

## V\* SINGLE VANE PUMP ORDERING CODE

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).

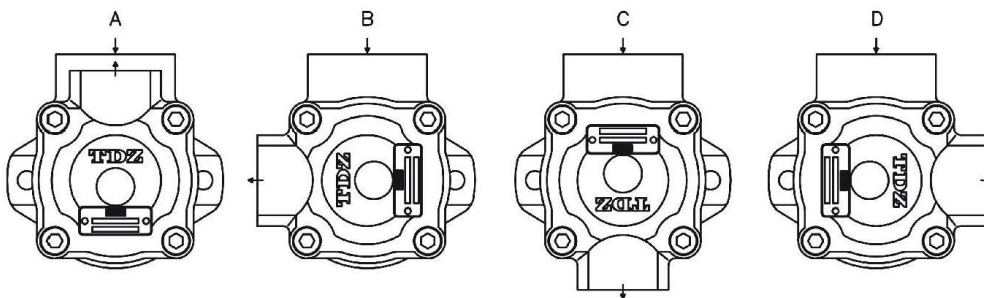
C: 180° from inlet.

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.)
	Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	Máx.	Intermit			Inlet	Outlet	
						Contin.	Intermit				
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	26	8	4,5	600	2500 1800 (VS)	175	210	6,9	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	24	6,2					20,3			
88*	27	6,5	21,1								
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	600	2200 1800 (VS)	155	175	32,3	Ø3"	Ø1½"	35,5
	148	47	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.

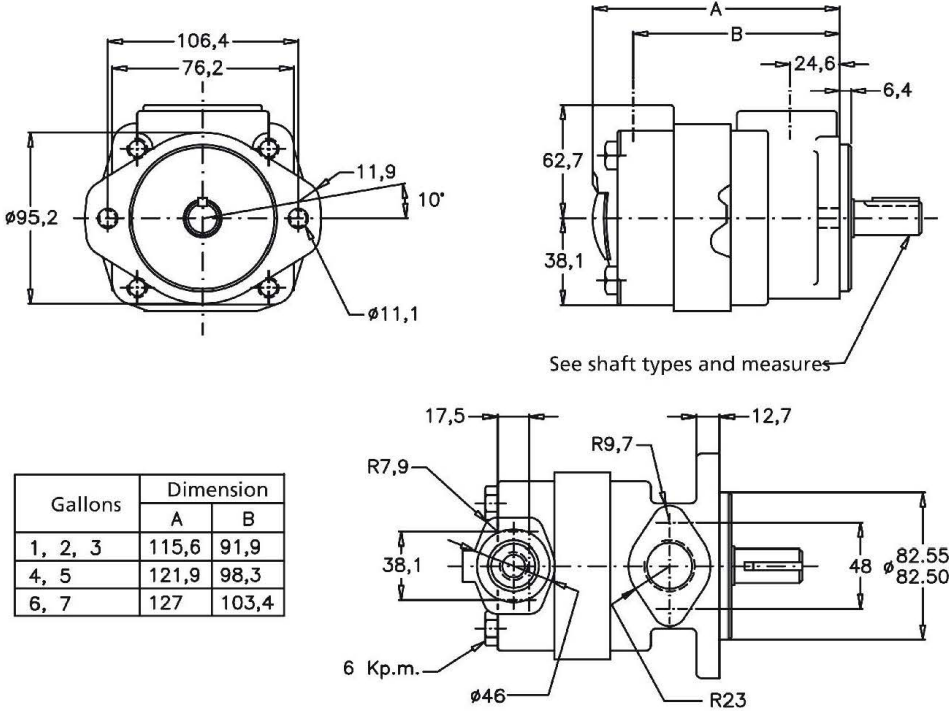
## SINGLE VANE PUMP TYPE VC-10

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

DATA SHEET

FLOW			SPEED (rpm)		PRESSURE (Bar)		Nominal Power (2)	CONNECTION		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	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			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			

(1) & (2) see page 27.



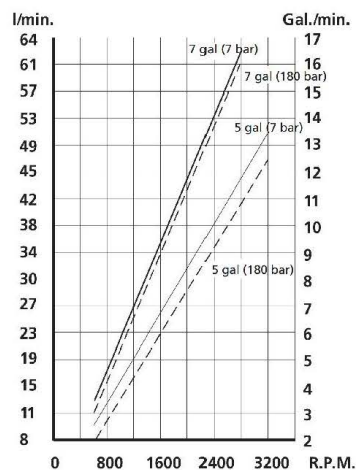
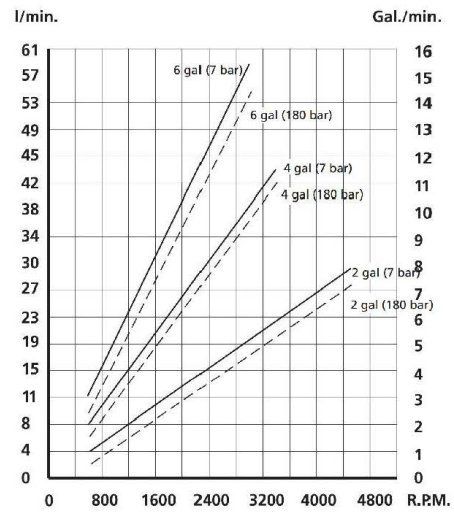
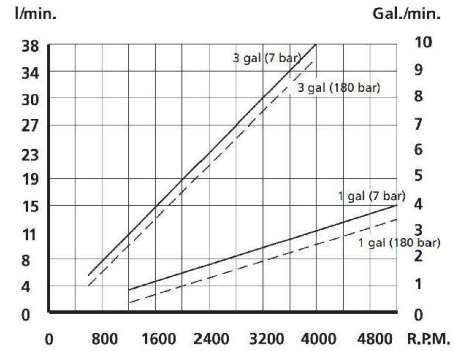
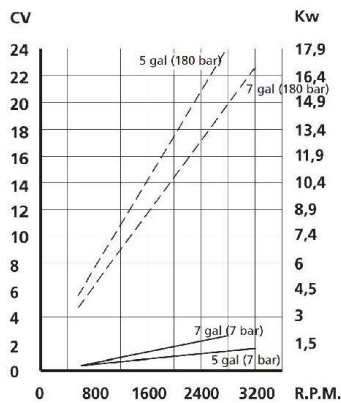
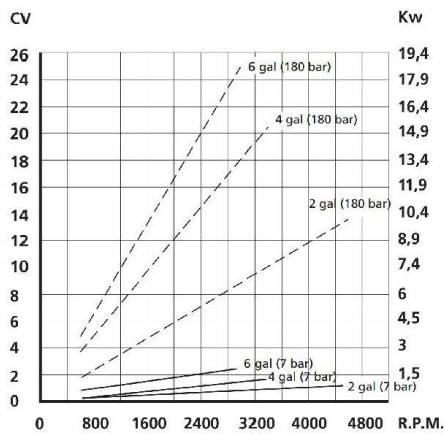
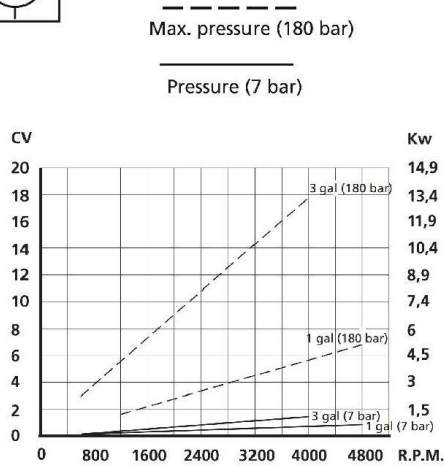
Num.	Inlet	Outlet
02	1" BSP	1/2" BSP
03	1"5/16-12 UNF	3/4"-16 UNF
04	1" NPT	1/2" NPT

Contact TDZ or your nearest distributor for other shaft types

## SINGLE VANE PUMP TYPE VC-10



### FLOW AND INPUT POWER DIAGRAMS



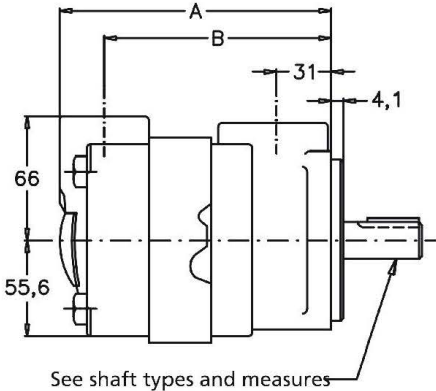
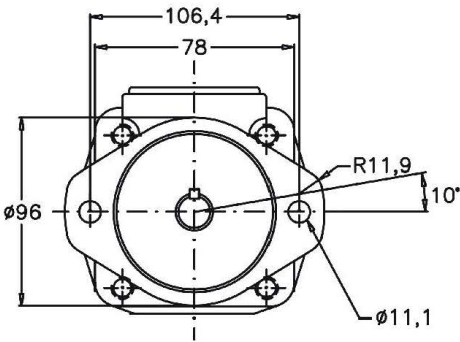
## SINGLE VANE PUMP TYPE VC-20

DATA SHEET

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

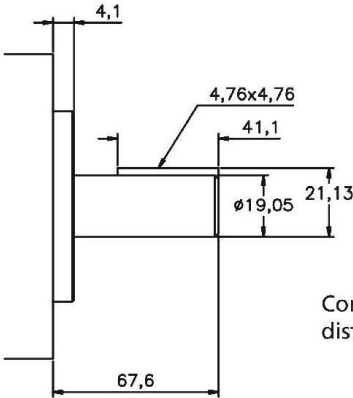
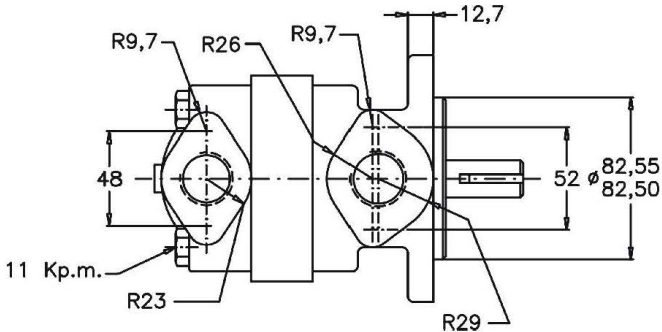
FLOW			SPEED (rpm)		PRES (BAR)		Nominal Power (2)	CONNECTION		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	Max.	Contin.	Intermit		Inlet	Outlet	
19	6	2,8	600	3400	155	180	3,9	1 1/4" NPT	3/4" NPT	7,3
22	7	4,2		3000			4,4			
26	8	4,5		2800			5,1			
29	9	4,8		2800			5,6			
36	11	4,8	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

(2) & (3) see page 27.



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



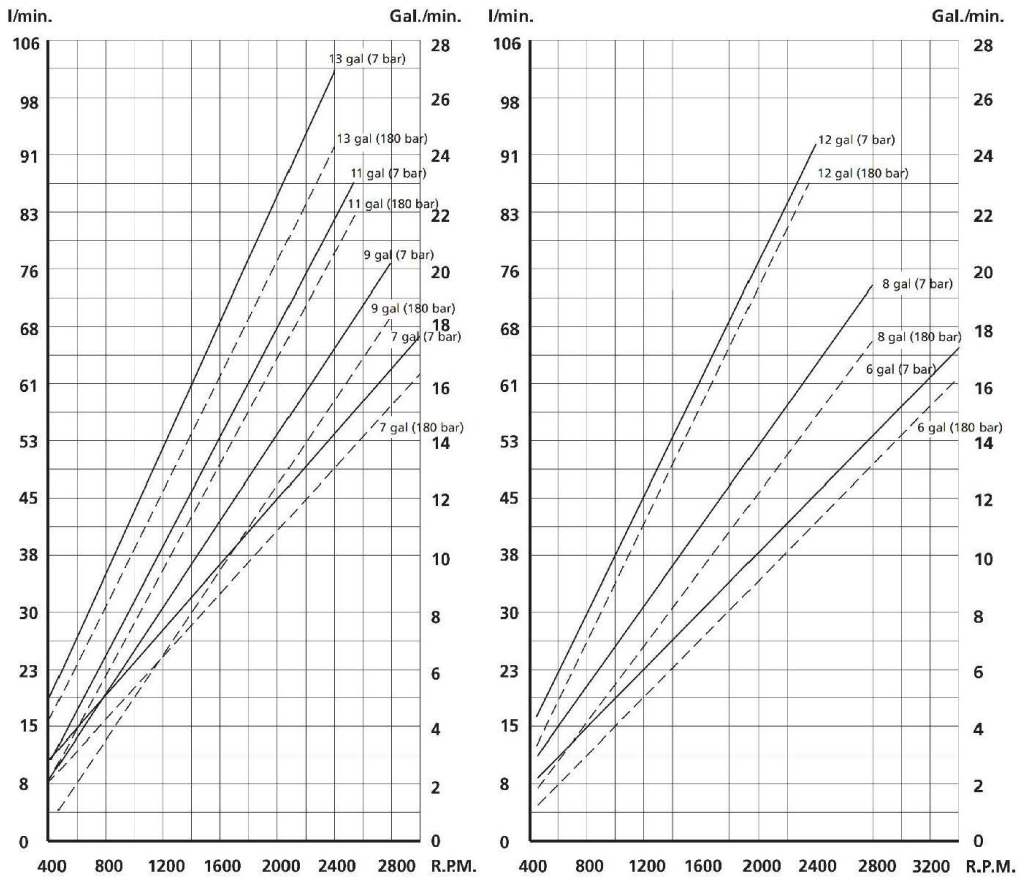
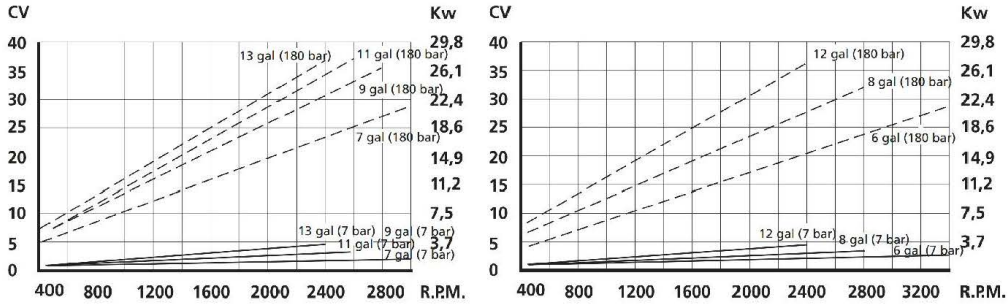
Contact TDZ or your nearest distributor for other shaft types

## SINGLE VANE PUMP TYPE VC-20



### FLOW AND INPUT POWER DIAGRAMS

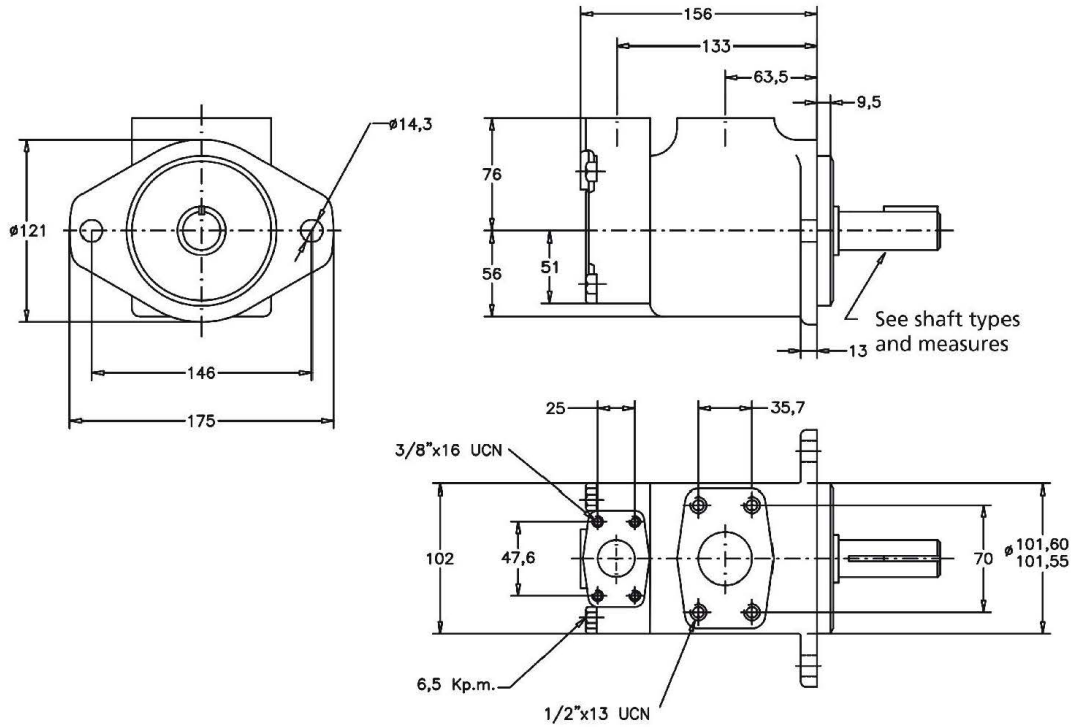
----- Max. pressure (180 bar)      \_\_\_\_\_ Min. Pressure (7 bar)



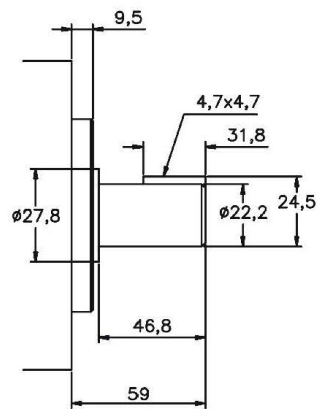
## SINGLE VANE PUMP TYPE VK-20 Y VQ-20

DIMENSIONS IN MILLIMETERS. 1" = 25,4 mm

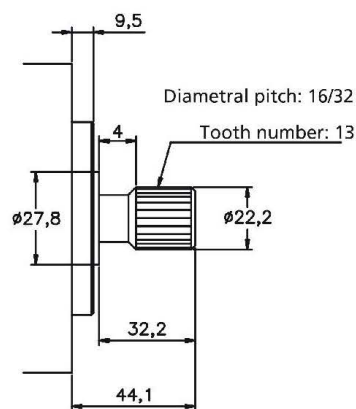
FLOW	SPEED (rpm)						PRES (BAR)		CONNECTION		WEIGHT (Kgs.)			
	Lts.at 1000 rpm	8	18	27	29	36	39	46	Min.	Max.		Contin.	Intermit.	Inlet
Gal.at 1200 rpm	2	5	8	9	11	12	14	600	2500	175	210	Ø 1 1/2"	Ø 3/4"	12



**N°1 Shaft**



**N°151 Shaft**

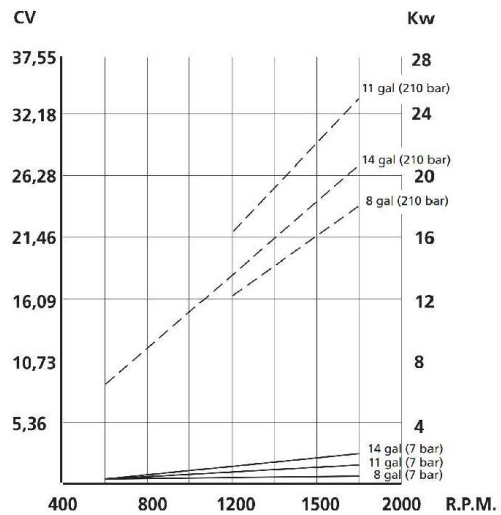
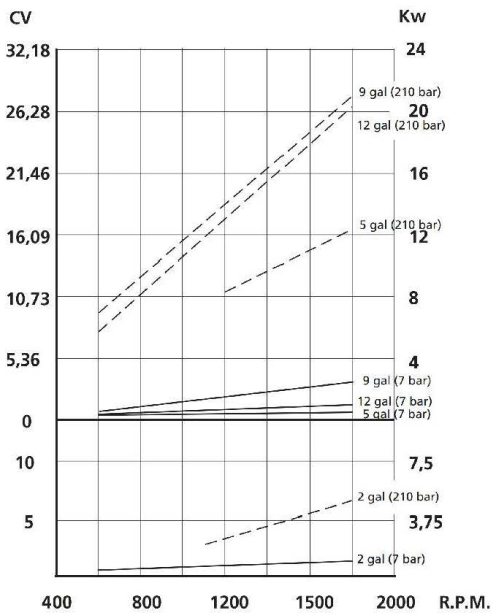
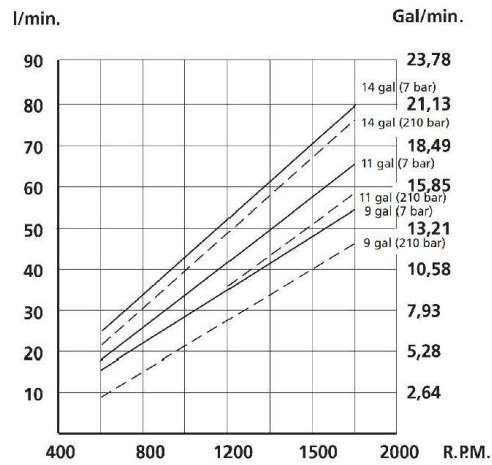
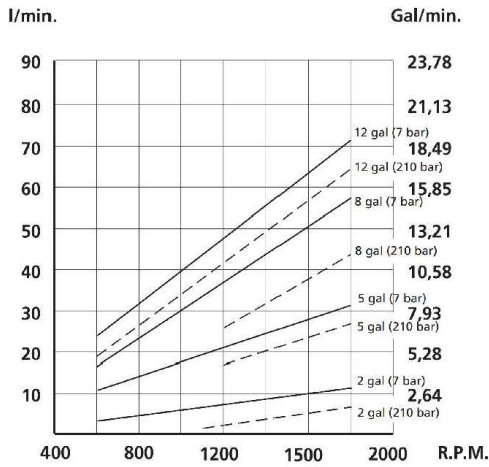


## SINGLE VANE PUMP TYPE VK-20 Y VQ-20



### FLOW AND INPUT POWER DIAGRAMS

----- Max. pressure (210 bar)      \_\_\_\_\_ Min. Pressure (7 bar)

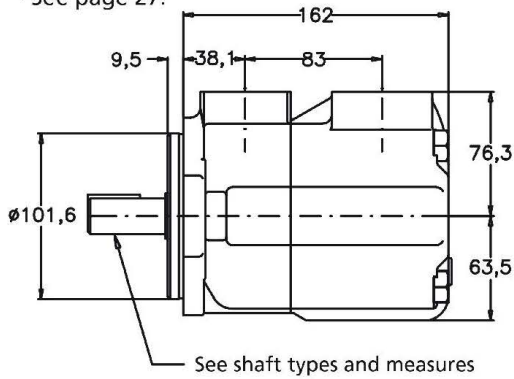




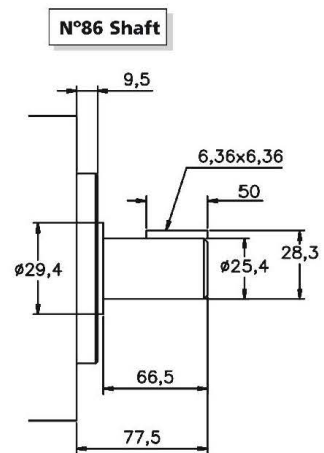
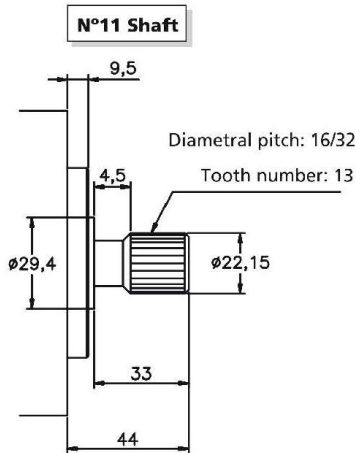
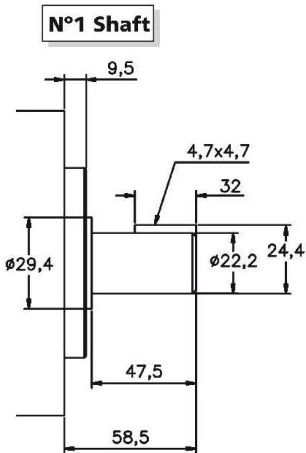
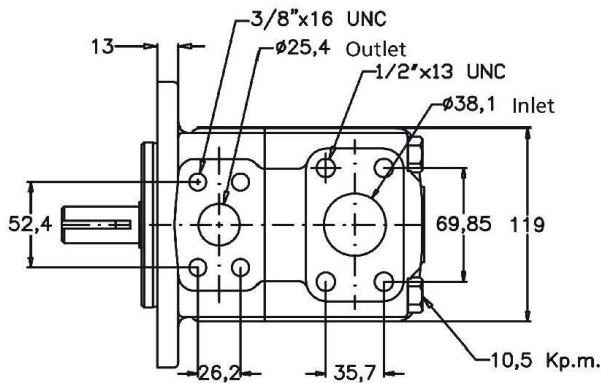
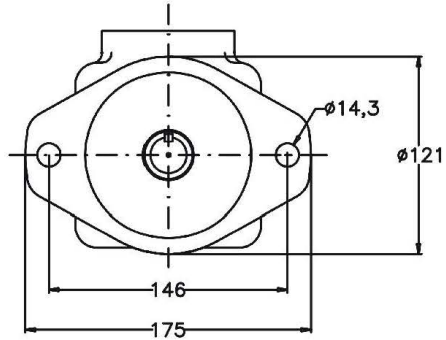
## SINGLE VANE PUMP TYPE VS-25 & VQ-25

FLOW								SPEED(rpm)		PRES (BAR)		CONNECTION		WEIGHT	
Lts.at 1000 rpm	26	40	45	55	60	67	80*	88*	Min.	Max.	Contin.	Intermit.	Inlet	Outlet	(Kgs.)
Gal.at 1200 rpm	8	12	14	17	19	21	24*	27*	600	2500*	175	210*	Ø1"1/2	Ø1"	15

\*See page 27.



DIMENSIONS IN MILLIMETERS 1" = 25.4 mm

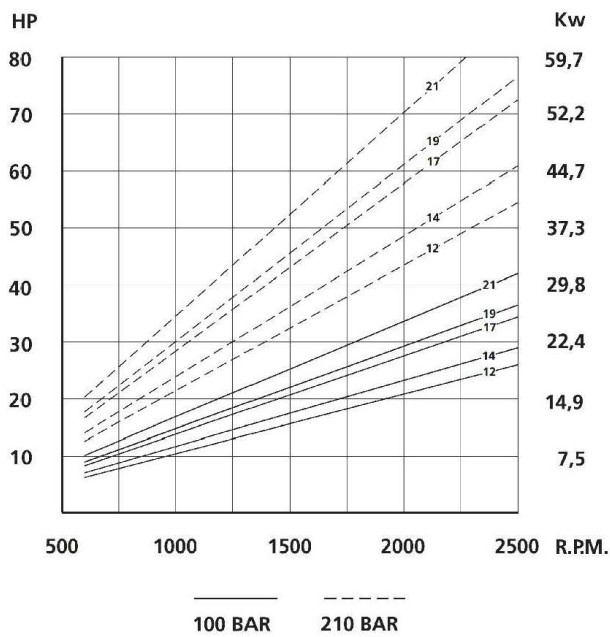
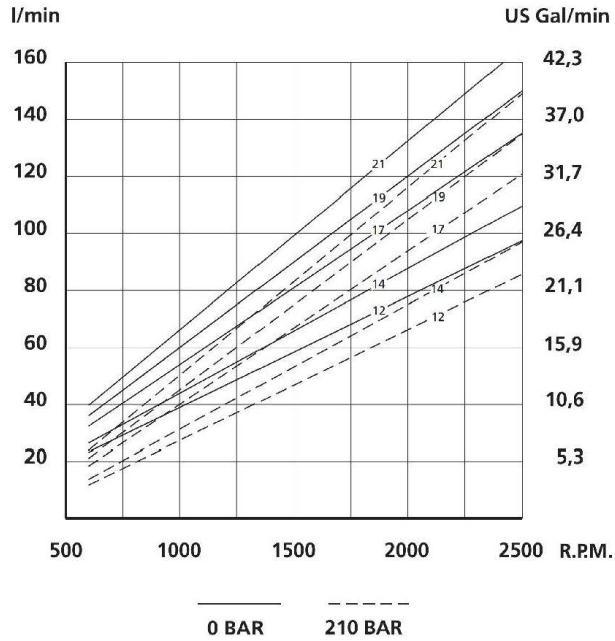


Enquire about other types of shafts

## SINGLE VANE PUMP TYPE VS-25 & VQ-25



**FLOW AND INPUT POWER DIAGRAMS**

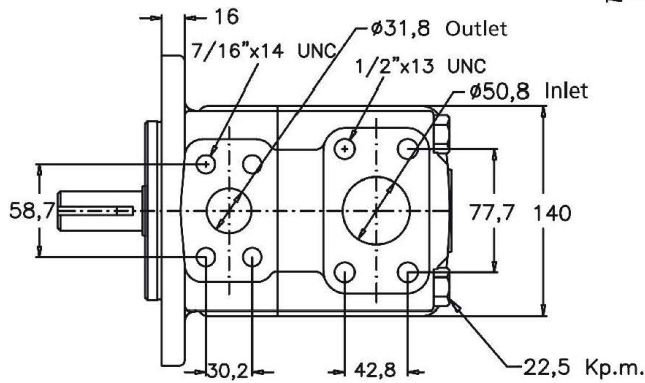
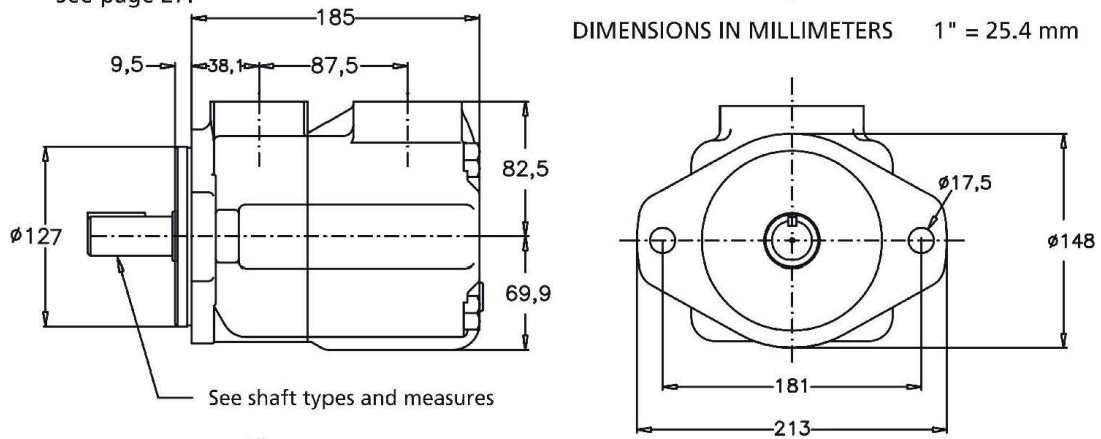


## SINGLE VANE PUMP TYPE VS-35 & VQ-35

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

\*See page 27.

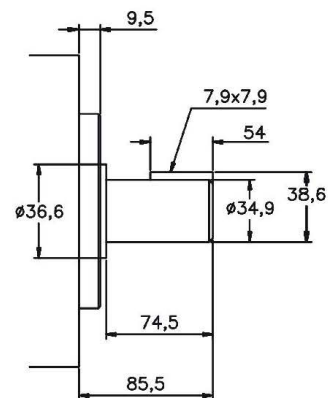
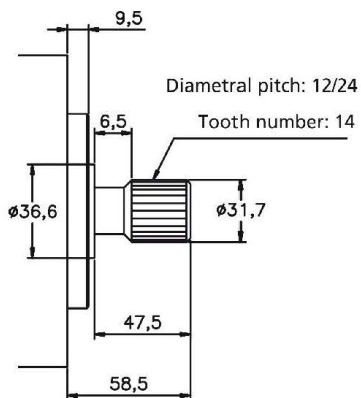
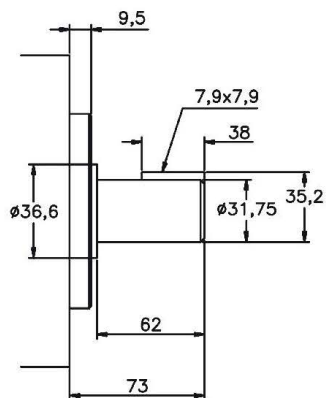
\* For further details see general chart



N°1 Shaft

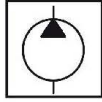
N°11 Shaft

N°86 Shaft

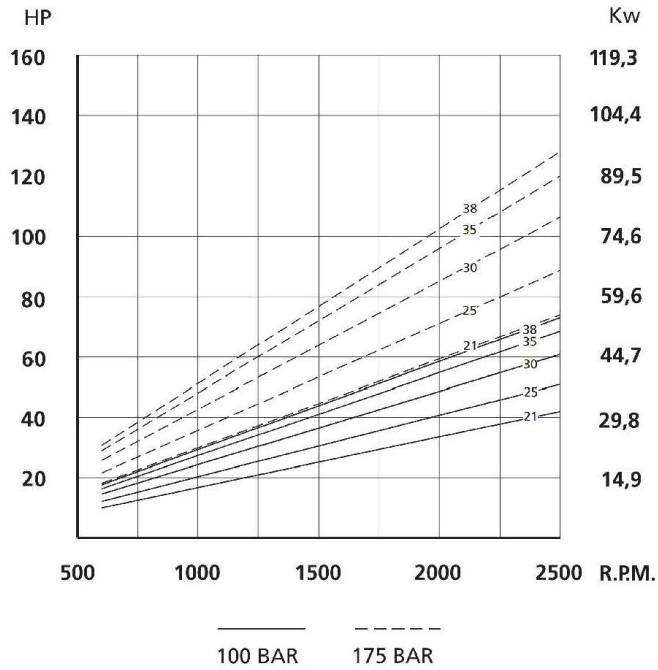
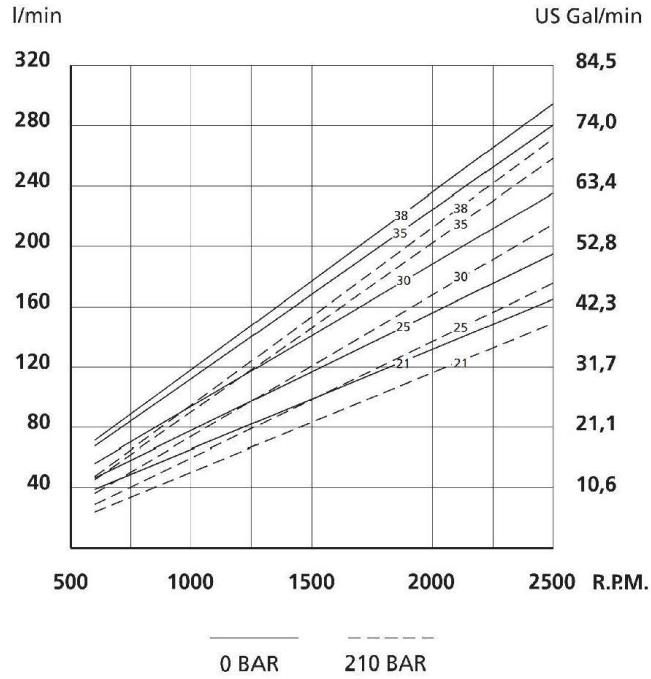


Enquire about other types of shafts

## SINGLE VANE PUMP TYPE VS-35 & VQ-35



**FLOW AND INPUT POWER DIAGRAMS**



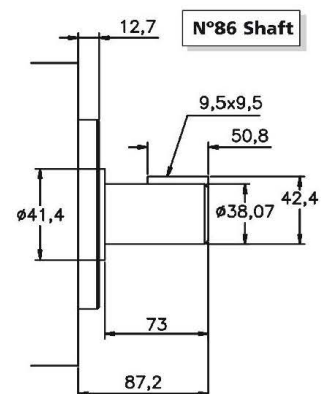
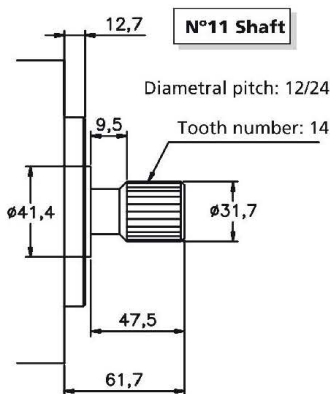
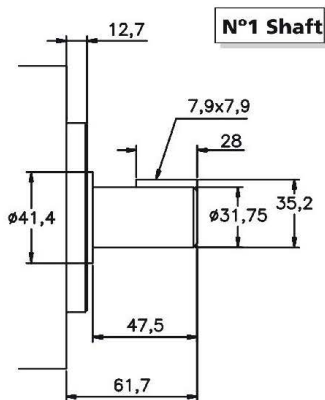
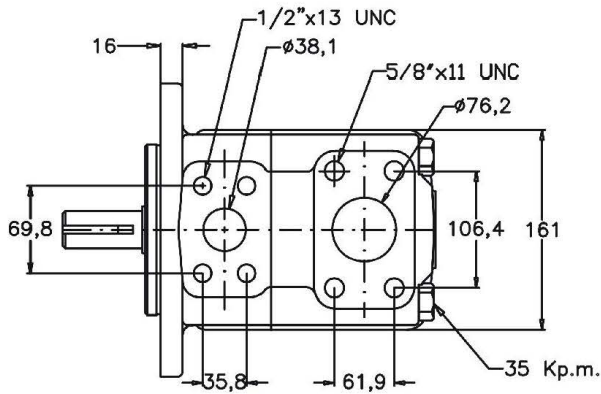
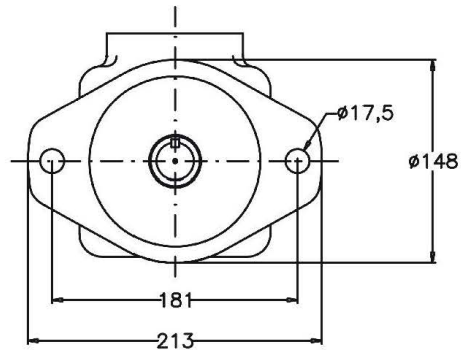
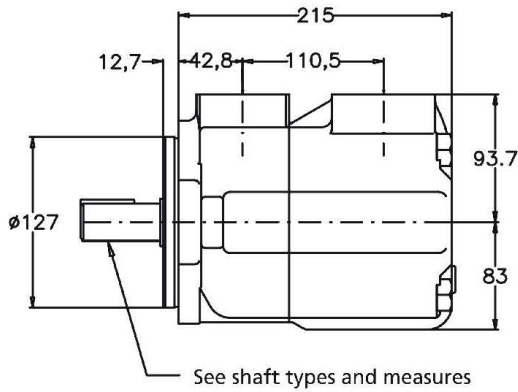
## SINGLE VANE PUMP TYPE VS-45 & VQ-45

DATA SHEET

FLOW	SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT (Kgs.)
	Min.	Máx.	Contin.	Intermit.	Inlet	Outlet	
Lts.a 1000 rpm	138	148	162	180	193	214	240
Gal. a 1200 rpm	42	47	50	57	60	67	75
	600	2200*	155	175	Ø3"	Ø1" 1/2	35,5

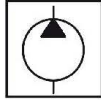
\* For further details see general chart

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**

