

GPH

High Pressure Piston Pump



GPH Pumps have the following advantages ;

- 600 bar Cont. Work. Pressure,
- 700 bar Peak Pressure,
- From 02cc to 45cc, (1500 rpm)
- Reduced Noise Level,
- Special Cast Iron with Raw Materials
- For Industrial Area,
- Economical Conception,
- High Rotating Speeds,
- High Output Pressure.

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Pump Code	Displacement (cm ³)								
GPH	45								
	<table border="1"> <tr> <td>02</td> <td>04</td> <td>06</td> <td>12</td> <td>15</td> <td>22</td> <td>35</td> <td>45</td> </tr> </table>	02	04	06	12	15	22	35	45
02	04	06	12	15	22	35	45		
GPH High Pressure Piston Pump, Fixed Displacement, 2 BOLT Mounting Flange									

Formulas			
Pump Output Flow	GPM	$GPM = (Speed \text{ (rpm)} \times disp. \text{ (cu. in.)}) / 231$	$GPM = (n \times d) / 231$
Pump Input Horsepower	HP	$HP = GPM \times Pressure \text{ (psi)} / 1714 \times Efficiency$	$HP = (Q \times P) / 1714 \times E$
Pump Efficiency	E	Overall Efficiency = Output HP / Input HP	$E_{overall} = HP_{out} / HP_{in} \times 100$
		Overall Efficiency = Volumetric Eff. $\times$ Mechanical Eff.	$E_{overall} = EffVol. \times EffMech.$
Pump Volumetric Efficiency	E	Volumetric Efficiency = Actual Flow Rate Output (GPM) / Theoretical Flow Rate Output (GPM) $\times$ 100	$EffVol. = Q_{act.} / Q_{theo.} \times 100$
Pump Mechanical Efficiency	E	Mechanical Efficiency = Theoretical Torque to Drive / Actual Torque to Drive $\times$ 100	$EffMech = T_{theo.} / T_{act.} \times 100$
Pump Displacement	CIPR	$Displcmnt \text{ (In.}^3 \text{ / rev.)} = Flow \text{ Rate (GPM)} \times 231 / Pump \text{ RPM}$	$CIPR = GPM \times 231 / RPM$
Pump Torque	T	Torque = Horsepower $\times$ 63025 / RPM	$T = 63025 \times HP / RPM$
		Torque = Pressure (PSIG) $\times$ Pump Displacement (CIPR) / 2π	$T = P \times CIPR / 6.28$

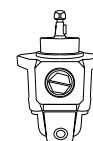
Horsepower for driving a pump : For every 1 hp of drive, the equivalent of 1 gpm @ 1500 psi can be produced.

Horsepower for idling a pump : To idle a pump when it is unloaded will require about 5% of it's full rated power

Wattage for heating hydraulic oil : Each watt will raise the temperature of 1 gallon of oil by 1° F. per hour.

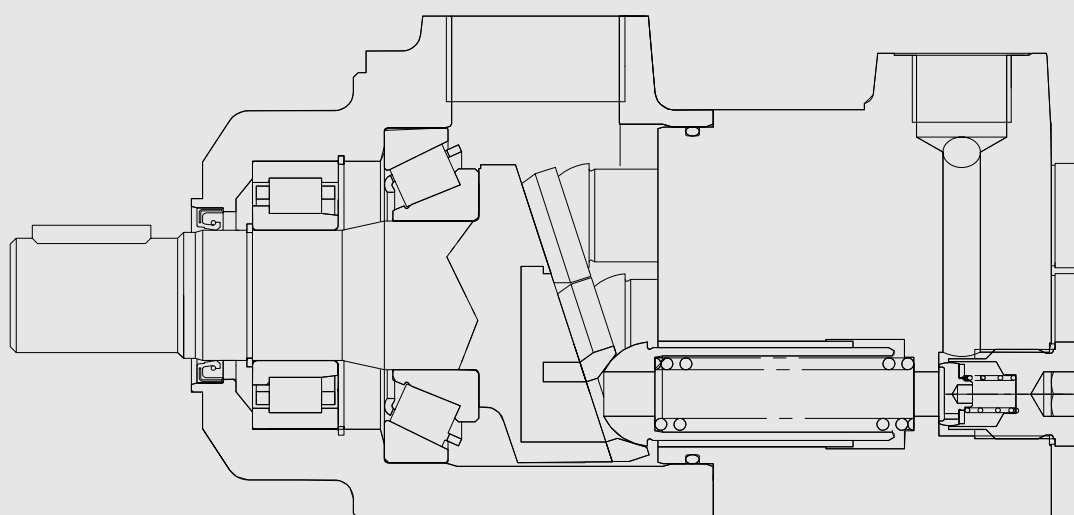
Flow velocity in hydraulic lines : Pump suction lines 2 to 4 feet per second, pressure lines up to 500 psi - 10 to 15 ft./sec., pressure lines 500 to 3000 psi - 15 to 20 ft./sec.; all oil lines in air-over-oil systems; 4 ft./sec.

		02	04	06	12	15	22	35	45
Displacement	cc	1,56	2,70	4,40	7,80	10,50	14,73	23,70	30,40
Theoretical oil flow l/min at pump speed	1000 rpm	1,56	2,70	4,40	7,80	10,50	14,73	23,70	30,40
	1500 rpm	2,34	4,05	6,60	11,70	15,75	22,09	35,55	45,60
Maximum Pump Speed									
- Continuous	rpm	3000	3000	3000	2800	2800	2800	2500	2400
- Limited	rpm	3500	3500	3500	3000	3000	3000	2800	2700
Max. Continuous Pressure	bar	600	600	600	450	400	400	400	400
Max. Peak Pressure	bar	700	700	700	500	500	500	500	500
Weight									
- Without inlet fitting	kg	5,50	5,50	5,50	8,00	8,00	8,00	12,00	12,00
- With inlet fitting	kg	5,60	5,60	5,60	8,15	8,15	8,15	12,25	12,25
Fluid		Mineral Based Hydraulic Oils							
Inlet		G 1"	G 1"	G 1"	G 1"	G 1"	G 1"	47,8mm	47,8mm
Outlet		G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	26,4mm	26,4mm

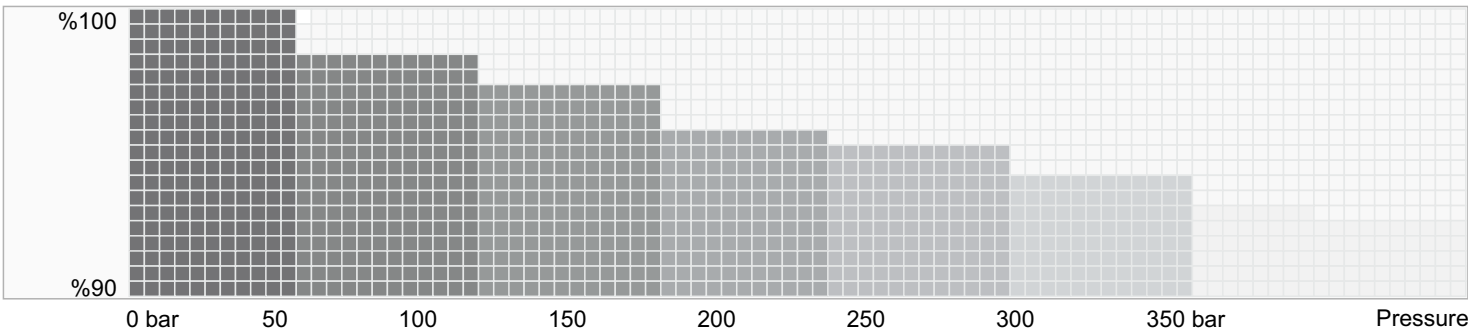


CW

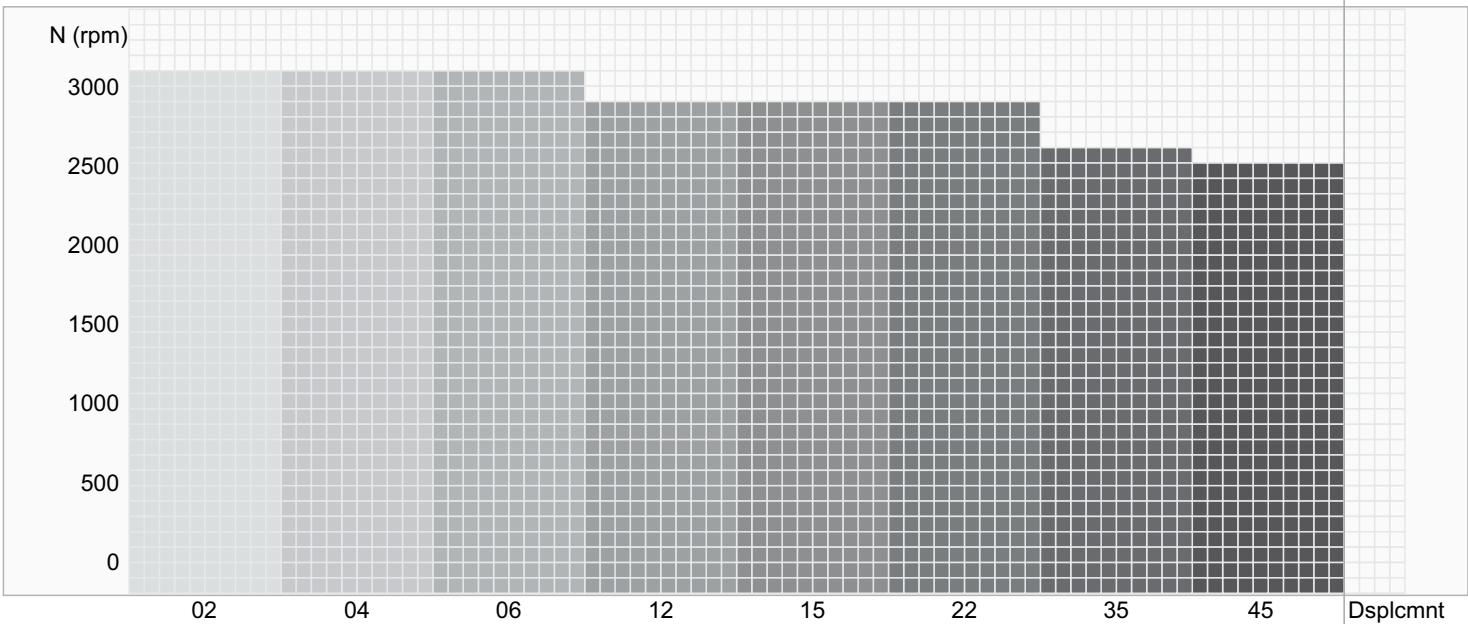
Rotation :
Fixed-Clock Wise

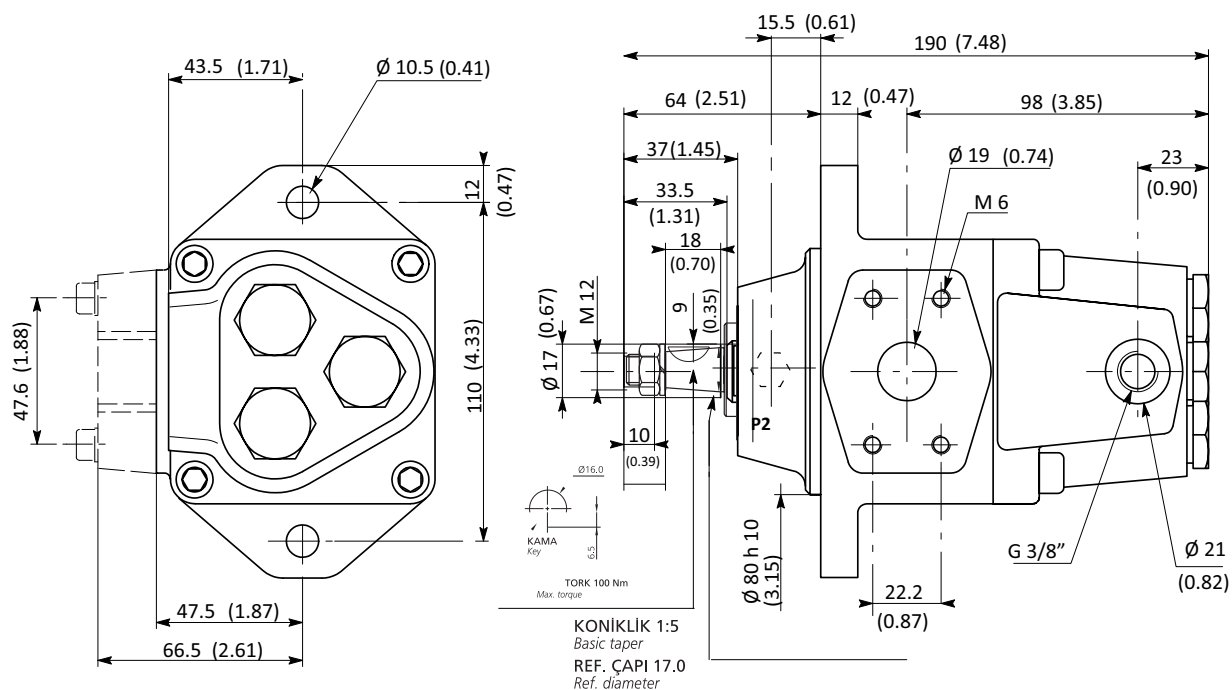


Efficiency Curves (1000 rpm)

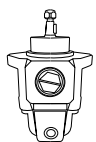


Flow



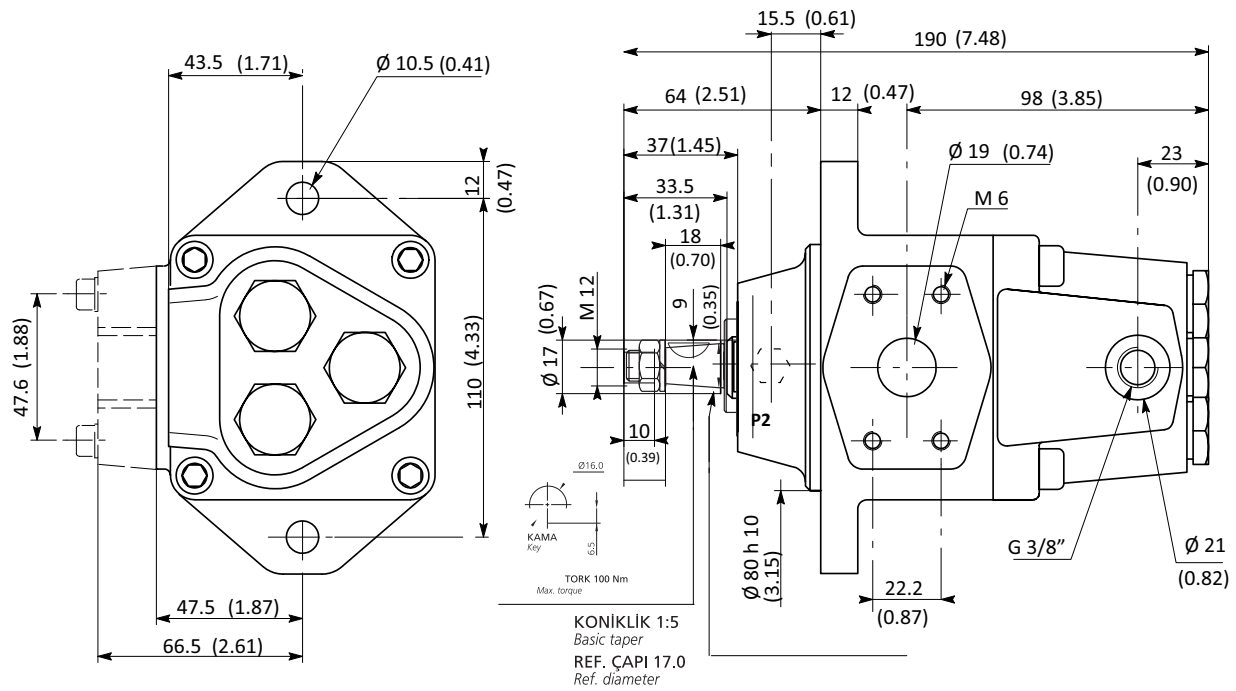


x 1000 rpm	1,56 cc
x 1500 rpm	2,34 cc
Max. Continuous Pump Speed	3000 rpm
Max. Limited Pump Speed	3500 rpm
Max. Continuous Pressure	600 bar
Max. Intermit. Peak Pressure	700 bar
Weight without inlet fitting	5,50 kg
Weight with inlet fitting	5,60 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"

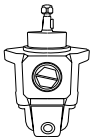


CW

Rotation :
Fixed-Clock Wise

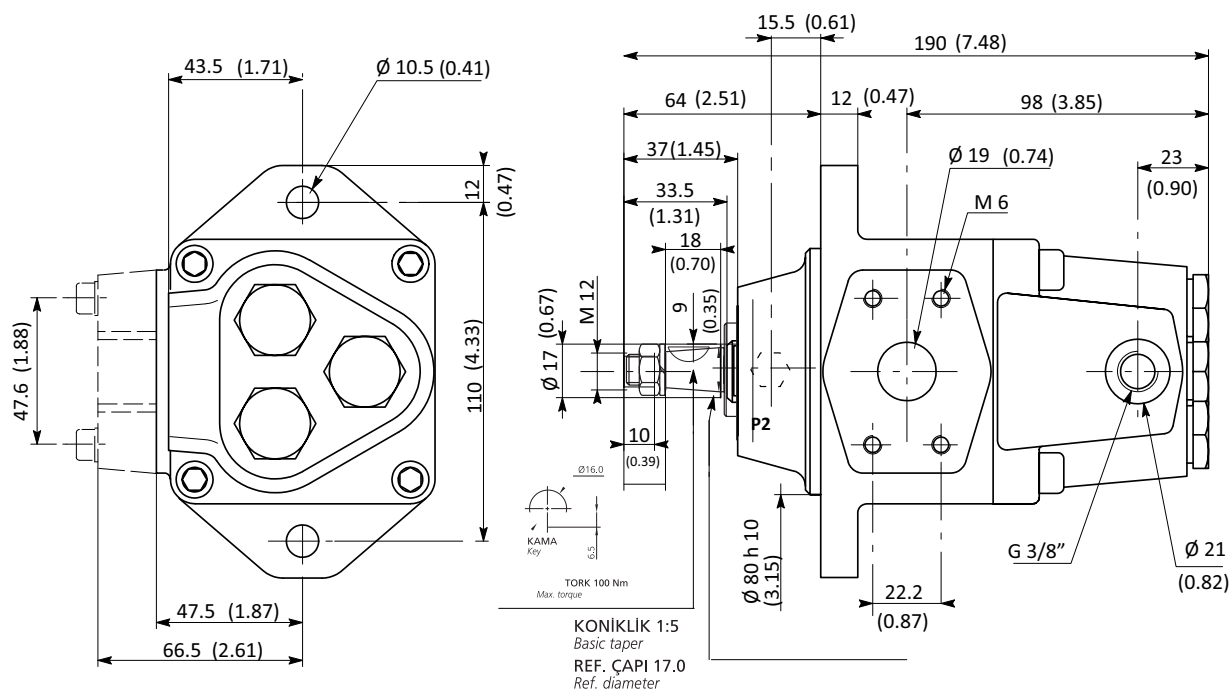


x 1000 rpm	2,70 cc
x 1500 rpm	4,05 cc
Max. Continuous Pump Speed	3000 rpm
Max. Limited Pump Speed	3500 rpm
Max. Continuous Pressure	600 bar
Max. Intermit. Peak Pressure	700 bar
Weight without inlet fitting	5,50 kg
Weight with inlet fitting	5,60 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"



CW

Rotation :
Fixed-Clock Wise

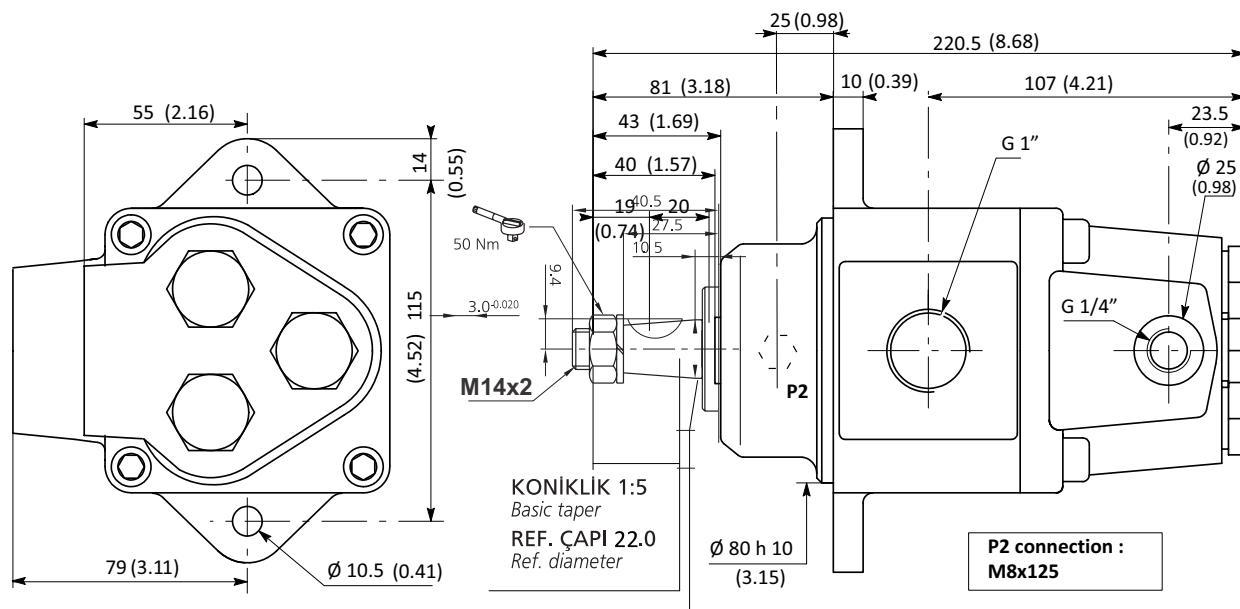


x 1000 rpm	4,40 cc
x 1500 rpm	6,60 cc
Max. Continuous Pump Speed	3000 rpm
Max. Limited Pump Speed	3500 rpm
Max. Continuous Pressure	600 bar
Max. Intermit. Peak Pressure	700 bar
Weight without inlet fitting	5,50 kg
Weight with inlet fitting	5,60 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"



CW

Rotation :
Fixed-Clock Wise

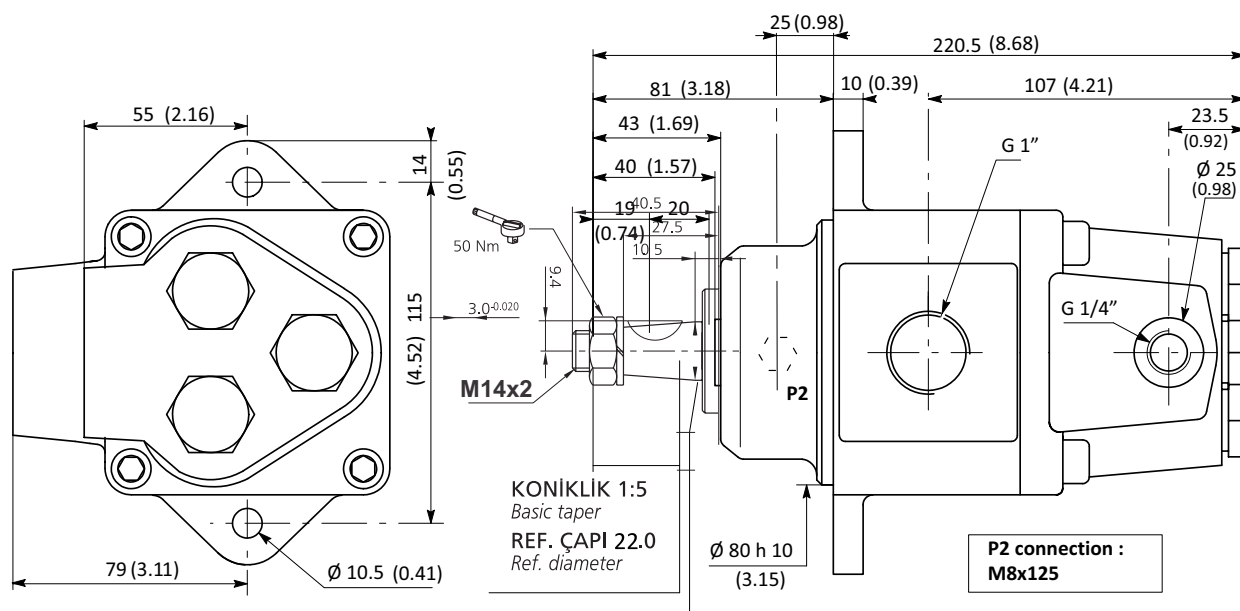


x 1000 rpm	7,80 cc
x 1500 rpm	11,70 cc
Max. Continuous Pump Speed	2800 rpm
Max. Limited Pump Speed	3000 rpm
Max. Continuous Pressure	450 bar
Max. Intermit. Peak Pressure	500 bar
Weight without inlet fitting	8,00 kg
Weight with inlet fitting	8,15 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"

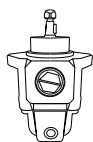


CW

Rotation :
Fixed-Clock Wise

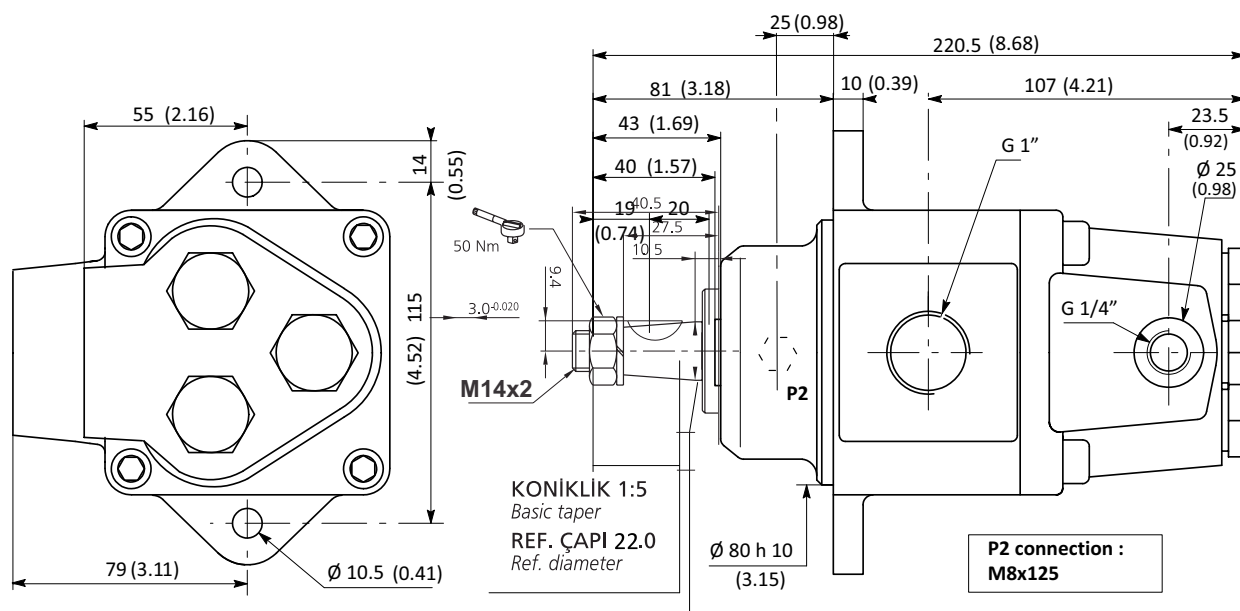


x 1000 rpm	10,50 cc
x 1500 rpm	15,75 cc
Max. Continuous Pump Speed	2800 rpm
Max. Limited Pump Speed	3000 rpm
Max. Continuous Pressure	400 bar
Max. Intermit. Peak Pressure	450 bar
Weight without inlet fitting	8,00 kg
Weight with inlet fitting	8,15 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"

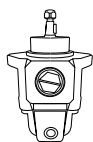


CW

Rotation :
Fixed-Clock Wise

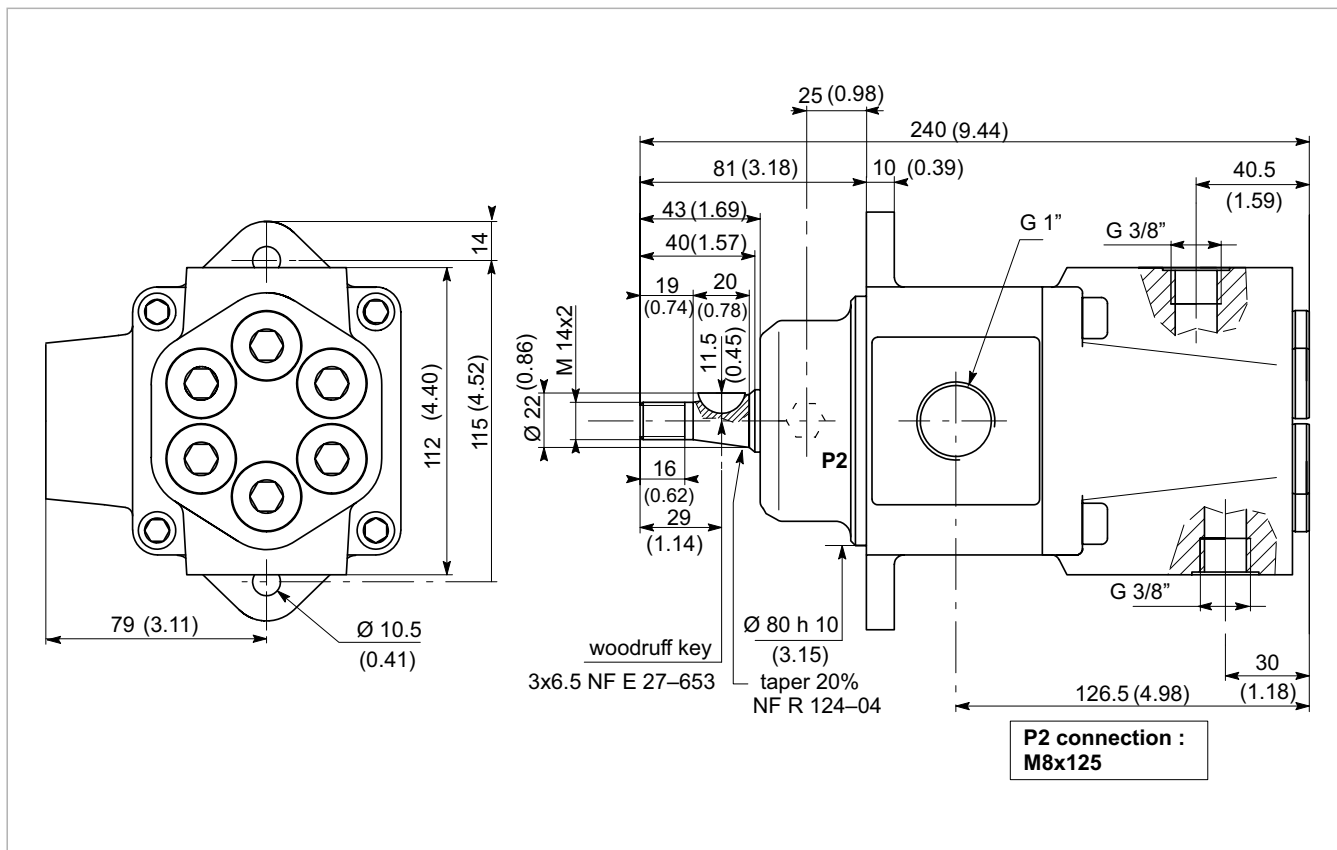


x 1000 rpm	14,73 cc
x 1500 rpm	22,09 cc
Max. Continuous Pump Speed	2800 rpm
Max. Limited Pump Speed	3000 rpm
Max. Continuous Pressure	400 bar
Max. Intermit. Peak Pressure	500 bar
Weight without inlet fitting	8,00 kg
Weight with inlet fitting	8,15 kg
Fluid	Min.B.Hyd.Oil
Inlet	G 1"
Outlet	G 1/4"



CW

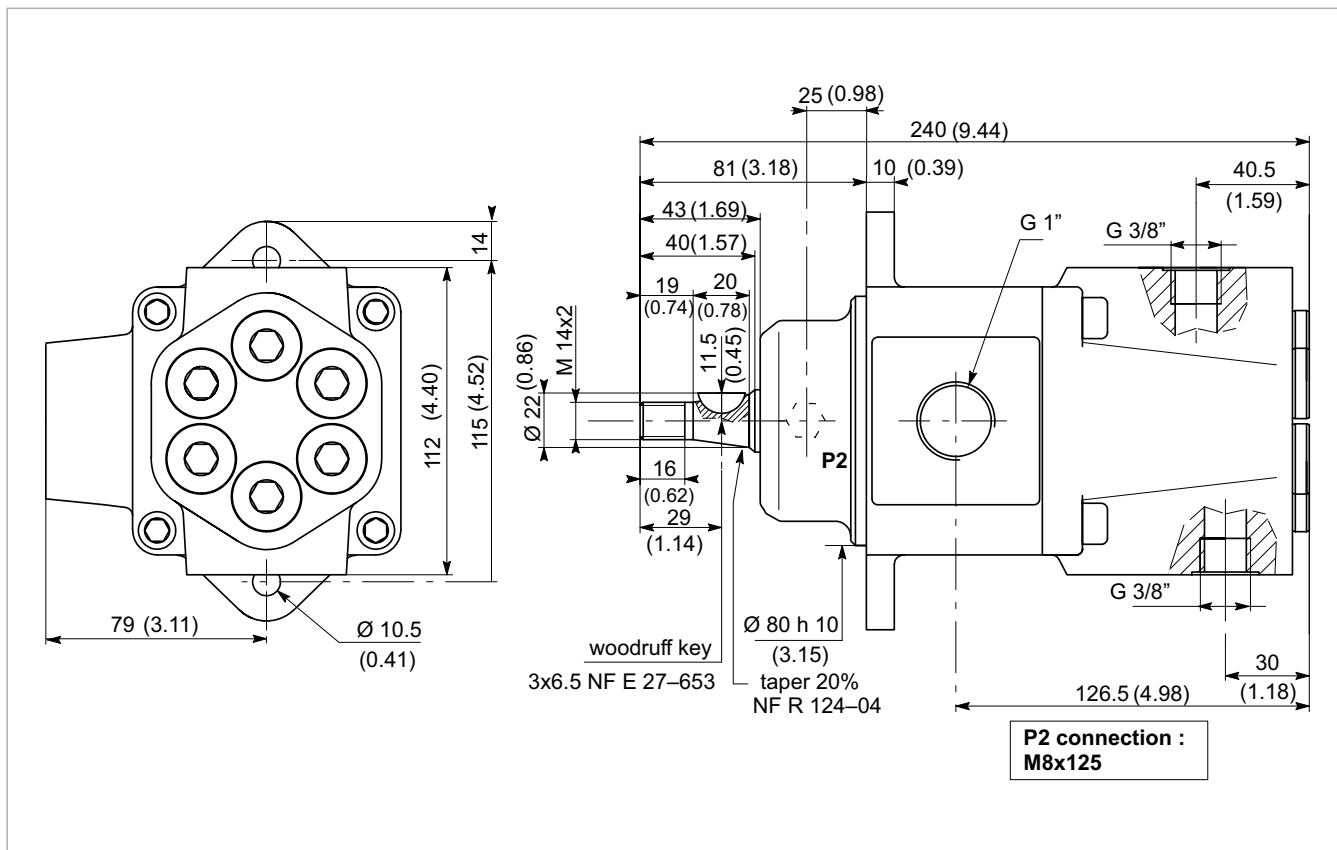
Rotation :
Fixed-Clock Wise



x 1000 rpm	23,70 cc
x 1500 rpm	35,55 cc
Max. Continuous Pump Speed	2500 rpm
Max. Limited Pump Speed	2800 rpm
Max. Continuous Pressure	400 bar
Max. Intermit. Peak Pressure	500 bar
Weight without inlet fitting	12,00 kg
Weight with inlet fitting	12,25 kg
Fluid	Min.B.Hyd.Oil
Inlet	47,8 _{mm}
Outlet	26,4 _{mm}



Rotation :
Fixed-Clock Wise



x 1000 rpm	30,40 cc
x 1500 rpm	45,60 cc
Max. Continuous Pump Speed	2400 rpm
Max. Limited Pump Speed	2700 rpm
Max. Continuous Pressure	400 bar
Max. Intermit. Peak Pressure	500 bar
Weight without inlet fitting	12,00 kg
Weight with inlet fitting	12,25 kg
Fluid	Min.B.Hyd.Oil
Inlet	47,8 _{mm}
Outlet	26,4 _{mm}



Rotation :
Fixed-Clock Wise

GPH High Pressure Piston Pumps designed for Industrial Area.

INSTALLATION

- Remove the protective covers off the inlet and output ports when connecting tubes or hosing.
- Rinse the tank and the tubes or hoses well to remove any possible contaminants.
- Before connecting up the pump inlet port, fill the tank and allow the oil to flow into a receptacle. This oil can be re-used after proper filtration.

OIL SUPPLY

Oil and supply line should be clean, and the supply line is airtight.

SUCTION LINE

Connect the suction line, tighten the suction connection bolts in diametric pairs.
Connect the pressure line.

REPAIR

We offers a comprehensive range of services for the repair of our Piston Pumps.
Repairs to the GPH High Pressure Pump may only be performed by authorized, skilled and instructed personnel.
Only use original and pre-installed our GPH spare parts from supplied to Manufacturer..

Tested and pre-installed GPH pumps successful repair requiring only little time.

SPARE PARTS

The spare parts list and the GPH pump order specific.
When ordering spare parts, quote the material and complete Ordering code number of the GPH Piston Pump as well as the right numbers of the spare parts.

RISK OF DAMAGE!

Do not touch the drive shaft of the GPH Piston Pump
Do not touch sensor, valves and fittings
Do not touch sealing surfaces.

DIMENSIONS & WEIGHTS

		02	04	06	12	15	22	35	45
- Without inlet fitting	kg	5,50	5,50	5,50	8,00	8,00	8,00	12,00	12,00
- With inlet fitting	kg	5,60	5,60	5,60	8,15	8,15	8,15	12,25	12,25

Address all questions regarding spare parts to your responsible Our Service Partner or the technical service department of the manufacture's plant / factory for the GPH Piston Pumps.

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order@hydrolina.com

DIN

DIN 5462 / ISO 14
8x32x35
8x32x36
DIN 6885


G2PA

G1PA

G2PM

Piston Pumps

Piston Motors

ISO

ISO 3019-2 (4 BOLTS)
DIN 5480 -W25,30,35,40,45
DIN 6885 -Ø20,25,30,35,40,45


G2P

G2M

SAE

SAE B2 C4 - SAE D
SAE J498b
SAE J 744


G2SE

G2EM

M2
Fixed Plug-in

DIN 5480 / ISO 3019-2
W30 - W35 - W40
M21 - M22 - M23


G2MS

DIN ISO 14
8x32x36


GPA

P2 Connection M8x125
Woodruff key 3x6,5 NF E
27-653 NF R 124-04
(2 BOLTS)


GPH

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GPH

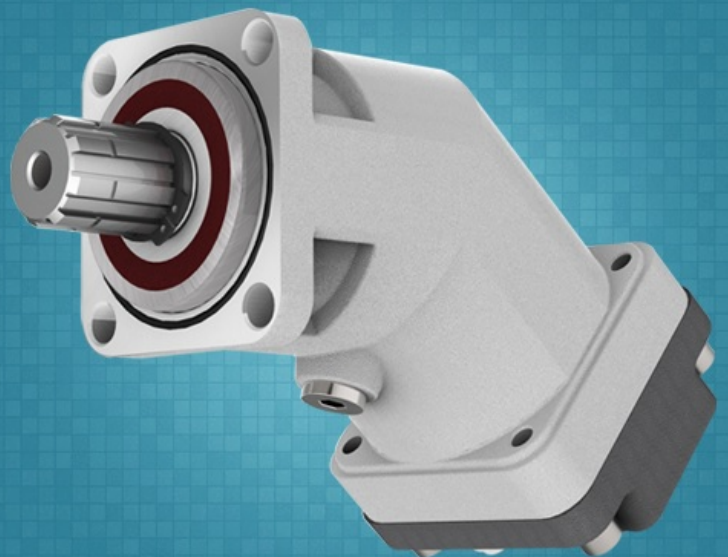


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G2PA

Bent Axis Piston Pumps

- Compact Design,
- Economical Conception,
- High Rotating Speeds,
- High Output Pressure.



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