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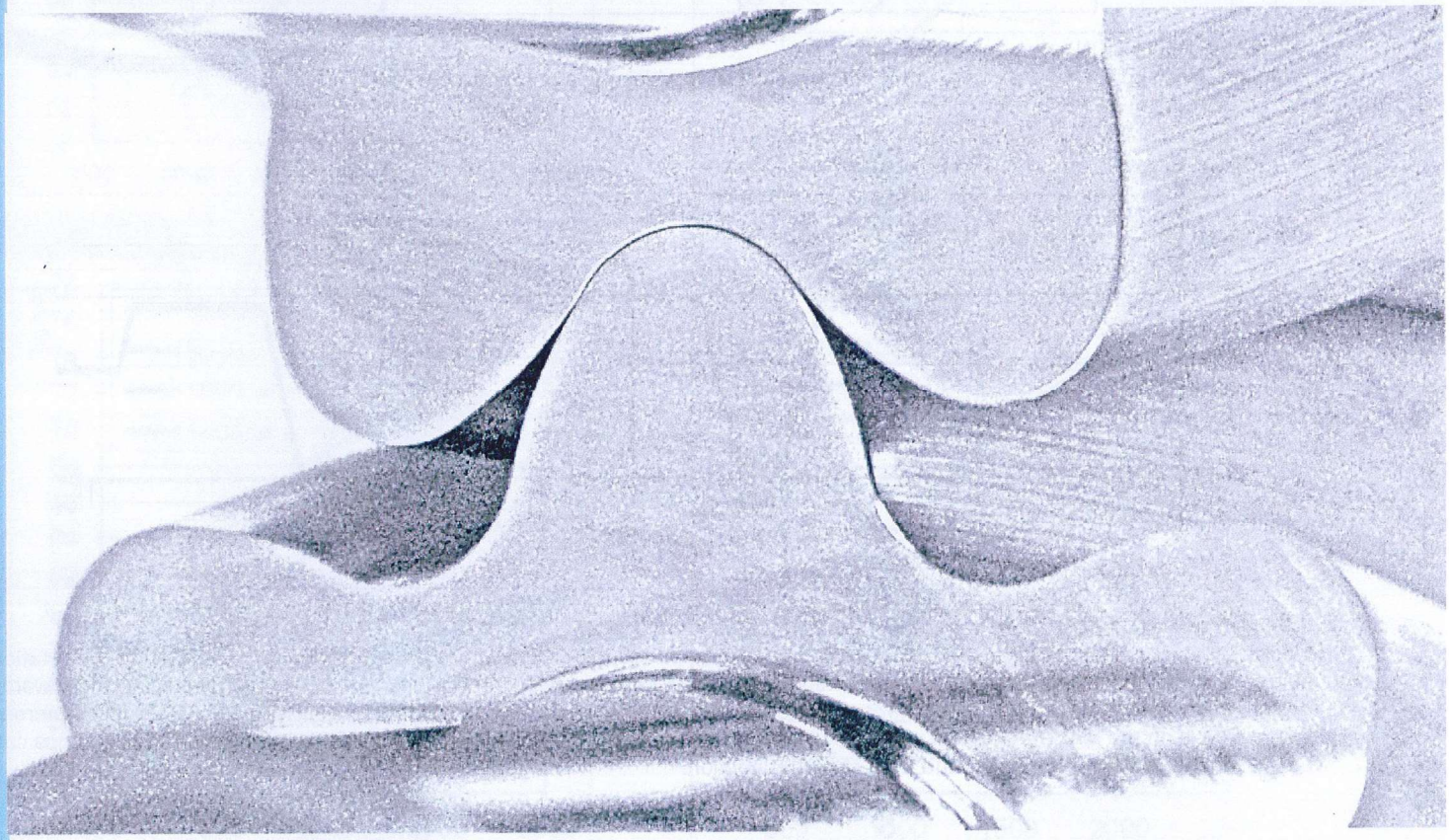
drive and control products

ELIKA®
by MARZOCCHI

Low - noise and Low - ripple gear pump

ELI4 series up to 200 cm³/rev



ELIKA Marzocchi's proposal for the gear pump market, is a perfect fit for all those applications that require low noise levels. The use of ELIKA gear pump eliminates adverse noise effects on humans and on the surrounding environment. The ELIKA reduces the noise level by an average of 15 dBA compared with a conventional external gear pump. ELIKA is a patented product.

MARZOCCHIPOMPE
HIGH PRESSURE GEAR PUMPS

INLET PRESSURE

Under standard working conditions, intake pipe pressure is lower than atmospheric pressure. The operating inlet pressure should range between 0.7 and 3 bars (absolute).

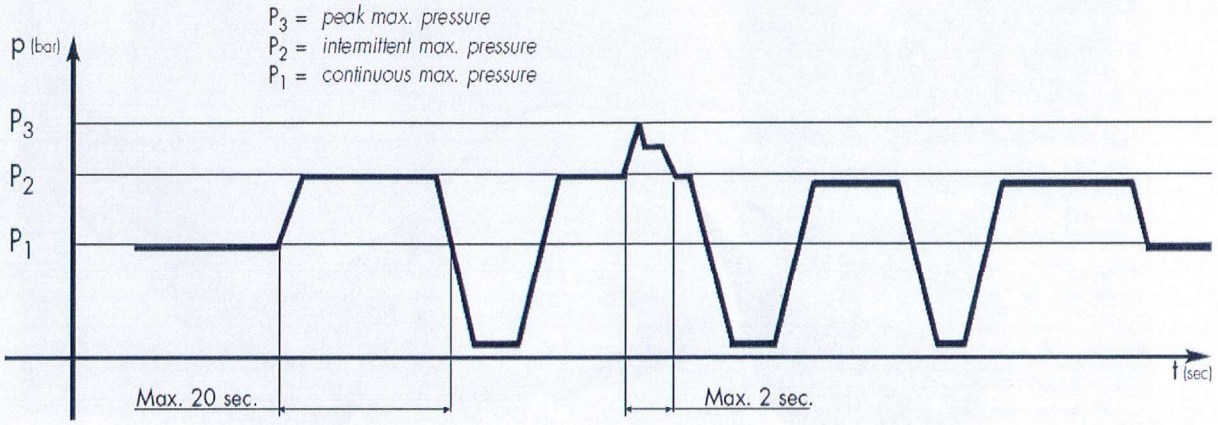
INLET AND DELIVERY LINES

Hydraulic system pipes should show no sudden changes of direction, sharp bends and sudden differences in cross-section. They should not be too long or out of proportion. Pipe cross-section should be sized so that fluid velocity does not exceed recommended values. It is advisable to carefully consider the possible diameter reduction of the inlet or outlet pipes fitted on flange fittings. Reference values are the following:

Condotto di aspirazione	Intake line	0.5 ÷ 1.6 m/s
Condotto di mandata	Delivery line	2.0 ÷ 6.0 m/s
Condotto di ritorno	Return line	1.6 ÷ 3.0 m/s

PRESSURE DEFINITION

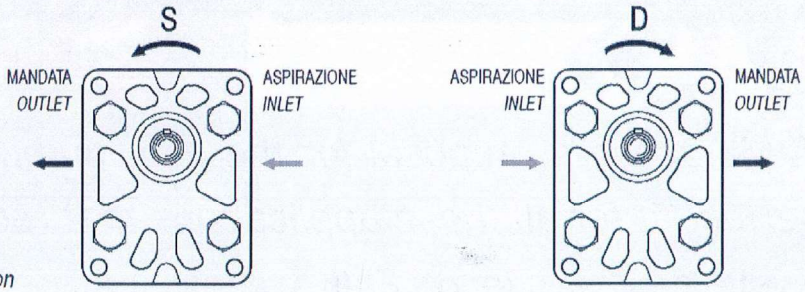
Product tables show three max pressure levels [P1, P2, P3] to which each pump can be used.



Pressure diagram as a function of time.

DIRECTION OF ROTATION

Marzocchi ELI series pumps are available in either clockwise or counter-clockwise rotation. Direction of rotation of single rotation pumps is conventionally defined as follows: when standing before the pump with driving shaft up with is projecting end towards the observer, the pump is rotating clockwise in case of right-hand rotation "D"; therefore, delivery side is on the right, whereas intake side is on the left: The contrary will happen with left-handed pumps "S", keeping the same point of view. The ELI pumps can not be modified in order to reverse the work rotation direction.



S = rotazione sinistra
counter-clockwise rotation

D = rotazione destra
clockwise rotation

DRIVE

Connect the pump to the motor using either a flexible coupling (either box or Oldham coupling) so that no radial and/or axial force is transmitted to the pump shaft during rotation, otherwise pump efficiency will dramatically drop due to early wear of inner moving parts. Therefore, coupling must absorb inevitable-even though reduced-misalignment between pump shaft and motor shaft. Box coupling or Oldham coupling should also move axially freely enough (enough for proper contact surface onto pump driving shaft). Furthermore, to avoid early wear of either splined or Oldham couplings, they should be lubricated at regular intervals using specific grease. Please contact our Sales or Technical Depts. For further details.

SEALS

"N" Standard version on NBR the temperature of the fluid should between -10°C and +80°C.
"V" Fluorocarbon version suitable for fluid at hi-temperatures. Range between -10°C and +120°C. In the range between -10°C and +80°C pressures P1, P2 e P3 are possible as per product table; beside that P1 should not be exceeded.

ELI4 Series how to order

ELI	TYPE	ROTATION	DISPL.	SHAFT	PORTS	SEALS
	4AC	D - CW	86.5	C0	A	N
		S - CCW	106.3	S1		V
			127.4			
			147.2			
			165.9			
			181.1			
			199.8			

Pump standard types:

4AC = flange SAE C + shaft C0 + ports A + standard seals

Examples:

ELI4AC-D-106.3-C0-A-N = clockwise rotation, 106.3 cm^3/rev, SAE flange, cilindrical shaft C0, flanged ports A type, standard seals.

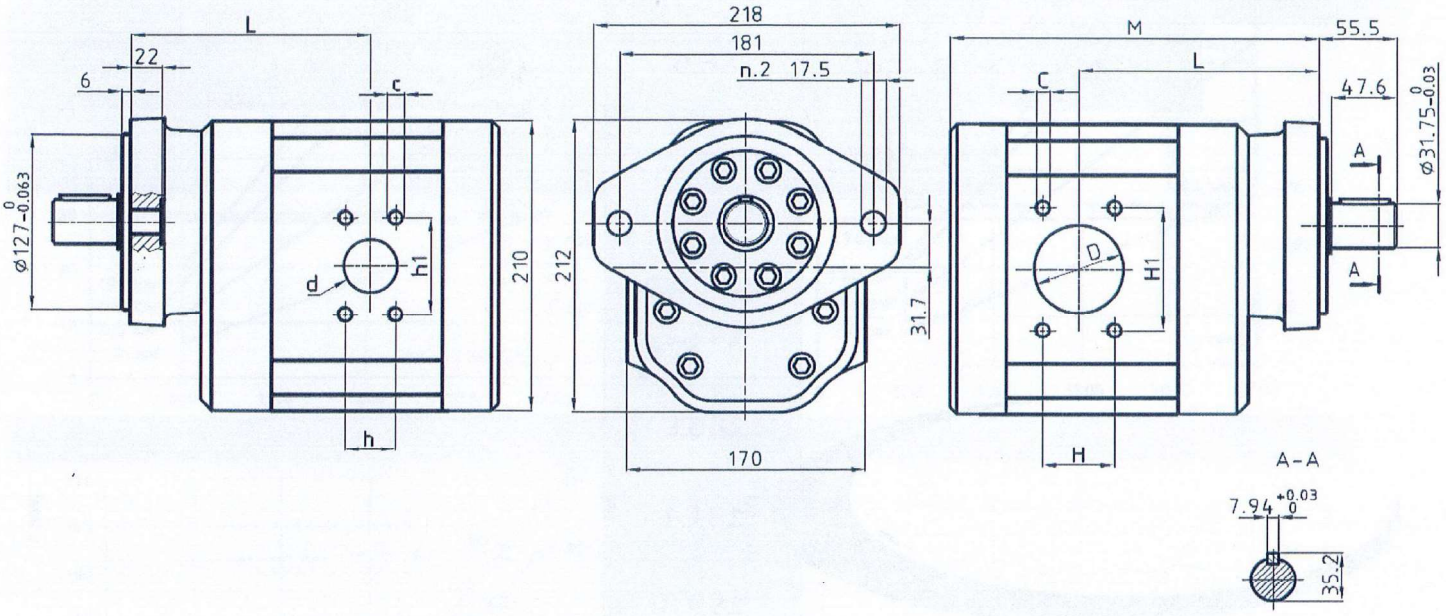
ELI4AC-S-199.8-S1-A-V = counter-clockwise rotation, 199.8 cm^3/rev, SAE flange, splined shaft S1, flanged ports A type, fluorocarbon seals.

The product data sheets show our standard model types. The synoptic tables for flanges, shafts and ports show all the possible configurations. For further details about the availability of each configuration please contact our Sales and Technical Dept..

* Value based on ISO4412 test procedure.

ELI4AC

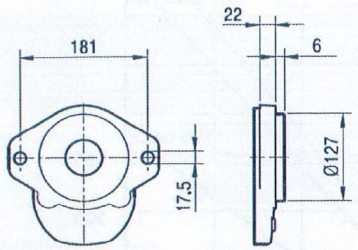
Outlet **Inlet**



Pump Type	Displ.	Flow at 1500 rpm	Operating pressures			Rotation speed		Noise at 1500 rpm *		Dimensions					
			P1 Max cont.	P2 Max intermit.	P3 Max peak	Minimum speed	Maximum speed	On recirc.	at P1	L	M	D	H / H'	d	h / h'
	[cm³/rev]	[l/min]	[bar]	[bar]	[bar]	[rpm]	[rpm]	[dBA]	[dBA]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
ELI4AC-86.5	86.5	129.8	240	255	270	200	2800	58	66	56.5	177.0	50.8	42.9 / 77.8	31.5	58.7 / 30.2
ELI4AC-106.3	106.3	159.5	200	215	230	200	2500	58	66	61.8	185.5	50.8	42.9 / 77.8	38.0	69.9 / 35.7
ELI4AC-127.4	127.4	191.1	180	195	210	200	2500	59	67	70.8	194.5	63.5	50.8 / 88.9	38.0	69.9 / 35.7
ELI4AC-147.2	147.2	220.8	170	185	200	200	2500	59	67	75.0	203.0	63.5	50.8 / 88.9	38.0	69.9 / 35.7
ELI4AC-165.9	165.9	248.9	160	175	190	200	2500	60	68	84.0	211.0	63.5	50.8 / 88.9	38.0	69.9 / 35.7
ELI4AC-181.1	181.1	271.7	140	155	170	200	2200	60	68	87.3	217.5	63.5	50.8 / 88.9	38.0	69.9 / 35.7
ELI4AC-199.8	199.8	299.8	130	145	160	200	2200	60	69	91.3	225.5	63.5	50.8 / 88.9	38.0	69.9 / 35.7

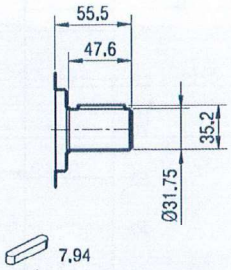
Accessories supplied with the standard pump: key (code 522262). Mounting flange 127-2 © in compliance with SAE j744C. Standard ports: M10, M12 threads depth 20 mm. Please strictly follow assembly and use indications given in this catalogue for top performance and longer life of the ELI Marzocchi series. It is also very important to equip the hydraulic system with a proper filtering unit.

FLANGE / *FLANGES*



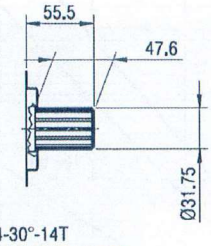
AC

ALBERI / *SHAFTS*



C0

Coppia Max
Max Torque 535 Nm

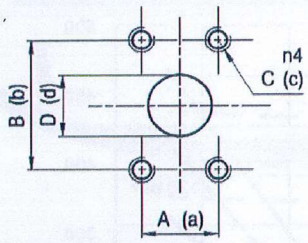


12/24-30°-14T
FLAT ROOT SIDE FIT

S1

Coppia Max
Max Torque 835 Nm

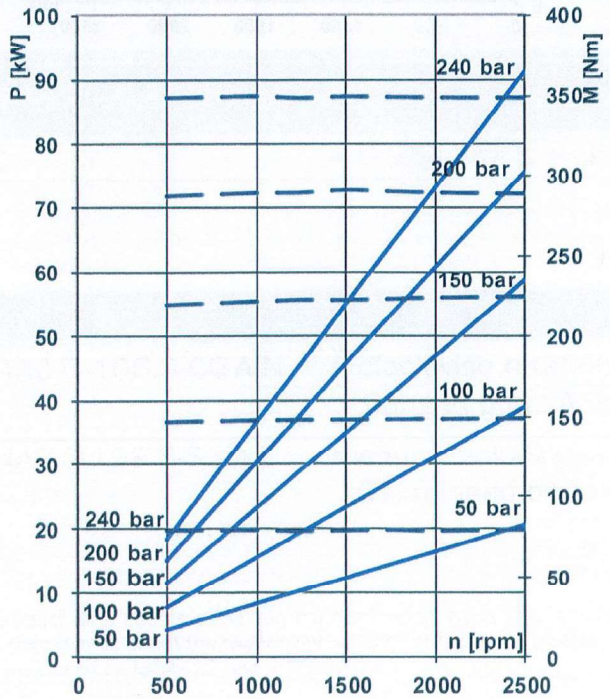
PORTE / *PORTS*



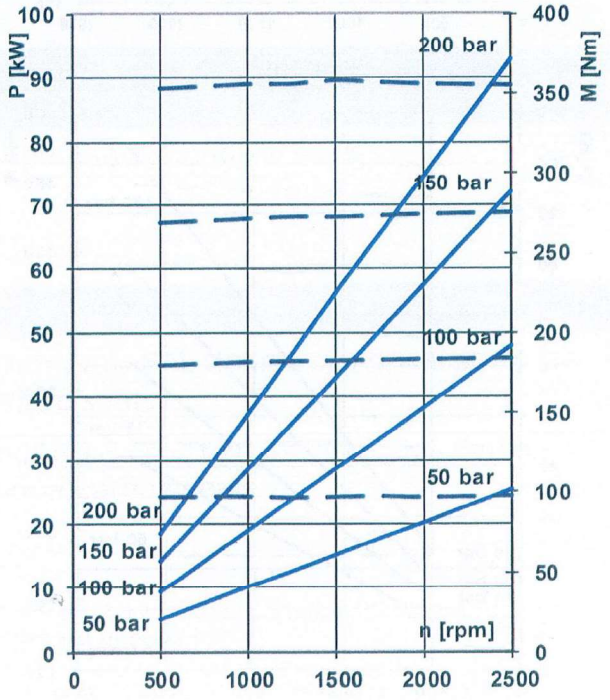
A

TYPE	INLET			OUTLET		
	D	A / B	C	d	a / b	c
ELI4..86.5	50.8	42.9 / 77.8	M12	31.5	58.7 / 30.2	M10
ELI4..106.3	50.8	42.9 / 77.8	M12	38.0	69.9 / 35.7	M12
ELI4..127.4 / 199.8	63.5	50.8 / 88.9	M12	38.0	69.9 / 35.7	M12

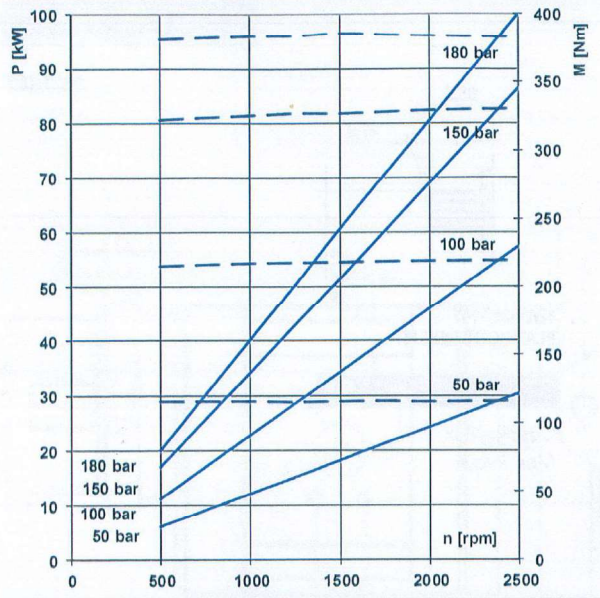
ELI4-86.5



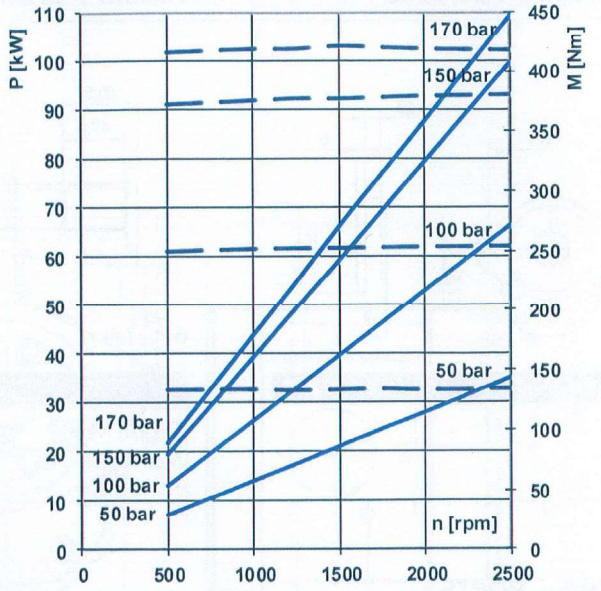
ELI4-106.3



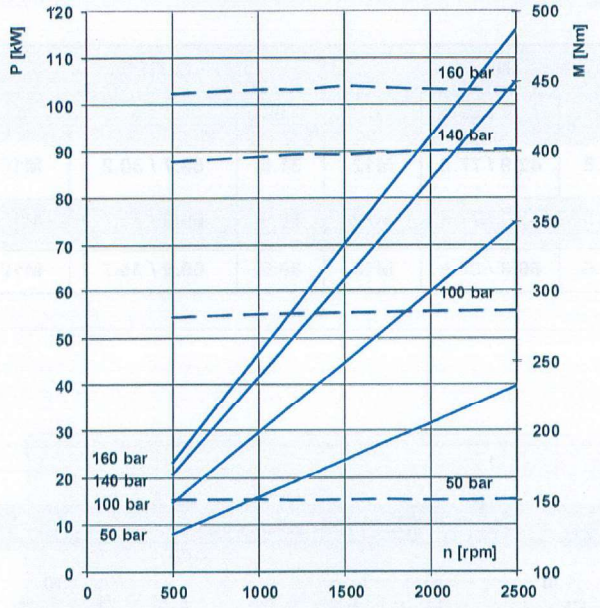
ELI4-127.4



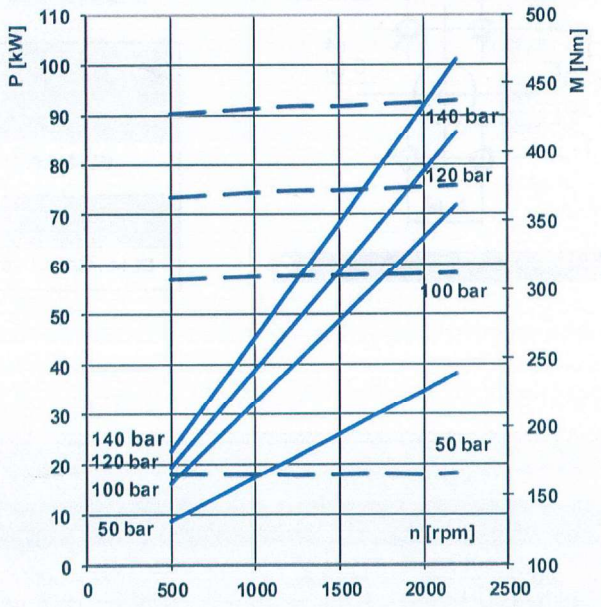
ELI4-147.2



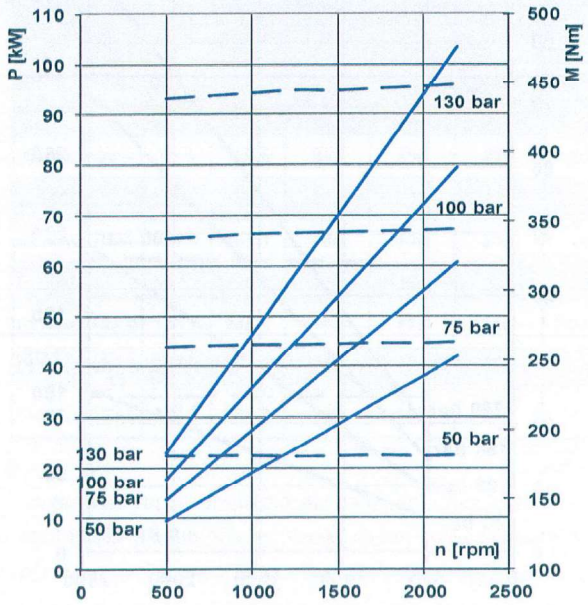
ELI4-165.9



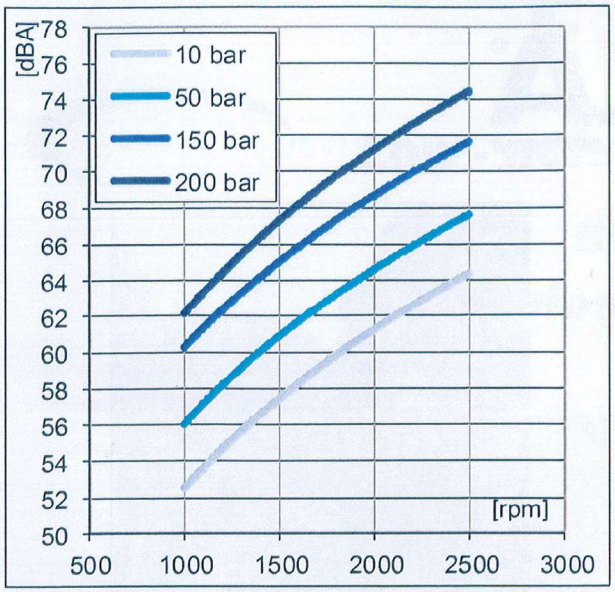
ELI4-181.1



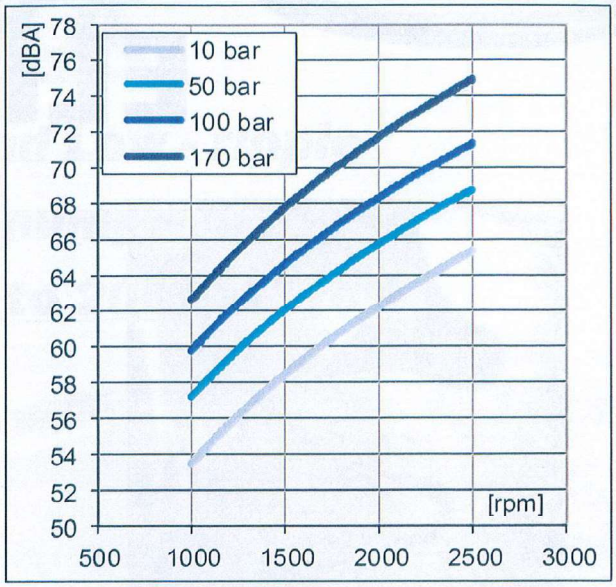
ELI4-199.8



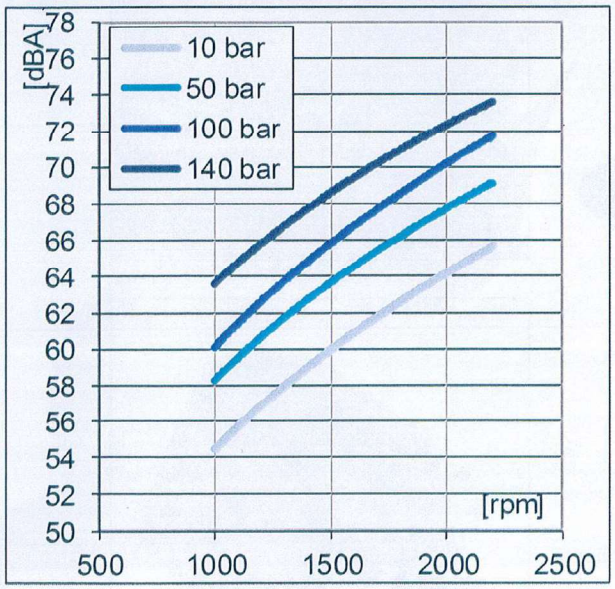
ELI4-86.5 / ELI4-106.3



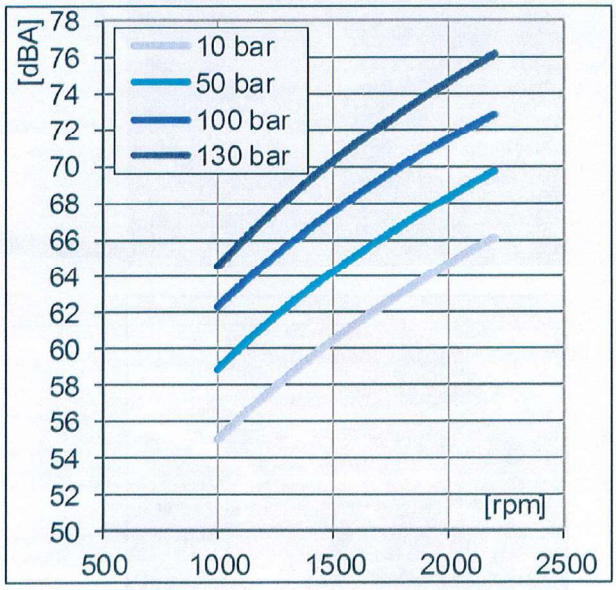
ELI4-127.4 / ELI4-147.2



ELI4-165.9 / ELI4-181.1



ELI4-199.8



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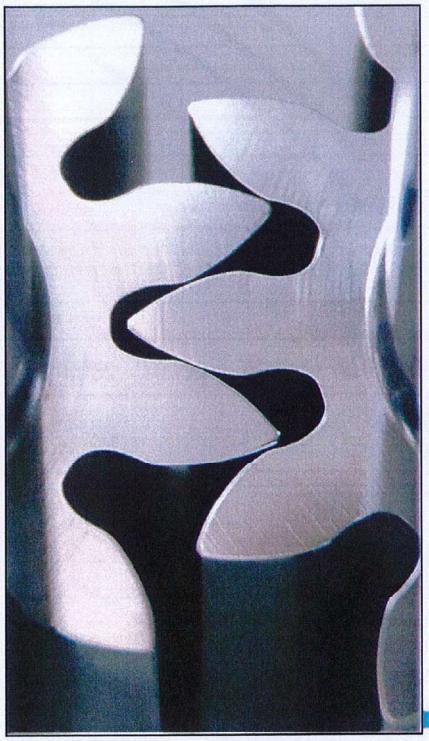
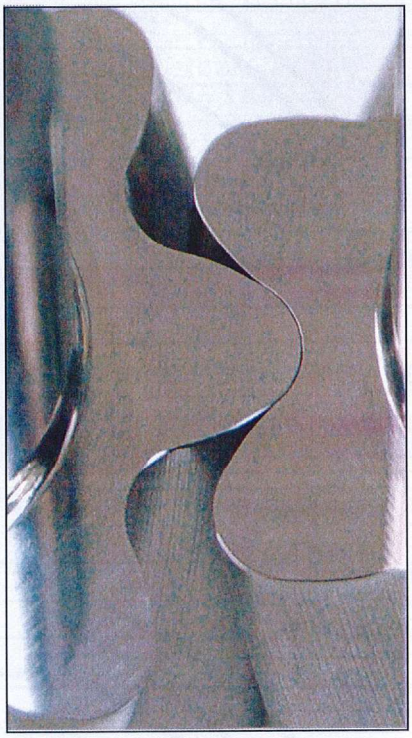
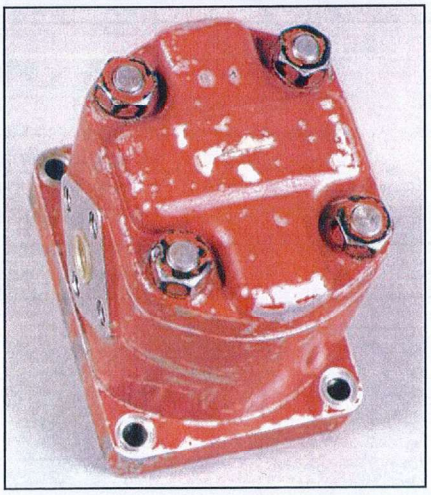
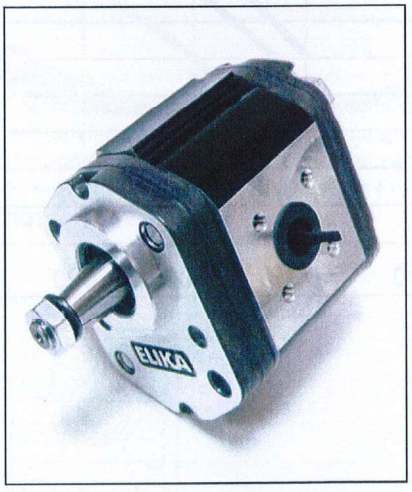






YEAR 1961 – First pump by Marzocchi



YEAR 2011 – First ELIKA by Marzocchi

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