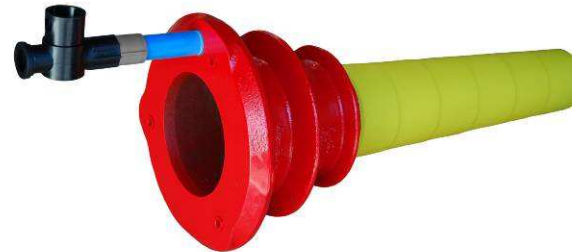




**ACCESSORIES FOR GROUTING AND VENT APPLICATIONS ON "M, M<sub>EP</sub><sup>®</sup> AND MX<sup>®</sup>" ANCHORAGES**

**These accessories can be used for grouting both with mortar and with grease. Their reuse is subject to a proper use according to operating instructions by TTM.**



"M, M<sub>EP</sub><sup>®</sup> and MX<sup>®</sup>" anchorages are provided with a front grouting/vent hole which is placed on the highest point to guarantee a correct grouting by discharging any air. All castings are provided with protective covers for threaded holes to connect to the cap or to the formwork.



The grouting and vent of grouted cables is carried out by means of several systems designed to make activities on site as easy as possible. We offer front grouting by rigid PVC tube and flexible solutions by corrugated polyethylene tubes. There are no particular specifications to determine the choice of one system, which is defined based on the installation.



The front hole for **grouting/vent** can be connected by means of a connector with grouting corrugated tubes having a diameter of 25 mm. and 20 mm. for grouting or vent with a limited flow rate. DD-1017-B connector for gas 3/4" threaded hole and DD20x25 tube. DD-1033-B connector for gas 1/2" threaded hole and DD15x20 corrugated tube. DD-1034-B connector for 1/2" threaded hole and DD20x25 corrugated tube.



**Grouting/vent** by means of DD-1003-A reusable valves and DD20x25 corrugated tube is the most common solution used both with anchorage infilling and with grouting cap. This solution is usually also adopted as vent.



**Grouting/vent** by means of a DD-3050-A reusable valve and DD20x25 corrugated tube is the most technical solution used both with infilling and with grouting cap. The DD-3050-A valve is designed to be reused several times.



**Grouting/vent** by means of reusable DD-1003-A valves and DD-6009 rigid PVC tube is the most common solution used for front grouting on anchorages that allows the operator to have a rigid connection. This solution is usually also adopted as vent.



**Grouting** by means of a reusable DD-3050-A valve and DD-6009 rigid PVC tube is the most common solution used for front grouting on anchorages that allows the operator to have a rigid connection. The DD-3050-A valve is designed to be reused several times.



**Vent** by means of DD-1016-A reusable valves and DD15x20 corrugated tube is the most economical solution used both with anchorage infilling and with grouting cap. This solution is used as vent on anchorages and caps where the connection to the grouting syringe is not required.



**Connection for corrugated DD20x25 tube** to connect two tubes that are not correctly interrupted and allow their restoring, by giving continuity. This device is generally used to recover tubes that are broken inside a slab and guarantees the grouting pressure.



DD-3050-A valve

**Reusable valve type DD-3050-A diam. 25 mm.**



This valve enables interception of the mixture, it can be connected directly to the DD20x25 diam. 25 mm corrugated tube and is reusable if the conical shut-off part is greased.

**Gate valve type DD-1003-A diam. 25 mm.**



DD-1003-A valve



This valve enables interception of the mixture, it can be connected directly to the DD20x25 diam. corrugated tube and is usually used to close the vent tubes.

**Gate valve type DD-1016-A diam. 20 mm.**



DD-1016-A valve



This gate valve can be connected to the 20 mm diam. type DD15x20. corrugated tube.

**Corrugated tube for grout and vents**

- DD 20x25 diam. 25 mm corrugated tube for primary grouts and vents.
- DD 15x20 diam. 20 mm corrugated tube for secondary vents.



DD 20x25 or DD15x20 corrugated tube

**Threaded rigid PVC tube sections**

- Threaded tube sections L=200 mm 3/4" type DD-6010.
- Threaded tube sections L=100 mm 3/4" type DD-6009.
- Threaded tube sections L=200 mm 1/2" type DD-6008.
- Threaded tube sections L=100 mm 1/2" type DD-6007.



DD-6010 and DD-6009 rigid PVC tube



DD-6010 rigid PVC tube and DD-6009 with DD-1017-A connection.



DD-3050-A valves connected with 3/4" DD-6009 tubes



DD-1003-A valves connected with 3/4" DD-6009 tubes



DD-1017-A connector



DD-1017-B connector

DD-6010 rigid PVC tube and DD-6009 with DD-1017-A connection.

**DD-3050-A** valves connected with 3/4" **DD-6009** tubes L=100 mm and **DD-6008** L=200 mm.



Coupling:

- **DD-3050-A** reusable valve,
- **DD-1017-A** connector,
- Threaded tube sections L=100 mm 3/4" type DD-6009.

**DD-1003-A** valves connected with 3/4" **DD-6009** tubes L=100 mm and **DD-6008** L=200 mm.



Coupling:

- **DD-1003-A** reusable valve,
- **DD-1017-A** connector,
- Threaded tube sections L=100 mm 3/4" type **DD-6009**

**DD-1017-A** connector for coupling between:

- Threaded tube sections 3/4" type **DD-6009** and **DD-6010**,
- **DD-3050-A** and **DD-1003-A** valves,

**DD-1017-B** connector for coupling between:

- corrugated tube DD20x25 mm,
- female 3/4" joint

**DD-1033-B** 1/2" connector corrugated tube DD15x20

**DD-1034-B** 1/2" connector corrugated tube DD20x25



DD-1033-B and DD-1034-B connector



- **DD-1017-B** connector and corrugated tube **DD20x25** mm.
- **DD-1033-B 1/2"** connector corrugated tube **DD15x20** mm.
- **DD-1034-B 1/2"** connector corrugated tube **DD20x25**mm.



DD-1034-B connector 1/2" corrugated tube DD20x25 mm.



DD-1033-B connector 1/2" corrugated tube DD15x20 mm.

Check nuts for threaded connectors:

**DD-9000** nut for coupling with thread  $3/4"$

**DD-8000** nut for coupling with thread  $1/2"$



DD-1033-B connector 1/2" corrugated tube DD15x20 mm. and DD-8000 check nut

**DD 1020-B** connection for corrugated DD20x25 tube to connect two tubes that are not correctly interrupted and allow their restoring, by giving continuity. This device is generally used to recover tubes that are broken inside a slab and guarantees the grouting pressure.



DD 1020-B connector for corrugated tube connection



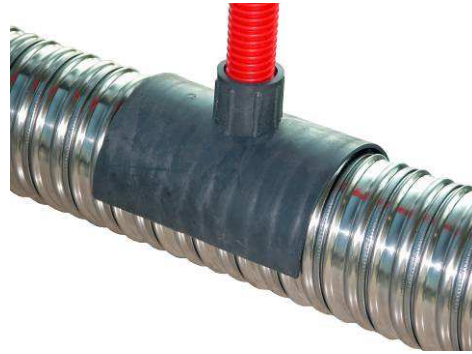
DD 1011HF and DD 1010HF vent covers

Vent covers for sheaths applied to single strands:

**DD 1010HF** for **DD20x25** mm corrugated tube.

**DD 1011HF** for **DD15x20** mm corrugated tube.

Vent cover for multi-strand cables type **DD 1001**.



DD-1001 vent cover on a metallic sheath

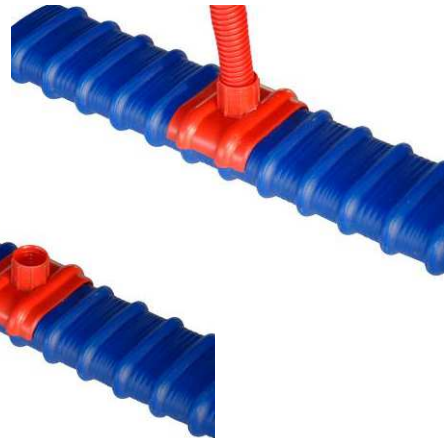


DD-1001 vent cover

**SPE-78x25x2 mm.** vent covers for flat sheaths:

**DD 1060HF** for **DD20x25** mm corrugated tube.

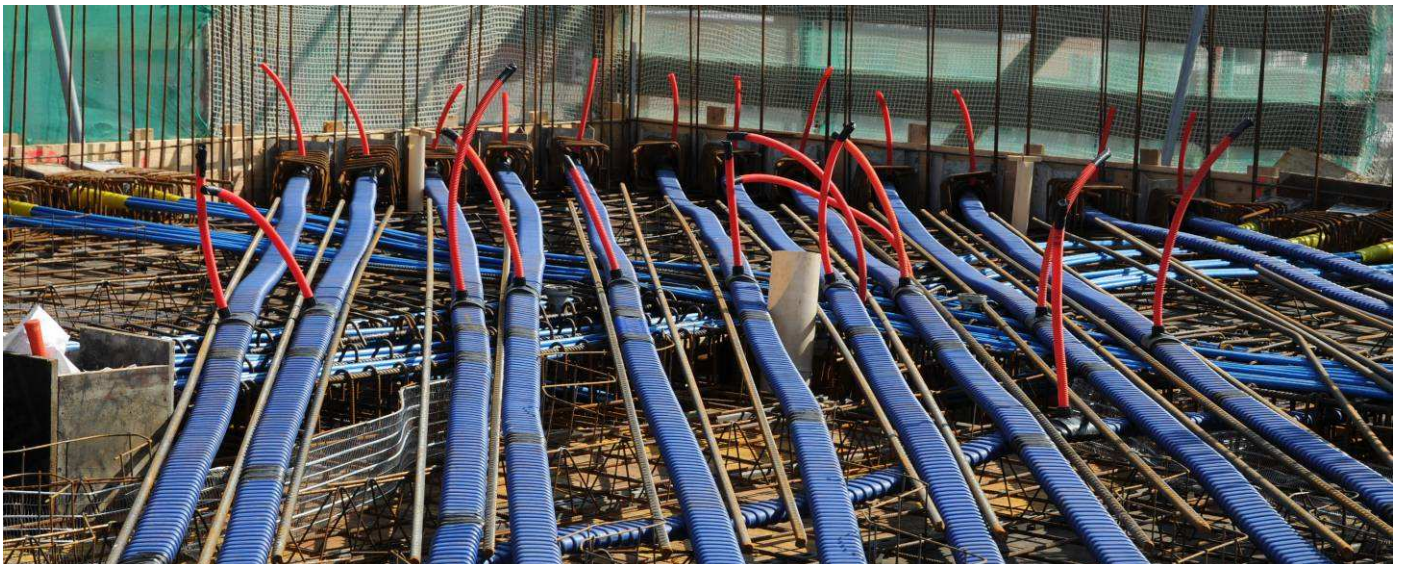
**DD 1050HF** for **DD15x20** mm corrugated tube.



DD 1050HF vent cover for flat sheaths



DD 1060HF vent cover for flat sheaths



### **DD-2015-PU reusable tips**



DD-2015-PU tip

**DD-2015-PU** tips are designed to prevent the corrugated sheaths from getting cut due to contact with the strand during threading and to facilitate the insertion of the strands into the sheaths.. They can be used with T15, T15S and T15C strands and are reusable.

### **DD-2115-PF reusable polypropylene tips**



DD-2115-PF tip

**DD-2115-PF** tips are designed to process cut to size strands on cutting benches. They can be used with T15, T15S and T15C strands and are reusable.

### **TT-5077 steel tips**



TT-5077 tip

**TT-5077** tips are designed for very difficult threading. They are made of steel and provided with blocking with T15 wedges. In those cases where threading is very difficult and where the plastic tips break because of the roughness of the positioning of the sheaths, **TT-5077** steel tips are recommended because they offer a greater resistance to impacts.

Their use offers great advantages with a powerful strand forcing machine, but they can also prove extremely harmful in case they are lost inside the sheath during their insertion as they obstruct the passing of new strands.