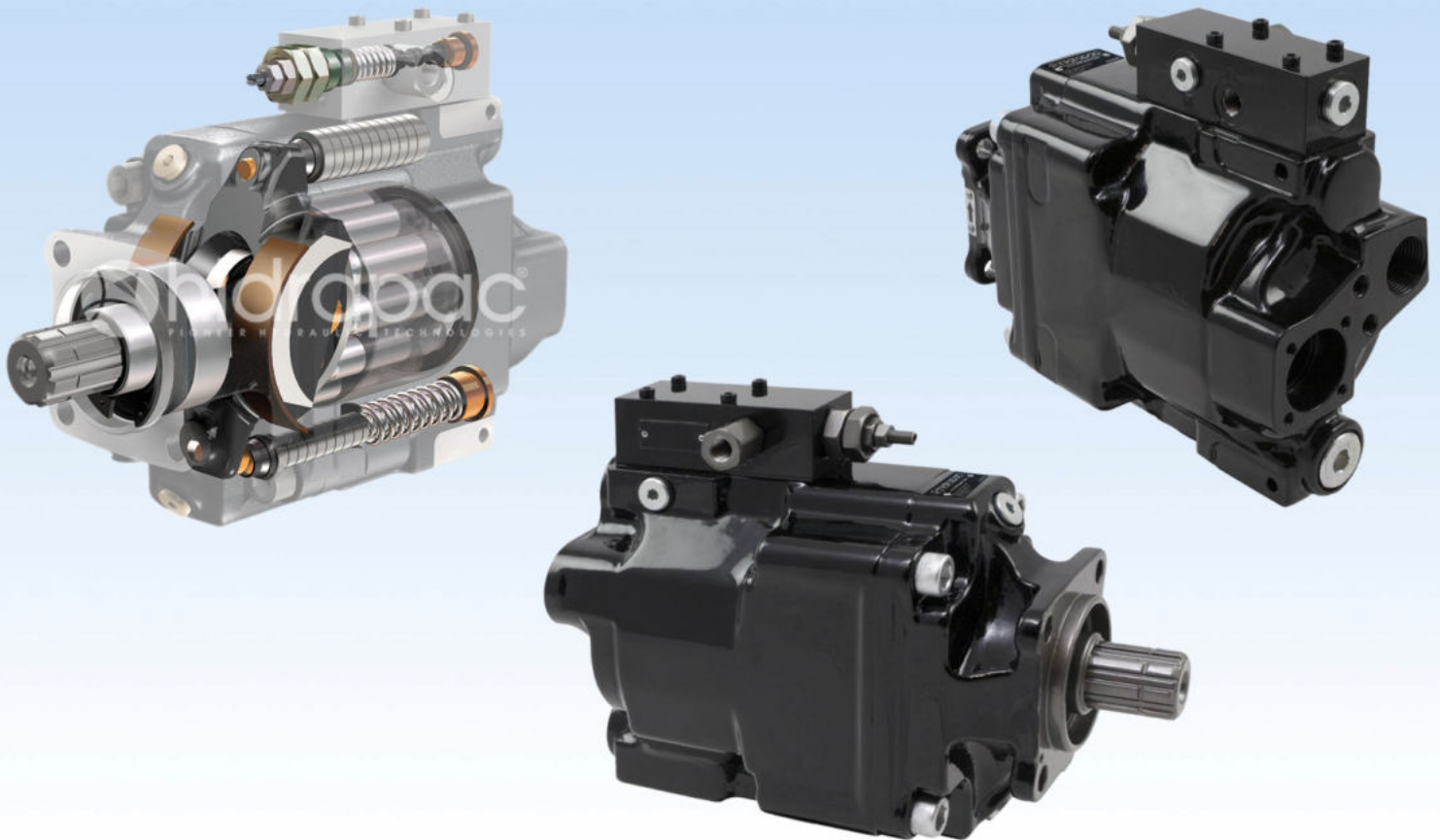


AXMV Variable Displacement Piston Motors

New Development Variable Displacement Piston Motors, High Pressure Motors, 400/450 BAR Working Pressure. High Rotational Speed, High Efficiency, Slim Design, Cast Iron Motor Body, Re-Designed.

Designation;

40cc, 60cc, 75cc, 92cc, 120cc, 130cc, 150cc.



Hidrapac **Store**

www.HIDRAPAC.com.tr

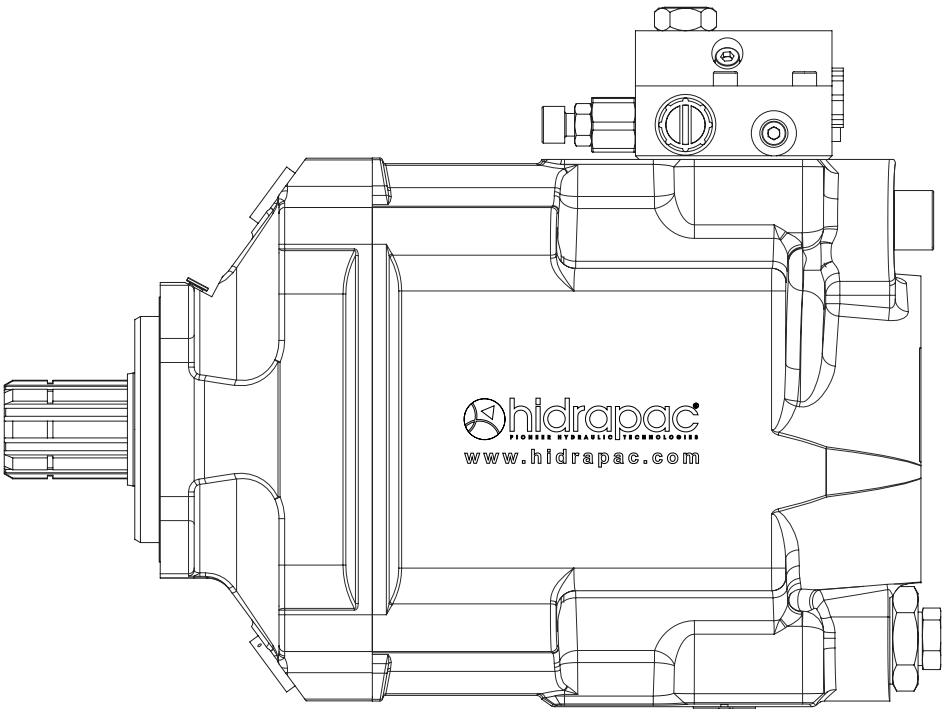
Characteristics of the AXMV Variable Dsplcmnt Piston Motors

Pump MODEL	DISPL. (cc)	MAX. OPERATING PRESSURE (bar)	MAX. PEAK PRESSURE INTERMITTNT (bar)	TORQUE AT 300 BAR (N.m)	MAX.SPEED AT FULL DISPLACMNT (rpm)	MAX. SPEED IN STAND BY (rpm)	WEIGHT (kg)	OVERHANG TORQUE (N.m)
AXMV 40 (independent) new bi-directional	40	400	450	225	3000	3000	26	34
AXMV 60 (independent) new bi-directional	60	400	450	335	2600	3000	26	34
AXMV 75 (independent) new bi-directional	75	400	450	420	2000	3000	26	34
AXMV 92 (independent) new bi-directional	92	400	450	515	1900	3000	26	34
AXMV 120 (independent) new bi-directional	120	380	430	675	2100	3000	26	34
AXMV 130 (independent) new bi-directional	130	380	430	730	2100	3000	28	38
AXMV 150 (independent) new bi-directional	150	380	430	840	2000	3000	28	38

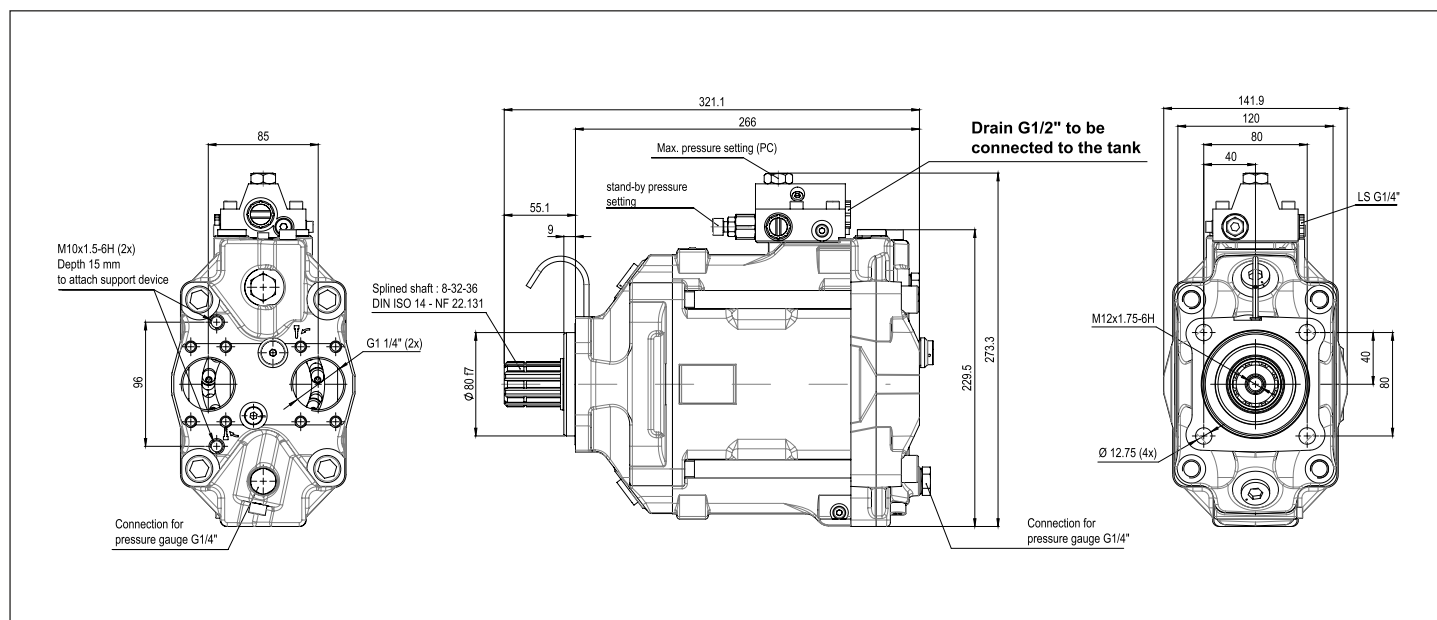


Ordering Code; AXMV Variable Dsplcmnt Piston Motors

Model Code	Displacement	Shaft Type	Flange Type	Rotation	Sealing
AXMV	92	S	M4	BD	V
AXMV	40	S	M4	BD	V
Variable Displcmnt Hydraulic Piston MOTOR	60	Splined Shaft (default) 8x32x36 DIN ISO 14NF	ISO 7653 Ø80 4 Bolt Flange	Bi-Directional	Viton High Pressure Seal
DIN Flge	75			Direction of Rotation	
	92				
	120				
	130				
	150	K			N
		Parallel Keyed Shaft (special) DIN 6885			Nitrile Seal 5/10 Bar



40cc, 60cc, 75cc, 92cc, 110cc, 120cc, 130cc, 150cc



Bi-Directional Rotation

Clockwise (CW)

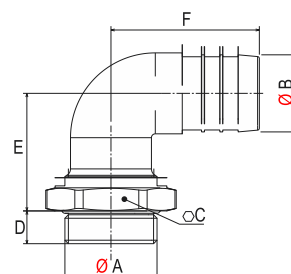
Counter-clockwise (CCW)



Suction Fittings for AXMV Hydraulic Piston Motors

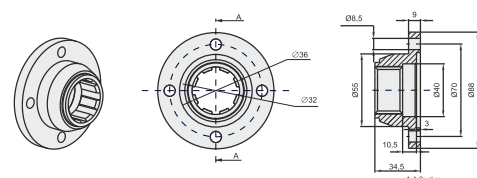
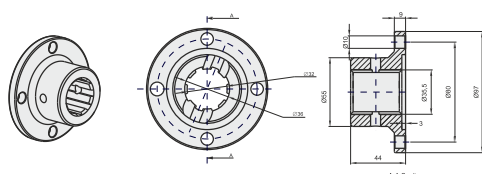
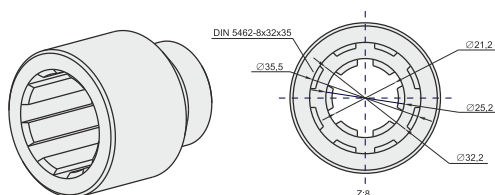
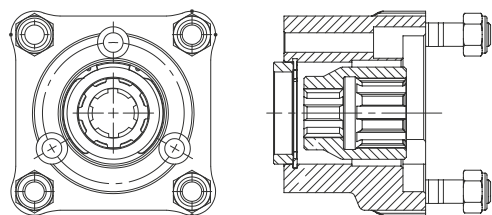
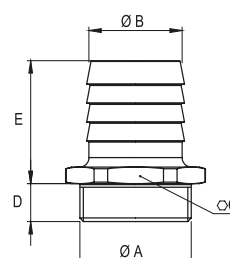
90° elbow fittings, swivel

Reference	A	Ø B	C	D	E	F	Pump type
90001	G 1 1/2"	40	60	17	61	77	variable
90002	G 1 1/2"	50	60	17	65	82	variable



Straight Fittings

Reference	A	Ø B	C	D	E	Pump type
50001	G 1 1/2"	40	55	16	52	variable
50002	G 1 1/2"	48	55	16	64	variable
50003	G 1 1/2"	60	65	16	67	variable
50004	G 1 1/2"	63.5	65	16	67	variable
50005	G 1 1/2"	76.2	80	16	87	variable



	Inlet Fittings & Installation Parts - Split Flange - Seal - Screw
	By-Pass Valves - 12 V - 24 V
	Hydraulic Adapters - PTO Piston Pump Adapter - PTO Gear Pump Adapter - Long / Short Adapter
	Flanges - 1120 (6 Spline) - 1120 (8 Spline) - 1300 (6 Spline) - 1300 (8 Spline)
	Couplers - 6 x 8 Couplar - 6 x 8 Couplar (Long) - 8 x 8 Couplar - 8 x 8 Couplar (Long)

Calculation of power to be supplied to the shaft as a function of flow and pressure

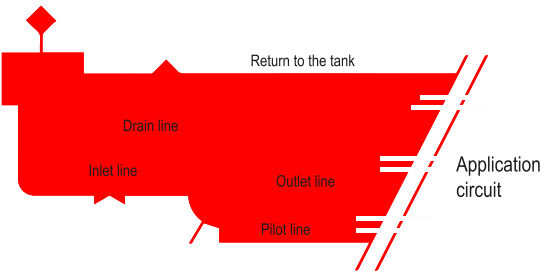
$$P = \frac{\Delta P \times Q}{600 \times \eta_{global}}$$

Calculation of torque to determine PTO,
 as a function of the displacement and the pressure

$$C = \frac{Cyl \times \Delta P}{62.8 \times \eta_{meca}}$$

- With:
- P = Hydraulic power in kW
 - ΔP = Differential pressure in bar
 - Q = Flow in l/min
 - C = Torque in N.m
 - Cyl = Displacement in cc/rev
 - η_{meca} = Mechanical efficiency
 - η_{global} = Mechanical efficiency + volumetric efficiency

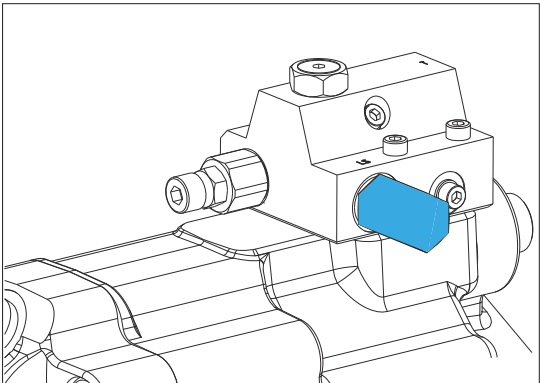
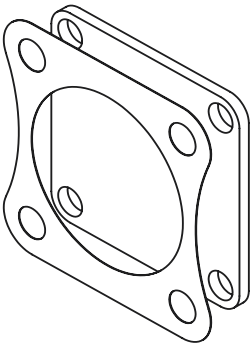
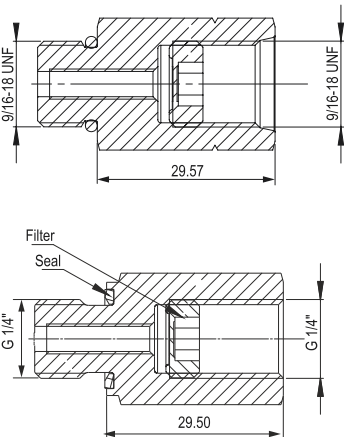
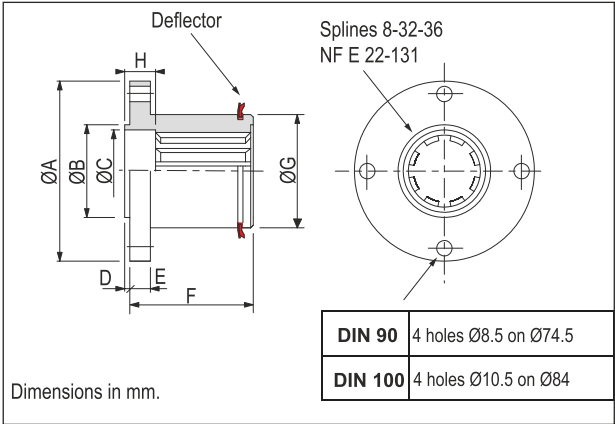
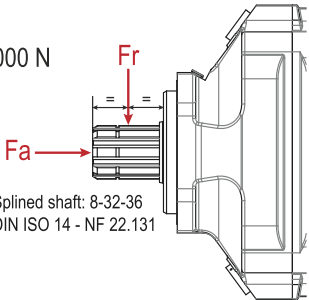
Ideal installation



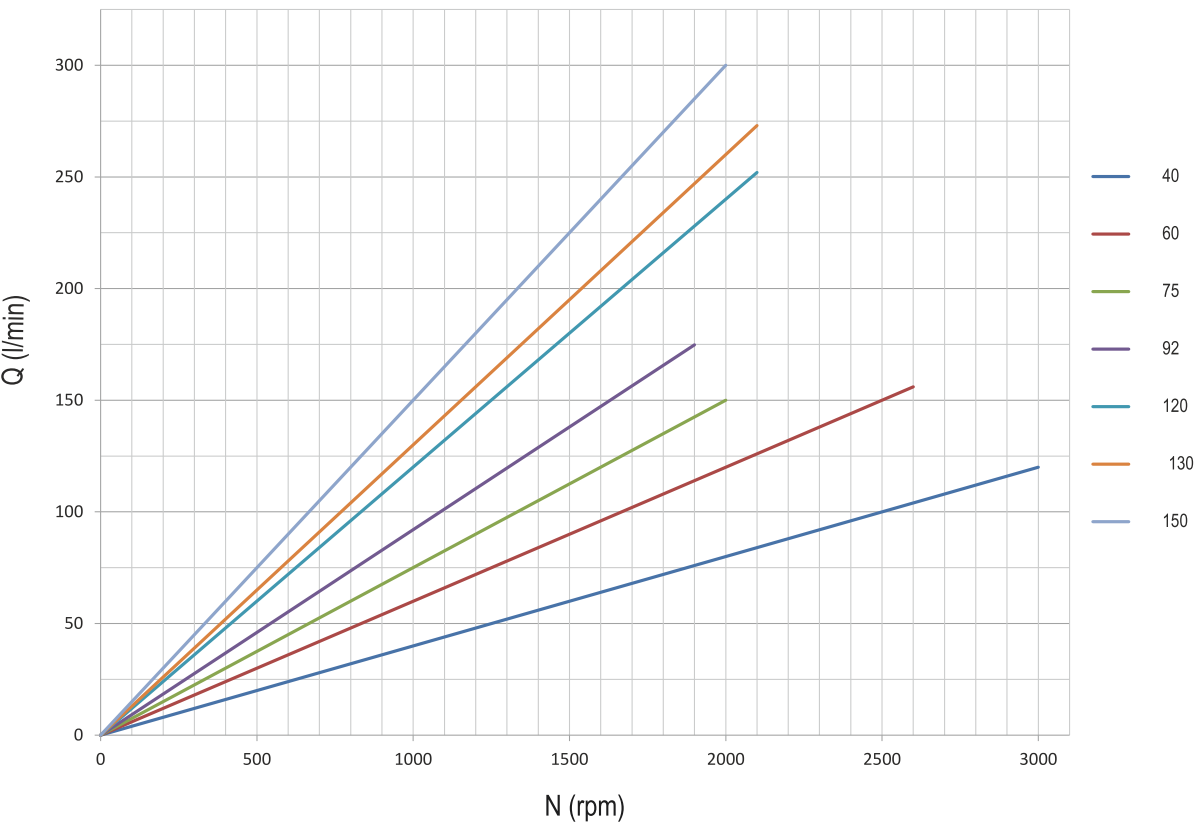
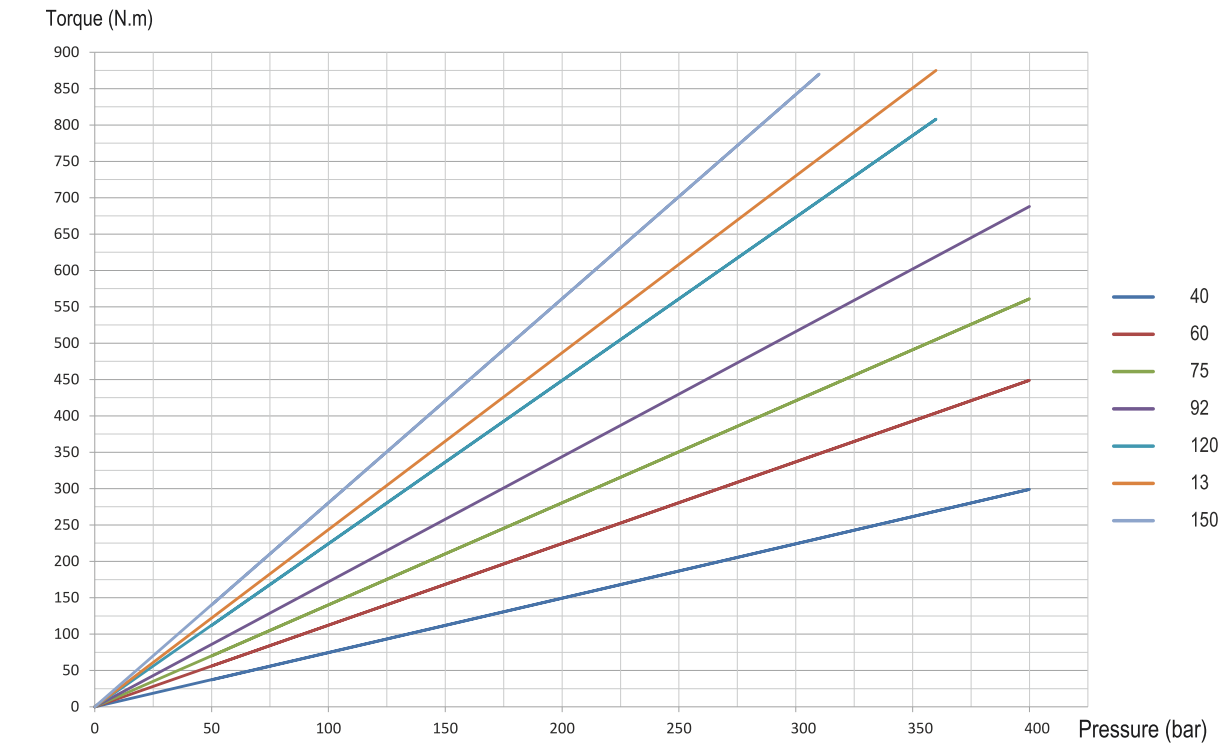
Type		ØA	ØB	C	D	E	F	ØG	H
DIN 90		90	47	43	2	10	62	55	15
DIN 100		100	57	43	2	10	64	55	15

Force on pump shaft

Fr : Acceptable max. radial force = 3000 N
 Fa : Acceptable axial force = 1600 N.



Torque and Flow

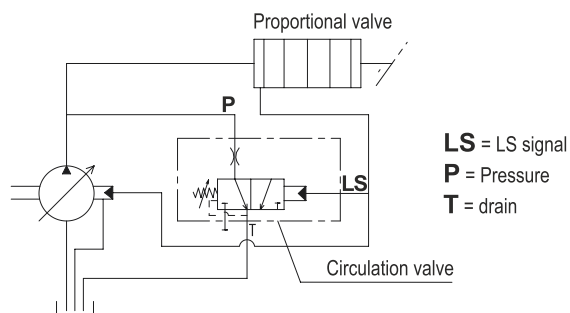
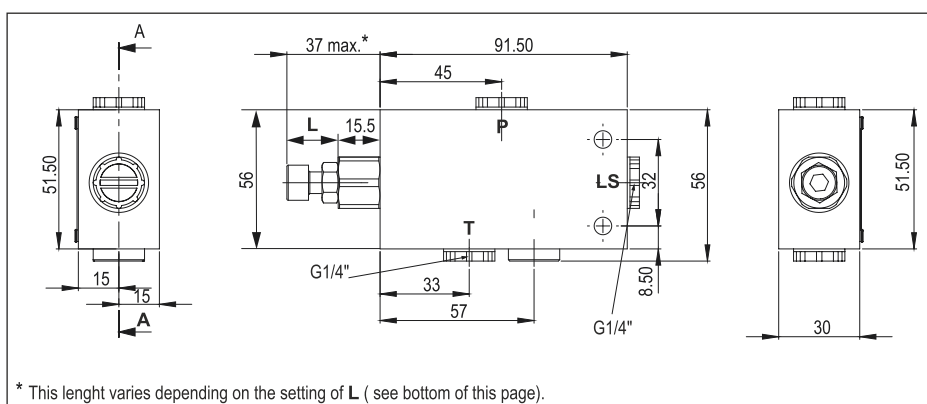
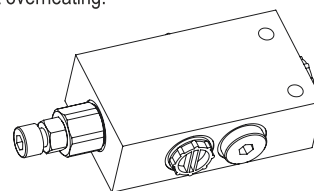


Accessories

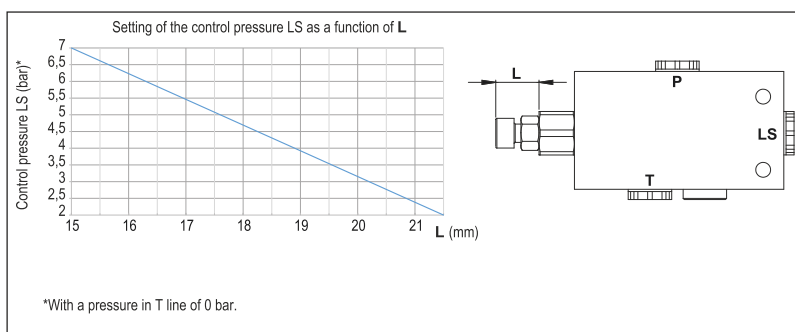
FCV - FLUID VALVE CIRCULATION

The fluid circulation (FCV) is designed for applications where the hydraulic variable displacement pump is used in standby mode for a long period of time, for example engine PTO, to protect the pump against overheating.

- The valve flow varies between 20 and 22 l/min for a ΔP at 30 bar.
- Maximum pressure is 420 bar.
- The closing pressure is 2 bar min. and 7 bar max.



Setting of the control pressure



40° bent axis design giving high power, small overall dimensions, optimum efficiency and economic design. Flange and shaft designed for direct mounting on truck gearbox PTO's. The fixed displacement bent axis Motors generates a hydraulic fluid flow. It is designed for use in trucks, commercial vehicles and all stationary hydraulic applications. The Pump a fixed pump with rotary group in bent-axis design open circuits. Flow is proportional to drive speed and displacement.

For axial piston units with bent-axis design, the Pistons are arranged diagonally with respect to the drive shaft. The pump covers the whole displacement range 5 to 130 cm³/rev. The pump has been developed with modern styling and design to satisfy market demand as to designed new generation plate and pistons with give high flow performance, high pressures with high efficiency and very small dimensions.

The pump is available both to DIN and SAE world standards and can be mounted either directly at the gear box or via a drive shaft. If necessary it can also be augmented with a by-pass valve. Other brand bent axis Motors compatible and interchangeable with DIN Hydraulic Piston Motors. Refer to the data sheet and confirmation for the technical data, operating conditions and operating limits of the bent axis piston Motors.

Formulas			
Pump Output Flow	GPM	$GPM = (\text{Speed (rpm)} \times \text{disp. (cu. in.)}) / 231$	$GPM = (n \times d) / 231$
Pump Input Horsepower	HP	$HP = GPM \times \text{Pressure (psi)} / 1714 \times \text{Efficiency}$	$HP = (Q \times P) / 1714 \times E$
Pump Efficiency	E	Overall Efficiency = Output HP / Input HP	Eoverall = HPOut / HPIn X 100
		Overall Efficiency = Volumetric Eff. × Mechanical Eff.	EOverall = EffVol. × EffMech.
Pump Volumetric Efficiency	E	Volumetric Efficiency = Actual Flow Rate Output (GPM) / Theoretical Flow Rate Output (GPM) × 100	EffVol. = QAct. / QTheo. X 100
Pump Mechanical Efficiency	E	Mechanical Efficiency = Theoretical Torque to Drive / Actual Torque to Drive × 100	EffMech = TTheo. / TAct. × 100
Pump Displacement	CIPR	Displcmnt (In. ³ / rev.) = Flow Rate (GPM) × 231 / Pump RPM	CIPR = GPM × 231 / RPM
Pump Torque	T	Torque = Horsepower × 63025 / RPM	T = 63025 × HP / RPM
		Torque = Pressure (PSIG) × Pump Displacement (CIPR) / 2π	T = P × 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.

Hydraulic Motors



K2FA (DIN)

BENT AXIS PISTON Motors



K2FL (DIN)

ALUMINUM BODY
BENT AXIS PISTON Motors



A2FD (DIN)

DUAL FLOW
BENT AXIS PISTON Motors



A2FO (ISO)

BENT AXIS PISTON Motors



A2FS (SAE)

BENT AXIS PISTON Motors



AXMV Series

VARIABLE DISPLACEMENT
PISTON Motors



A3PP Series

AXIAL PISTON Motors



A3PH Series

HIGH PRESSURE
PISTON Motors



ByPass Valve

FOR
BENT AXIS PISTON Motors



LS Adapters

FOR
VARIABLE PISTON Motors

Hydraulic Motors



K2FM (DIN)

BENT AXIS PISTON MOTORS



A2FM (ISO)

BENT AXIS PISTON MOTORS



A2MS (SAE)

BENT AXIS PISTON MOTORS



A2FE (FixedPlug)

BENT AXIS PISTON MOTORS



Anti Cavitation

VALVE
BENT AXIS PISTON MOTORS

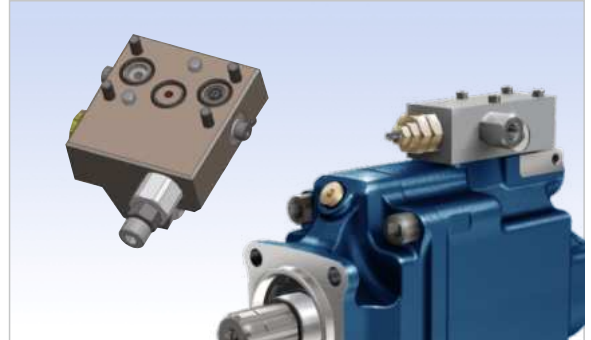
ByPass Valve

for Bent Axis Piston Motors



LS Adapter

for Variable Displacement Piston Pump



Suction Fittings

for Bent Axis Piston Motors



Flushing Valve

for Bent Axis Piston Motors



Adapter

for Bent Axis Piston Motors



Flange, Couplar

for Bent Axis Piston Motors



Hydraulic Motors, Hydraulic Motors

Bent Axis Hydraulic Piston Motors, Bent Axis Piston Motors,
Dual Flow Hydraulic Piston Motors, Variable Displacement Piston Motors,
High Pressure Piston Motors, Straight Axial Piston Motors..



Address;

HIDRAPAC HYDRAULIC PUMP & MOTORS

Address; (PRODUCTION)

Fevzicakmak Mah. Sila Cad. Kobisan 3 San. Sit.
No: 73 / C Karatay – Konya, PO Code; 42050, Turkiye

Address; (ASSEMBLE, SHIPMENT)

Fevzicakmak Mah. Sila Cad. Kobisan 3 San. Sit.
No: 71 / AD Karatay – Konya, PO Code; 42050, Turkiye

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