


mtc

an acal group company



Fabric-/Foil over Foam Gaskets
Hollow Chamber-, Clip-on- and EPDM-Profiles
IP/EMC-Gaskets
Punched Parts
Conductive Fabrics and Fleeces

MODERN COMPANY WITH LONG TRADITION

MTC is specialized on the protection of electronic circuits and the environment from high frequency electromagnetic radiation. Therefore we develop, manufacture and sell **high quality EMC shielding materials and thermally conductive products**.

Thereby we use the very latest technologies and work with a network of efficient suppliers.

20 years of experience in the business and steady growth provide guarantees for long term, successful cooperation with our customers and suppliers.

MTC - PART OF AN INTERNATIONAL GROUP

In October 2011 MTC was acquired by the UK-listed company Acal plc. With a turnover of more than 250 million euro and over 750 employees worldwide Acal has evolved into an important international service provider - with focus on the distribution of electronic and photonic components, power supply and system components.

Acal has offices in 12 European countries. Thus MTC also grows internationally and ensures its customers local presence and pan-European support.

MTC's head office is located in Dillingen (Bavaria). This is where you will find the appropriate contacts for commercial matters and technical support. The production and delivery of our goods are also controlled from here.

MTC also has a sales office in Hong Kong. We provide services for the complete Asian market from this base.

MTC has manufacturing sites in Germany and South Korea. **With Regens-Wagner-Stiftung, a facility for disabled people in Dillingen and our sister company EMC Innovation in Incheon we guarantee our customers short reaction times and high flexibility.**

STANDARD OR CUSTOMIZED SOLUTIONS

Our product portfolio includes both an extensive range of standard products and products tailored for specific customer needs. Our customers can rely on our solutions being perfectly tailored to their wishes and needs. Normally we work with our customers from the early stages of projects and act as adviser from the birth of the idea to the mass produced product.



MTC is an ISO 9001 and ISO 14001 certified company. This means assured quality and ecology-minded production processes



All our products are RoHS compliant



UL 94 certified product



Custom length available



Optionally available on endless rolls



Optionally available with Wide Release Liner

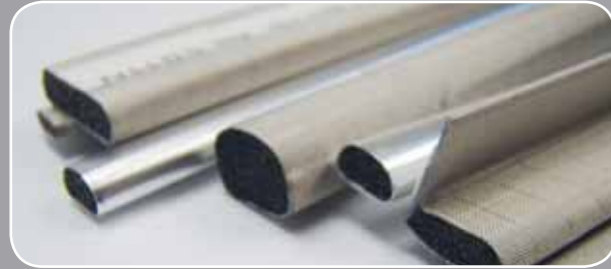


Optionally available with several items on shared carrier sheet (Sheet Type Package)

PLEASE NOTE!!!

All data is provided for guidance only due to the varied conditions of potential use which are beyond our control. All recommendations or suggestions are given without guarantee or responsibility on our part and users should make their own test to determine suitability.

Features	UL 94	Custom Length	REEL	WRL	STP
Fabric-/foil over foam gaskets	✓	✓	✓	✓	✓
Hollow chamber-, clip-on and EPDM-profiles		✓	✓		
IP/EMC-gaskets	✓	✓	✓		
Punched parts	✓				
Conductive fabric and fleeces		✓	✓		
Conductive elastomers		✓	✓		
Knitted wire gaskets		✓	✓		
Conductive foam		✓	✓		
Conductive tapes		✓	✓		
Contact springs		✓			
SMD contact springs			✓		
Board Level Shields (BLS)			✓		
Thermally conductive products	✓	✓	✓		✓



Our standard gaskets have a **polyurethane foam core** which is available in four different hardness values (32 / 45 / 70 / 150 kg/cm³). The foam core is covered with a **conductive fabric with a copper-nickel metal coating** or **aluminium foil**.



Our **standard portfolio** includes a large range of sizes and shapes. **Customized dimensions** can be supplied at low cost at any time. The material can also be cut to the length you require or modified to suit your individual needs.



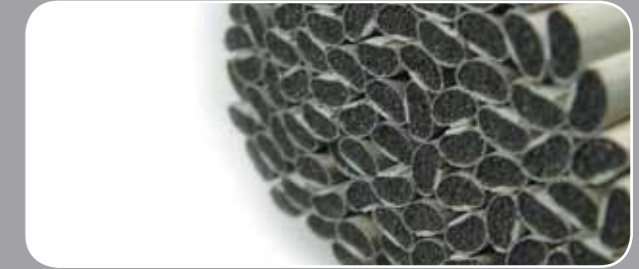
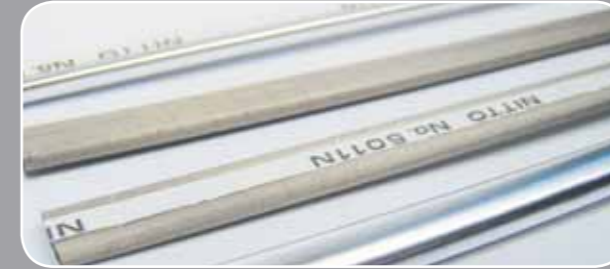
Our profiles are fitted with a **non-conductive adhesive tape** as standard. The following other versions are also available:

- gaskets with conductive adhesive tape
- several adhesive tapes on a single profile
- adhesive tapes with removal aid (WRL)
- small and miniature parts assembled on self adhesive paper (STP)



In addition to their **excellent shielding effectiveness** (as high as over 80 dB @ 100 MHz – 18 GHz), our seals offer you the **following benefits**:

- they are easy to work and can be cut with a pair of scissors.
- they offer high wear resistance.
- low contact pressure forces mean that thinner metal plates can be used, which in turn reduces costs.
- they have low surface resistance (< 0.08 Ohm).
- seals are a cost-saving method of shielding.



Tolerances (mm)

Width and height (mm)	0,5 - 6,3	+/- 0,5
	6,3 - 10,0	+/- 0,7
	10,0 - 16,0	+/- 0,8
	16,0 - 25,0	+/- 1,0
	25,0 - 40,0	+/- 1,3
Length (mm)	40,0 - 63,0	+/- 1,6
	5 - 150	+/- 0,8
	151 - 300	+/- 1,3
	301 - 1.200	+/- 2,5
	1.201 - 1.750	+/- 4,7
	1.751 - 2.300	+/- 6,4

Our EMC gaskets provide the following advantages:

- **Short delivery time by own manufacturing**
- Available with different degrees of foam hardness
- Available with adhesive tape
- Available with several tapes for special applications
- Available with Cu/Ni coated fabric (standard) and other coatings

Example: **DRE 6x4 NI - N2 V0 - xx**

Product series

- DAU Clip-on profiles
- DCW C-shape profiles
- DHR D-shape profiles
- DKE Knife-edge-profiles
- DKO Combi-profiles (IP + EMC)
- DLS L-shape profiles
- DRE Rectangular profiles
- DMP M-shape profiles
- DPT P-shape profiles
- DQU Square profiles
- DTA Triangular profiles, asymmetric
- DTR Triangular profiles, symmetric
- DST Punched parts
- HHR Hollow chamber profiles

Dimensions

- Width x Height in mm

Surface material (if appropriate)

- NI Copper/nickel
- AG Silver
- AL Aluminium

Adhesive tape (if appropriate)

- N Non-conductive
- C Conductive
- + width in mm

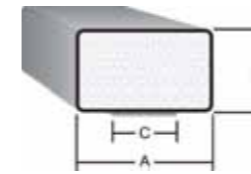
UL-level (if appropriate)

- V0 UL 94 V-0 compliant
- XX Not certified / not appropriate

Length

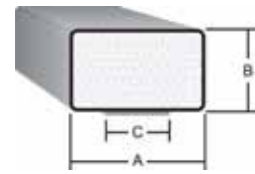
- xx Length in mm
- REEL Endless reel
- STPxx As **S**heet **T**ype **P**ackage
- WRLxx With **W**ide **R**elease **L**iner

Rectangular profiles, width up to 9,5 mm



Item number	Width (A)	Height (B)	Standard tape width (C)
DRE3x1,2NI	3,0	1,2	1,5
DRE3x2NI	3,0	2,0	1,5
DRE4x1,2NI	4,0	1,2	2,0
DRE4x2NI	4,0	2,0	2,0
DRE4x3NI	4,0	3,0	2,0
DRE5x0,5NI	5,0	0,5	2,0
DRE5x1,2NI	5,0	1,2	2,0
DRE5x2NI	5,0	2,0	2,0
DRE5x3NI	5,0	3,0	2,0
DRE5x4NI	5,0	4,0	2,0
DRE6x1,2NI	6,0	1,2	2,5
DRE6x2NI	6,0	2,0	2,5
DRE6x3NI	6,0	3,0	2,5
DRE6x5NI	6,0	5,0	2,5
DRE6x7NI	6,0	7,0	2,5
DRE6x8NI	6,0	8,0	2,5
DRE6,4x3,2NI	6,4	3,2	2,5
DRE7x1,2NI	7,0	1,2	3,0
DRE7x2NI	7,0	2,0	3,0
DRE7x4NI	7,0	4,0	3,0
DRE7x5NI	7,0	5,0	3,0
DRE7x6NI	7,0	6,0	3,0
DRE8x1,5NI	8,0	1,5	4,0
DRE8x3NI	8,0	3,0	4,0
DRE8x5NI	8,0	5,0	4,0
DRE8x10NI	8,0	10,0	4,0
DRE8x12NI	8,0	12,0	4,0
DRE9x3NI	9,0	3,0	4,0
DRE9x4NI	9,0	4,0	4,0
DRE9x6NI	9,0	6,0	4,0
DRE9,5x6,4NI	9,5	6,4	4,0
DRE9,5x12,7NI	9,5	12,7	4,0

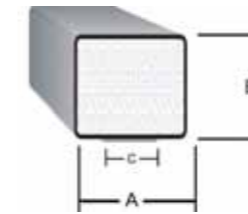
Other dimensions on request



Rectangular profiles, width over 10,0 mm

Item number	Width (A)	Height (B)	Standard tape width (C)
DRE10x0,5NI	10,0	0,5	4,0
DRE10x1,2NI	10,0	1,2	4,0
DRE10x2NI	10,0	2,0	4,0
DRE10x3NI	10,0	3,0	4,0
DRE10x4NI	10,0	4,0	4,0
DRE10x5NI	10,0	5,0	4,0
DRE10x7NI	10,0	7,0	4,0
DRE10x8NI	10,0	8,0	4,0
DRE10x12NI	10,0	12,0	4,0
DRE10x15NI	10,0	15,0	4,0
DRE11,5x10,5NI	11,5	10,5	5,0
DRE12x10NI	12,0	10,0	5,0
DRE12x13NI	12,0	13,0	5,0
DRE12,7x3,2NI	12,7	3,2	5,0
DRE12,7x6,4NI	12,7	6,4	5,0
DRE12,7x9,5NI	12,7	9,5	5,0
DRE13x1NI	13,0	1,0	5,0
DRE13x2NI	13,0	2,0	5,0
DRE13x3NI	13,0	3,0	5,0
DRE13x5NI	13,0	5,0	5,0
DRE13x7NI	13,0	7,0	5,0
DRE13x10NI	13,0	10,0	5,0
DRE14x1NI	14,0	1,0	6,0
DRE15x1NI	15,0	1,0	6,0
DRE15x2NI	15,0	2,0	6,0
DRE15x4NI	15,0	4,0	6,0
DRE15x8NI	15,0	8,0	6,0
DRE15x10NI	15,0	10,0	6,0
DRE17x7NI	17,0	7,0	7,0
DRE20x10NI	20,0	10,0	8,0
DRE21x1NI	21,0	1,0	8,0
DRE22x2NI	22,0	2,0	9,0
DRE25x1,5NI	25,0	1,5	12,0
DRE25x10NI	25,0	10,0	12,0
DRE25x20NI	25,0	20,0	12,0
DRE30x2NI	30,0	2,0	12,0
DRE30x10NI	30,0	10,0	12,0

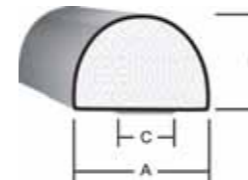
Other dimensions on request



Square profiles

Item number	Width (A)	Height (B)	Standard tape width (C)
DQU2x2NI	2,0	2,0	1,5
DQU3x3NI	3,0	3,0	1,5
DQU5x5NI	5,0	5,0	2,0
DQU6x6NI	6,0	6,0	2,5
DQU6,4x6,4NI	6,4	6,4	2,5
DQU7x7NI	7,0	7,0	3,0
DQU8x8NI	8,0	8,0	4,0
DQU9x9NI	9,0	9,0	4,0
DQU9,5x9,5NI	9,5	9,5	4,0
DQU10x10NI	10,0	10,0	4,0
DQU12,7x12,7NI	12,7	12,7	5,0
DQU17x17NI	17,0	17,0	7,0

Other dimensions on request

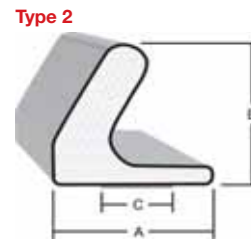
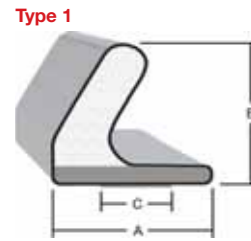


D-shape profiles

Item number	Width (A)	Height (B)	Standard tape width (C)
DHR2x1,5NI	2,0	1,5	1,5
DHR2,3x2,3NI	2,3	2,3	2,0
DHR3x3NI	3,0	3,0	2,0
DHR3,8x1,5NI	3,8	1,5	2,0
DHR3,8x2,3NI	3,8	2,3	2,0
DHR3,8x3NI	3,8	3,0	2,0
DHR4x3NI	4,0	3,0	2,0
DHR4x4NI	4,0	4,0	2,0
DHR5x2NI	5,0	2,0	2,0
DHR5x3NI	5,0	3,0	2,5
DHR6x2NI	6,0	2,0	2,5
DHR6x3NI	6,0	3,0	2,5
DHR6x4NI	6,0	4,0	2,5
DHR6x5NI	6,0	5,0	2,5
DHR6,4x3,2NI	6,4	3,2	2,5
DHR6,4x3,6NI	6,4	3,6	2,5
DHR6,4x6,4NI	6,4	6,4	4,0
DHR7x2,5NI	7,0	2,5	3,0
DHR7,6x4,8NI	7,6	4,8	3,0
DHR8x4NI	8,0	4,0	3,0
DHR8x5,5NI	8,0	5,5	3,0
DHR8x6NI	8,0	6,0	3,0
DHR8x7 NI	8,0	7,0	3,0
DHR9x3NI	9,0	3,0	4,0
DHR9,5x6,4NI	9,5	6,4	4,0
DHR10x4NI	10,0	4,0	4,0
DHR10x7NI	10,0	7,0	4,0
DHR10x8NI	10,0	8,0	4,0
DHR10x10NI	10,0	10,0	4,0
DHR10x18NI	10,0	18,0	4,0
DHR12,7x12,7NI	12,7	12,7	5,0

Other dimensions on request

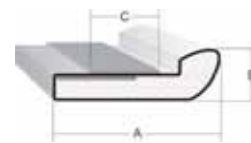
C-shape profiles



Item number	Width (A)	Height (B)	Standard tape width (C)	Type
DCW6x3,5NI	6,0	3,5	2,5	1
DCW6x6NI	6,0	6,0	2,5	1
DCW10,7x9,8NI	10,7	9,8	5,0	1
DCW11x11NI	11,0	11,0	5,0	2
DCW14,7x17,1NI	14,7	17,1	6,0	2
DCW14,7x17,9NI	14,7	17,9	6,0	2

Other dimensions on request

Knife-edge-profiles

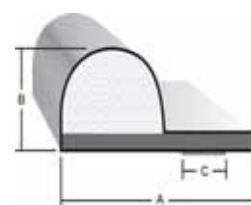


Item number	Width (A)	Height (B)	Standard tape width (C)
DKE8x2,7NI	8,0	2,7	2,5
DKE11,3x2,3NI	11,3	2,3	6,0
DKE11,3x2,7NI	11,3	2,7	6,0

Other dimensions on request

- Top side or lower side adhesive tape positioning available.

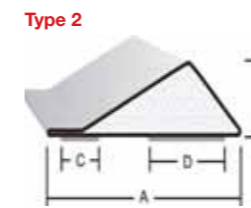
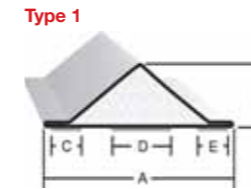
P-shape profiles



Item number	Width (A)	Height (B)	Standard tape width (C)
DPT8x3NI	8,0	3,0	3,0
DPT17x10NI	17,0	10,0	4,0
DPT18x4,5/1NI	18,0	4,5	5,0
DPT29x4,8/1NI	29,0	4,8	5,0

Other dimensions on request

Triangular profiles

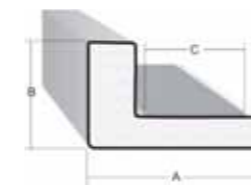


Item number	A	B	C	D	E	Type
DTR9,1x3NI	9,10	3,00	2,50		2,50	1
DTR10x2,3NI	10,00	2,30	2,50	2,50	2,50	1
DTR10x3,2NI	10,00	3,20	2,50	2,50	2,50	1
DTA10x4,5NI	10,00	4,50	2,50	2,50	2,50	2
DTA12,7x3,2NI	12,70	3,20	3,00	4,50	3,00	2

Other dimensions on request

- Adhesive tape D is electrically conductive.
- Optimal for use with μ TCA & ATCA plug-in modules.

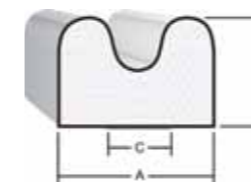
L-shape profiles



Item number	Width (A)	Height (B)	Standard tape width (C)
DLS5,6x3NI	5,6	3,0	3,0

Other dimensions on request

M-shape profiles



Item number	Width (A)	Height (B)	Standard tape width (C)
DMP12,7x9,5NI	12,7	9,5	5,0

Other dimensions on request



In addition to our standard EMC seals with foam cores, MTC can also supply EPDM/rubber-based EMC seals, such as hollow chamber, slot-in/edge protection and solid profiles. These profiles can be used wherever constructive or functional situations require them.



The core of the hollow chamber and slot-in/edge protection profile is made of **expanded rubber** and is covered with **copper-nickel fabric** as standard. To order they can also be covered with alternative metal-coated fabrics or aluminium foil.



Our hollow chamber profiles can be supplied **with or without adhesive tape**. They are also available with several adhesive tapes for special applications.



Slot-in/edge protection profiles have an **integrated loop tape** and a U-shaped section. They are extremely flexible and are primarily used on control cabinets.

These slot-in/edge protection profiles are installed by simply being pressed into position on the edges being encased by hand. The profiles are mounted by a clamping effect. No adhesive is required. They are weatherproof and resistant to a temperature range from approx. -25°C to approx. +80°C.



Both types of section can be supplied in **any lengths and also on rolls**. We can provide short lead times for slot-in/edge protection and hollow chamber profiles from our standard range. If you require specific widths and heights or cross-sections which must be produced using special tools, we have to insist on a minimum purchase quantity to justify our manufacturing costs.

Our hollow chamber-, clip-on- and EPDM-profiles provide the following advantages:

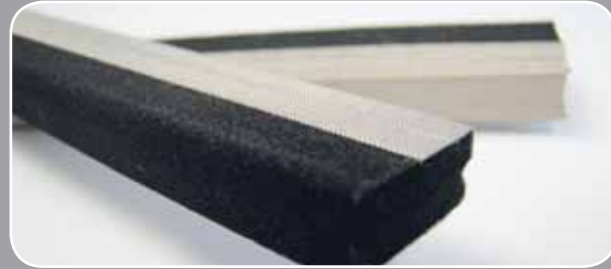
- **Short delivery time**
- Available with Cu/Ni coated fabric (standard) and other coatings
- Hollow chamber profiles are available with and without adhesive tape



Clip-on profiles

Item number	Width (A)	Height (B)
DAU16x8NI	8,0	16,0

Other dimensions on request



In addition to EMC and ESD shielding, **protection against environmental influences** such as dust and moisture is often also required. This can be achieved by using so-called combi gaskets. Either of the following may be used for this purpose:



- separate seals for EMC and IP (Intrusion Protection) or
- combi gaskets

Which version should be given preference depends primarily on the design situation of the housing or control cabinet that you wish to seal.



IP/EMC seals are mainly used where electronic devices require both EMC/ESD protection and also protection from environmental influences. This means that they are often used outdoors to protect equipment from moisture, dirt etc.



A range of core materials (for example EPDM, expanded rubber, NBR, etc.) in a range of hardness levels is available for IP/EMC and combi seals. The core of the profile can be **partially or completely** coated with conductive **copper-nickel (CuNi)** fabric or **aluminium foil**. The gaskets can be supplied **with or without** adhesive tape.



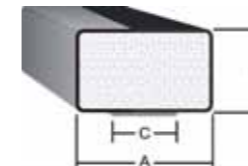
Please find our standard dimensions in the following table.
If you cannot find a section in our range that meets your requirements, we will develop the seals you require or manufacture customized seals to your drawing specifications.



Our combi gaskets provide the following advantages:

- **Short delivery time by own manufacturing**
- Partly coated EMI gaskets with rectangular profile available for combined IP- and EMI protection
- Available with adhesive tape
- Available with several adhesive tapes for special applications
- Available with Cu/Ni coated fabric (standard) and other coatings

Combi gaskets



Item number	Width (A)	Height (B)	Standard tape width (C)
DK012x6NI	12,0	6,0	5,0

Other dimensions on request



Our modern and flexible production enables us to process our standard products according to your need:

- gaskets for D-Sub connectors
- gaskets for USB connectors
- gaskets for RJ-45 connectors
- gaskets for I/O connectors
- custom-specific punched parts



Punched parts can be supplied in a range of materials. The following base materials are available:

- metal-coated fabrics and fleeces
- completely conductive foam
- foam covered with conductive fabric or aluminium foil
- copper- and aluminium tapes and
- conductive silicone sheets



Stamping parts made of **copper/aluminum tapes** are available on role.

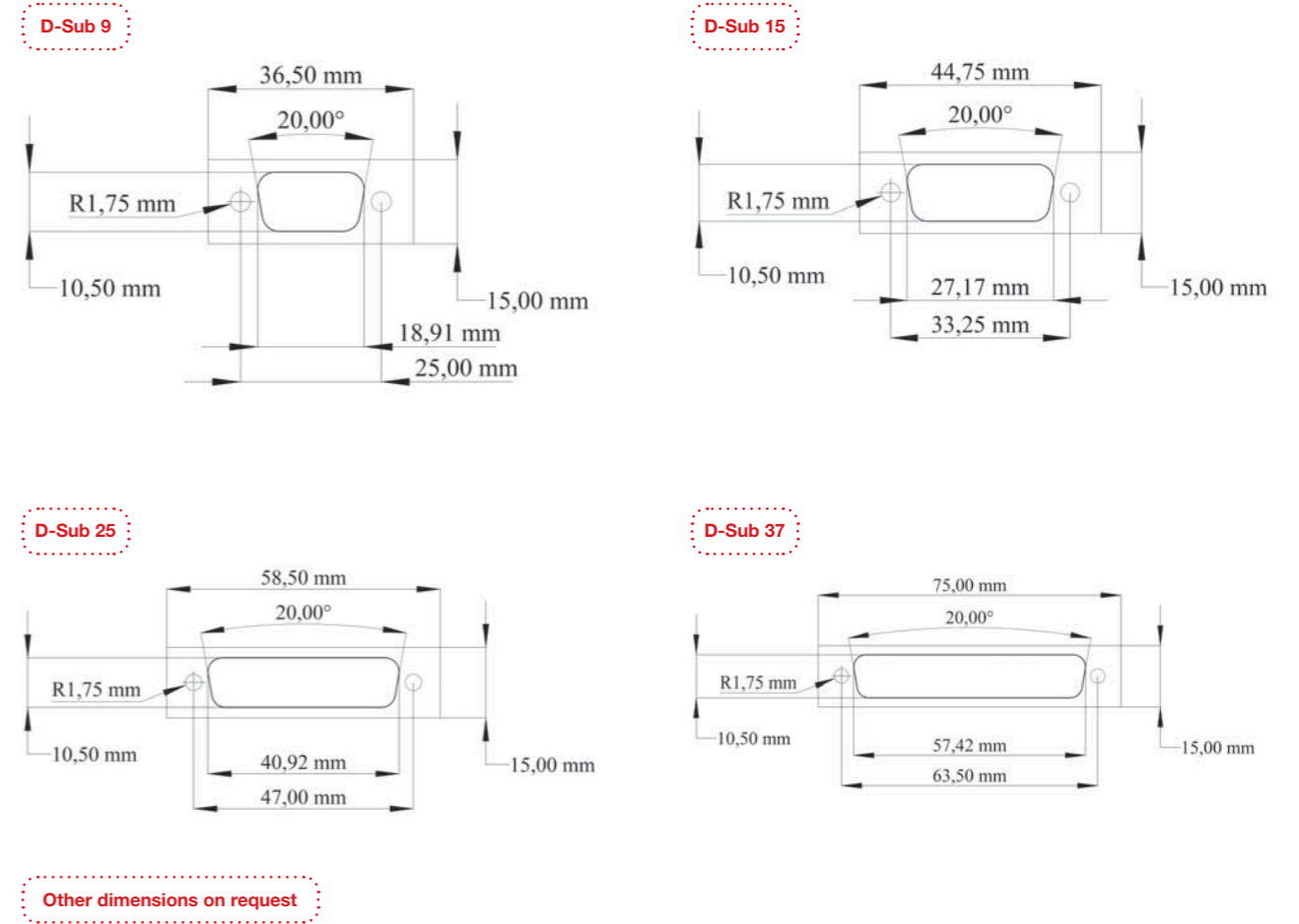
Tolerances (mm)

Position and shape of punching	+/- 0,5	
Shape of gasket	+/- 0,5	
Length (mm)	< 500	+/- 1
	500 - 1.000	+/- 2
	> 1.000	+/- 3

Our punched parts provide the following advantages:

- **Short delivery time by own manufacturing**, also for custom parts
- Standard sizes for D-Sub plug connectors
- Custom sizes and cutouts available
- Easy tool production on the basis of CAD data or other drawings
- Optimal for electronic connector panels and I/O-Shields, e.g. compliant to ATX- or BTX-standard

Standard gaskets for D-Sub





The in-house production of our fabric seals means that we have a wide range of different technical fabrics and fleece types which we can supply exclusively for refinishing.



Conductive fabrics and fleeces provide **excellent shielding effectiveness**. Since this is very lightweight and high strength material, it also features extremely high flexibility.



Our fabrics and fleeces are generally **polyester fabric**. The galvanic plating is made by dipping the fabric in several baths.

We can supply the material with the following metal coatings:

- **nickel/copper (Ni/Cu)**
- **silver/copper (Ag/Cu)**



Depending on your requirements we can supply our fabrics and fleeces with **conductive or non-conductive adhesive**.

Delivery forms are:

- **on roll** in standard width
- on roll in **customer-specified width**
- on roll as tape (with electrically conductive adhesive) in standard or customer-specified width



Our conductive fabrics and fleeces provide the following advantages:

- **Large selection of different metallized plating (e. g. Cu/Ni, Cu/Ni-SN, Ag, Au, Carbon), densities and knitting types**
- Also available with conductive adhesive and cut to rolls with width of max. 1070 mm

Item number	Coating	Special Features
RGW-WR-260-PCN	Cu/Ni	Fabric, rip stop
RGW-WR-260-PCN(ATU)	Cu/Ni	Fabric, coating (ATU), rip stop
RGW-WD-250-NICO	Cu/Ni-Co	Fabric, for better attenuation at low frequencies
RGW-W-290-PCN	Cu/Ni	Fabric
RGW-WPD-300-PCN	Cu/Ni	Fabric, very thin
RGW-NW-50-PCN	Cu/Ni	Fleece
RGW-M-80-PCNR	Cu/Ni-Sn	Mesh, black surface
RGW-SWRP-370-PCNS	Cu/Ni-Sn	Fabric, black



If you choose **MTC** as your supplier you will benefit not only from **our flexibility** and our **competitive prices** but also from our **long lasting experience** and **professionalism**.

We are an **ISO 9001** and **ISO 14001** certified company.



The ratification of the relevant regulations **ROHS / WEEE** is an important issue in our industry. **MTC** has detected this early and was **one of the first providers** with appropriate solutions. Therefore **all our products** are without exception **RoHS compliant**. Of course, we also pay attention to the RoHS compliance of our suppliers.



A **UL certification** is mandatory for many of our customers for the worldwide sale of their products. Here you can rely on **MTC**. Our products are, as far as possible, **tested according to UL 94**. We are ready to send you all required information so that you can verify this at UL. For MTC this transparency is a matter of course!