

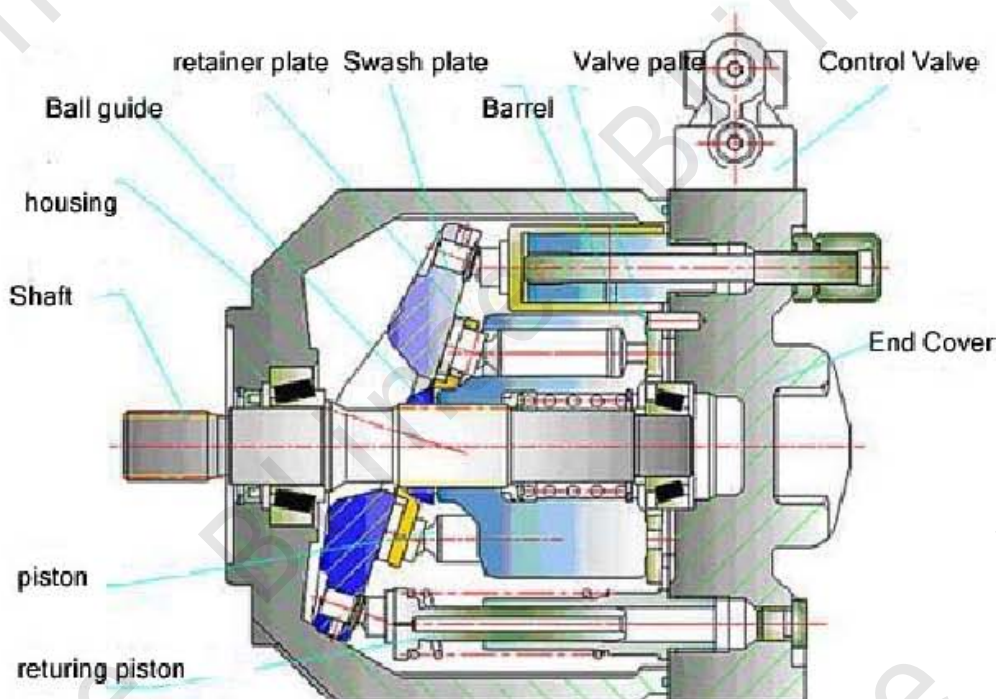
### Model 3: A10VSO SERIES



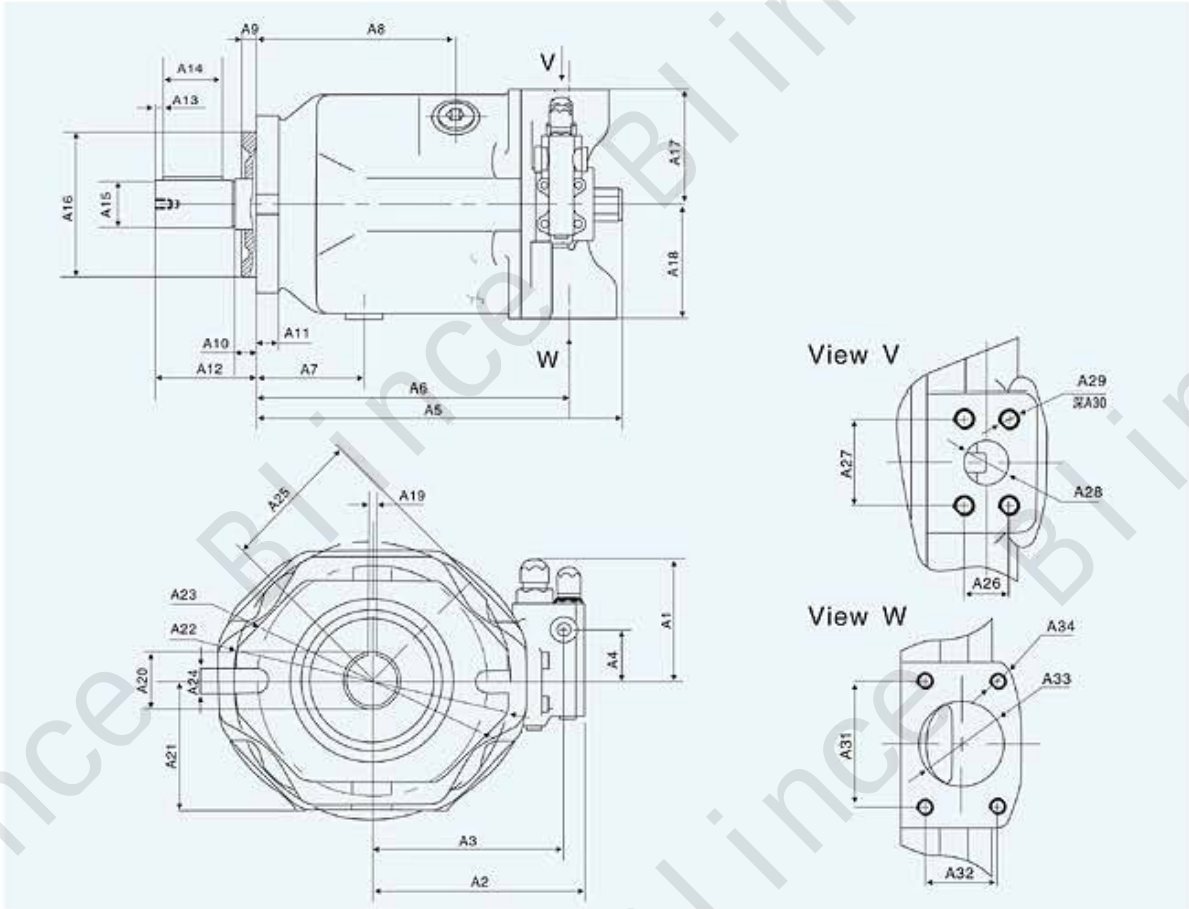
#### CHARACTERISTIC:

- 1 Swash plate design axial variable piston pump used in open circuit.
- 2 Continuous work pressures can reach 280bar, the highest instantaneous work pressure can reach 350bar.
- 3 The flow is directly proportional to the drive rotate speed and the displacement, and can make stepless variable come true by adjusting the obliquity of the swash plate.
- 4 There are various of control type such as DR, DFR, DFLR etc. and the control response is very fast.
- 5 Low noises level, High efficiency, High reliability and long time service life.
- 6 Small volume, High power density.
- 7 Excellent oil absorbency.
- 8 Axial and radial loading of drive shaft possible
- 9 SAE and ISO mounting flange
- 10 Thru shaft configuration use in circuit system.

#### Drawing and Dimension Size:



A10VSO Piston Pump

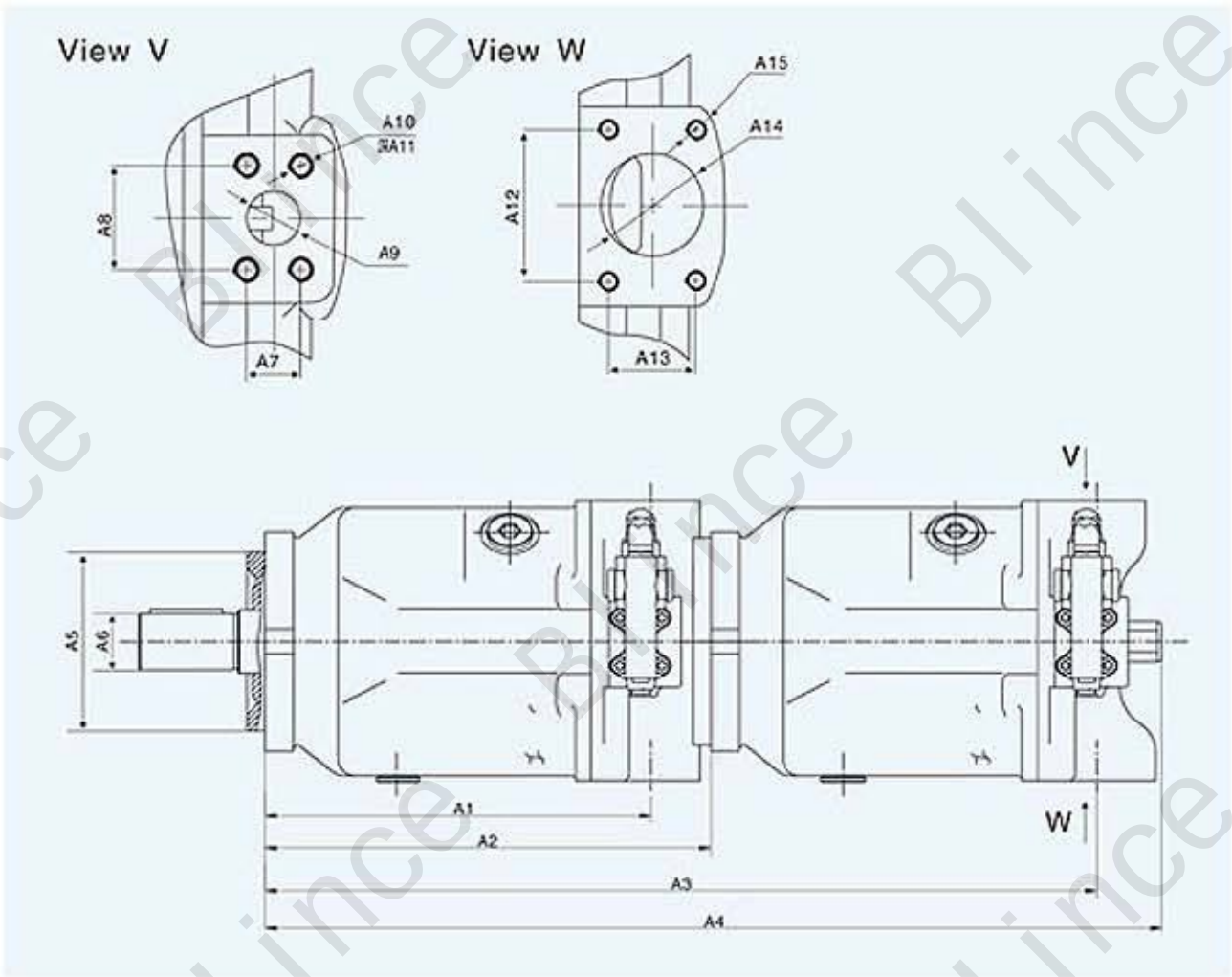


| SPEC  | A1    | A2    | A3   | A4  | A5  | A6    | A7   | A8    | A9   | A10  | A11  | A12  | A13 | A14  | A15  | A16   | A17  |
|-------|-------|-------|------|-----|-----|-------|------|-------|------|------|------|------|-----|------|------|-------|------|
| 16/18 | 104.5 | 125.5 | 119  | 40  | 195 | 145   | 43   | 83    | 6.3  | 8    | 11.5 | 26   | 2   | 25   | 18"  | 82.5" | 63   |
| 28    | 105   | 135.5 | 119  | 40  | 206 | 164.5 | 40   | 90    | 9    | 10   | 13   | 46   | 2   | 32   | 22"  | 100"  | 80   |
| 45    | 105   | 145.5 | 129  | 40  | 224 | 184   | 45   | 96    | 9    | 10   | 13   | 52   | 3   | 36   | 25"  | 100"  | 90   |
| 71    | 105   | 159.5 | 143  | 40  | 357 | 217   | 53   | 115   | 9    | 10   | 20   | 60   | 2.5 | 45   | 32"  | 125"  | 104  |
| 100   | 105   | 164.5 | 148  | 40  | 326 | 275   | 95   | 175   | 9    | 10   | 17   | 80   | 1.5 | 68   | 40"  | 125"  | 100  |
| 140   | 105   | 209   | 183  | 40  | 337 | 275   | 78   | 173   | 9    | 10   | 21   | 92   | 1.5 | 80   | 45"  | 180"  | 110  |
| SPEC  | A18   | A19   | A20  | A21 | A22 | A23   | A24  | A25   | A26  | A27  | A28  | A29  | A30 | A31  | A32  | A33   | A34  |
| 16/18 | 63    | 6     | 20.5 | 68  |     | 109   | 11   | 66    | 22.2 | 47.6 | 20   | 3/8" | 20  | 52.4 | 26.2 | 25    | 3/8" |
| 28    | 80    | 6     | 24.5 | 75  | 174 | 140   | 14   | 74    | 22.2 | 47.6 | 20   | M10  | 17  | 58.7 | 30.2 | 32    | M10  |
| 45    | 90    | 8     | 28   | 81  | 177 | 140   | 14   | 83    | 26.2 | 52.4 | 25   | M10  | 17  | 69.9 | 35.7 | 40    | M12  |
| 71    | 104   | 10    | 35   | 92  | 210 | 180   | 18   | 98    | 30.2 | 58.7 | 25   | M10  | 20  | 77.8 | 42.9 | 50    | M12  |
| 100   | 100   | 12    | 43   | 95  |     | 180   | 17.5 | 106   | 31.8 | 66.7 | 32   | M14  | 19  | 88.9 | 50.8 | 61    | M12  |
| 140   | 110   | 14    | 48.5 | 108 |     | 224   | 18   | 118.5 | 31.8 | 66.7 | 32   | M14  | 20  | 88.9 | 50.8 | 63    | M12  |

A10V0 PISTON PUMP SERIES



A10V0 PISTON PUMP SERIES



| Main pump<br>Secondary<br>Pump | A10VSO28 |     |      |     |      |     | A10VSO45 |     |     |     |      |     | A10VSO71 |     |     |     |      |     |
|--------------------------------|----------|-----|------|-----|------|-----|----------|-----|-----|-----|------|-----|----------|-----|-----|-----|------|-----|
|                                | A1       | A2  | A3   | A4  | A5   | A6  | A1       | A2  | A3  | A4  | A5   | A6  | A1       | A2  | A3  | A4  | A5   | A6  |
| A10VSO<br>18                   | 165      | 204 | 349  | 399 | 100" | 22" | 184      | 229 | 374 | 424 | 100  | 25" | 217      | 267 | 412 | 412 | 125  | 32" |
| A10VSO<br>28                   | 165      | 204 | 369  | 398 | 100" | 22" | 184      | 229 | 394 | 423 | 100  | 25" | 217      | 267 | 431 | 431 | 125  | 32" |
| A10VSO<br>45                   | /        | /   | /    | /   | /    | /   | 184      | 229 | 413 | 448 | 100  | 25" | 217      | 267 | 451 | 451 | 125  | 32" |
| A10VSO<br>71                   | /        | /   | /    | /   | /    | /   | /        | /   | /   | /   | /    | /   | 217      | 267 | 484 | 484 | 125  | 32" |
| SPEC                           | A7       |     | A8   |     | A9   |     | A10      |     | A11 |     | A12  |     | A13      |     | A14 |     | A15  |     |
| A10VSO<br>18                   | 22.2     |     | 47.6 |     | 20   |     | 3/8"     |     | 20  |     | 52.4 |     | 26.2     |     | 25  |     | 3/8" |     |
| A10VSO<br>28                   | 22.2     |     | 47.6 |     | 20   |     | M10      |     | 17  |     | 58.7 |     | 30.2     |     | 32  |     | M10  |     |
| A10VSO<br>45                   | 26.2     |     | 52.4 |     | 25   |     | M10      |     | 17  |     | 69.9 |     | 35.7     |     | 40  |     | M12  |     |
| A10VSO<br>71                   | 30.2     |     | 58.7 |     | 25   |     | M10      |     | 20  |     | 77.8 |     | 42.9     |     | 50  |     | M12  |     |

## A10V(S)O technical Parameter

| Sizes                        |               |        |                 | 16/18 | 28   | 45   | 71   | 100  | 140  |
|------------------------------|---------------|--------|-----------------|-------|------|------|------|------|------|
| Displacement                 |               | Vg max | cm <sup>3</sup> | 18    | 28   | 45   | 71   | 100  | 140  |
| Max speed                    |               | nmax   | rpm             | 3300  | 3000 | 2600 | 2200 | 2000 | 1800 |
| Max. flow                    | At nmax       | qv     | L/min           | 59.4  | 84   | 117  | 156  | 200  | 252  |
|                              | At 1500 r/min |        |                 | 27    | 42   | 68   | 107  | 150  | 210  |
| ( $\Delta p=280\text{bar}$ ) | At nmax       | Pmax   | Kw              | 27.7  | 39   | 55   | 73   | 93   | 118  |
| Max. power                   | At 1500 r/min |        |                 | 12.6  | 20   | 32   | 50   | 70   | 98   |
| ( $\Delta p=280\text{bar}$ ) | At Vg max     | Tmax   | Nm              | 80.1  | 125  | 200  | 316  | 445  | 623  |
| Max. torque                  |               |        |                 |       |      |      |      |      |      |
| Weight                       |               | m      | Kg              | 12    | 15   | 21   | 33   | 45   | 60   |

# Ordering Code:

|         |   |    |    |   |    |   |   |   |   |   |    |     |
|---------|---|----|----|---|----|---|---|---|---|---|----|-----|
| A10V(S) | O | 28 | DR | / | 31 | R | - | P | S | C | 62 | N00 |
|---------|---|----|----|---|----|---|---|---|---|---|----|-----|

Model Variable pump,  
Swashplate design  
Rated pressure 280bar  
Peak pressure 350bar

Mode of operation  
Pump, Circuit

Displacement 18, 28, 45, 71,  
100, 140, (ml/r)

Controller DG— Two point, direct control  
DRG— Remote pressure control  
DR— Pressure control  
DFR— Pressure and flow control  
DFR1— Pressure and flow control,  
Orifice in X-channel closed  
DFLR— Pressure, flow and torque  
control

Series 31 Series 52 Series

Direction of Rotation R— clockwise  
L— anti-clockwise

Seals P— Perbunan  
V— Viton

Shaft end P— Metric parallel with key  
S— SAE splined  
K— SAE parallel with key  
U— SAE splined, reduced dia.

Mounting flange C— SAE 2-hole  
A— ISO 2-hole

Port for service lines 11— SAE flange rear, fixing thread metric  
12— SAE flange on opposite side, fixing thread metric  
61— SAE flange rear, fixing thread UNC  
62— SAE flange on opposite side, fixing thread UNC

Through drive N00— Without through drive  
K\*\*— With through drive