



ITM

ITMH

ITMS

STFC

STFD

CRM-HA

CRM-HB

CRM-PS

SMA6V

SMA2F

# 产品特点 / Product Feature

ITMH高压高转速液压马达是在ITM系列液压马达的基础上进行了优化改进，其内部集成了多个阀组，对马达的关键性摩擦副也进行了重新设计，提高了马达的综合性能和可靠性。

相比ITM马达，其主要性能特点如下：

- 额定工作压力21Mpa，提升25%；
- 额定转速提升10%；
- 额定功率提高10%以上；
- 可靠性和使用寿命均有所提升。

ITMH high pressure high speed hydraulic motor is an upgrate of the ITM series,its internal integrated with multiple valve group, the critical friction pair is redesigned,these improved the comprehensive performance and reliability of the motor remarkably.

Compared with the ITM series motor,the main characteristics are as followes:

- The rated pressure is 21 Mpa, the pressure increased by 25%;
- Rated Speed increased by 10%;
- Rated Power increased by more than 10%;
- Reliability and service life are improved.

# 计算公式 / Calculation

- 1、液压马达的理论输出扭矩（ Theoratical output torque ）： $M=0.159 (P_1-P_2) q(N \cdot M)$   
 液压马达的实际输出扭矩（ Practical output torque ）： $M_A=0.159 (P_1-P_2) q \cdot \eta_m(N \cdot M)$

式中（ Where ）： P<sub>1</sub>、P<sub>2</sub> —— 分别为液压马达的入口和出口压力（ MPa ） inlet and outlet pressure of motors(MPa)  
 q —— 液压马达的排量 displacement(mL/r)  
 $\eta_m$  —— 液压马达的机械效率 mechanical efficiency(%)

- 2、液压马达的理论转速（ Theoratical output speed ）： $n=\frac{Q}{q}(r/min)$

液压马达的实际转速（ Practical speed ）： $n_A=\frac{Q}{q} \cdot \eta_v(r/min)$

- 3、液压马达的理论输出功率（ Theoratical power ）： $N=\frac{M \times n}{9550}(kw)$

液压马达的实际输出功率（ Practical output power ）： $N_A=\frac{Q(P_1-P_2)}{60000} \eta_m \cdot \eta_v(kw)$

式中（ Where ）： n —— 液压马达的转速 motor speed(r/min)  
 Q —— 输入液压马达的流量 input flow rate(mL/min)  
 $\eta_v$  —— 液压马达的容积效率 volumetric efficiency(%)



# ITMH 系列/ ITMH Serie



## 产品标识说明/ Ordering Code

\*\*\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*-\*-\*-\*  
1 2 3 4 5 6 7 8 9 10 11

1、马达系列代号 / Model-ITMH

2、型号 / Type

3、名义排量 / Nominal Displacement (ml/r)

4、输出轴形式 / Shaft Options

(1) 无字母表示标准矩形花键轴(以外径定心)

No symbol--standard rectangle spline shaft(the center is up to outside diameter)

(2) B表示平键轴 B--Parallel key shaft

(3) D安装连接尺寸与昆山液压件厂1JMD型同排量液压马达相同

D--installation dimension same as 1 JMD series motor(KunSan HYD element plant)

(4) I表示内花键(以内径定心) I--female spline

(5) GM, SL表示安装连接尺寸与意大利SAI公司生产的M系列, L系列, 液压马达相同, 注脚数字表示不同种类安装尺寸

GM, SL--the installation dimension same as M series, L series of SAI ITALY.

5、通油盘种类/Distributors

订货时若不注明, 则按标准配置(见各系列马达外形尺寸图)。如有特殊需要, 请参考A-17页, 并在订货中注明。

If you have special request of dimensions, please state it in order, or we will treat it as our standard. ( distributor options, refer to Page A-17 )

6、有无垫块/block

1-有垫块 1-with block

0-无垫块 0-without block

7、进出口口螺纹/ I / O port thread

标准螺纹可不标。如有特殊需要请参考A-17页, 并在订货中说明。

For special thread, please state in your order, or we will treat it as our standard. ( thread options, refer to Page A-17 )

8、冲洗功能/Flushing function

C: 单向冲洗 Unidirectional

S: 双向冲洗 Double-direction flushing

0: 不带冲洗功能 Without flushing function

9、马达转向/Motor steering

S: 顺转 Clockwise direction

N: 逆转 Counter clockwise direction

10、油口角度/ Port direction

请参考A-17页, 并在订货中说明。

Please refer to page A-17 and state in your order.

11、其它设计参数/Others





## 技术参数/ Technical Specification

ITM

ITMH

ITMS

STFC

STFD

CRM-HA

CRM-HB

CRM-PS

SMA6V

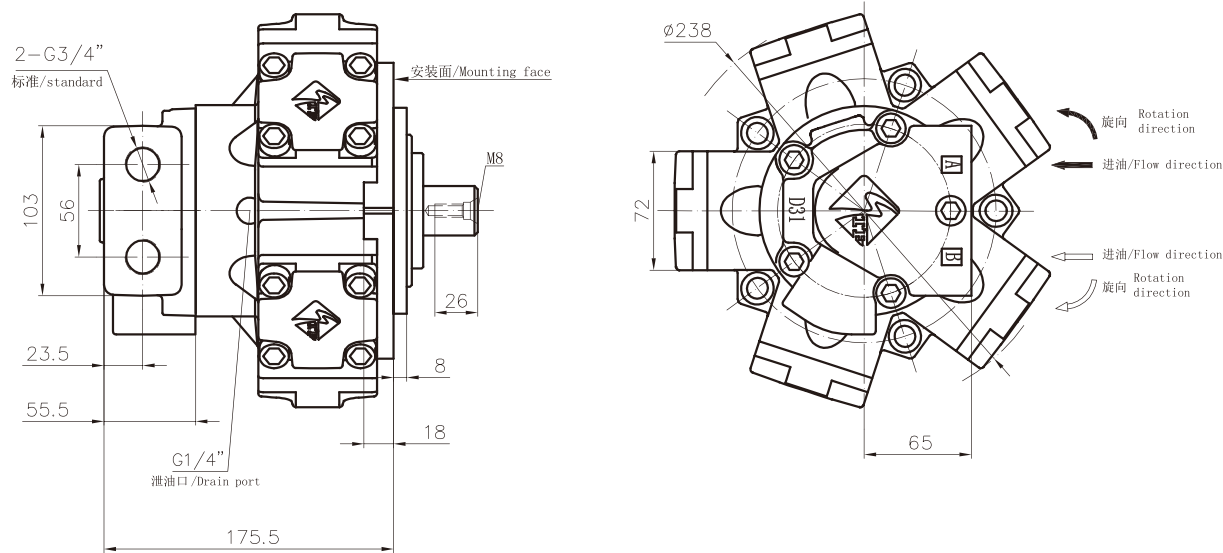
SMA2F

| 型号<br>TYPE   | 理论排量<br>Theory<br>Displacement | 压力/Pressure            |                       | 扭矩/Torque            |                     | 最高转速<br>Max.Speed | 额定功率<br>Rated Power | 重量<br>Weight |
|--------------|--------------------------------|------------------------|-----------------------|----------------------|---------------------|-------------------|---------------------|--------------|
|              |                                | 额定压力<br>Rated Pressure | 最高压力<br>Max. Pressure | 额定扭矩<br>Rated Torque | 单位扭矩<br>Unit Torque |                   |                     |              |
|              |                                | MPa                    | MPa                   | N.m                  | N.m/MPa             |                   |                     |              |
| HITMH01-63   | 64                             | 21                     | 25                    | 182                  | 9                   | 650               | 7                   | 25           |
| HITMH01-80   | 78                             | 21                     | 25                    | 221                  | 11                  | 600               | 7                   |              |
| HITMH01-100  | 96                             | 21                     | 25                    | 272                  | 13                  | 550               | 9                   |              |
| HITMH01-125  | 126                            | 21                     | 23                    | 358                  | 17                  | 550               | 10                  |              |
| HITMH01-160  | 159                            | 21                     | 23                    | 451                  | 21                  | 500               | 10                  |              |
| HITMH02-100  | 113                            | 21                     | 25                    | 357                  | 15                  | 550               | 9                   | 32           |
| HITMH02-150  | 159                            | 21                     | 25                    | 479                  | 21                  | 450               | 13                  |              |
| HITMH02-175  | 180                            | 21                     | 25                    | 542                  | 24                  | 400               | 14                  |              |
| HITMH02-200  | 206                            | 21                     | 25                    | 622                  | 28                  | 350               | 15                  |              |
| HITMH03-175  | 181                            | 21                     | 25                    | 546                  | 24                  | 400               | 15                  | 40           |
| HITMH03-200  | 201                            | 21                     | 25                    | 599                  | 27                  | 360               | 15                  |              |
| HITMH03-250  | 254                            | 21                     | 23                    | 767                  | 34                  | 330               | 18                  |              |
| HITMH03-300  | 289                            | 21                     | 23                    | 872                  | 39                  | 320               | 16                  |              |
| HITMH03-350  | 340                            | 21                     | 23                    | 1008                 | 46                  | 300               | 15                  |              |
| HITMH03-400  | 380                            | 21                     | 23                    | 1134                 | 51                  | 300               | 17                  |              |
| HITMH06-400  | 397                            | 21                     | 25                    | 1176                 | 54                  | 320               | 31                  | 62           |
| HITMH06-450  | 452                            | 21                     | 25                    | 1365                 | 61                  | 320               | 34                  |              |
| HITMH06-500  | 491                            | 21                     | 25                    | 1470                 | 66                  | 300               | 36                  |              |
| HITMH06-600  | 594                            | 21                     | 25                    | 1785                 | 80                  | 300               | 40                  |              |
| HITMH06-700  | 683                            | 21                     | 23                    | 2058                 | 92                  | 280               | 41                  | 76           |
| HITMH08-600  | 617                            | 21                     | 25                    | 1848                 | 83                  | 300               | 41                  |              |
| HITMH08-700  | 710                            | 21                     | 23                    | 2142                 | 96                  | 280               | 44                  |              |
| HITMH08-800  | 810                            | 21                     | 23                    | 2436                 | 109                 | 240               | 43                  |              |
| HITMH08-900  | 889                            | 21                     | 23                    | 2688                 | 120                 | 220               | 41                  | 101          |
| HITMH11-700  | 682                            | 21                     | 25                    | 2058                 | 92                  | 300               | 46                  |              |
| HITMH11-800  | 782                            | 21                     | 25                    | 2352                 | 106                 | 300               | 52                  |              |
| HITMH11-900  | 894                            | 21                     | 25                    | 2688                 | 121                 | 280               | 56                  |              |
| HITMH11-1000 | 981                            | 21                     | 23                    | 2961                 | 133                 | 250               | 55                  |              |
| HITMH11-1100 | 1104                           | 21                     | 23                    | 3318                 | 149                 | 220               | 60                  |              |
| HITMH11-1200 | 1234                           | 21                     | 23                    | 3708                 | 167                 | 200               | 53                  | 176          |
| HITMH11-1300 | 1301                           | 21                     | 23                    | 3692                 | 176                 | 200               | 51                  |              |
| HITMH16-1400 | 1413                           | 21                     | 25                    | 4263                 | 191                 | 220               | 79                  |              |
| HITMH16-1600 | 1648                           | 21                     | 25                    | 4935                 | 223                 | 220               | 88                  |              |
| HITMH16-1800 | 1814                           | 21                     | 23                    | 5418                 | 245                 | 200               | 86                  |              |
| HITMH16-2000 | 2034                           | 21                     | 23                    | 5773                 | 275                 | 180               | 79                  |              |
| HITMH16-2400 | 2267                           | 21                     | 23                    | 6434                 | 306                 | 180               | 79                  |              |

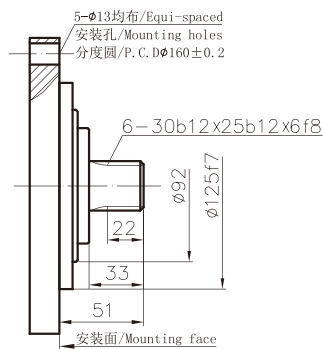
ITMH01 系列/ ITMH01 Serie



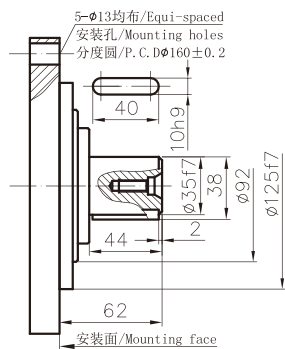
ITMH01 外形及安装尺寸/ ITMH01 Installation Dimensions



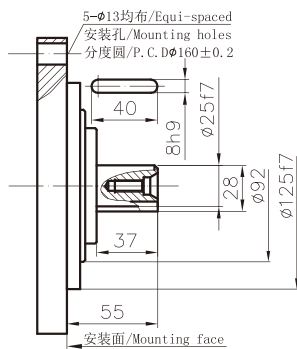
标准外花键 : ITMH01-\*\*  
Standard Involute Spline



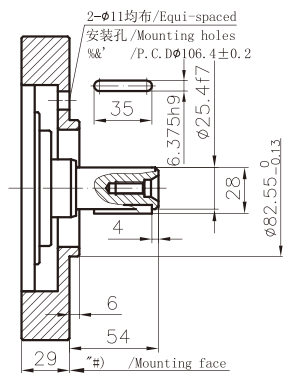
标准平键 : ITMH01-\*\*B  
Standard Parallel Key



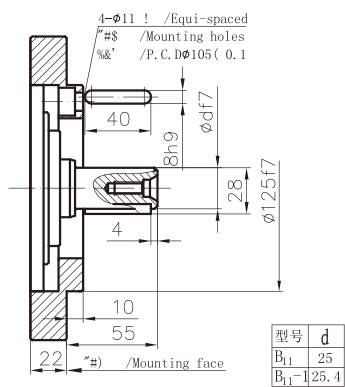
ITMH01-\*\*B<sub>28</sub>



ITMH01-\*\*B<sub>3</sub>

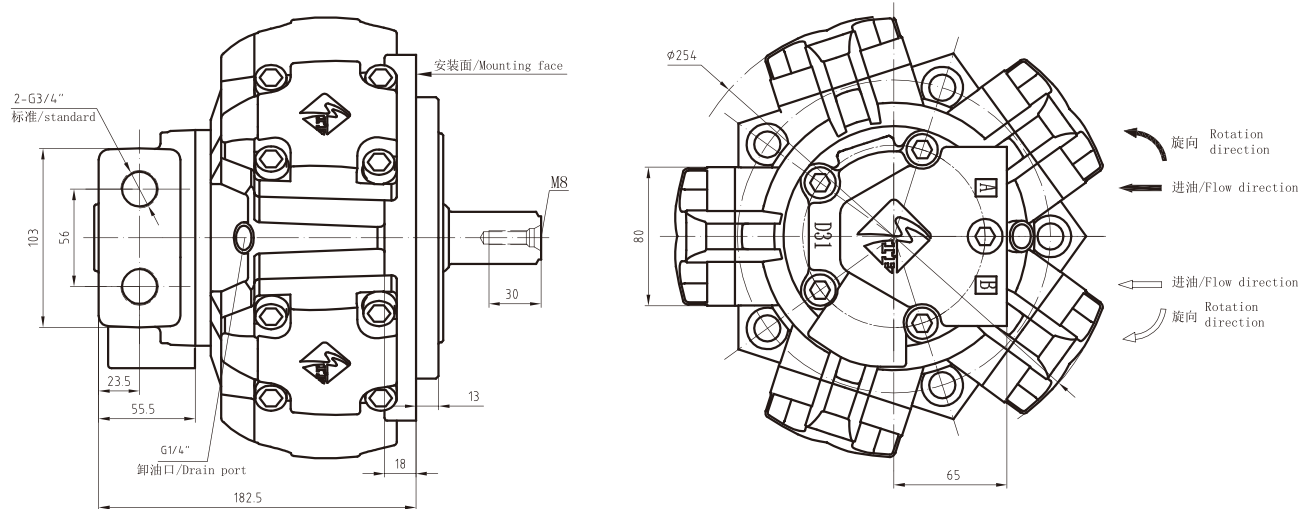


ITMH01-\*\*B<sub>11</sub>、B<sub>11</sub>-1



| 型号                 | d    |
|--------------------|------|
| B <sub>11</sub>    | 25   |
| B <sub>11</sub> -1 | 25.4 |

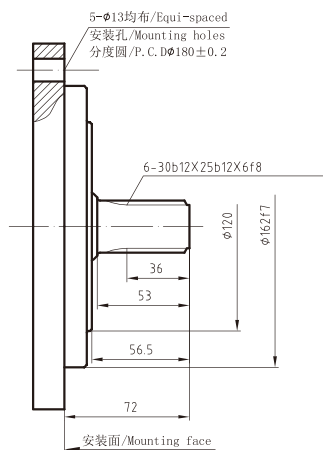
## ITMH02 外形及安装尺寸/ ITM02 Installation Dimensions



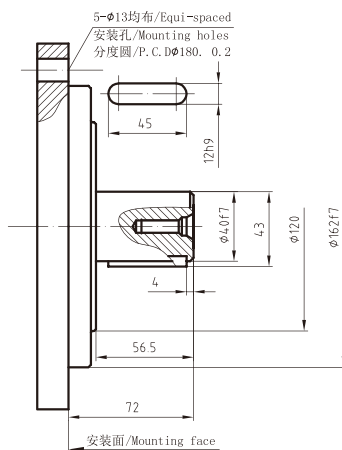
标准外花键 : ITMH02--  
Standard Involute Spline

标准平键 : ITMH02--B  
Standard Parallel Key

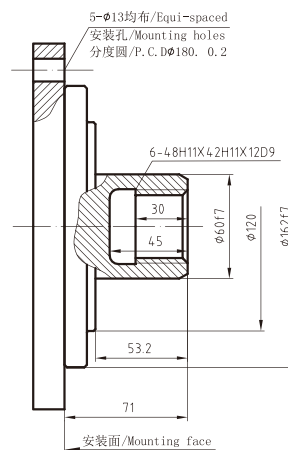
标准内花键 : ITMH02--\*I  
Standard Female Spline



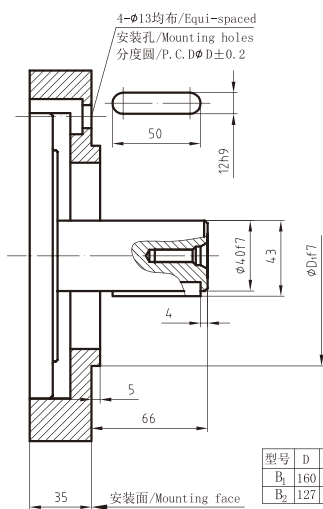
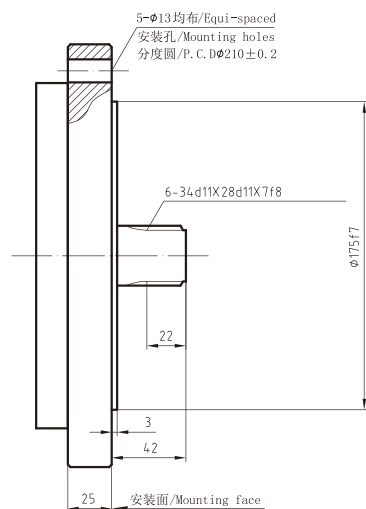
ITMH02--SL<sub>1</sub>



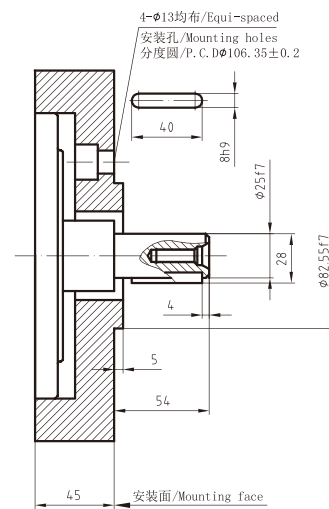
ITMH02--B<sub>1</sub>, B<sub>2</sub>



ITMH02--B<sub>24</sub>



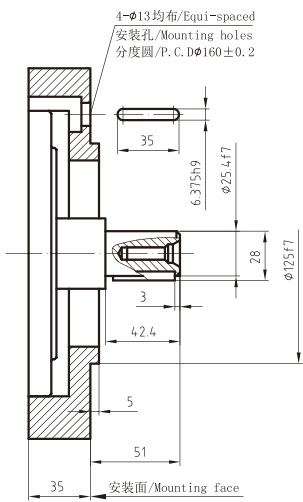
| 型号             | D   | D <sub>1</sub> |
|----------------|-----|----------------|
| B <sub>1</sub> | 160 | 125            |
| B <sub>2</sub> | 127 | 100            |



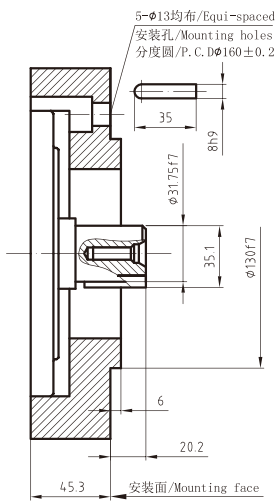
ITMH02 系列/ ITMH02 Serie



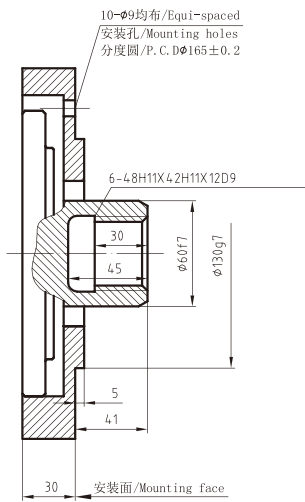
ITMH02-\*\*-B<sub>3</sub>



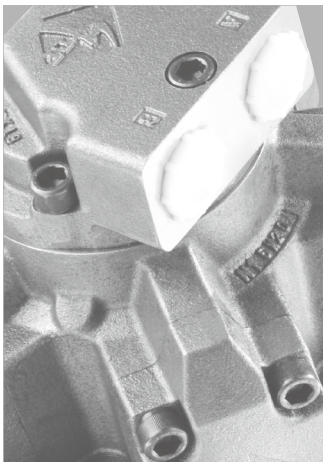
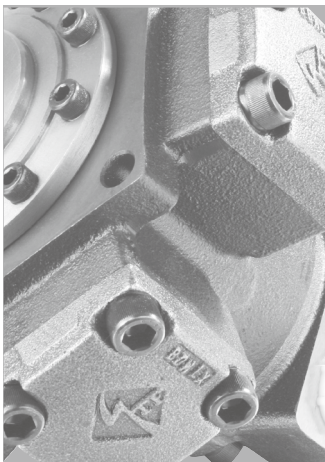
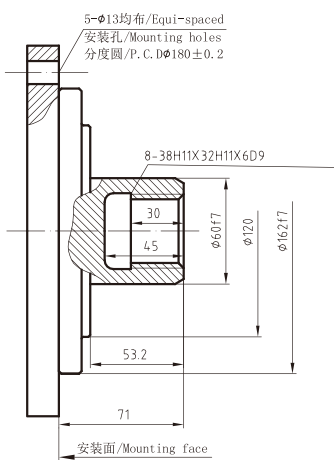
ITMH02-\*\*-B<sub>14</sub>



ITMH02-\*\*-I<sub>01</sub>、I<sub>02</sub>



ITMH02-\*\*-I<sub>03</sub>



ITM

ITMH

ITMS

STFC

STFD

CRM-HA

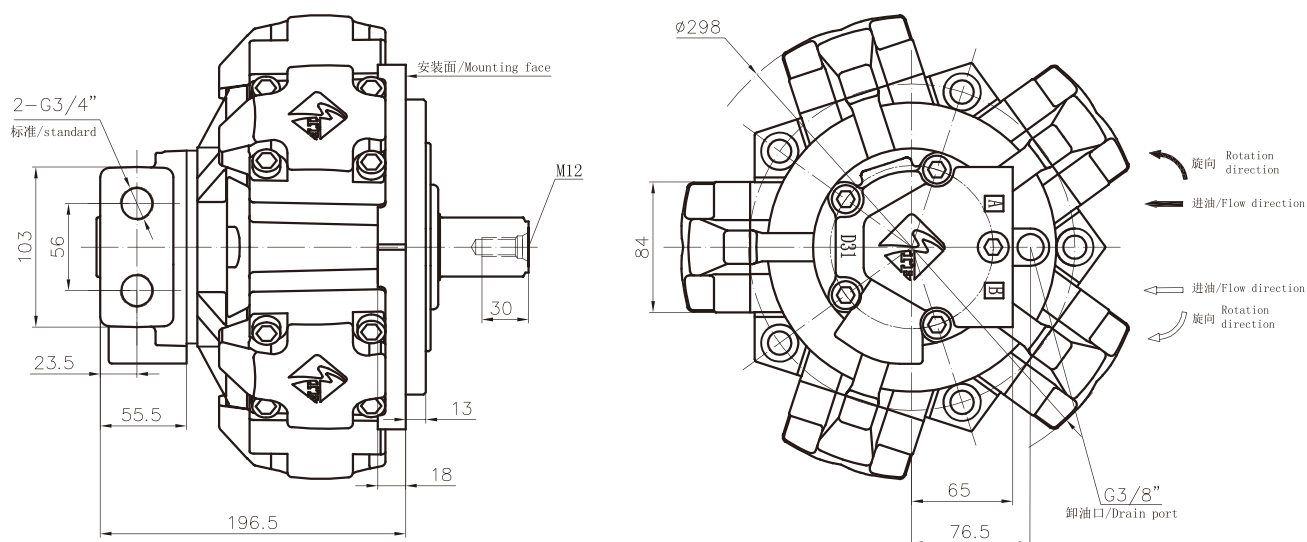
CRM-HB

CRM-PS

SMA6V

SMA2F

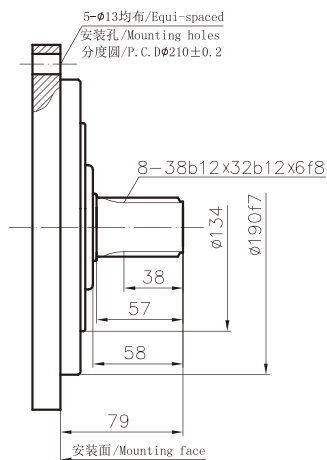
## ITMH03 外形及安装尺寸/ ITMH03 Installation Dimensions



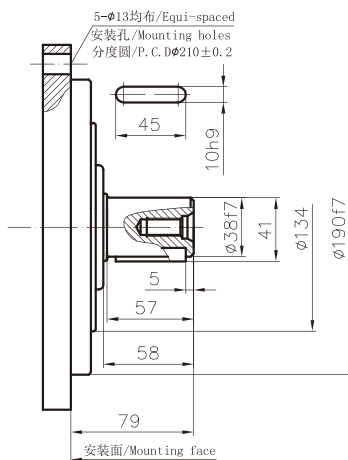
标准外花键 : ITMH03--\*\*  
Standard Involute Spline

标准平键 : ITMH03--\*\*B  
Standard Parallel Key

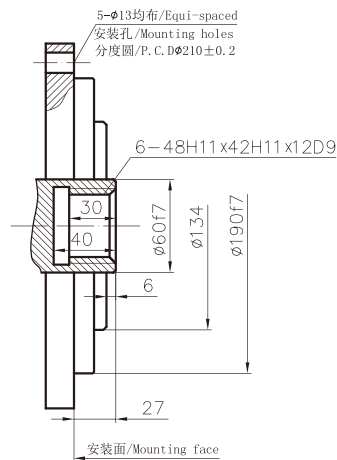
标准内花键 : ITMH03--\*\*I  
Standard Female Spline



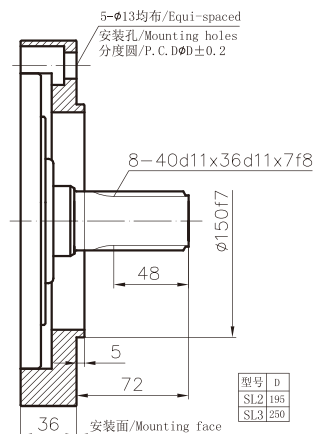
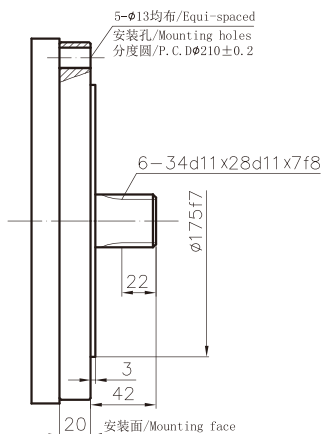
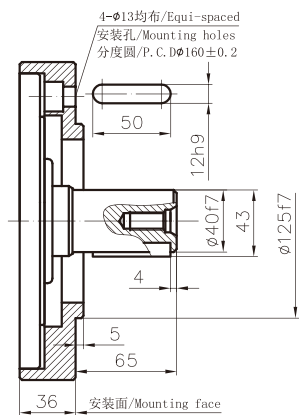
ITMH03--\*\*B<sub>1</sub>



ITMH03--\*\*SL<sub>1</sub>



ITMH03--\*\*SL<sub>2</sub>, SL<sub>3</sub>



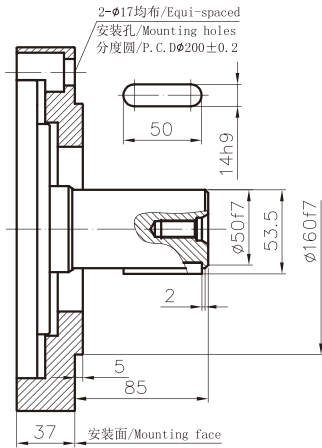
| 型号  | D   |
|-----|-----|
| SL2 | 195 |
| SL3 | 250 |



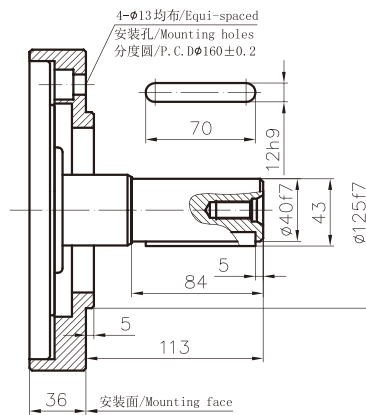
# ITMH03 系列/ ITM03 Serie

**STF**  
HYDRAULIC TRANSMISSIONS

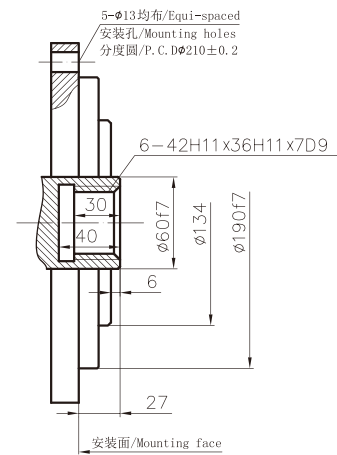
ITMH03-\*\*-B<sub>2</sub>



ITMH03-\*\*-B<sub>5</sub>



ITMH03-\*\*-I<sub>42</sub>



ITM

ITMH

ITMS

STFC

STFD

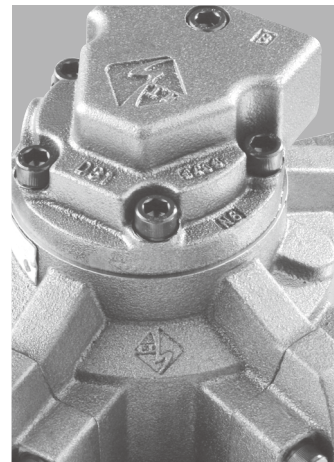
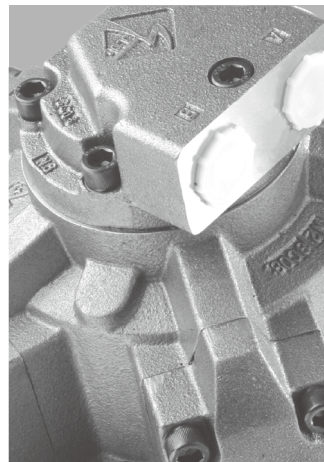
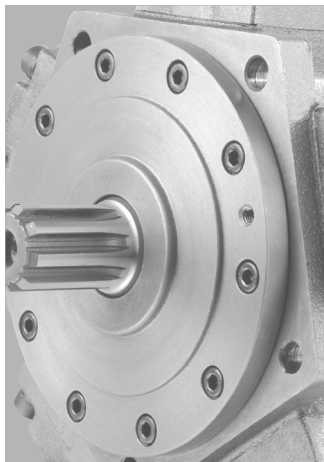
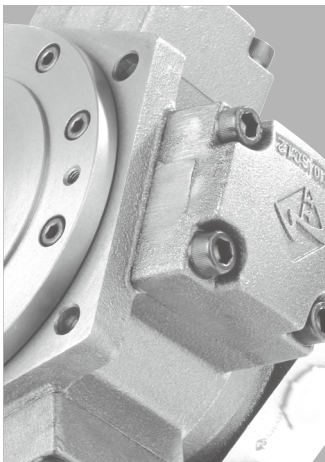
CRM-HA

CRM-HB

CRM-PS

SMA6V

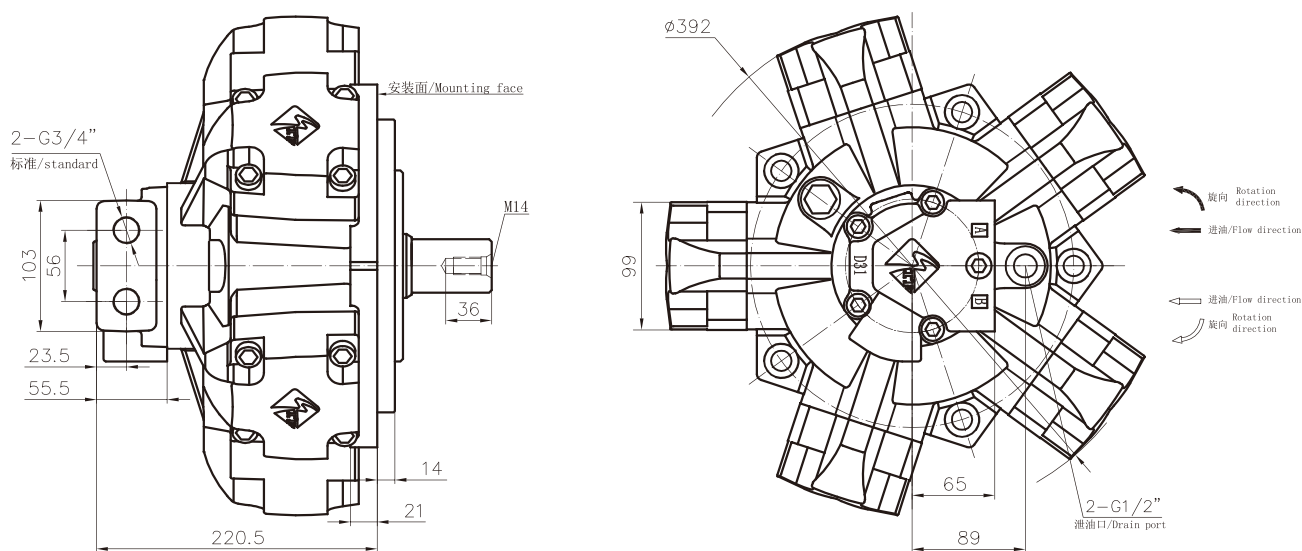
SMA2F



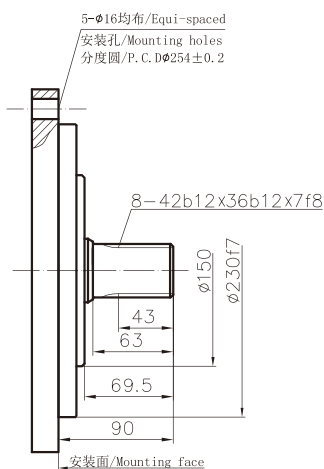
[www.stfgroup.com.cn](http://www.stfgroup.com.cn)

A-09

## ITMH06 外形及安装尺寸/ ITMH06 Installation Dimensions

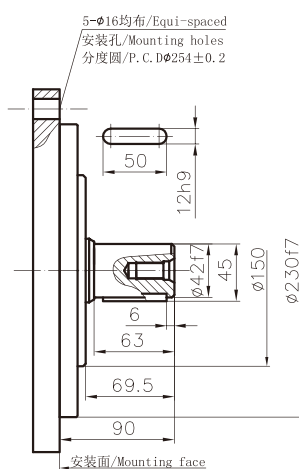


标准外花键 : ITMH06-\*\*\*  
Standard Involute Spline



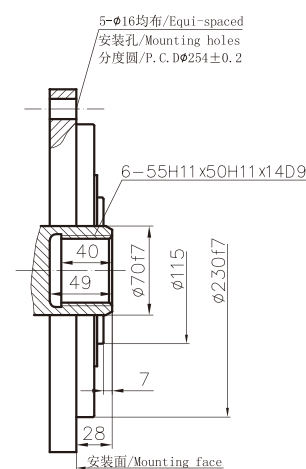
ITMH06-\*\*\*SL<sub>3</sub>

标准平键 : ITMH06-\*\*\*B  
Standard Parallel Key

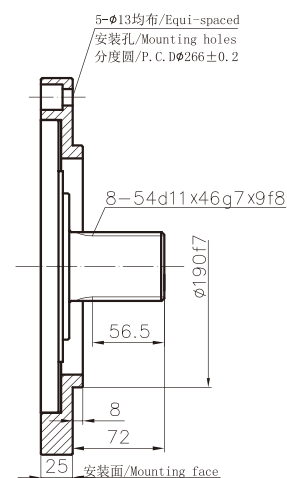
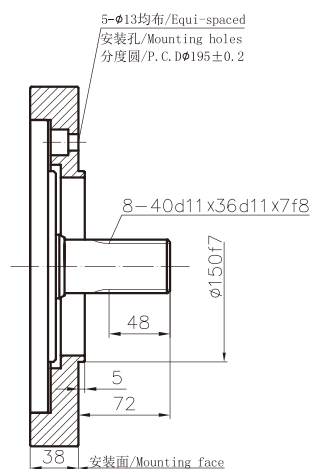
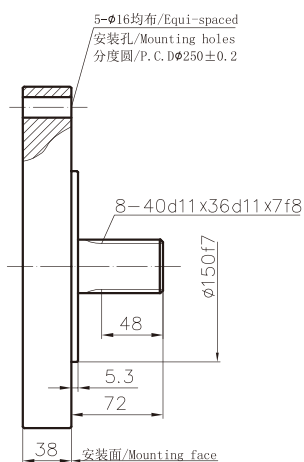


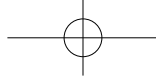
ITMH06-\*\*\*SL<sub>2</sub>

标准内花键 : ITMH06-\*\*\*I  
Standard Female Spline



ITMH06-\*\*\*N

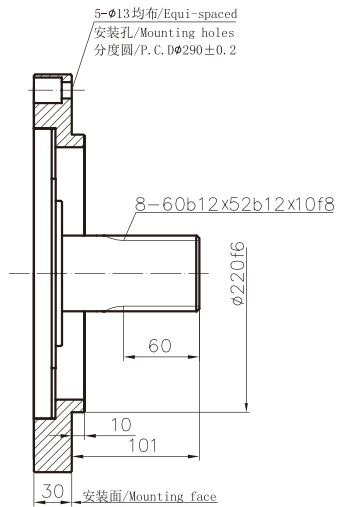




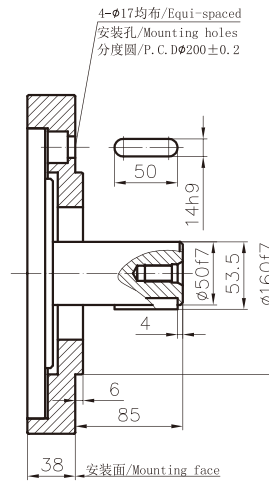
# ITMH06 系列/ ITMH06 Serie

**STF**  
HYDRAULIC TRANSMISSIONS

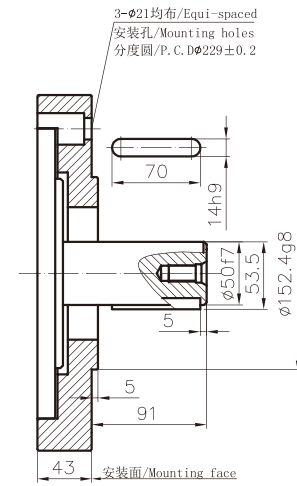
ITMH06--\*\*N<sub>1</sub>



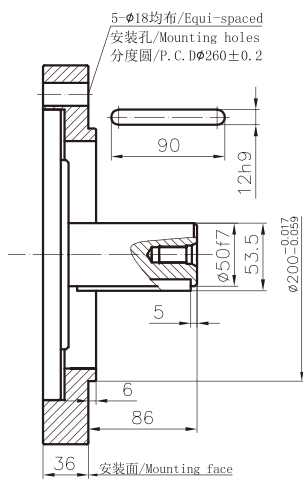
ITMH06--\*\*B<sub>2</sub>



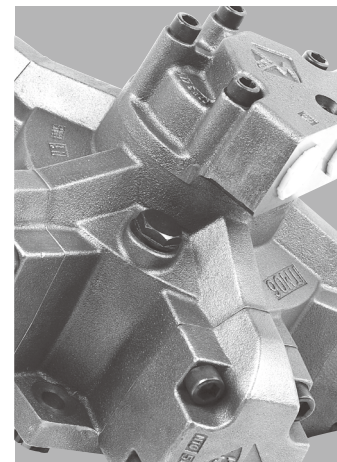
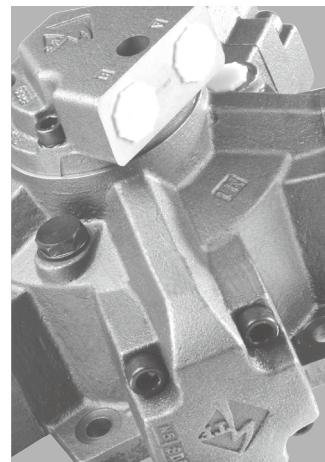
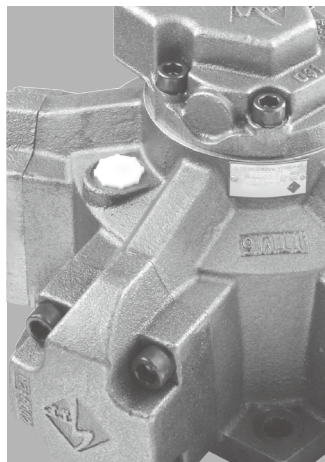
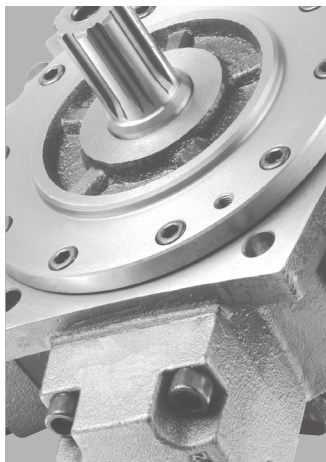
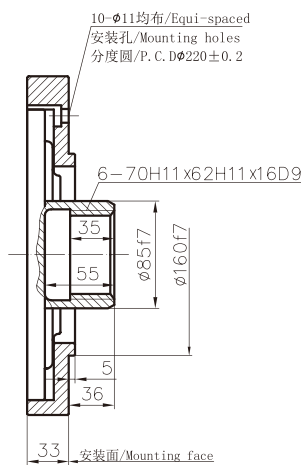
ITMH06--\*\*B<sub>4</sub>



ITMH06--\*\*B<sub>13</sub>



ITMH06--\*\*I<sub>11</sub>



ITM

ITMH

ITMS

STFC

STFD

CRM-HA

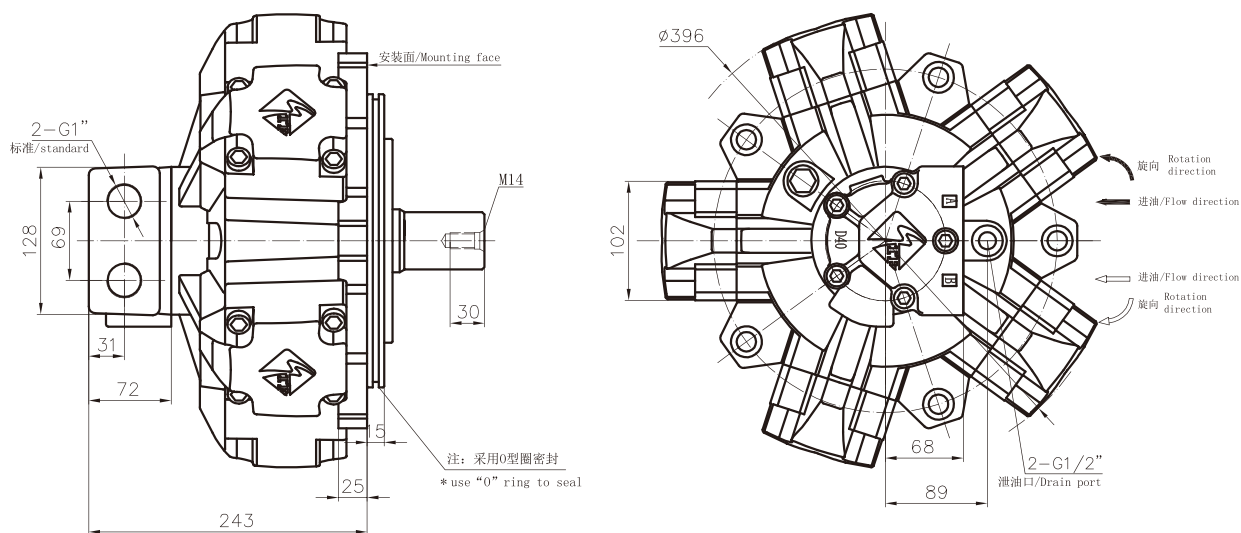
CRM-HB

CRM-PS

SMA6V

SMA2F

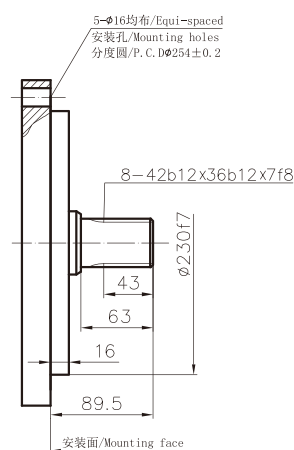
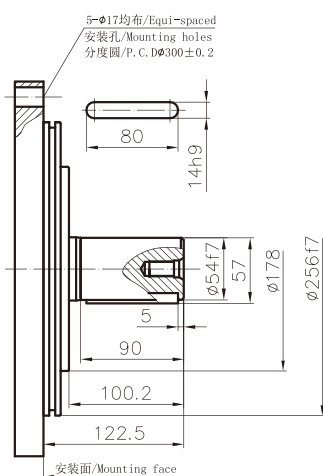
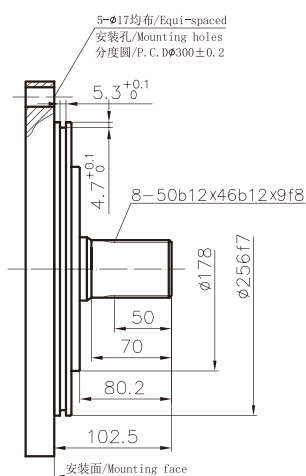
## ITMH08 外形及安装尺寸/ ITMH08 Installation Dimensions



标准外花键 : ITMH08--\*\*  
Standard Involute Spline

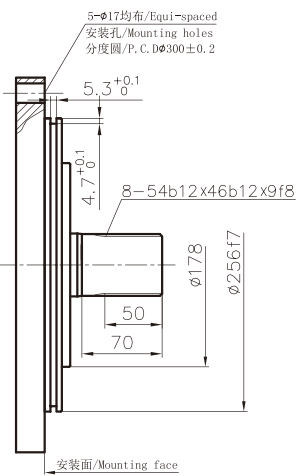
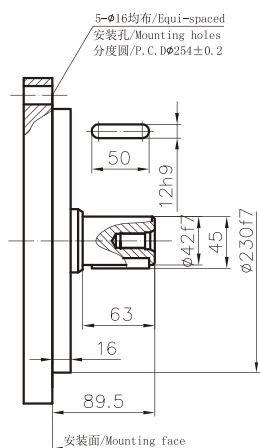
标准平键 : ITMH08--\*\*B  
Standard Parallel Key

ITMH08--\*\*6M



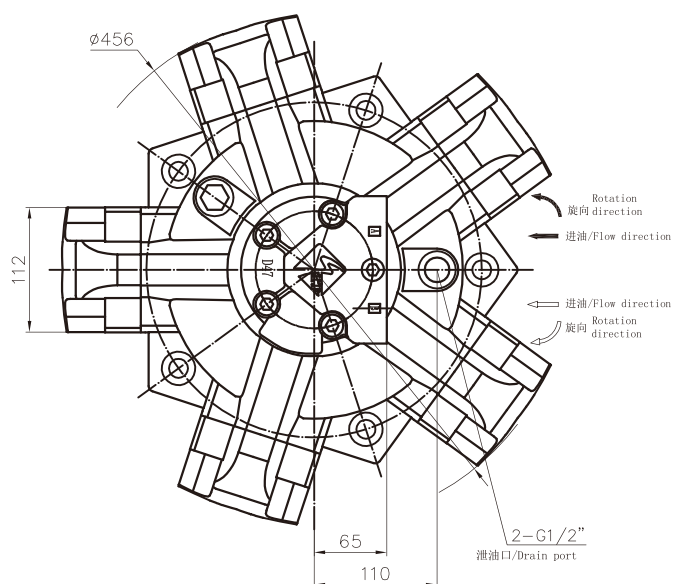
ITMH08--\*\*6MB

ITMH08--H54

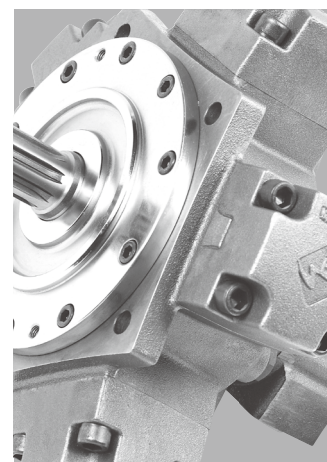
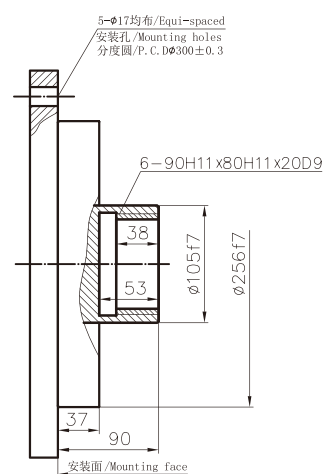


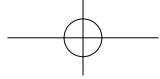


**STF**  
HYDRAULIC TRANSMISSIONS



标准内花键 : ITMH11-\*\*\*  
Standard Female Spline :





ITM

ITMH

ITMS

STFC

STFD

CRM-HA

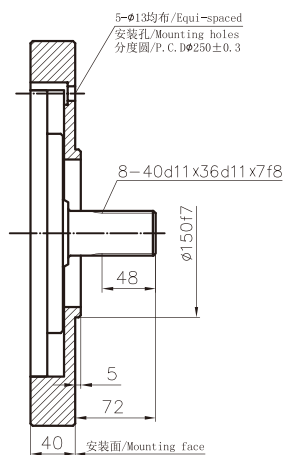
CRM-HB

CRM-PS

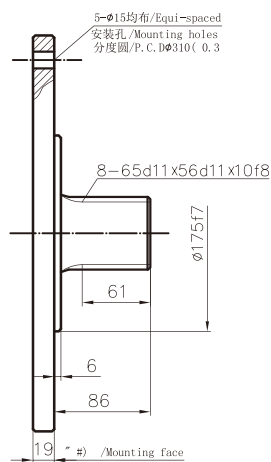
SMA6V

SMA2F

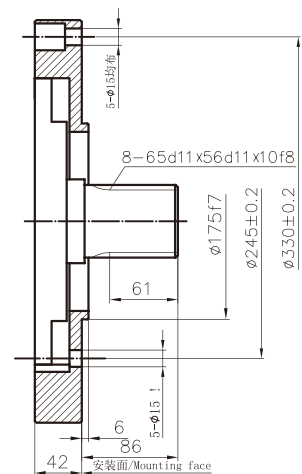
ITMH11-\*\*\*SL<sub>3</sub>



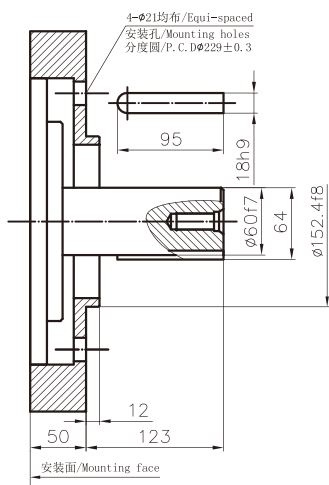
ITMH11-\*\*\*SL<sub>4</sub>



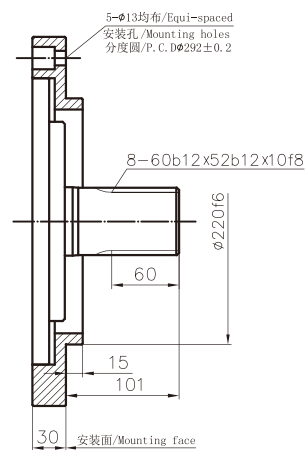
ITMH11-\*\*\*SM<sub>4</sub>



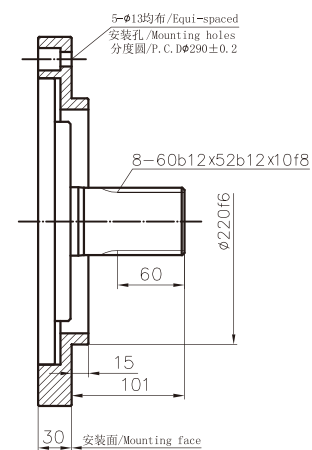
ITMH11-\*\*\*B<sub>6</sub>



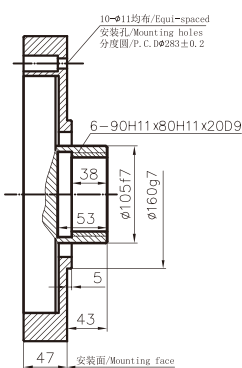
ITMH11-\*\*\*N<sub>1</sub>



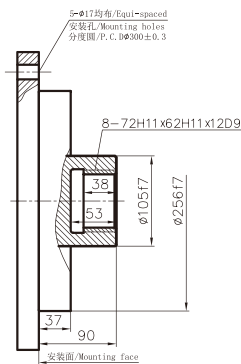
ITMH11-\*\*\*N<sub>2</sub>



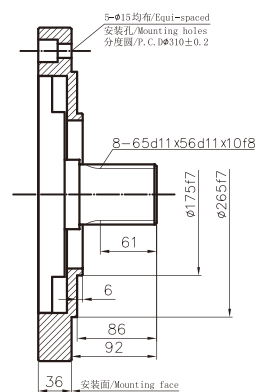
ITMH11-\*\*\*I<sub>21</sub>



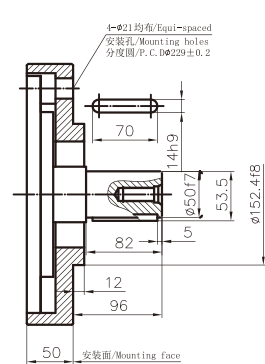
HITMH11-\*\*\*I<sub>12</sub>



ITMH11-\*\*\*SL<sub>5</sub>

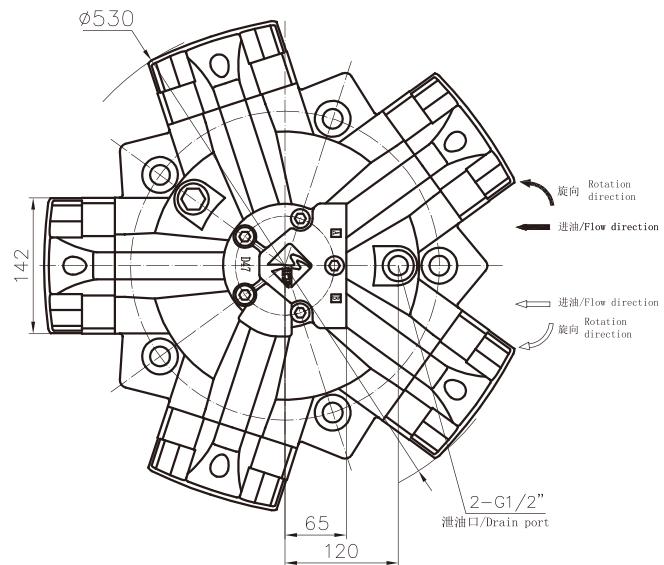


ITMH11-\*\*\*B<sub>4</sub>

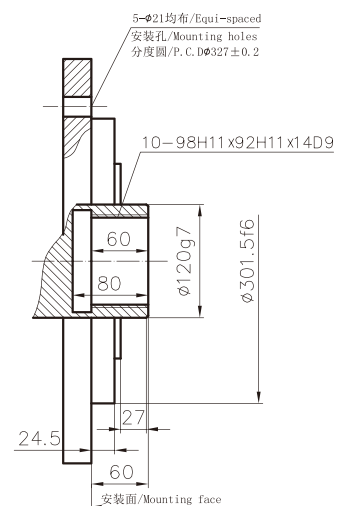




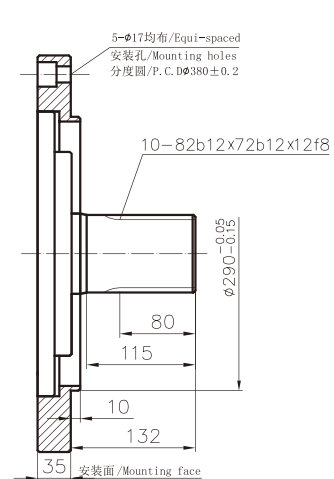
**STF**  
HYDRAULIC TRANSMISSIONS



标准内花键 : ITMH16-\*\*I  
Standard Female Spline :



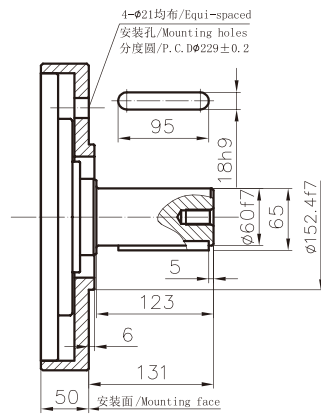
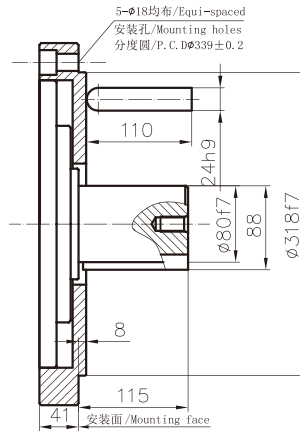
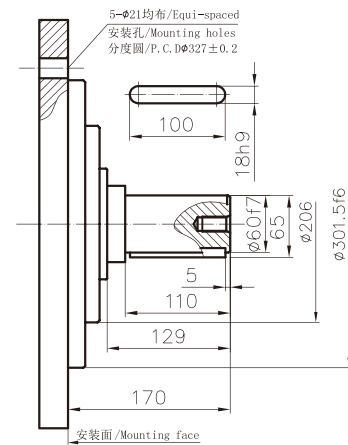
ITMH16-\*\*-N



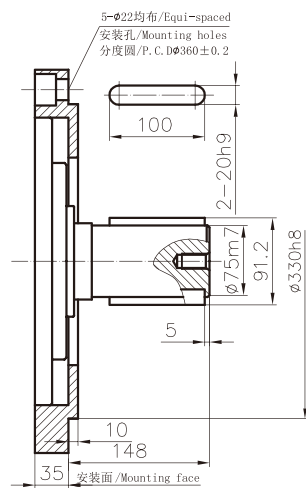
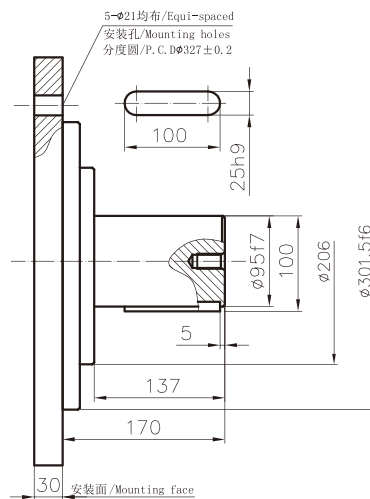


# ITMH16 系列/ ITMH16 Serie

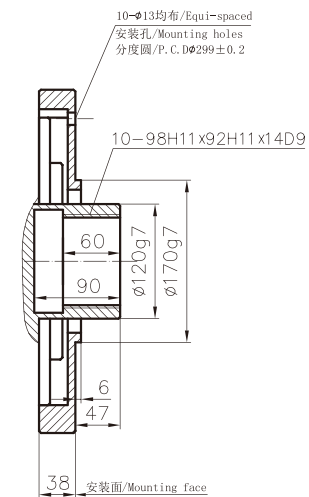
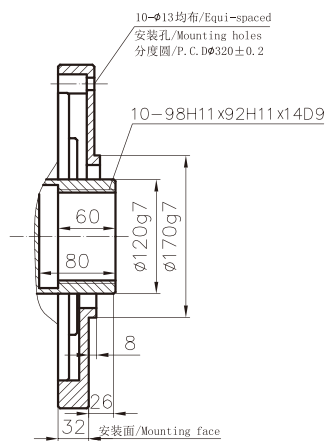
ITMH

ITMH16-\*\*-B<sub>6</sub>ITMH16-\*\*B<sub>17</sub>ITMH16-\*\*B<sub>19</sub>

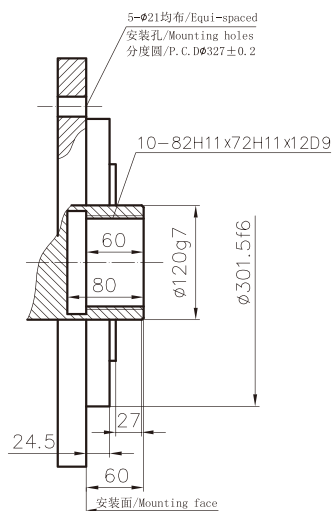
ITMH16-\*\*-D

ITMH16-\*\*B<sub>30</sub>

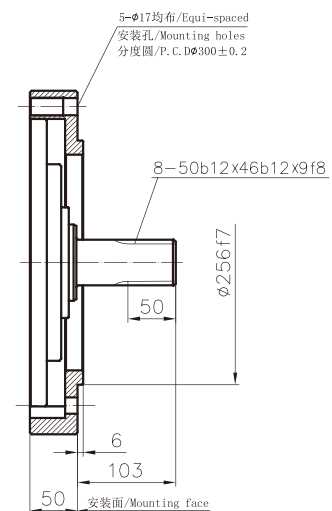
ITMH16-\*\*-132

ITMH16-\*\*-I<sub>42</sub>

ITMH16-\*\*-82



ITMH16-\*\*-11M



通油盘种类/ Distributor

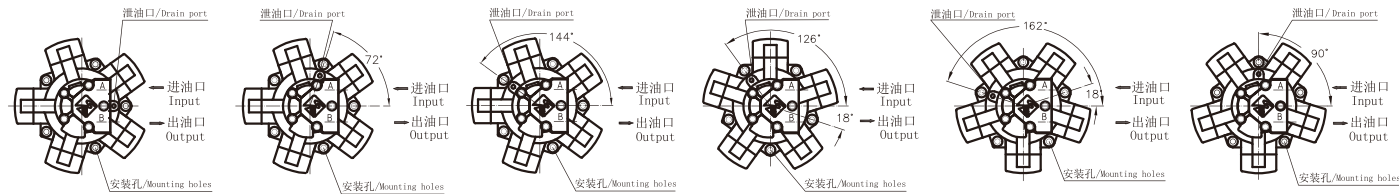


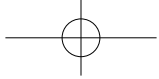
| 型号<br>Type | 标准螺纹<br>Standard Thread | 可选用螺纹<br>Thread Options                                                                               | 适用产品<br>Product                      | 尺寸<br>Dimensions |
|------------|-------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|
| D31        | G3/4"                   | G1"<br>NPT3/4"<br>NPT1"<br>ZG3/4"<br>ZG1"<br>M27x2<br>M33x2                                           | ITMH01<br>ITMH02<br>ITMH03<br>ITMH06 |                  |
| D40        | G1"                     | G3/4"<br>NPT3/4"<br>NPT1"<br>ZG3/4"<br>ZG1"<br>M27x2<br>M33x2                                         | ITMH08<br>ITMH11                     |                  |
| D47        | Ø 25                    | 加连接块后螺纹<br>Thread With Spacer<br>NPT3/4"<br>ZG3/4"<br>G3/4"<br>G1"<br>NPT1"<br>ZG1"<br>M27x2<br>M33x2 | ITMH11<br>ITMH16                     |                  |
| D90        | Ø 40                    | 加连接块后螺纹<br>Thread With Spacer<br>M33x2<br>M42x2<br>G1"<br>ZG1"<br>NPT1"<br>Ø 30以上 Ø 60以下的管插孔          | ITMH16                               |                  |

进出油口与泄漏油口的相对位置/ Port Direction

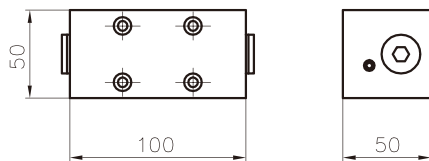
油口角度/Port angle

1、正常0° /Normal 0°    2、转角72° /Rotation72°    3、转角144° /Rotation144°    4、转角126° /Rotation126°    5、转角162° /Rotation162°    6、转角90° /Rotation90°

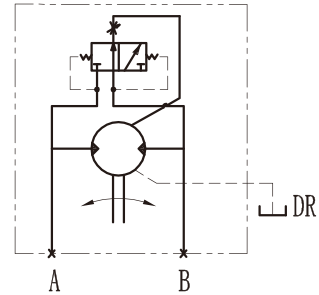




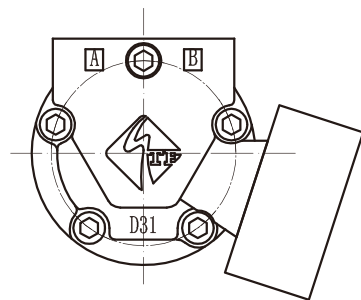
CXF冲洗阀外形及原理图/Symbol and schematic diagram of the CXF flushing valve



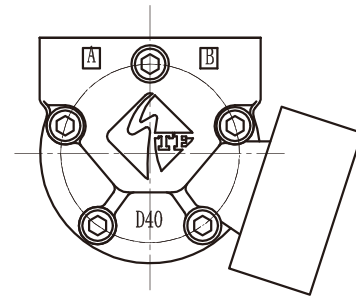
CXF- ITMH- D31



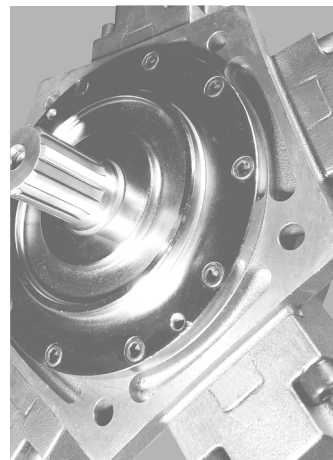
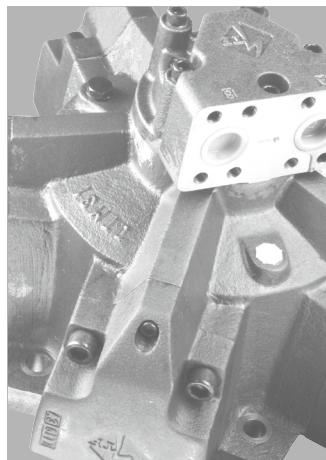
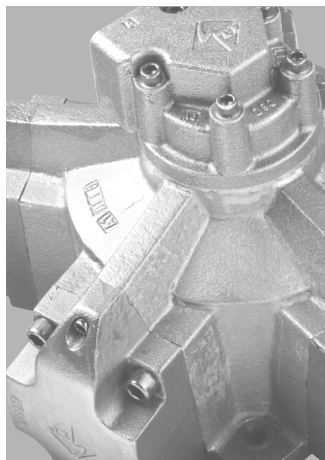
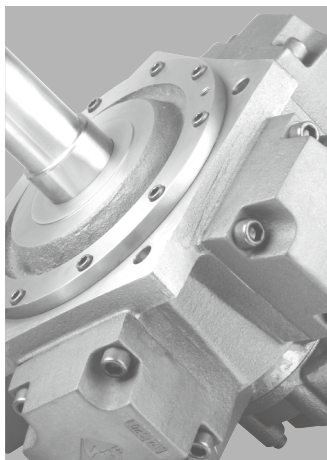
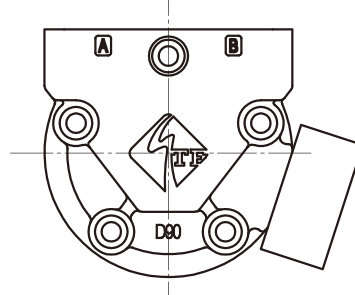
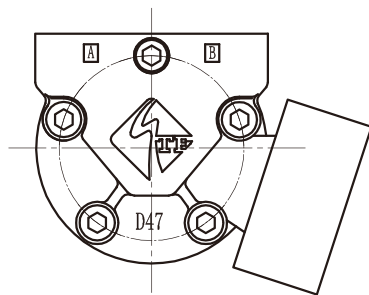
CXF- ITMH- D40



CXF- ITMH- D47



CXF- ITMH- D90



# 分体式平衡阀/ Split Balancing Valve

**STF**  
HYDRAULIC TRANSMISSIONS

## D47-120L单向平衡阀/D47-120L One-way Balancing Valve

**D47120A000N**

单向平衡阀

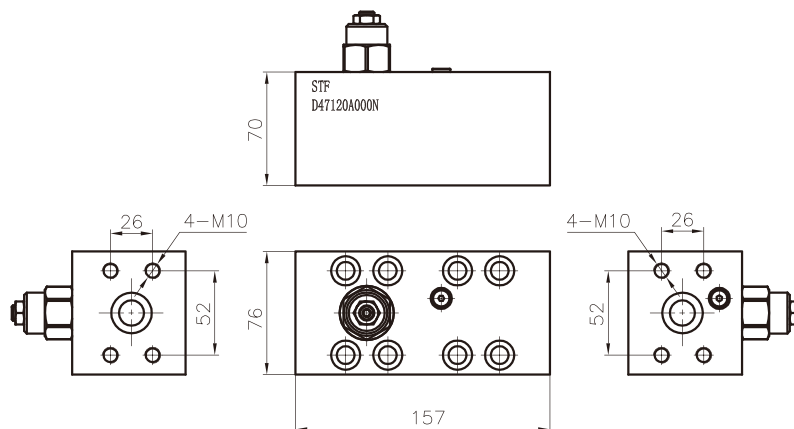
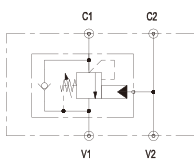
最高设定压力35MPa

最大流量为120L/min

One-way balancing valve

Max set pressure 35 MPa

Max flow 120 L/min



## D47-120L双向平衡阀/D47-120L Two-way Balancing Valve

**D47120AB00N**

双向平衡阀

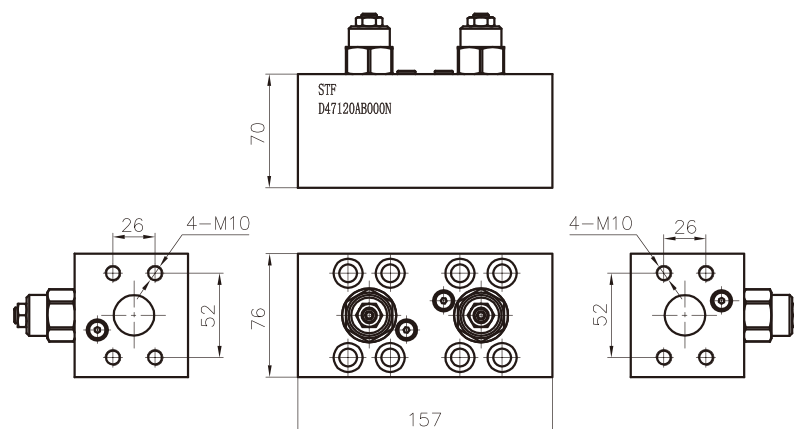
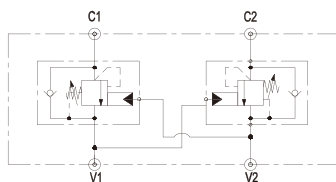
最高设定压力35MPa

最大流量为120L/min

Two-way balancing valve

Max set pressure 35 MPa

Max flow 120 L/min



## D47-240L单向平衡阀/D47-240L One-way Balancing Valve

**D47240A000N**

单向平衡阀

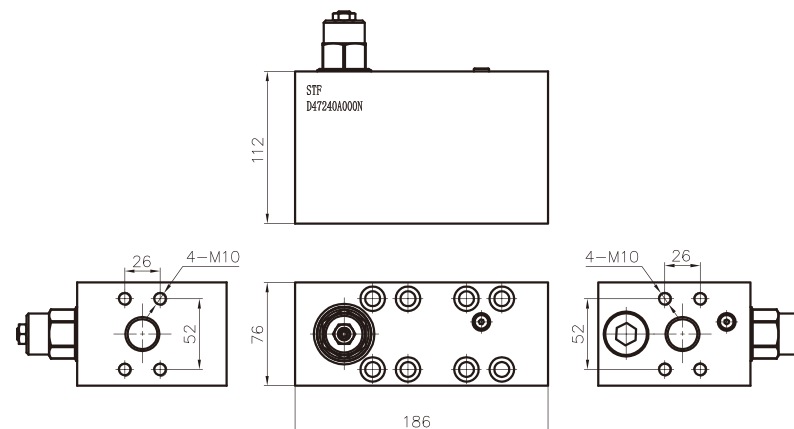
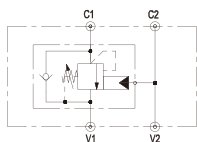
最高设定压力35MPa

最大流量为240L/min

One-way balancing valve

Max set pressure 35 MPa

Max flow 240 L/min



## D47-240L双向平衡阀/D47-240L Two-way Balancing Valve

**D47240AB00N**

双向平衡阀

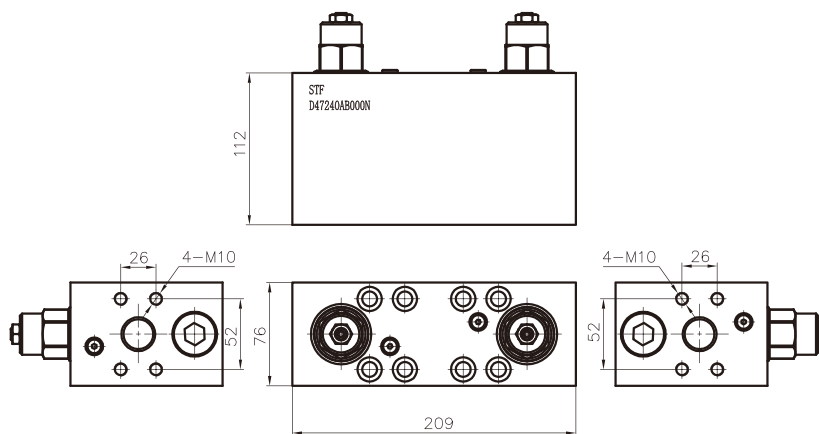
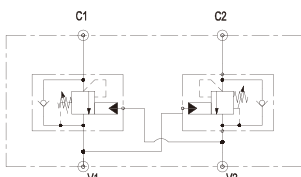
最高设定压力35MPa

最大流量为240L/min

Two-way balancing valve

Max set pressure 35 MPa

Max flow 240 L/min



## D90-240L单向平衡阀/D90-240L One-way Balancing Valve

**D90240A000N**

单向平衡阀

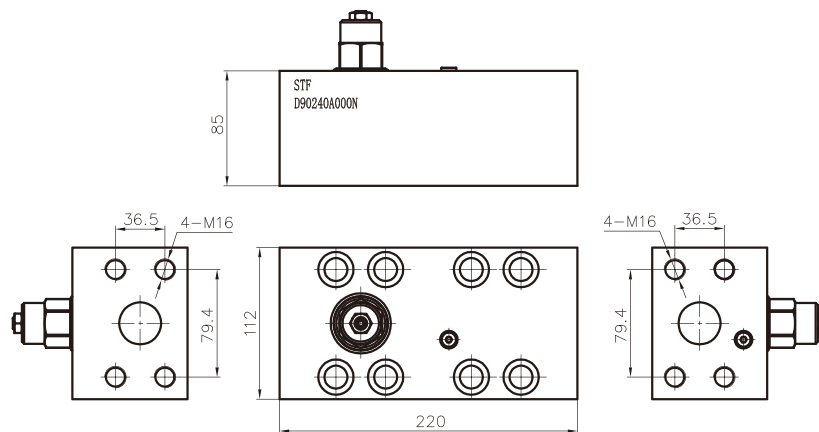
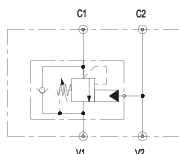
最高设定压力35MPa

最大流量为240L/min

One-way balancing valve

Max set pressure 35 MPa

Max flow 240 L/min



## D90-240L双向平衡阀/D90-240L Two-way Balancing Valve

**D90240AB00N**

双向平衡阀

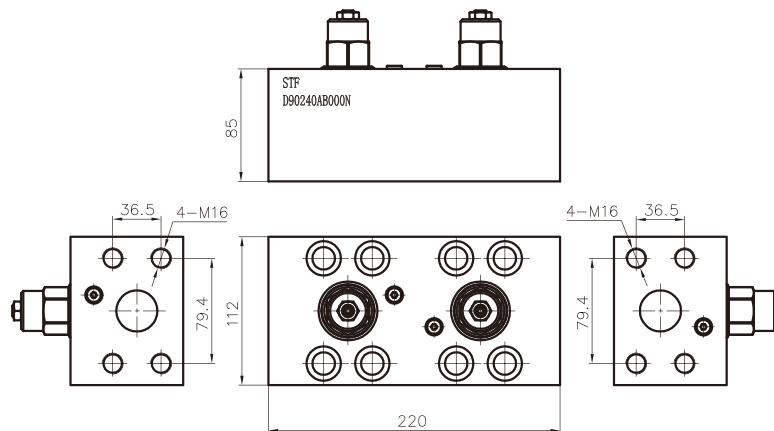
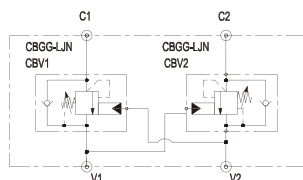
最高设定压力35MPa

最大流量为240L/min

Two-way balancing valve

Max set pressure 35 MPa

Max flow 240 L/min



# 分体式平衡阀/ Split Balancing Valve

**STF**  
HYDRAULIC TRANSMISSIONS

## D90-480L单向平衡阀/D90-480L One-way Balancing Valve

D90480A000N

单向平衡阀

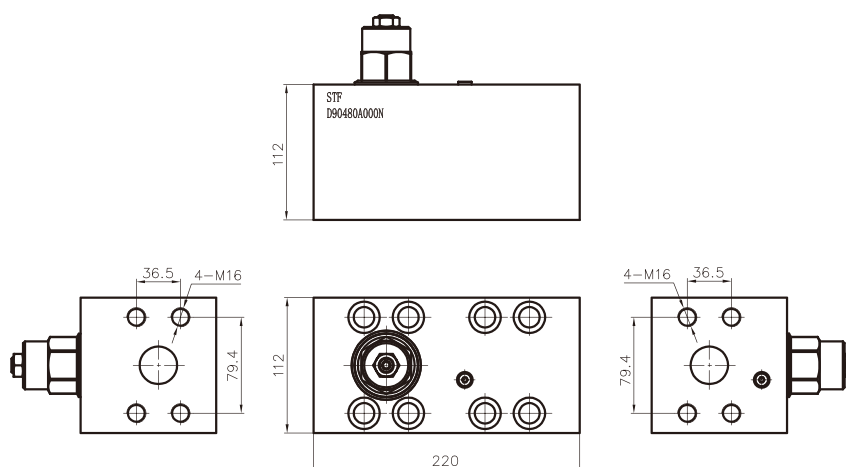
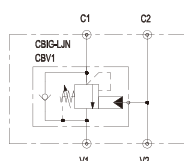
最高设定压力35MPa

最大流量为480L/min

One-way balancing valve

Max set pressure 35 MPa

Max flow 480 L/min



## D90-480L双向平衡阀/D90-480L Two-way Balancing Valve

D90480A000N

双向平衡阀

最高设定压力35MPa

最大流量为480L/min

Two-way balancing valve

Max set pressure 35 MPa

Max flow 480 L/min

