

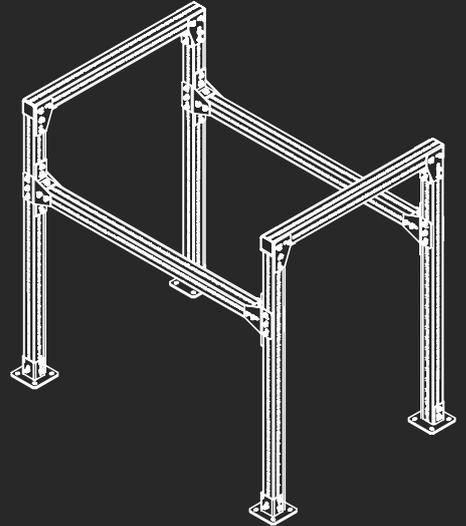


Technical  
Product Specifications:

# MODFRAME

Approval/calculation  
possibilities:

- RAL-GZ-655
- NZS 1170.5:2004
- NZS 4219:2009
- NZS 4541:2020
- AS/NZ 4680:2006





## ORBITAL FIRE HEAVY DUTY MODULAR FRAMING

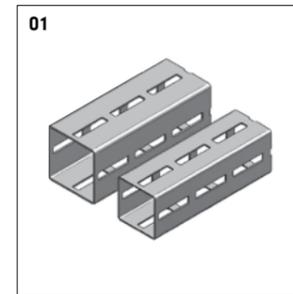
- ✓ HVAC Support Systems
- ✓ Cable Support Systems
- ✓ Pipe Support Systems
- ✓ Fire Support Systems
- ✓ Mezzanine Floors



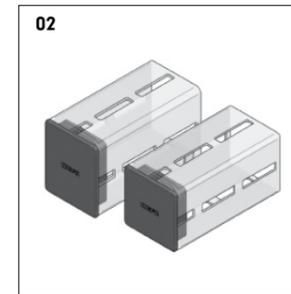
### Advantages of using MODFRAME®

- Eliminates the need for welding, drilling and galvanizing.
- Gain up to 60% time savings and significantly reduced material weights.
- A standard range of system components are stocked and readily available.
- All components are Hot Dipped Galvanized.
- Its modular nature means site modifications are easily completed.
- Frames, supports and modules can be designed by the Orbital Fire Team to be fully compliant with AS/NZ 4219: 2009.

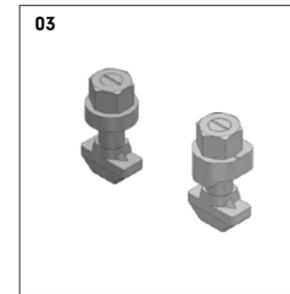
### Component List



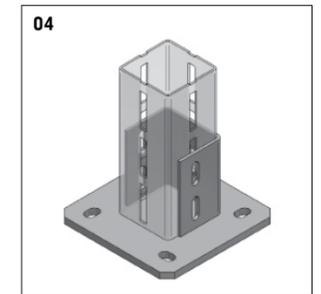
MODFRAME® Square profile



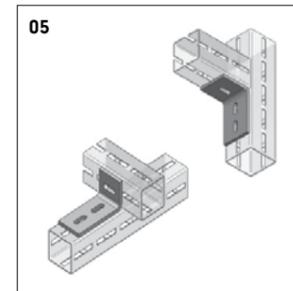
MODFRAME® Protecting caps



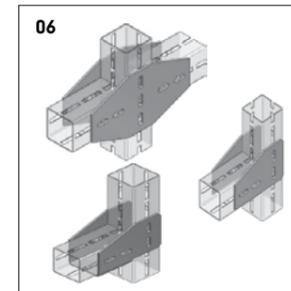
MODFRAME® Connection system



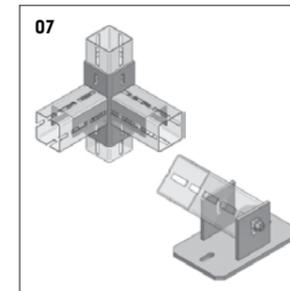
MODFRAME® Holder



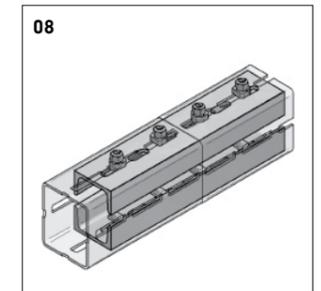
MODFRAME® Angles



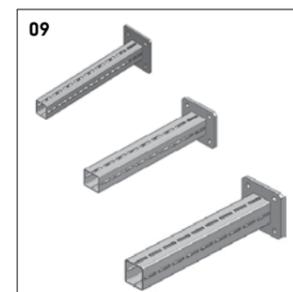
MODFRAME® Angle-shoe, MODFRAME® Plates



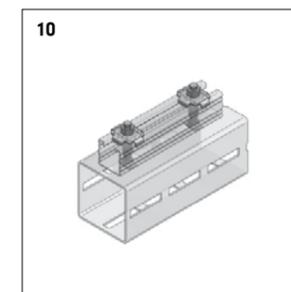
MODFRAME® Angle coupler, MODFRAME® Joint holder



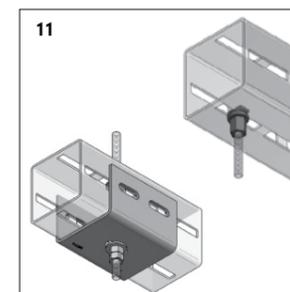
MODFRAME® Connector



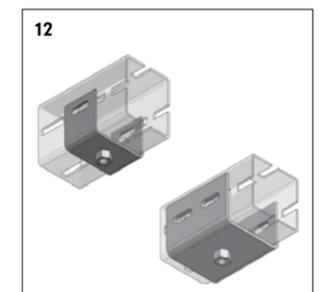
MODFRAME® Consoles



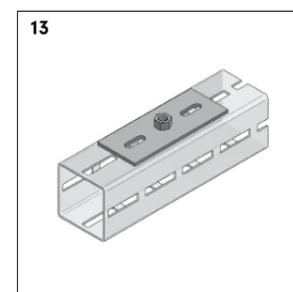
MODFRAME® Joint connection, C-profile connector



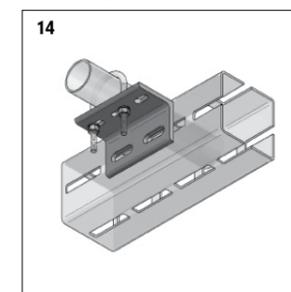
MODFRAME® Wall connector, MODFRAME® Direct connector



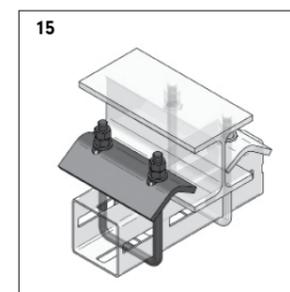
MODFRAME® Thread connector, MODFRAME® Massive connector



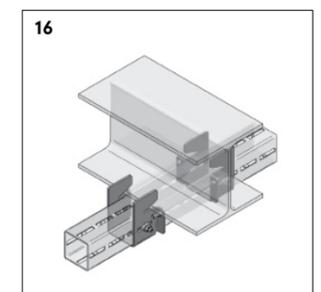
MODFRAME® Base plate



MODFRAME® Pipe holder



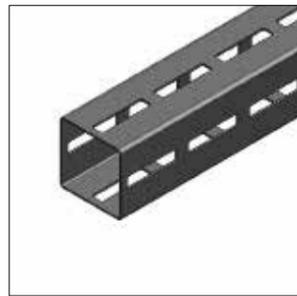
MODFRAME® Clamping bow



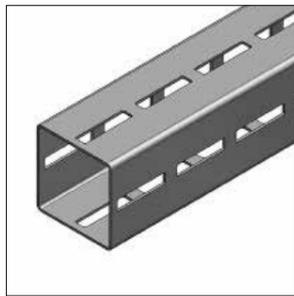
MODFRAME® Clamping shoe

|   |  |
|---|--|
| <p><b>Component safety concept:</b> According DIN EN 1991-1</p>   |  |
| <p><b>Global safety coefficient <math>\gamma</math></b><br/>The evaluation of global safety coefficient for the value of impact is based on a ratio of 2/3 of tare weight and 1/3 of working load.</p> <p><math>\gamma = (2/3 \gamma_G + 1/3 \gamma_Q) \times \gamma_z = (2/3 \times 1.35 + 1/3 \times 1.50) \times 1.1 = 1.54</math></p> <p><b>Exceptions</b><br/>MODFRAME® screwing acc. RAL GZ 655-D <math>\gamma = 2.0</math></p> | <p><b>Safety for impact</b><br/>Safety tare weight <math>\gamma_G = 1.35</math><br/>Safety working load <math>\gamma_Q = 1.50</math></p> <p><b>Safety for resistance</b><br/>Safety load resistance <math>\gamma_z = 1.10</math></p> |

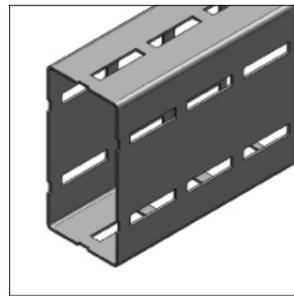
## MODFRAME® Square Profile



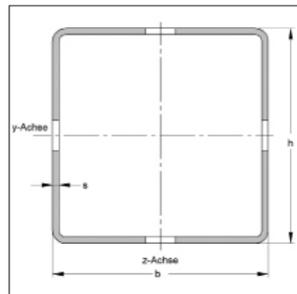
MODFRAME® profile MOD 80



MODFRAME® profile MOD 100



MODFRAME® profile MOD 200



**Description of system:**

- Modular system
- 4-sided without raster in connection with mounting parts
- Torsion stiffness
- High load capacity

**Technical data:**

Material: Steel  
 Material type: (MOD80: S275), (MOD100: S275), (MOD200:S235)  
 Surface: Hot-Dip Galvanized according to AS/NZS 4680:2006

| Identification            | Dimensions<br>h x b<br>[mm] | Profile thickness<br>s<br>[mm] | Perforation | Length<br>L<br>[m] | Weight<br>[kg/m] | Part-No.  |
|---------------------------|-----------------------------|--------------------------------|-------------|--------------------|------------------|-----------|
| MODFRAME® profile MOD 80  | 80 x 80                     | 2.5                            | 4-sided     | 6                  | 5.51             | MOD80HDG  |
| MODFRAME® profile MOD 100 | 100 x 100                   | 3                              | 4-sided     | 6                  | 8.46             | MOD100HDG |
| MODFRAME® profile MOD 200 | 200 x 100                   | 5                              | 4-sided     | 6                  | 20.46            | MOD200HDG |

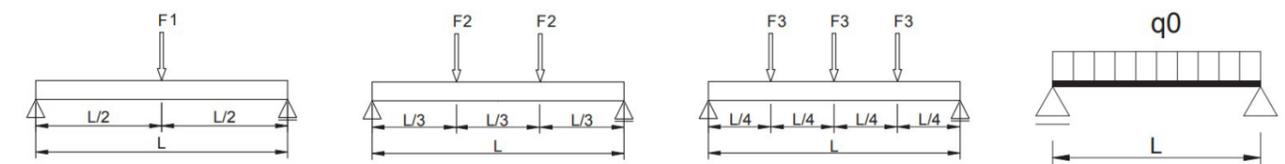
**MODFRAME® overview technical values**

| Identification            | Cross-section                    | Section modulus                        | Geometrical moment                        |   | Section modulus             |                             | Gyration radius |             |
|---------------------------|----------------------------------|--|---|---|-----------------------------|-----------------------------|-----------------|-------------|
|                           | area<br>$A_k$<br>cm <sup>2</sup> | of torsion<br>$W_t$<br>cm <sup>3</sup> | of inertia<br>$I_{yy}$<br>cm <sup>4</sup> | of inertia<br>$I_{zz}$<br>cm <sup>4</sup> | $W_{yy}$<br>cm <sup>3</sup> | $W_{zz}$<br>cm <sup>3</sup> | $i_y$<br>cm     | $i_z$<br>cm |
| MODFRAME® Profile MOD 80  | 6.19                             | 36.04                                  | 64.51                                     | 64.51                                     | 16.13                       | 16.13                       | 3.23            | 3.23        |
| MODFRAME® Profile MOD 100 | 9.73                             | 56.40                                  | 157.14                                    | 157.14                                    | 31.43                       | 31.43                       | 4.02            | 4.02        |
| MODFRAME® Profile MOD 200 | 24.15                            | 185.25                                 | 1255.68                                   | 433.47                                    | 125.56                      | 86.69                       | 7.21            | 4.24        |

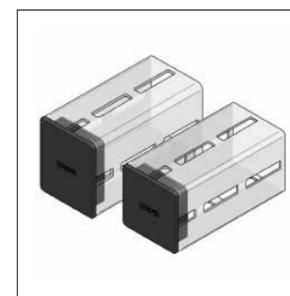
Load values for MODFRAME® profile rails can be found on page 5.

## Load values MODFRAME® profile rails

| bearing space | MOD 80           |                  |                  |                       | MOD 100          |                  |                  |                       | MOD 200          |                  |                  |                       |
|---------------|------------------|------------------|------------------|-----------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|------------------|-----------------------|
|               | single load 1xF1 | double load 2xF2 | triple load 3xF3 | distributed load 1xF1 | single load 1xF1 | double load 2xF2 | triple load 3xF3 | distributed load 1xF1 | single load 1xF1 | double load 2xF2 | triple load 3xF3 | distributed load 1xF1 |
| [mm]          | [kN]             | [kN]             | [kN]             | [kN/m]                | [kN]             | [kN]             | [kN]             | [kN/m]                | [kN]             | [kN]             | [kN]             | [kN/m]                |
| 500           | 23.03            | 17.28            | 11.52            | 92.12                 | 44.88            | 33.66            | 22.44            | 162.54                | 179.33           | 129.69           | 86.46            | 518.76                |
| 700           | 15.35            | 11.51            | 7.68             | 40.91                 | 29.91            | 22.43            | 14.96            | 79.74                 | 119.51           | 89.63            | 59.76            | 318.69                |
| 1000          | 11.50            | 8.63             | 5.75             | 22.99                 | 22.41            | 16.81            | 11.21            | 44.82                 | 89.59            | 67.19            | 44.80            | 179.18                |
| 1250          | 9.19             | 6.89             | 4.60             | 14.70                 | 17.91            | 13.44            | 8.96             | 28.66                 | 71.63            | 53.72            | 35.82            | 114.60                |
| 1500          | 7.64             | 5.73             | 3.82             | 10.19                 | 14.91            | 11.18            | 7.46             | 19.88                 | 59.64            | 44.73            | 29.82            | 79.52                 |
| 1750          | 6.54             | 4.91             | 3.27             | 7.47                  | 12.76            | 9.57             | 6.38             | 14.58                 | 51.08            | 38.31            | 25.54            | 58.37                 |
| 2000          | 5.71             | 4.28             | 2.86             | 5.71                  | 11.15            | 8.36             | 5.58             | 11.15                 | 44.65            | 33.49            | 22.33            | 44.65                 |
| 2250          | 5.06             | 3.73             | 2.53             | 4.50                  | 9.89             | 7.42             | 4.95             | 8.79                  | 39.64            | 29.73            | 19.82            | 35.24                 |
| 2500          | 4.55             | 3.01             | 2.16             | 3.28                  | 8.88             | 6.66             | 4.44             | 7.11                  | 35.63            | 26.72            | 17.82            | 28.50                 |
| 2750          | 4.12             | 2.47             | 1.78             | 2.45                  | 8.05             | 6.04             | 4.03             | 5.86                  | 32.34            | 24.26            | 16.17            | 23.52                 |
| 3000          | 3.52             | 2.07             | 1.48             | 1.88                  | 7.36             | 5.08             | 3.64             | 4.62                  | 29.60            | 22.20            | 14.80            | 19.73                 |
| 3250          | 2.97             | 1.75             | 1.25             | 1.47                  | 6.78             | 4.31             | 3.09             | 3.61                  | 27.27            | 20.46            | 13.64            | 16.79                 |
| 3500          | 2.54             | 1.49             | 1.07             | 1.16                  | 6.27             | 3.69             | 2.65             | 2.88                  | 25.28            | 18.96            | 12.64            | 14.45                 |
| 3750          | 2.19             | 1.29             | 0.93             | 0.94                  | 5.44             | 3.20             | 2.29             | 2.32                  | 23.54            | 17.66            | 11.77            | 12.56                 |
| 4000          | 1.90             | 1.12             | 0.80             | 0.76                  | 4.75             | 2.79             | 2.00             | 1.90                  | 22.03            | 16.52            | 11.02            | 11.02                 |
| 4250          | 1.66             | 0.98             | 0.70             | 0.63                  | 4.17             | 2.45             | 1.76             | 1.57                  | 20.68            | 15.51            | 10.34            | 9.73                  |
| 4500          | 1.46             | 0.86             | 0.62             | 0.52                  | 3.68             | 2.16             | 1.55             | 1.31                  | 19.48            | 14.61            | 9.74             | 8.66                  |
| 4750          | 1.29             | 0.76             | 0.54             | 0.44                  | 3.27             | 1.92             | 1.38             | 1.10                  | 18.41            | 13.81            | 9.21             | 7.75                  |
| 5000          | 1.14             | 0.67             | 0.48             | 0.37                  | 2.91             | 1.71             | 1.23             | 0.94                  | 17.44            | 13.08            | 8.72             | 6.31                  |
| 5250          | 1.01             | 0.59             | 0.43             | 0.31                  | 2.61             | 1.53             | 1.10             | 0.80                  | 16.56            | 12.42            | 8.28             | 6.31                  |
| 5500          | 0.89             | 0.53             | 0.38             | 0.26                  | 2.34             | 1.37             | 0.99             | 0.68                  | 15.76            | 11.82            | 7.88             | 5.73                  |



## MODFRAME® Protecting cap



MODFRAME® Protecting cap

**Specification:**

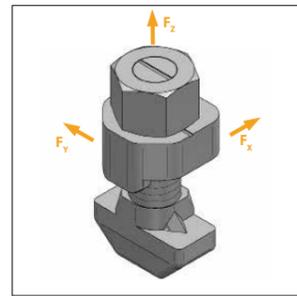
For profile type: MOD 80, MOD 100

**Technical data:**

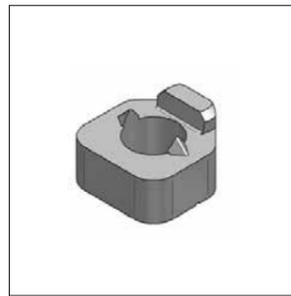
Material: Plastic  
 Material type: PE  
 Colour: Black

| Identification                   | Weight [kg/pc.] | Packing [set] | Part-No.  |
|----------------------------------|-----------------|---------------|-----------|
| MODFRAME® Protecting cap MOD 80  | 0.056           | 20            | MOD80CAP  |
| MODFRAME® Protecting cap MOD 100 | 0.092           | 20            | MOD100CAP |

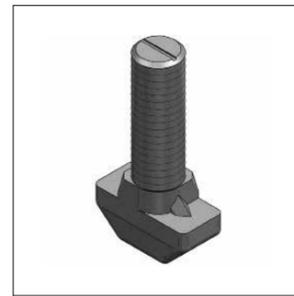
## MODFRAME® T-lock head, toothed



MODFRAME® T-lock head



MODFRAME® Lock washer



MODFRAME® T-lock bolt



|                       |  |                        |       |       |       |         |      |     |     |               |       |      |     |  |
|-----------------------|--|------------------------|-------|-------|-------|---------|------|-----|-----|---------------|-------|------|-----|--|
| <b>Specification:</b> |  | <b>Technical data:</b> |       |       |       |         |      |     |     |               |       |      |     |  |
| For profile type:     | MOD 80, MOD 100 and MOD 200  | Material: Steel        |       |       |       |         |      |     |     |               |       |      |     |  |
| Features:             | Immovable and form-locking connection  | Surface: Zinc-nickel   |       |       |       |         |      |     |     |               |       |      |     |  |
| Max. load:            | <table border="0"> <tr> <td></td> <td><math>F_x</math></td> <td><math>F_y</math></td> <td><math>F_z</math></td> </tr> <tr> <td>MOD 80:</td> <td>8 kN</td> <td>8kN</td> <td>3kN</td> </tr> <tr> <td>from MOD 100:</td> <td>10 kN</td> <td>10kN</td> <td>3kN</td> </tr> </table> |                        | $F_x$ | $F_y$ | $F_z$ | MOD 80: | 8 kN | 8kN | 3kN | from MOD 100: | 10 kN | 10kN | 3kN |  |
|                       | $F_x$  | $F_y$                  | $F_z$ |       |       |         |      |     |     |               |       |      |     |  |
| MOD 80:               | 8 kN   | 8kN                    | 3kN   |       |       |         |      |     |     |               |       |      |     |  |
| from MOD 100:         | 10 kN  | 10kN                   | 3kN   |       |       |         |      |     |     |               |       |      |     |  |
| Safety $\gamma$ :     | 2  |                        |       |       |       |         |      |     |     |               |       |      |     |  |
| Application:          | C-profile connector (at hole $\varnothing \geq 14$ mm)   |                        |       |       |       |         |      |     |     |               |       |      |     |  |

| Identification                        | Property class | recommended tightening torque [Nm] | Weight [kg/pc.] | Packing [pcs.] | Part-No. |
|---------------------------------------|----------------|------------------------------------|-----------------|----------------|----------|
| MODFRAME® T-lock head M12x40, toothed | 10.9           | MOD 80: 90<br>from MOD 100: 120    | 0.120           | 50             | MODTB/S  |

## Assembly instruction for T-lock head

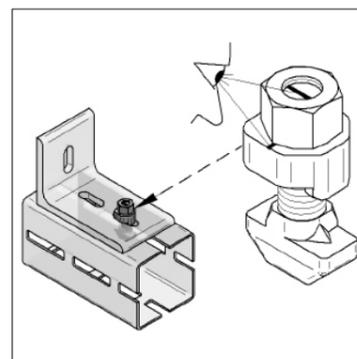


Figure 1

**Positioning:**  
Locate T-lock head into mounting part like shown in Figure 1.

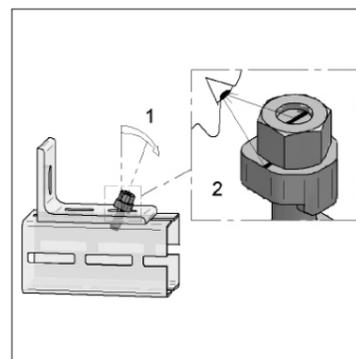


Figure 2

**Adjustment:**  
Turn T-lock head around 90 degrees, so that T-lock bolt stands diagonally to long hole (see 1).  
  
Tilt forward T-lock head, so that guide wedge of Lock washer snaps in long hole (see 2).

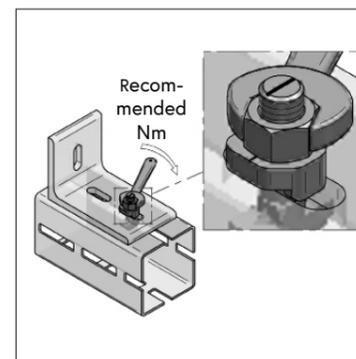
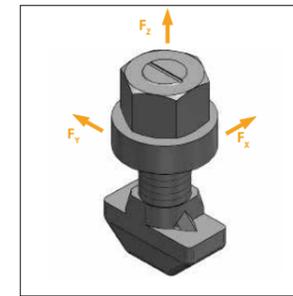


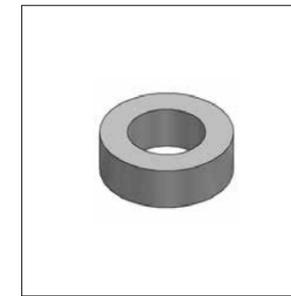
Figure 3

**Fixation:**  
Tighten tilted T-lock with 90 Nm (MOD 80) or 120 Nm (from MOD 100).  
T-lock head after dismantling non-reusable.

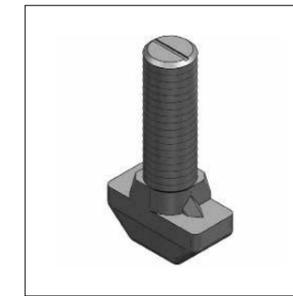
## MODFRAME® T-bolt, with Steel disk



MODFRAME® T-bolt



MODFRAME® Steel disk

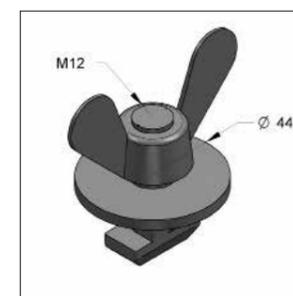


MODFRAME® T-lock bolt, toothed

|                       |   |                        |       |       |       |         |      |     |     |               |      |      |     |  |
|-----------------------|---|------------------------|-------|-------|-------|---------|------|-----|-----|---------------|------|------|-----|--|
| <b>Specification:</b> |   | <b>Technical data:</b> |       |       |       |         |      |     |     |               |      |      |     |  |
| For profile type:     | MOD 80, MOD 100, and MOD 200  | Material: Steel        |       |       |       |         |      |     |     |               |      |      |     |  |
| Features:             | Frictional connection   | Surface: Zinc-nickel   |       |       |       |         |      |     |     |               |      |      |     |  |
| Max. load:            | <table border="0"> <tr> <td></td> <td><math>F_x</math></td> <td><math>F_y</math></td> <td><math>F_z</math></td> </tr> <tr> <td>MOD 80:</td> <td>3 kN</td> <td>8kN</td> <td>3kN</td> </tr> <tr> <td>from MOD 100:</td> <td>3 kN</td> <td>10kN</td> <td>3kN</td> </tr> </table> |                        | $F_x$ | $F_y$ | $F_z$ | MOD 80: | 3 kN | 8kN | 3kN | from MOD 100: | 3 kN | 10kN | 3kN |  |
|                       | $F_x$   | $F_y$                  | $F_z$ |       |       |         |      |     |     |               |      |      |     |  |
| MOD 80:               | 3 kN  | 8kN                    | 3kN   |       |       |         |      |     |     |               |      |      |     |  |
| from MOD 100:         | 3 kN  | 10kN                   | 3kN   |       |       |         |      |     |     |               |      |      |     |  |
| Safety $\gamma$ :     | 2   |                        |       |       |       |         |      |     |     |               |      |      |     |  |
| Application:          | C-profile connector   |                        |       |       |       |         |      |     |     |               |      |      |     |  |

| Identification          | Property class | Recommended tightening torque [Nm] | Weight [kg/pc.] | Packing [pcs.] | Part-No. |
|-------------------------|----------------|------------------------------------|-----------------|----------------|----------|
| MODFRAME® T-bolt M12x40 | 10.9           | MOD 80: 90<br>from MOD 100: 120    | 0.100           | 50             | MODTB/W  |

## MODFRAME® FixBOB

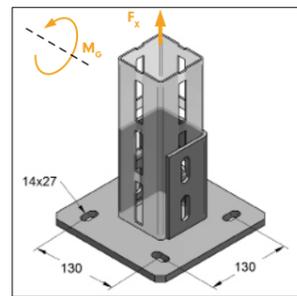


MODFRAME® FixBOB

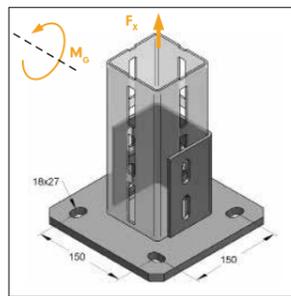
|                       |  |                                   |
|-----------------------|--|-----------------------------------|
| <b>Specification:</b> |  | <b>Technical data:</b>            |
| Application area:     | Adjustment aid for MODFRAME® assembly parts                              | Material: Steel                   |
| Features:             | Wing nut with hammer head<br><b>only for fixing MODFRAME® components</b> | Surface: Galvanized / painted red |

| Identification   | Thread | Weight [kg/pc.] | Packing [pcs.] | Part-No. |
|------------------|--------|-----------------|----------------|----------|
| MODFRAME® FixBOB | M12    | 0.139           | 10             | MODFB    |

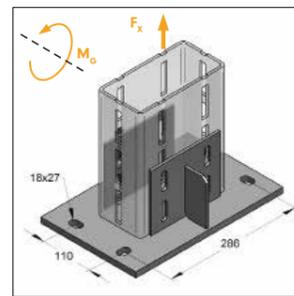
### MODFRAME® Holder



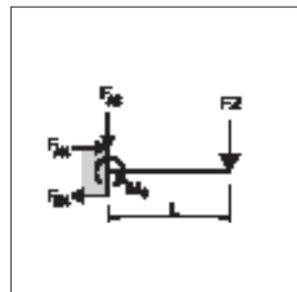
MODFRAME® Holder MOD 80



MODFRAME® Holder MOD 100



MODFRAME® Holder MOD 200



$M_G = F_z \times L$

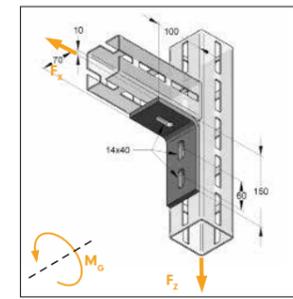
**Specification:**  
For profile type: MOD 80, MOD 100, and MOD 200  
Scope of supply: T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

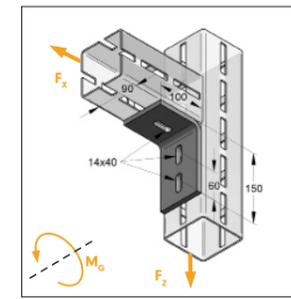
\* at least one screw per profile side / With MOD 200 two screws per profile side

| Identification                  | Max. load*    |                                    | Plate-width<br>[mm] | Plate-length<br>[mm] | Plate-thickness<br>[mm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|---------------------------------|---------------|------------------------------------|---------------------|----------------------|-------------------------|--------------------|------------------|----------|
|                                 | $F_x$<br>[kN] | Maximum torque<br>$M_G^*$<br>[kNm] |                     |                      |                         |                    |                  |          |
| <b>MODFRAME® Holder MOD 80</b>  | 25            | 4.2                                | 200                 | 200                  | 10                      | 4.48               | 1                | MOD80BP  |
| <b>MODFRAME® Holder MOD 100</b> | 30            | 5.2                                | 220                 | 220                  | 12                      | 6.15               | 1                | MOD100BP |
| <b>MODFRAME® Holder MOD 200</b> | 40            | 5.2                                | 220                 | 340                  | 12                      | 9.57               | 1                | MOD200BP |

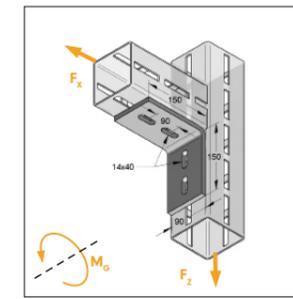
### MODFRAME® Angles - corner connector



MODFRAME® 3-hole angle  
MOD 80



MODFRAME® 3-hole angle  
from MOD 100



MODFRAME® 4-hole angle  
from MOD 100

**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200  
Required accessory: T-lock head, toothed, M12/40

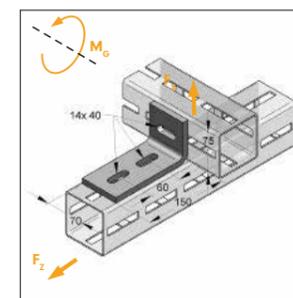
**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

\* by using of all screw holes

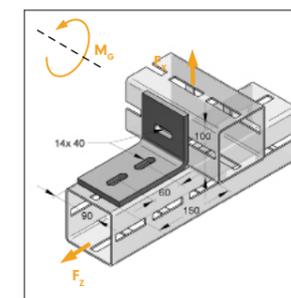
Remark: Always align elongated holes of components in direction of elongated holes of MODFRAME® profile.

| Identification                             | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.   |
|--|---------------|---------------|---|--------------------|------------------|------------|
|  | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |            |
| <b>MODFRAME® 3-hole angle MOD 80</b>       | 5.2           | 16            | 0.40                                    | 1.28               | 1                | MOD80AB3H  |
| <b>MODFRAME® 3-hole angle from MOD 100</b> | 6.0           | 20            | 0.50                                    | 1.68               | 1                | MOD100AB3H |
| <b>MODFRAME® 4-hole angle from MOD 100</b> | 6.0           | 20            | 0.50                                    | 2.02               | 1                | MOD100AB4H |

### MODFRAME® Angles horizontal - cross connector



MODFRAME® 3-hole angle  
horizontal MOD 80



MODFRAME® 3-hole angle  
horizontal MOD 100

**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200  
Required accessory: T-lock head, toothed, M12/40

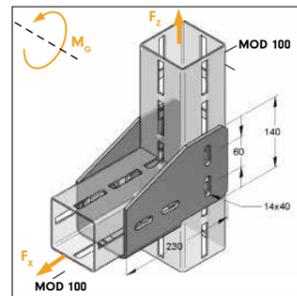
**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

\* by using of all screw holes

Remark: Always align elongated holes of components in direction of elongated holes of MODFRAME® profile.

| Identification                                   | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.     |
|--|---------------|---------------|---|--------------------|------------------|--------------|
|  | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |              |
| <b>MODFRAME® 3-hole angle horizontal MOD 80</b>  | 5.2           | 16            | 0.4                                     | 1.13               | 1                | MOD80AB3H-H  |
| <b>MODFRAME® 3-hole angle horizontal MOD 100</b> | 6             | 20            | 0.5                                     | 1.68               | 1                | MOD100AB3H-H |

## MODFRAME® Angle-shoe



MODFRAME® Angle-shoe  
MOD 100

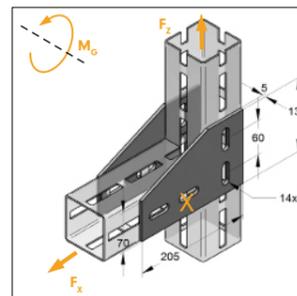
**Specification:**  
For profile type: MOD 100  
High-strength corner connection with profile support  
Required accessory: T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

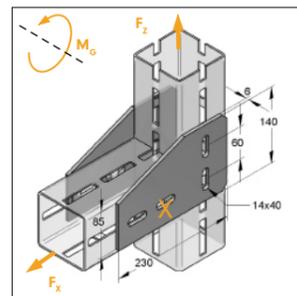
\* by using of all screw holes

| Identification                      | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|-------------------------------------|---------------|---------------|---|--------------------|------------------|----------|
|                                     | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |          |
| <b>MODFRAME® Angle-shoe MOD 100</b> | 40            | 40            | 1.2                                     | 3.57               | 1                | MOD100AS |

## MODFRAME® Corner Plate



MODFRAME® Corner plate  
use in pairs



MODFRAME® Corner plate L  
from MOD 100

**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200  
Required accessory: T-lock head, toothed, M12/40

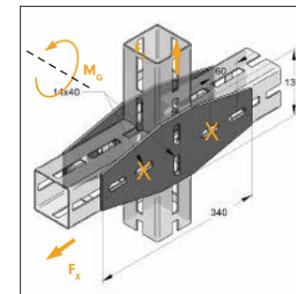
**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

\* by using of all screw holes

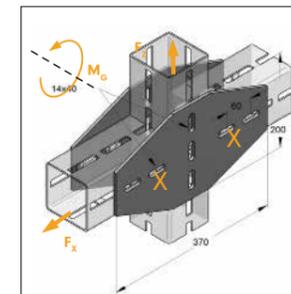
Remark: for  $M_G = 0$  only one screw per side at X

| Identification                                      | Profile type | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|---|--------------|---------------|---------------|---|--------------------|------------------|----------|
|   |              | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |          |
| <b>MODFRAME® Corner plate MOD 80 (use in pairs)</b> | MOD 80       | 32            | 32            | 0.95*                                   | 0.92               | 1                | MOD80CP  |
| <b>MODFRAME® Corner plate L (use in pairs)</b>      | from MOD 100 | 40            | 40            | 1.20*                                   | 1.38               | 1                | MOD100CP |

## MODFRAME® Cross Plate



MODFRAME® Cross plate  
MOD 80



MODFRAME® Cross plate  
from MOD 100

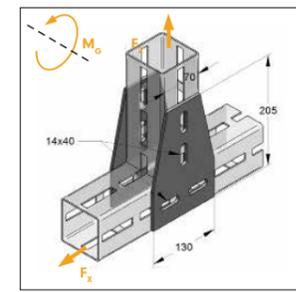
**Specification:**  
For profile type: MOD 100, MOD 120 and MOD 200  
Required accessory: T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

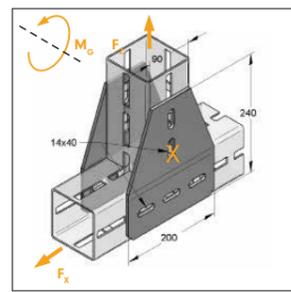
\* by using of all screw holes  
Remark: for  $M_G = 0$  only one screw per side at X

| Identification                                     | Profile type | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|--|--------------|---------------|---------------|---|--------------------|------------------|----------|
|  |              | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |          |
| <b>MODFRAME® Cross plate MOD 80 (use in pairs)</b> | MOD 80       | 32            | 32            | 0.95*                                   | 1.47               | 1                | MOD80XP  |
| <b>MODFRAME® Cross plate (use in pairs)</b>        | from MOD 100 | 40            | 40            | 1.20*                                   | 2.89               | 1                | MOD100XP |

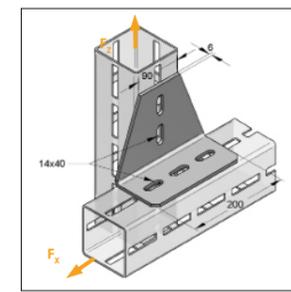
## MODFRAME® T-plate



MODFRAME® T-plate  
MOD 80



MODFRAME® T-plate  
from MOD 100



MODFRAME® T-plate, angled

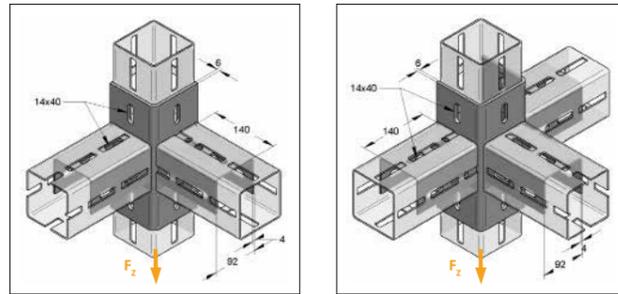
**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200  
Required accessory: T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.54

<sup>1)</sup> by using of all screw holes  
<sup>2)</sup> use in pairs  
<sup>3)</sup> cross profile MOD 100; any connecting profile

| Identification                               | Profile type                   | Max. load     |               | Max. limited torque<br>$M_G^*$<br>[kNm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.  |
|--|--------------------------------|---------------|---------------|---|--------------------|------------------|-----------|
|  |                                | $F_x$<br>[kN] | $F_z$<br>[kN] |   |                    |                  |           |
| <b>MODFRAME® T-plate MOD 80<sup>2)</sup></b> | MOD 80                         | 32            | 32            | 0.95 <sup>1)</sup>                      | 0.92               | 1                | MOD80TP   |
| <b>MODFRAME® T-plate<sup>2)</sup></b>        | from MOD 100                   | 40            | 40            | 1.20 <sup>1)</sup>                      | 1.97               | 1                | MOD100TP  |
| <b>MODFRAME® T-plate, angled</b>             | MOD 100, MOD 200 <sup>3)</sup> | 20            | 9             | -                                       | 1.99               | 1                | MOD100ATP |

## MODFRAME® Angle coupler



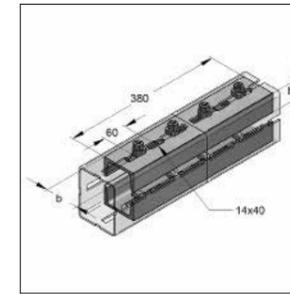
MODFRAME® Angle coupler 90°

MODFRAME® Angle coupler 180°

|                       |                              |                        |                    |
|-----------------------|------------------------------|------------------------|--------------------|
| <b>Specification:</b> |                              | <b>Technical data:</b> |                    |
| For profile type:     | MOD 100                      | Material:              | Steel              |
| Required accessory:   | T-lock head, toothed, M12/40 | Material type:         | S235JR             |
|                       |                              | Surface:               | Hot-Dip Galvanized |
|                       |                              | Safety factor:         | 1.54               |

| Identification               | Max. load<br>$F_z$<br>[kN] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.    |
|------------------------------|----------------------------|--------------------|------------------|-------------|
| MODFRAME® Angle coupler 90°  | 20                         | 4.72               | 1                | MOD100AC90  |
| MODFRAME® Angle coupler 180° | 20                         | 7.12               | 1                | MOD100AC180 |

## MODFRAME® Connector

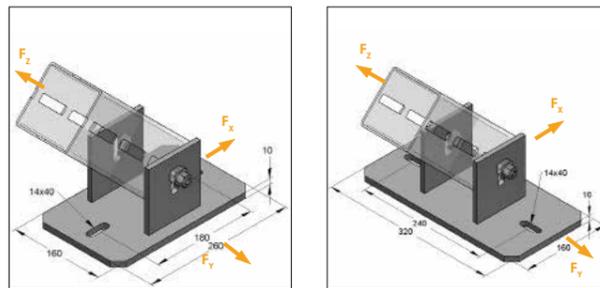


MODFRAME® Connector

|                       |  |                        |                    |
|-----------------------|--|------------------------|--------------------|
| <b>Specification:</b> |  | <b>Technical data:</b> |                    |
| Scope of supply:      | Mounting accessories, loose insert<br>(8x T-lock head, toothed, M 12/40) | Material:              | Steel              |
| Function:             | Connection of MOD 80, MOD 100 or MOD 200                                 | Surface u-steel:       | Hot-Dip Galvanized |
|                       |  | Surface screws:        | Zinc-nickel        |

| Identification          | Profile type:    | Limit moment<br>$M_G$<br>[kNm] | Length<br>[mm] | Width<br>b<br>[mm] | Height<br>h<br>[mm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|-------------------------|------------------|--------------------------------|----------------|--------------------|---------------------|--------------------|------------------|----------|
| MODFRAME® Connector-Set | MOD 80           | 1.6                            | 380            | 60                 | 30                  | 4.94               | 1                | MOD80CS  |
| MODFRAME® Connector-Set | MOD 100, MOD 200 | 2                              | 380            | 80                 | 45                  | 7.90               | 1                | MOD100CS |

## MODFRAME® Joint holder



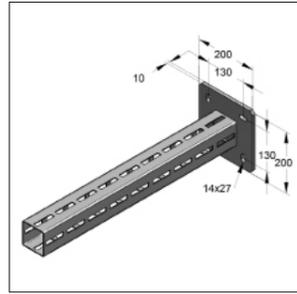
MODFRAME® Joint holder  
MOD 100 vertical

MODFRAME® Joint holder  
MOD 100 horizontal

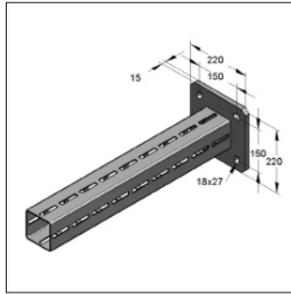
|                       |                              |                        |                    |
|-----------------------|------------------------------|------------------------|--------------------|
| <b>Specification:</b> |                              | <b>Technical data:</b> |                    |
| For profile type:     | MOD 100                      | Material:              | Steel              |
| Required accessory:   | T-lock head, toothed, M12/40 | Material type:         | S235JR             |
| Tightening torque:    | 60 Nm                        | Surface:               | Hot-Dip Galvanized |
| Delivery time:        | On request                   | Safety factor:         | 1.54               |

| Identification                            | Max. load     |               |               | Center hole<br>Plate | Dimension<br>Plate<br>L x B x S | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.  |
|---|---------------|---------------|---------------|----------------------|---------------------------------|--------------------|------------------|-----------|
|   | $F_x$<br>[kN] | $F_z$<br>[kN] | $F_y$<br>[kN] |                      |                                 |                    |                  |           |
| MODFRAME® Joint holder MOD 100 vertical   | 6.3           | 20            | 11            | 180                  | 260 x 160 x 10                  | 4.89               | 1                | MOD100VHB |
| MODFRAME® Joint holder MOD 100 horizontal | 6.3           | 20            | 11            | 240                  | 320 x 160 x 10                  | 5.72               | 1                | MOD100HHB |

## MODFRAME® Console



MODFRAME® Console MOD 80



MODFRAME® Console MOD 100

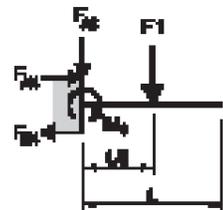
**Specification:**  
For profile type: MOD 80, 100

**Technical data:**  
Material: Steel  
Material type (plate): S235JR  
Material type (rail): S275JR  
Surface: Hot-Dip Galvanized  
Safety factor: 1.35

\* Delivery time on request, variant demand possible

| Identification                   | Length<br>[mm] | Max. load 1<br>F1<br>[kN] | Max. load 2<br>F2<br>[kN] | Max. load 3<br>qo<br>[kN/m] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No.    |
|----------------------------------|----------------|---------------------------|---------------------------|-----------------------------|--------------------|------------------|-------------|
| <b>MODFRAME® Console MOD 80</b>  | 720            | 8.38                      | 4.19                      | 11.64                       | 7.26               | 1                | MOD80C720   |
| <b>MODFRAME® Console MOD 80</b>  | 960            | 6.29                      | 2.94                      | 6.55                        | 8.58               | 1                | MOD80C960   |
| <b>MODFRAME® Console MOD 80</b>  | 1440           | 4.19                      | 1.88                      | 4.18                        | 11.23              | 1                | MOD80C1440  |
| <b>MODFRAME® Console MOD 100</b> | 720            | 16.17                     | 8.08                      | 22.45                       | 11.92              | 1                | MOD100C720  |
| <b>MODFRAME® Console MOD 100</b> | 960            | 12.13                     | 6.06                      | 12.63                       | 13.62              | 1                | MOD100C960  |
| <b>MODFRAME® Console MOD 100</b> | 1440           | 8.08                      | 4.58                      | 5.61                        | 18.02              | 1                | MOD100C1440 |

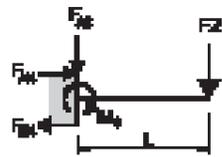
Max. load 1 (LF1)



$F_{AZ} = F1$

$$F_{AZ} = F1 \quad M_G = \frac{F1 * L}{2}$$

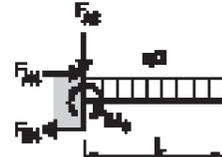
Max. load 2 (LF2)



$F_{AZ} = F2$

$$F_{AZ} = F2 \quad M_G = F2 * L$$

Max. load 3 (LF3)



$F_{AZ} = qo * L$

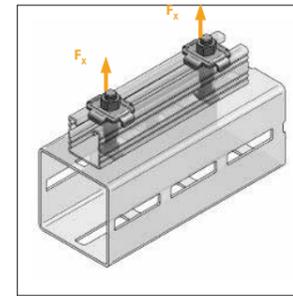
$$F_{AZ} = qo * L \quad M_G = \frac{qo * L^2}{2}$$

Limit moment MOD 80  
Support reaction force MOD 80  
Support reaction force MOD 80  
Limit moment MOD 100  
Support reaction force MOD 100  
Support reaction force MOD 100

$M_G$ : 3.017.28 Nm  
 $F_{AX}$ : 23.21 kN  
 $F_{BX}$ : 23.21 kN  
 $M_G$ : 9.008.0 Nm  
 $F_{AX}$ : 53.0 kN  
 $F_{BX}$ : 53.0 kN

**Remark:**  
All load capacities excessive refer to static loads.

## MODFRAME® Channel connector



MODFRAME® C-profile connector

**Specification:**  
For profile type: MOD 100 and MOD 200  
Application: To connect profile rails

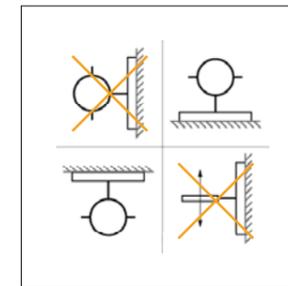
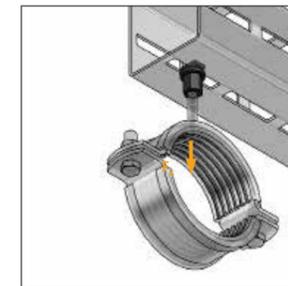
**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: galvanized

| Identification                     | For profile-height<br>[mm] | Max. load<br>F <sub>x</sub><br>[kN] | Tightening torque<br>[Nm] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|------------------------------------|----------------------------|-------------------------------------|---------------------------|--------------------|------------------|----------|
| <b>MODFRAME® Channel connector</b> | 40-45                      | 2.0                                 | 10                        | 0.160              | 50               | MODSC45  |
| <b>MODFRAME® Channel connector</b> | 60                         | 2.0                                 | 10                        | 0.170              | 50               | MODSC65  |

## MODFRAME® Direct connector



MODFRAME® Direct connector



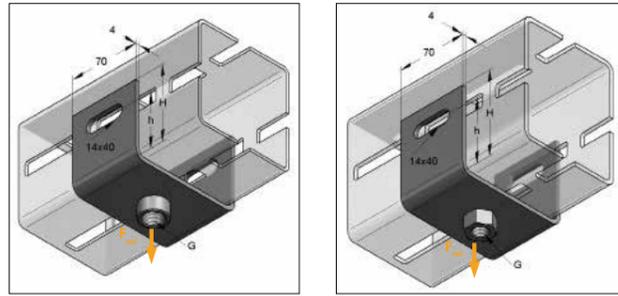
Mounting recommendation

**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200  
Application: Direct connection for M10 or M12 thread

**Technical data:**  
Material type: Steel  
Surface: Zinc-nickel  
Safety factor: 1.54

| Identification                    | Wrench size | Height collar nut<br>[mm] | Recommended tightening torque<br>[Nm] | Max. load<br>F<br>[kN] | Weight<br>[kg/pc.] | Packing<br>[pc.] | Part-No. |
|-----------------------------------|-------------|---------------------------|---------------------------------------|------------------------|--------------------|------------------|----------|
| <b>MODFRAME® Direct connector</b> | SW 17       | 25                        | 25                                    | 3.0                    | 0.072              | 50               | MODDCM10 |
| <b>MODFRAME® Direct connector</b> | SW 17       | 25                        | 25                                    | 3.0                    | 0.070              | 50               | MODDCM12 |

## MODFRAME® Thread connector



MODFRAME® Thread connector  
MOD 80 / MOD 100 1/2"

MODFRAME® Thread connector  
MOD 120 M16

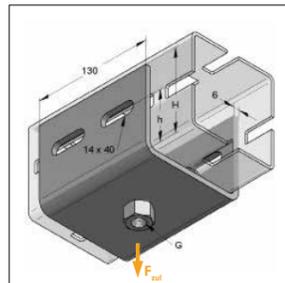
**Specification:**  
For profile type: MOD 80, MOD 100 and MOD 200

**Required:** 2 x T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Zinc-nickel  
Safety factor: 1.54

| Identification                    | Profile type      | Thread G | Max. load $F_{zul}$ [kN] | H [mm] | h [mm] | Weight [kg/pc.] | Packing [pc.] | Part-No.   |
|-----------------------------------|-------------------|----------|--------------------------|--------|--------|-----------------|---------------|------------|
| <b>MODFRAME® Thread connector</b> | MOD 80            | M16      | 4.0                      | 64     | 40     | 0.480           | 1             | MOD80TC16  |
| <b>MODFRAME® Thread connector</b> | MOD 100 / MOD 200 | M12      | 5.0                      | 74     | 50     | 0.550           | 1             | MOD100TC12 |
| <b>MODFRAME® Thread connector</b> | MOD 100 / MOD 200 | M16      | 5.0                      | 74     | 50     | 0.557           | 1             | MOD100TC16 |

## MODFRAME® Massive connector



MODFRAME® Massive connector  
MOD 100 M16

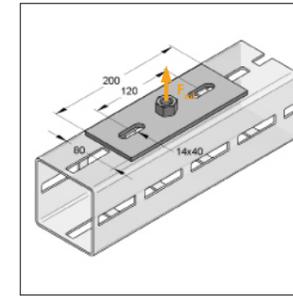
**Specification:**  
For profile type: MOD 100 and MOD 200

**Required:** 4 x T-lock head, toothed, M12/40

**Technical data:**  
Material: Steel  
Material type: S235JR  
Surface: Zinc-nickel  
Safety factor: 1.54

| Identification                     | Profile type      | Thread G | Max. load $F_{zul}$ [kN] | H [mm] | h [mm] | Weight [kg/pc.] | Packing [pc.] | Part-No.    |
|------------------------------------|-------------------|----------|--------------------------|--------|--------|-----------------|---------------|-------------|
| <b>MODFRAME® Massive connector</b> | MOD 100 / MOD 200 | M16      | 10.0                     | 86     | 50     | 1.65            | 1             | MOD100MTC16 |

## MODFRAME® Base plate



MODFRAME® Base plate M12

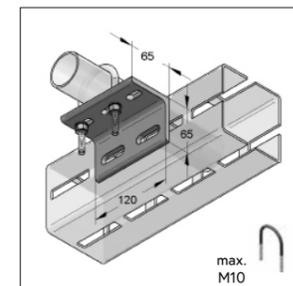
**Specification:**  
For profile type: MOD80, MOD100 and MOD 200

**Required accessory:** T-lock head, toothed, M12/40 or T-bolt with Steel disk, M12/40

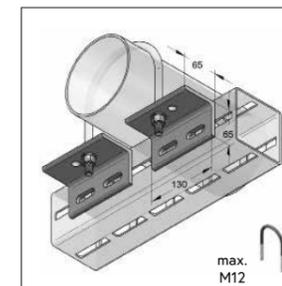
**Technical data:**  
Material: Steel  
Material type: S235JRG2  
Surface: Zinc-nickel  
Safety factor: 1.54

| Identification                  | Length [mm] | Height [mm] | Max. load $F_{zul}$ [kN] | Thickness [mm] | Weight [kg/pc.] | Packing [pc.] | Part-No.    |
|---------------------------------|-------------|-------------|--------------------------|----------------|-----------------|---------------|-------------|
| <b>MODFRAME® Base plate M12</b> | 200         | 80          | 5.5                      | 6              | 0.760           | 1             | MOD100BP-12 |
| <b>MODFRAME® Base plate M16</b> | 200         | 80          | 5.5                      | 6              | 0.790           | 1             | MOD100BP-16 |

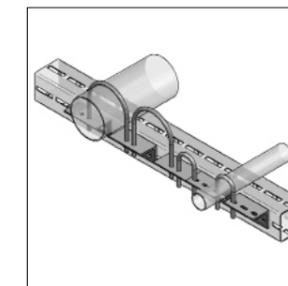
## MODFRAME® Pipe holder



MODFRAME® Ø 21.3 - 76.1



MODFRAME® Ø 88.9 - 219.1



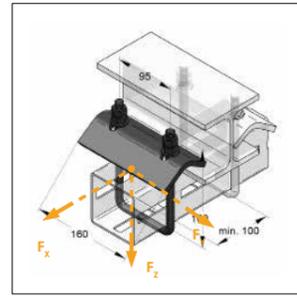
Combined example

**Specification:**  
For pipe diameter: Ø 21.3 - 219.1 mm  
Mounting instruction: Pipe must overlie  
Advantage: Installation of different pipe diameter  
Required accessory: T-lock head and U-bolt  
Delivery time: On request

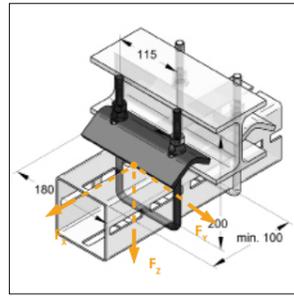
**Technical data:**  
Material: Steel  
Material type: S235JRG2  
Surface: Hot-Dip Galvanized

| Identification               | For pipe-Ø   | Length [mm] | Height [mm] | Thickness [mm] | Weight [kg/pc.] | Packing [pcs.] | Part-No.    |
|------------------------------|--------------|-------------|-------------|----------------|-----------------|----------------|-------------|
| <b>MODFRAME® Pipe holder</b> | 21.3 - 76.1  | 120         | 65          | 7              | 0.81            | 1              | MODPH65X120 |
| <b>MODFRAME® Pipe holder</b> | 88.9 - 219.1 | 130         | 65          | 7              | 1.80            | 2              | MODPH65X130 |

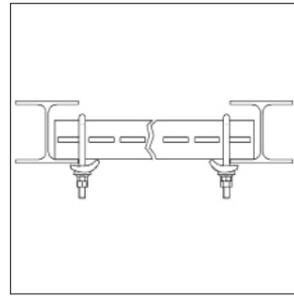
**MODFRAME® Clamping bow**



MODFRAME® Clamping bow MOD 80



MODFRAME® Clamping bow MOD 100

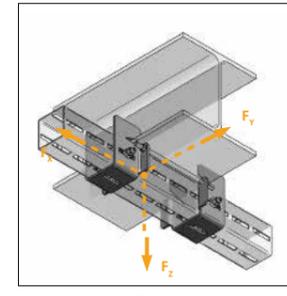


|  |                                    |   |
|--|------------------------------------|---|
| <b>Specification:</b>  | <b>Set consisting of:</b>          | <b>Technical data:</b>                  |
| For profile rail type: MOD 80, MOD 100                         | U-bolt 1 pc.                       | Material: Steel                         |
| Application area: For mounting of Steel profile rail on girder | MODFRAME® tensioning bracket 1 pc. | Material type: S235JR                   |
|  | Nuts M12 4 pcs.                    | Surface:                                |
|  | Washer 2 pcs.                      | U-bolt: Zinc-nickel                     |
|  |                                    | MODFRAME® tensioning bracket Galvanized |
|  |                                    | Nuts M12 Galvanized                     |
|  |                                    | washer Galvanized                       |

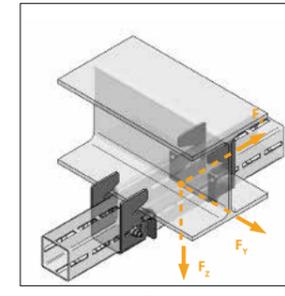
Remark: max. loads refer according to a clamping bow pair. Please notice max. loads of MODFRAME® profile rails

| Identification                        | Thread U-bolt | Max. load [kN] |                |                | Tightening torque [Nm] | Max. clamping strength [mm] | Weight [kg/pc.] | Packing [pc.] | Part-No. |
|---------------------------------------|---------------|----------------|----------------|----------------|------------------------|-----------------------------|-----------------|---------------|----------|
|                                       |               | F <sub>x</sub> | F <sub>y</sub> | F <sub>z</sub> |                        |                             |                 |               |          |
| <b>MODFRAME® Clamping bow MOD 80</b>  | M12           | 3.0            | 3.0            | 10.0           | 25                     | 6 - 25                      | 1.30            | 1             | MOD80CB  |
| <b>MODFRAME® Clamping bow MOD 100</b> | M12           | 3.0            | 3.0            | 10.0           | 25                     | 6 - 25                      | 1.49            | 1             | MOD100CB |

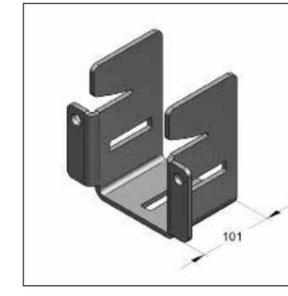
**MODFRAME® Clamping shoe**



MODFRAME® Clamping shoe mounted



MODFRAME® Clamping shoe mounted



MODFRAME® Clamping shoe single

|  |   |
|--|---|
| <b>Specification:</b>  | <b>Technical data:</b>                  |
| Application area: Attaching MODFRAME® profiles to Steel girder     | Material: Steel                         |
| Installation advise: Evenly tightening of threaded rods with 15 Nm | Material type: S235JR                   |
|  | Torque for MODFRAME® T-lock head 120 Nm |
|  | Surface: Hot-Dip Galvanized             |
|  | Safety factor: 1.54                     |
| Scope of delivery: Sold in pairs                                   |   |

| Identification                    | Profile type | Clamping thickness Flange [mm] | Min. Clamping range Flange [mm] | Max. web thickness Girder [mm] | Max. load           |                     |                     | Weight [kg/set] | Packing [set] | Part-No.    |
|-----------------------------------|--------------|--------------------------------|---------------------------------|--------------------------------|---------------------|---------------------|---------------------|-----------------|---------------|-------------|
|                                   |              |                                |                                 |                                | F <sub>x</sub> [kN] | F <sub>y</sub> [kN] | F <sub>z</sub> [kN] |                 |               |             |
| <b>MODFRAME® Clamping shoe S</b>  | MOD 100      | 5-10                           | 82*                             | 10                             | 20.0                | 4,2                 | 22.5                | 4.24            | 1             | MODCS-100S  |
| <b>MODFRAME® Clamping shoe M</b>  | MOD 100      | 8-15                           | 100                             | 10                             | 20.0                | 4,2                 | 22.5                | 4.39            | 1             | MODCS-100M  |
| <b>MODFRAME® Clamping shoe L</b>  | MOD 100      | 13-20                          | 140                             | 20                             | 20.0                | 4,2                 | 22.5                | 4.56            | 1             | MODCS-100L  |
| <b>MODFRAME® Clamping shoe XL</b> | MOD 100      | 19-30                          | 180                             | 40                             | 20.0                | 4,2                 | 22.5                | 5.20            | 1             | MODCS-100XL |

The min. clamping width of flange with 82mm only for IPE girder, with 91mm only for IPEa girder, for other types of girder the min. clamping width is 100mm.



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