DATA SHEET

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.

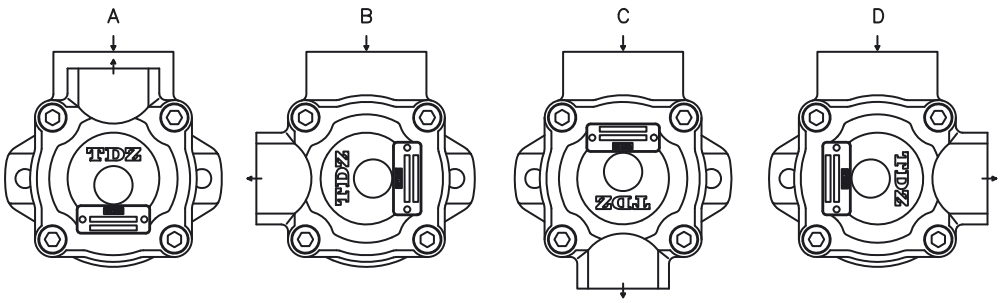
4 - Flow: VC, VS and VQ in US Gallons per minute at 1200 rpm and 7 Bar.

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

6 - Shaft type: See on each pump model.

7 - Oulet 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)	Mín.	Máx.	Contin.	Intermit		Inlet	Outlet	
VC10	3 6 9 13 16 19 22	1 2 3 4 5 6 7	0,8 0,9 1,2 1,6 1,7 1,8 1,9	600	4800 4500 4000 3400 3200 3000 2800	155 140	180	0,7 1,4 2,1 2,7 3,2 3,7 4,2	(3)	(3)	4,5
VC20	19 22 26 29 36 39 42	6 7 8 9 11 12 13	2,8 4,2 4,5 4,8 4,8 5,4 6,0	600	3400 3000 2800 2800 2500 2400 2400	155 140	180	3,9 4,4 5,1 5,6 6,5 7,5 8,1	(3)	(3)	7,3
VK20 **VQ20**	8 18 27 29 36 39 46	2 5 8 9 11 12 14	0,9 2,1 2,8 3,5 4,3 4,3 5,3	600	2600	175	210	1,9 4 6,6 6,9 7,3 7,4 7,6	Ø1½"	Ø3/4"	12
VS25 **VQ25**	32 40 45 55 60 67 80 88*	10 12 14 17 19 21 24 27	5,1 5,7 5,7 5,8 5,8 6 6,2 6,5	600	2500 1800 (VS) 1500	175 125	210 150	8,6 10,4 11,6 13,8 14,6 16,8 20,3 21,1	Ø1½"	Ø1"	15
VS35 **VQ35**	66 81 97 112 121 142	21 25 30 35 38 45	8,6 9 10 11,4 11,4 13,1	600	2400 1800 (VS) 1500	175 125	210 150	16,8 20,3 24,3 27,4 29,3 33,3	Ø2"	Ø1¼"	23
VS45 **VQ45**	138 148 162 180 193 214 240	42 47 50 57 60 67 75	15 15,7 14,3 17,9 18,6 22 26	600	2200 1800 (VS)	155	175	32,3 36,3 37,9 43,2 46,1 51,2 57,4	Ø3"	Ø1½"	35,5

***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.

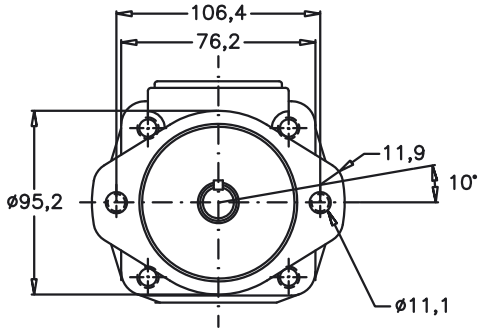
DATA SHEET

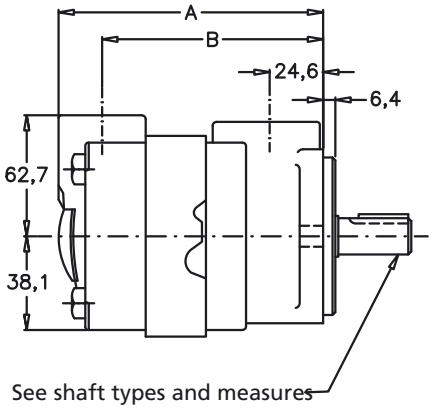
SINGLE VANE PUMP TYPE VC-10

DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

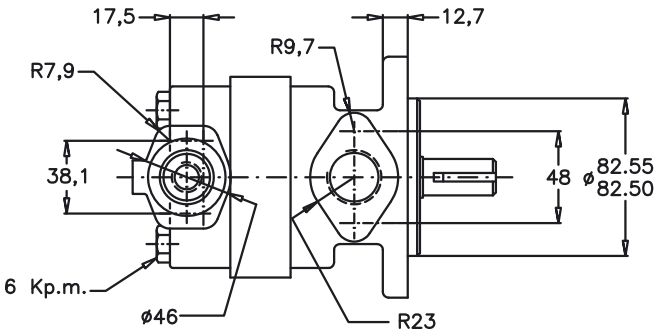
FLOW			SPEED (rpm) (rpm)		PRESSURE (Ba r)		Nominal Power (2)	CONNECTION		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Mín.	Máx.	Contin.	Intermit.		Inlet	Outlet	
3	1	0,8	600	4800	155	180	0,7	1" NPT 1" BSP	1/2" NPT 1/2" BSP	4,5
6	2	0,9		4500			1,4			
9	3	1,2		4000			2,1			
13	4	1,6		3400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

(1) & (2) see page 27.





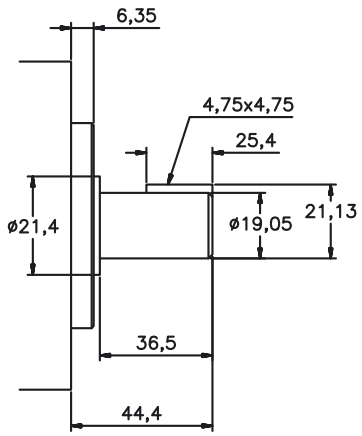
Gallons	Dimension	
	A	B
1, 2, 3	115,6	91,9
4, 5	121,9	98,3
6, 7	127	103,4



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

Contact TDZ or your nearest distributor for other shaft types

N°1 Shaft

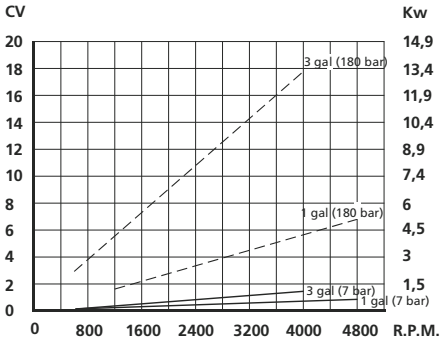


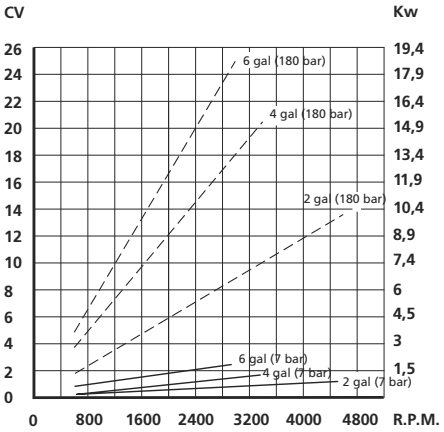
SINGLE VANE PUMP TYPE VC-10

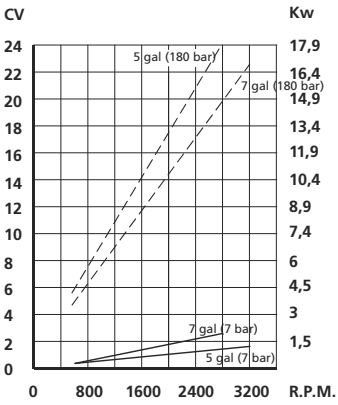
FLOW AND INPUT POWER DIAGRAMS

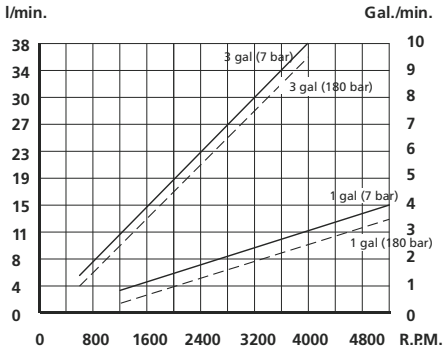
Max. pressure (180 bar)

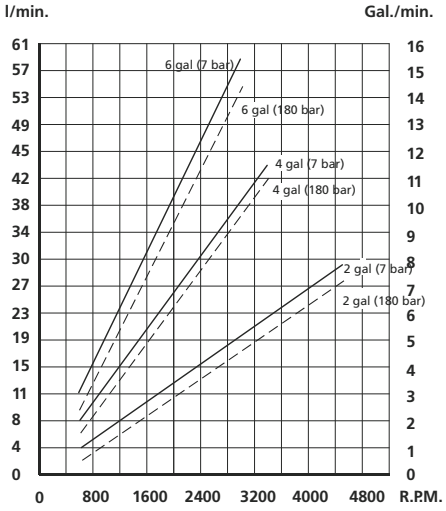
Pressure (7 bar)

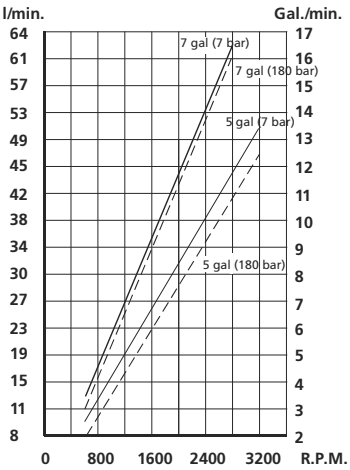












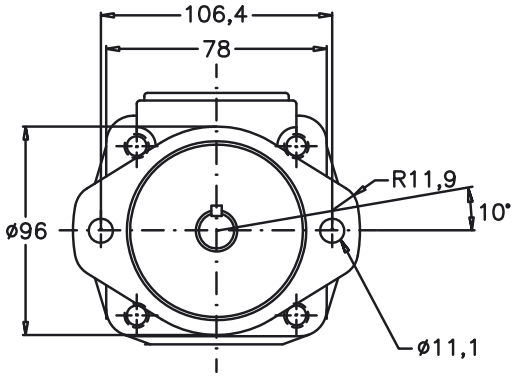
DATA SHEET

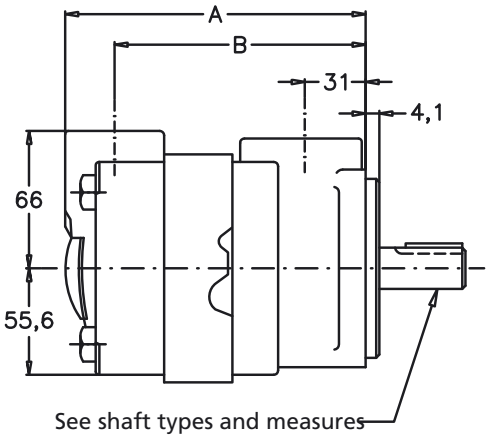
SINGLE VANE PUMP TYPE VC-20

DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

FLOW			SPEED (rpm)		PRES (BAR)		Nominal Power	CONNECTIO N		WEIGHT (Kgs.)
Lts.at 1000 rpm	Gal.at 1200 rpm	Reduction (1)	Min.	Max.	Contin.	Intermit	(2)	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	140		8,1			

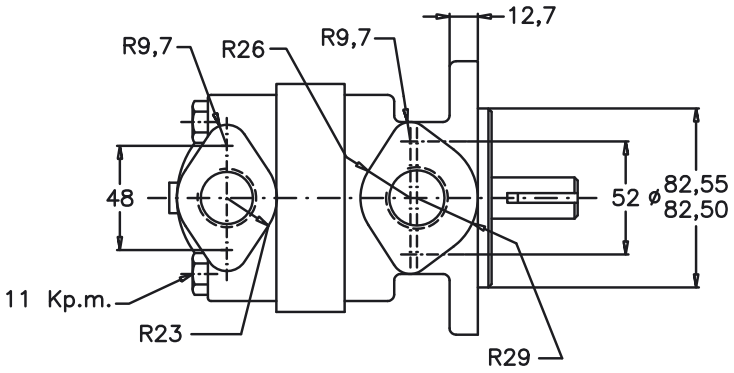
(2) & (3) see page 27.

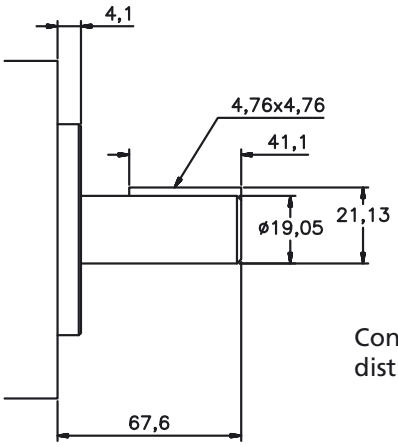




Galon	Dimension	
	A	B
6	125,2	102,1
7, 8, 9	131,6	108,4
11	136,7	113,5
12, 13	140,2	117,1

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





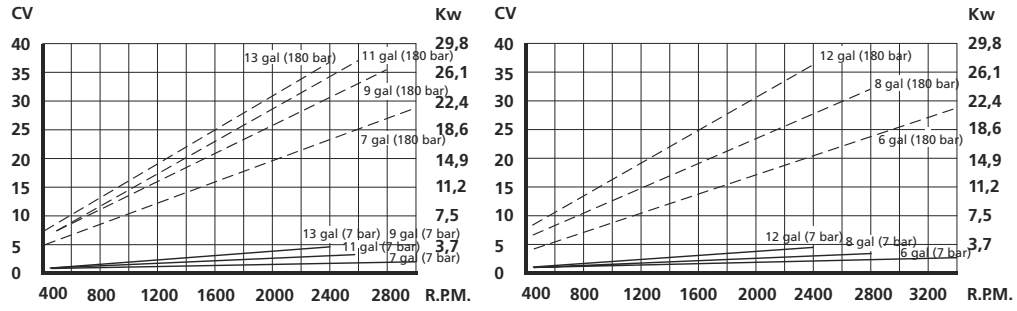
N°1 Shaft

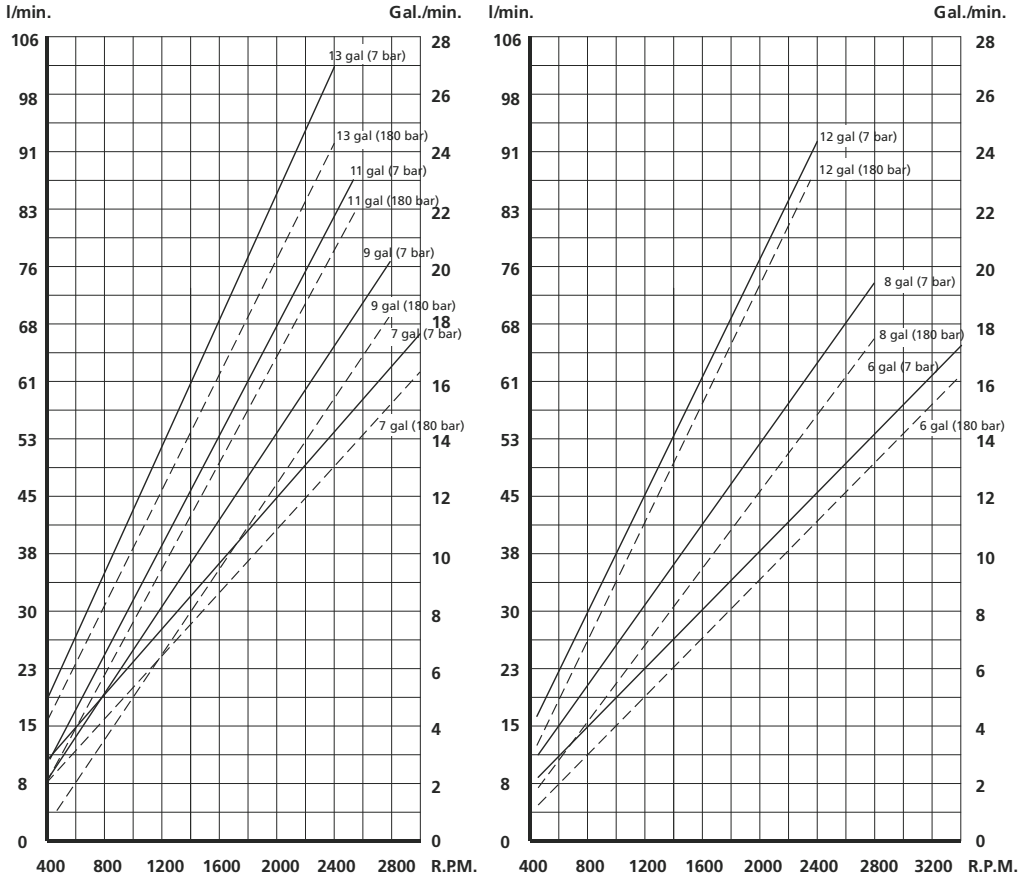
Contact TDZ or your nearest distributor for other shaft types

SINGLE VANE PUMP TYPE VC-20

FLOW AND INPUT POWER DIAGRAMS

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



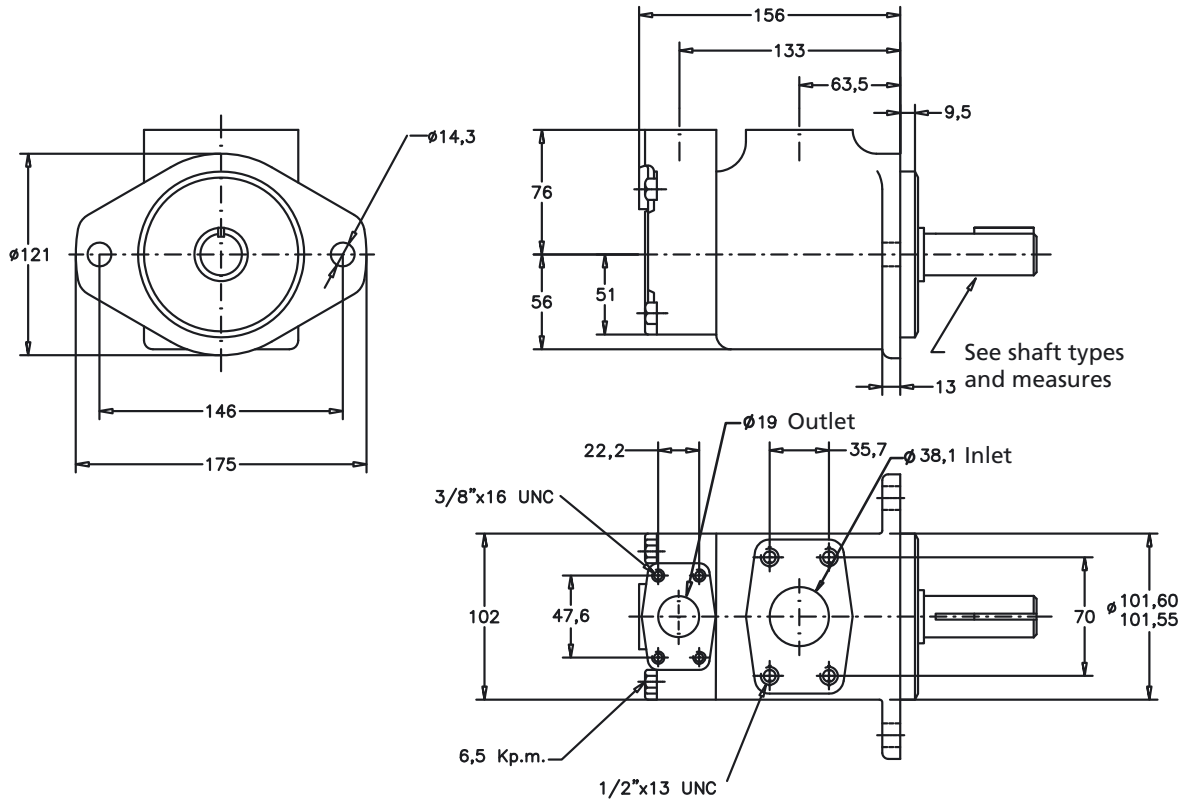


DATA SHEET

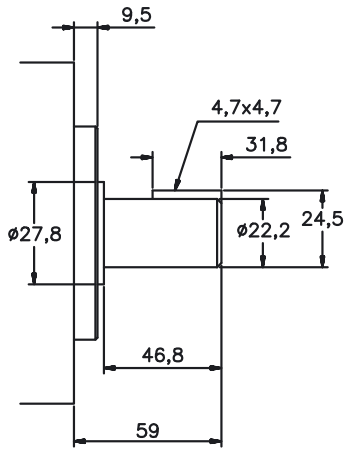
SINGLE VANE PUMP TYPE VK-20 Y VQ-20

DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

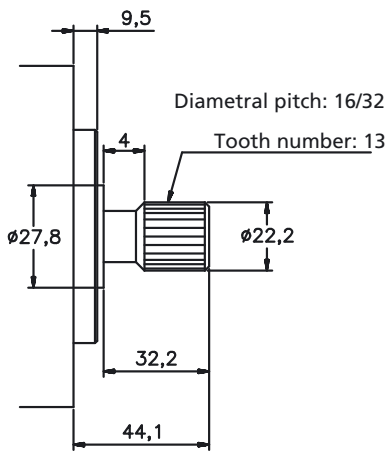
FLOW								SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT
Lts.at 1000 rpm	8	18	27	29	36	39	46	Min.	Max.	Contin.	Intermit.	Inlet	Outlet	(Kgs.)
Gal.at 1200 rpm	2	5	8	9	11	12	14	600	2500	175	210	Ø 1 1/2"	Ø 3/4"	12



N°1 Shaft



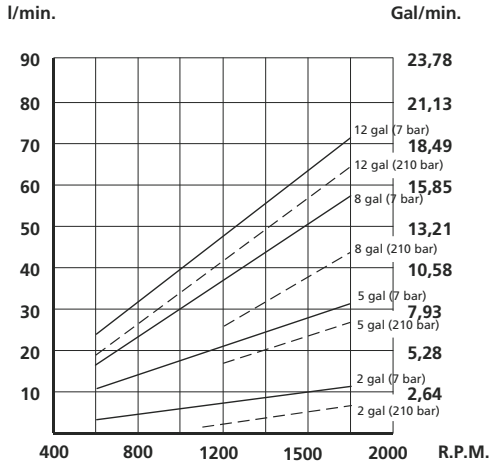
N°151 Shaft

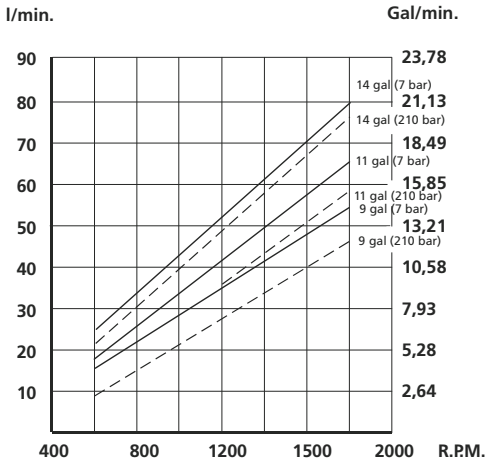


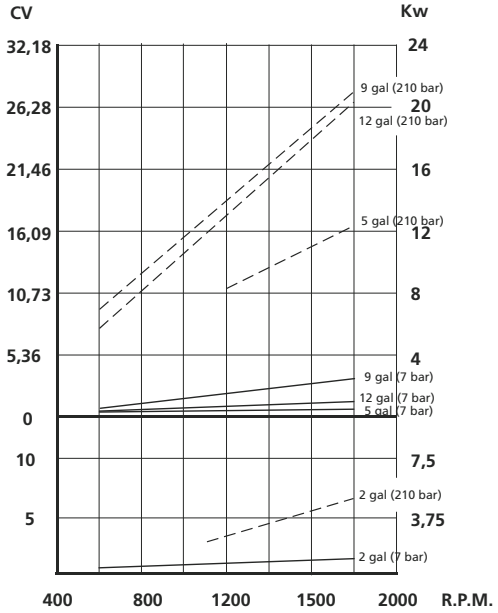
SINGLE VANE PUMP TYPE VK-20 Y VQ-20

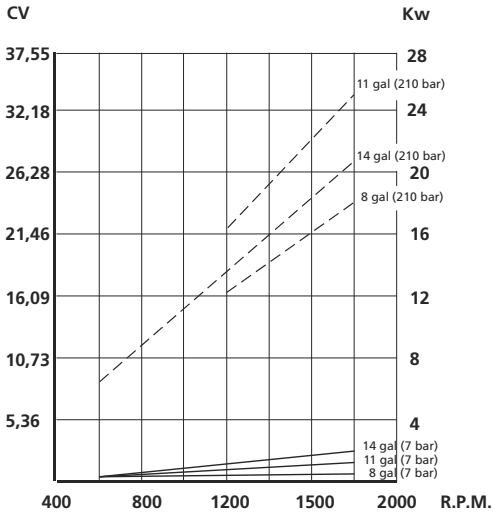
FLOW AND INPUT POWER DIAGRAMS

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









DATA SHEET

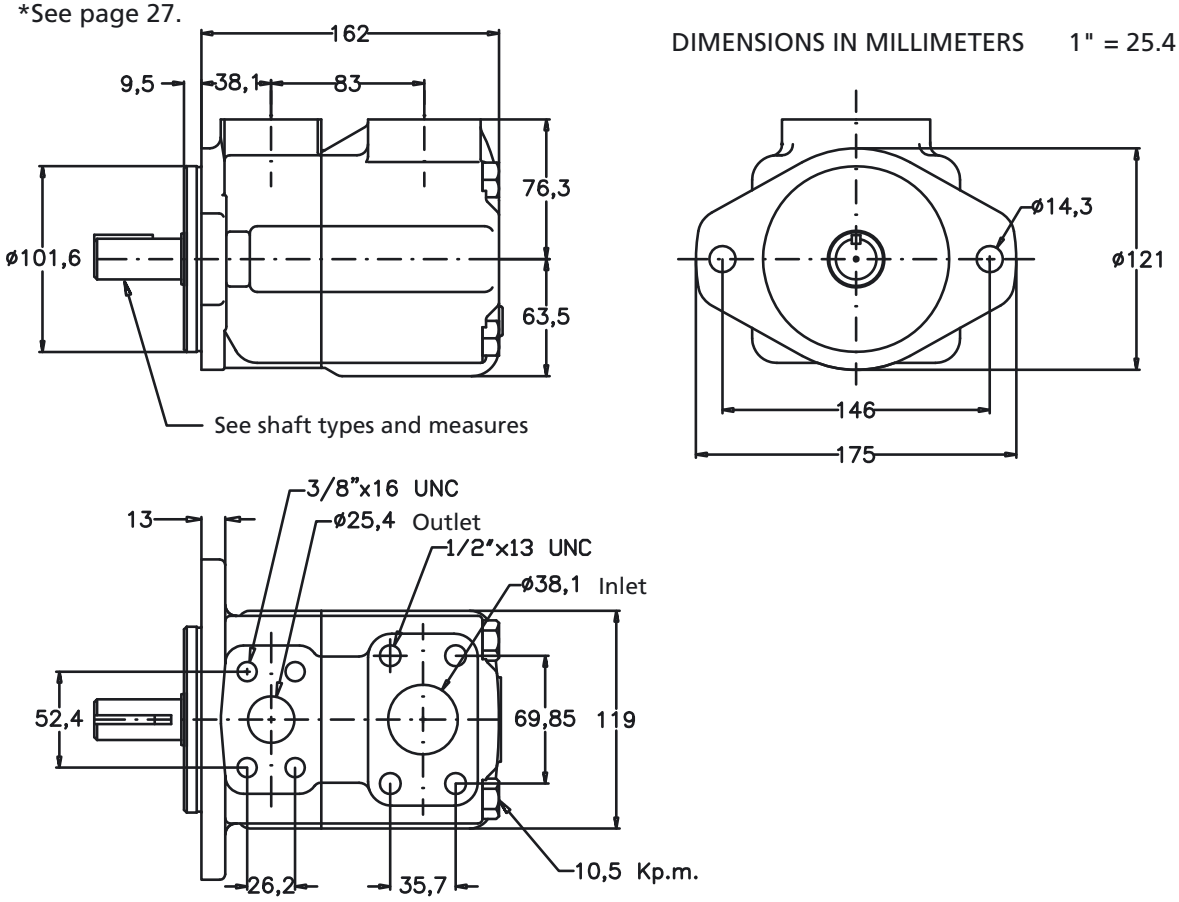
SINGLE VANE PUMP TYPE VS-25 & VQ-25

DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

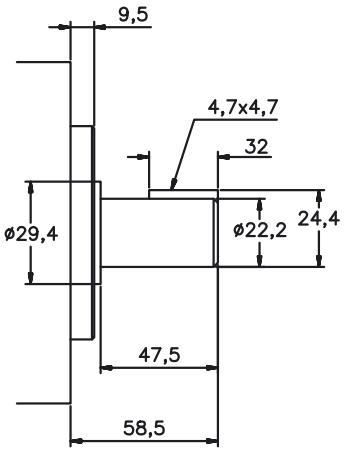
FLOW									SPEED(rpm)		PRES (BAR)		CONNECTION		WEIGHT
Lts.at 1000 rpm	32	40	45	55	60	67	80*	88*	Min.	Max.	Contin.	Intermit.	Inlet	Outlet	(Kgs.)
Gal.at 1200 rpm	10	12	14	17	19	21	24*	27*	600	2500*	175	210*	Ø1"1/2	Ø1"	15

*See page 27.

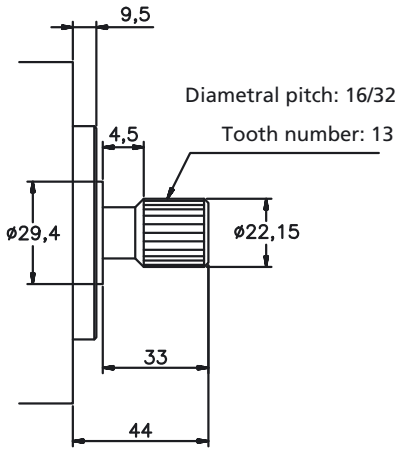
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



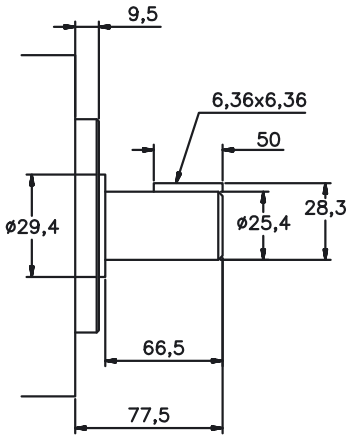
N°1 Shaft



N°11 Shaft



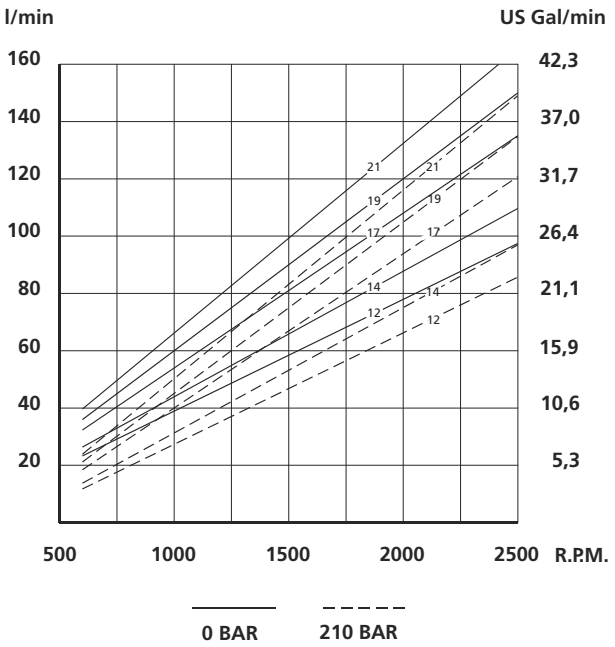
N°86 Shaft

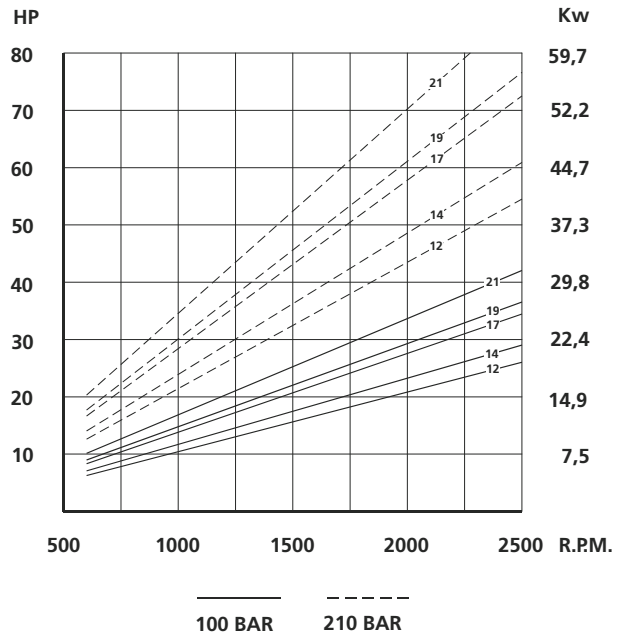


Enquire about other types of shafts

SINGLE VANE PUMP TYPE VS-25 & VQ-25

FLOW AND INPUT POWER DIAGRAMS





DATA SHEET

SINGLE VANE PUMP TYPE VS-35 & VQ-35

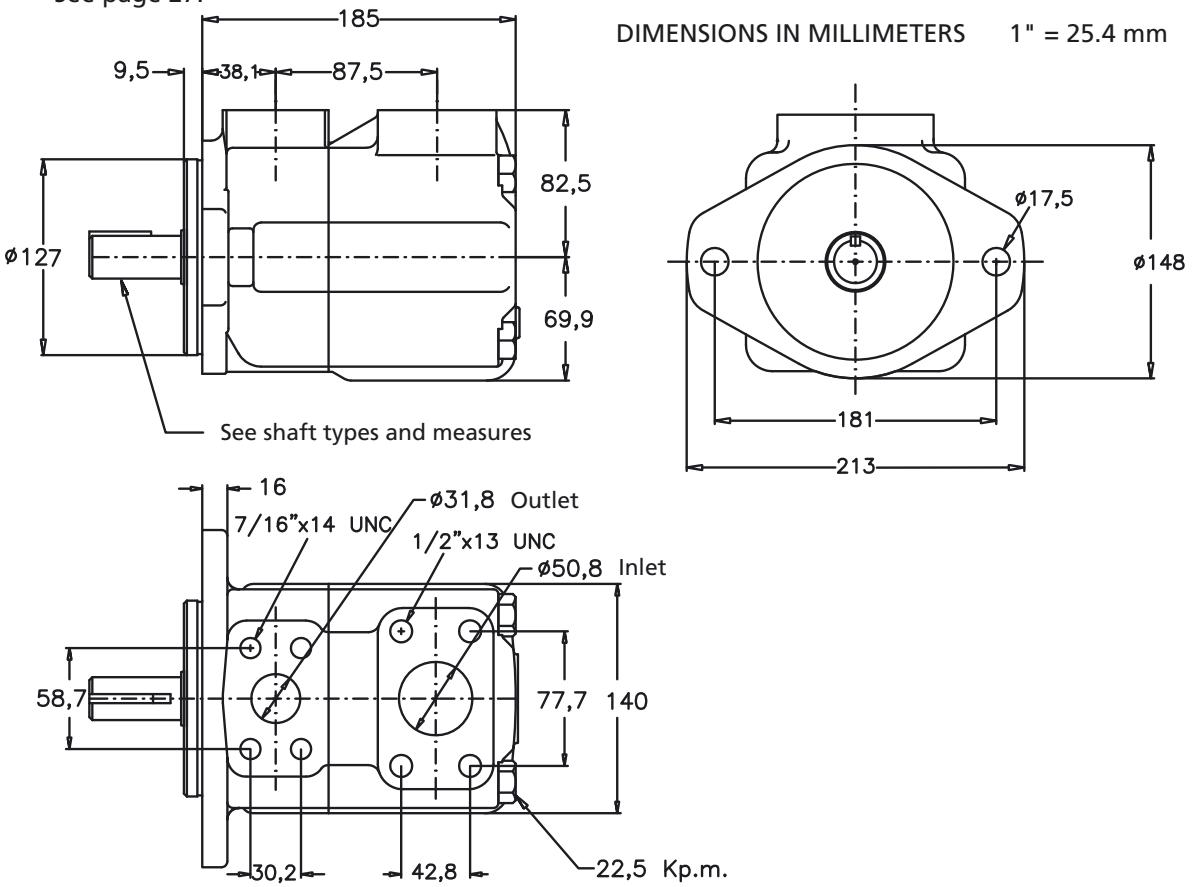
DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

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

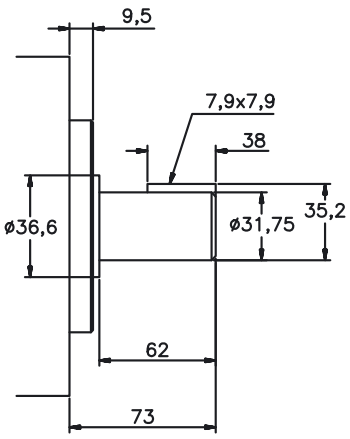
*See page 27.

* For further details see general chart

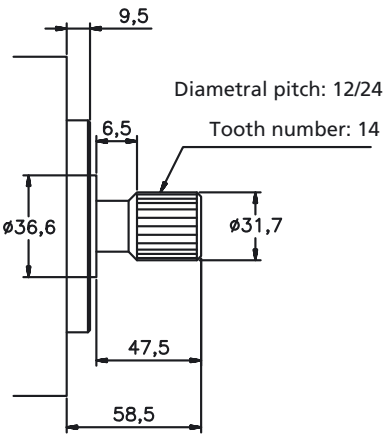
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



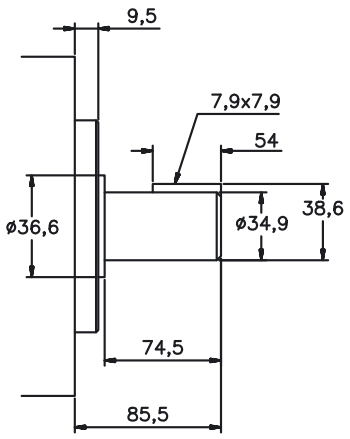
N°1 Shaft



N°11 Shaft



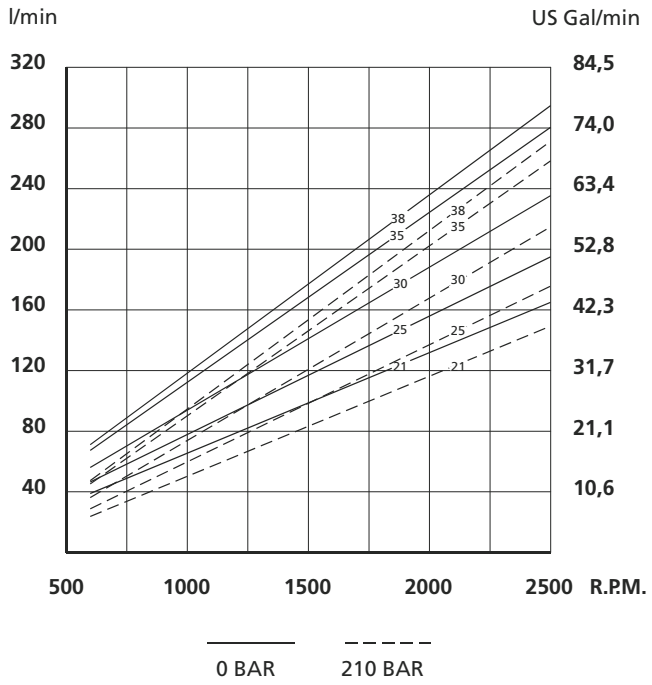
N°86 Shaft

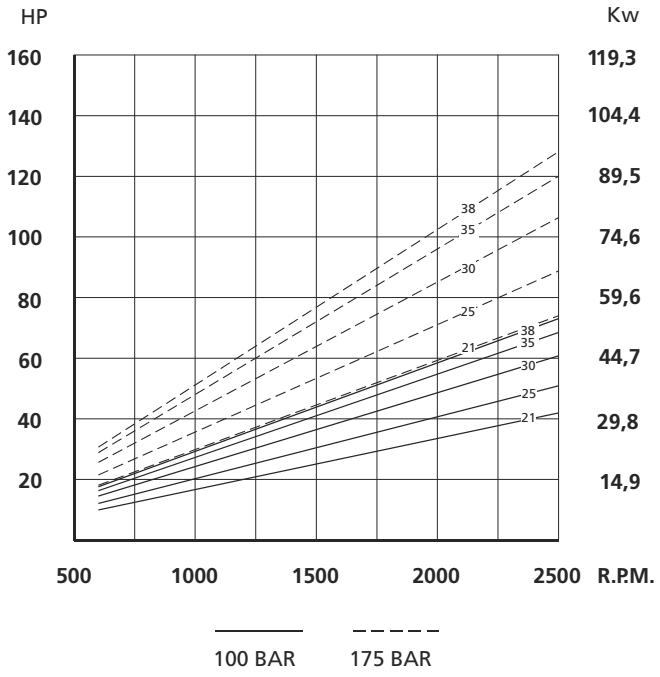


Enquire about other types of shafts

SINGLE VANE PUMP TYPE VS-35 & VQ-35

FLOW AND INPUT POWER DIAGRAMS





DATA SHEET

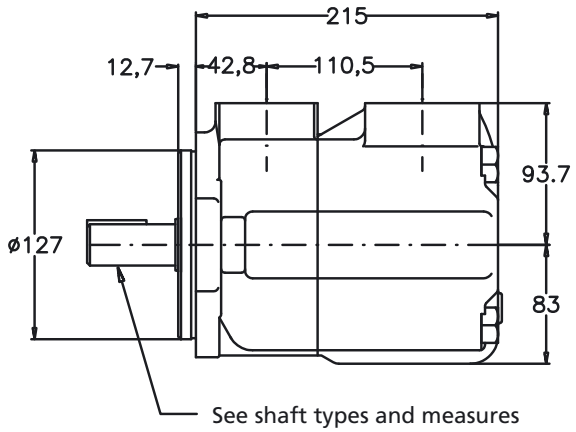
SINGLE VANE PUMP TYPE VS-45 & VQ-45

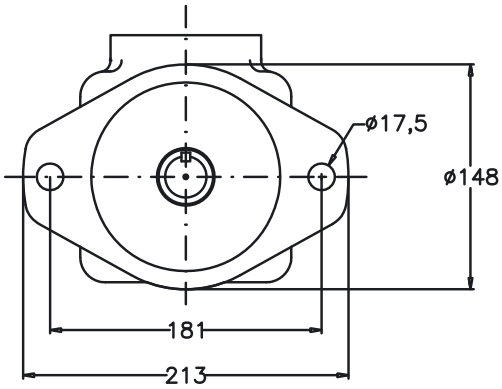
DIMENSIONS IN MILLIMETERS. **1" = 25,4 mm**

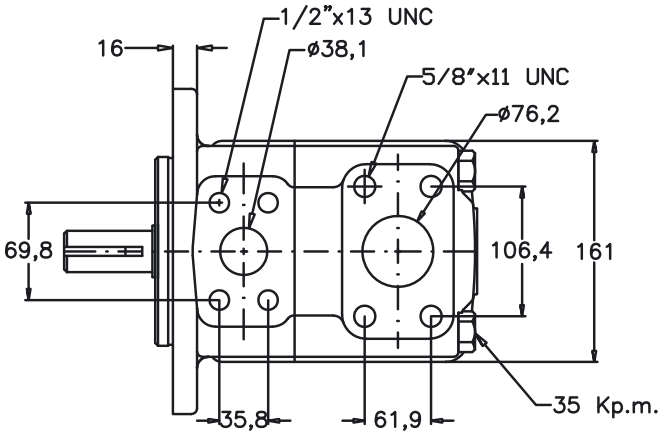
FLOW								SPEED (rpm)		PRES (BAR)		CONNECTION		WEIGHT
Lts.a 1000 rpm	138	148	162	180	193	214	240	Mín.	Máx.	Contin.	Intermit.	Inlet	Outlet	(Kgs.)
Gal. a 1200 rpm	**42**	**47**	**50**	**57**	**60**	**67**	**75**	600	2200*	155	175	Ø3"	Ø1"1/2	35,5

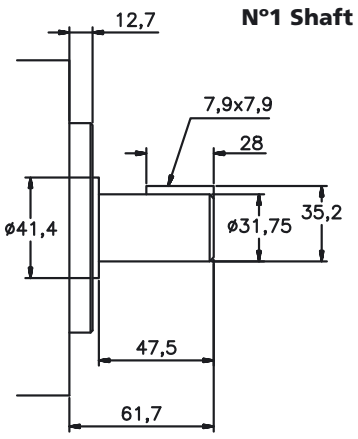
* For further details see general chart

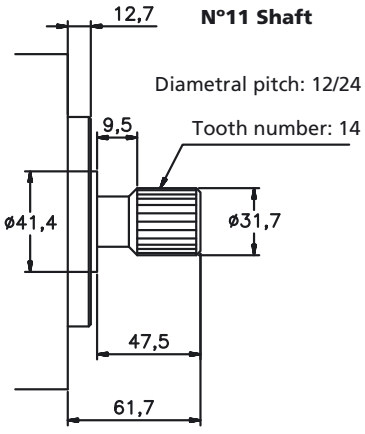
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm

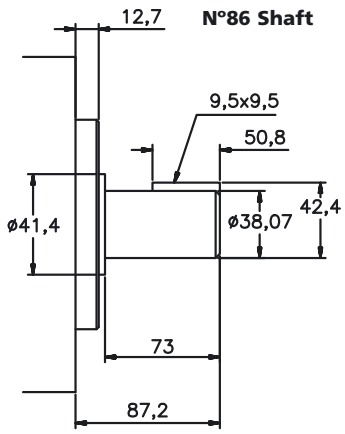












Enquire about other types of shafts

SINGLE VANE PUMP TYPE VS-45 & VQ-45

FLOW AND INPUT POWER DIAGRAMS