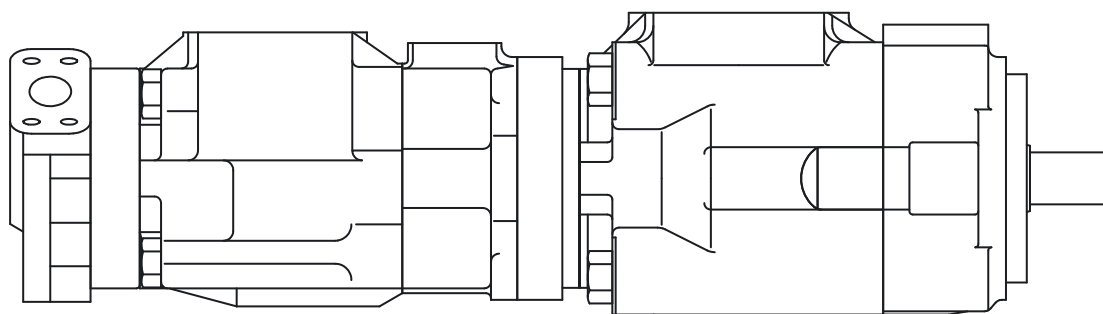




Bezares Group

## THRU DRIVE VANE PUMPS

V\*\*T thru drive single vane pumps



See single V\* pumps for displacement & power diagrams (Pages 35, 37.39)

V\*7TC thru drive pump with V\*64 double pump

## V\* THRU DRIVE SINGLE VANE PUMPS ORDERING CODE

| F3 | VS | 7T | C | 60 | D | 86 | A | A |
|----|----|----|---|----|---|----|---|---|
| 1  | 2  | 3  | 4 | 5  | 6 | 7  | 8 | 9 |

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

**2 - Pump Type:**

**VS = 12 vane pump**, industrial use (very quiet), UNC threads

**VQ = 10 vanes and bronze plates pump**, mobile use, UNC threads

**3 - Pump model:** 4T, 6T and 7T.

**4 - Rear pump mounting:** With SAE mounting flange, 2-bolts.

**A:** SAE-A mounting flange

**B:** SAE-B mounting flange

**C:** SAE-C mounting flange

**5 - Flow:** In US Gallons per minute at 1200 rpm and 7 bar.

**6 - D =** Right-hand direction of rotation (Clockwise)

**Y =** Left-hand direction of rotation (Counterclockwise).

(To check the direction of rotation view from the shaft end).

**7 - Shaft type:**

1: Parallel keyed

11: Splined

86: Heavy duty parallel keyed

**8 - Outlet position, (viewed from shaft):**

A: 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 (Counterclockwise from inlet)

**9- Rear flange positions, (viewed from the flange):**

SAE A flanges

A: 45° on the right (Clockwise)

B: 45° on the left (Counterclockwise)

SAE-B and SAE-C flanges:

A: In line with in-front flange

B: 90° rotated

## THRU DRIVE SINGLE VANE PUMPS CHARACTERISTICS

| TYPE         | 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 |               |
| VS4T<br>VQ4T | 26              | 8                | 4,5           | 600         | 2500<br>1800<br>(VS) | 175            | 210       | 6,9               | Ø64        | Ø25,4  | 19,5          |
|              | 40              | 12               | 5,7           |             |                      |                |           | 10,4              |            |        |               |
|              | 45              | 14               | 5,7           |             |                      |                |           | 11,6              |            |        |               |
|              | 55              | 17               | 5,8           |             |                      |                |           | 13,8              |            |        |               |
|              | 60              | 19               | 5,8           |             | 1500                 | 125            | 150       | 14,6              |            |        |               |
|              | 67              | 21               | 6             |             |                      |                |           | 16,8              |            |        |               |
|              | 80              | 24               | 6,2           |             |                      |                |           | 20,3              |            |        |               |
|              | 88*             | 27               | 6,5           |             |                      |                |           | 23,8              |            |        |               |
| VS6T<br>VQ6T | 66              | 21               | 8,6           | 600         | 2400<br>1800<br>(VS) | 175            | 210       | 16,8              | Ø76        | Ø31,8  | 29,5          |
|              | 81              | 25               | 9             |             |                      |                |           | 20,3              |            |        |               |
|              | 97              | 30               | 10            |             |                      |                |           | 24,3              |            |        |               |
|              | 112             | 35               | 11,4          |             |                      |                |           | 27,4              |            |        |               |
|              | 121             | 38               | 11,4          |             | 1500                 | 125            | 150       | 29,3              |            |        |               |
|              | 142             | 45               | 13,1          |             |                      |                |           | 33,3              |            |        |               |
| VS7T<br>VQ7T | 138             | 42               | 15            | 600         | 2200<br>1800<br>(VS) | 155            | 175       | 32,3              | Ø89        | Ø38,1  | 38            |
|              | 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              |            |        |               |

(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.

$$\text{Approx. output flow (Ltrs./min.)} = \text{Theoretical flow} \times \frac{\text{R.P.M}}{1000} - \text{Reduction} \frac{\text{Pressure (bar)}}{100}$$

(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:

$$\text{Real input power} = \text{Input power} \times \frac{\text{R.P.M}}{1000} \times \frac{\text{Pressure (bar)}}{100}$$

### REAR PUMP MOUNTING

The mounted pump to the V\*\*T\* should have the shaft shown below:

| Model | Mounted pump shaft |       |             |        |
|-------|--------------------|-------|-------------|--------|
|       | DP splined         | Teeth | Press angle | Flange |
| V**TA | 16/32              | 9     | 30°         | SAE-A  |
| V**TB | 16/32              | 13    | 30°         | SAE-B  |
| V**TC | 12/24              | 14    | 30°         | SAE-C  |

### TRANSMISSIBLE MAXIMUM TORQUE

The torque of the V\*\*T plus the torque of the rear pump, in pressure, shall be equal to or less than the below torques:

| V*4T  |                | V*6T  |                | V*7T  |                |
|-------|----------------|-------|----------------|-------|----------------|
| Shaft | Max. Torque Nm | Shaft | Max. Torque Nm | Shaft | Max. Torque Nm |
| 1     | 313            | 1     | 392            | 1     | 588            |
| 11    | 313            | 11    | 568            | 11    | 803            |
| 86    | 392            | 86    | 588            | 86    | 803            |

### MAXIMUM TORQUE OF THE MOUNTED REAR PUMP

The torque of the mounted pump to the V\*\*T rear pump, in pressure, shall be equal to or less than the indicated torques on next page.

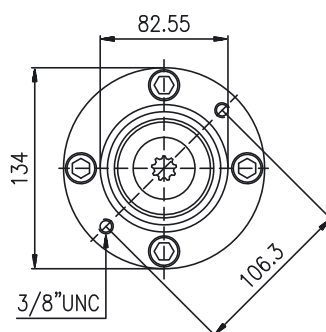
## REAR FLANGE MOUNTING OF THE V\*\*T\* THRU DRIVE PUMP DIMENSIONS

DIMENSIONS IN MILLIMETERS 1" = 25.4 mm

| Rear Flange (connection) | Max Torque Nm              |
|--------------------------|----------------------------|
| A                        | 130                        |
| B                        | 315                        |
| C                        | 440 (V*6TC)<br>700 (V*7TC) |

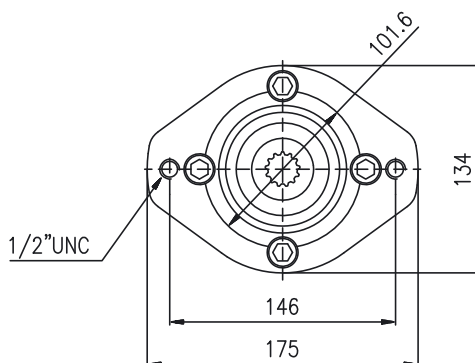
### V\*4TA, V\*6TA & V\*7TA

Torque for screw 65 Nm.



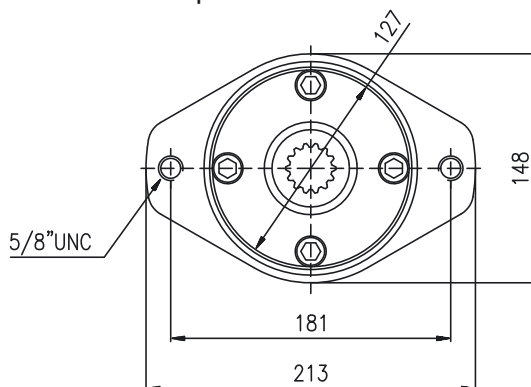
### V\*4TB, V\*6TB & V\*7TB

Torque for screw 65 Nm.



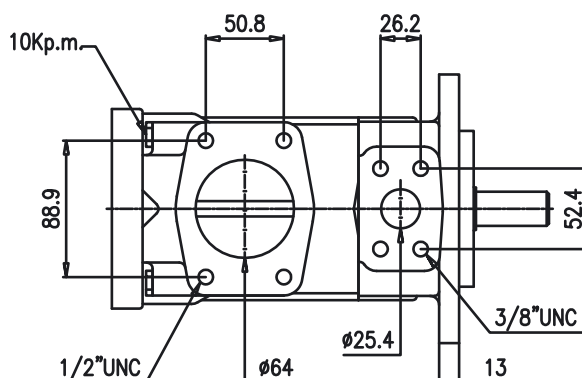
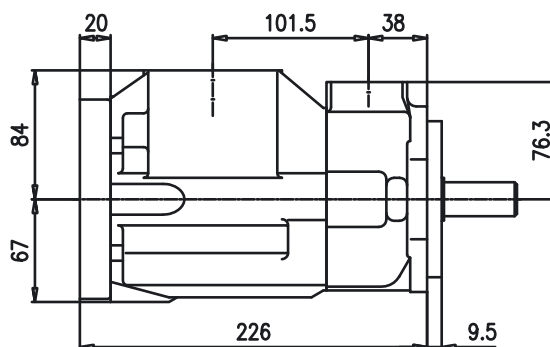
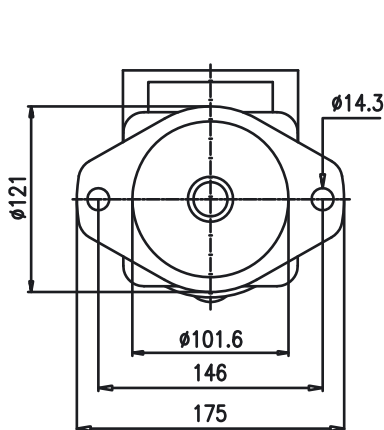
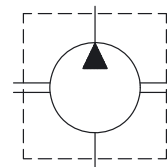
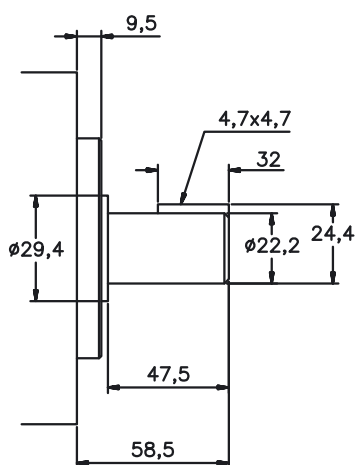
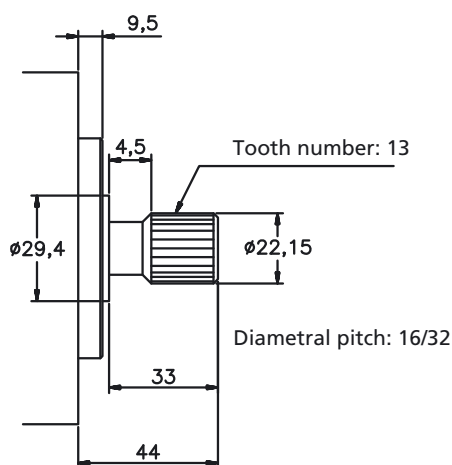
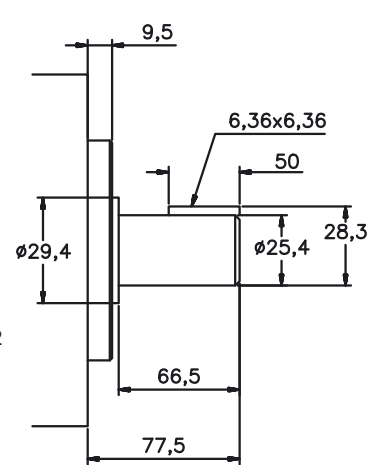
### V\*6TC & V\*7TC

Torque for screw 65 Nm.



## THRU DRIVE PUMPS VS4T & VQ4T

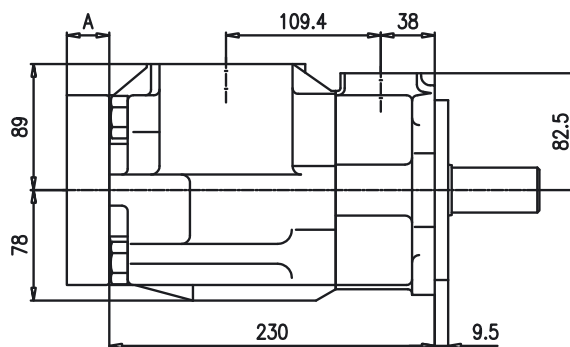
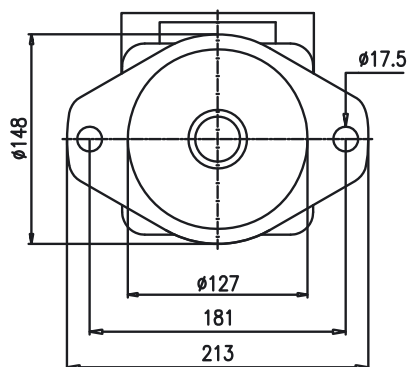
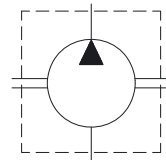
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm


**N°1 Shaft**

**N°11 Shaft**

**N°86 Shaft**


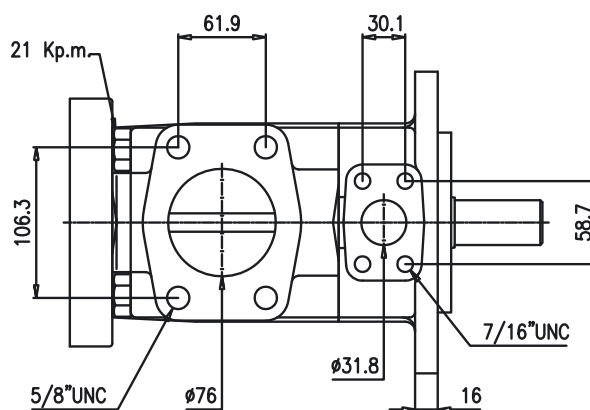
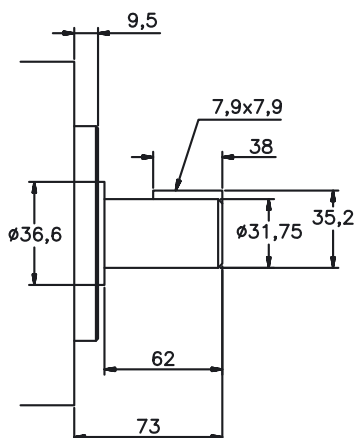
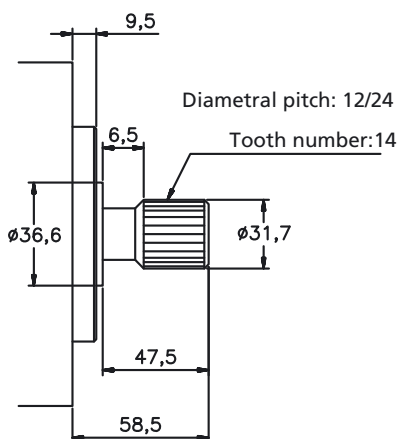
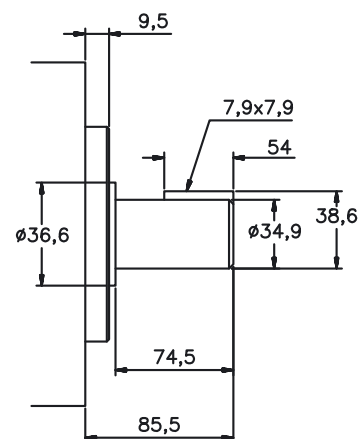
Enquire about other types of shafts

**THRU DRIVE PUMPS VS6T & VQ6T**

DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



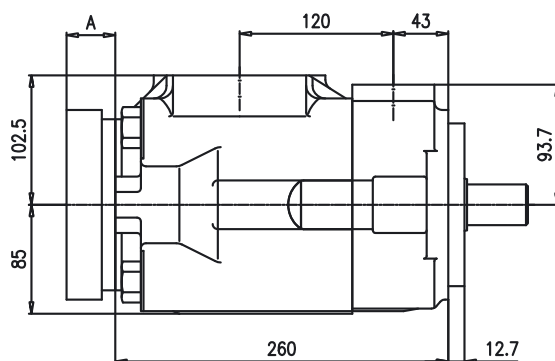
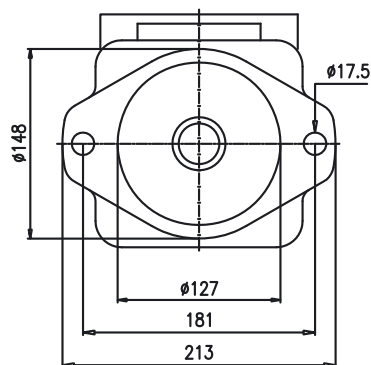
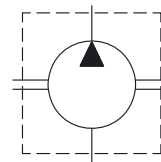
| Model | A  |
|-------|----|
| V*6TA | 20 |
| V*6TB | 30 |
| V*6TC | 38 |


**N°1 Shaft**

**N°11 Shaft**

**N°86 Shaft**


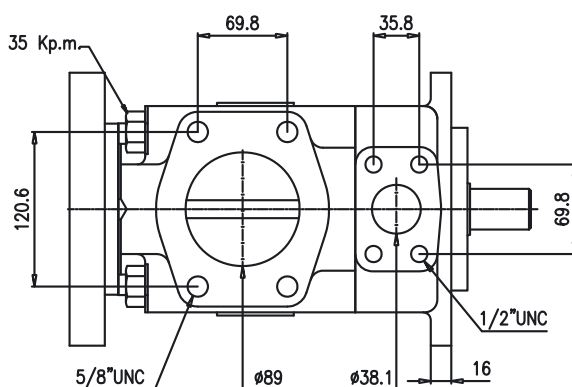
Enquire about other types of shafts

## THRU DRIVE PUMPS VS7T & VQ7T

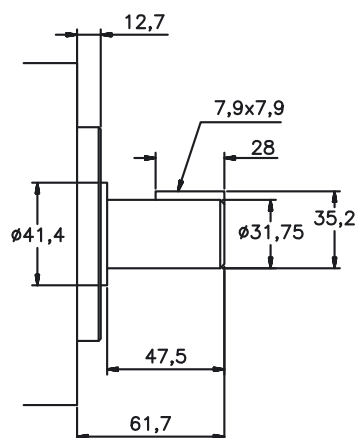
DIMENSIONS IN MILLIMETERS 1" = 25.4 mm



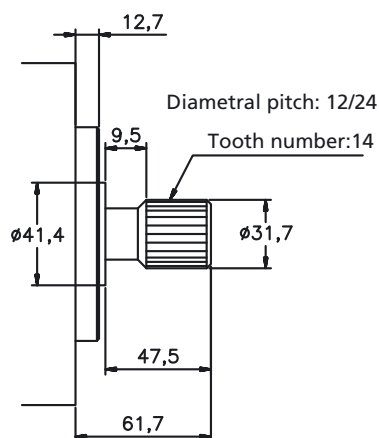
| Model | A  |
|-------|----|
| V*7TA | 20 |
| V*7TB | 30 |
| V*7TC | 38 |



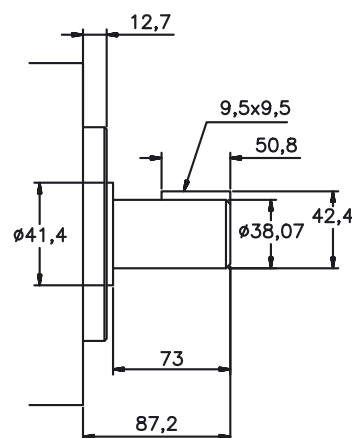
N°1 Shaft



N°11 Shaft



N°86 Shaft



Enquire about other types of shafts