

MAKRO TEKNIK

Express

If you think that your time is valuable...



MAKRO TEKNIK
www.makroteknik.com

A L O MAKRO
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Makroteknik is a company founded, in the year 1998, built upon a 18 year long tradition in application, which produces HVAC components. Our company is equipped with a customer centered corporate understanding and has its principles arranged according to this.

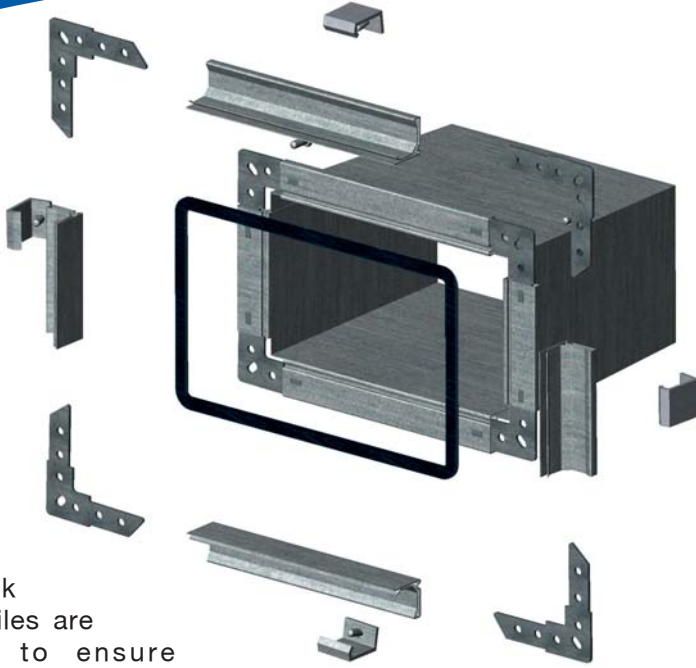
Our company has begun producing channel flange and equipments, which are air duct connection elements, in the end of 1998. In adding carrying profiles, clips and different assembly supplies after this to the product range, the broadening activities of the product range have become continuous.

Our quality, after one year of training and reconstruction, has been ISO 9001 certified in March 2003 and our company has begun its institutionilisation process. With time it has formed its quality parameters, and has worked to organize its departments in that way, but without sacrificing its principles and sectoral identity.

Our company aims to improve its production type and technic, to increase its product diversity, to have the most economical costs and customer satisfaction. Some of the realities of our quality policy are, that Employees, working in all departments, on all levels, are getting their needed training, so the overall efficiency is increased and the human resources are used in time and efficiently.

Our company started its production activities on a 250 m² area, and after second half of 2003 it transferred its productions to larger sites. It organizes its management, production, delivery and shipping activities on a total of approx. 5000 m² closed areas with its head office and warehouse in Istanbul Anatolian side, warehouses in Antalya and Izmir. Our company performs its shipping, warehousing and administrative functions in Istanbul Anatolian side, and realizes shipping and delivery on a total of 15000 m² closed areas with 'Makro Express's, the numbers of which increase each passing day in Anatolia.

Beginning from our founding, in every product we are beginning to produce, in every investment we make, in every project we start, we are getting the needed energy from the satisfaction of our customers.



Makro Teknik flange profiles are produced to ensure maximum strength, tightness and mountability for air ducts. Sealing, non-leaking, frost-proof Butly mastic is applied on duct settlement joints along the flange. Alternative connection profiles in DW 142 and SMACNA standards are given which could be used in duct systems. With its definitions and approaches, SMACNA underlines especially the savings of the use of new technology. Duct flange defined as one of the alternative connection elements, provides saving in time and labour as well as maximum sealing and rigidity when applied correctly. When necessary accessories are used, it increases mounting ability, also gives the system an aesthetic integrity.

FLANGE CORNER PIECES

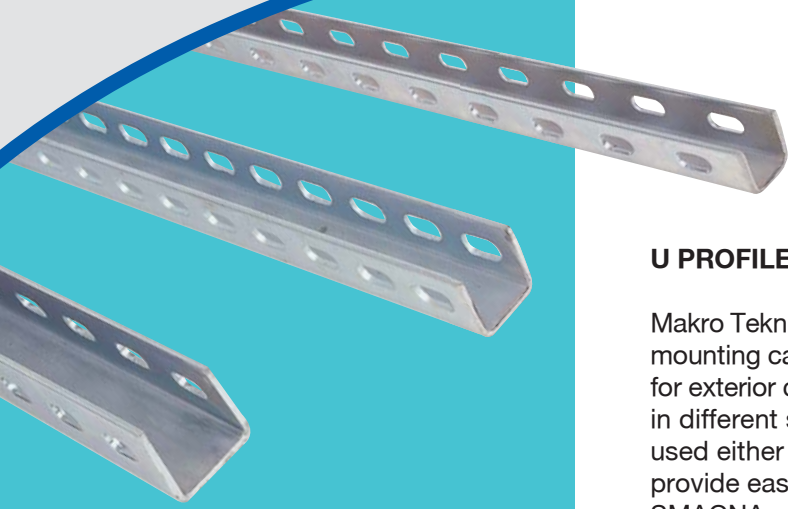
Makro corner elements are produced in flat and rounded forms in the manner to fit into Makro flange profiles. They provide rigidity for the interconnections of flanges and thus minimize the effects of duct vibrations.

SCREW TYPE CLIPS

They are used for the fixation of flanges in C and D (high) pressure classes.



Perforated Profiles



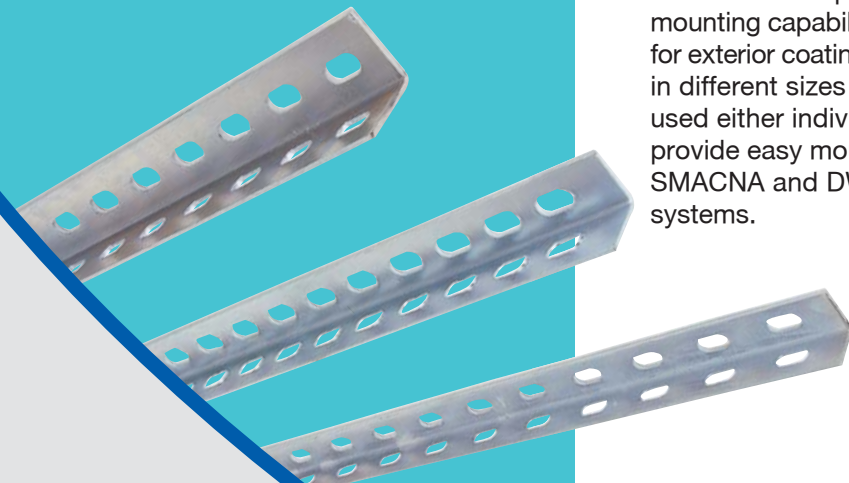
U PROFILE

Makro Teknik U profiles have a wide range of application with their different mounting capabilities. They are used as support and connection elements for exterior coating hangers and pipe support systems. They are produced in different sizes and thicknesses to meet customer needs. They can be used either individually or in combination with other profiles. Their holes provide easy mounting and installation. Alternative connection profiles in SMACNA and DW142 standards are given which could be used in duct systems.



C PROFILE

Makro Teknik C Profiles have a wide range of application in different industrial systems. They are used as support and connection elements for exterior coating hangers, electrical installations, and pipe support systems. They can be used either individually or in combination with other profiles. They are supported with a wide selection of connection elements.



L PROFILE

Makro Teknik L profiles have a wide range of application with their different mounting capabilities. They are used as support and connection elements for exterior coating hangers, and pipe support systems. They are produced in different sizes and thicknesses to meet customer needs. They can be used either individually or in combination with other profiles. Their holes provide easy mounting and installation. Alternative connection profiles in SMACNA and DW142 standards are given which could be used in duct systems.

Ventilation Hanging Elements

L HANGING ELEMENT

L hanging element is used with rod or bolt as hanging element in bearing and hanging systems. It reduces vibration caused by pressure and velocity in air duct with vibration damping rubber.



Z HANGING ELEMENT

Z hanging element is used with rod in bearing and hanging systems as hanging element. It reduces vibration caused by air and velocity in air duct with vibration damping rubber.



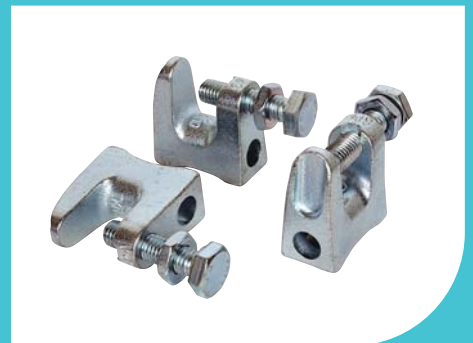
V HANGING ELEMENT

V hanging elements are used with rods. In fixation and hanging systems, they can be used for the assembly of round air ducts and can also produce solutions in different details.



CAST CLAMP

They are used to fasten pipes, sprinkler systems and profiles on steel constructions. Suitable for M8 and M10 bolts.



Clamps



Clamps, used to fix horizontal – vertical pipes and round air ducts, are zinc-coated against corrosion. Models with rubber have ability to absorb vibration occurring in installations so that a reduction in the sound level up to 18dB is provided.

- ROUND DUCT CLAMPS
- SPRINKLER CLAMPS
- CLAMPS WITH NUT AND RUBBER
- CLAMPS WITH SHORT TRIPHON AND RUBBER
- CLAMPS WITH LONG TRIPHON AND RUBBER
- PVC CLAMPS WITH RUBBER
- HEAVY DUTY CLAMPS (BRACKET TYPE)
- HEAVY DUTY CLAMPS WITH NUT

Grilles



They are made of aluminium in painted and unpainted types. They are produced in various sizes and characteristics in order to be used at blowing and suction points of air ducts, in the suction parts of fan coil devices and for air transfer purposes between spaces. Air and fire dampers are produced to be used at required points of air ducts.

- SUPPLY AND RETURN GRILLES
- LINEAR GRILLES
- SQUARE HONEY COMB GRILLES
- ROUNDED DUCT GRILLES
- DOOR TRANSFER GRILLES
- LOUVRES
- SQUARE AND ROUND AIR DIFFUSERS
- AIR DAMPERS
- FIRE DAMPERS
- INSPECTION DOOR
- SLOT DIFFUSER

Expansion Bolt



Simple Screw



Bolt-Washer-Nut



Rod



Insulation Pin



It is used for fixing insulation materials to metal surfaces. Self-adhesive insulation pins can only be used on smooth, clean and dry surfaces. They should be stored and maintained in dry places, at temperatures in between 5 °C – 25 °C. Application quantity changes between 5 – 9 pieces/m² depending on material weight (density), temperature and surface conditions.

Insulation Anchor



Large headed plastic insulation anchors, produced with hard plastic, are used in the fixation of expanded polystyrene, extruded polystyrene, and rock wool and glass wool insulation materials, especially in the exterior jacketing applications. Anchors should be applied at least 24 hours after plates are adhered. They are available in 8, 10, and 14 cm.

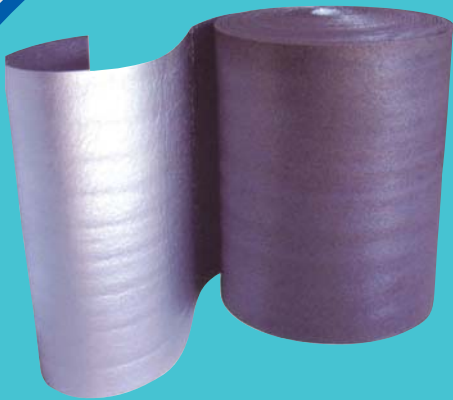
Rubber



It is used in air conditioning, heating and cooling systems. An elastometric rubber based insulation material with closed porous smooth cell structure, available in hollowed and sheet types. It is also available in aluminium folio coated and self-adhesive types. It is produced in thicknesses of 6, 9, 13, 19, 25, 32, and 50mm. It is defined as Class 0 according to British Standard BS 476 – Part 6.



Polyethylene



It is polyethylene foam material with closed porous cell structure produced in hollowed, sheet and cord types in order to be used in air conditioning, cooling, solar energy systems, and packaging and construction sector. It is flexible, resistant to water and steam and provides high thermal insulation. It provides insulation and condensation control through these characteristics.



Glass Wool



It can be produced in mattress, sheet and hollowed types. It can be used in a temperature range of $-50 / +250$ °C. It provides heat insulation, sound insulation and acoustic balancing as well as fire protection. It is neither deformed, decayed, moulded, corroded nor is destroyed by insects and microorganisms over time. It can be produced in aluminium folio, yellow fibreglass and black fibreglass coated types.



Rock Wool



It can be produced in mattress, sheet, tube and casting types. It is intended to be used for purposes of heat insulation, sound insulation, acoustic balancing and fire protection. It can be applied in a temperature range of $-50 / +750$ °C. It is neither deformed, decayed, moulded, corroded over time nor is destroyed by insects and microorganisms. It can be available in fire-proof aluminium folio and black fibreglass coated types.

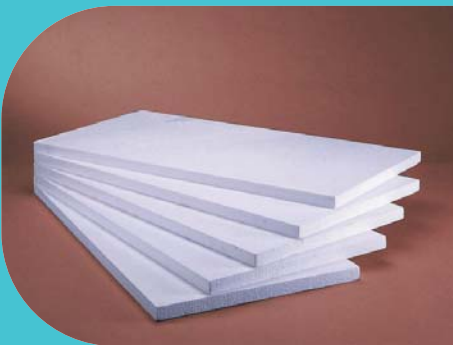


XPS



It is produced from polystyrene raw material through extrusion. It can be produced in sheet type with various edge and surface forms in different sizes and compression strength, depending on the application area and purpose. It can be used at a temperature range of $-50 / +75$ °C. It does not absorb water because of its 100% homogeneous closed porous cell structure. It is used in jacketing, floor heating systems, roofs and foundations to provide thermal insulation.

EPS



It is made of pre-expanded granules so that polystyrene raw material exposes to water steam so that pentane gas existing in raw material granules leads to expansion and adherence of such granules to each other. They can be produced in sheet and template types with different edge and surface forms in various sizes and technical characteristics depending on the application area and purpose. It is used for thermal insulation and packaging purposes. The range of application temperature is $-50 / +75$ °C. It has no capillary absorbency. It is used in jacketing, floor heating systems, roofs, foundations and packaging industry for thermal insulation purposes.

Adhesive

CONTENT

It is composed of synthetic rubber, synthetic resin, natural resin and several solvent compositions.

APPLICATION AREAS

- Rubber and polyethylene foam insulation materials
- In-duct fireproof acoustic foam
- Wood, chipwood, hardboard, formica
- Leather, stout leather, rubber, paste board, cork

CAUTIONS

- **FLAMMABLE!** Keep away from flame sources.
- In case of flame, use foam extinguishers. Never try to extinguish with water
- Provide sufficient ventilation in area where it will be applied.
- If it is swallowed, drink plenty of water and consult to a physician immediately.
- In case of eye contact, rinse your eyes with plenty of water and consult to physician immediately.

- It is resistant to temperatures in between -20 °C and +80 °C. It freezes at -20 °C. It does not freeze at 0 °C but its viscosity increases. When required, it can be thinned by cellulosic thinner.
- It does not contain Benzole.
- Lid must be tightened after each use.
- It is recommended to use protective mask and gloves during application.
- Stains can be removed with solvent.
- Shelf life is 9 (nine) months.

APPLICATION

- Shake well before use.
- Surfaces should be free from water, dust, dirt and oil.
- It should be applied on both surfaces to be adhered by brush, roller or trowel.
- Depending on the environment temperature, pieces should be adhered and pressed for a short time 5 – 15 minutes after the application of adhesive.



MT-100
CONTACT ADHESIVE

Acoustic Foam

It is fireproof polyurethane foam, strengthened with a fire resistant mineral. It never melts, is non-flammable and does not form flowing droplets. Walking speed of flame in the foam is 0 m/sec. It is dustproof since no static electric occurs on it. It is ensured that product can easily be cleared when materials like fabric, aluminium folio, and artificial leather are laminated. It does not flake off and cause dust formation. Because of this, it can be safely used in spaces where air flow exists; (mess halls, auditoriums, music and recording rooms, electronic device boxes, rooms and etc).

Application Areas: Heating and ventilation systems, voice recording studios, cinemas, marine sector, generator – compressor sector, automotive sector, trains, aircrafts, in a word, it can be used directly or in the composite special laminated manner (PVC or Lead Protected) in all areas where nonflammability and acoustic insulation are required.

Density: 50, 60, 70, 80, 100, 110 kg/m³.

Nonflammability: BS 476 Part 5, 6, 7 (Class 0), SANITIZED AG (Antibacterial), TGA (Oxygen Index) TUV Automotive, Russia GOST, Russia Hygiene

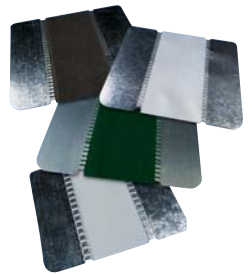


AFS Flexes



Aluminium flexible air ducts are multi-purpose flexible air ducts, specially designed for heating, cooling, ventilation and air conditioning systems operating at low and mid-pressure. Multilayered laminated aluminium material is reinforced with high stressed helical steel wire.

Aluminium flexible air ducts are leak proof. Uninsulated aluminium flexible air ducts have high flexibility, bending and compressibility features. It provides easy installation on round, oval and corner junctions. It is available in insulated, uninsulated and heat – acoustic insulated types. Also, it can be produced in PVC, polyester, aluminium semi-flexible, combi, semi-flexible stainless steel types.



AFS Fans

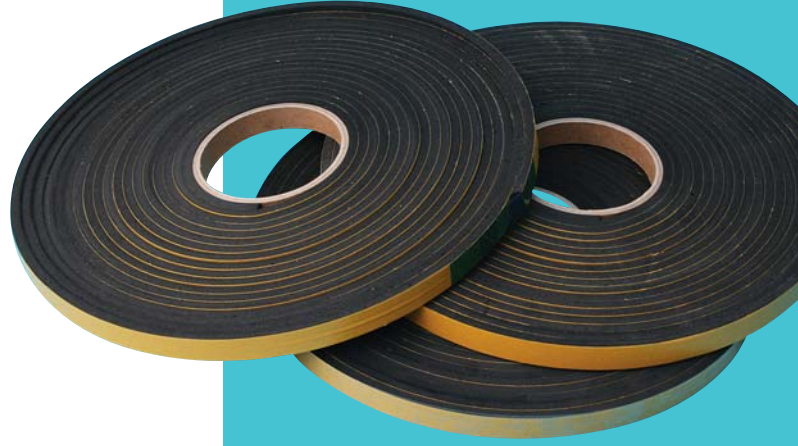


Fans used in air conditioning systems and direct ventilation of spaces are produced in various types and sizes. Duct-type radial and combined-flow fans, window-wall-ceiling type axial fans, and roof – funnel type fans are main types.



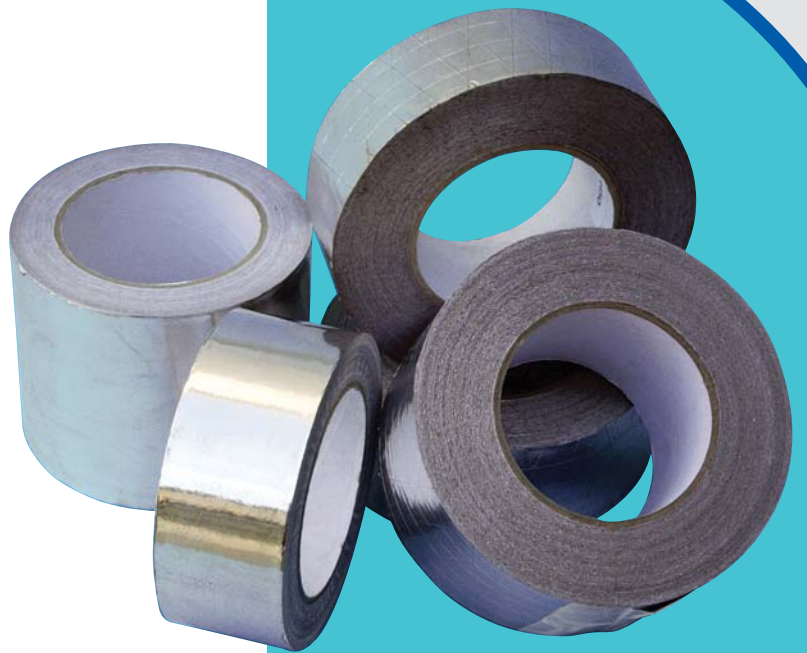
Eva-Neoprene Seal

It is used as sealing ring in air-duct flanges. It provides tightness against effects such as water, air, dust, oil and noise. It is resistant to UV lights. It is available in various widths according to flange size.



Aluminium Folio Tapes

Adhesive aluminium folio tapes are generally used for the tightness of junctions of aluminium folio coated insulation materials. It is available in standard and reinforced types. It is 5-7, 5-10cm in width and 40m long. Surfaces where the tape will be applied should be clean and dry. No satisfactory adhesion is achieved in there is any dirt, dust and wetness on the surface.



PVC Tape

PVC Tape



It is used on joints of polyethylene and rubber foam insulation materials and for repair purposes of damaged insulation materials.

Rubber Tape

Rubber Tape



It is used on joints of hallowed and sheet type insulation materials, for insulating valves, hard-section installations and short-length pipes and for repairing damaged insulations.

Membranes



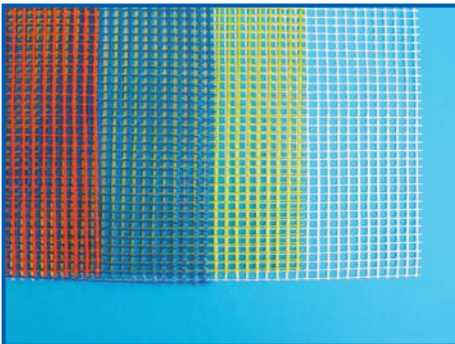
It is waterproofing mat coated with SBS or APP based polymeric bitumen, including fibreglass or polyester felt carrier. It is produced in mineral or aluminium folio coated types in white, red and green colours of which the upper and bottom surfaces are made of polyethylene. It is offered in roll form. Bituminous Waterproofing Mats are intended to be used in applications with torch flame and hot asphalt. These are indispensable mats for waterproofing applications in buildings from foundation to roof, thanks to their high mechanical strength, elasticity and adhesive features and full water resistance. Mats are wholly or partially (regional or in stripes) adhered or laid down freely depending on the type of building. The overlapping margin of mats should be at least 10cm.

Geotextile Felt



These are produced with 100 – 150 – 200 – 250 – 300 – 400 – 500 gr/m² in density. In general, they are used as separator layer for terrace roof, foundation insulations and in garden terrace and drainage systems. They are further used in areas like roads, bridges and tunnels.

Plaster Meshes



Plastering meshes used in the plaster layer in jacketing systems are widely used to avoid from crack formation on surfaces and joints of heat insulation plates. Fiberglass meshes have ability to relieve stress and because of this feature they prevent cracking of plaster. Plaster meshes are available with densities, varying from 52gr/m² to 250gr/m², depending on the application thickness of plaster.

Main application areas:

- In jacketing type insulation applications
- In restoration and repair works of walls with cracks and holes together with plaster and gypsum
- In order to fill cracks and joints on pre-plastered walls
- In splashing insulation applications

Construction Chemicals



- Concrete admixtures
- Grout and anchorage products
- Coating materials for repair and protection purposes
- Structural strengthening products
- Grouting and adhesive products
- Waterproofing products
- Industrial floor covering materials



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