



Table of Contents

1. Rectangular Duct Connections

1.1	Profiles	3
1.2	Corner Pieces	3
1.3	Clamps	4

2. Round Duct Connections

2.1	Circular Flanges AF	5
2.2	Circular Flanges LF	5
2.3	Circular Flanges BF	5
2.4	Circular Flanges UF	6
2.5	Joining Clips SR	6
2.6	Nut Runner SE	7
2.7	Overcollars MU	7
2.8	Circular Flanges PF	7
2.9	Joining Clips SS	8
2.10	Measuring Bands MRF	8
2.11	Notching Tools NZ and PNZ	8

3. Access Doors

3.1	Access Doors RD for rectangular (not insulated) ducts	9
3.2	Access Doors GX for rectangular (not insulated) ducts	9
3.3	Insulated Access Doors IRD-2, -3, -4 for insulated rectangular ducts	10
3.4	Insulated Access Doors IRD-3DE (with 3rd cover) for rectangular ducts with outside insulation	11
3.5	Insulated Access Doors IRD-3PL (with 3rd plate) for insulated rectangular ducts	12
3.6	Insulated Access Doors IRD-DW1 for double-wall rectangular ducts	13
3.7	Insulated Access Doors IRD-DW2 for double-wall rectangular ducts	13
3.8	Access Doors RRD for round (not insulated) ducts	14
3.9	Insulated Access Doors IRRD-3DE (with 3rd cover) for round ducts with outside insulation	15
3.10	Insulated Access Doors IRRD-3PL (with 3rd plate) for insulated round ducts	16
3.11	Insulated Access Doors IRRD-DW1 for double-wall round ducts	17
3.12	Insulated Access Doors IRRD-DW2 for double-wall round ducts	17
3.13	Plastic Access Doors KRD for rectangular ducts (PVC, PE, PP or PPs)	18
3.14	Plastic Access Doors KRRD for round ducts (PVC, PE, PP or PPs)	18
3.15	Retaining Cable for Access Doors	19
3.16	Set for lockable access doors (retrofit set)	19
3.17	Access doors with nuts instead of knobs (retrofit set)	19

4. Assembly and Accessories

4.1	Drain Fittings ST-G with wide funnel	20
4.2	Drain Fittings ST-K with conical washer	20
4.3	Drain Fitting Caps KST	20
4.4	Drain Fittings Sealing Ring made of PTFE	20
4.5	Drain Fittings Funnel Puller	21
4.6	Drain Fittings Holding Wrenches	21
4.7	Control Dampers KS	21



Table of Contents

4.8	Tie Bar Fittings	21
4.9	Cantilever Brackets KH	22
4.10	Hanger Profiles MS	22
4.11	Support Brackets AL	22
4.12	Hanger Bolts AB	22
4.13	Angle Brackets MB	23
4.14	Isolation Hangers SI	23
4.15	Round Duct Hangers BA	23
4.16	Ceiling Brackets DB	23
4.17	Rubber Isolators GP and GR	24
4.18	Threaded Rods GS	24
4.19	Long Nuts	24

1. Rectangular Duct Connections

The METU-SYSTEM 4-Bolt Flange allowing to connect rectangular ducts made of Profiles, Corners Pieces and Clamps

1.1 Profiles

Flange made of a triangular-shaped hollow profiles designed to be slid-on the duct wall of the rectangular duct and fitted with an external bead to facilitate the installation of clamps. The dished internal web acts as a metallic sealing lip while the fastening onto the duct is made through clinching, spot-welding or blind riveting. Also available with injected sealant.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Profile size:	_____	(M2 20 mm / M3 30 mm / M4 40 mm)
Material thickness:	_____	(0,7 / 0,8 / 0,9 / 1,2 / 1,5 mm, availability depends on the selected profile size)
Material:	_____	(galvanized / stainless steel V2A 1.4301 * / Aluminum *)
Quantity (in meters):	_____	(Only sold in whole packaging units: Bundles)

1.2 Corner Pieces

Heavy-duty, press-formed corner pieces made of heavy gage steel to be inserted into the profile ends.

- Corner Pieces "A": The seam needs to be notched out.
- Corner Pieces "A" with slotted hole: The seam needs to be notched out.
- Corner Pieces "A" short version: For small duct dimensions. The seam needs to be notched out.
- Corner Pieces "S": Duct-wall seam does not need to be notched out.
- Corner Pieces "S" short version: For small duct dimensions. Duct-wall seam does not need to be notched out.
- Corner Pieces "B": Economical corner pieces. Duct-wall seam does not need to be notched out.
- Corner Pieces "Z": Two-Part Corners for formed-on profiles (e.g. FIRMAC).

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Corner Piece size:	_____	(M2 20 mm / M3 30 mm / M4 40 mm)
Corner Piece type:	_____	(A / A - slotted hole / A - short version / S / S - short version / B / Z)
Material:	_____	(galvanized / stainless steel V2A 1.4301 * / Aluminum *)
Quantity	_____	(Only sold in whole packaging units: Bags)

* Not available in all dimensions.

1. Rectangular Duct Connections

1.3 Clamps

Sturdy clamps made of heavy gage pressed material fitting tightly the shape of the rectangular profiles. They are designed to provide additional support by larger duct cross-sections or higher pressure loads. Available as G-Clamps, fitted with a bolt, or Drive Clamps, when the installation space is restricted.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Clamp size: _____ (M2 20 mm / M3 30 mm / M4 40 mm)
Clamp type: _____ (G-Clamps / Drive Clamps)
Material: _____ (galvanized / stainless steel V2A 1.4301 *)
Quantity: _____ (Only sold in whole packaging units: Bags)

* Not available in all dimensions.



2. Round Duct Connections

The METU-SYSTEM Round Duct Connections are made of circular Flanges and Joining Clips or Overcollars.

2.1 Circular Flanges AF

Sturdy (brings additional stability to the duct) METU-SYSTEM AF circular flange designed to simplify the assembly of light-gauge round ducts, spirally wound ducts without reinforcing ribs and fittings (inner Ø 200 to 3000 mm). The flange is characterized by a sealing lip (ATC3, EN 16798-3) which also centers the flange and secures it in place. Fastening into the duct is achieved through notches, drilling-screws or blind rivets. Available in different materials. The cone-shaped flanges are then connected together rapidly (only one nut must be tightened) thanks to a SR Joining Clip.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (200 / 224 / 250 / 280 / 300 / 315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 / 1400 / 1600 mm, or special Ø)
Material: _____ (galvanized / stainless steel V2A 1.4301)
For fittings: _____ (yes / no)
Quantity: _____

2.2 Circular Flanges LF

METU-SYSTEM LF circular flange for ducts and fittings with a turned-out (Van Stone) edge. The flange is characterized by a conical groove which allows it to be simply fitted onto the upturned edge of the duct, thus providing a completely smooth internal surface. Injected HD mastic ensures the seal with the duct wall (ATC3, EN 16798-3). The LF in stainless steel comes without mastic. Flanged ducts are assembled using SR joining clips with integrated gasket.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (200 / 224 / 250 / 280 / 300 / 315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 / 1400 / 1600 mm, or special Ø)
Material: _____ (galvanized / stainless steel V2A 1.4301)
For fittings: _____ (yes / no)
Quantity: _____

* Not available in all dimensions.



2. Round Duct Connections

2.3 Circular Flanges BF

METU-SYSTEM BF circular flange, sturdy (provides additional duct stability) with two metal sealing lips (ATC3 to EN 16798-3) which simultaneously center the flange, the ends of which are welded. Fastened into the duct with either notches, self-drilling screws or blind rivets. The BF flange is designed to simplify and speed up the assembly of spiral-wound circular ducts without reinforcing ribs, as well as special parts with internal diameters from 200 to 3000 mm. Flanged ducts are assembled using SR joining clips with integrated gasket.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (200 / 224 / 250 / 280 / 300 / 315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 / 1400 / 1600 mm, or special Ø)
For fittings: _____ (yes / no)
Quantity: _____

2.4 Circular Flanges UF

METU-SYSTEM UF type circular flange, robust (provides additional duct stability) without sealing lip, for internal diameters between 200 and 3000 mm. Fastened into the duct with self-drilling screws, blind rivets or spot welding. A sealant (mastic) must be applied between the flange and the duct around the entire circumference to achieve the required airtightness. Flanged ducts are assembled using SR joining clips with integrated gasket.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (200 / 224 / 250 / 280 / 300 / 315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 / 1400 / 1600 mm, or special Ø)
Material: _____ (galvanized / stainless steel V2A 1.4301)
For fittings: _____ (yes / no)
Quantity: _____

* Not available in all dimensions.



2. Round Duct Connections

2.5 Joining Clips SR

METU-SYSTEM SR joining clip designed to connect ducts and fittings fitted with AF, BF, LF, UF circular flanges. Made from a "V"-shaped steel section, bent into a ring, the ends of which can be tightened with an angled bolt. Assembly is achieved by tightening a single nut for all diameters. Available with polyethylene (PE) foam gasket, with ceramic fiber (KF) gasket to achieve sealing class ATC3 to EN 16798-3, or without gasket.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Diameter: _____ (200 / 224 / 250 / 280 / 300 / 315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 / 1400 / 1600 mm, or special Ø)
Material: _____ (galvanized / stainless steel V2A 1.4301)
Gasket: _____ (PE / KF / without)
Quantity: _____

2.6 Nut Runner SE

The METU-SYSTEM SE Nut Runner allows the tightening of the SR Joining Clips within seconds. The hollow body provides enough clearance for the curved SR bolt. Fits standard electric and pneumatic wrenches. M6 for Ø 200 to 450 mm, M8 for Ø 500 to 900 mm, M12 for Ø 1000 to 3000 mm.

You can find possible versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

For SR-nut: _____ (M6-1/4", M6-3/8", M6-1/2",
M8-1/4", M8-3/8", M8-1/2", M8-3/4",
M12-3/8", M12-1/2", M12-3/4", M12-1")
Quantity: _____

2.7 Overcollars MU

The METU-SYSTEM MU overcollars connect straight circular ducts and fittings with inner diameters between 71 and 315 mm. Allow ducts to be disconnected without damaging them. Available with polyethylene foam gasket (PE), ceramic fiber gasket (KF), or EPDM gasket. Reach the air-tightness class ATC2 EN 16798-3. The curved sides of the collar ensure an equipotential bonding.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (71 / 80 / 90 / 100 / 112 / 125 / 140 / 150 / 160 / 180 / 200 / 224 / 250 / 280 / 300 / 315 mm)
Gasket: _____ (PE / KF / EPDM)
Material: _____ (galvanized / stainless steel V2A 1.4301)
Quantity: _____

* Not available in all dimensions.



2. Round Duct Connections

2.8 Circular Flanges PF

METU-SYSTEM PF type circular flange, sturdy (provides additional duct stability) for internal diameters from 80 to 180 mm. Fastened in the duct with self-drilling screws, blind rivets, spot welding or beading. A sealant (mastic) must be applied between the flange and the duct around the entire circumference to achieve the required airtightness. Flanged ducts are assembled using SS joining clips with integrated gasket.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (80 / 100 / 125 / 140 / 150 / 160 / 180 mm)
Material: _____ (galvanized / stainless steel V2A 1.4301 *)
Quantity: _____

2.9 Joining Clips SS

METU-SYSTEM SR Joining clips are designed to assemble the PF round flanges (Ø 80 to 180 mm) effectively and rapidly. With or without gasket depending on the requirements (gasket made of polyethylene PE or ceramic wool KF to achieve tightness class ATC3 according to EN 16798-3). It is made of a V-shaped profile which has been bent to form a ring. The ends are pulled together thanks to a tightening device operated with a unique socket-screw. Through the tightening of the socket-screw the flanges are centered and pulled together at the same time, resulting in a sturdy duct connection.

You can find possible diameters, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Diameter: _____ (80 / 100 / 125 / 140 / 150 / 160 / 180 mm)
Gasket: _____ (PE / KF / without)
Material: _____ (galvanized / stainless steel V2A 1.4301 *)
Quantity: _____

2.10 Measuring Bands MRF

The MRF measuring bands, made of painted spring steel, allow the measurement of the internal duct circumference easily and accurately according to DIN EN 24145. The graduations allow the precise quantifying of circumference deviations (+ or -) in order to order the exact circular flange diameters.

You can find possible diameters in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____ (71 / 80 / 90 / 100 / 112 / 125 / 140 / 150 / 160 / 180 / 200 / 224 / 250 / 280 / 300 /
315 / 355 / 400 / 450 / 500 / 560 / 600 / 630 / 710 / 800 / 900 / 1000 / 1120 / 1250 /
1400 / 1600 mm)
Quantity: _____

* Not available in all dimensions.

2. Round Duct Connections

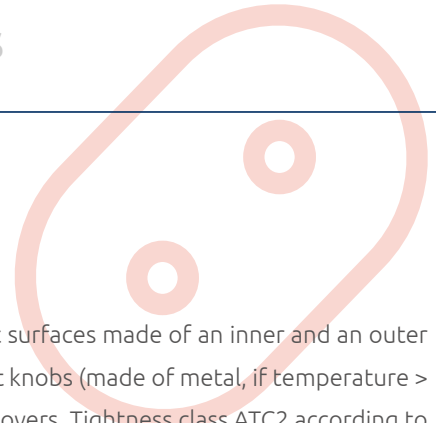
2.11 Notching Tools NZ and PNZ

Manual (NZ) and pneumatic (PNZ) tools allowing to create the notches at the correct distance from the duct end and with the correct depth for the secure fastening of the AF and BF circular flanges.

* Not available in all dimensions.



3. Access Doors



3.1 Access Doors RD for rectangular (not insulated) ducts

Sturdy, press-formed METU-SYSTEM access door RD for rectangular ducts or flat surfaces made of an inner and an outer cover plate which are pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size:	_____	(180 × 80 / 200 × 100 / 300 × 150 / 300 × 200 / 400 × 200 / 400 × 300 / 500 × 300 / 500 × 400 / 600 × 400 / 600 × 500 / 700 × 500 mm)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

3.2 Access Doors GX for rectangular (not insulated) ducts

Sturdy, press-formed METU-SYSTEM access door for rectangular ducts or flat surfaces with lower installation height and easier positioning, since the access doors sits deeper in the duct wall and the special groove automatically positions the access door into the opening. Made of an inner and an outer cover plate which are pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Tightness class ATC2 according to DIN EN 16798-3.

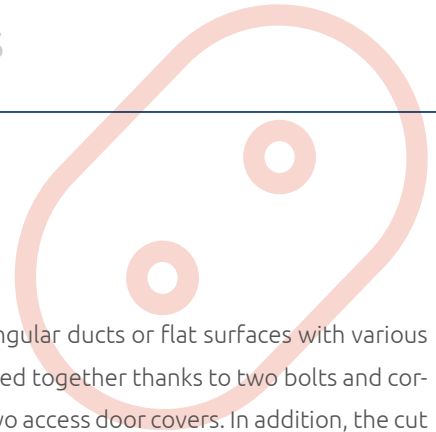
You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size:	_____	(200 × 100 / 300 × 200 / 400 × 300 mm)
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.



3. Access Doors



3.3 Insulated Access Doors IRD-2, -3, -4 for insulated rectangular ducts

Sturdy, press-formed METU-SYSTEM access door IRD-2, -3, -4 for insulated rectangular ducts or flat surfaces with various soft insulation thickness made of an inner and an outer cover plate which are pulled together thanks to two bolts and corrosion-resistant knobs. In doing so the duct wall is clamped evenly between the two access door covers. In addition, the cut edge of the insulation is protected by a cover plate which is maintained in place and connected to the duct-wall without creating any thermal bridges thanks to a special rubber profile (up to + 80°C). Also serves as edge protection. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size: _____ (200 × 100 / 300 × 200 / 400 × 200 / 400 × 300 / 500 × 300 / 500 × 400 / 600 × 400 / 600 × 500 / 700 × 500 mm)
IRD type: _____ (IRD-2 for insulation thicknesses between 20 and 30 mm, IRD-3 for insulation thicknesses between 30 and 40 mm, IRD-4 for insulation thicknesses between 40 and 55 mm)
Material: _____ (galvanized steel / stainless steel V2A 1.4301 / Aluminum)
Quantity: _____

* Not available in all dimensions.



3. Access Doors

3.4 Insulated Access Doors IRD-3DE (with 3rd cover) for rectangular ducts with outside insulation

Sturdy, press-formed METU-SYSTEM access door IRD-3DE for outside insulated rectangular ducts or flat surfaces with various insulation thickness made of an inner and an outer cover plate which are pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Additionally, the longer bolts allow a 3rd larger cover plate (3DE) to be placed on top of the insulation outside the duct in order to minimize any thermal bridges. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size:	_____	(200 × 100 mm for insulation thicknesses from 10 to max. 150 mm, 300 × 200 mm for insulation thicknesses from 10 to max. 150 mm, 400 × 200 mm for insulation thicknesses from 10 to max. 145 mm, 400 × 300 mm for insulation thicknesses from 10 to max. 145 mm, 500 × 300 mm for insulation thicknesses from 10 to max. 145 mm, 500 × 400 mm for insulation thicknesses from 10 to max. 130 mm, 600 × 400 mm for insulation thicknesses from 10 to max. 130 mm, 600 × 500 mm for insulation thicknesses from 10 to max. 130 mm, 700 × 500 mm for insulation thicknesses from 10 to max. 130 mm)
Isolation thickness:	_____	mm
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.

3. Access Doors

3.5 Insulated Access Doors IRD-3PL (with 3rd plate) for insulated rectangular ducts

Sturdy, press-formed METU-SYSTEM access door IRD-3PL for insulated rectangular ducts or flat surfaces with various insulation thickness made of an inner and an outer cover plate which are pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Additionally, a 3rd plate (3PL) has been spot welded onto the inner cover plate creating a hollow space filled with insulation. Also provides a smooth inner surface. Attention: this access door has unavoidable thermal bridges when installed. Tightness class ATC2 according to DIN EN 16798-3.

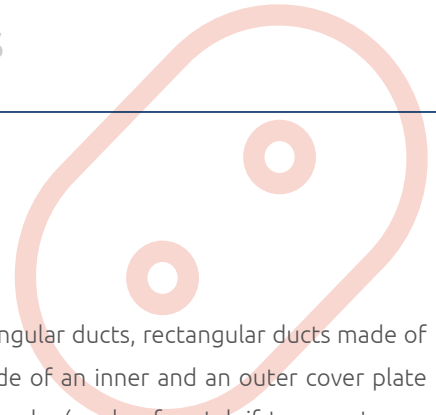
You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size:	_____	(180 × 80 / 200 × 100 / 300 × 150 / 300 × 200 / 400 × 200 / 400 × 300 / 500 × 300 / 500 × 400 / 600 × 400 / 600 × 500 / 700 × 500 mm)
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.



3. Access Doors



3.6 Insulated Access Doors IRD-DW1 for double-wall rectangular ducts

Sturdy, press-formed METU-SYSTEM access door IRD-DW1 for double-wall rectangular ducts, rectangular ducts made of pre-insulated panels (PAL) or flat surfaces with various insulation thickness made of an inner and an outer cover plate which are pulled together thanks to two longer bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct walls are clamped evenly between the two access door covers. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening size:	_____	(200 × 100 mm for insulation thicknesses up to max. 30 mm, 300 × 150 mm for insulation thicknesses up to max. 30 mm, 300 × 200 mm for insulation thicknesses up to max. 30 mm, 400 × 200 mm for insulation thicknesses up to max. 40 mm, 400 × 300 mm for insulation thicknesses up to max. 40 mm, 500 × 300 mm for insulation thicknesses up to max. 50 mm, 500 × 400 mm for insulation thicknesses up to max. 50 mm, 600 × 400 mm for insulation thicknesses up to max. 60 mm, 600 × 500 mm for insulation thicknesses up to max. 60 mm, 700 × 500 mm for insulation thicknesses up to max. 60 mm)
Isolation thickness:	_____	mm
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

3.7 Insulated Access Doors IRD-DW2 for double-wall rectangular ducts

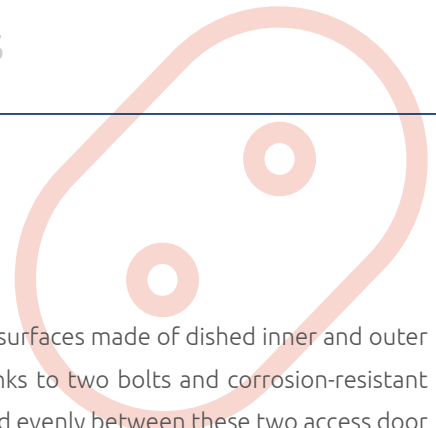
Solution for double-wall rectangular ducts with very thick insulation. Made of two separate standard RD access doors: one for the inner duct and a second one, preferably larger, for the outer duct.

Please provide details for both access doors (RD respectively GX) for a quotation. See also: „3.1 Access Doors RD for rectangular (not insulated) ducts“ on page 10 and „3.2 Access Doors GX for rectangular (not insulated) ducts“ on page 10

Please pay attention to minimum insulation thicknesses! See also: www.metu.de

* Not available in all dimensions.

3. Access Doors



3.8 Access Doors RRD for round (not insulated) ducts

Sturdy, press-formed METU-SYSTEM access door RRD for round ducts or curved surfaces made of dished inner and outer cover plates which are adapted to the duct diameter and pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between these two access door covers. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter:	_____	
Opening size:	_____	(180 × 80 mm for duct-Ø between 68 and 170 mm, 200 × 100 mm for duct-Ø between 130 and 360 mm, 300 × 200 mm for duct-Ø between 260 and 530 mm, 400 × 300 mm for duct-Ø between 370 and 950 mm, 500 × 400 mm for duct-Ø between 520 and 1800 mm)
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.



3. Access Doors

3.9 Insulated Access Doors IRRD-3DE (with 3rd cover) for round ducts with outside insulation

Sturdy, press-formed METU-SYSTEM access doors IRRD-3DE for outside insulated circular ducts or curved surfaces with various insulation thickness made of dished inner and outer cover plates which adapted to the respective duct diameter s and are pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Additionally, the longer bolts allow a 3rd larger cover plate (3DE) to be placed on top of the insulation outside the duct in order to minimize any thermal bridges. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter:	_____	
Opening sizes:	_____	(180 × 80 mm for duct-Ø from 68 to 170 mm, isolation thickness from 25 to max. 150 mm, 200 × 100 mm for duct-Ø from 130 bis 360 mm, isolation thickness from 25 to max. 150 mm, 300 × 200 mm for duct-Ø from 260 bis 530 mm, isolation thickness from 25 to max. 145 mm, 400 × 300 mm for duct-Ø from 370 bis 950 mm, isolation thickness from 25 to max. 145 mm)
Insulation thickness:	_____	mm
Outer diameter:	_____	mm
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.

3. Access Doors

3.10 Insulated Access Doors IRRD-3PL (with 3rd plate) for insulated round ducts

Sturdy, press-formed METU-SYSTEM access door IRRD-3PL for insulated round ducts or curved surfaces with various outside insulation thickness made of dished inner and outer cover plates which are adapted to the duct diameter and pulled together thanks to two bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct wall is clamped evenly between the two access door covers. Additionally, a 3rd plate (3PL) has been spot welded onto the inner cover plate creating a hollow space filled with insulation. Also provides a smooth inner surface. Attention: this access door has unavoidable thermal bridges when installed. Tightness class ATC2 according to DIN EN 16798-3.

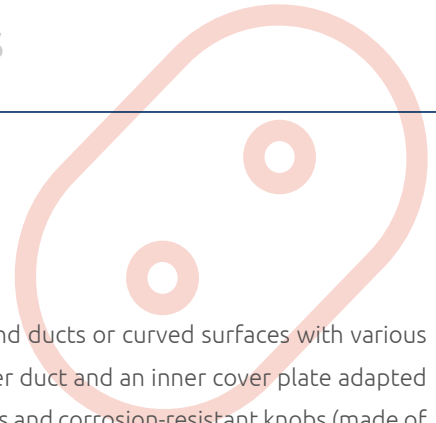
You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter:	_____	
Opening size:	_____	(180 × 80 mm for duct-Ø between 68 and 170 mm, 200 × 100 mm for duct-Ø between 130 bis 360 mm, 300 × 200 mm for duct-Ø between 260 bis 530 mm, 400 × 300 mm for duct-Ø between 370 bis 950 mm, 500 × 400 mm for duct-Ø between 520 bis 1800 mm)
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

* Not available in all dimensions.



3. Access Doors



3.11 Insulated Access Doors IRRD-DW1 for double-wall round ducts

Sturdy, press-formed METU-SYSTEM access door IRRD-DW1 for double-wall round ducts or curved surfaces with various insulation thickness consisting of a curved outer cover plate adapted to the outer duct and an inner cover plate adapted to the inner duct. Both cover plates are pulled together thanks to two longer bolts and corrosion-resistant knobs (made of metal, if temperature > 80°C). In doing so the duct walls are clamped evenly between the two access door covers. Tightness class ATC2 according to DIN EN 16798-3.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter:	_____	
Opening size:	_____	(180 × 80 mm for duct-Ø from 68 up to 170 mm, isolation thickness max. 20 mm, 200 × 100 mm for duct-Ø from 130 up to 360 mm, isolation thickness max. 30 mm, 300 × 200 mm for duct-Ø from 260 up to 530 mm, isolation thickness max. 30 mm, 400 × 300 mm for duct-Ø from 370 up to 950mm, isolation thickness max. 40 mm)
Insulation thickness:	_____	mm
Outer diameter:	_____	mm
Gasket:	_____	(PE - polyethylene gasket up to +70°C / SKK - rubber edge molding up to +80°C / KF - ceramic fibers up to +200°C / SI 80° - silicone gasket up to +80°C / SI 200° - silicone gasket up to +200°C / NBR - NBR gasket up to +80°C *)
Material:	_____	(galvanized steel / stainless steel V2A 1.4301 / Aluminum / V4A 1.4404 *)
Knob type:	_____	(plastic / metal)
Quantity:	_____	

3.12 Insulated Access Doors IRRD-DW2 for double-wall round ducts

Solution for double-wall rectangular ducts with very thick insulation. Made of two separate standard RRD access doors adapted to the respective duct diameters: one for the inner duct and a second one, preferably larger, for the outer duct.

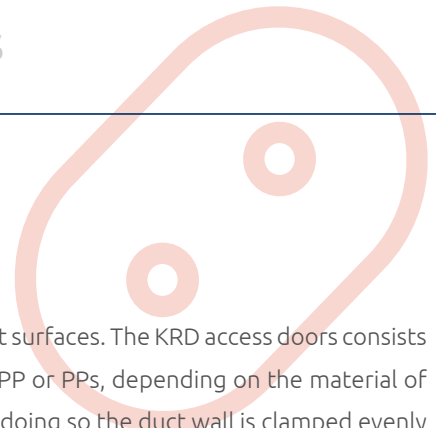
Please provide details for both RRD access doors of the IRRD-DW2-solution for a quotation. See also: „3.8 Access Doors RRD for round (not insulated) ducts“ on page 15

Please pay attention to minimum insulation thicknesses! See also: www.metu.de

* Not available in all dimensions.



3. Access Doors



3.13 Plastic Access Doors KRD for rectangular ducts (PVC, PE, PP or PPs)

Sturdy, press-formed METU-SYSTEM access doors KRD for rectangular ducts or flat surfaces. The KRD access doors consists of an outer cover plate made of PVC and an inner cover plate made of PVC, PE, PP or PPs, depending on the material of the duct. The cover plates are pulled together thanks to two bolts and knobs. By doing so the duct wall is clamped evenly between the two access door covers. An EPDM gasket glued to the inner cover ensures sealing even under high pressure.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Opening sizes: _____ (KRD 21: 200 × 90 mm
KRD 32: 290 × 200 mm
KRD 43: 425 × 328 mm
KRD 54: 520 × 420 mm
KRD 65: 620 × 520 mm)

Material inner cover plate: _____ (PVC / PE / PP / PPs)

Quantity: _____

3.14 Plastic Access Doors KRRD for round ducts (PVC, PE, PP or PPs)

Sturdy, press-formed METU-SYSTEM access door KRRD for round ducts or curved surfaces. The KRRD access doors consists of an outer cover plate made of PVC and an inner cover plate made of PVC, PE, PP or PPs, depending on the material of the duct. The cover plates are pulled together thanks to two bolts and knobs. By doing so the duct wall is clamped evenly between the two access door covers. An EPDM gasket glued to the inner cover ensures sealing even under high pressure.

You can find possible sizes, materials and versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Ø Inner duct diameter: _____

Opening sizes: _____ (KRRD 19-16: 192 x 98 mm for duct-Ø 160 - 180 mm,
KRRD 21-20: 205 x 105 mm for duct-Ø 200 bis 250 mm,
KRRD 32-31: 355 x 215 mm for duct-Ø 315 bis 355 mm,
KRRD 43-40: 425 x 335 mm for duct-Ø 400 bis 500 mm,
KRRD 54-60: 530 x 435 mm for duct-Ø 600 mm,
KRRD 54-70: 530 x 435 mm for duct-Ø 700 mm,
KRRD 54-80: 530 x 435 mm for duct-Ø 800 mm,
KRRD 54-90: 530 x 435 mm for duct-Ø 900 mm,
KRRD 54-100: 530 x 435 mm for duct-Ø 1000 mm,
KRRD 65-120: 620 x 520 mm for duct-Ø 1200 mm,
KRRD 65-140: 620 x 520 mm for duct-Ø 1400 mm,

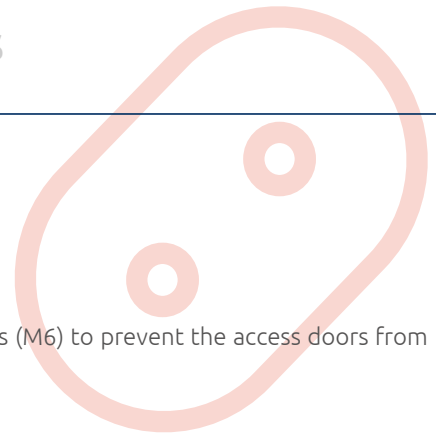
Material inner cover plate: _____ (PVC / PE / PP / PPs)

Quantity: _____

* Not available in all dimensions.



3. Access Doors



3.15 Retaining Cable for Access Doors

METU retaining cable for access doors including bolts, nuts and toothed washers (M6) to prevent the access doors from falling and hurting someone. Packaging unit is 10 pieces per bag.

You can find more information in our current price list on our website www.metu.de.

3.16 Set for lockable access doors (retrofit set)

The special burglar-resistant option for access doors includes two metal knobs with holes (\varnothing 11 mm), two washers and a locking bracket. They can be installed on any METU-SYSTEM access door and secured with two standard padlocks (not included).

You can find possible materials and versions in our current price list on our website www.metu.de.

Opening size existing access door: _____
Material: _____ (galvanized steel / stainless steel V2A 1.4301)
Quantity: _____

3.17 Access doors with nuts instead of knobs (retrofit set)

This option with nuts and washers (M8, M10 or M12, depending on the size of the door) ensures that the access door cannot be opened without the use of tools (Machinery Directives).

You can find possible materials and versions in our current price list on our website www.metu.de.

Opening size existing access door: _____
Material: _____ (galvanized steel / stainless steel V2A 1.4301)
Quantity: _____

* Not available in all dimensions.



4. Assembly and Accessories

4.1 Drain Fittings ST-G with wide funnel

Special METU-SYSTEM drain fittings ST-G designed to drain condensation from rectangular air ducts or other equipment. They are made of a nickel-plated brass fitting and nut and a galvanized or stainless steel funnel, which creates a depression inside the duct to facilitate the drainage of fluids. Easy installation not requiring any welding.

You can find possible sizes and materials in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Material: _____ (galvanized + nickel-plated brass or stainless steel V4A 1.4404)
Thread size: _____ (1/2", 3/4", 1", 1 1/2")
Quantity: _____

4.2 Drain Fittings ST-K with conical washer

Special METU-SYSTEM drain fittings ST-K designed to drain condensation or other liquids from rectangular and round air ducts. Consisting of a threaded fitting, a tightening nut and a sturdy conical washer creating a basin inside the duct wall to facilitate the evacuation of fluids. Easy installation not requiring any welding.

You can find possible sizes and materials in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Material: _____ (nickel-plated brass or stainless steel V4A 1.4404)
Thread size: _____ (1/2", 3/4", 1", 1 1/2")
Quantity: _____

4.3 Drain Fitting Caps KST

Drain Fitting Caps with gasket.

You can find possible sizes and materials in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Material: _____ (nickel-plated brass or stainless steel V4A 1.4404)
Thread size: _____ (1/2", 3/4", 1", 1 1/2")
Quantity: _____

* Not available in all dimensions.



4. Assembly and Accessories

4.4 Drain Fittings Sealing Ring made of PTFE

Drain fitting seals made of PTFE for increased fluid-tightness and chemical resistance.

In order to compress the PTFE ring seal sufficiently it is recommended to use the drain fitting holding wrench. See also: „4.6 Drain Fittings Holding Wrenches“ on page 22

You can find possible sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread size: _____ (1/2", 3/4", 1", 1 1/2")

Quantity: _____

4.5 Drain Fittings Funnel Puller

The Drain Fitting Funnel Puller are used as a tool allowing to pull thicker duct walls without running the risk of damaging the neck of the drain fitting.

You can find possible sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread size: _____ (1/2", 3/4", 1", 1 1/2")

Quantity: _____

4.6 Drain Fittings Holding Wrenches

The Drain Fittings Holding Wrench help tighten the drain fittings nut without damaging their threads.

You can find possible sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread size: _____ (1/2", 3/4", 1", 1 1/2")

Quantity: _____

* Not available in all dimensions.



4. Assembly and Accessories

4.7 Control Dampers KS

The Control Dampers facilitate the fabrication of dampers to regulate the air flow. Only the blade has to be manufactured according to the dimensions of the rectangular duct.

You can find more information in our current price list on our website www.metu.de.

4.8 Tie Bar Fittings

Galvanized steel components for the installation of tie bars allowing to stiffen the air-ducts. The duct wall is clamped between two rigid discs for an optimal load distribution. Commercially available, inexpensive $\frac{3}{8}$ " galvanized tubing (DIN 2440) can be used as tie bars.

You can find more information in our current price list on our website www.metu.de.

4.9 Cantilever Brackets KH

Cantilever brackets designed for the vertical suspension of rectangular, round and oval air ducts. Flexible installation element, as various duct dimensions and stand-off distances from the wall can be covered. Made of two U-formed profiled legs and pivotal fastening blocks.

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Version: _____ (KH 12 / KH18 / KH 24 / KH 32 / KH 40 / KH 48)
Quantity: _____

4.10 Hanger Profiles MS

No specifications text available.

* Not available in all dimensions.

4. Assembly and Accessories

4.11 Support Brackets AL

METU-SYSTEM Support Brackets AL for the suspension of rectangular air ducts or other equipment. Made of a sturdy construction with a large supporting surface preventing the edge of the ductwork from being damaged. Since the nut is located under the duct edge, no bending forces are applied on the threaded rod. Easy installation through two drilling screws or blind rivets, which prevent the bracket from sliding.

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread size: _____ (M8 or M10)
Quantity: _____

4.12 Hanger Bolts AB

METU-SYSTEM Hanger Bolts AB for the suspension of rectangular ducts with threaded rods. Made of an extended massive bolt with a cross-hole for the suspension with threaded rods and which simultaneously serves as assembly bolt for corner pieces of the rectangular ductwork connection.

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread Size: _____
Quantity: _____

4.13 Angle Brackets MB

Sturdy METU-SYSTEM Angle Bracket MB for suspending rectangular air ducts made of galvanized steel. Available in various lengths. The Rubber Isolator GP M8 provides acoustic insulation.

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

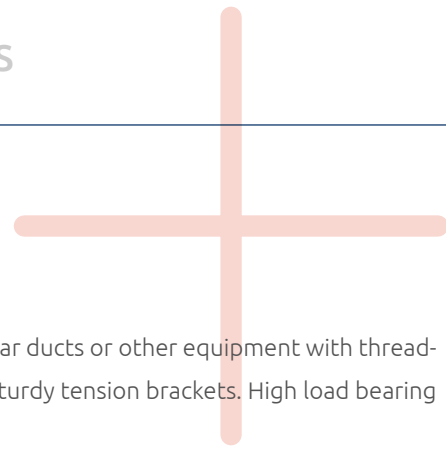
Version: _____ (MB 100 / MB 150 / MB 200 / MB 250)
Quantity: _____

* Not available in all dimensions.



METU-SPECIFICATIONS

METU-SYSTEM



4.14 Isolation Hangers SI

METU-SYSTEM Isolation Hangers SI for a sound isolated suspension of rectangular ducts or other equipment with threaded rods. The hangers are made of a large piece of rubber placed between two sturdy tension brackets. High load bearing capacity with can be read on a scale.

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread Size: _____ (M8 / M10 / M12)
Quantity: _____

4.15 Round Duct Hangers BA

METU-SYSTEM Round Duct Hanger BA designed for the suspension of round ducts (all standard Ø) with threaded rods. Made of a press-formed steel bracket, which connects the metal strip (separate article) to the threaded rod (not included). Simple installation thanks to the self-clamping device. Acoustic insulated version (BA S) also available. Suspension Steel Strip made of galvanized steel is supplied in coils (approx. 100 m, depending on stock).

You can find possible versions and sizes in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Version depending on load capacity: _____ (BA 3 / BA 4 / BA 5)
Acoustic insulated version: _____ (yes / no)
Dimensions Suspension Steel Strip: _____ (30 x 0,75 mm / 40 x 0,88 mm / 50 x 1,00 mm)
Quantity: _____

4.16 Ceiling Brackets DB

METU-SYSTEM Ceiling Bracket DB for sound-insulated suspension with threaded rods of air ducts and other equipment. The sturdy bracket can be moved along the oval hole and rotated, which allows the vertical alignment of the threaded rod.

You can find possible versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread Size: _____ (M8 / M10 / M12)
Quantity: _____

* Not available in all dimensions.



4. Assembly and Accessories

4.17 Rubber Isolators GP and GR

METU-SYSTEM Rubber Isolators GP provide sound insulation and reduce the transmission of vibrations. They come with a molded-on washer made of galvanized steel. The matching Rubber Isolator GR can be used for double-sided sound insulation.

You can find possible versions in our current price list on our website www.metu.de. The following information is required for a quotation (please indicate article no. if possible to avoid misunderstandings):

Thread Size: _____ (M8 / M10 / M12)
Quantity: _____

4.18 Threaded Rods GS

Galvanized Threaded Rods (M6 / M8 / M10 / M12) available in various dimensions.

You can find more information in our current price list on our website www.metu.de.

4.19 Long Nuts

The long nuts (M6 / M8 / M10 / M12) minimize material waste as they allow you to connect together unused threaded rod sections. The center stops ensure that both ends of the threaded rods enter the nut to the same depth.

You can find more information in our current price list on our website www.metu.de.

Disclaimer

These information have been carefully compiled. They serve as guidelines and do not exempt the user from carrying out their own tests and trials. A legally binding assurance about certain properties or suitability for a specific application cannot be derived from these information. It is therefore necessary to assess the suitability of the products for the intended specific application before using them. We reserve the right to make technical and price changes without prior notice. No guarantees can be given regarding completeness and correctness. Changes and errors excepted.

* Not available in all dimensions.

