METU-SPECIFICATIONS METU-FORM



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1. Ducts

"Parallel" or "plain"?

The straight ducts and fittings with a formed-on "parallel" flange are preferred to the "plain" versions (without flanges) for the following reasons:

- They are stronger and bring extra stability
- They offer a completely smooth inner surface
- They cover a wider diameter range (from 80 to 1000 mm)

required for a quotation (at best specify our article number):

• The connection elements SRX for "parallel" ducts come with various gasket types

1.1 Straight Ducts "Parallel" (with flanges)

Air, liquid and oil-tight, laser-welded METU-FORM straight ducts made of galvanized steel or stainless steel (V2A / 1,4301 / 304) with smooth inner surfaces and integral, stable and formed-on "parallel flanges" formed from the duct itself on both ends. Inner duct diameters from 80 up to 1000 mm. Connection with SRX joining clips fitted with a gasket. The gasket is not in direct contact with the air flow. Equipotential bonding (ESD) automatically achieved. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters and materials in our current price list on our website www.metu.de. The following information is

Material: ______ (galvanized or stainless steel from 200 mm diameter)

1.2 Straight Ducts "Plain" (without flanges)

Air, liquid and oil-tight, laser-welded METU-FORM straight ducts made of galvanized steel (stainless steel V2A / 1,4301 / 304 not available) with smooth inner surfaces and without flanges on both ends ("Plain" execution). Inner duct diameters from 80 up to 200 mm. Connection with overcollars MUX. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters and materials in our current price list on our website www.metu.de. The following information is required for a quotation (at best specify our article number):

Diameter:

Quantity:



Diameter:

2. Connection elements

2.1 Joining Clips SRX

Air, liquid and oil-tight METU-FORM joining clips SRX made of galvanized steel or stainless steel (V2A / 1.4301 / 304) designed to connect together ducts and fittings fitted with METU-FORM formed-on "parallel" flanges. Diameters 80 up to 1000 mm. Gasket made of NBR or silicone. The gasket is designed in such a way that no gasket needs to be inserted between the duct elements. The seal is not in direct contact with the air flow. Potential equalization is automatically achieved. A unique hexagon socket screw (Allen screw) is required for the assembly. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters and materials in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

required for a quotation (at best specify	y our article number):
Diameter: Material: Gasket: Quantity:	(galvanized or stainless steel from 200 mm diameter) (NBR or silicone)
2.2 Overcollars MUX	
ducts and fittings. Diameters from 8	overcollars MUX made of galvanized steel for the connection of "plain" METU-FORM up to 200 mm. Gasket made of NBR. Equipotential bonding achieved thanks to ar exagon socket screw (Allen screw) is required for the tightening. Tightness class ATC
You can find possible diameters and ma required for a quotation (at best specify	terials in our current price list on our website <u>www.metu.de</u> . The following information is y our article number):
Diameter: Optional contact band: Quantity:	



3. Fittings

3.1 Elbows

Air, liquid and oil-tight METU-FORM laser-welded and/or MIG-soldered elbows made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips), or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

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 (at best specify our article number): Diameter: ____ (galvanized or stainless steel from 200 mm diameter) Material: ___ ("plain" or "parallel") Version: Elbow type: __ (15°, 30°, 45°, 60° or 90°) Quantity: **Branches** Air, liquid and oil-tight METU-FORM laser-welded and/or MIG-soldered branches made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips), or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): (see price list for possible combinations) Diameter each: Material: ____ (galvanized or stainless steel from 200 mm diameter) ____ ("plain" or "parallel") Version: ___ (30°, 45° or 90°) Branch angle: Quantity: 3.3 Cross pieces Air, liquid and oil-tight METU-FORM laser-welded and/or MIG-soldered cross pieces made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): _ (see price list for possible combinations) Diameter each: ___ (galvanized or stainless steel from 200 mm diameter) Material: __ ("plain" or "parallel") Version: Branch angle: _ (30°, 45° or 90°) Quantity:



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3. Fittings

3.4 Saddle Pieces

METU-FORM laser-welded and/or MIG-soldered saddle pieces made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

16798-3). 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 (at best specify our article number): _ (see price list for possible combinations) Diameter each: ____ (galvanized or stainless steel from 200 mm diameter) Material: ___ ("plain" or "parallel") Version: (30°, 45° or 90°) Branch angle: Quantity: 3.5 **Reducers** Air, liquid and oil-tight METU-FORM pressed or laser-welded / MIG-soldered, symmetrical reducers made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): (see price list for possible combinations) Diameter each: _____ (galvanized or stainless steel from 200 mm diameter) Material: __ ("plain" or "parallel") Version: Quantity: Collars 3.6 Air, liquid and oil-tight laser-welded METU-FORM collars made of galvanized steel or stainless steel (V2A / 1,4301 / 304) with smooth inner surfaces and a formed-on "parallel flange" on one end. Diameters from 80 up to 1000 mm. Connection with SRX joining clips. Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): Diameter: Material: ___ (galvanized or stainless steel from 200 mm diameter) Quantity:



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3. Fittings

3.7 End Caps

Air, liquid and oil-tight METU-FORM end caps made of galvanized steel or stainless steel (V2A / 1,4301 / 304). Diameters from 80 up to 1000 mm. Connection with SRX joining clips and/or MUX overcollars, depending on the version ("plain" or "parallel") and the duct diameters. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

Diameter:	
Material:	(galvanized or stainless steel from 200 mm diameter)
Version:	("plain" or "parallel")
Quantity:	

3.8 Forks

Air, liquid and oil-tight METU-FORM laser-welded and/or MIG-soldered forks made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

Please fill out the production form (download at www.metu.de) for forks for a quotation.

3.9 Swan Necks

Air, liquid and oil-tight METU-FORM laser-welded and/or MIG-soldered swan-neck elbows made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

Please fill out the production form (download at <u>www.metu.de</u>) for swan necks for a quotation.



4. Valves

4.1 Throttle Valves

Air, liquid and oil-tight METU-FORM laser-welded throttle valves made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

Diameter:	
Material:	(galvanized or stainless steel from 200 mm diameter)
Version:	("plain" or "parallel")
Optional 4.3 Preparation for Damper Actuators	
Quantity:	

4.2 Tight Throttle Valves

Air, liquid and oil-tight METU-FORM laser-welded throttle valves made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Fitted with a NBR gasket around the edge of the throttle plate. Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips), or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

Diameter:	
Material:	(galvanized or stainless steel from 200 mm diameter)
Version:	("plain" or "parallel")
Optional 4.3 Preparation for Damper Actuators	
Quantity:	

4.3 Preparation for Damper Actuators

A special plate is mounted on the throttle valves / dampers allowing to install a BELIMO electric actuator for the automatic adjustment of the air flow.

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



5. Transition pieces

5.1 Transition Pieces

Air, liquid and oil-tight METU-FORM welded transition pieces (transition from a round to a rectangular air duct) made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (FN 16798-3).

MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): Diameter: (galvanized or stainless steel from 200 mm diameter) Material: Version: ___ ("plain" or "parallel") Quantity: Loose Flange Adapters METU-FORM laser-welded and/or MIG-soldered, loose flange adapters made of galvanized steel or stainless steel (V2A / 1.4301 / 304), which allow the connection of ducts from other manufacturers to the METU-FORM "plain" or "parallel" duct systems. Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). 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 (at best specify our article number): ___ (galvanized or stainless steel from 200 mm diameter) Material: ____ ("plain" or "parallel") Version: Quantity: 5.3 Take off's Air, liquid and oil-tight METU-FORM welded / laser-welded take offs made of galvanized steel or stainless steel (V2A / 1.4301 / 304) allowing to connect a circular duct to the sides of a rectangular one. Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): Diameter: ____ (galvanized or stainless steel from 200 mm diameter) Material: _ ("plain" or "parallel") Version: Quantity:



5. Transition pieces

5.4 Sliding Pipes

Air, liquid and oil-tight laser-welded METU-FORM sliding pipes (serve as duct-length adjustments) made of galvanized steel or stainless steel (V2A / 1,4301 / 304) with a formed-on "parallel" flange on one end. Diameters from 80 up to 1000 mm. Connection with SRX joining clips. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

Diameter:	
Material:	(galvanized or stainless steel from 200 mm diameter
Version:	("plain" or "parallel")
Gasket:	(NBR or silicone)
Quantity:	



6. Hose Connections

6.1 Industrial Hoses

In view of the numerous flexible hose types available in the market, we recommend that you purchase them directly from the manufacturer.

6.2 Male Hose Couplings

Material:

METU-FORM laser-welded liquid and oil-tight male hose couplings made of galvanized steel or stainless steel (V2A / 1.4301 / 304), allowing to connect the flexible industrial hoses to the METU-FORM airducts. Two versions: with "Parallel" flange formed directly from the duct itself (\emptyset 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, \emptyset 80 to 200 mm, connection with MUX overcollars).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

(galvanized or stainless steel from 200 mm diameter)

Versic Quant	
6.3	Female Hose Couplings
METU	$_{ m J-FORM}$ laser-welded female hose couplings made of galvanized steel or stainless steel (V2A $_{ m J}$ 1.4301 $_{ m J}$ 304), allowing
to co	nnect the flexible industrial hoses to the METU-FORM airducts. They are designed for a vertical installation, as they
ргече	ent the oil or other liquids from reaching outside the air ducts when the ventilation system and machines are turned
off. T	wo versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX join-
ing cl	lips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars).
	an find possible diameters, materials and versions in our current price list on our website www.metu.de . The following informs is required for a quotation (at best specify our article number):
Diame Mater	
Versio	
Quant	tity:



7. Roof Elements

7.1 Exhausts

Air, liquid and oil-tight METU-FORM laser-welded exhausts made of galvanized steel or stainless steel (V2A / 1.4301 / 304). Installation outside buildings, on roofs or facades, intended for the evacuation or suction of air. Two versions: with "Parallel" flange formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3).

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 (at best specify our article number): Diameter: Material: (galvanized or stainless steel from 200 mm diameter) __ ("plain" or "parallel") Version: Quantity: Deflector Hoods, Exhaust Heads, Jet Caps METU-FORM exhausts made of galvanized steel. Installation outside buildings, on roofs or facades, intended for the evacuation or suction of air. Two versions: with "Parallel" flange formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): ____ ("plain" or "parallel") Version: Quantity: 7.3 Rain Caps METU-FORM rain caps made of galvanized steel. Installation outside buildings, on roofs or facades, intended for the evacuation or suction of air. Two versions: with "Parallel" flange formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without a flange, Ø 80 to 200 mm, connection with MUX overcollars). Tightness class ATC 1 (EN 16798-3). 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 (at best specify our article number): Diameter: ___ ("plain" or "parallel") Version: Quantity:



8. Other Parts

8.1 Inspection Ducts

Air, liquid and oil-tight METU-FORM laser-welded inspection ducts made of galvanized steel or stainless steel (V2A / 1.4301 / 304). They are fitted with an oil-tight RRD access door (NBR or silicone gasket). Two versions: with "Parallel" flanges formed directly from the duct itself (Ø 80 to 1000 mm, connection with SRX joining clips) or "plain" (without flanges, Ø 80 to 200 mm, connection with MUX overcollars). The air-tightness exceeds the highest-class D according to the norm DIN EN 12237. Tightness class ATC 1 (EN 16798-3).

You can find possible diameters, materials and versions in our current price list on our website <u>www.metu.de</u>. The following information is required for a quotation (at best specify our article number):

Diameter:		
Material:	(galvanized or stainless steel fro	m 200 mm diameter)
/ersion:	("plain" or "parallel")	
Opening size access door:		
Gasket:	(NBR or silicone)	
Quantity:		

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.

