

POSITIVE DISPLACEMENT ROTARY VANE PUMP

Series 1052E

Technical specifications



DOC: 1052E_01_EN REV: 01-01/2019

The Tuma self priming positive displacement rotary vane pump is used for fluid transfer. It has mechanical seals and an adjustable internal by-pass valve. The 1052E Pump line represents the optimal solution for diesel, fuel oil, gasoline, jet fuel and many solvents like esters, naphtha, aromatics and other liquids with Teflon™ seals.

Components (standard configuration for fuels)

COMPONENTS	MATERIALS
BODY, HEAD AND COVER	Cast iron
ROTOR	Ductile iron
SHAFT	High resistance carbon steel
VANES	Syntetic material
BY-PASS VALVE	Cast iron
BY-PASS VALVE SPRING	Plated carbon steel
MECHANICAL SEALS	Steel with FPM (Viton™) or PTFE (Teflon™)
BALL BEARINGS	High resistance carbon steel



The Pump has a high suction lift and adjustable with the internal by-pass which discharges pressure in order to prevent pressure shock and protect the downstream instrumentation.

Accessories

- Welding Squared flange (inlet/outlet), in carbon steel.
- Inlet "T" Filter
- Hydraulic motor adaptor & Hydraulic motor
- Flange connection to Cardan shaft

Options upon request

- Right version inlet
- Threaded flange NPT

Standard documentation

- Declaration of conformities to regulations applied
- Declaration of material conformities and functional test (CCC)
- User and maintenance manual

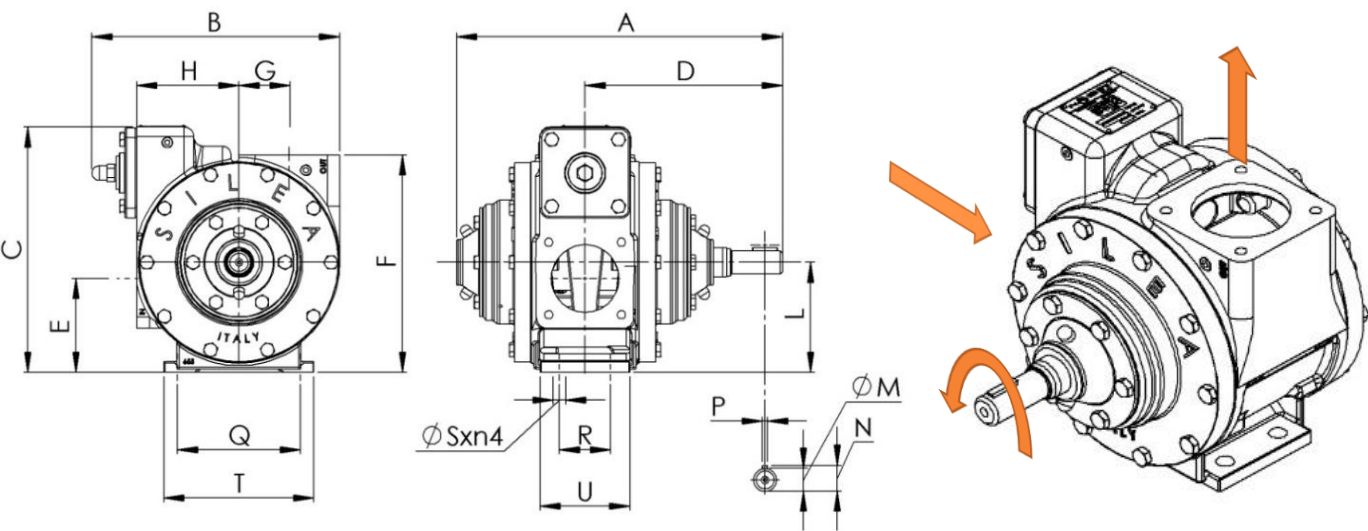
Standards and Regulations

- Conformity Declaration of current Directive **ATEX** for Equipment used in Potentially explosive atmospheres
- Customs Declaration of certification for Russia, Kazakhstan, Belarus, **EAC certification**.
- Conformity Declaration of current Directive **MACHINERY**

Operativity values

Diameter	@rpm	Max flow rate		Request Power		Differential pressure	Max differential pressure
		l/min	m ³ /h	kW	Hp	bar	
2"	330	150	9	2,2	3	5,5	7 bar
	650	300	18	2,2	3	3	
2 ½"	400	300	18	2,2	3	3	
	650	500	30	4	5,5	4	
3"	500	750	45	5,5	7,5	3	
	650	1000	60	7,5	10	3,5	
4"	400	1500	90	15	20	4	
	450	1700	102	15	20	3,5	
	500	2000	120	15	20	3	

Data are referred to a fluid with 100 ssu (22 cP) viscosity at 3,5 bar (50 psi). Pumps can work up to 10'000 ssu viscosity (cp 2200).
N.B.: operativity references have to be requested.



Left inlet pump (standard).

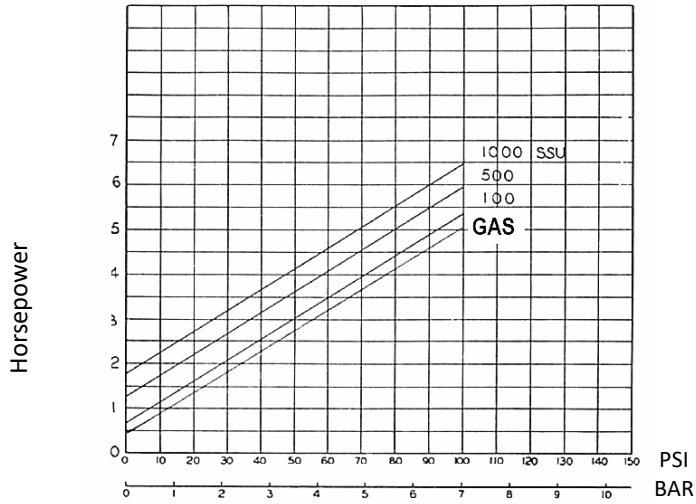
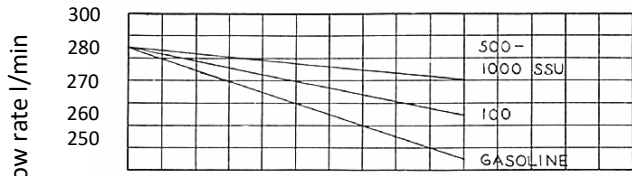
Dimensions and weights

Diameter	A	B	C	D	E	F	G	H	L	ϕM	N	P	Q	R	ϕS	T	U	Weight
2"	341,5	261,5	224	206	90	207,5	40	105	102	28,5	31,5	6	126,5	41	11	166	91,5	32
2 ½"	376	263	247	223	97	230	44	108	101,5	28,5	32,2	6,25	140	76	11	185	126	37
3"	405	308	305	245	116,5	281	63,5	127	136,5	28,5	32,2	6	152	64	16	186	111	60
4"	485,5	430	401	280	126,5	370	63,5	187	126,5	38,1	41,2	10	203	113	16	230	180	143

Dimensions in mm and weight in kg.

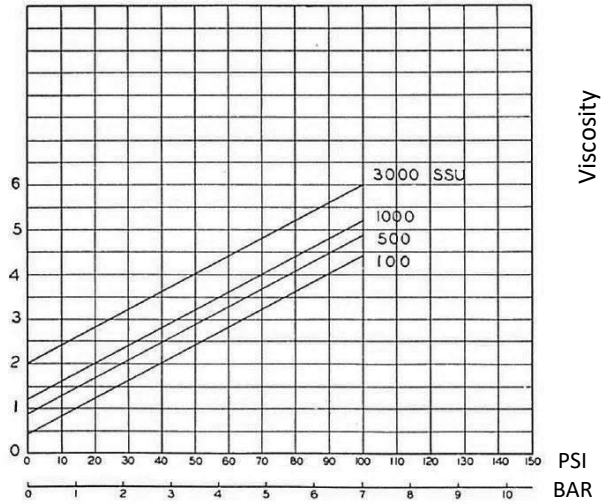
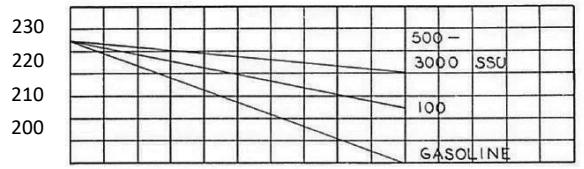
2" pump performance curves

650 (rpm)



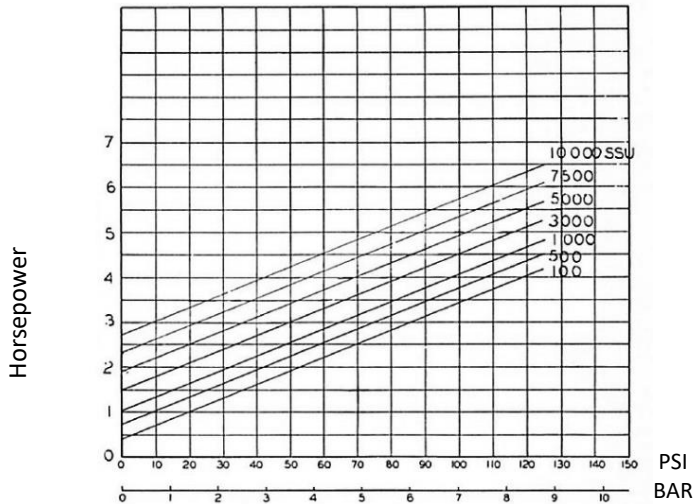
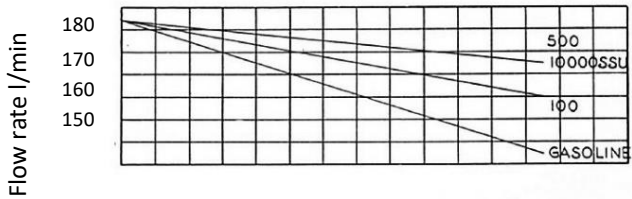
Differential pressure

520 (rpm)



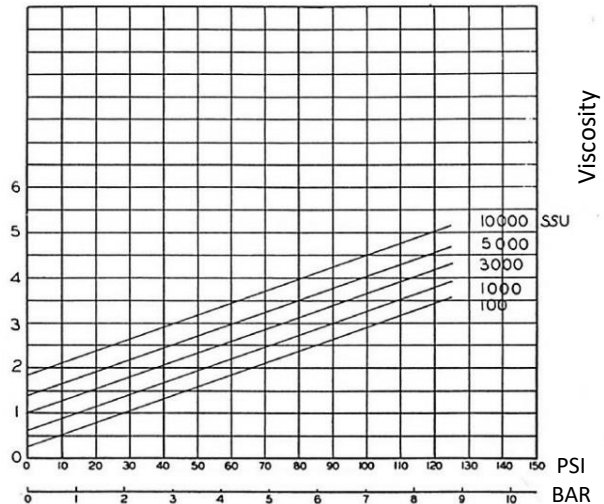
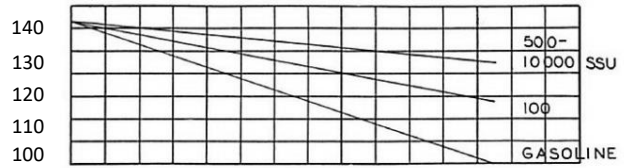
Differential pressure

420 (rpm)



Differential pressure

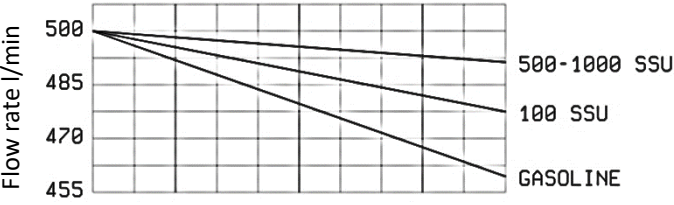
330 (rpm)



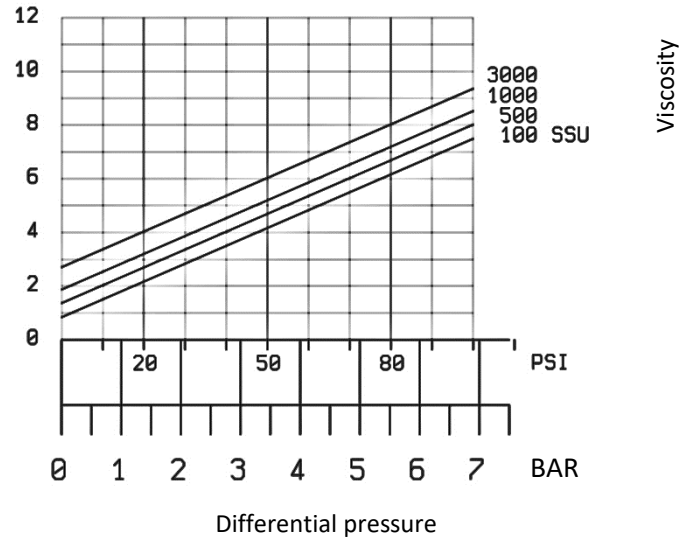
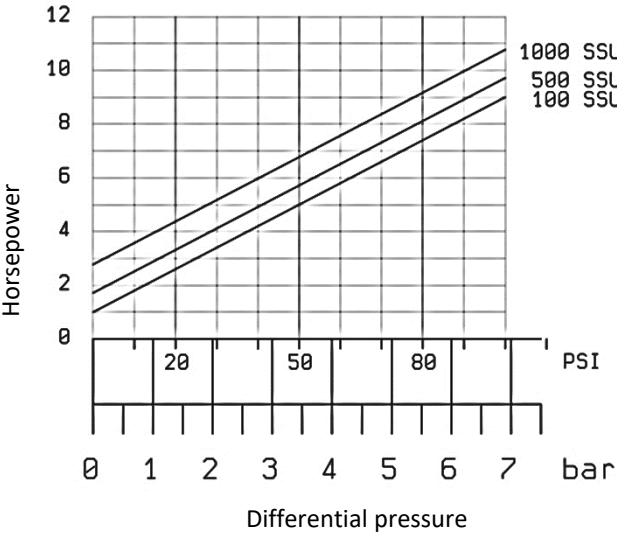
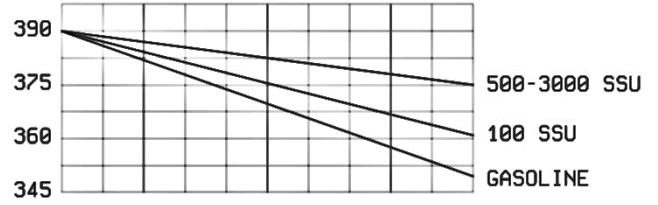
Differential pressure

2 1/2" pump performance curves

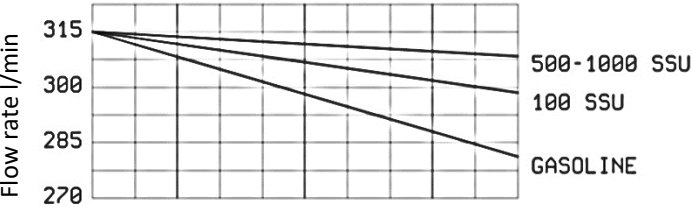
650 (rpm)



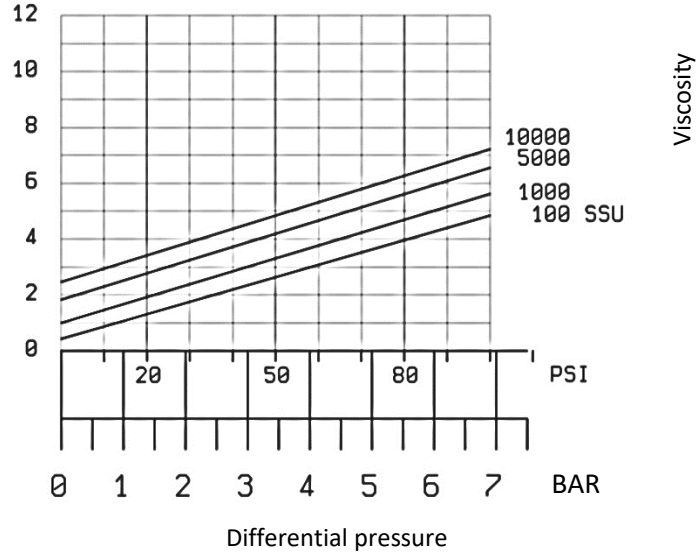
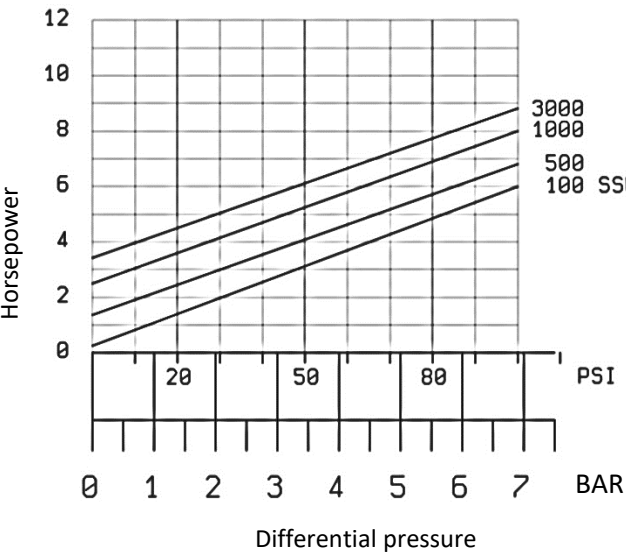
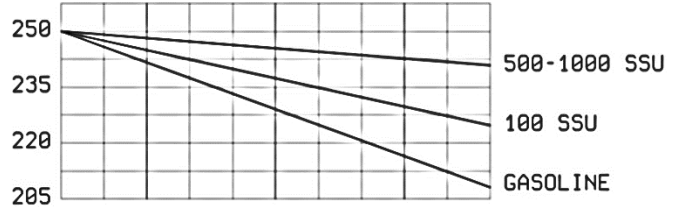
520 (rpm)



420 (rpm)

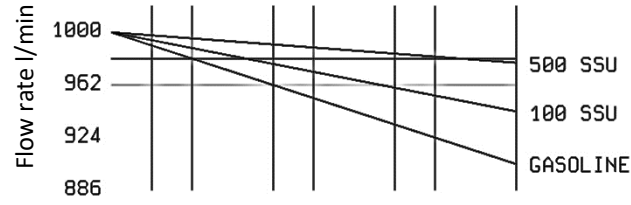


330 (rpm)

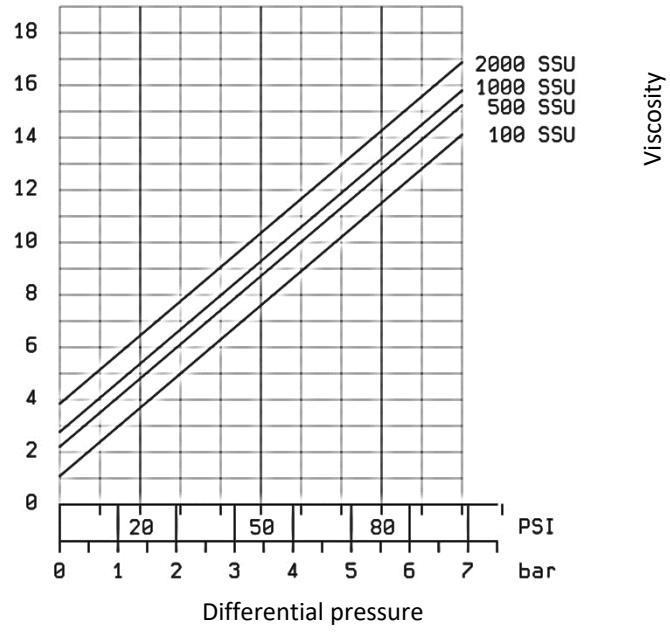
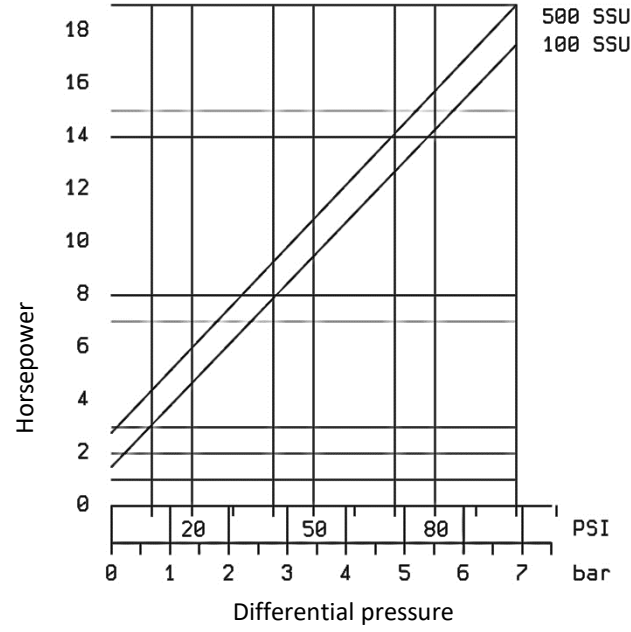
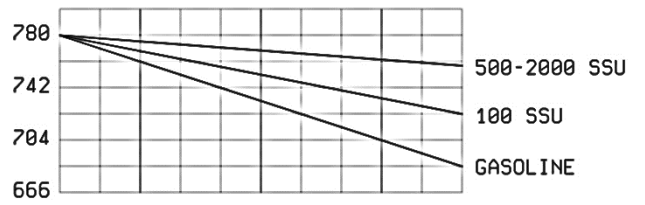


3" pump performance curves

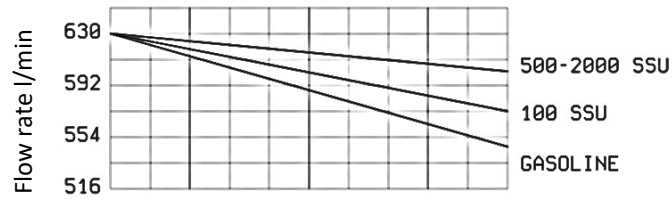
650 (rpm)



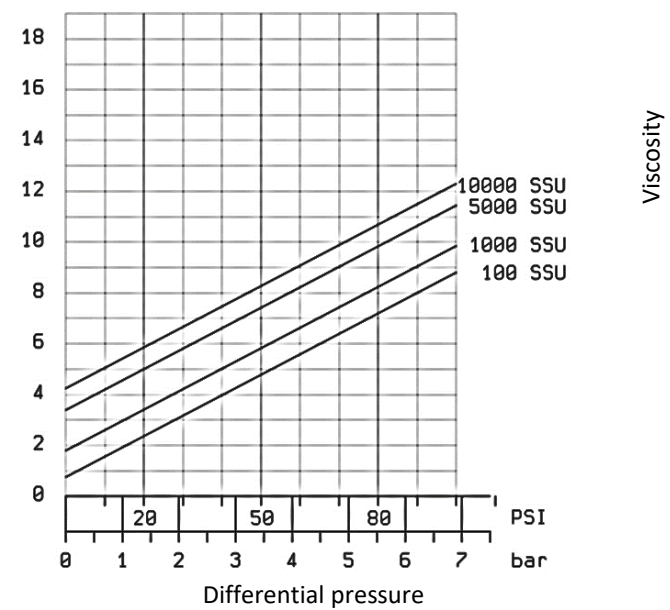
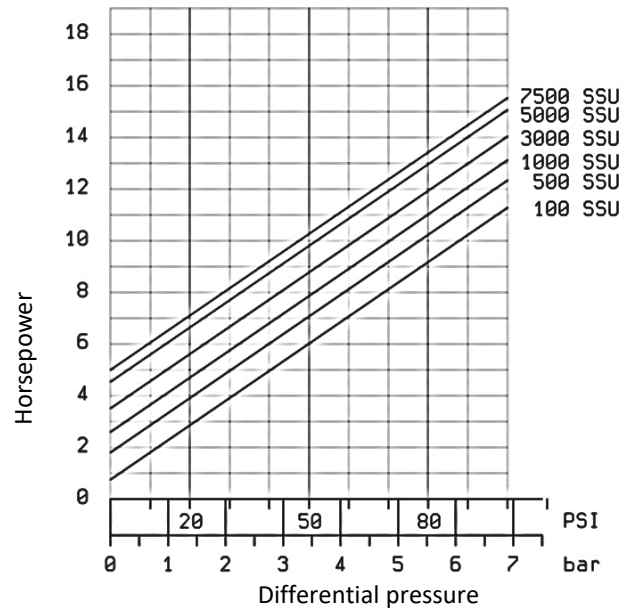
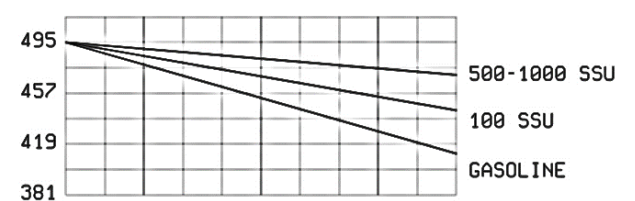
520 (rpm)



420 (rpm)



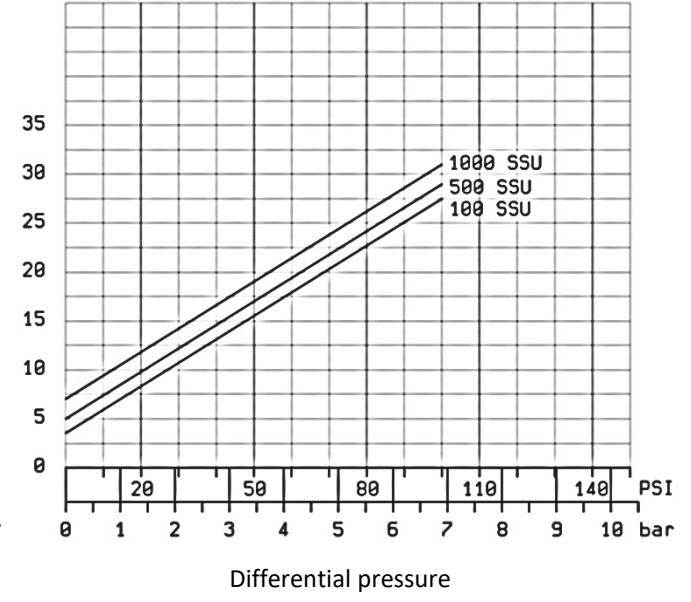
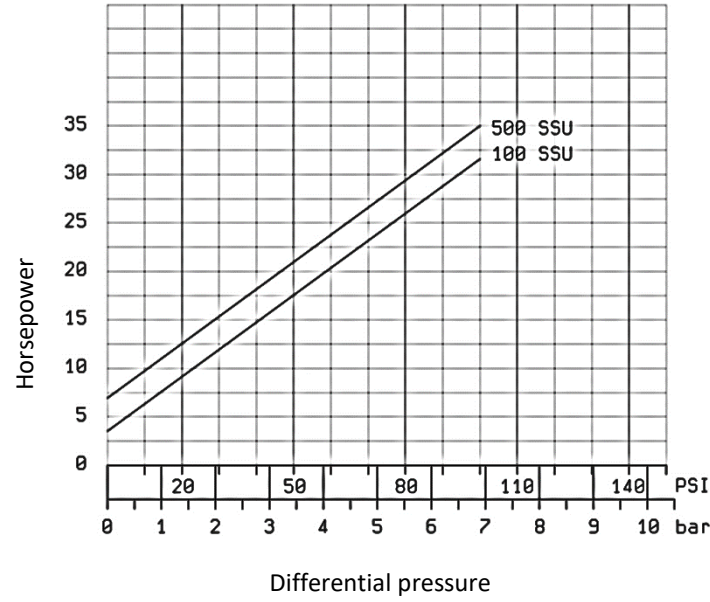
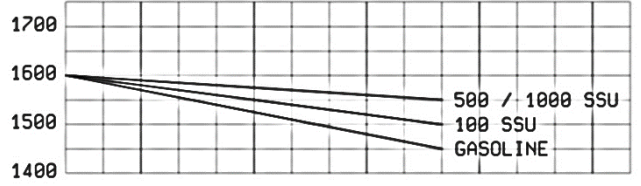
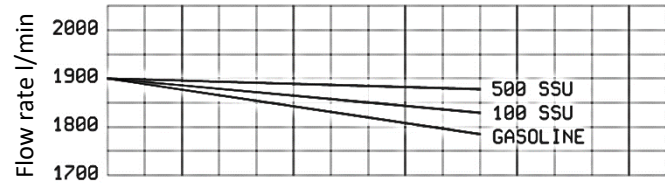
330 (rpm)



4" pump performance curves

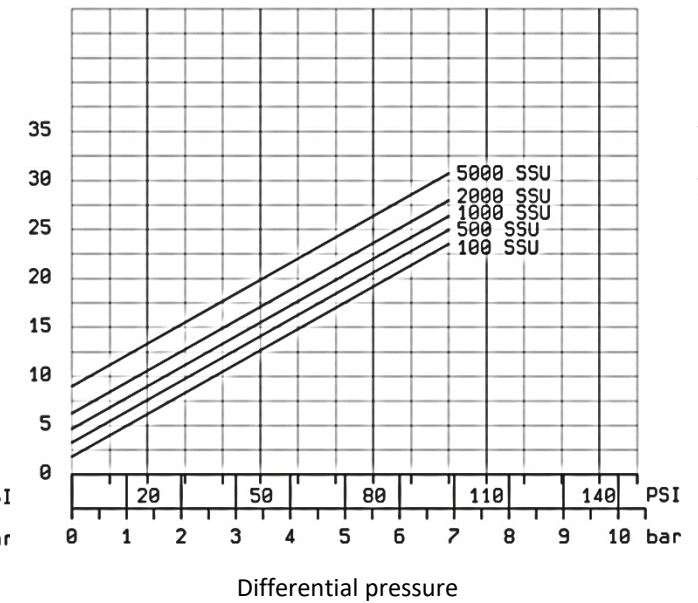
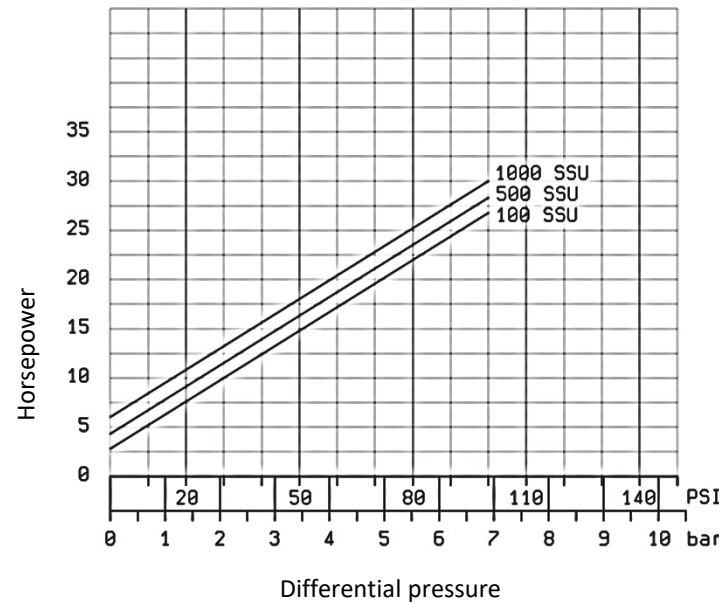
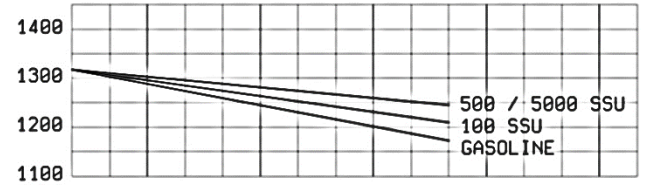
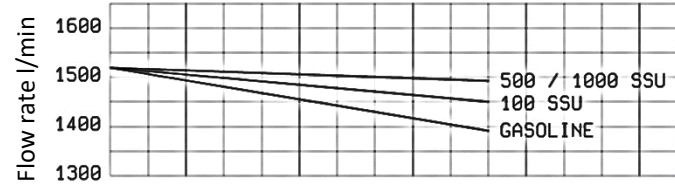
500 (rpm)

420 (rpm)



400 (rpm)

350 (rpm)

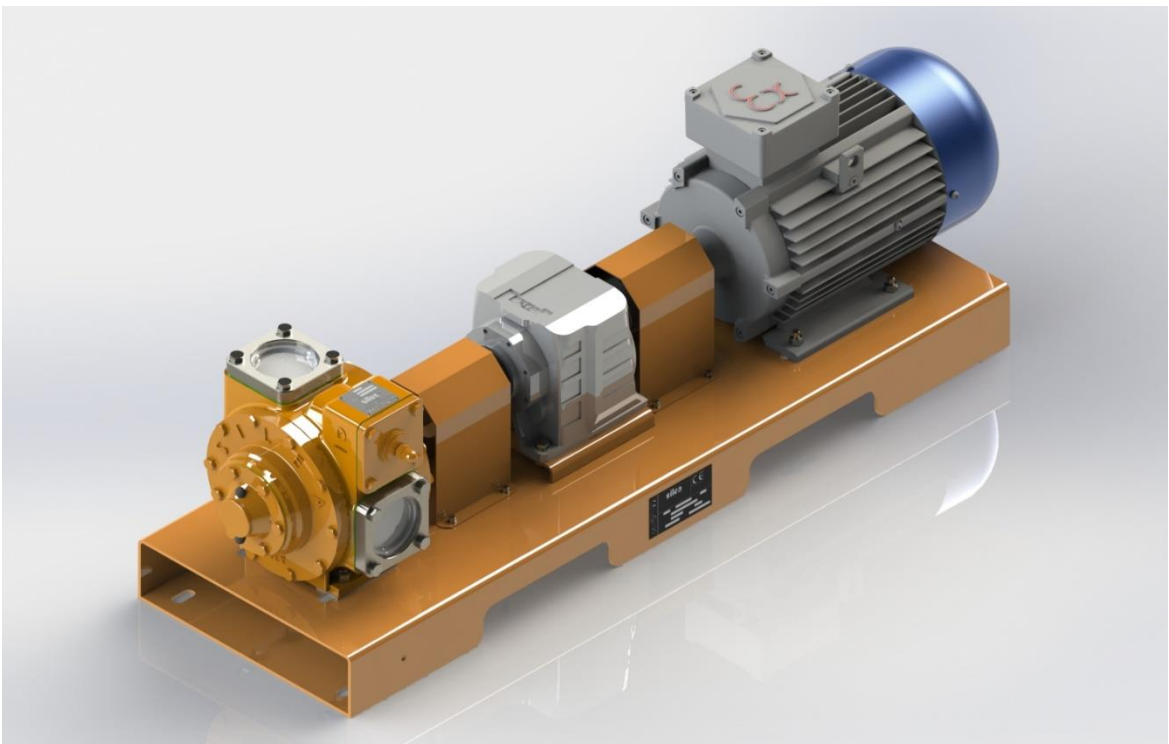


Viscosity

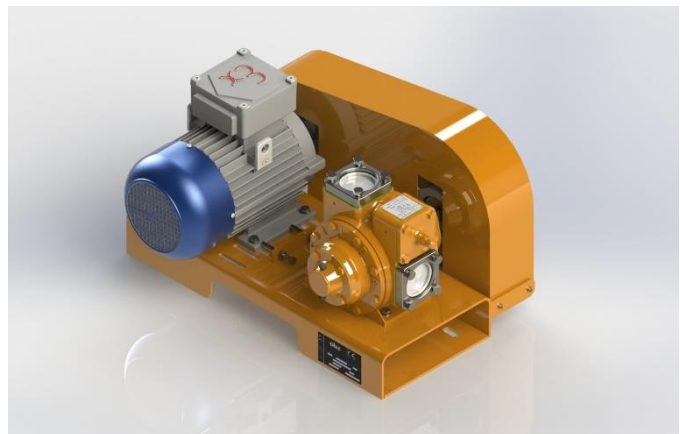
Viscosity



Pump 1052 E reduction gear application with motor.



Pump 1052 E belts pulleys application with motor.





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