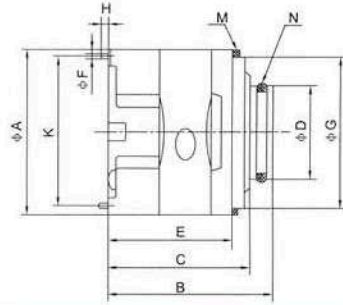


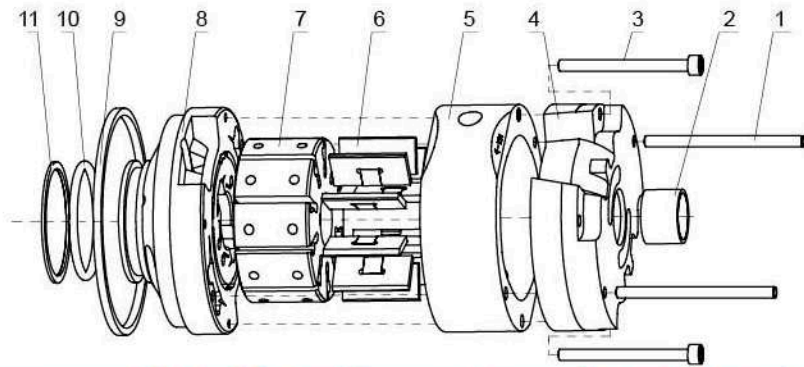
V 系列泵芯 Series-cartridge



型号说明/Model Designation

| (F3-) | PC- | 25V | 19 | R | 10 |
|--|---|---------------|---|---|----------------------|
| 前注 Note | 泵芯标志 Cartridge mark | 系列号 Series | ▲排量代号 Flow code | 旋转方向 Rotation | 设计号 Design number |
| 无标记 No-marking: 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid | PC-单泵泵芯 双联泵轴端泵芯 | 20V | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 | (从泵的轴端看) (Viewed from shaft end of pump) L-逆时针旋转 Left hand for counter clockwise R-顺时针旋转 Right hand for clockwise | 10 |
| | Cartridge kit of single pump double pump shaft end | 25V | 10, 12, 14, 15, 17, 19, 21, 25 | | |
| | PCT-双联泵盖端泵芯 | 35V | 21, 25, 30, 32, 35, 38, 45 | | |
| | Cartridge kit of double pump cover end | 45V | 42, 45, 50, 57, 60, 66, 75 | | |

▲ 在1200r/min和0.69MPa(100psi)下的额定排量; 与相应系列、规格的油泵性能参数一致, 详见V系列单泵的性能参数。
USgpm Flow(USgpm) at 1200r/min and 0.69MPa.
The data of relevant series, model are unanimous. Please see V series-single pump data.



| 序号NO. | 名称Part | 数量Qty | 序号NO. | 名称Part | 数量Qty | 序号NO. | 名称Part | 数量Qty |
|-------|------------------------------|-------|-------|---------------------------|-------|-------|-------------|-------|
| 1 | 销 Pin | 2 | 5 | 定子 cam ring | 1 | 9 | 挡圈 Retainer | 1 |
| 2 | 滑动轴承 sliding bearing | 1 | 6 | 叶片 vane kit | 12 | 10 | O型圈 O ring | 1 |
| 3 | 十字槽盘头螺钉 cross pan head bolts | 2 | 7 | 转子 Rotor | 1 | 11 | 挡圈 Retainer | 1 |
| 4 | 侧板 inlet support plate | 1 | 8 | 压力侧板 outlet support plate | 1 | | | |

| 系列号 Series | ØA | B | C | ØD | E | ØF | ØG | H | K | M (挡圈Gasket) | M(O形圈O-Ring) |
|---------------|--------|-------|-------|------|-------|-----|------|---|--------|-----------------|--------------|
| 20V | 82.55 | 81.5 | 70.1 | 47 | 61.5 | 4.8 | 76.2 | 7 | 73.6 | 82.76x76.26x3.5 | 40x3.55 |
| 25V | 96.8 | 98.8 | 87 | 52.2 | 71.2 | 4.8 | 90.5 | 7 | 88.19 | 97x91x3.5 | 44x3.53 |
| 35V | 114.3 | 117.7 | 105 | 72.2 | 90.3 | 6.4 | 108 | 8 | 103.94 | 114.5x108.5x3.5 | 63.09x3.53 |
| 45V | 133.35 | 141.1 | 129.6 | 80.2 | 105.5 | 6.4 | 127 | 8 | 123.8 | 133.6x127.6x3.5 | 71x3.55 |

| 转子内花键齿廓参数Inside spline tooth outline parameter of rotor | | | | | |
|---|-----------------------|-------------|-----------------------|----------------------|----------------------|
| 系列号 Series | 齿数 Number of teeth | 径节 Pitch | 压力角 Pressure angle | 大径 Major Diameter | 小径 Minor Diameter |
| 20V | 30 | 48/96 | 45° | 16.617 | 15.56 |
| 25V | 40 | 48/96 | 45° | 21.9 | 20.86 |
| 35V | 37 | 40/80 | 45° | 24.38 | 23.10 |
| 45V | 14 | 12/24 | 30° | 32.59 | 27.6 |

VQ 系列叶片泵 Series-vane Pumps

产品简介/Product Introduction

适用于工程机械的高压高性能子母叶片泵。

主要特点为:

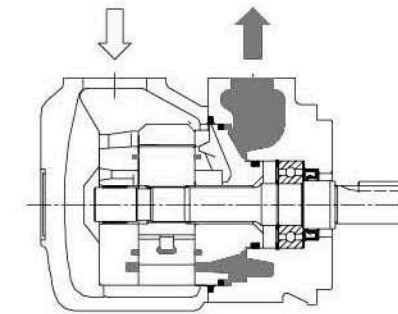
- 1、采用液压平衡的子母叶片结构及10叶片制的设计, 压力更高, 最高达到21MPa。
- 2、采用浮动侧板结构, 可自动补偿端面间隙, 使泵在高压下能保持较高的容积效率。
- 3、侧板采用双金属材料, 提高了抗咬合性能, 使泵的使用寿命更长。

The high-pressure and high-performance Intra-vane pumps for Mobile Equipment.

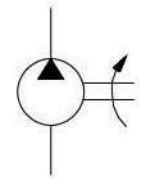
Features:

1. To adopt balanced hydraulic for the struction of Intra-vane and ten-Vane design, higher Pressure, top to 21 MPa.
2. To adopt floating structure for side plate, it will do a compensation for end-face clearance by automatic, so that even the pump under high pressure it can maintain a high volumetric efficiency.
3. The side plate is made of dual-metal material, it improved the seizure resistance. and so that the life of pump will be longer

VQ 系列单泵 Series-single Pumps



液压符号
Hydraulic Sign



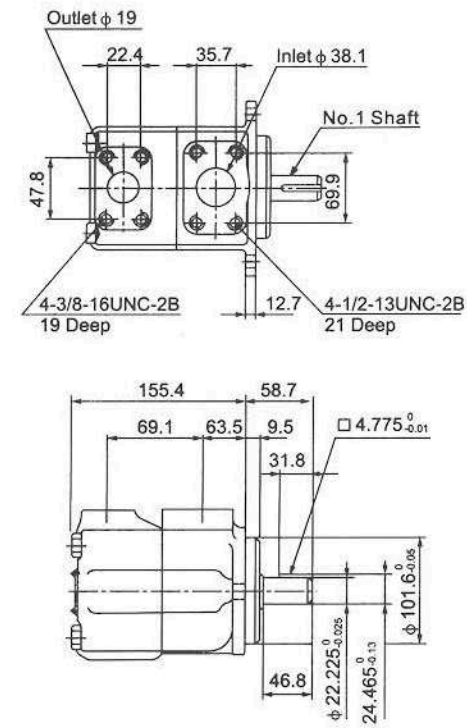
| (F3-) | 25VQ | 19 | A | (F) | -1 | A | 30 | R |
|--|---------------|--|---|---|---|---|-------------------------|--|
| 前注 Note | 系列号 Series | ▲排量代号 Flow code | 油口连接 Port connections | 安装形式 Installation type | 轴伸形式 Shaft type | 出口口位置 Outlet positions | 设计号 Design number | 旋转方向 Rotation |
| 无标记 No-marking 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid | 20VQ | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 | A-SAE 4 螺栓法兰 A-SAE 4 bolt flange | 无标记 No-marking -法兰安装型 Flange Mounting F-脚座安装型 F-Foot Mounition | 1平键轴/Str key 151花键轴/Spline | (从泵的盖端看) (Viewed from cover end of pump) A-进油口对面 Opposite inlet port B-从进油口逆时针90° 90° CCW from inlet C-进油口同侧 Inline with inlet D-从进油口顺时针90° 90° CW from inlet | 30 | (从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 right hand for clockwise L-逆时针旋转 left hand for counter- clockwise |
| | 25VQ | 10, 12, 14, 15, 17, 19, 21, 25 | | | 1平键轴/Str key 86重型平键轴 HD str key 11花键轴/Spline | 20 | | |
| | 35VQ | 21, 25, 30, 32, 35, 38, 45 | | | | | | |
| | 45VQ | 42, 45, 50, 57, 60, 66, 75 | | | | | | |

▲ 在1200r/min和0.69MPa(100psi)下的额定排量
USgpm Flow(USgpm) at 1200r/min and 0.69MPa

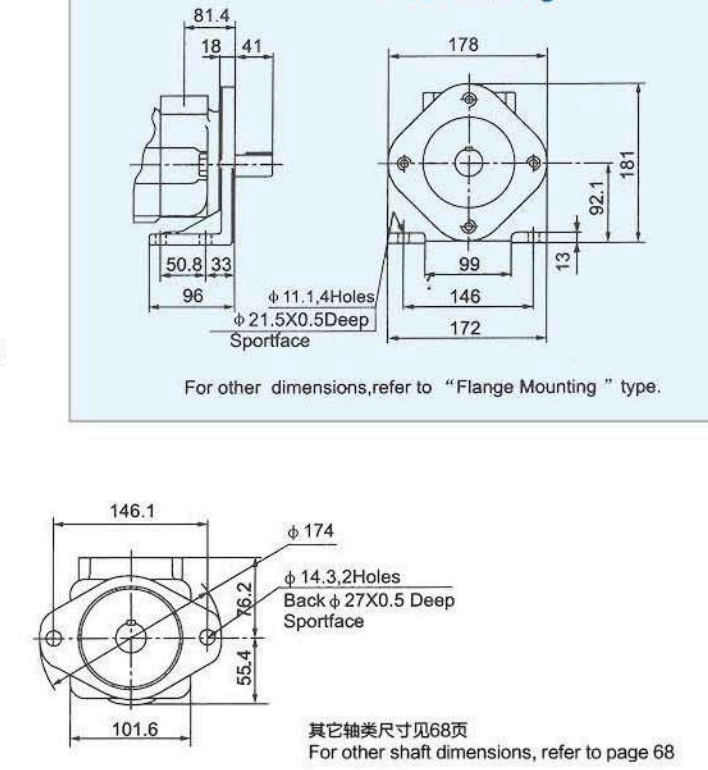
技术参数/Technical Data

| 系列号 series | 排量代号 Flow code (USgpm) | 理论排量 Geometric displace- ment mL/r | 最高使用压力 Max. operating pressure Mpa | 最高转速 Max. speed r/min | 最低转速 Min. speed r/min | |
|---------------|------------------------------|--|--|-----------------------------|-----------------------------|-----|
| 20VQ | 2 | 7(0.43) | 21 | 2700 | 600 | |
| | 3 | 10(0.61) | | | | |
| | 4 | 13(0.79) | | | | |
| | 5 | 16.5(1.01) | | | | |
| | 6 | 19(1.16) | | | | |
| | 7 | 22(1.40) | | | | |
| | 8 | 27(1.67) | | | | |
| | 9 | 30(1.85) | | | | |
| | 10 | 31.5(1.92) | | | | |
| | 11 | 35(2.14) | | | | |
| | 12 | 40(2.44) | 16 | | | |
| | 14 | 45(2.78) | | | | |
| | 25VQ | 10 | 32(1.95) | 21 | 2700 | 600 |
| | | 12 | 38(2.32) | | | |
| 14 | | 43.5(2.65) | | | | |
| 15 | | 47(2.89) | 2500 | | | |
| 17 | | 54(3.30) | | | | |
| 19 | | 60(3.66) | | | | |
| 21 | | 67(4.13) | | | | |
| 25 | 79.2(4.83) | | | | | |
| 35VQ | 21 | 67(4.13) | 21 | 2500 | 600 | |
| | 25 | 81(4.94) | | | | |
| | 30 | 95(5.80) | | | | |
| | 32 | 101(6.16) | | 2400 | | |
| | 35 | 109(6.65) | | | | |
| | 38 | 119(7.26) | | | | |
| | 45 | 143(8.72) | | | | |
| 45VQ | 42 | 134(8.17) | 17.5 | 2400 | 600 | |
| | 45 | 143(8.72) | | | | |
| | 50 | 159(9.70) | | | | |
| | 57 | 181(11.05) | | 2200 | | |
| | 60 | 189(11.53) | | | | |
| | 66 | 210(12.81) | | | | |
| | 75 | 237(14.46) | | | | |

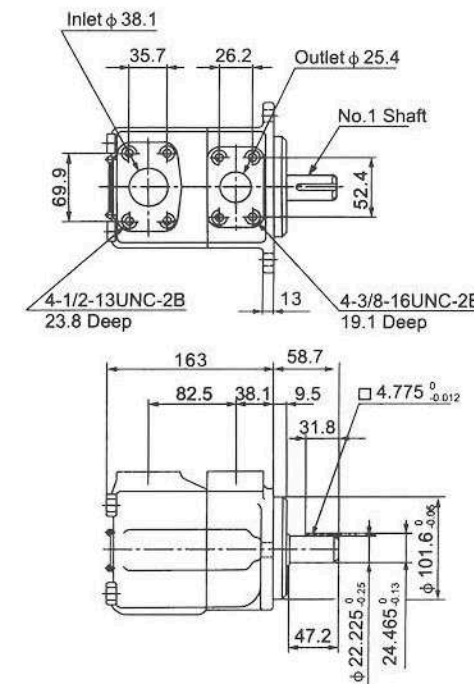
20VQ 法兰安装尺寸
Flange Mounting



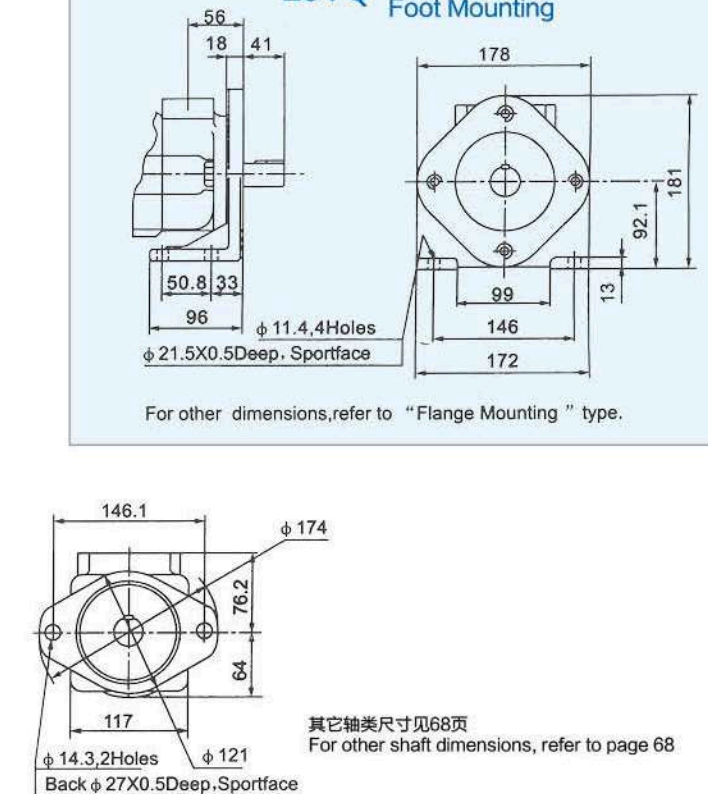
20VQ 脚座安装尺寸
Foot Mounting



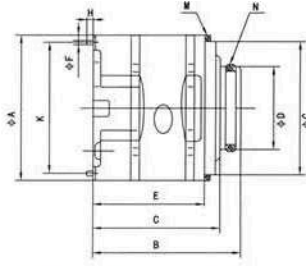
25VQ 法兰安装尺寸
Flange Mounting



25VQ 脚座安装尺寸
Foot Mounting



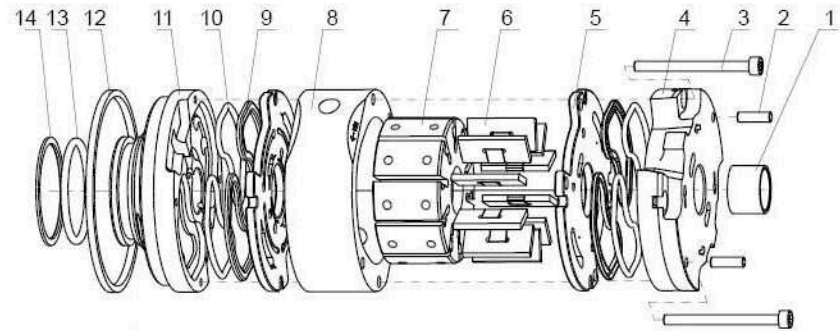
VQ 系列泵芯 Series-cartridge



型号说明/Model Designation

| (F3-) | PC- | 25VQ | 19 | R | 10 |
|---|--|------------------------------|--|--|----------------------|
| 前注 Note | 泵芯标记 Cartridge mark | 系列号 Series | ▲排量代号 Displacement | 旋转方向 Rotation | 设计号 Design number |
| 无标记 No-marking: 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid | PC-单泵泵芯、双联泵轴端泵芯 Cartridge kit of single pump double pump shaft end PCT-双联泵盖端泵芯 Cartridge kit of double pump cover end | 20VQ 25VQ 35VQ 45VQ | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 10, 12, 14, 15, 17, 19, 21, 25 21, 25, 30, 32, 35, 38, 45 42, 45, 50, 57, 60, 66, 75 | (从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 right hand for clockwise L-逆时针旋转 left hand for counter-clockwise | 10 |

▲ 在1200r/min和0.69MPa(100psi)下的额定排量;与相应系列、规格的油泵性能参数一致,详见VQ系列单泵的性能参数。
USgpm Flow(USgpm) at 1200r/min and 0.69MPa.
The data of relevant series, model are unanimous. Please see VQ series-single pumps data.



| 序号NO. | 名称Part | 数量Qty | 序号NO. | 名称Part | 数量Qty | 序号NO. | 名称Part | 数量Qty |
|-------|--|-------|-------|-------------------------------|-------|-------|---------------------------|-------|
| 1 | 滑动轴承 Sliding bearing | 1 | 6 | 叶片 vane kit | 10 | 11 | 压力侧板 outlet support plate | 1 |
| 2 | 销 Pin | 2 | 7 | 转子 Rotor | 1 | 12 | 挡圈 Retainer | 1 |
| 3 | 内六角圆柱头螺钉 Hexagon socket head cap screws | 2 | 8 | 定子 cam ring | 1 | 13 | O型圈 O shape retainer | 1 |
| 4 | 侧板 inlet support plate | 1 | 9 | 异形挡圈 irregular shape retainer | 4 | 14 | 挡圈 Retainer | 1 |
| 5 | 配油盘 valve plate | 2 | 10 | O型圈 O shape retainer | 4 | | | |

技术规格/Specifications

| 系列号 Series | ΦA | B | C | ΦD | E | ΦF | ΦG | H | K | M(挡圈Gasket) | N(O形圈O-Ring) |
|---------------|--------|-------|-------|------|-------|-----|------|----|--------|-----------------|--------------|
| 20VQ | 82.55 | 81.5 | 70.1 | 47.2 | 61.5 | 4.8 | 76.2 | 7 | 73.8 | 82.76×76.26×3.5 | 40×3.55 |
| 25VQ | 96.8 | 98.8 | 87 | 52.2 | 71.2 | 4.8 | 90.5 | 7 | 88.19 | 97×91×3.5 | 44×3.53 |
| 35VQ | 114.3 | 117.7 | 105 | 72.2 | 90.3 | 6.4 | 108 | 7 | 103.94 | 114.5×108.5×3.5 | 63.09×3.53 |
| 45VQ | 133.35 | 141.1 | 129.6 | 80.2 | 105.5 | 6.4 | 127 | 11 | 123.8 | 133.6×127.6×3.5 | 71×3.55 |

| 系列号 Series | 转子内花键齿廓参数 Inside spline tooth outline parameter of rotor | | | | |
|---------------|---|-------------|-----------------------|----------------------|----------------------|
| | 齿数 Number of teeth | 径节 Pitch | 压力角 Pressure angle | 大径 Major diameter | 小径 Minor diameter |
| 20VQ | 30 | 48/96 | 45° | 16.617 | 15.56 |
| 25VQ | 40 | 48/96 | 45° | 21.9 | 20.86 |
| 35VQ | 37 | 40/80 | 45° | 24.38 | 23.10 |
| 45VQ | 14 | 12/24 | 30° | 32.59 | 27.6 |

2520VQSV10S 三联泵 Series-treble Pumps

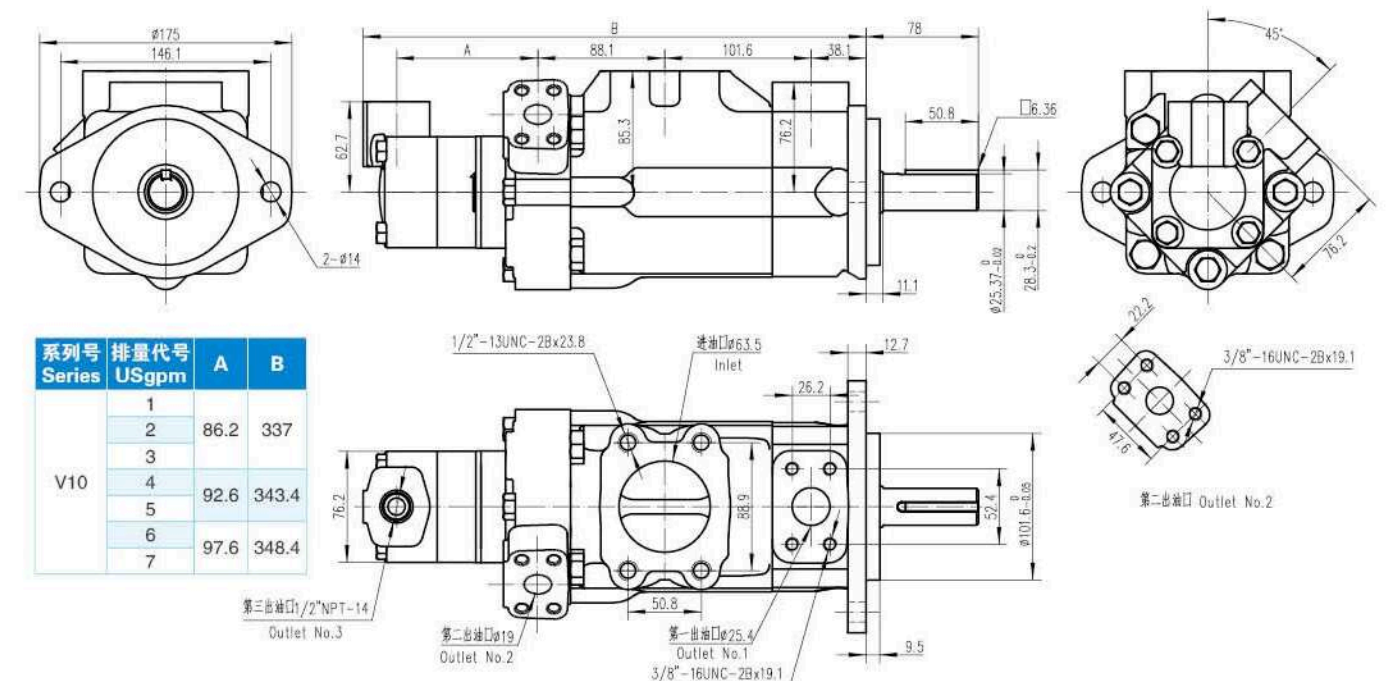
型号说明/Model Designation

| (F3-) | 2520VQSV10S | -21 | A | 7 | -P | 7 | -86 | C | B | C | -20 | R |
|--|---------------|---------------------------------------|--|---|---|---|---------------------------|---|---|---|-------------------------|--|
| 前注 Note | 系列号 Series | 轴端泵排量 代号 Flow-shaft end code | 双泵油口连接 Double pump port connection | 中间泵排量 代号 Flow-mid code | 盖端泵油口连接 Flow-cover end pump port connction | 盖端泵排 量代号 Flow- cover end code | 轴伸形 式 Shaft type | 第一出 油口位 置 No.1 Outlet positions | 第二出 油口位 置 No.2 Outlet positions | 第三出 油口位 置 No.3 Outlet positions | 设计号 Design number | 旋转方向 Rotation |
| 无标记 No-marking: 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol- fluid F3: 磷酸酯液 phosphate ester fluid | 2520VQSV10S | 10, 12, 14, 15, 17, 19, 21, 25 | A- SAE 4螺栓法兰 A-SAE 4-bolt flange | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 | 1/2"NPT-14 | 1, 2, 3, 4, 5, 6, 7 | -86 轴 Shaft | 见下表 see below | 见下表 see below | 见下表 see below | -20 | (从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 right hand for clockwise L-逆时针旋转 left hand for counter- clockwise |

出油口位置代号/Outlet oil port position code

| 从盖端观察的位置/Views from cover end of pump | No.1 出油口/No.1 Outlet | No.2 出油口/No.2 Outlet | No.3 出油口/No.3 Outlet |
|---|----------------------|----------------------|----------------------|
| 在进油口对侧 Oppsite of the inlet oil port | A | - | A |
| 从进油口逆时针135° CCW from the inlet oil port | - | A | - |
| 从进油口逆时针90° CCW from the inlet oil port | B | - | B |
| 从进油口逆时针45° CCW from the inlet oil port | - | B | - |
| 在进油口同侧 Same side of the inlet oil port | C | - | C |
| 从进油口顺时针45° CW from the inlet oil port | - | C | - |
| 从进油口顺时针90° CW from the inlet oil port | D | - | D |
| 从进油口顺时针135° CW from the inlet oil port | - | D | - |

2520VQSV10S安装连接尺寸/Installation Dimensions



| 系列号 Series | 排量代号 USgpm | A | B |
|---------------|---------------|------|-------|
| V10 | 1 | | |
| | 2 | 86.2 | 337 |
| | 3 | | |
| | 4 | 92.6 | 343.4 |
| | 5 | | |
| | 6 | 97.6 | 348.4 |
| | 7 | | |