

HYDRAULIC CLAMPING SYSTEM

CHS-HYDRAULIC  
SWING CLAMP



FEATURES

The product is ideal for mass production on a special purpose machine and jig in machining center. It will greatly upgrade the production efficiency.

When the hydraulic clamp actuate, and the piston moves downward, the clamping arm will swing to a rated angle. Then it lowers until the workpiece is clamped securely.

To avoid too fast motion, a flow control valve is suggested to connect to the hydraulic swing clamp cylinder. Do not clamp workpiece while the clamp is swinging to avoid damaging the cylinder barrel and internal parts.

The cylinder body is manufactured from structural carbon steel.Inside surface is specially treated for maximum smoothness and long service life.

NOTE

When you need to increase the length of the clamping arm, please don't exceed 1.5 times of the original length.

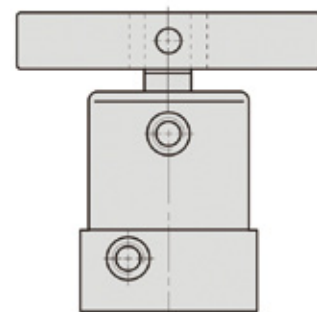
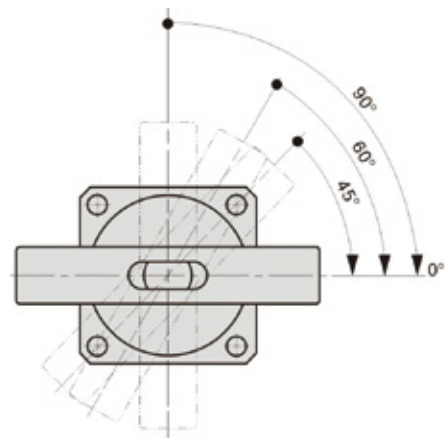
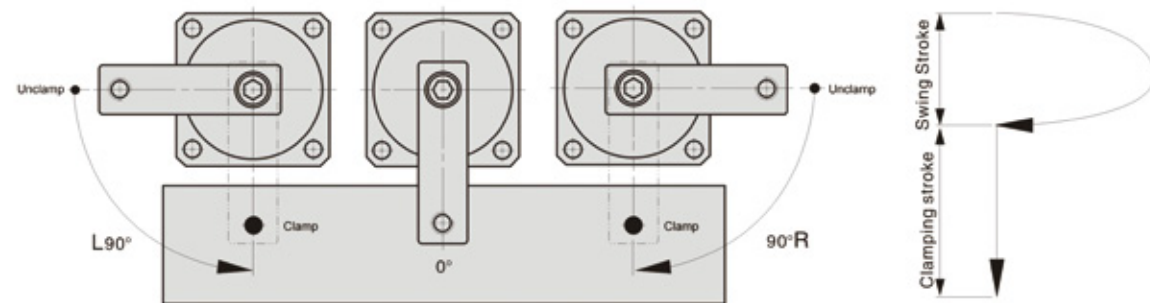
ORDERING INDICATION

CHS - MF 25 S R × 90 E

|         |                                    |                                |
|---------|------------------------------------|--------------------------------|
| CHS     | Series                             | CHS                            |
|         |                                    | Blank: Line type               |
|         |                                    | MF: Manifold with flow control |
| MF      | Type                               | M: Manifold type               |
|         |                                    | FA: Flange type                |
|         |                                    | TB: Threaded body              |
|         |                                    | FAM: Flange with manifold      |
|         |                                    | FAMT: Flange with flow control |
| 25<br>S | Hydraulic cylinder inside diameter | φ25, φ32, φ40, φ50, φ63,       |
|         | Clamping arm type                  | S: Single side arm D: Double   |
| R       | Rotating direction                 | side arm                       |
|         |                                    | R: Turn right                  |
| 90<br>E | Rotating direction                 | L: Turn left                   |
|         |                                    | N:0 No swing                   |
|         | Rotating angle                     | 90° ,45° ,60°                  |
|         | E                                  | Stroke extension- line type    |

Max:operating pressure 70 bar  
Min: operating pressure 10 bar  
Double acting

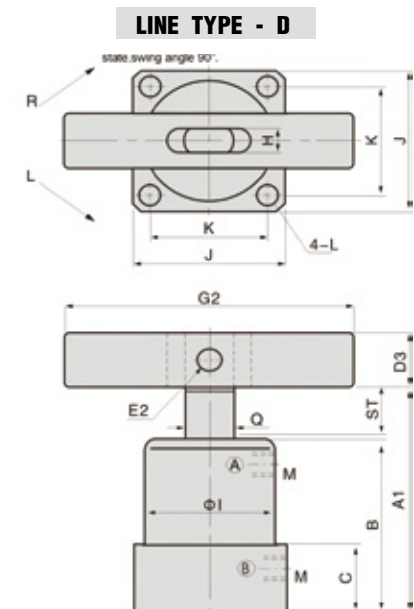
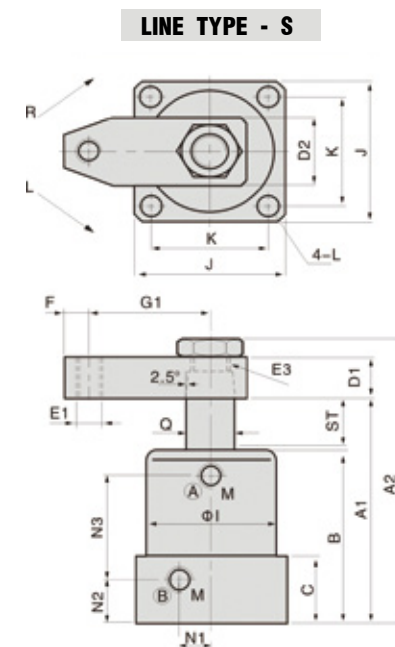
| MODEL  | CLAMPING FORCE AT 70 bar (KN) | SWING STROKE (mm) | EXTENDED CLAMPING STROKE (mm) | STANDARD TOTAL STROKE(mm) | EXTENDED TOTAL STROKE(mm) | OIL STANDARD CAPACITY CLAMP(cm³) | OIL STANDARD CAPACITY UNCLAMP(cm³) | OIL EXTENDED CAPACITY CLAMP(cm³) | OIL STANDARD CAPACITY UNCLAMP(cm³) | OIL EXTENDED CAPACITY UNCLAMP(cm³) | EFF.PISTON AREA CLAMP(cm²) | EFF.PISTON AREA UNCLAMP(cm²) | RANGE OF TEMPERATURE (°C) |
|--------|-------------------------------|-------------------|-------------------------------|---------------------------|---------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|------------------------------------|----------------------------|------------------------------|---------------------------|
| CHS-25 | 1.69                          | 9                 | 13                            | -                         | 22                        | -                                | 5.21                               | -                                | 10.80                              | -                                  | 2.37                       | 4.91                         | -10~+60° C                |
| CHS-32 | 3.50                          | 11                | 15                            | 30                        | 26                        | 41                               | 12.74                              | 20.09                            | 20.90                              | 32.96                              | 4.9                        | 8.04                         | -10~+60° C                |
| CHS-40 | 6.15                          | 11                | 15                            | 30                        | 26                        | 41                               | 22.41                              | 35.34                            | 32.66                              | 51.50                              | 8.62                       | 12.56                        | -10~+60° C                |
| CHS-50 | 9.62                          | 13                | 17                            | 34                        | 30                        | 47                               | 40.41                              | 63.31                            | 58.89                              | 92.26                              | 13.47                      | 19.63                        | -10~+60° C                |
| CHS-63 | 15.18                         | 13                | 17                            | 34                        | 30                        | 47                               | 63.78                              | 99.92                            | 93.48                              | 146.45                             | 21.26                      | 31.16                        | -10~+60° C                |



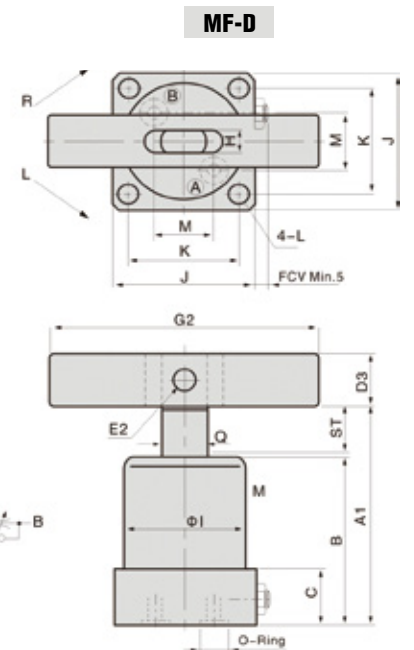
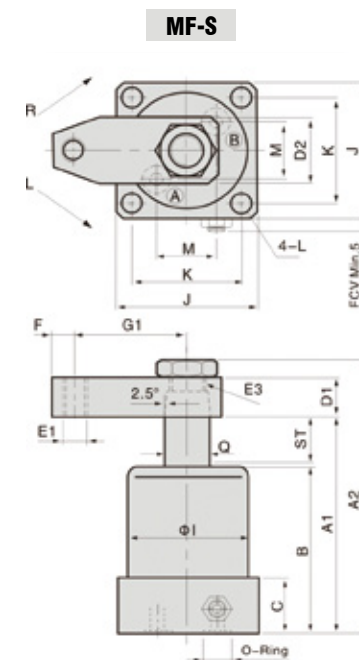
### CLAMPING ARM MOUNTING METHODS



### CLAMPING ARM REMOVING METHODS



Ⓐ CLAMPING PORT Ⓑ UNCLAMPING PORT



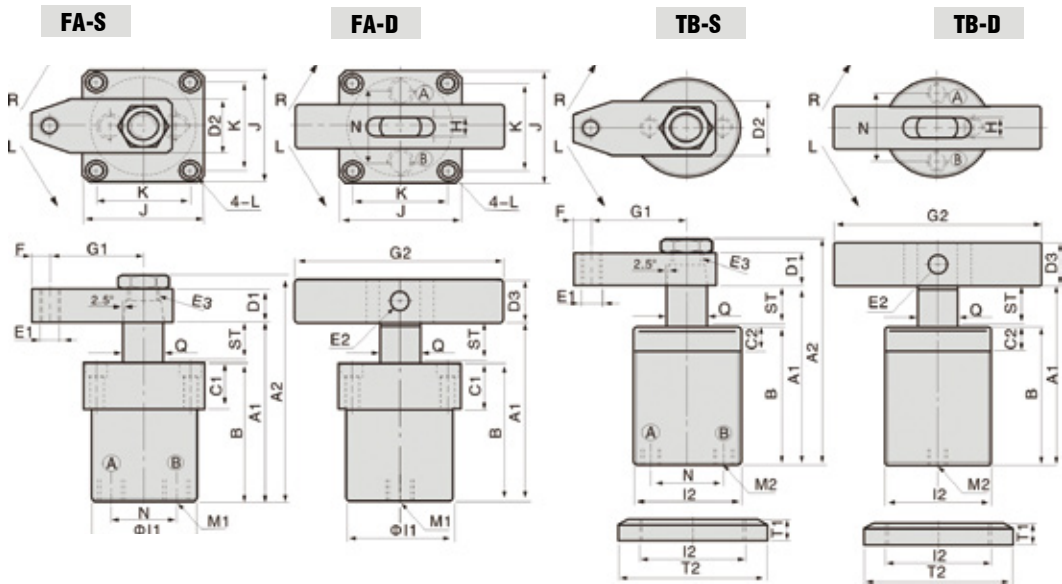
Ⓐ CLAMPING PORT Ⓑ UNCLAMPING PORT

| MODEL    | ST: SWING/CLAMPING | A1 UNCLAMP | A2 UNCLAMP | B   | C  | D1 | D2 | D3   | E1  | E2  | E3      | F  | G1 | G2  | H  | I   | J  | K  | L    | M     | N1 | N2   | N3   | O-RING | Q     |
|----------|--------------------|------------|------------|-----|----|----|----|------|-----|-----|---------|----|----|-----|----|-----|----|----|------|-------|----|------|------|--------|-------|
| CHS-25   | 22:9/13            | 104        | 127        | 76  | 27 | 16 | 27 | □ 19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | φ46 | 52 | 40 | φ6.8 | PT1/8 | 8  | 17   | 46   | -      | φ18   |
| CHS-32   | 26:11/15           | 118        | 144        | 85  | 30 | 18 | 31 | □ 22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | φ50 | 56 | 44 | φ6.8 | PT1/8 | 10 | 19   | 52   | -      | φ20   |
| CHS-40   | 26:11/15           | 123        | 150        | 90  | 30 | 18 | 31 | □ 22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | φ54 | 63 | 48 | φ9   | PT1/8 | 12 | 19   | 57   | -      | φ22.4 |
| CHS-50   | 30:13/17           | 137        | 167        | 100 | 34 | 20 | 37 | □ 25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | φ66 | 72 | 57 | φ9   | PT1/4 | 15 | 21.5 | 63.5 | -      | φ28   |
| CHS-63   | 30:13/17           | 142        | 177        | 105 | 34 | 23 | 48 | □ 32 | M16 | φ15 | M24×2   | 15 | 75 | 200 | 15 | φ80 | 88 | 70 | φ11  | PT1/4 | 17 | 22   | 68   | -      | φ35.5 |
| CHS-MF25 | 22:9/13            | 104        | 127        | 76  | 22 | 16 | 27 | □ 19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | φ46 | 55 | 42 | φ6.8 | 19    | -  | -    | -    | P7     | φ18   |
| CHS-MF32 | 26:11/15           | 118        | 144        | 85  | 25 | 18 | 31 | □ 22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | φ50 | 57 | 44 | φ6.8 | 21    | -  | -    | -    | P7     | φ20   |
| CHS-MF40 | 26:11/15           | 123        | 150        | 90  | 25 | 18 | 31 | □ 22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | φ54 | 63 | 48 | φ9   | 23    | -  | -    | -    | P9     | φ22.4 |
| CHS-MF50 | 30:13/17           | 137        | 167        | 100 | 30 | 20 | 37 | □ 25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | φ66 | 72 | 57 | φ9   | 28    | -  | -    | -    | P9     | φ28   |
| CHS-MF63 | 30:13/17           | 142        | 177        | 105 | 30 | 23 | 48 | □ 32 | M16 | φ15 | M24×2   | 15 | 75 | 200 | 15 | φ80 | 88 | 70 | φ11  | 32    | -  | -    | -    | P9     | φ35.5 |

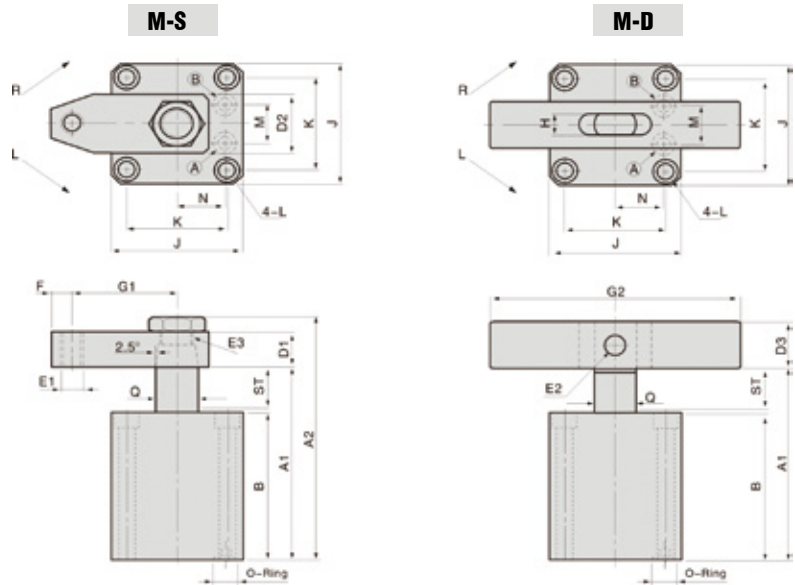
Unit:mm

\* The following drawing of FA-D&TB-D&M-D,double side swing clamp,all show unclamping state, swing angle 90° .

\* The following drawing of FAM-D & FAMT-D,double side swing clamp,all show unclamping state, swing angle 90° .



(A) CLAMPING PORT (B) UNCLAMPING PORT

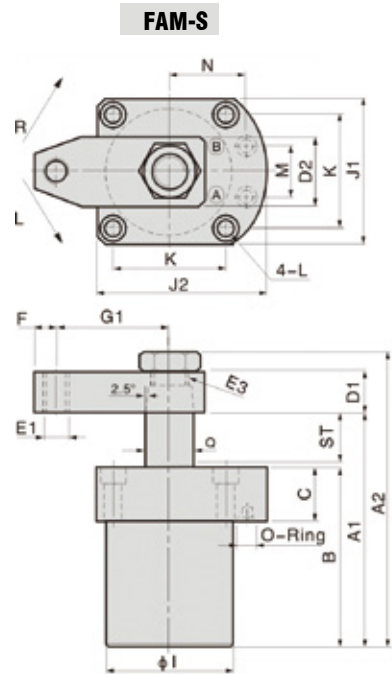


(A) CLAMPING PORT (B) UNCLAMPING PORT

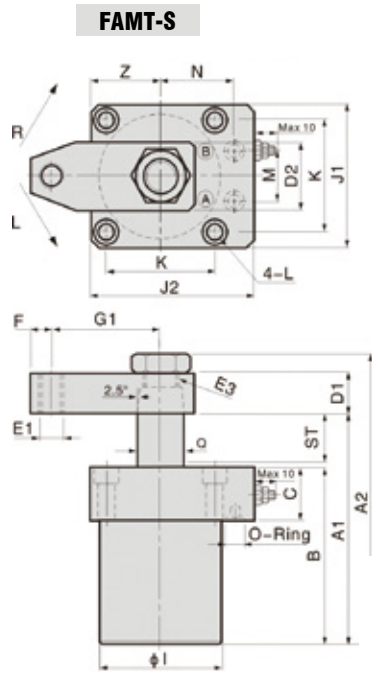
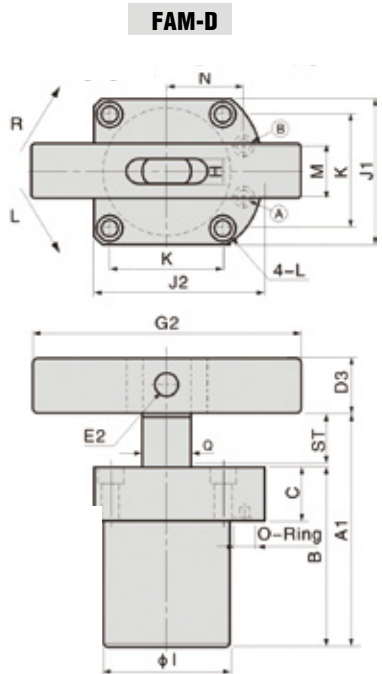
Unit:mm

| MODEL    | ST: SWING/<br>CLAMPING | A1<br>UNCLAMP | A2<br>UNCLAMP | B   | C1 | C2 | D1 | D2 | D3  | E1  | E2  | E3      | F  | G1 | G2  | H  | I1  | I2      | J  | K  | L               | M1    | M2    | N  | T1×2PCS | T2  | Q     |
|----------|------------------------|---------------|---------------|-----|----|----|----|----|-----|-----|-----|---------|----|----|-----|----|-----|---------|----|----|-----------------|-------|-------|----|---------|-----|-------|
| CHS-FA25 | 22:9/13                | 104           | 127           | 76  | 22 | -  | 16 | 27 | □19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | φ45 | -       | 53 | 40 | φ6.8-φ10.5×6.5D | PT1/4 | -     | 28 | -       | -   | φ18   |
| CHS-FA32 | 26:11/15               | 118           | 144           | 85  | 25 | -  | 18 | 31 | □22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | φ50 | -       | 57 | 44 | φ6.8-φ10.5×6.5D | PT1/4 | -     | 32 | -       | -   | φ20   |
| CHS-FA40 | 26:11/15               | 123           | 150           | 90  | 25 | -  | 18 | 31 | □22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | φ58 | -       | 69 | 52 | φ9-φ13.5×9D     | PT1/4 | -     | 40 | -       | -   | φ22.4 |
| CHS-FA50 | 30:13/17               | 137           | 167           | 100 | 30 | -  | 20 | 37 | □25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | φ68 | -       | 75 | 58 | φ9-φ13.5×9D     | PT1/4 | -     | 50 | -       | -   | φ28   |
| CHS-FA63 | 30:13/17               | 142           | 177           | 105 | 30 | -  | 23 | 48 | □32 | M16 | φ15 | M24×2   | 15 | 75 | 200 | 15 | φ81 | -       | 90 | 70 | φ11-φ17×11D     | PT1/4 | -     | 63 | -       | -   | φ35.5 |
| CHS-TB25 | 22:9/13                | 104           | 127           | 76  | -  | 12 | 16 | 27 | □19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | -   | M45×1.5 | -  | -  | -               | -     | PT1/8 | 28 | 10      | φ65 | φ18   |
| CHS-TB32 | 26:11/15               | 118           | 144           | 85  | -  | 12 | 18 | 31 | □22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | -   | M50×1.5 | -  | -  | -               | -     | PT1/8 | 32 | 11      | φ70 | φ20   |
| CHS-TB40 | 26:11/15               | 123           | 150           | 90  | -  | 15 | 18 | 31 | □22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | -   | M55×1.5 | -  | -  | -               | -     | PT1/8 | 40 | 11      | φ70 | φ22.4 |
| CHS-TB50 | 30:13/17               | 137           | 167           | 100 | -  | 15 | 20 | 37 | □25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | -   | M65×1.5 | -  | -  | -               | -     | PT1/8 | 50 | 12      | φ85 | φ28   |

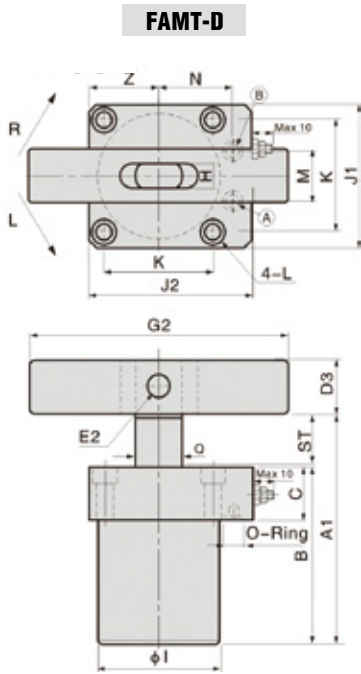
| MODEL   | ST: SWING/<br>CLAMPING | A1<br>UNCLAMP | A2<br>UNCLAMP | B   | D1 | D2 | D3   | E1  | E2  | E3      | F  | G1 | G2  | H  | J  | K  | L               | M  | N  | O-RING | Q     |
|---------|------------------------|---------------|---------------|-----|----|----|------|-----|-----|---------|----|----|-----|----|----|----|-----------------|----|----|--------|-------|
| CHS-M25 | 22:9/13                | 104           | 127           | 76  | 16 | 27 | □ 19 | M10 | φ8  | M14 1.5 | 10 | 50 | 140 | 9  | 55 | 42 | φ6.8-φ10.5×6.5D | 18 | 20 | P7     | φ18   |
| CHS-M32 | 26:11/15               | 118           | 144           | 85  | 18 | 31 | □ 22 | M10 | φ8  | M16 1.5 | 10 | 55 | 160 | 10 | 57 | 44 | φ6.8-φ10.5×6.5D | 22 | 22 | P7     | φ20   |
| CHS-M40 | 26:11/15               | 123           | 150           | 90  | 18 | 31 | □ 22 | M10 | φ10 | M18 1.5 | 10 | 60 | 160 | 10 | 69 | 52 | φ9-φ13.5×9D     | 26 | 26 | P8     | φ22.4 |
| CHS-M50 | 30:13/17               | 137           | 167           | 100 | 20 | 37 | □ 25 | M12 | φ12 | M20 1.5 | 12 | 65 | 180 | 12 | 75 | 58 | φ9-φ13.5×9D     | 32 | 30 | P8     | φ28   |



(A) CLAMPING PORT (B) UNCLAMPING PORT



(A) CLAMPING PORT (B) UNCLAMPING PORT



Unit:mm

| MODEL      | ST: SWING/<br>CLAMPING | A1<br>UNCLAMP | A2<br>UNCLAMP | B   | C  | D1 | D2 | D3  | E1  | E2  | E3      | F  | G1 | G2  | H  | I   | J1 | J2   | K  | L               | M  | N    | O-RING | Q     | Z    |
|------------|------------------------|---------------|---------------|-----|----|----|----|-----|-----|-----|---------|----|----|-----|----|-----|----|------|----|-----------------|----|------|--------|-------|------|
| CHS-FAM25  | 22:9/13                | 104           | 127           | 76  | 22 | 16 | 27 | □19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | φ45 | 55 | 64   | 42 | φ6.8-φ10.5×6.5D | 20 | 28   | P6     | φ18   |      |
| CHS-FAM32  | 26:11/15               | 118           | 144           | 85  | 25 | 18 | 31 | □22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | φ50 | 57 | 65.5 | 44 | φ6.8-φ10.5×6.5D | 22 | 29   | P6     | φ20   |      |
| CHS-FAM40  | 26:11/15               | 123           | 150           | 90  | 25 | 18 | 31 | □22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | φ58 | 69 | 79   | 52 | φ9-φ13.5×9D     | 26 | 34.5 | P9     | φ22.4 |      |
| CHS-FAM50  | 30:13/17               | 137           | 167           | 100 | 30 | 20 | 37 | □25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | φ68 | 75 | 87   | 58 | φ9-φ13.5×9D     | 30 | 39   | P9     | φ28   |      |
| CHS-FAMT25 | 22:9/13                | 104           | 127           | 76  | 22 | 16 | 27 | □19 | M10 | φ8  | M14×1.5 | 10 | 50 | 140 | 9  | φ45 | 55 | 64   | 42 | φ6.8-φ10.5×6.5D | 20 | 28   | P6     | φ18   | 27.5 |
| CHS-FAMT32 | 26:11/15               | 118           | 144           | 85  | 25 | 18 | 31 | □22 | M10 | φ8  | M16×1.5 | 10 | 55 | 160 | 10 | φ50 | 57 | 65.5 | 44 | φ6.8-φ10.5×6.5D | 22 | 29   | P6     | φ20   | 28.5 |
| CHS-FAMT40 | 26:11/15               | 123           | 150           | 90  | 25 | 18 | 31 | □22 | M10 | φ10 | M18×1.5 | 10 | 60 | 160 | 10 | φ58 | 69 | 77   | 52 | φ9-φ13.5×9D     | 26 | 34.5 | P6     | φ22.4 | 34.5 |
| CHS-FAMT50 | 30:13/17               | 137           | 167           | 100 | 30 | 20 | 37 | □25 | M12 | φ12 | M20×1.5 | 12 | 65 | 180 | 12 | φ68 | 75 | 87   | 58 | φ9-φ13.5×9D     | 30 | 39   | P9     | φ28   | 37.5 |