigrade oils.

9- Maximum working temperature

Maintaining an hydraulic circuit requires a control, particulary of the oil temperature.

In general, it is recommended not to exceed 50 to 60 °C. If the latter temperature is exceeded, it would be necessary either to increase the tank volume, or to use a cooler.

Also check whether circuit obstructions or abnormal rolling of some distribution or regulation devices are not causing the heating.

In case the working or ambiant temperature conditions require a working temperature higher than 60 °C, it is then necessary to use a higher viscosity oil (for instance, 5 °E at 70 °C instead of 50 °C).

Ambiant temperature - 15 °C to + 60 °C.

Also make sure that no external heat supply disturbs the functioning of the pump . In this case, inform our Technical Department who will give you useful advices, amoung others Viton seals for temperatures between 70 and 130 °C will be recommended (example : hydraulic pump in contact with the carter of a diesel motor that can work under temperatures of 120 °C).

10- Oil aging

The use of an oil that has lost its lubrication properties is a cause for wear and tear of the pump and of the circuit devices.

Temperature variations, rolling in the distribution and regulation valves cause a molecular modification of the fluid in the more or less long-term.

The rapidity of the aging depends on the oil volume in the circuit, on the important temperature variation and on the rolling under pressure.

According to the energy conversion rate of the circuit, it is necessary to provide for changing oil between 500 and 1000 duty hour .

(N.B: analysis in case of a big quantity of oil).

11- Additional information

For any further details, seek advice from our Technical Departments.

TYPE	ISO	CASTROL	ELF	ESSO	FINA
HM	32	HYSPIN AWS 32	ELFOLNA DS 32	NUTO H 32	HYDRAN TS 32
	46	HYSPIN AWS 46	ELFOLNA DS 46	NUTO H 46	HYDRAN TS 46
	68	HYSPIN AWS 68	ELFOLNA DS 68	NUTO H 68	HYDRAN TS 68
HV	32	HYSPIN AWH 32	HYDRELF DS 32	UNIVIS N 32	HYDRAN TSX 32
	46	HYSPIN AWH 46	HYDRELF DS 46	UNIVIS N 46	HYDRAN TSX 46
	68	HYSPIN AWH 68	ELFOLNA DS 68	UNIVIS N 68	HYDRAN TSX 68
HE	32	CARELUBE HTG 32			BIOHYDRAN TMP 32
	46			UNIVIS BIO SHP 46	BIOHYDRAN TMP 46
	68				BIOHYDRAN TMP 68
OILS DIESELS MOTORS			PERFORMANCE XR 15W-40	FARM 4 15W- 40	KAPPA SUPER 10W
		RX SUPER PLUS 15W-40	PERFORMANCE SUPER D 15W-40	ESSOLUBE X 301 10W	KAPPA SUPER 20W20
			PERFORMANCE TROPHY DX 15W-40	ESSOLUBE XT 301 15W-40	KAPPA SUPER 15W40

TYPES	ISO	FUCHS LUBRIFIANTS INDUSTRIE	MOBIL	SHELL	TOTAL
HM	32	RENOLIN EXTRA 32S	MOBIL DTE 24	TELLUS 32	AZOLL ZS 32
	46	RENOLIN EXTRA 46S	MOBIL DTE 25	TELLUS 46	AZOLLA ZS 68
	68	RENOLIN EXTRA 68S	MOBIL DTE 26	TELLUS 68	AZOLLA ZS 68
HV	32	RENOLIN EQUIGRADE 32	MOBIL DTE 13 M	TELLUS T et ST 32	EQUIVIS ZS 32
	46	RENOLIN EQUIGRADE 46	MOBIL DTE 15 M	TELLUS T et ST 46	EQUIVIS ZS 46
	68	RENOLIN EQUIGRADE 68	MOBIL DTE 16 M	TELLUS T et ST 68	EQUIVIS ZS 68
HE	46			NATURELLE HFE	HYDROBIO 46
OILS DIESELS MOTORS		TITAN TRUCK 15W-40			RUBIA S 10W
		TITAN UNIVERSAL HD 15W-40		RIMULAX 15W - 40	
		TITAN UNIVERSAL HD 20W-50			

OILS TYPE HM : Refined mineral oils with anti-rust, anti - oxydation and anti - wear properties.
Application hydraulic systems in general. (Max pressure 2900 PSI, Max speed 2000 RPM)

OILS TYPE HV : Oils type HM with improved viscosity / temperature properties.
Application car industry, marine equipement, high performance hydraulic (high pressures and speds).

OILS TYPE HE : Biodegradable hydraulic oils, synthetic base (esthers).
Can be used in all hydraulic equipments requiring a HV oil.

OILS TYPE HFAE , HFAS , HFB , HFC , HFD : Water emulsion in oil or synthetic fluid, consult our technical departments. The type of elastomer and the compatibility defoinition must be subject to an agreement between the supplier and the final customer.

As the JTEKT-HPI hydraulic pumps are designed with shafts on bush bearings, it is necessary to avoid any axial or radial load and, in order to obtain the best performances and a longer life time, to pay some keen attention to the transmission driving type.

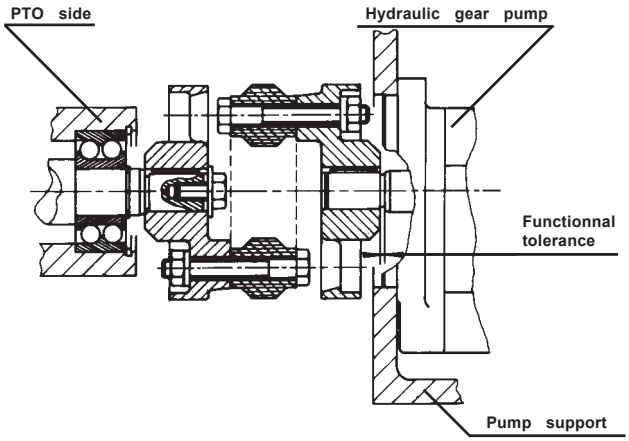
The hereunder sketches show the couplings to realize or to proscribe in order to avoid any kind of damage of the pump.

Recommended couplings :
F.T R 0009 1/3 2/3

Conditionnally recommended couplings :
F.T R 0009 2/3 3/3

Proscribed couplings :
F.T R 0009 3/3

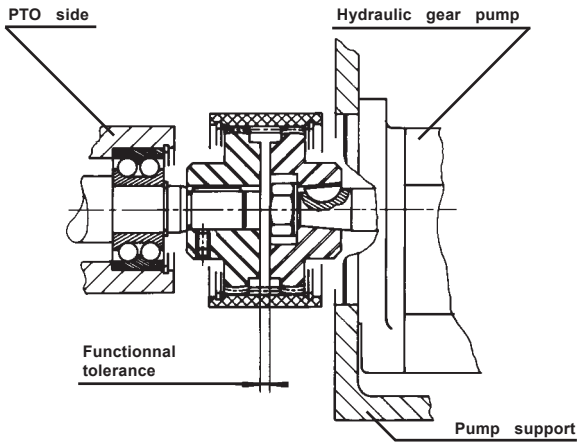
RECOMMENDED COUPLINGS



Mounting with elastic 3 parts coupling.

The pump shafts can be :

- **Straight keyed shafts**
- **Tapered shafts**
- **Splined shafts**

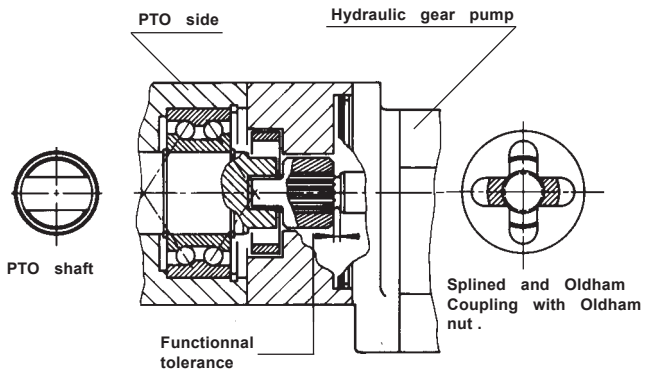


Mounting with 3 parts coupling with bulged gear.

The pump shafts can be :

- **Straight keyed shafts**
- **Tapered shafts**
- **Splined shafts**

RECOMMENDED COUPLINGS

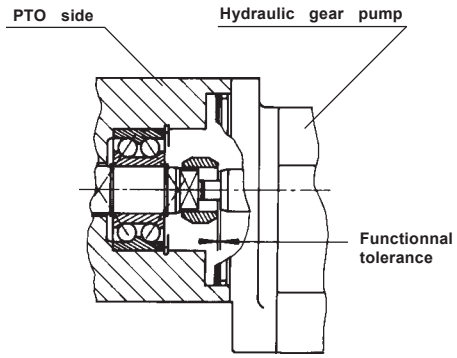


Mounting with coupling and Oldham coupling .

The pump shafts can be :

- **Straight keyed shafts**
- **Tapered shafts**
- **Splined shafts**

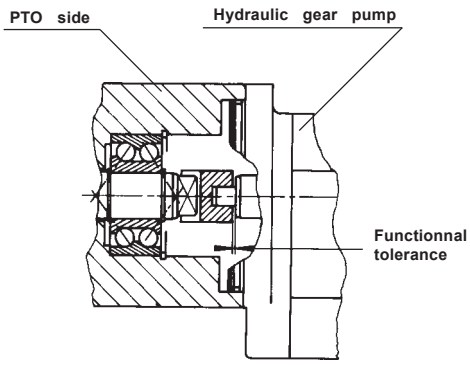
RECOMMENDED LUBRICATION.



Mounting with Oldham coupling .

Tang drive shaft on PTO and pump shaft .

RECOMMENDED LUBRICATION.

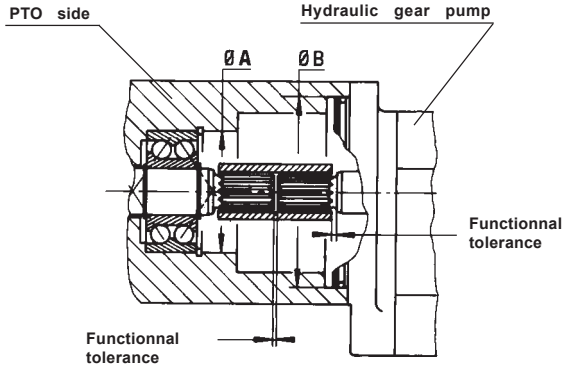


Mounting with Oldham coupling .

Tang drive shaft on PTO and pump shaft .

RECOMMENDED LUBRICATION.

CONDITIONALLY ALLOWED COUPLINGS

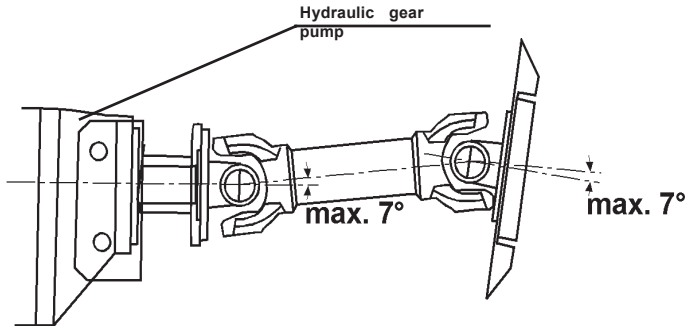


Mounting with splined coupling (Spigot on free flank) .

Tolerated coupling provided that there is a perfect concentricity between Ø A and Ø B .

Concentricity ⩽ 0,03 (according to the pump type and capacity) .

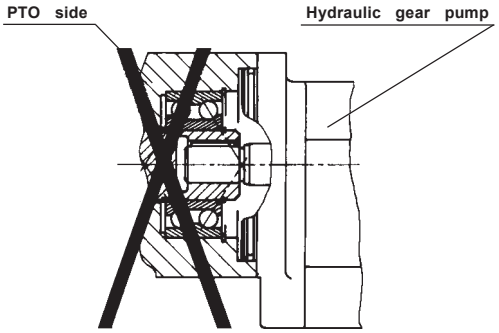
CONDITIONALLY ALLOWED COUPLINGS



Homocinetic coupling

PROSCRIBED COUPLINGS

(Direct drive of the pump shaft on the PTO shaft)

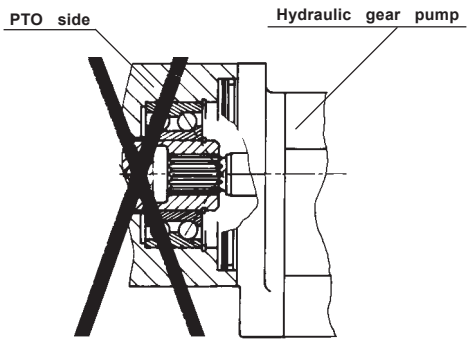


Straight keyed drive .

Hyperstatic mounting .

Impossibility to line up properly the pump shaft and the PTO shaft .

INEVITABLE PUMP SHAFT - CONSTRAINT

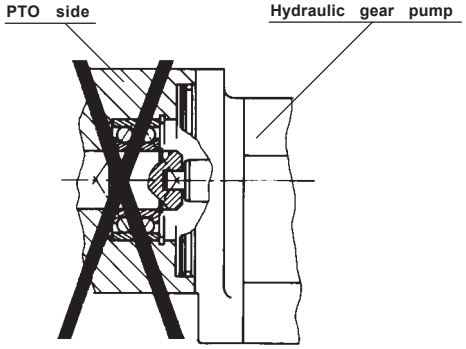


Splined drive .

Hyperstatic mounting .

Impossibility to line up properly the pump shaft and the PTO shaft .

INEVITABLE PUMP SHAFT - CONSTRAINT

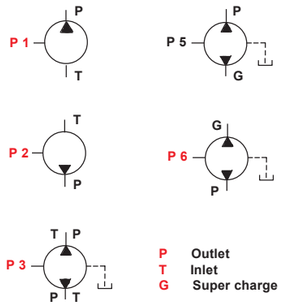


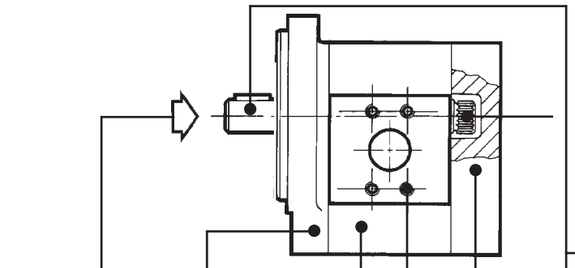
Tang drive .

Pump shaft directly into the PTO shaft .

INEVITABLE PUMP SHAFT - CONSTRAINT

CODIFICATION OF SINGLE PUMPS





NB: Not all combination are feasible

CAUTION:
The signes XIII and XIV are valid only for the pumps with relief valve.
(see rear bodies technical data sheet according to the series concerned)

P	1	AA	N	2	008	H	L	2	0	C 02	N	100	VXX
I Sign	II Sign	III Sign	IV Sign	V	VI Sign	VII Sign	VIII Sign	IX Sign	X Sign	XI Sign	XII Sign	XIII Sign	XIV Sign

Pressure
Speed of rotation

TYPE
- Pump — P
- " Saphir " Pump — S* (* Only for series 2 and 2,5)

DIRECTION of ROTATION
- Clockwise — 1
- Anti clockwise — 2
- 2 direction (no preferential direction) — 3
- 2 direction for super charge Inlet (Preferential direction 1) — 5
- 2 direction for super charge Inlet (Preferential direction 2) — 6

FRONT BODY

MOUNTING FLANGE
- 2 and 4 holes (USA - ISO) — A
- 4 holes (English - Italian) — B
- 2 and 4 holes (French) — C
- 2 and 4 holes (German) — D
- 4 holes — Z
- A , B , C , D , E , F , J , L , R , W , Z ..... Variations

Flat Front Body
- without tighness on spigot joint — N
- with tighness on spigot joint — K

Thick Front Body with front bearing

Hard Series
- without tighness on spigot joint — P
- with tighness on spigot joint — R

Light Series
- without tighness on spigot joint — X
- with tighness on spigot joint — Z
- Power take-off — C
- Module flange without tighness (*) — N
- Module flange with tighness (*) — E

(*) Only for Series 2 and 2,5

TYPE of SERIES
- Series 0
- Series 1
- Series 2
- Series 2,5
- Series 2,6
- Series 3
- Series 5
- Series 4

CAPACITY (cc / rev)
- 0,25 - 0,50 - 0,75 - 1,00 - 1,25 - 1,50 - 2,00
- (00)1 - (00)2 - (00)3 - (00)4 - (00)5 - (00)6
- (00)4 - (00)6 - (00)8 - (0)10 - (0)12 - (0)15 - (0)17 - (0)18 - (0)22 - (0)26 - (0)30
- 12 - 15 - 17 - 18 - 22
- 20 - 25 - 27 - 30 - 35 - 40
- (0)20 - (0)25 - (0)31 - (0)40 - (0)50 - (0)60 - (0)71 - (0)80 - (0)90 - 100
- (0)43 - (0)52 - (0)62 - (0)72 - (0)83 - (0)93 - 103 - 125 - 140 - 153
- 075 - 110 - 150 - 175 - 212 - 250

(0) - Only for codification purposes

SHAFT SEAL
- N Nitrile
- V Viton
- S " Saphir "

PRIMARY SHAFT CODE
see Data sheet

TYPE of SHAFT

Front
- 1 Tapered
- 2 Straight keyed
- 3 Splinned
- 4 Tang

Rear
- 0 without shaft

REAR BODY
- L not port on rear body (Standard)
- A External flow control
- X High pressure relief valve, internal pressure
- T High pressure relief valve, external pressure
- V Low pressure relief valve, internal return
- W Low pressure relief valve, external return
- Q Internal flow control
- AR with block, configuration MBPS
- J Pre-arrangement for assembling "Module 3" Series 1 , 2 , 2,6 and 3

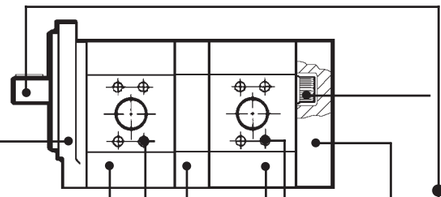
PORT LOCATION
- H Implantation HPI
- C Square location
- F Threaded ports
- Y ISO location (Norm 6162)
- S SAE location (Norm J518c)
- B Italian location
- U SAE threaded location (Norm J475)
- X without ports (with Rear body Typ A)

Consult us for availability

CODIFICATION of "GENERAL" MULTIPLE PUMPS

NB: Not all combination are feasible

CAUTION:
The signes XIII and XIV are valid only for the pumps with relief valve.
(see rear bodies technical data sheet according to the series concerned)



P	1	AA	N	2	008	H	D	2	008	H	L	2	0	C02	N	100	VXX
I	II	III	IV	V	VI	VII	VIII	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV

Pressure

Rotation speed

SHAFT SEAL
- N Nitrile
- V Viton

PRIMARY SHAFT CODE
see data sheets

TYPE of SHAFT

Front
- 1 Tapered
- 2 Straight keyed
- 3 Splinned
- 4 Tang

Rear
- 0 without shaft
- 3 Pre-arrangement for mounting 2nd stage

TYPE
Pumpe P

DIRECTION of ROTATION
- Clockwise 1
- Anti clockwise 2

FRONT BODY

MOUNTING FLANGE
- 2 and 4 holes (USA - ISO) A
- 4 holes (English - Italian) B
- 2 and 4 holes (French) C
- 2 and 4 holes (German) D
- 4 holes Z
- A , B , C , D , E , F , J , L , R , W , Z .....
- Variations

Flat Front Body
- without tightness on spigot joint N
- with tightness on spigot joint K

Thick Front Body with front bearing

Hard Series
- without tightness on spigot joint P
- with tightness on spigot joint R

Light Series
- without tightness on spigot joint X
- with tightness on spigot joint Z
- Power take off C
- Module flange without tightness (*) N
- Module flange with tightness (*) E

(*) Only for Series 2 and 2,5

TYPE of SERIE
- Series 0
- Series 1
- Series 2
- Series 2,5
- Series 2,6
- Series 3
- Series 5
- Series 4

CAPACITY (cc / rev)
- 0,25 - 0,50 - 0,75 - 1,00 - 1,25 - 1,50 - 2,00
- (00)1 - (00)2 - (00)3 - (00)4 - (00)5 - (00)6
- (00)4 - (00)6 - (00)8 - (0)10 - (0)12 - (0)15 - (0)17 - (0)18 - (0)22 - (0)26 - (0)30
- 12 - 15 - 17 - 18 - 22
- 20 - 25 - 27 - 30 - 35 - 40
- (0)20 - (0)25 - (0)31 - (0)40 - (0)50 - (0)60 - (0)71 - (0)80 - (0)90 - 100
- (0)43 - (0)52 - (0)62 - (0)72 - (0)83 - (0)93 - 103 - 125 - 140 - 153
- 075 - 110 - 150 - 175 - 212 - 250

(0) - only for codification purposes

PORT LOCATION
- H HPI
- C Square location
- F Threaded ports
- Y ISO location (Norm 6162)
- S SAE location (Norm J518c)
- B Italian location
- U SAE threaded location (Norm J475)
- X without ports (with Rear body Typ A)

REAR BODY
- L not port on rear body (Standard)
- A External flow control
- X High pressure relief valve, internal pressure
- T High pressure relief valve, external pressure
- V Low pressure relief valve, internal return
- W Low pressure relief valve, external return
- Q Internal flow control
- AR with Block, configuration MBPS
- J Pre-arrangement for assembling "Module 3" Series 1 - 2 - 2,5 - 2,6 - 3

JUNCTION BODY
- A Communication between suction ports
- D Independant inlet side (Communication of leaks)
- E Tightness between ports
- X Adjustable relief valve internal return in preceding pump
- J Junction " Module 3 "

Dimensions readings and approximative characteristics subject to modifications.

F.T R 0030

Consult us for availability

SERIES	MODEL	Capacity	PEACK PRESSURE		MAX WORKING PRESSURE		Maxi speed RPM	NOMINAL FLOW		Input power (kW) at 1000 RPM and 100 bar	Input torque at 100 bar and N.m	Approx. weight
								at 1500 RPM	at Maxi speed			
		cc / rev	bar	PSI	bar	PSI		l / min	l / min			Kg
0	0025	0,25	280	4060	240	3480	8000	0,37	2	0,05	0,47	0,42
	0050	0,50	280	4060	240	3480	8000	0,75	4	0,10	0,54	
	0075	0,75	250	3625	210	3045	8000	1,12	6	0,15	1,40	
	0100	1	250	3625	210	3045	8000	1,50	8	0,20	1,87	0,45
	0125	1,25	200	2900	170	2465	6000	1,87	7,5	0,25	2,34	
	0150	1,50	150	2175	125	1812	6000	2,25	9	0,29	2,81	
	0200	2	125	1812	105	1522	5000	3	10	0,39	3,74	0,50
1	1001	1,02	300	4350	255	3697	8000	1,53	8,16	0,20	1,91	0,9
	1002	2,05	300	4350	255	3697	8000	3,07	16,4	0,40	3,83	
	1003	3,07	300	4350	255	3697	7000	4,60	21,4	0,60	5,74	
	1004	4,09	250	3625	215	3117	6000	6,13	24,5	0,80	7,65	1,1
	1005	5,12	200	2900	170	2465	6000	7,68	30,7	1	9,58	
	1006	6,14	150	2175	125	1812	6000	9,21	30,7	1,20	11,49	
2	2004	4,65	280	4060	240	3480	3500	6,97	16,2	0,91	8,70	1,6
	2006	6,45	280	4060	240	3480	3500	9,67	22,5	1,26	12,07	1,6
	2008	8,25	280	4060	240	3480	3500	12,37	28,8	1,62	15,43	1,7
	2010	10,12	280	4060	240	3480	3500	15,18	35,3	1,98	18,93	1,7
	2012	12	280	4060	240	3480	3500	18	42	2,35	22,45	1,7
	2014	13,8	250	3625	210	3045	3500	20,7	48,3	2,71	25,81	2
	2015	15,52	250	3625	210	3045	3500	23,25	52,5	3,04	29,03	2,1
	2017	17,3	220	3190	190	2755	3500	25,95	60,55	3,39	32,36	2,1
	2018	19,12	200	2900	170	2465	3500	28,65	66,8	3,75	35,77	2,2
	2022	22,87	175	2537	150	2175	3500	34,2	79,8	4,48	42,78	2,3
	2026	27,6	175	2537	150	2175	3000	41,4	82,8	5,41	51,63	2,7
	2030	31,2	175	2537	150	2175	3000	46,8	93,6	6,12	58,36	2,8
2,5	2512	12	300	4350	255	3697	3500	18	42	2,35	22,45	2,2
	2515	15,52	280	4060	240	3480	3500	23,25	52,5	3,04	29,03	2,6
	2517	17,3	280	4060	240	3480	3500	25,95	60,55	3,39	32,36	2,6
	2518	19,12	250	3625	215	3117	3500	28,65	66,8	3,75	35,77	2,7
	2522	22,87	225	3262	190	2755	3500	34,2	79,8	4,48	42,78	2,8
2,6	2620	19,6	330	4185	280	4060	3000	29,40	58,80	3,70	36,66	8
	2625	24,2	330	4185	280	4060	3000	36,30	72,60	4,50	45,27	
	2627	27,5	330	4185	280	4060	3000	41,25	82,50	5	51,25	
	2630	30,5	330	4185	280	4060	3000	45,75	91,50	5,70	57,05	
	2635	34,5	290	4205	250	3625	3000	51,75	103,50	6,40	64,54	
	2640	39,8	250	3625	210	3045	3000	59,70	119,40	7,50	74,45	

Dimensions readings and approximative characteristics subject to modifications.

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Consult us for availability

SERIES	MODEL	Capacity	PEACK PRESSURE		MAX WORKING PRESSURE		Maxi speed RPM	NOMINAL FLOW		Input power (kW) at 1000 RPM and 100 bar	Input torque at 100 bar and N.m	Approx. weight
								at 1500 RPM	at Maxi speed			
		cc / rev	bar	PSI	bar	PSI		l / min	l / min			Kg
3	3020	21,1	275	3987	235	235	3000	31,65	63,3	4,14	39,47	5,6
	3025	25,8	275	3987	235	235	3000	38,7	77,4	5,06	48,26	5,6
	3031	32,1	275	3987	235	235	3000	48,15	96,3	6,29	60,05	5,6
	3040	41,5	275	3987	235	235	3000	62,25	124,5	8,14	77,63	5,7
	3050	51,65	250	3625	215	215	3000	77,47	154,9	10,13	96,62	6,9
	3060	62,6	225	3262	190	190	2500	93,9	156,5	12,27	117,10	7
	3071	73,55	225	3262	190	190	2500	110,32	183,8	14,42	137,58	7
	3080	82,95	200	2900	170	170	2200	124,42	182,4	16,26	155,17	7,1
	3090	92,95	150	2175	130	130	2000	139,42	185,9	18,23	173,87	7,8
	3100	103,9	150	2175	130	130	2000	155,85	207,8	20,37	194,37	8
5	5043	43,06	300	4350	255	3697	3000	64,59	129	8,44	80,55	14,2
	5052	52,91	300	4350	255	3697	3000	79,36	158,5	10,37	98,97	14,2
	5062	62,75	300	4350	255	3697	3000	94,12	188	12,30	117,38	14,4
	5072	72,59	300	4350	255	3697	3000	108,88	217,5	14,23	135,79	14,6
	5083	83,67	280	4060	240	3480	2700	125,50	226	16,41	156,51	15,1
	5093	93,51	250	3625	210	3045	2700	140,26	252,5	18,34	174,92	15,2
	5103	103,3	250	3625	210	3045	2700	154,95	279	20,25	193,23	15,2
	5125	125,5	250	3625	210	3045	2600	188,25	326	24,61	234,76	15,7
	5140	140,2	250	3625	210	3045	2500	210,30	350,5	27,49	262,26	15,7
	5153	153	250	3625	210	3045	2400	229,50	367,5	30	286,20	16
4	4075	075	200	2900	170	2465	2500	112,5	187,5	19,37	141	17
	4110	110	200	2900	170	2465	2500	165	275	28,42	206	17,2
	4150	150	200	2900	170	2465	2500	225	375	28,60	281	17,4
	4175	175	175	2625	150	2175	2500	262,5	437,5	34,31	327,35	19
	4212	212	150	2175	130	1885	2500	318	530	41,57	396,56	19,4
	4250	250	125	1812	105	1522	2000	375	500	49,02	467,65	20

Dimensions readings and approximative characteristics subject to modifications.

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Consult us for availability

DIFFERENT MOUNTING POSSIBILITIES BETWEEN MULTIPLE PUMPS

TYPE DES POMPES	(VIII Signe) Communication between suction ports (Capacity of the pump without suction ≥ half of the capacity of the front section) Code A	Indépendant inlet side (communication of leaks) (Oil and tank to be necessarily identical) Code D	Tightness between ports Code E	Adjustable relief valve internal return in preceding pump Code X
0 / 0				
1 / 1				
2 / 1				
2 / 2				
2,5 / 1				
2,5 / 2				
2,5 / 2,5				
2,6 / 2				
2,6 / 2,5				
2,6 / 2,6				
3 / 1				
3 / 2				
3 / 2,5				
3 / 3				
5 / 5				
4 / 4				

ATTENTION: Versions 2 / 1 and 2,5 / 1 are not feasible in DCN - DCK - DUK - DWN - DZK

Types not manufactured

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F.T R 0029