

V* SINGLE VANE PUMP ORDERING CODE

DATA SHEET

F3	VS	25	21	D	1	A	00
1	2	3	4	5	6	7	8

1 - "F3" means special seals for fire-resistant fluids. Omit if not required.

2 - Pump Type:

VC = 12 vane pump (only VC10 and VC20), mobile and industrial use.

VK = 10 vane pump (only VK20), industrial use, UNC threads.

VS = 12 vane pump (VS25, VS35, VS45), industrial use (very quiet), UNC threads.

VQ = 10 vane pump and bronze plates (VQ20, VQ25, VQ35, VQ45), mobile use, UNC threads.

3 - Pump model: VC10, VC20; VK20, VQ20; VS25, VQ25; VS35, VQ35; VS45, VQ45.

4 - Flow: VC, VS and VQ in US Gallons per minute at 1200 rpm and 7 Bar.

5 - D = Right-hand rotation (Clockwise).
Y = Left-hand rotation (Counterclockwise).
 (Viewed from shaft end).

6 - Shaft type: See on each pump model.

7 - Outlet position, (viewed from shaft end):

A: Outlet in line with inlet.

B: 90° on the right from inlet (Clockwise from inlet).

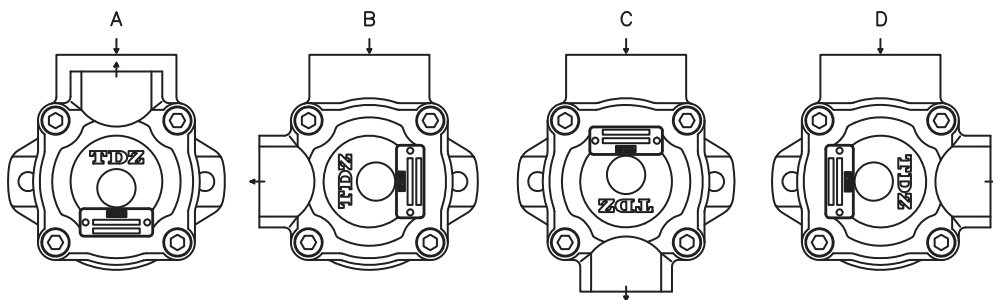
C: 180° from inlet.

D: 90° on the left from inlet (90° counterclockwise from inlet).

8- Special characteristic (Only for VC10 / VC20 pumps)

Omit if not required

- Example: 02 : BSP
 03 : UNF
 04 : NPT



SINGLE VANE PUMP CHARACTERISTICS

VICKERS DESIGN VANE PUMPS

TYPE	FLOW			SPEED (rpm)		PRESSURE (Bar)		Nominal Power (2)	CONNECTION		WEIGHT (Kgs.)
	Ltrs.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	Máx.	Contin.	Intermit		Inlet	Outlet	
VC10	3	1	0,8	600	4800	155	180	0,7	(3)	(3)	4,5
	6	2	0,9		4500			1,4			
	9	3	1,2		4000			2,1			
	13	4	1,6		3400			2,7			
	16	5	1,7		3200			3,2			
	19	6	1,8		3000			3,7			
	22	7	1,9		2800			4,2			
VC20	19	6	2,8	600	3400	155	180	3,9	(3)	(3)	7,3
	22	7	4,2		3000			4,4			
	26	8	4,5		2800			5,1			
	29	9	4,8		2800			5,6			
	36	11	4,8		2500			6,5			
	39	12	5,4		2400			7,5			
	42	13	6,0		2400			8,1			
VK20 VQ20	8	2	0,9	600	2600	175	210	1,9	Ø1½"	Ø3/4"	12
	18	5	2,1					4			
	27	8	2,8					6,6			
	29	9	3,5					6,9			
	36	11	4,3					7,3			
	39	12	4,3					7,4			
	46	14	5,3					7,6			
VS25 VQ25	32	10	5,1	600	2500 1800 (VS)	175	210	8,6	Ø1½"	Ø1"	15
	40	12	5,7					10,4			
	45	14	5,7					11,6			
	55	17	5,8					13,8			
	60	19	5,8					14,6			
	67	21	6					16,8			
	80	25	6,2					20,3			
VS35 VQ35	66	21	8,6	600	2400 1800 (VS)	175	210	16,8	Ø2"	Ø1¼"	23
	81	25	9					20,3			
	97	30	10					24,3			
	112	35	11,4					27,4			
	121	38	11,4					29,3			
	142	45	13,1					33,3			
	VS45 VQ45	138	42					15			
148		45	15,7	36,3							
162		50	14,3	37,9							
180		57	17,9	43,2							
193		60	18,6	46,1							
214		67	22	51,2							
240		75	26	57,4							

***27 gallons (88 lts.) cartridge not mounted in VQ25 vane pump model.**

(1) Delivery flow reduction in Ltrs./min. at 100 Bar. 22 cST of oil viscosity at operating temperature. To calculate the approximate delivery flow at a given pressure and speed, use the following formula with flow reduction and theoretical flow values shown in the chart. Flow reduction values are independent of shaft speed.

$$\text{Approx. output flow (Ltrs./min.)} = \text{Theoretical flow} \times \frac{\text{R.P.M}}{1000} - \text{Reduction} \times \frac{\text{Pressure (Bar)}}{1000}$$

(2) Nominal Power in H.P. at 100 Bar and 1000 RPM (to convert into Kw multiply by 0.735). To obtain the real input power at different pressure and revolutions, use the formula as follows:

$$\text{Real input power} = \text{Input power} \times \frac{\text{R.P.M}}{1000} \times \frac{\text{Pressure (Bar)}}{1000}$$

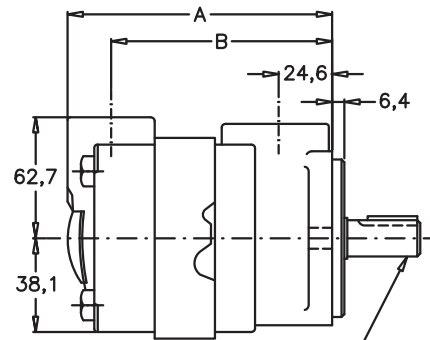
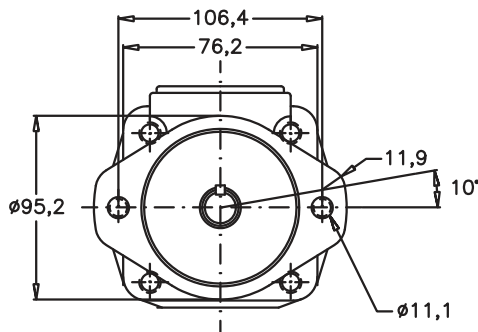
(3) See options on dimension pages.

SINGLE VANE PUMP TYPE VC-10

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

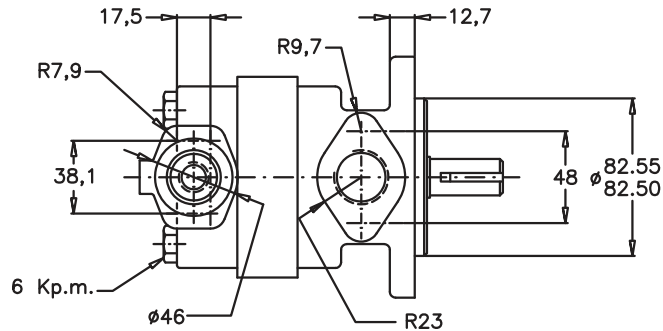
FLOW			SPEED (rpm)		PRESSURE (Ba r)		Nominal Power (2)	CONNECTION		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Mín.	Máx.	Contin.	Intermit.		Inlet	Outlet	
3	1	0,8	600	4800	155	180	0,7	1" NPT	1/2" NPT	4,5
6	2	0,9		4500						
9	3	1,2		4000						
13	4	1,6		3400						
16	5	1,7		3200						
19	6	1,8		3000						
22	7	1,9		2800	140	4,2	1" BSP	1/2" BSP		

(1) & (2) see page 27.



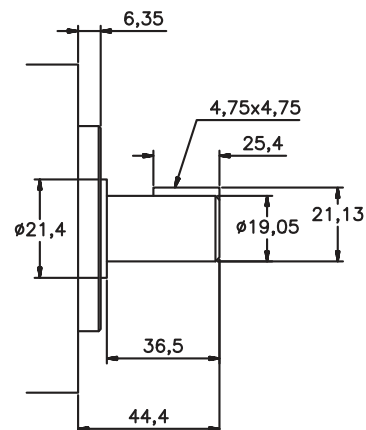
See shaft types and measures

Gallons	Dimension	
	A	B
1, 2, 3	115,6	91,9
4, 5	121,9	98,3
6, 7	127	103,4



Num.	Inlet	Outlet
02	1" BSP	1/2" BSP
03	1"5/16-12 UNF	3/4"-16 UNF
04	1" NPT	1/2" NPT

N°1 Shaft



Contact TDZ or your nearest distributor for other shaft types

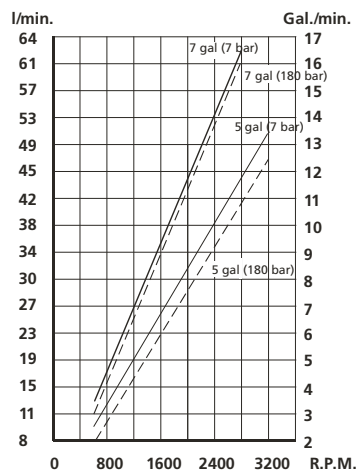
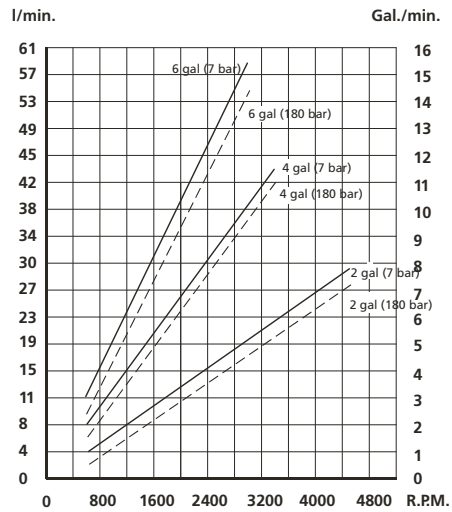
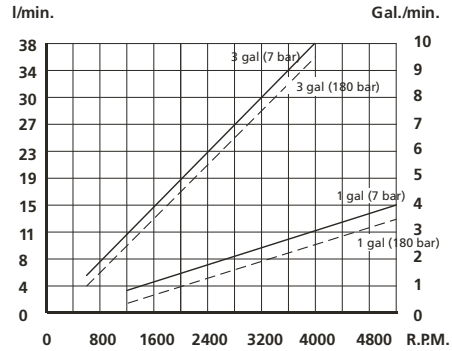
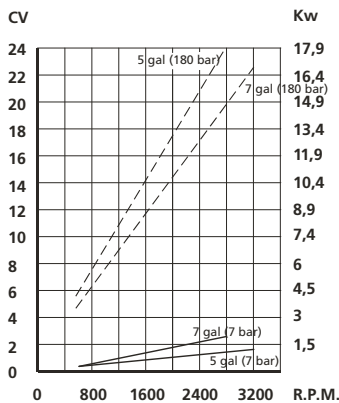
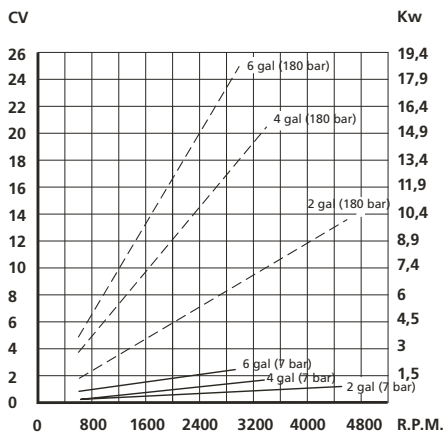
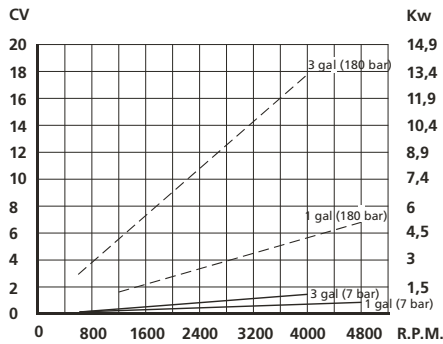
SINGLE VANE PUMP TYPE VC-10



FLOW AND INPUT POWER DIAGRAMS

Max. pressure (180 bar)

Pressure (7 bar)

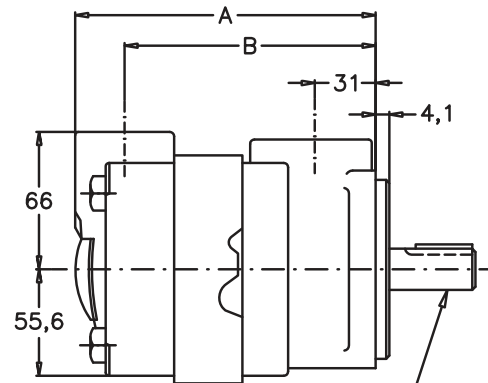
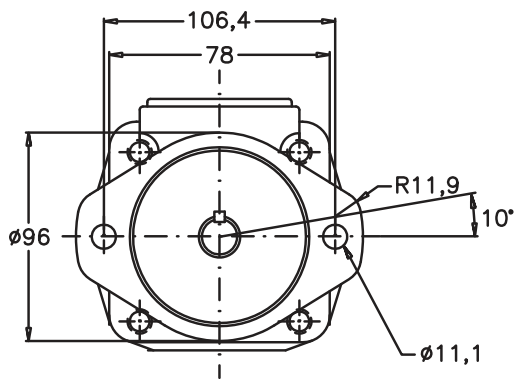


SINGLE VANE PUMP TYPE VC-20

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

FLOW			SPEED (rpm)		PRES (BAR)		Nominal Power (2)	CONNECTIO N		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	Max.	Contin.	Intermit		Inlet	Outlet	
19	6	2,8	600	3400	155	180	3,9	1 1/4" NPT 1 1/4" BSP	3/4" NPT 3/4" BSP	7,3
22	7	4,2		3000			4,4			
26	8	4,5		2800			5,1			
29	9	4,8		2800	5,6					
36	11	4,8		2500	6,5					
39	12	5,4		2400	7,5					
42	13	6,0	2400	8,1	140	8,1				

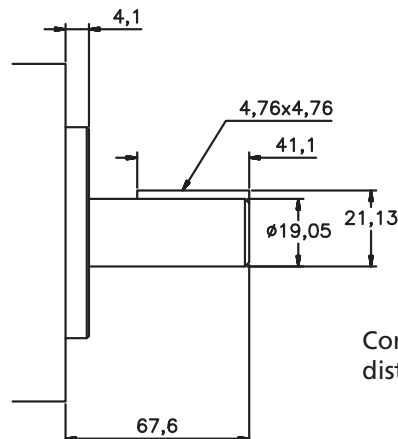
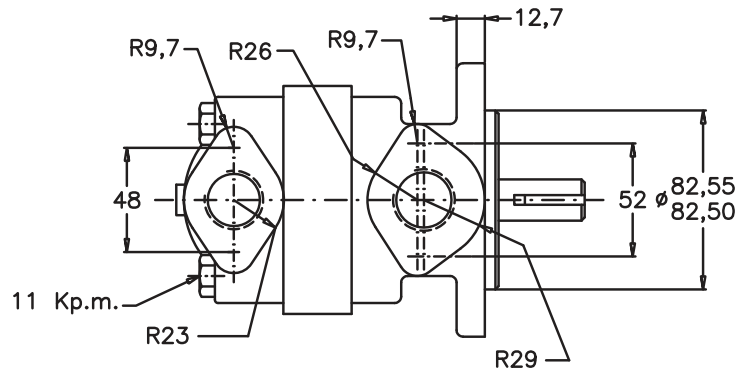
(2) & (3) see page 27.



See shaft types and measures

Galon	Dimension	
	A	B
6	125,2	102,1
7, 8, 9	131,6	108,4
11	136,7	113,5
12, 13	140,2	117,1

Num.	Inlet	Outlet
02	1" 1/4 BSP	3/4" BSP
03	1" 5/8-12 UNF	1" 1/16 UNF
04	1" 1/4 NPT	3/4" NPT



N°1 Shaft

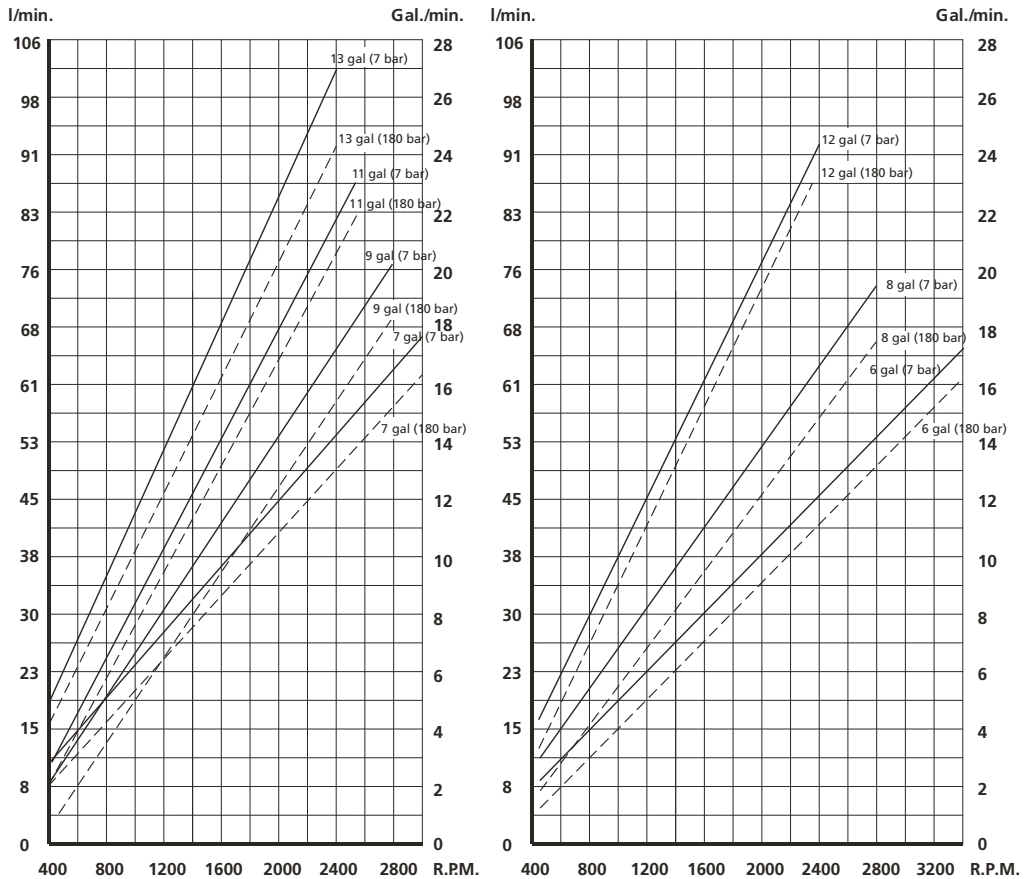
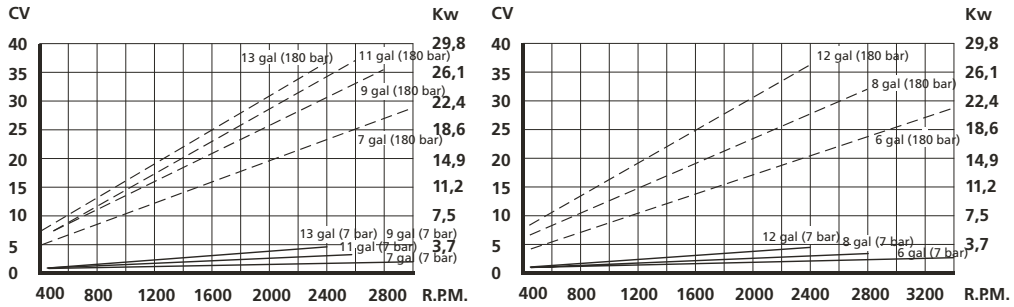
Contact TDZ or your nearest distributor for other shaft types

SINGLE VANE PUMP TYPE VC-20



FLOW AND INPUT POWER DIAGRAMS

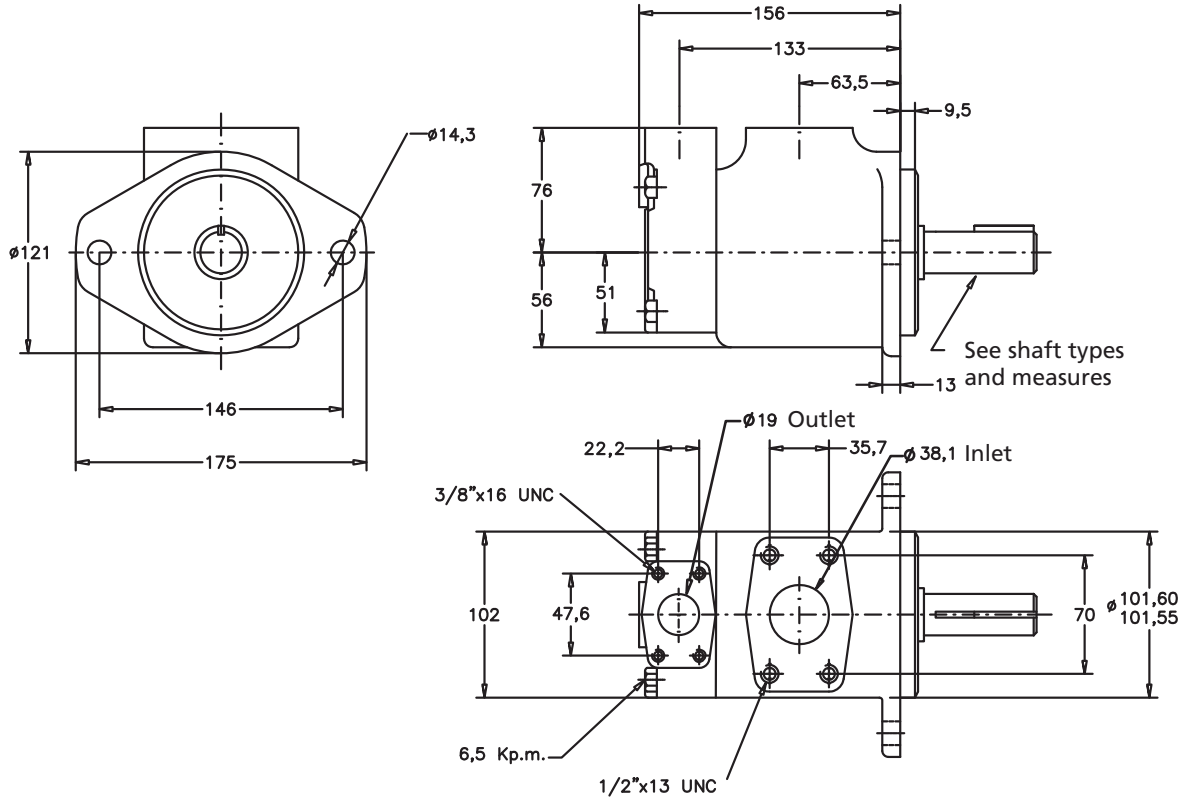
----- Max. pressure (180 bar) _____ Min. Pressure (7 bar)



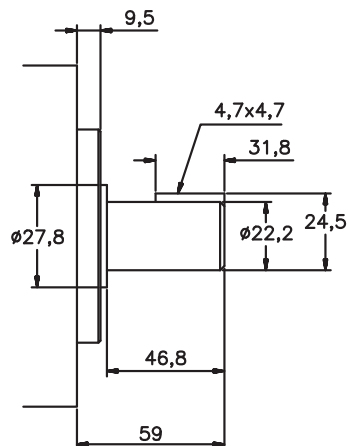
SINGLE VANE PUMP TYPE VK-20 Y VQ-20

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

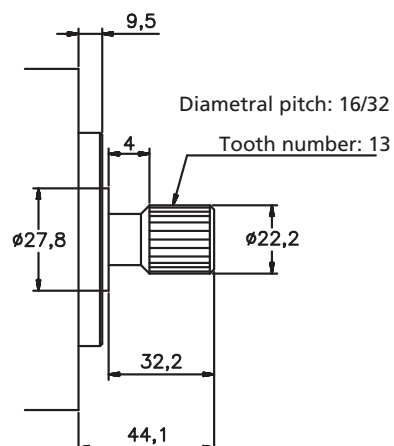
	FLOW							SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT (Kgs.)
	Lts.at 1000 rpm	8	18	27	29	36	39	46	Min.	Max.	Contin.	Intermit.	Inlet	
Gal.at 1200 rpm	2	5	8	9	11	12	14	600	2500	175	210	Ø 1 1/2"	Ø 3/4"	12



N°1 Shaft



N°151 Shaft

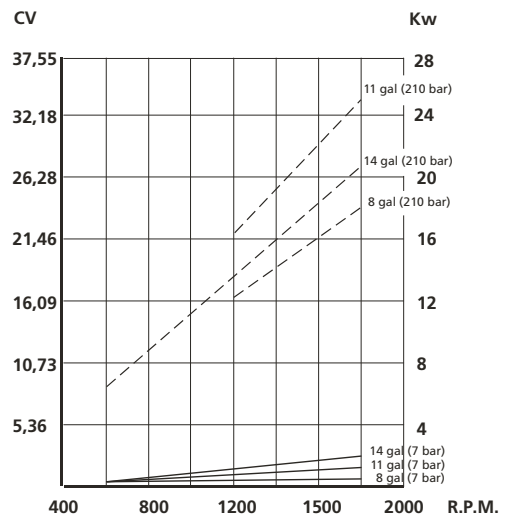
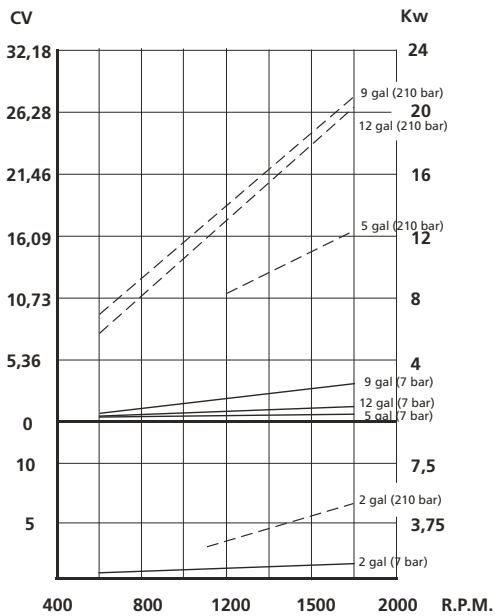
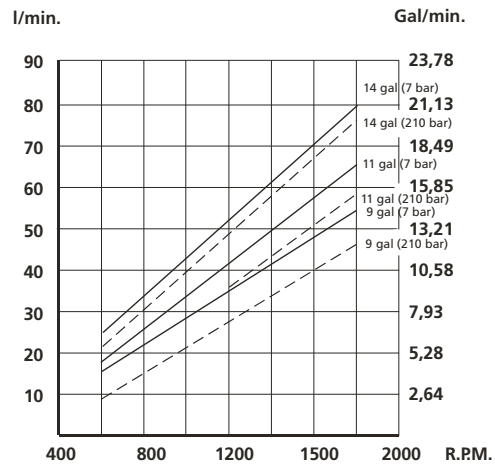
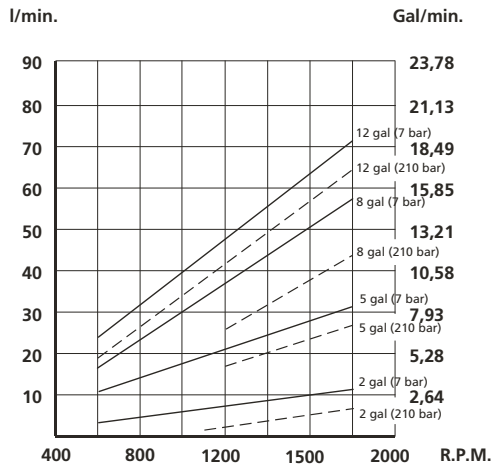


SINGLE VANE PUMP TYPE VK-20 Y VQ-20



FLOW AND INPUT POWER DIAGRAMS

----- Max. pressure (210 bar) _____ Min. Pressure (7 bar)

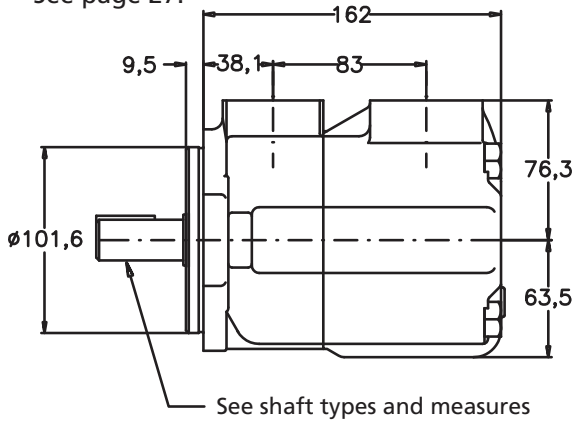


SINGLE VANE PUMP TYPE VS-25 & VQ-25

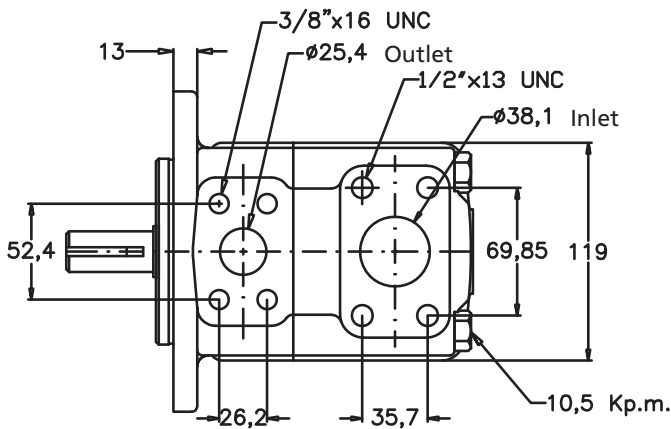
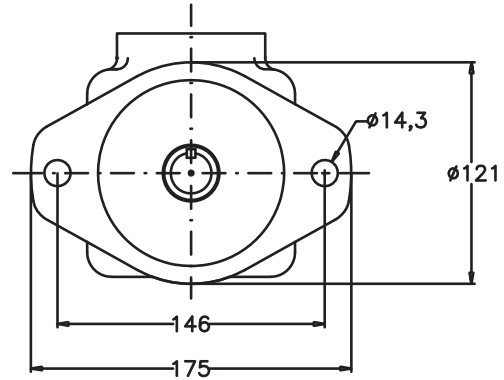
DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

	FLOW							SPEED(rpm)		PRES (BAR)		CONNECTION		WEIGHT (Kgs.)
	Lts.at 1000 rpm	32	40	45	55	60	67	80	Min.	Max.	Contin.	Intermit.	Inlet	
Gal.at 1200 rpm	10	12	14	17	19	21	25	600	2500*	175	210*	Ø1"1/2	Ø1"	15

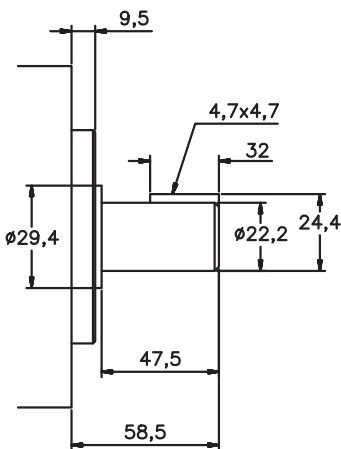
*See page 27.



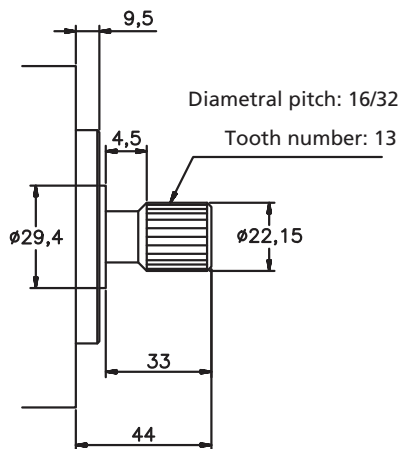
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



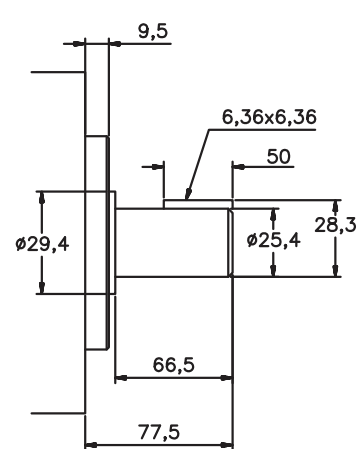
N°1 Shaft



N°11 Shaft



N°86 Shaft

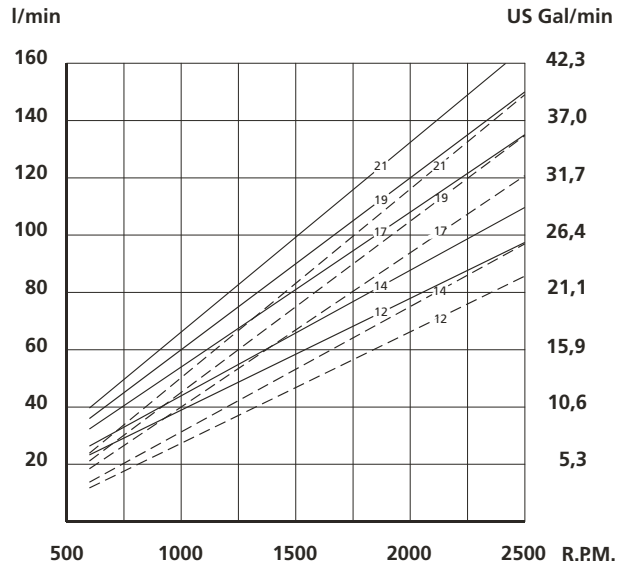


Enquire about other types of shafts

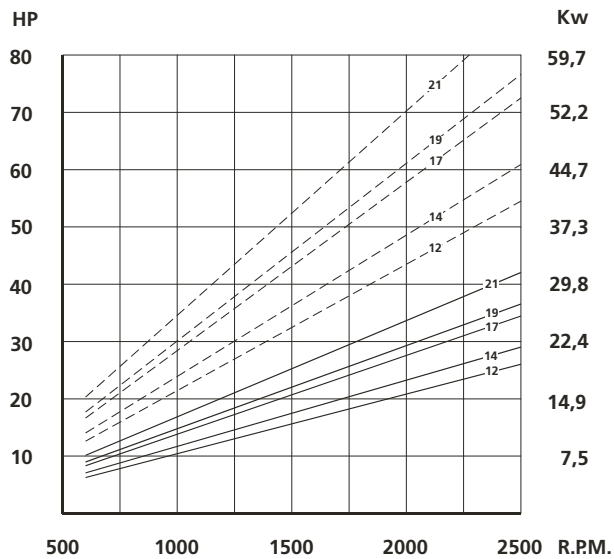
SINGLE VANE PUMP TYPE VS-25 & VQ-25



FLOW AND INPUT POWER DIAGRAMS



— 0 BAR - - - 210 BAR



— 100 BAR - - - 210 BAR

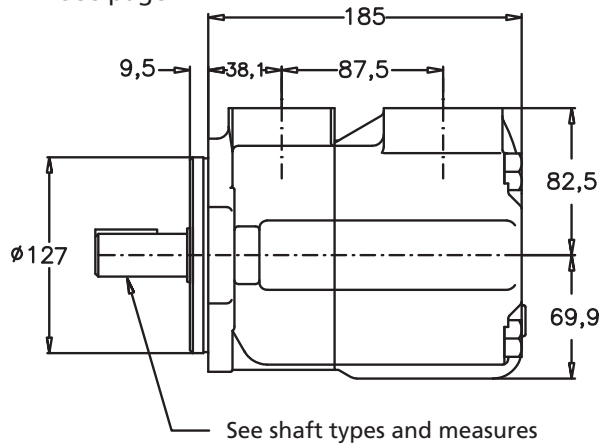
SINGLE VANE PUMP TYPE VS-35 & VQ-35

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

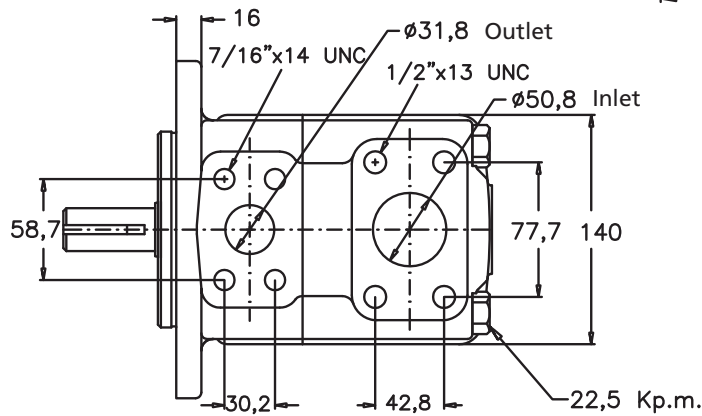
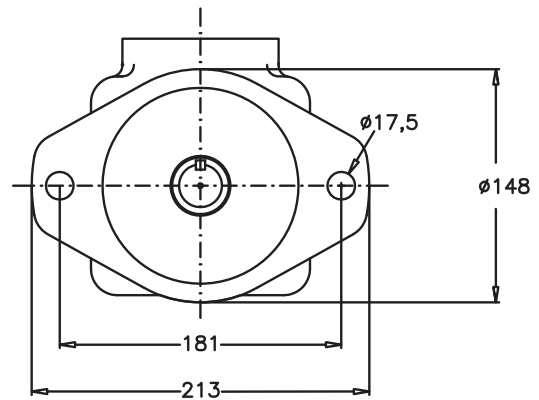
FLOW	SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT (Kgs.)	
	Lts.at 1000 rpm	Gal.at 1200 rpm	Min.	Max.	Contin.	Intermit.		Inlet
66 81 97 112 121 142*	21 25 30 35 38 45*	600	2400*	175	210*	Ø2"	Ø1" 1/4	23

*See page 27.

* For further details see general chart



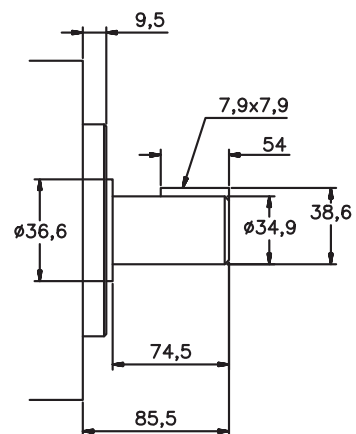
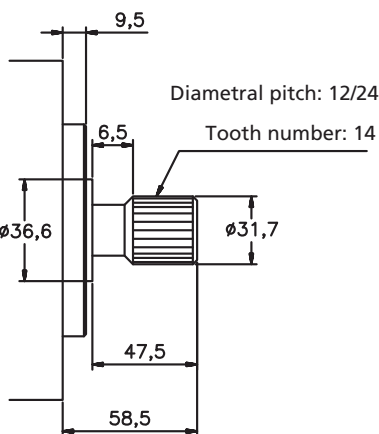
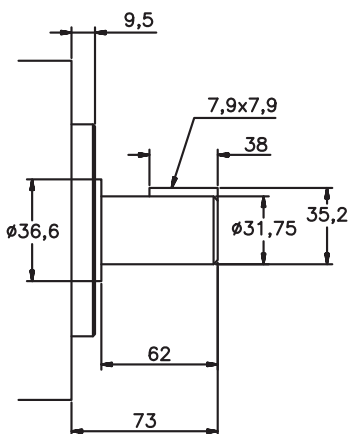
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



N°1 Shaft

N°11 Shaft

N°86 Shaft

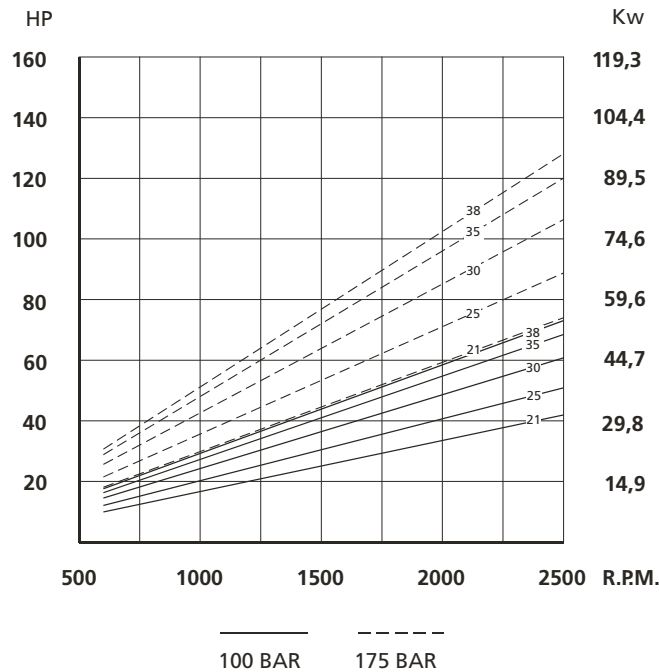
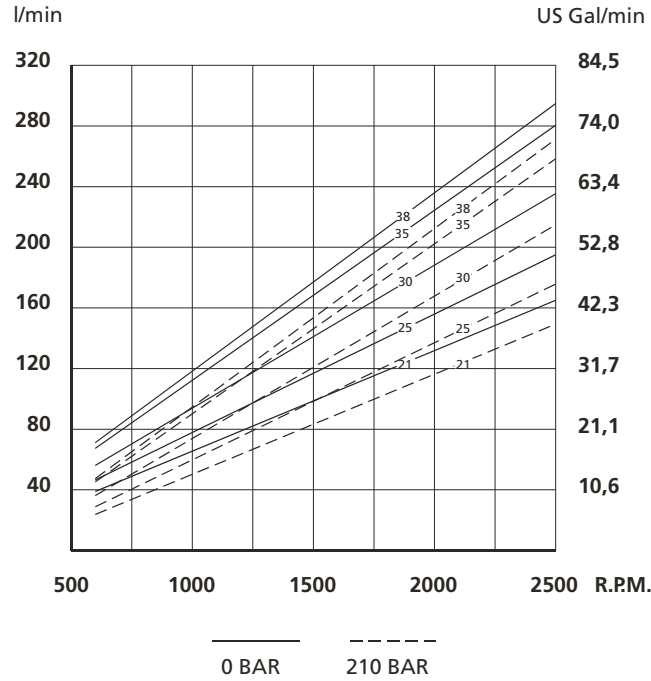


Enquire about other types of shafts

SINGLE VANE PUMP TYPE VS-35 & VQ-35



FLOW AND INPUT POWER DIAGRAMS



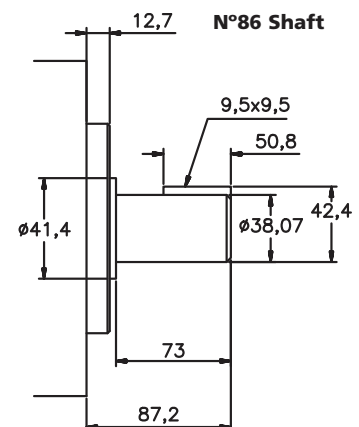
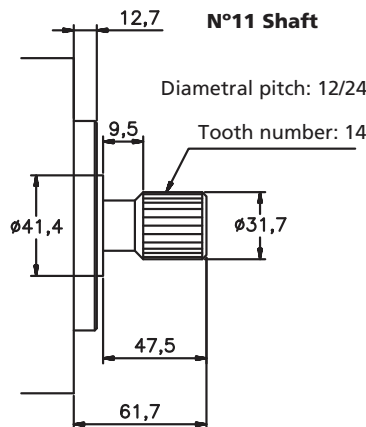
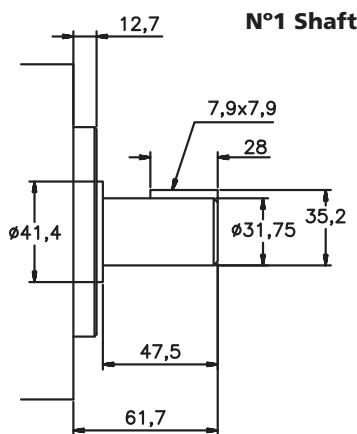
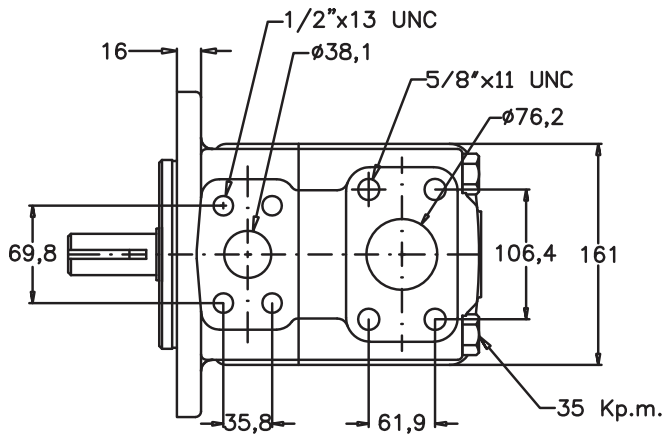
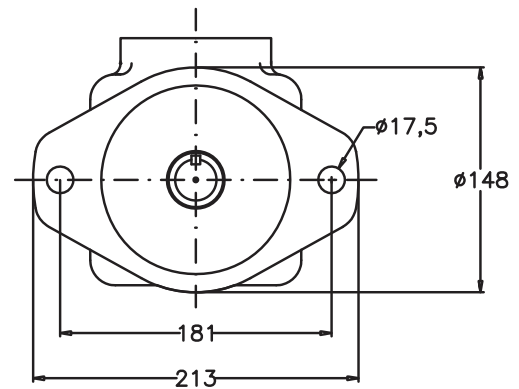
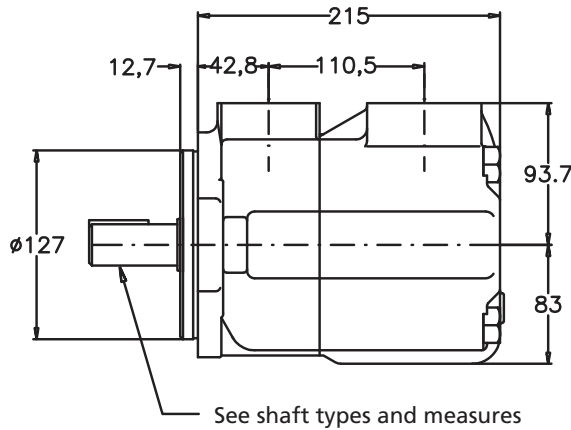
SINGLE VANE PUMP TYPE VS-45 & VQ-45

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

FLOW							SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT (Kgs.)	
Lts.a 1000 rpm	138	148	162	180	193	214	240	Mín.	Máx.	Contin.	Intermit.	Inlet		Outlet
Gal. a 1200 rpm	42	45	50	57	60	67	75	600	2200*	155	175	Ø3"	Ø1" 1/2	35,5

* For further details see general chart

DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



Enquire about other types of shafts

SINGLE VANE PUMP TYPE VS-45 & VQ-45



FLOW AND INPUT POWER DIAGRAMS

