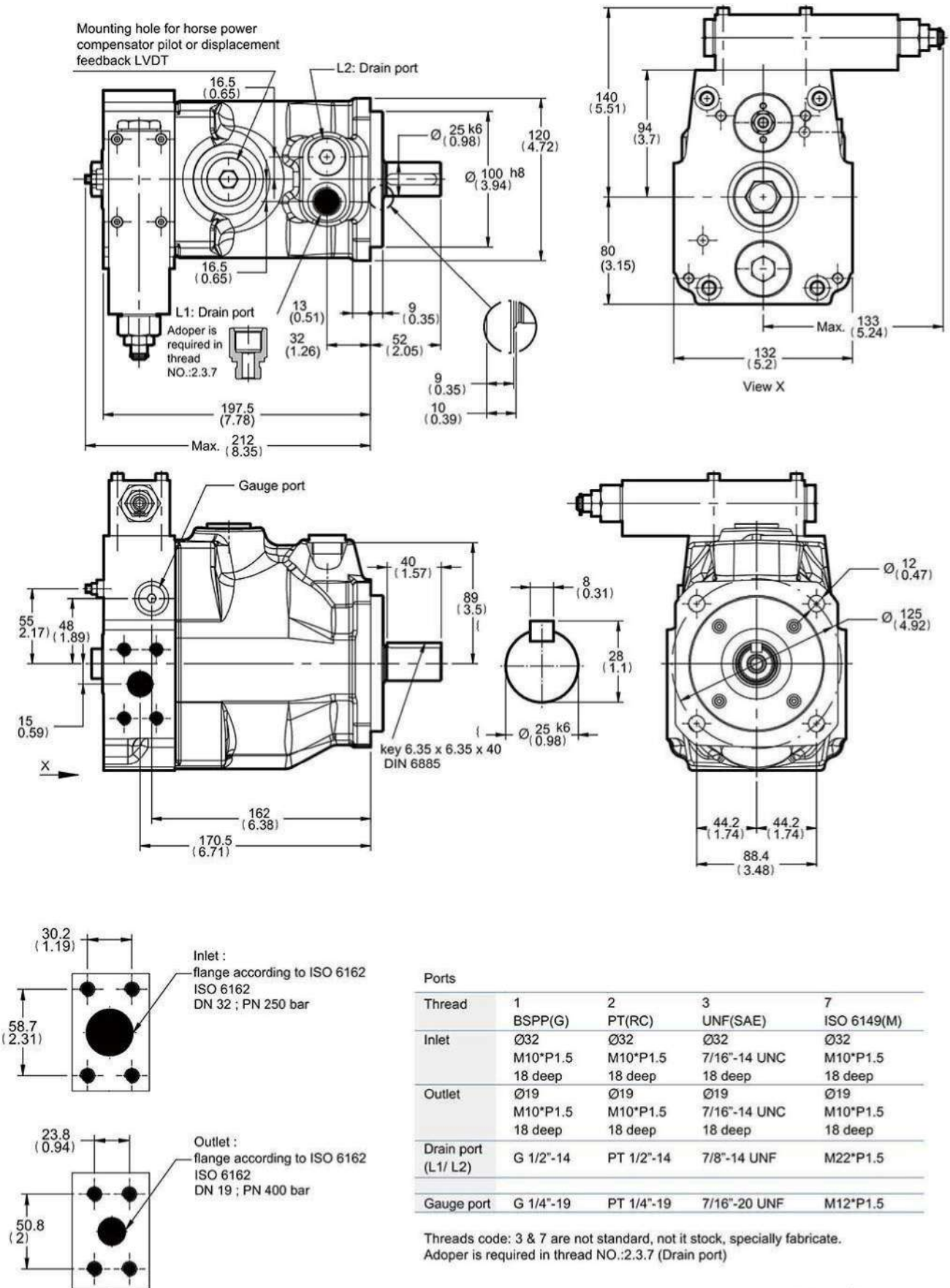


# Dimensions

## PV016 ~ PV023, PV028 (Body 1)

Metric version (Motor Mounting  $\text{Ø}101.6$ )



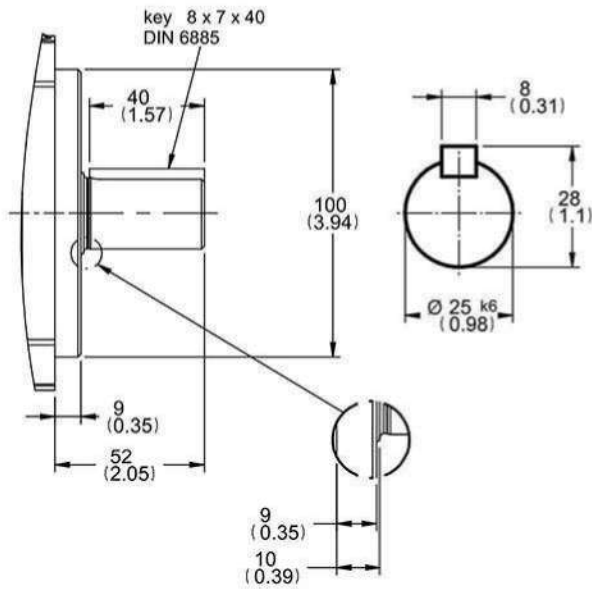
# Dimensions

PV016 ~ PV023, PV028 (Body 1)

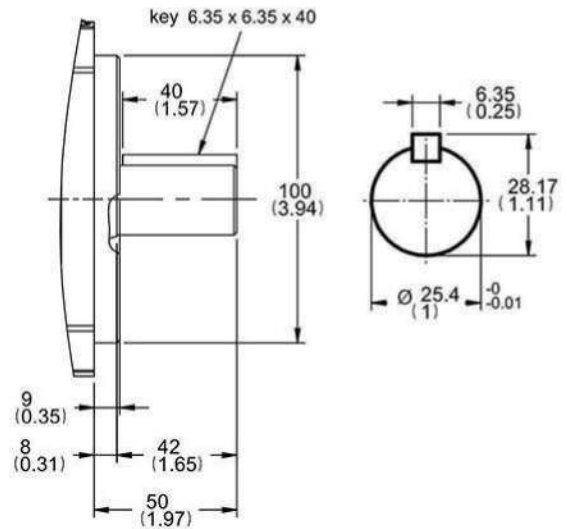
Metric version (Motor Mounting  $\varnothing 100$ )

Shaft type

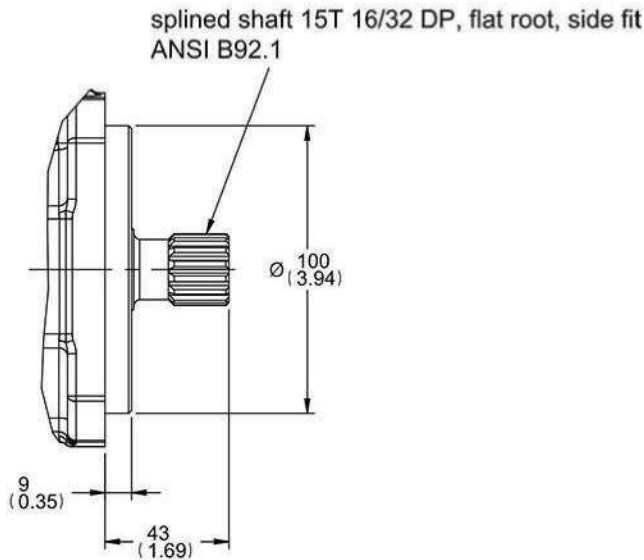
Mounting code: **M**



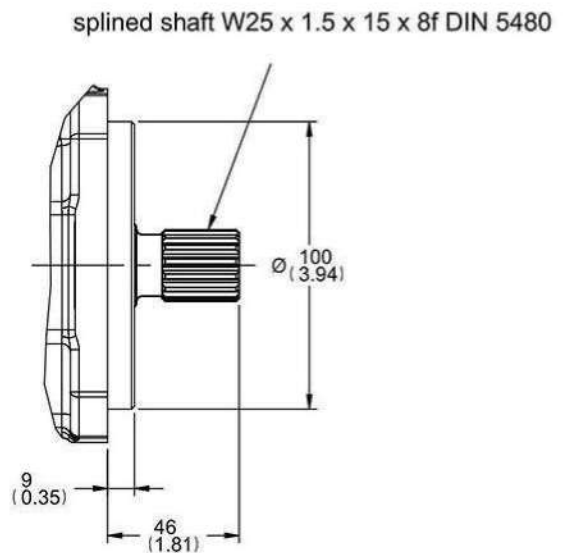
Mounting code: **R**



Mounting code: **K**



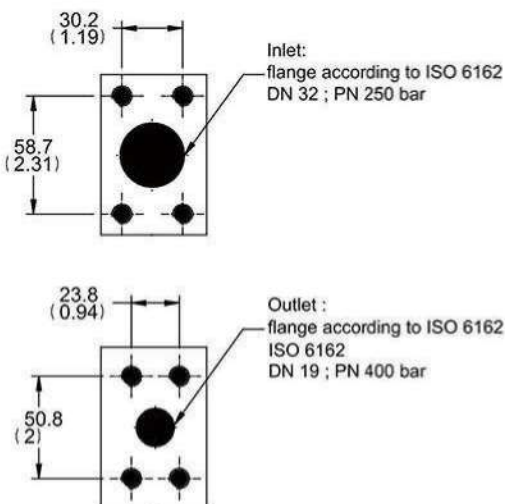
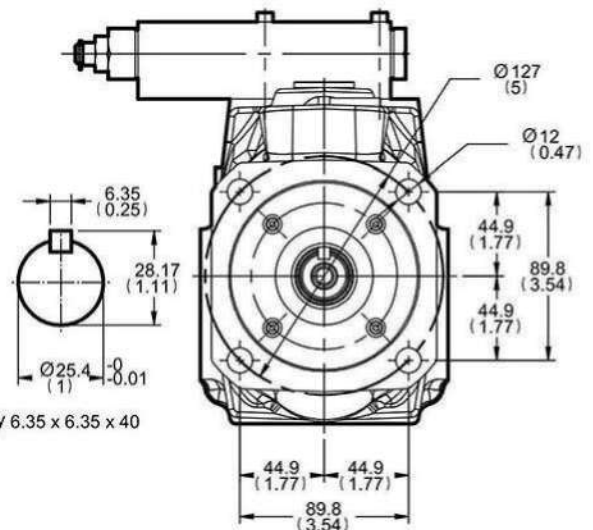
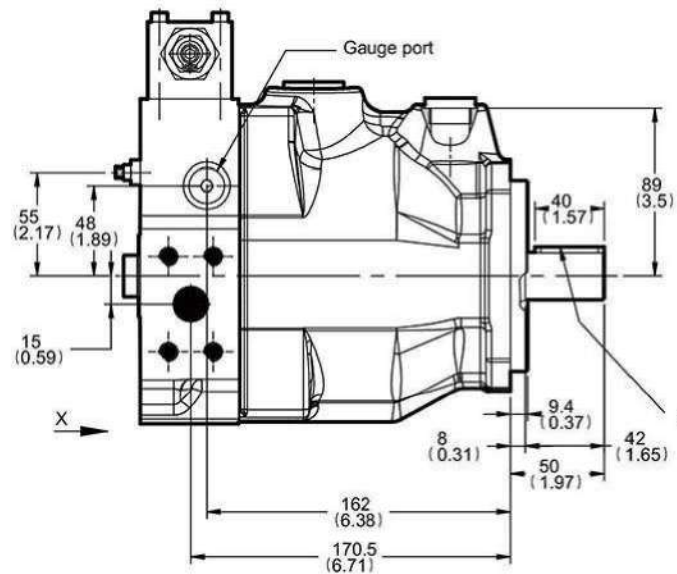
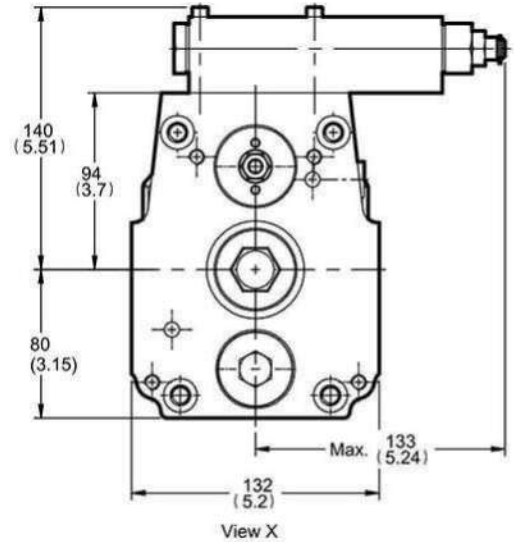
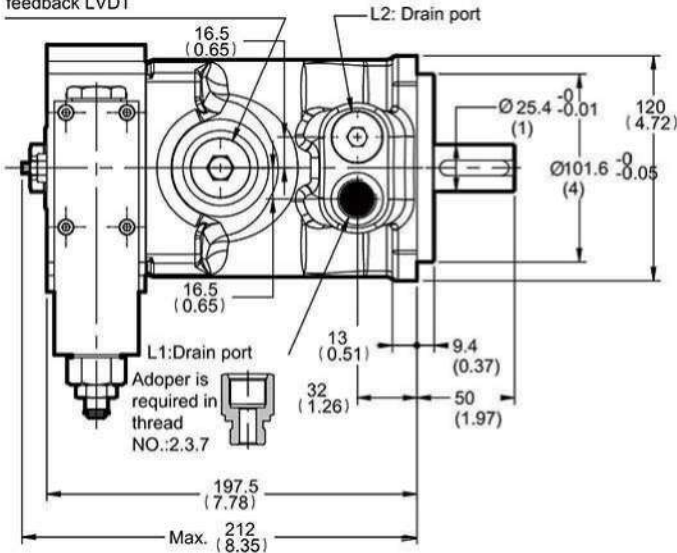
Mounting code: **S**



# Dimensions

## PV016 ~ PV023, PV028 (Body 1) SAE version (motor mounting $\varnothing 101.6$ )

Mounting hole for horse power compensator pilot or displacement feedback LVDT



### Ports

| Thread             | 3<br>UNF(SAE)                       | 1<br>BSPP(G)                            | 2<br>PT(RC)                             | 7<br>ISO 6149(M)                        |
|--------------------|-------------------------------------|---|---|---|
| Inlet              | $\varnothing 32$<br>7/16"-14<br>UNC | $\varnothing 32$<br>M10*P1.5<br>18 deep | $\varnothing 32$<br>M10*P1.5<br>18 deep | $\varnothing 32$<br>M10*P1.5<br>18 deep |
| Outlet             | $\varnothing 19$<br>7/16"-14<br>UNC | $\varnothing 19$<br>M10*P1.5<br>18 deep | $\varnothing 19$<br>M10*P1.5<br>18 deep | $\varnothing 19$<br>M10*P1.5<br>18 deep |
| Drain port (L1/L2) | 7/8"-14 UNF                         | G 1/2"-14                               | PT 1/2"-14                              | M22*P1.5                                |
| Gauge port         | 7/16"-20<br>UNF                     | G 1/4"-19                               | PT 1/4"-19                              | M12*P1.5                                |

Threads code: 3 & 7 are not standard, not in stock, specially fabricate.  
Adoper is required in thread NO.:2.3.7 (Drain port)



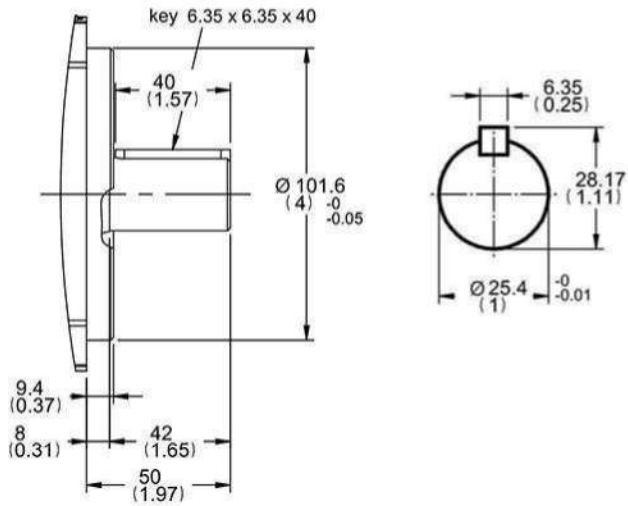
# Dimensions

PV016 ~ PV023, PV028 (Body 1)

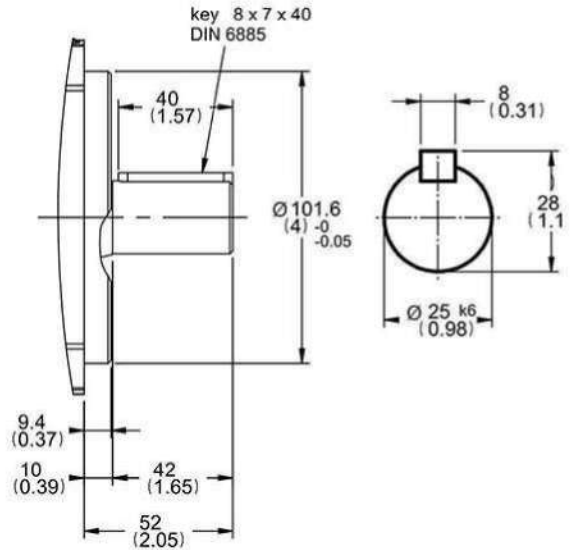
SAE version (motor mounting  $\text{Ø}101.6$ )

Shaft type

Mounting code: **N**

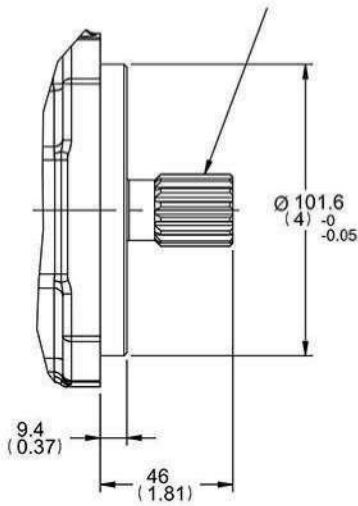


Mounting code: **J**



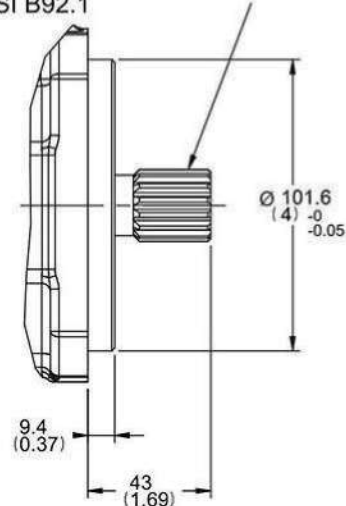
Mounting code: **D**

splined shaft W25 x 1.5 x 15 x 8f DIN 5480



Mounting code: **U**

splined shaft 15T 16/32 DP, flat root, side fit ANSI B92.1



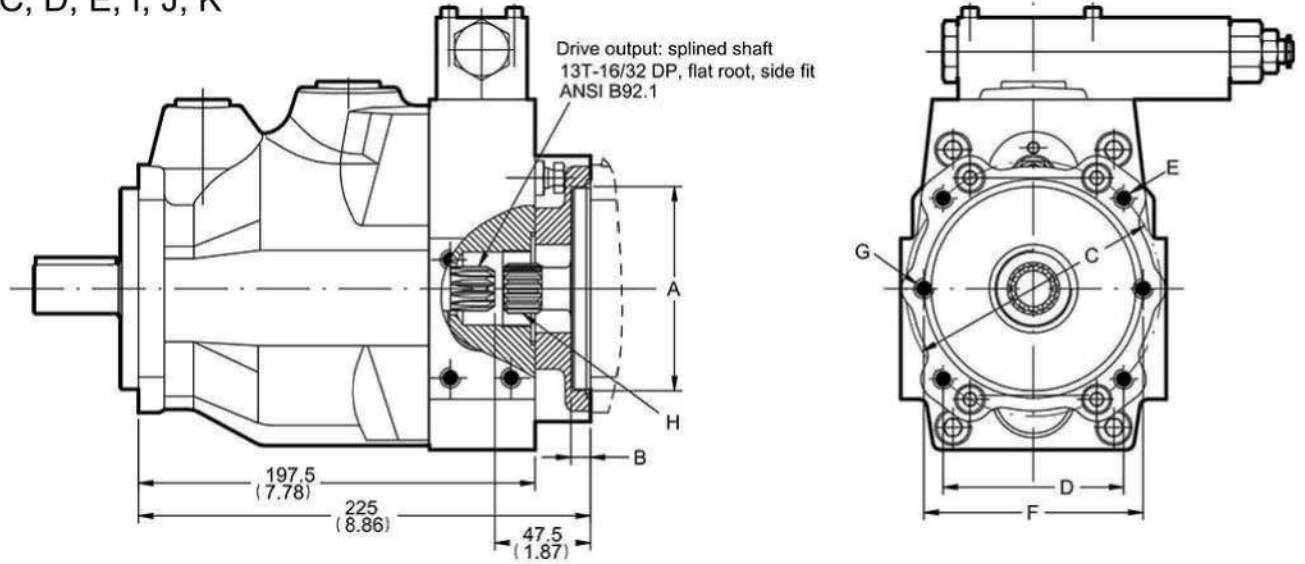
# Dimensions

PV016 ~ PV023, PV028 (Body 1)

Thru drive

Thru drive:

C, D, E, I, J, K



Thru shaft adaptors are available with the following dimensions

| thru code | A     | B    | C   | D    | E   | F         | G         |
|-----------|-------|------|-----|------|-----|-----------|-----------|
| I         | 63    | 10   | 85  | -    | M8  | 100       | M8        |
| J         | 80    | 10   | 103 | -    | M8  | 109       | M10       |
| K         | 100   | 10.5 | 125 | -    | M10 | n. avail. | n. avail. |
| C         | 50.8  | 10   | -   | -    | -   | 82        | M8        |
| D         | 82.55 | 10   | -   | -    | -   | 106       | M10       |
| E         | 101.6 | 10.5 | -   | 89.8 | M10 | n. avail. | n. avail. |

Thread codes are 3 and 7, the dimensions E and G are UNC-2B threads

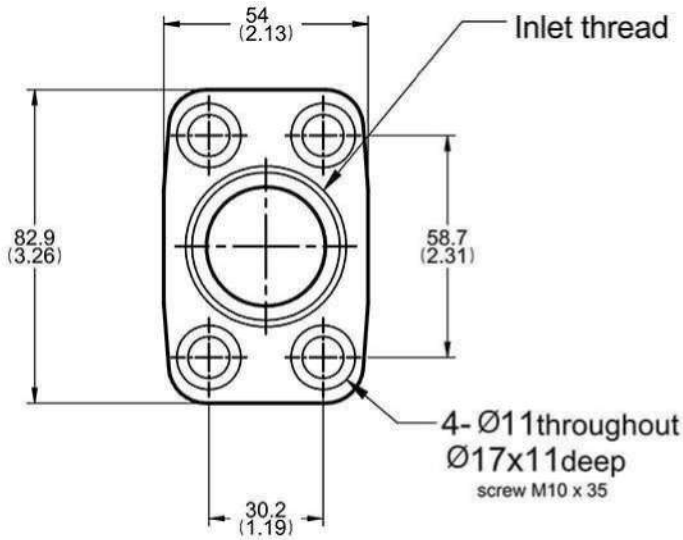
threads code: 3 and 7 Not standard, not in stock, require special requests.



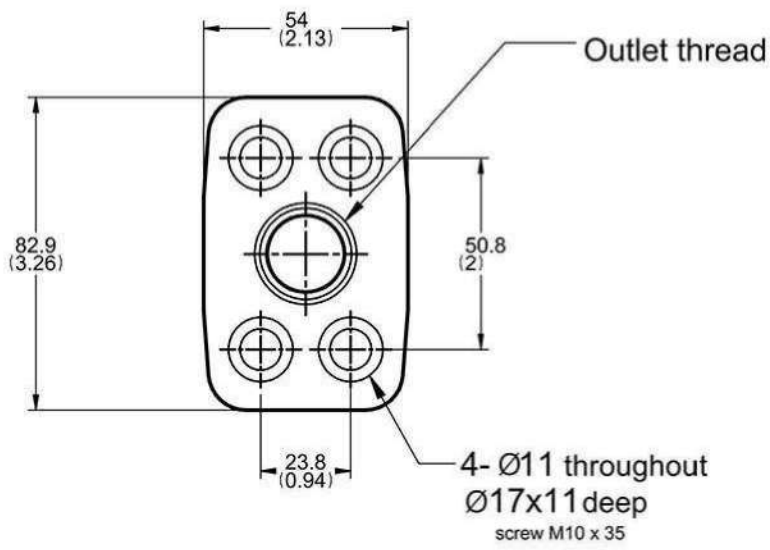
# Dimensions

## PV016 ~ PV023,PV028(Body 1) Inlet / Outlet Flange

### Inlet Flange



### Outlet Flange



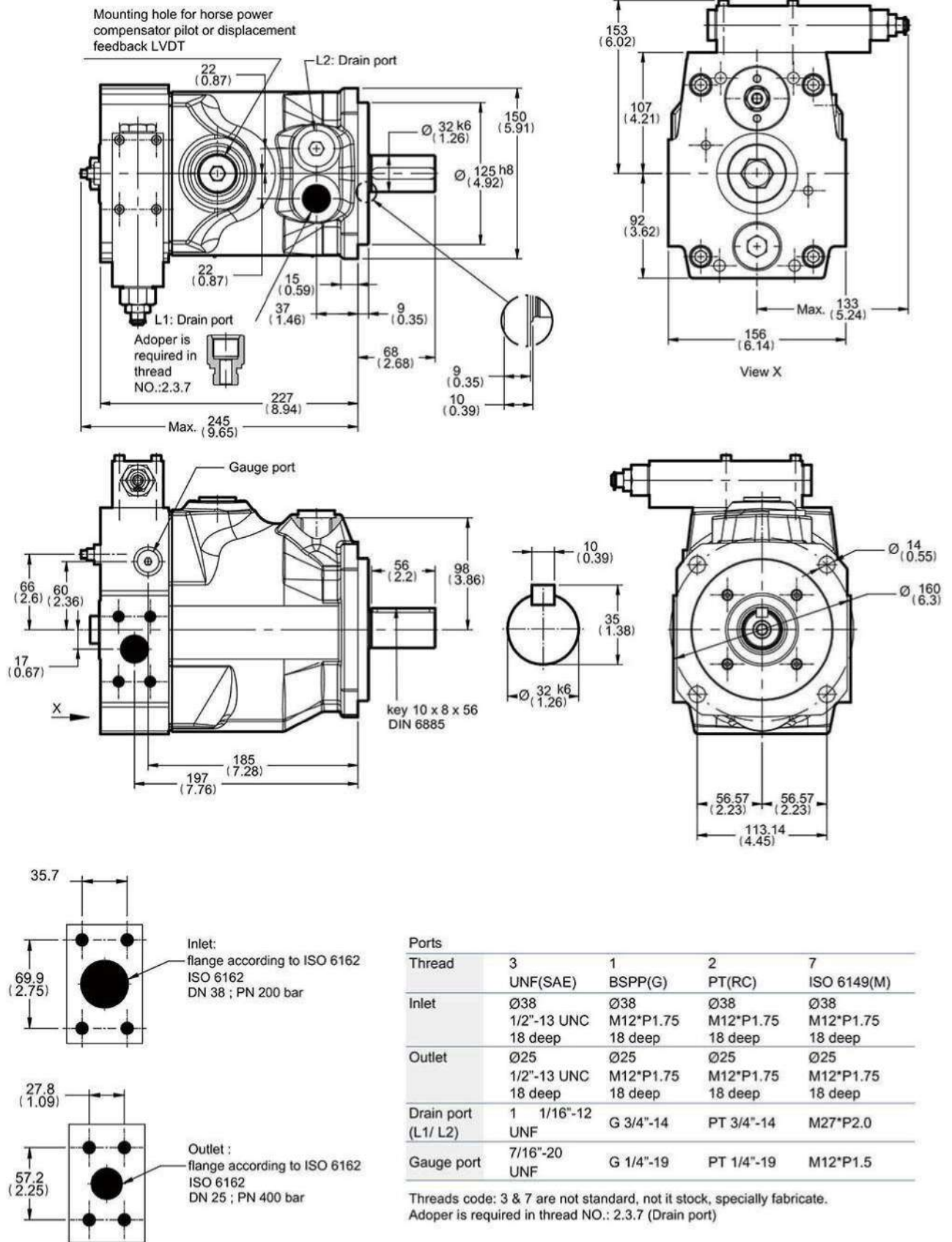
#### Ports

| Thread code | 3<br>UNF(SAE) | 1<br>BSPP(G) | 2<br>PT(RC)  | 7<br>ISO 6149(M) |
|-------------|---------------|--------------|--------------|------------------|
| Inlet       | 1 5/8"-12 UN  | G 1 1/4"-11  | PT 1 1/4"-11 | M42*P2.0         |
| Outlet      | 1 1/16"-12 UN | G 3/4"-14    | PT3/4"-14    | M27*P2.0         |

Threads code: 3 & 7 are not standard, not it stock, specially fabricate.

# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2)  
Metric version (motor mounting Ø125)



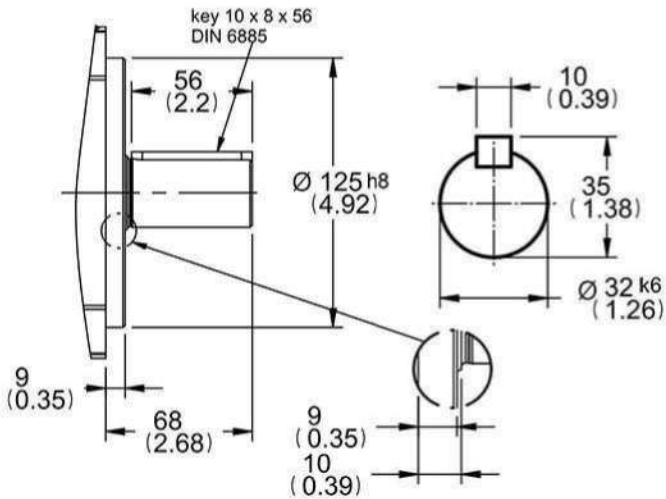
# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2)

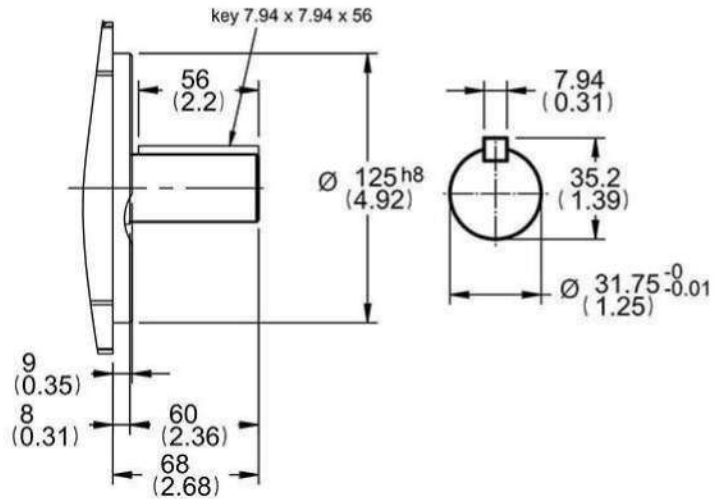
Metric version (motor mounting  $\varnothing 125$ )

Shaft type

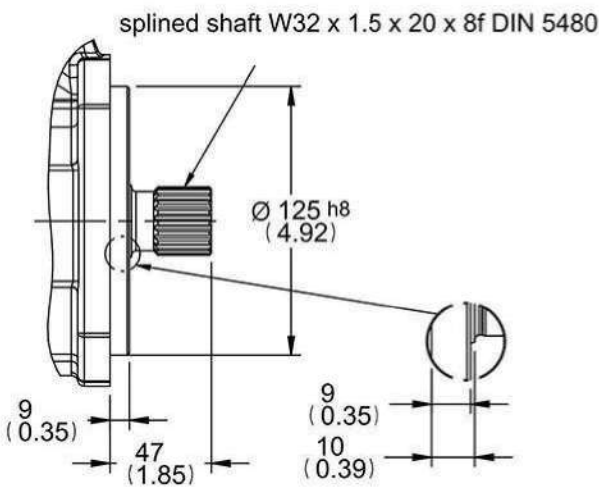
Mounting code: **M**



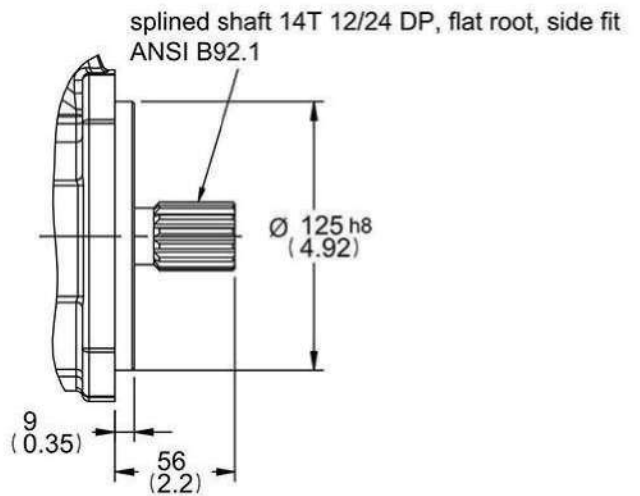
Mounting code: **R**



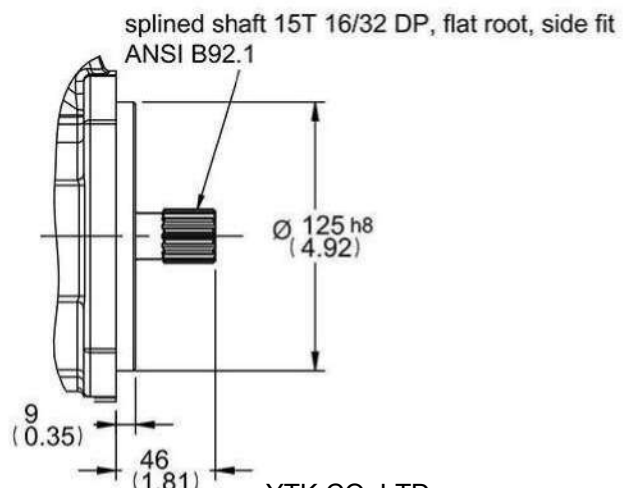
Mounting code: **K**



Mounting code: **S**



Mounting code: **P**

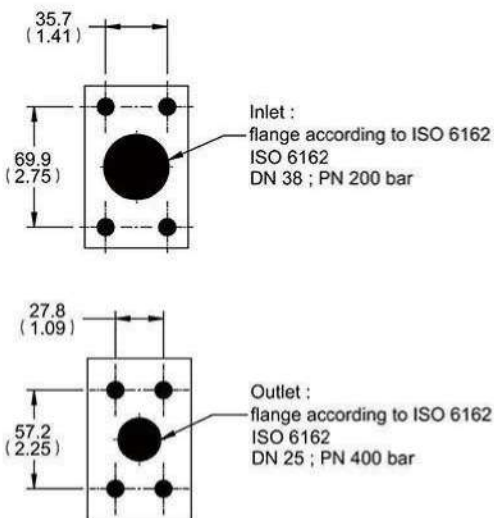
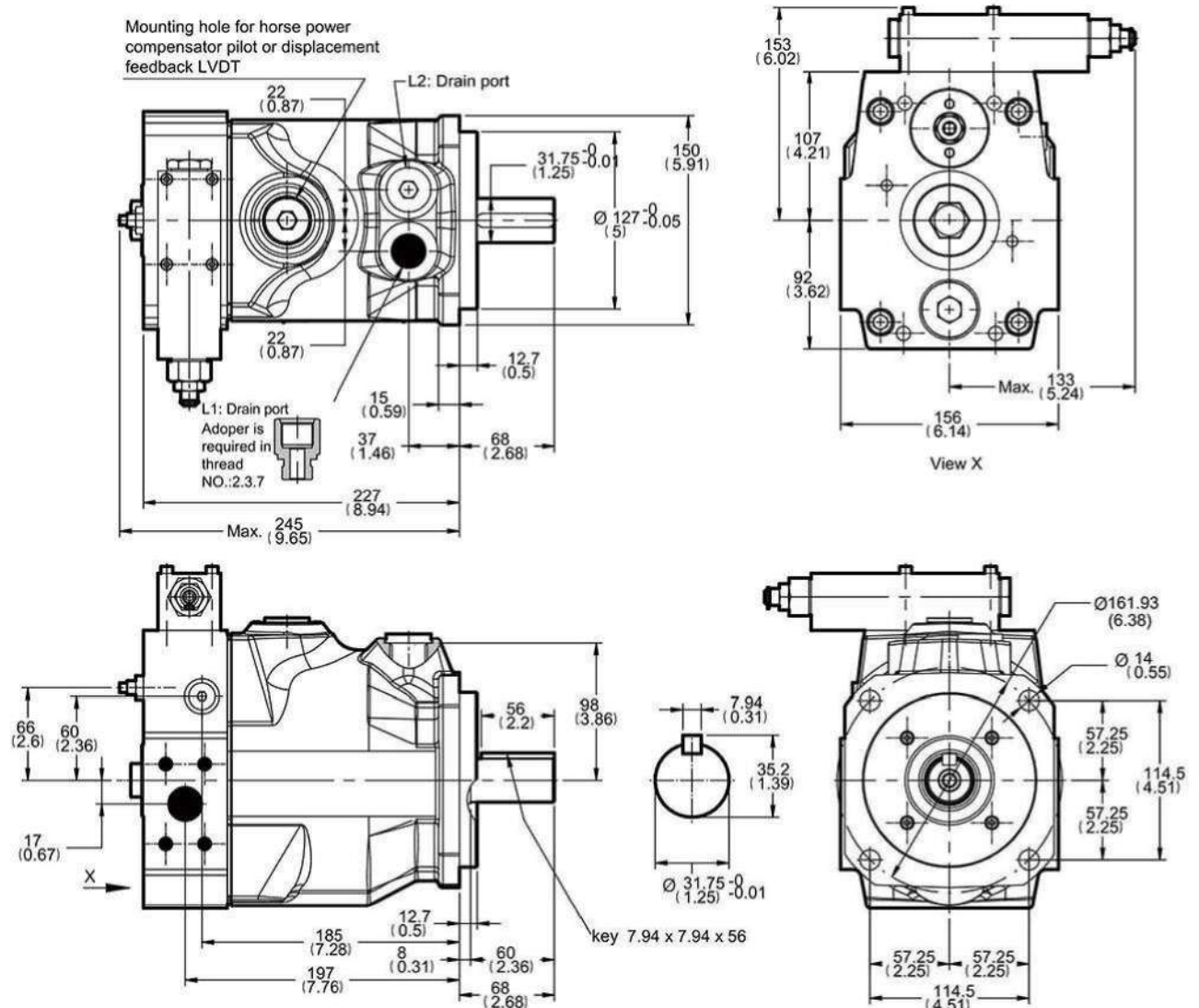




# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2)

SAE version (motor mounting Ø127)



| Ports               | 3                             | 1                           | 2                           | 7                           |
|---------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Thread              | UNF(SAE)                      | BSPP(G)                     | PT(RC)                      | ISO 6149(M)                 |
| Inlet               | Ø38<br>1/2"-13 UNC<br>18 deep | Ø38<br>M12*P1.75<br>18 deep | Ø38<br>M12*P1.75<br>18 deep | Ø38<br>M12*P1.75<br>18 deep |
| Outlet              | Ø25<br>1/2"-13 UNC<br>18 deep | Ø25<br>M12*P1.75<br>18 deep | Ø25<br>M12*P1.75<br>18 deep | Ø25<br>M12*P1.75<br>18 deep |
| Drain port (L1/ L2) | 1 1/16"-12<br>UNF             | G 3/4"-14                   | PT 3/4"-14                  | M27*P2.0                    |
| Gauge port          | 7/16"-20<br>UNF               | G 1/4"-19                   | PT 1/4"-19                  | M12*P1.5                    |

Threads code: 3 & 7 are not standard, not it stock, specially fabricate.  
Adoper is required in thread NO.: 2.3.7 (Drain port)



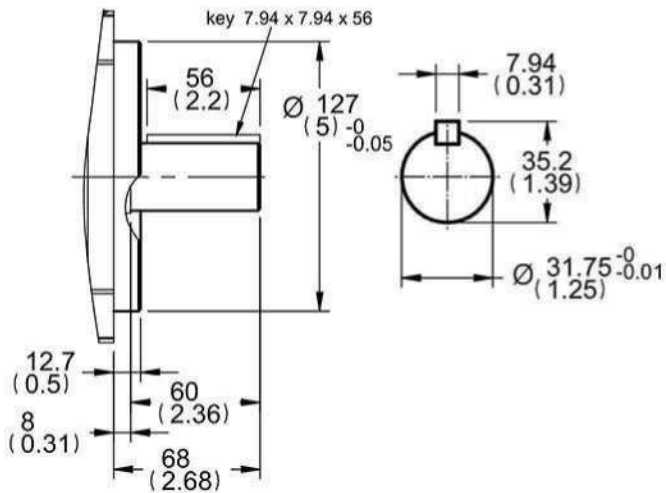
# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2)

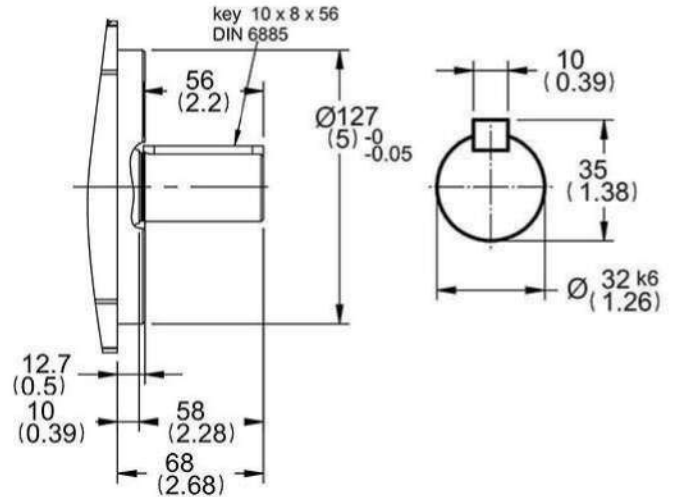
SAE version (motor mounting  $\varnothing 127$ )

Shaft type

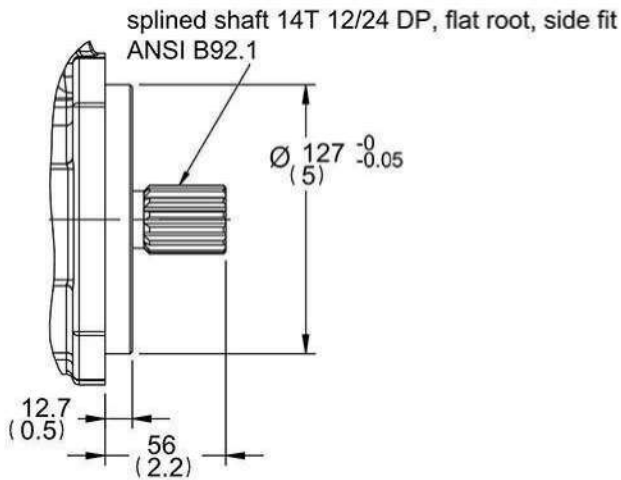
Mounting code: **N**



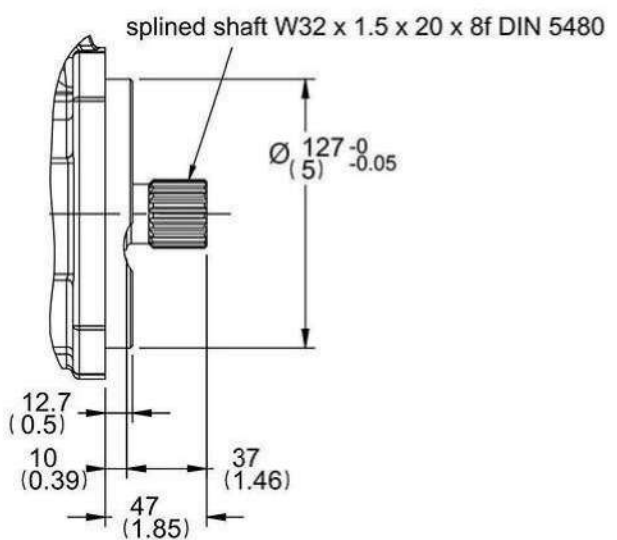
Mounting code: **J**



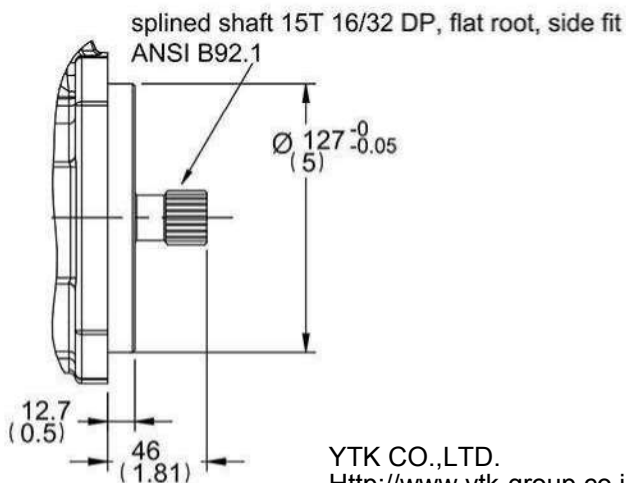
Mounting code: **D**



Mounting code: **U**



Mounting code: **G**

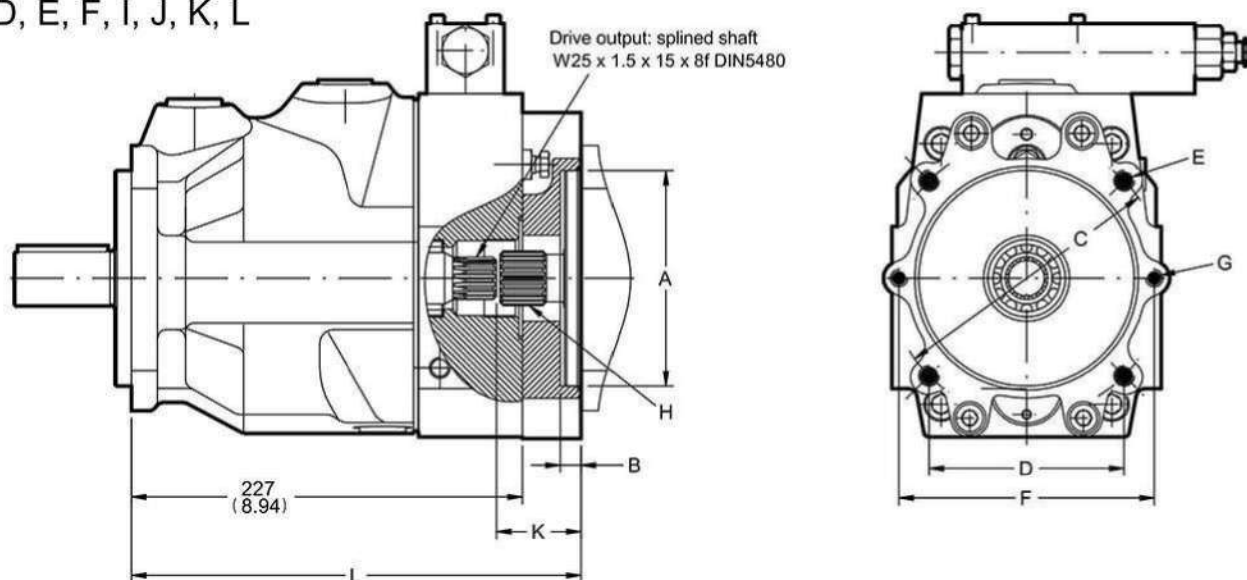


# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2)

Thru drive

Thru drive:  
D, E, F, I, J, K, L

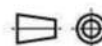


Thru shaft adaptors are available with the following dimensions:

| thru code | A     | B    | C   | D     | E   | F         | G         | K  | L   |
|-----------|-------|------|-----|-------|-----|-----------|-----------|----|-----|
| I         | 63    | 8.5  | 85  | -     | M8  | 100       | M8        | 49 | 261 |
| J         | 80    | 8.5  | 103 | -     | M8  | 109       | M10       | 49 | 261 |
| K         | 100   | 10.5 | 125 | -     | M10 | 140       | M12       | 49 | 261 |
| L         | 125   | 12   | 160 | -     | M12 | n. avail. | n. avail. | 49 | 261 |
| D         | 82.55 | 8    | -   | -     | -   | 106       | M10       | 49 | 261 |
| E         | 101.6 | 11   | -   | 89.8  | M10 | 146       | M12       | 49 | 261 |
| F         | 127   | 13.5 | -   | 114.5 | M12 | n. avail. | n. avail. | 64 | 276 |

Thread codes are 3 and 7  
the dimensions E and G are  
UNC-2B threads

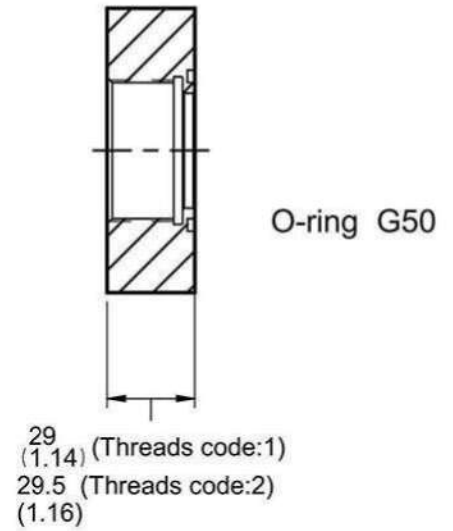
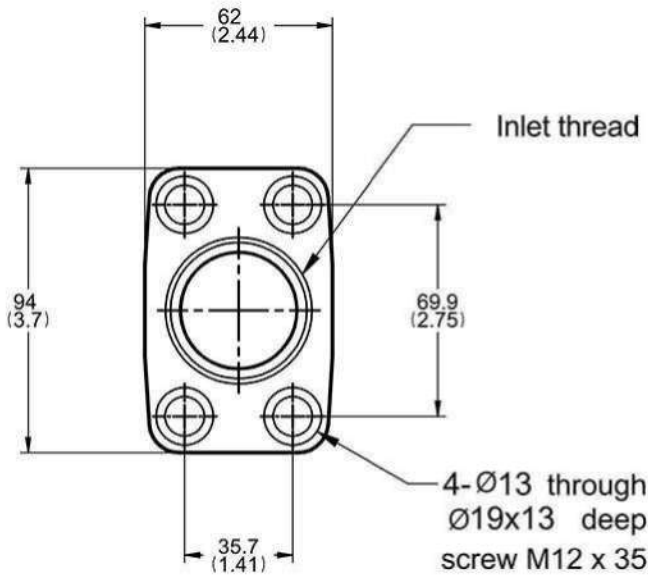
threads code: 3 and 7 Not  
standard, not in stock  
require special requests



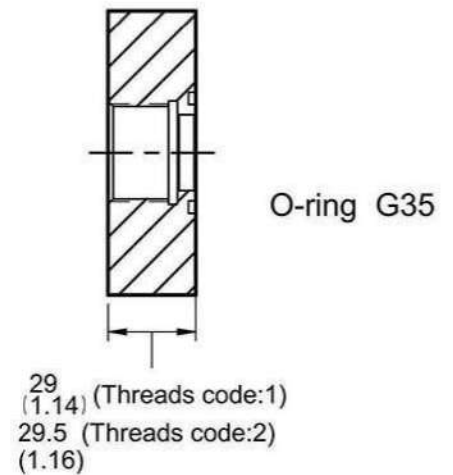
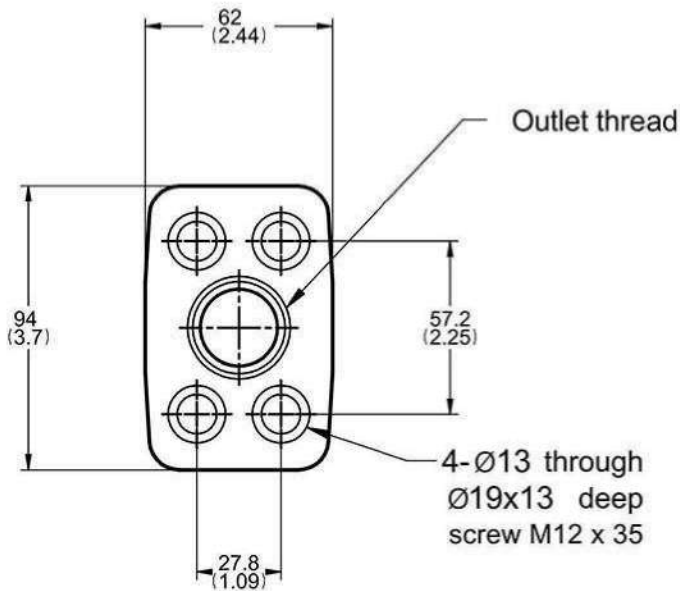
# Dimension

PV032 ~ PV046, PV056, PV065 (Body 2) Inlet / Outlet Flange

## Inlet Flange



## Outlet Flange



### Ports

| Thread code | 3             | 1           | 2            | 7           |
|-------------|---------------|-------------|--------------|-------------|
|             | UNF(SAE)      | BSPP(G)     | PT(RC)       | ISO 6149(M) |
| Inlet       | 1 7/8"-12 UN  | G 1 1/2"-11 | PT 1 1/2"-11 | M48*P2.0    |
| Outlet      | 1 5/16"-12 UN | G 1"-11     | PT 1"-11     | M33*P2.0    |

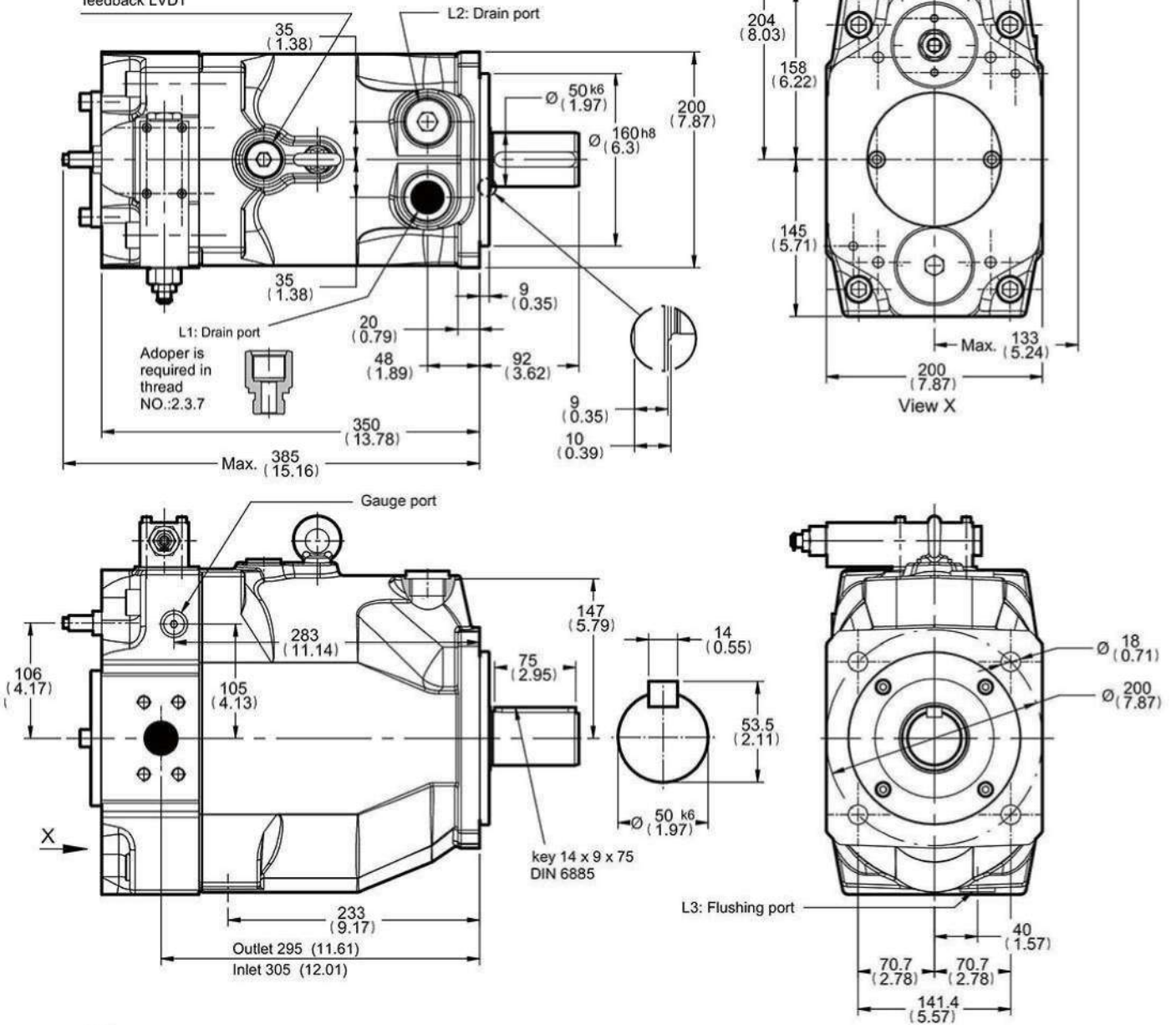
threads code: 3 & 7 are not standard, not it stock, specially fabricate.

# Dimension

## PV140 ~ PV180, PV210 (Body 4)

### Metric version (motor mounting Ø160)

Mounting hole for horse power compensator pilot or displacement feedback LVDT

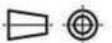


#### Ports

| Thread              | 3                             | 1                           | 2                           | 7                           |
|---------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|
|                     | UNF(SAE)                      | BSPP(G)                     | PT(RC)                      | ISO 6149(M)                 |
| Inlet               | Ø64<br>1/2"-13 UNC<br>20 deep | Ø64<br>M12*P1.75<br>20 deep | Ø64<br>M12*P1.75<br>20 deep | Ø64<br>M12*P1.75<br>20 deep |
| Outlet              | Ø32<br>1/2"-13 UNC<br>20 deep | Ø32<br>M12*P1.75<br>20 deep | Ø32<br>M12*P1.75<br>20 deep | Ø32<br>M12*P1.75<br>20 deep |
| Drain port (L1/ L2) | 1 5/16"-12 UNF                | G 1"-11                     | PT 1"-11                    | M33*P2.0                    |
| L3                  | 1 1/16"-12 UNF                | G 3/4"-14                   | PT 3/4"-14                  | M27*P2.0                    |
| Gauge port          | 7/16"-20 UNF                  | G 1/4"-19                   | PT 1/4"-19                  | M12*P1.5                    |

threads code: 3 & 7 are not standard, not it stock, specially fabricate.

Adoper is required in thread NO.:2.3.7 (Drain port)



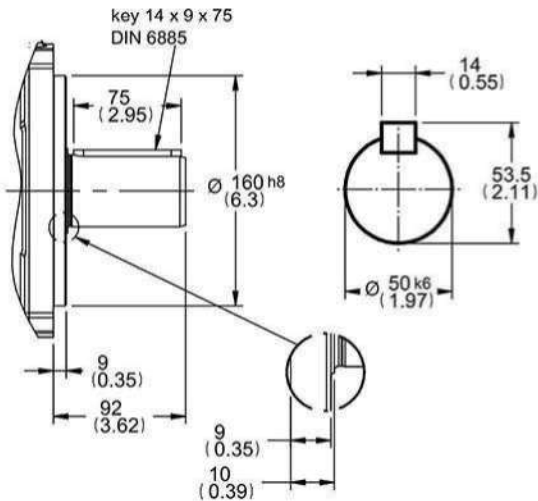
# Dimension

PV140 ~ PV180, PV210 (Body 4)

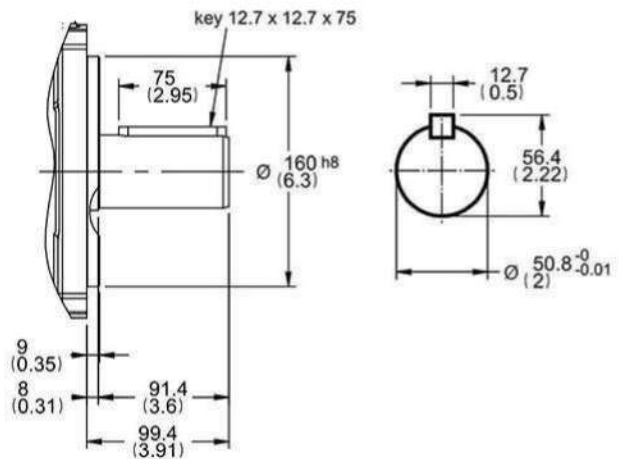
Metric version (motor mounting  $\varnothing 160$ )

Shaft type

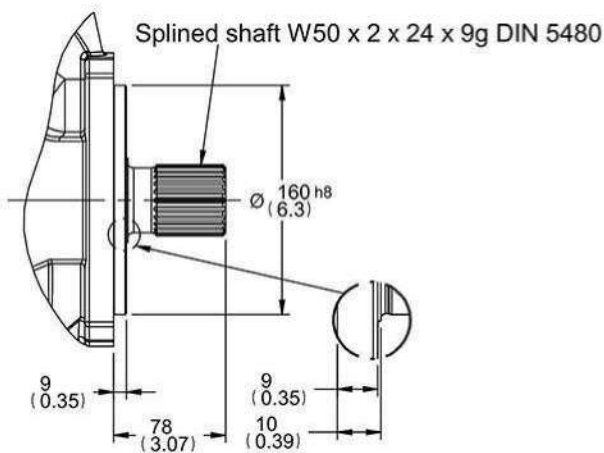
Mounting code: **M**



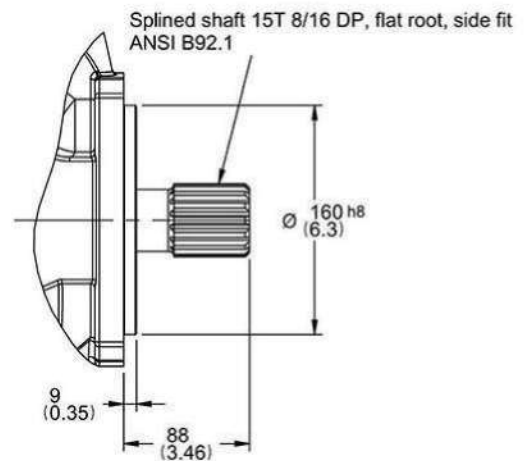
Mounting code: **R**



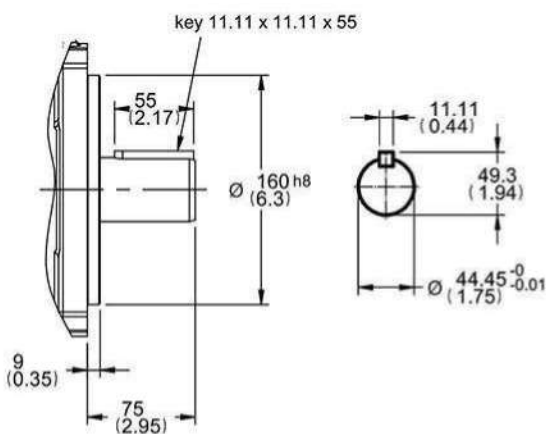
Mounting code: **K**



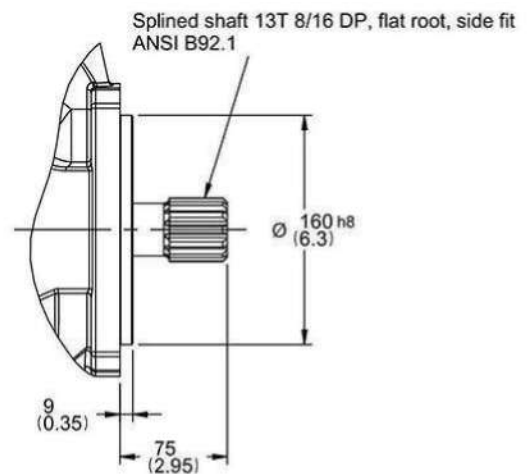
Mounting code: **S**



Mounting code: **Q**

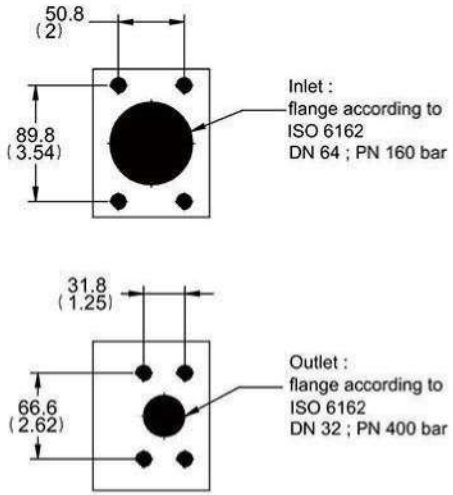
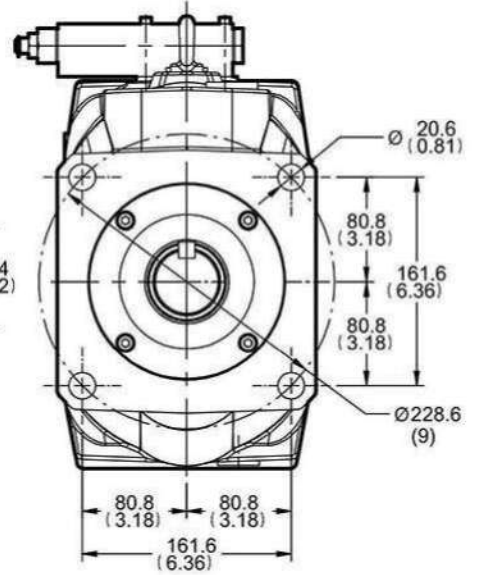
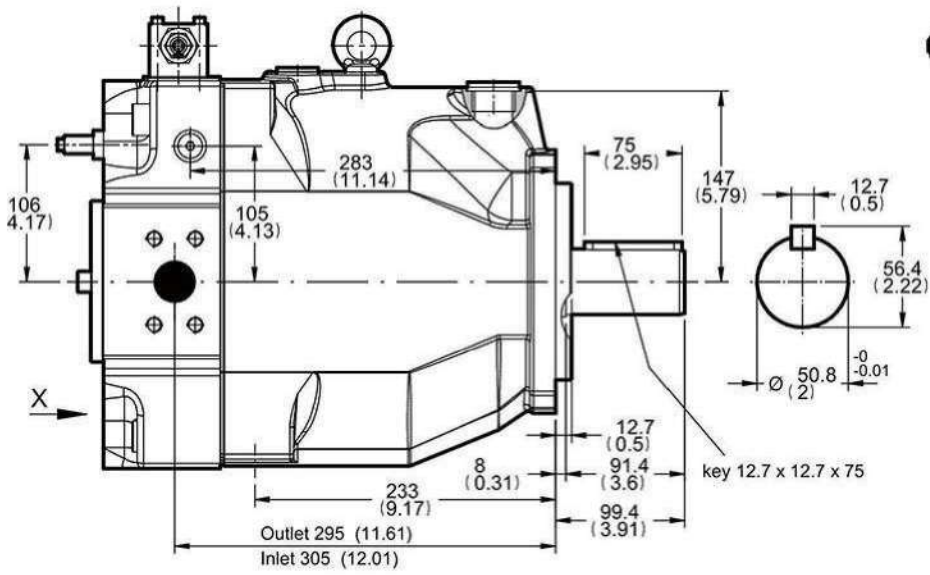
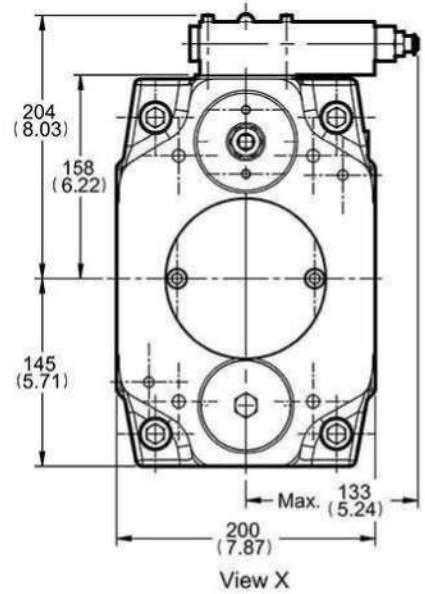
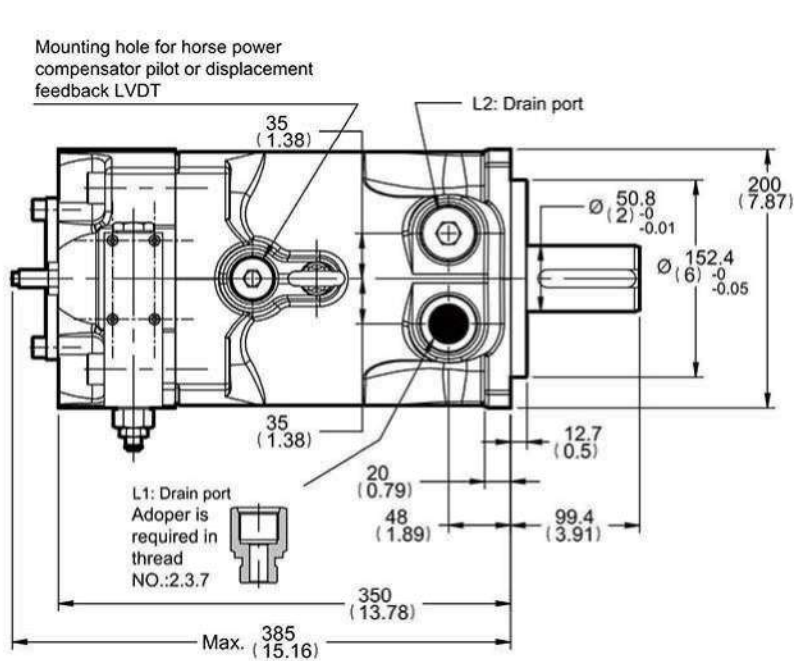


Mounting code: **P**



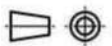
# Dimension

PV140 ~ PV180, PV210 (Body 4)  
SAE version (motor mounting Ø152.4)



| Ports               | 1                           | 2                           | 3                             | 7                           |
|---------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|
| Thread              | BSPP(G)                     | PT(RC)                      | UNF(SAE)                      | ISO 6149(M)                 |
| Inlet               | Ø64<br>M12*P1.75<br>20 deep | Ø64<br>M12*P1.75<br>20 deep | Ø64<br>1/2"-13 UNC<br>20 deep | Ø64<br>M12*P1.75<br>20 deep |
| Outlet              | Ø32<br>M12*P1.75<br>20 deep | Ø32<br>M12*P1.75<br>20 deep | Ø32<br>1/2"-13 UNC<br>20 deep | Ø32<br>M12*P1.75<br>20 deep |
| Drain port (L1/ L2) | G 1"-11                     | PT 1"-11                    | 1 5/16"-12 UNF                | M33*P2.0                    |
| L3                  | G 3/4"-14                   | PT 3/4"-14                  | 1 1/16"-12 UNF                | M27*P2.0                    |
| Gauge port          | G 1/4"-19                   | PT 1/4"-19                  | 7/16"-20 UNF                  | M12*P1.5                    |

threads code: 3 & 7 are not standard, not it stock, specially fabricate.  
Adoper is required in thread NO.:2.3.7 (Drain port)



●規格修改，本公司不另行通知  
●Specification is subjected to change without notice.

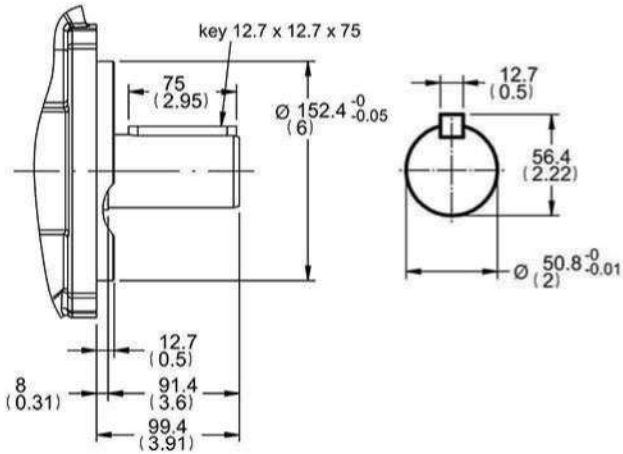
# Dimension

PV140 ~ PV180, PV210 (Body 4)

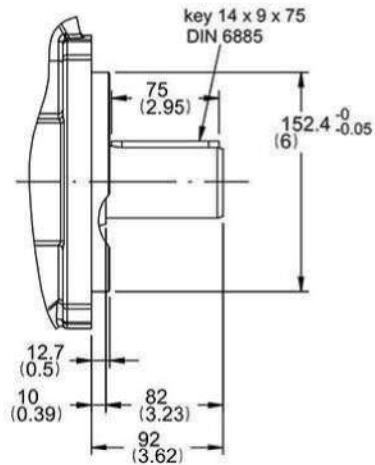
SAE version (motor mounting  $\text{Ø}152.4$ )

Shaft type

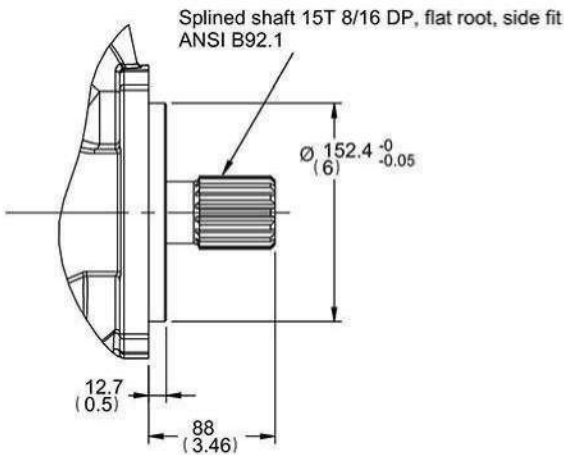
Mounting code: **N**



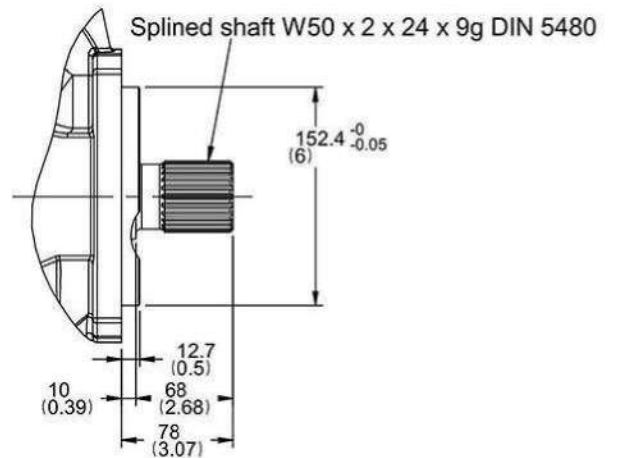
Mounting code: **J**



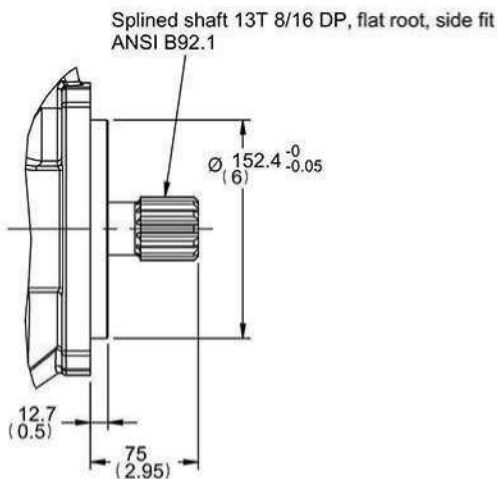
Mounting code: **D**



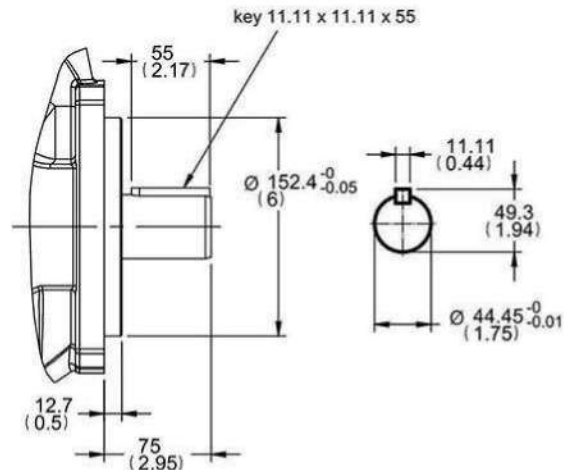
Mounting code: **U**



Mounting code: **G**



Mounting code: **F**





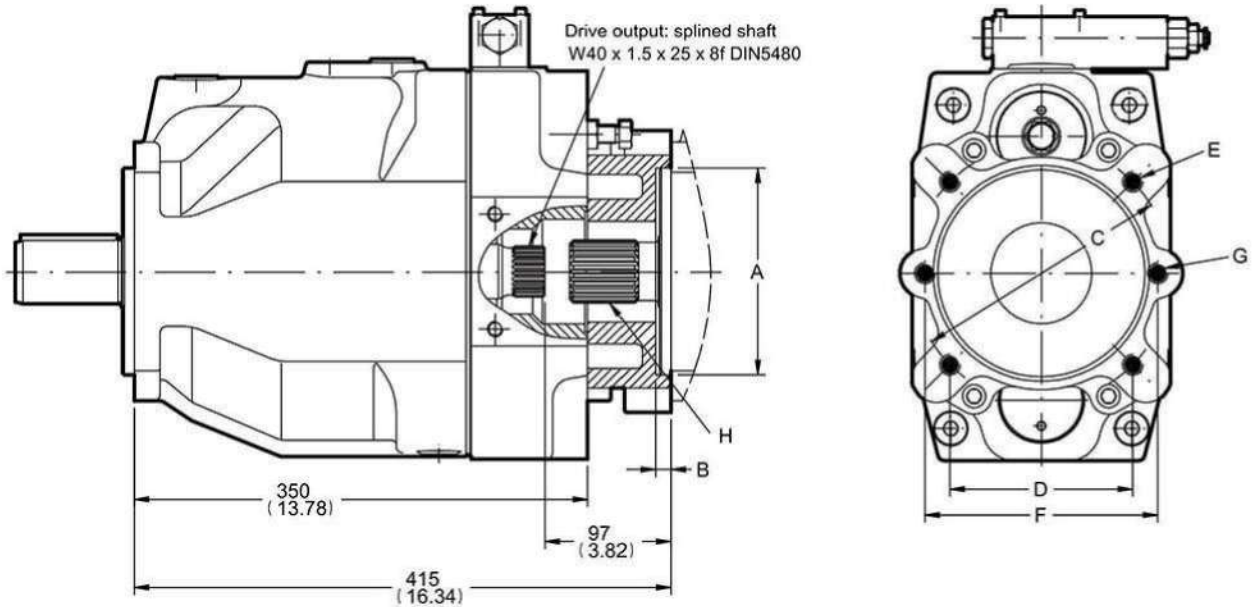
## Dimension

PV140 ~ PV180, PV210 (Body 4)

Thru drive

Thru drive:

D, E, F, G, J, K, L, M



| Thru shaft adaptors are available with the following dimensions: |       |    |     |       |     |           |           |
|--|-------|----|-----|-------|-----|-----------|-----------|
| thru code  | A     | B  | C   | D     | E   | F         | G         |
| J  | 80    | 10 | 103 | -     | M8  | 109       | M10       |
| K  | 100   | 12 | 125 | -     | M10 | 140       | M12       |
| L  | 125   | 12 | 160 | -     | M12 | 180       | M16       |
| M  | 160   | 12 | 200 | -     | M16 | n. avail. | n. avail. |
| D  | 82.55 | 10 | -   | -     | -   | 106       | M10       |
| E  | 101.6 | 12 | -   | 89.8  | M10 | 146       | M12       |
| F  | 127   | 14 | -   | 114.5 | M12 | 181       | M16       |
| G  | 152.4 | 14 | -   | 161.6 | M16 | n. avail. | n. avail. |

Thread codes are 3 and 7  
the dimensions E and G are  
UNC-2B threads

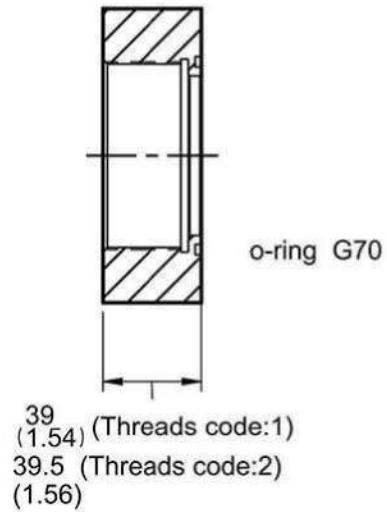
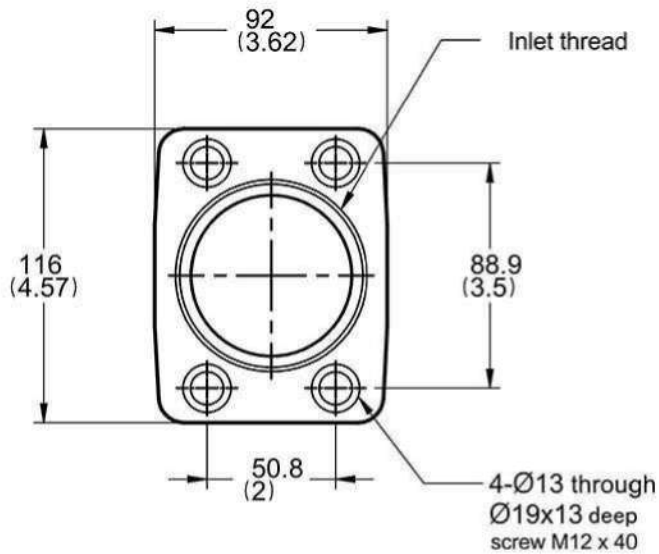
threads code: 3 and 7 Not  
standard, not in stock  
require special requests.



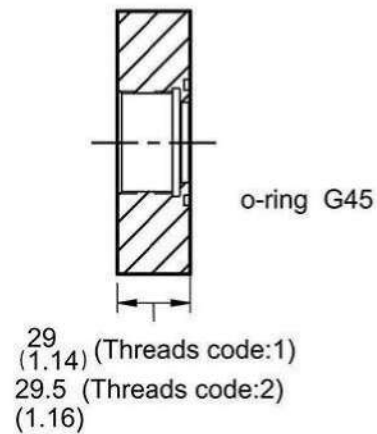
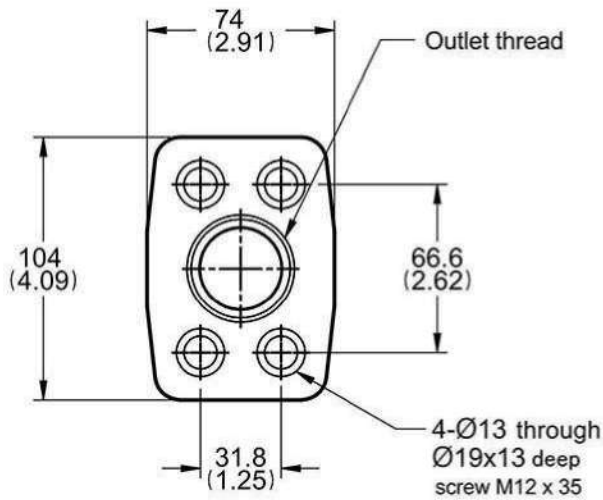
# Dimension

## PV140 ~ PV180, PV210 (Body 4) Inlet / Outlet Flange

### Inlet Flange



### Outlet Flange



### Ports

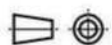
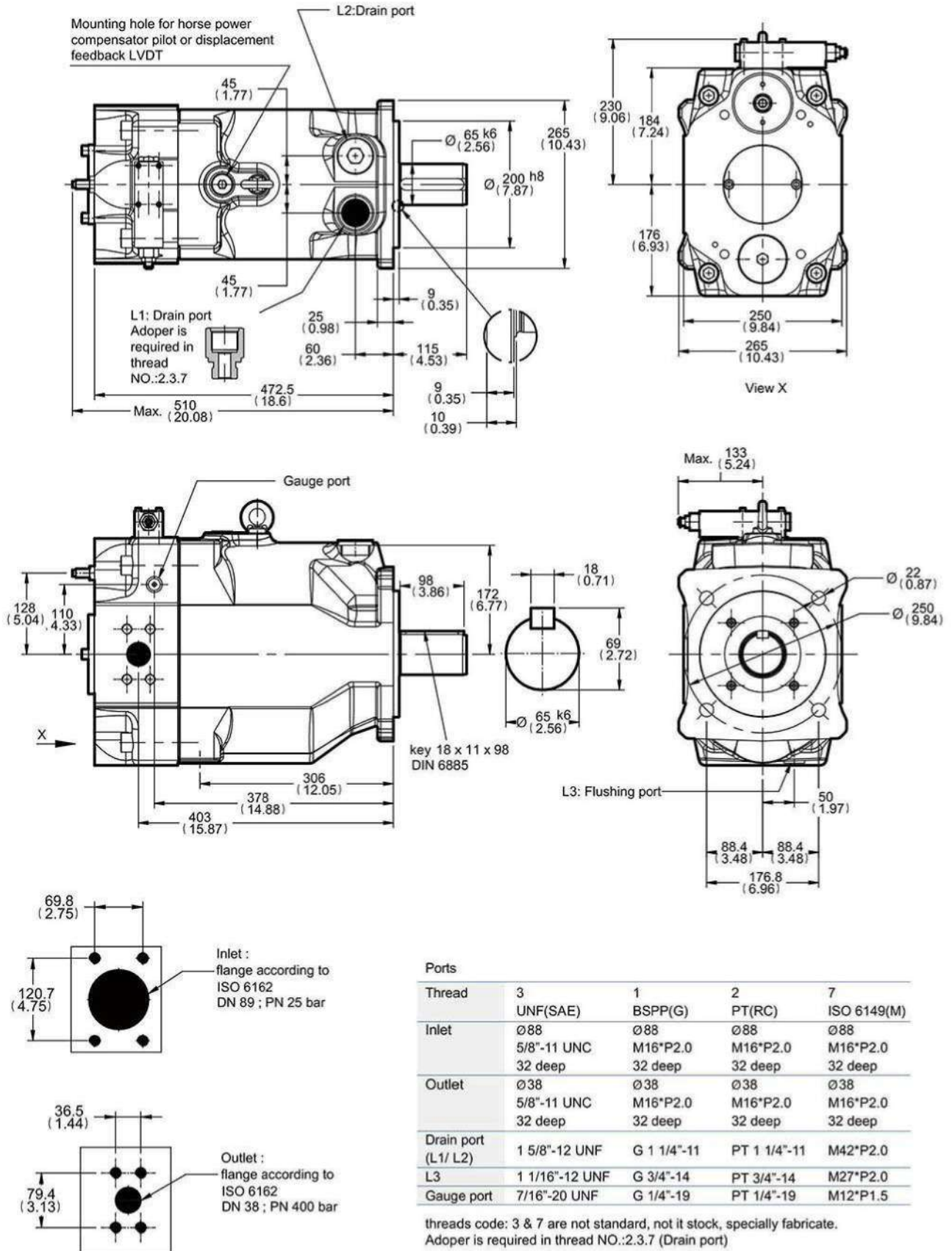
| Thread code | 3            | 1           | 2            | 7           |
|-------------|--------------|-------------|--------------|-------------|
|             | UNF(SAE)     | BSPP(G)     | PT(RC)       | ISO 6149(M) |
| Inlet       | Welding      | G 2 1/2"-11 | PT 2 1/2"-11 | Welding     |
| Outlet      | 1 5/8"-12 UN | G 1 1/4"-11 | PT 1 1/4"-11 | M42*P2.0    |

threads code: 3 & 7 are not standard, not it stock, specially fabricate.

# Dimension

## PV270 (Body 5)

Metric version (motor mounting Ø200)

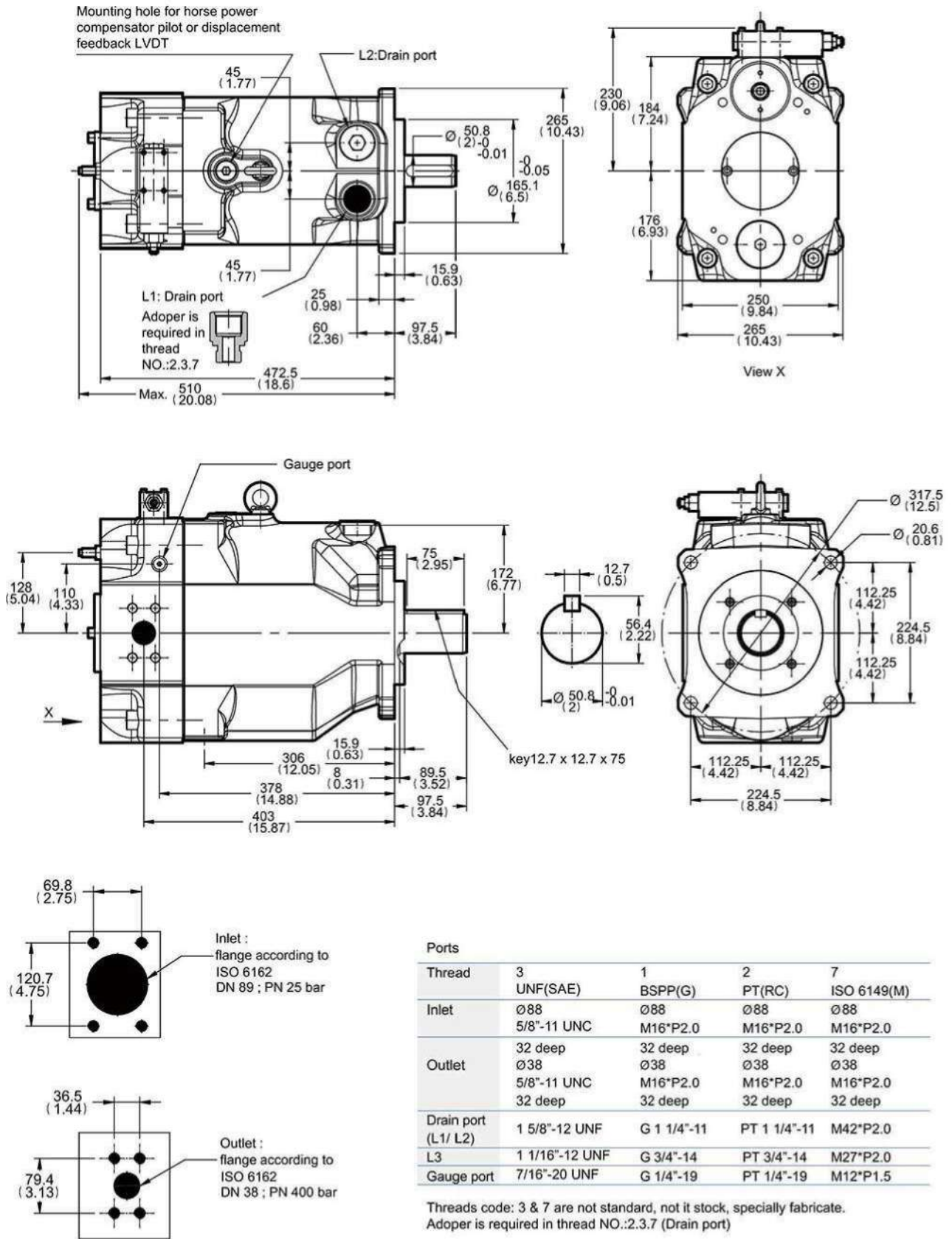




# Dimension

## PV270 (Body5)

SAE version (motor mounting  $\varnothing 165.1$ )



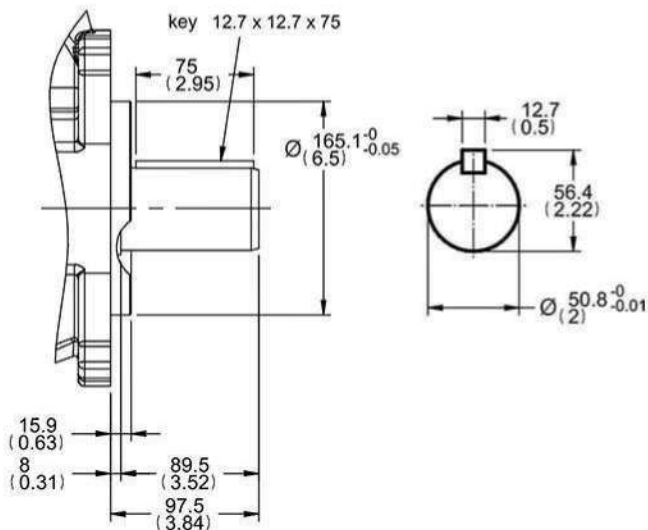
# Dimension

## PV270 (Body 5)

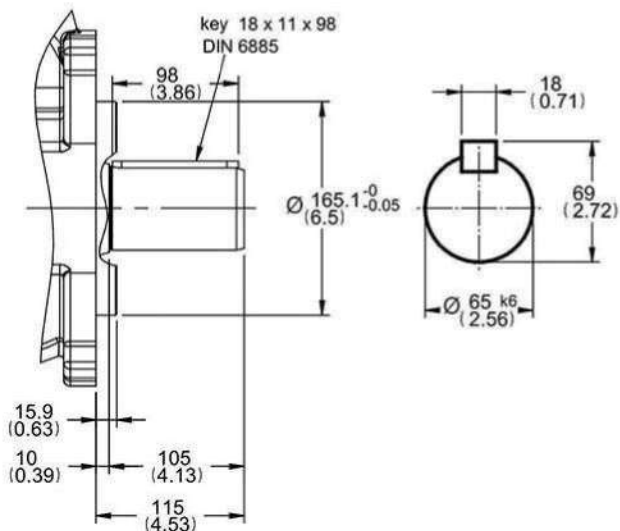
SAE version(motor mounting  $\varnothing 165.1$ )

Shaft type

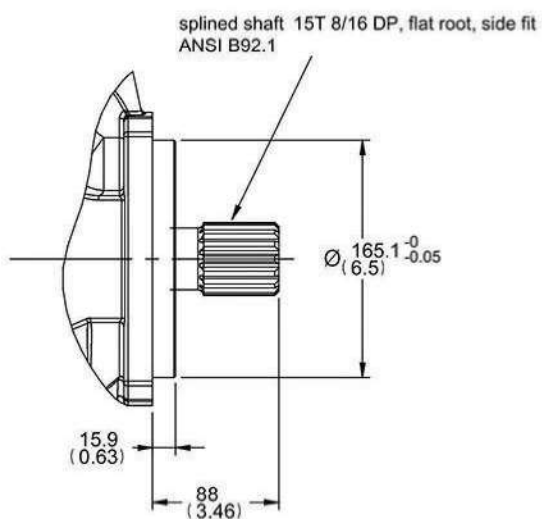
Mounting code: **N**



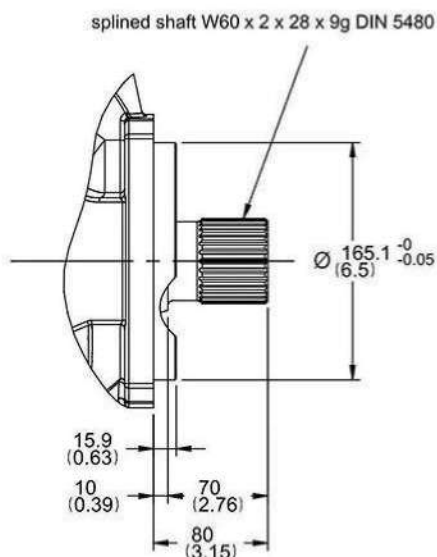
Mounting code: **J**



Mounting code: **D**



Mounting code: **U**



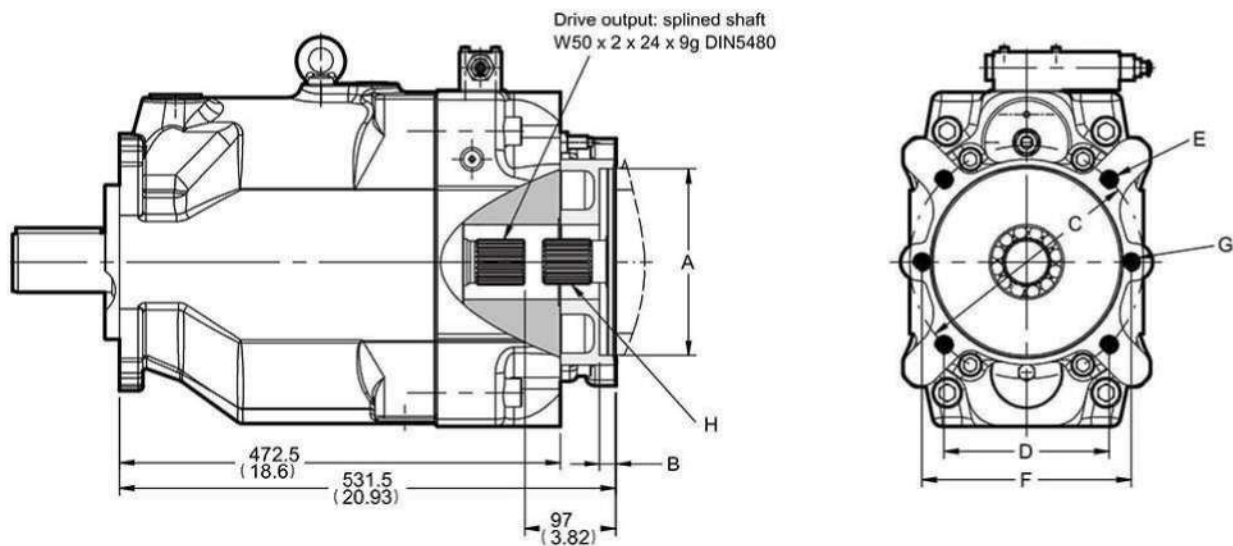
# Dimension

## PV270 (Body 5)

Thru drive

Thru drive:

D, E, F, G, H, J, K, L, M, N

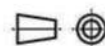


Thru shaft adaptors are available with the following dimensions:

| thru code | A     | B    | C   | D     | E   | F         | G         |
|-----------|-------|------|-----|-------|-----|-----------|-----------|
| J         | 80    | 8.5  | 103 | -     | M8  | 109       | M10       |
| K         | 100   | 10.5 | 125 | -     | M10 | 140       | M12       |
| L         | 125   | 10.5 | 160 | -     | M12 | 180       | M16       |
| M         | 160   | 13.5 | 200 | -     | M16 | 224       | M20       |
| N         | 200   | 13.5 | 250 | -     | M20 | n. avail. | n. avail. |
| D         | 82.55 | 8    | -   | -     | -   | 106       | M10       |
| E         | 101.6 | 11   | -   | 89.8  | M10 | 146       | M12       |
| F         | 127   | 13.5 | -   | 114.5 | M12 | 181       | M16       |
| G         | 152.4 | 13.5 | -   | 161.6 | M16 | 229       | M20       |
| H         | 165.1 | 17   | -   | 224.5 | M20 | n. avail. | n. avail. |

Thread codes are 3 and 7  
the dimensions E and G are  
UNC-2B threads

threads code: 3 and 7 Not  
standard, not in stock  
require special requests.

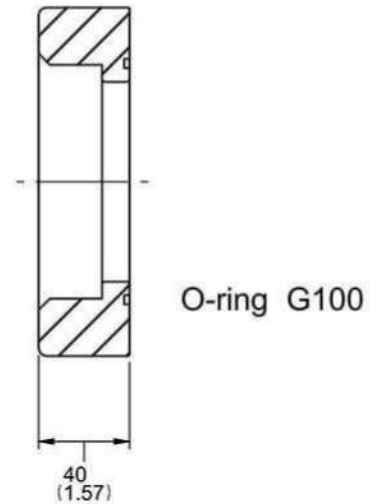
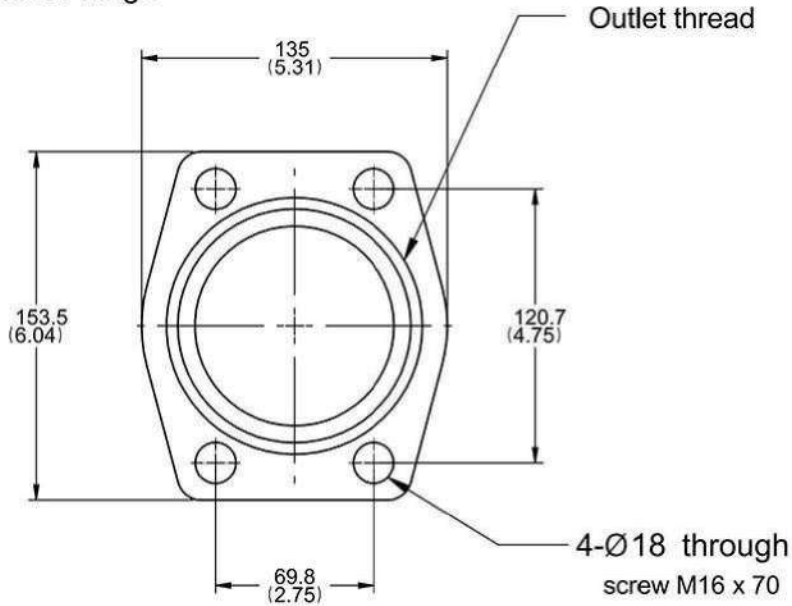


# Dimension

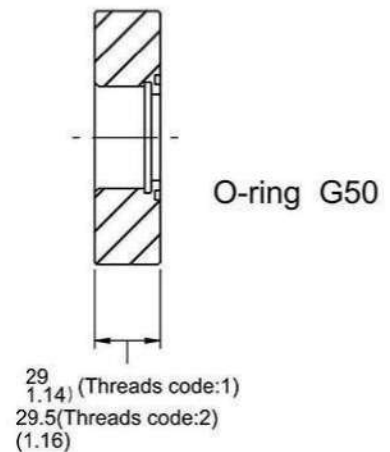
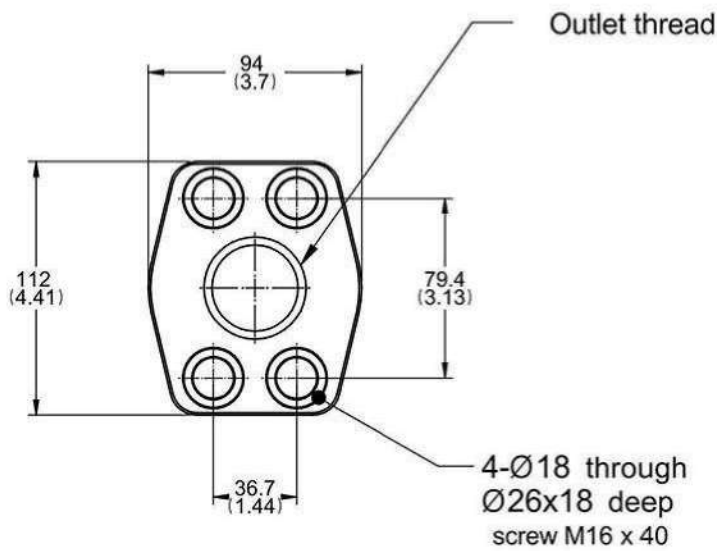
## PV270 (Body 5) Inlet / outlet Flange

Thru drive

### Inlet Flange



### Outlet Flange



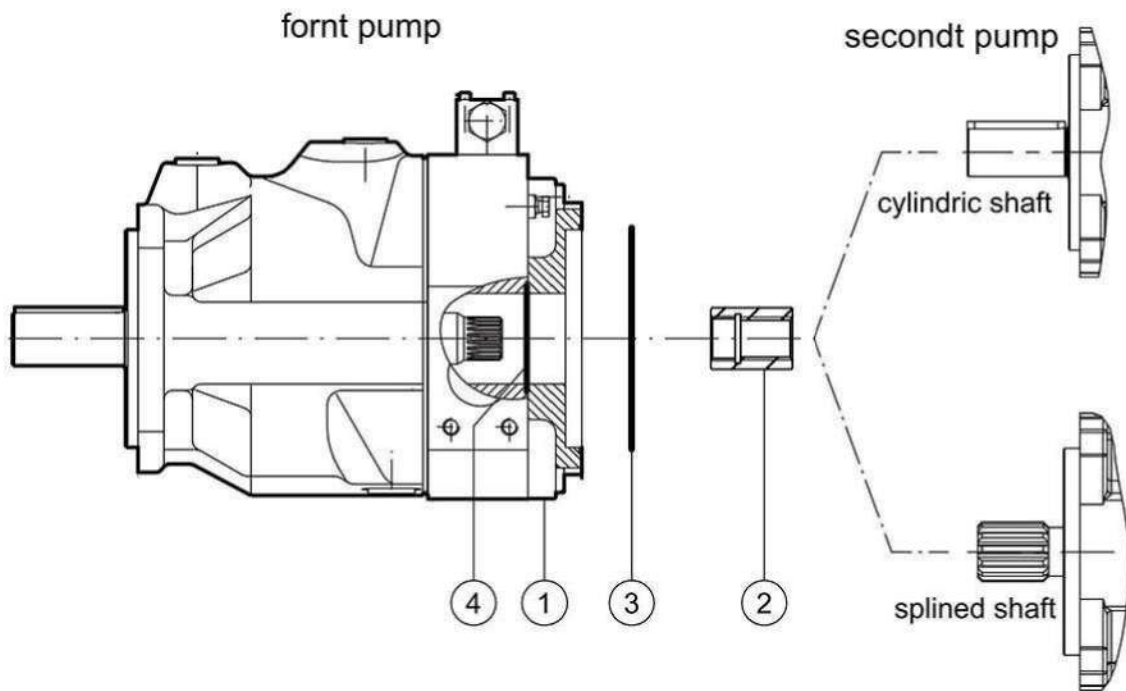
#### Ports

| Thread code | 3              | 1           | 2            | 7           |
|-------------|----------------|-------------|--------------|-------------|
|             | UNF(SAE)       | BSPP(G)     | PT(RC)       | ISO 6149(M) |
| Inlet       | welding 3 1/2" |             |              |             |
| Outlet      | 1 7/8"-12 UN   | G 1 1/2"-11 | PT 1 1/2"-11 | M48*P2.0    |

Threads code: 3 & 7 are not standard, not it stock, specially fabricate.



# Pump combination



| NO. | Name               |
|-----|--------------------|
| 1   | adapter            |
| 2   | coupling           |
| 3   | front pump o-ring  |
| 4   | second pump o-ring |

Order code refers to next page

# Pump combination

## ② Coupling Order no.

| Second pump            |  | Fornt pump Size                 |                                    |                                   |                               |                   |
|------------------------|--|---------------------------------|------------------------------------|-----------------------------------|-------------------------------|-------------------|
| Second pump shaft      | Model                                    | Body 1<br>(PV016~023,<br>PV028) | Body 2<br>(PV032~046,<br>056,065 ) | Body 3<br>(PV063~092,<br>110,125) | Body 4<br>(PV140~180,<br>210) | Body 5<br>(PV270) |
| SAE splined shaft      |  |                                 |                                    |                                   |                               |                   |
| 9T 16/32 DP            |  | 4A505032                        | 4A505037                           | 4A505051                          | 4A505058                      | 4A505069          |
| 11T 16/32 DP           |  | --                              | --                                 | --                                | --                            | --                |
| 13T 16/32 DP           |  | 4A505033                        | 4A505034                           | 4A505047                          | 4A505059                      | 4A505070          |
| 15T 16/32 DP           | (PV016~023,PV028)<br>(PV032~046,056,065) | --                              | 4A505040                           | 4A505120                          | 4A505060                      | 4A505071          |
| 14T 12/24 DP           | (PV032~046,056,065)                      | --                              | 4A505036                           | 4A505052                          | 4A505061                      | 4A505072          |
| 17T 12/24 DP           |  | --                              | --                                 | --                                | --                            | --                |
| 13T 8/16 DP            | (PV063~092,110,125)<br>(PV140~180,210)   | --                              | --                                 | --                                | 4A505062                      | 4A505073          |
| 15T 8/16 DP            | (PV140~180,210)<br>(PV270)               | --                              | --                                 | --                                | 4A505063                      | 4A505074          |
| splined shaft DIN 5480 |  |                                 |                                    |                                   |                               |                   |
| 15T W25x1.5x15         | (PV016~023,PV028)                        | 4A505031                        | 4A505038                           | 4A505049                          | 4A505057                      | 4A505068          |
| 20T W32x1.5x20         | (PV032~046,056,065)                      | --                              | 4A505039                           | 4A505048                          | 4A505056                      | 4A505067          |
| 25T W40x1.5x25         | (PV063~092,110,125)                      | --                              | --                                 | 4A505050                          | 4A505055                      | 4A505066          |
| 24T W50x2.0x24         | (PV140~180,210)                          | --                              | --                                 | --                                | 4A505054                      | 4A505065          |
| 28T W60x2.0x28         | (PV270)                                  | --                              | --                                 | --                                | --                            | 4A505075          |
| cylindric shaft        |  |                                 |                                    |                                   |                               |                   |
| ø19.05*4.76            |  | --                              | --                                 | --                                | --                            | --                |
| ø22.22*4.76            |  | --                              | 4A505042                           | 4A505043                          | 4A505053                      | 4A505064          |
| ø22.22*6.35            |  | --                              | 4A505042                           | 4A505043                          | 4A505053                      | 4A505064          |
| ø25.4*6.35             | (PV016~023,PV028)                        | --                              | 4A505041                           | --                                | --                            | --                |
| ø31.75*7.94            | (PV032~046,056,065)                      | --                              | --                                 | --                                | --                            | --                |
| ø44.45*11.11           | (PV063~092,110,125)<br>(PV140~180,210)   | --                              | --                                 | --                                | --                            | --                |
| ø50.8*12.7             | (PV140~180,210)<br>(PV270)               | --                              | --                                 | --                                | --                            | --                |
| cylindric shaft        |  |                                 |                                    |                                   |                               |                   |
| ø25*8                  | (PV016~023,028)                          | --                              | 4A505035                           | --                                | --                            | --                |
| ø32*10                 | (PV032~046,056,065)                      | --                              | --                                 | --                                | --                            | --                |
| ø40*12                 | (PV063~092,110,125)                      | --                              | --                                 | --                                | --                            | --                |
| ø50*14                 | (PV140~180,210)                          | --                              | --                                 | --                                | --                            | --                |
| ø65*18                 | (PV270)                                  | --                              | --                                 | --                                | --                            | --                |

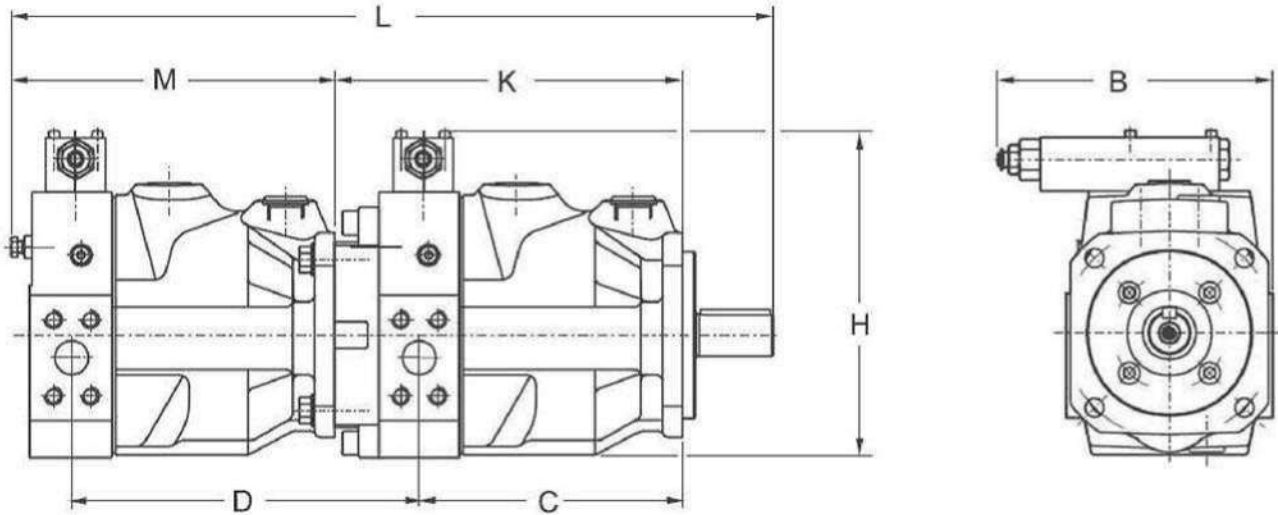
# Pump combination

order no.

| Fornt pump                    | Thru drive code  | ①          | ③                 | ④                  |
|-------------------------------|------------------|------------|-------------------|--------------------|
|                               |                  | Adapter    | Fornt pump o-ring | Second pump o-ring |
| Body 1<br>(PV016~023,028)     | I φ 63           | 4A504012   | 3AAA1BA134        | 3AAC1AA065         |
|                               | J φ 80           | 4A504013   | 3AAA1BA134        | 3AAC1AA085         |
|                               | K φ 100          | 4A504014   | 3AAA1BA134        | 3AAC1AA105         |
|                               | C φ 50.8         | 4A504015   | 3AAA1BA134        | 3AAC1AA055         |
|                               | D φ 82.55        | 4A504016   | 3AAA1BA134        | 3AAC1AA085         |
|                               | E φ 101.6        | 4A504017   | 3AAA1BA134        | 3AAC1AA105         |
| Body 2<br>(PV032~046,056,065) | I φ 63 (261L)    | --         | 3AAA1BA146        | --                 |
|                               | J φ 80 (261L)    | --         | 3AAA1BA146        | 3AAD1AA080         |
|                               | K φ 100 (261L)   | 4A504023   | 3AAA1BA146        | 3AAD1AA100         |
|                               | L φ 125 (261L)   | 4A504024   | 3AAA1BA146        | 3AAD1AA125         |
|                               | D φ 82.55 (261L) | 4A504020   | 3AAA1BA146        | 3AAD1AA085         |
|                               | E φ 101.6 (261L) | 4A504021   | 3AAA1BA146        | 3AAD1AA100         |
|                               | S φ 101.6 (276L) | 4A504018   | 3AAA1BA146        | 3AAD1AA100         |
| F φ 127 (276L)                | 4A504019         | 3AAA1BA146 | 3AAD1AA130        |                    |
| Body 3<br>(PV063~092,110,125) | I φ 63           | --         | 3AAA1BA146        | --                 |
|                               | J φ 80           | 4A504030   | 3AAA1BA146        | 3AAD1AA080         |
|                               | K φ 100          | 4A504031   | 3AAA1BA146        | 3AAD1AA100         |
|                               | L φ 125          | 4A504032   | 3AAA1BA146        | 3AAD1AA125         |
|                               | M φ 160          | 4A504033   | 3AAA1BA146        | 3AAF1AA316         |
|                               | D φ 82.55        | 4A504025   | 3AAA1BA146        | 3AAD1AA085         |
|                               | E φ 101.6        | 4A504026   | 3AAA1BA146        | 3AAD1AA100         |
|                               | F φ 127          | 4A504027   | 3AAA1BA146        | 3AAD1AA130         |
|                               | G φ 152.4        | 4A504028   | 3AAA1BA146        | 3AAA1AA163         |
| Body 4<br>(PV140~180,210)     | J φ 80           | 4A504039   | 3AAA1BA153        | 3AAD1AA080         |
|                               | K φ 100          | 4A504040   | 3AAA1BA153        | 3AAD1AA100         |
|                               | L φ 125          | 4A504041   | 3AAA1BA153        | 3AAD1AA125         |
|                               | M φ 160          | 4A504042   | 3AAA1BA153        | 3AAF1AA316         |
|                               | D φ 82.55        | 4A504035   | 3AAA1BA153        | 3AAD1AA085         |
|                               | E φ 101.6        | 4A504036   | 3AAA1BA153        | 3AAD1AA100         |
|                               | F φ 127          | 4A504037   | 3AAA1BA153        | 3AAD1AA130         |
|                               | G φ 152.4        | 4A504038   | 3AAA1BA153        | 3AAA1AA163         |
| Body 5<br>(PV270)             | J φ 80           | 4A504049   | 3AAA1BA153        | 3AAD1AA080         |
|                               | K φ 100          | 4A504050   | 3AAA1BA153        | 3AAD1AA100         |
|                               | L φ 125          | 4A504051   | 3AAA1BA153        | 3AAD1AA125         |
|                               | M φ 160          | 4A504052   | 3AAA1BA153        | 3AAF1AA316         |
|                               | N φ 200          | 4A504053   | 3AAA1BA153        | 3AAF1AA320         |
|                               | D φ 82.55        | 4A504044   | 3AAA1BA153        | 3AAD1AA085         |

# Dimensions

## Double pump dimensions



| Main pump                 | Second pump           | Interface main pump | L    | B   | C     | D     | H   | K     | M   |
|---------------------------|-----------------------|---------------------|------|-----|-------|-------|-----|-------|-----|
| PV016,020,023,028         | PV016,020,023,028     | 100 B4 HW           | 489  | 196 | 170.5 | 225   | 220 | 225   | 212 |
| PV032,040,046,<br>056,065 | PV016,020,023,028     | 125 B4 HW           | 541  | 208 | 197   | 235.5 | 245 | 261   | 212 |
|                           | PV032,040,046,056,065 |                     | 574  | 208 | 197   | 261   | 245 | 261   | 245 |
| PV063,080,092<br>110,125  | PV016,020,023,028     | 160 B4 HW           | 630  | 232 | 252   | 244.5 | 299 | 326   | 212 |
|                           | PV032,040,046,056,065 |                     | 663  | 232 | 252   | 271   | 299 | 326   | 245 |
|                           | PV063,080,092,110,125 |                     | 724  | 232 | 252   | 326   | 299 | 326   | 306 |
| PV140,180,210             | PV016,020,023,028     | 160 B4 HW           | 719  | 230 | 305   | 208.5 | 349 | 415   | 212 |
|                           | PV032,040,046,056,065 |                     | 752  | 230 | 305   | 307   | 349 | 415   | 245 |
|                           | PV063,080,092,110,125 |                     | 813  | 230 | 305   | 362   | 349 | 415   | 306 |
|                           | PV140,180,210         |                     | 878  | 230 | 305   | 415   | 349 | 415   | 385 |
| PV270                     | PV016,020,023,028     | 200 B4 HW           | 860  | 255 | 403   | 299   | 406 | 531.5 | 212 |
|                           | PV032,040,046,056,065 |                     | 893  | 255 | 403   | 325.5 | 406 | 531.5 | 245 |
|                           | PV063,080,092,110,125 |                     | 954  | 255 | 403   | 380.5 | 406 | 531.5 | 306 |
|                           | PV140,180,210         |                     | 1033 | 255 | 403   | 433.5 | 406 | 531.5 | 385 |
|                           | PV270                 |                     | 1134 | 255 | 403   | 531.5 | 406 | 531.5 | 510 |

# PV Axial Piston Pump

## Thru drive, shaft load limitations

The max. Transferable torque in Nm for the different shafts options are:

| Shaft code | PV016-023<br>PV028 | PV032-046<br>PV056&065 | PV063-125 | PV032-046<br>PV210 | PV270 |
|------------|--------------------|------------------------|-----------|--------------------|-------|
| N          | 300                | 550                    | 1320      | 2000               | 2000  |
| D          | 300                | 610                    | 1218      | 2680               | 2680  |
| F          | -                  | -                      | -         | 1320               | -     |
| G          | -                  | -                      | -         | 1640               | -     |
| M          | 300                | 570                    | 1150      | 1900               | 2850  |
| K          | 405                | 675                    | 1400      | 2650               | 3980  |

### Important notice

The max. allowable torque of the individual shaft must not be exceeded.

For 2-pump combinations, there is no problem because PV series offers 100% thru torque.

For 3-pump combinations (or more), the limit torque will be reached or exceeded.

Therefore, it is necessary to calculate the torque factor and compare with the allowed torque limit factor in the table.

Requirement: calculated torque factor  
< torque factor

To make the necessary calculations easier and more user friendly it is not required to calculate actual torque requirements in Nm and compare them with the shaft limitations. The table on the right shows limit factors that include material specification, safety factors and conversion factors.

The total torque factor is represented by the sum of the individual torque factors of all pumps in the complete pump combination.

The torque factor of each individual pump is calculated by multiplying the max. operating pressure  $p$  of the pump (in bar) with the max. displacement  $V_g$  of the pump (in  $\text{cm}^3/\text{rev}$ ).

| pump                     | shaft | torque limit factor |
|--------------------------|-------|---------------------|
| PV016-PV023<br>PV028     | N     | 17700               |
|                          | D     | 17700               |
|                          | M     | 17700               |
|                          | K     | 20130               |
| PV032-046<br>PV056&065   | N     | 32680               |
|                          | D     | 36380               |
|                          | M     | 33810               |
| PV063-PV092<br>PV110&125 | K     | 40250               |
|                          | N     | 77280               |
|                          | D     | 72450               |
| PV140-PV180<br>PV210     | M     | 67620               |
|                          | K     | 83720               |
|                          | N     | 118400              |
|                          | D     | 158760              |
|                          | F     | 78750               |
| PV270                    | G     | 97650               |
|                          | M     | 113400              |
|                          | K     | 157500              |
|                          | N     | 119000              |
|                          | D     | 159700              |
|                          | M     | 170100              |
|                          | K     | 236250              |

Total torque factor of the combination =  
sum of individual torque factors of all pumps

Torque factor of any pump =  $p \times V_g$  (pressure in bar x displacement in  $\text{cm}^3/\text{rev}$ )