

## Connecting clamps

### Technopolymer and aluminium

#### STANDARD COMPONENTS

- **MSR.60-B base:** glass-fibre reinforced polyamide based (PA) technopolymer, black colour, matte finish.
- **CC-MSR.60 screw-covers:**
  - polyester based (PBT) technopolymer in six colours, glossy finish press-fit assembly.
  - Supplied, removable by a screwdriver.
  - Available also as accessories sold separately (see table).
- **MSR.60-C Two-way clamp:** glass-fibre reinforced technopolymer, black colour, matte finish.
- **MSR.60-TA-TB-TC-TD-TE-TF device clamps:** glass-fibre reinforced technopolymer, black colour, matte finish.
- **MSR.60-T13 connecting tubes:**
  - aluminium profile available with standard lengths from 100 to 2000 mm.
  - On request and for sufficient quantities other lengths are available.
- **TC13-MSR.60 Connecting tube closing caps:**
  - glass-fibre reinforced polyamide based (PA) technopolymer, black colour, matte finish, push-fit assembly.
  - Supplied.
  - Available also as accessory sold separately (see table).

#### FEATURES AND APPLICATIONS

MSR. connecting clamps, designed according to ELESA patent, allow an easy and efficient connection between the components, preventing the risk of rotating freely. The system allows the axial, perpendicular or angled positioning of the connecting tube to the base.

#### ADVANTAGES

The slot-shaped connecting tube preventing free rotation. Tube and components clamped by the aid of only one screw. Easy adjustments by five degrees of freedom of the clamped devices (see drawing). Lack of cavities to avoid the deposit of dirt and undesired substances. Easy identification of the clamped device using different coloured caps on the base.

#### ACCESSORIES ON REQUEST

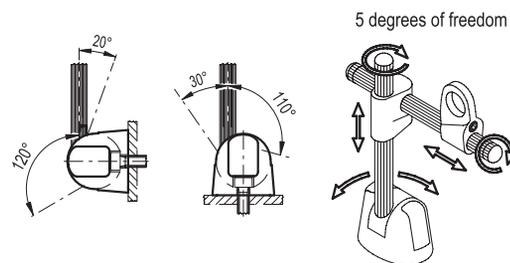
- CC-MSR.60: polyester based technopolymer (PBT) screw-covers, in six colours, glossy finish, press-fit assembly (see table).
- TC13-MSR.60: glass-fibre reinforced polyamide based (PA) technopolymer connecting tube closing caps, black colour, matte finish, press-fit assembly (see table).

 C1 RAL7021	 C2 RAL2004	 C3 RAL7035	 C4 RAL1021	 C5 RAL5024	 C6 RAL3000
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#### CC-MSR.60

Code	Description	Screw-covers for
440011-*	CC-MSR.60-*	MSR.60-B

\* Complete with colour index (C1, ..., C6).



FMMdesign

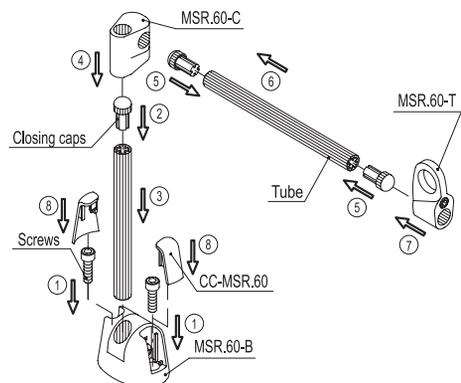
#### ASSEMBLY INSTRUCTIONS

1. Assemble the base by means of 2 M6 cylindrical head screws with hexagon socket (not supplied).
2. Fit one of the closing caps to the end of the connecting tube by tapping gently with a plastic mallet until firmly in place. Be careful not to assemble the cap to the end fitted to the base.
3. Insert the connecting tube in the shaped hole of the base and clamp it by screwing the set screw. Suggested tightening torque 5 Nm.
4. Insert the connecting tube in the shaped hole of the two-way clamp.
5. Fit the closing caps to the connecting tube.
6. Insert the connecting tube in the shaped hole of the two-way clamp.
7. Fit on the connecting tube the proper device clamp, chosen within the six available. After the positioning of the components, clamp them by screwing the set screws. Suggested tightening torque 3 Nm. We recommend not to exceed this value.
8. Once the adjustment has been set, fit the screw covers on the base.

#### TC13-MSR.60

Code	Description	Closing caps for
440016	TC13-MSR.60	MSR.60-T13

#### Assembly instructions



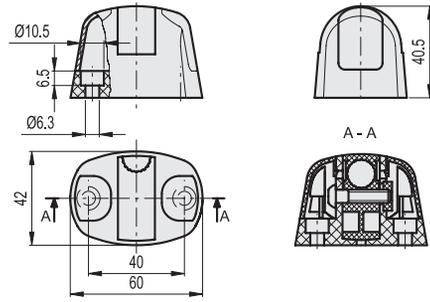


\* Complete with colour index, example: 440001-C9 MSR.60-B-C9

C9  
  C2  
  C3  
  C4  
  C5  
  C6  
 RAL9005   RAL2004   RAL7035   RAL1021   RAL5024   RAL3000

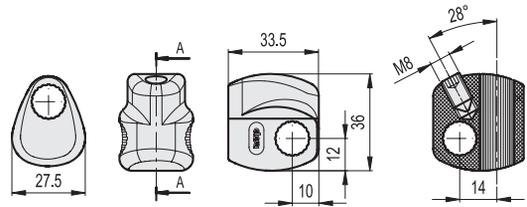
**MSR.60-B**

Code	Description	Pull out resistance [N]	
440001-*	MSR.60-B-*	300	50



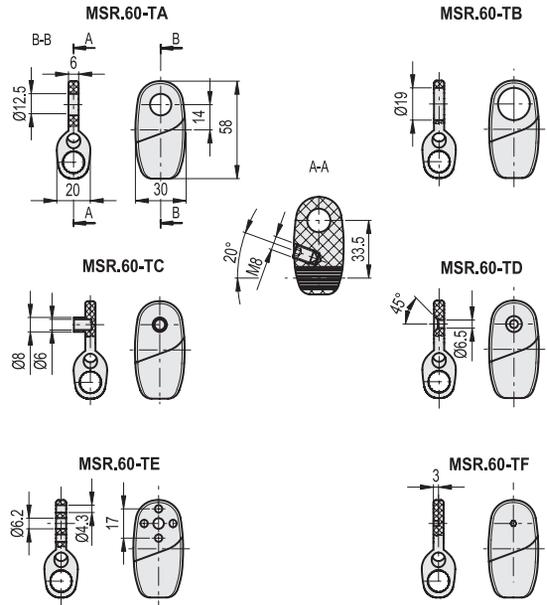
**MSR.60-C**

Code	Description	Pull out resistance [N]	
440021	MSR.60-C	300	19



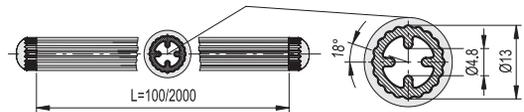
**MSR.60-TA-TB-TC-TD-TE-TF**

Code	Description	Pull out resistance [N]	
440031	MSR.60-TA	300	18
440032	MSR.60-TB	300	17
440033	MSR.60-TC	300	19
440034	MSR.60-TD	300	18
440035	MSR.60-TE	300	18
440036	MSR.60-TF	300	20



**MSR.60-T13**

Code	Description	L	
440050	MSR.60-T13-100	100	20
440055	MSR.60-T13-150	150	28
440060	MSR.60-T13-200	200	36
440065	MSR.60-T13-250	250	44
440070	MSR.60-T13-300	300	52
440200	MSR.60-T13-2000*	2000	320



\* Supplied without closing caps.

