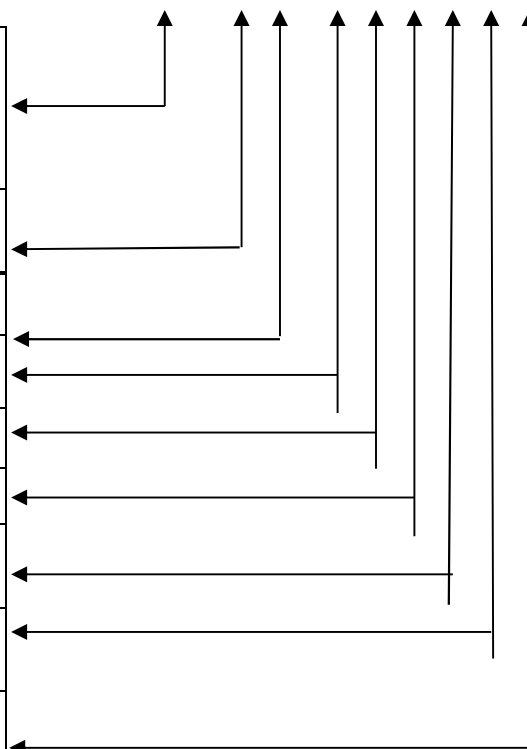


DATA SHEET FOR PUMPS HWB 150-200-250-300-400

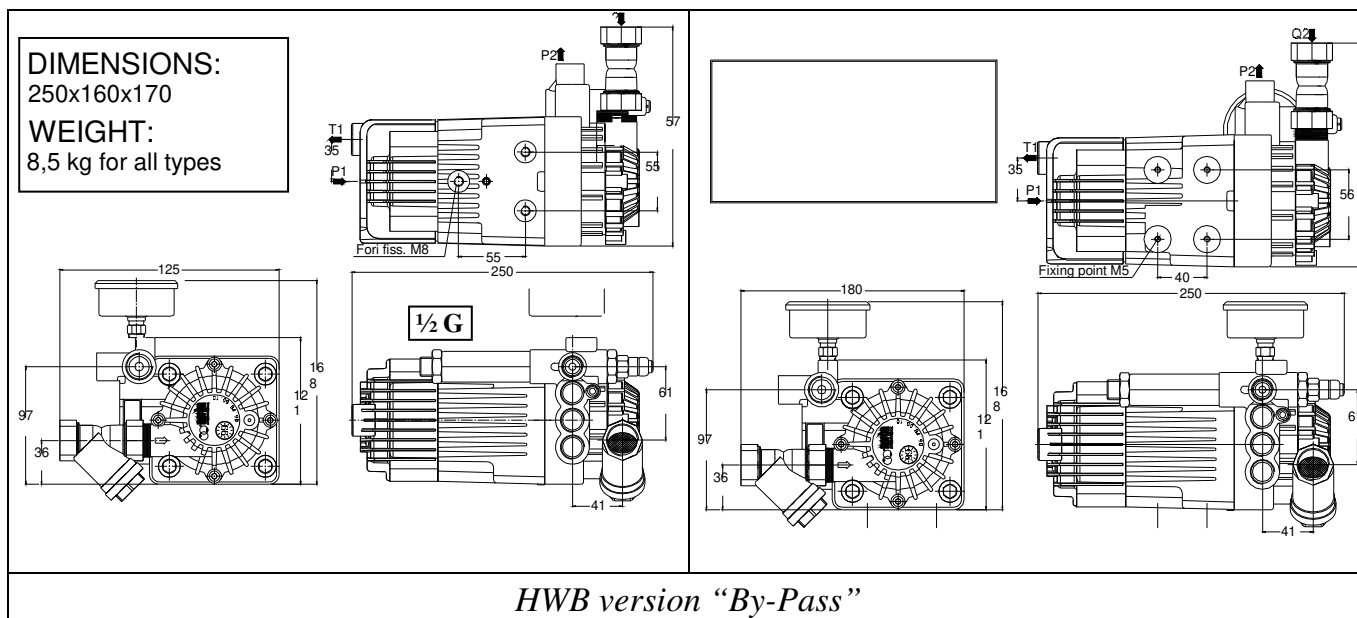
513	A	0	0	0	D	2	3	3
515	B	3	1	1	C	F	4	4
518	C	3				P	6	6
521								7
525								

Model	513 515 518 521 525
Pressure gauge	A with pr.gauge 400 bar B with plastic plug C with metal plug
Manifold material	0 Forged brass, thermal valve 3 Forged brass, water by-pass
Body material	0 Anodised aluminium. 3-4 fixing holes 1 Brass 3 fixing holes
Carter material	0 Anodised alluminium 1 Brass
Operation	D Automatic C By-Pass
Oil inlet (P1)	2 1/2" GAS Female F With flow .valve block P Flow & press valve block
Secondary fluid inlet (Q2 or T2)	3 3/4" NPT female 4 3/4" BSP male 6 3/4" BSP female
Secondary fluid Outlet (P2)	3 M 22x1,5 4 3/8" NPT F 6 3/8" BSP F 7 1/2" BSP M



TYPE	FEATURES							
Model	Pressure gauge	Outlet port P2 3/8" BSP F	Outlet port 3/8" NPT F	Outlet port P2 1/2" BSP M	Neròn filter 3/4" FF 80 mesh, hose barb 3/4" M	Neròn 1 filter 3/4" MM 80 mesh, hose barb 3/4" M & sockets 3/4" FF	Chemical suction kit	Spacers for mounting holes
HWB 150	●	○	○	○	● ϕ 25	upon request	○	○
HWB 200	●	○	○	○	● ϕ 25	upon request	○	○
HWB 250	●	○	○	○	● ϕ 25	upon request	○	○
HWB 300	●	○	○	○	● ϕ 25	upon request	○	○
HWB 400	●	○	○	○	● ϕ 25	upon request	○	○

- Standard
- Optional with charge



Legend:

HWB BY-PASS

Q2 o T2: water inlet	3/4" BSP M	3/4" NPT F		
P2: water outlet	M 22X1,5	1/2" BSP M	3/8" BSP F	3/8" NPT F
T1: oil return port to the tank		1/2" gas F		
P1: oil pressure inlet port		1/2" gas F		

Oil protection valve

Pressure unloader at P2

Thermal valve or long brass thermal valve or water by-pass to tank

Options:

flow limiting valve block max 80 l/m

flow and pressure limiting valve block max 80 l/m

Viton seals

MODEL	MAX WATER TEMPERATURE	MINIMUM OIL QUANTITY AT P1	MAX OIL TEMPERATURE	SUCTION	USE
HWB 150	60°C/110°F	12 l/m-3,17 gpm	80°C-145°F	selfpriming	also with salted water
HWB 200	60°C/110°F	12 l/m-3,17 gpm	80°C-145°F	selfpriming	also with salted water
HWB 250	60°C/110°F	12 l/m-3,17 gpm	80°C-145°F	selfpriming	also with salted water
HWB 300	60°C/110°F	12 l/m-3,17 gpm	80°C-145°F	selfpriming	also with salted water
HWB 400	60°C/110°F	12 l/m-3,17 gpm	80°C-145°F	selfpriming	also with salted water

(*) with viton seals & water by-pass to tank max temperature: 90°C-165°F

HYDRAULIC TEST AND CALIBRATION

Each pump is tested for 15 minutes before shipment. A serial number is stamped on each pump as an identification code.

A label, reporting some technical data and the max working pressure, is fixed on each pump.

The quality control people will calibrate the pump with the following performance:

MODEL	INLET OIL FLOW	OUTLET WATER FLOW	OIL INLET PRESSURE	WATER OUTLET PRESSURE	NOZZLE	AUTOMATISM ADJUSTMENT	OVER PRESSURE
HWB 150	22 l/m-5,8 gpm	28,6 l/min-7,6gpm	250 bar-3625 psi	150 bar-2175 psi	10	180 bar-2610 psi	40 bar-580 psi
HWB 200	22 l/m-5,8 gpm	22 l/min-5,8gpm	230 bar-3335 psi	184 bar-2670 psi	08	170 bar-2465 psi	40 bar-580 psi
HWB 250	22 l/m-5,8 gpm	14,8 l/min-3,9gpm	190 bar-2755 psi	228 bar-3300 psi	04	260 bar-3770 psi	40 bar-580 psi
HWB 300	22 l/m-5,8 gpm	11 l/min-3 gpm	130 bar-1885 psi	228 bar-3300 psi	03	250 bar-3625 psi	40 bar-580 psi
HWB 400	22 l/m-5,8 gpm	9 l/min-3 gpm	160 bar-1885 psi	300 bar-3300 psi	02	250 bar-3625 psi	40 bar-580 psi

MODEL	INLET OIL FLOW	FLOW RATIO FACTOR	OUTLET WATER FLOW	INLET OIL PRESSURE	PRESSURE RATION FACTOR	OUTLET WATER PRESSURE	NOZZLE
HWB 150	MIN 12 l/min-3,2 gpm	1,3	15,6l/min-4,1gpm	120 bar-1740 psi	0,6	72 bar-1044 psi	09
	18 l/min-4,8 gpm		23,4l/min-6,2gpm	200 bar-2900 psi		120 bar-1740psi	09
	20 l/min-5,3 gpm		26 l/min-6,9 gpm	220 bar-3190 psi		132 bar-1914 psi	10
	22 l/min-5,8 gpm		28,6l/min-7,6gpm	230 bar-3335 psi		138 bar-2001 psi	10
	MAX 25 l/min-6,6 gpm		MAX 32,5l/min-8,6gpm	MAX 250 bar-3625 psi		MAX 150 bar-2175 psi	10
HWB 200	MIN 12 l/min-3,2 gpm	1	12 l/min/3,2 gpm	120 bar-1740 psi	0,8	96 bar-1392 psi	05
	18 l/min-4,8 gpm		18 l/min-4,8 gpm	200 bar-2900 psi		160 bar-2320 psi	06
	20 l/min-5,3 gpm		20 l/min-5,3 gpm	220 bar-3190 psi		176 bar-2552 psi	065
	22 l/min-5,8 gpm		22 l/min-5,8 gpm	230 bar-3335 psi		184 bar-2668 psi	07
	MAX 25 l/min-6,6 gpm		MAX 25 l/min-6,6gpm	MAX 250 bar-3625 psi		MAX 200 bar-2900 psi	08
HWB 250	MIN 12 l/min-3,2 gpm	0,67	8 l/min-2,1 gpm	120 bar-1740 psi	1,2	144 bar-2088 psi	03
	18 l/min-4,8 gpm		12 l/min-3,2 gpm	140 bar-2030 psi		168 bar-2436 psi	035
	20 l/min-5,3 gpm		13,4l/min-3,5gpm	160 bar-2320 psi		192 bar-2784 psi	04
	22 l/min-5,8 gpm		14,7l/min-3,9gpm	180 bar-2610 psi		216 bar-3132 psi	04
	MAX 25l/min-6,6 gpm		MAX 16,8l/min-4,4 gpm	MAX 190 bar-2755 psi		MAX 228 bar-3306 psi	045
HWB 300	MIN 12 l/min-3,2 gpm	0,5	6 l/min-1,6 gpm	70 bar-1015 psi	1,75	122 bar-1776 psi	03
	18 l/min-4,8 gpm		9 l/min-2,4 gpm	80 bar-1160 psi		140 bar-2030 psi	035
	20 l/min-5,3 gpm		10 l/min-2,6 gpm	120 bar-1740 psi		210 bar-3045 psi	035
	22 L/min-5,8 gpm		11 l/min-2,9 gpm	130 bar-1885 psi		228 bar-3299 psi	035
	MAX 25 l/min-6,6 gpm		MAX 12,5l/min-3,3gpm	MAX 140bar-2030 psi		MAX 245 bar-3553 psi	03
HWB 400	MIN 12 l/min-3,2 gpm	0,4	4,8 l/min-1,2 gpm	100 bar-1450 psi	1,9	190 bar-2755 psi	03
	18 l/min-4,8 gpm		7,2 l/min-1,9 gpm	120 bar-1740 psi		220 bar-3190 psi	03
	20 l/min-5,3 gpm		8 l/min-2,1 gpm	140 bar-2030 psi		260 bar-3770 psi	03
	22 L/min-5,8 gpm		8,8 l/min-2,3 gpm	160 bar-2320 psi		300 bar-4350 psi	025
	MAX 25 l/min-6,6 gpm		MAX 10 l/min-2,6 gpm	MAX 180bar-2610 psi		MAX 3240 bar-4930	02

HOW TO READ THE ABOVE:

In order to calculate the outlet water flow to the secondary circuit you need to multiply the inlet oil flow by the flow ratio factor.

From the above it is stated: by multiplying 25 l/m-6,6 gpm inlet oil by the flow ratio factor 0,67 you will obtain an outlet water flow of 12,5 l/m-3,3 gpm.

In order to calculate the outlet pressure you need to multiply the inlet oil pressure by the pressure ratio factor.

From the above it is stated: by multiplying the oil inlet pressure 140 bar-2030 psi by the pressure ratio factor 1,75 you will obtain an outlet pressure of 245 bar-3553 psi.

If your system has more than 25 l/m-6,6 gpm oil inlet, you have to mount on the inlet oil port to the pump a flow limiting valve. Besides, by using a nozzle of a smaller hole you can obtain a higher outlet pressure. (see nozzle chart)



In order to avoid cavitation, the inlet oil flow values hereinabove must not be exceeded.

ADVANTAGES:

- INTEGRATED HYDRAULIC MOTOR
- DIRECTLY MOUNTING ON THE VEHICLE IN ANY POSITION WITH FIXING HOLES ON TWO SIDES OF THE BODY
- SELFPRIMING UP TO 5 MT
- UNLOADER AND THERMAL RELIEF VALVE BUILT IN
- DIRECT FLOW CONNECTION
- SUCTION COVER TO BE TURNED 360°
- BACK PRESSURE OIL SAFETY PROTECTION VALVE