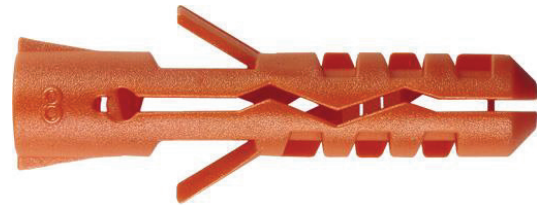


MN Nylon Plug

Nylon Plug MN made from high- quality Polyamide PA 6 for use in solid building materials. Possible combination with wood screws, chipboard screws and metric screws.



1 SPECIFICATIONS OF INTENDED USE

Futures:

- Made from high-quality polyamide PA6
- Indoor and outdoor applications
- Sound absorption (Polyamide PA 6 absorbs sound transmissions between construction unit and building material
- Pre installation or through fixing
- Suitable for use in most kinds of building materials, especially in solid building materials

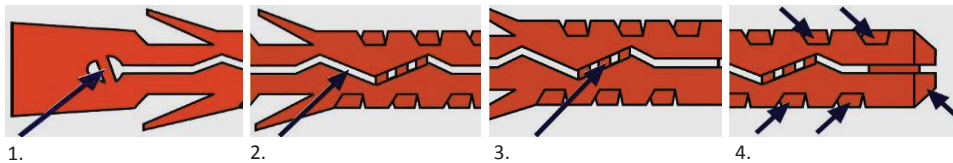
Base materials:

- Concrete
- Clay solid Brick
- Lightweight Concrete
- Calcium silicate solid brick
- Natural stone, rock

Applications:

- Substructures
- Woodwork
- Sanitary installation
- Profiles, holders
- Pictures, lamps
- Electric switches
- Rails

2 CHARACTERISTICS

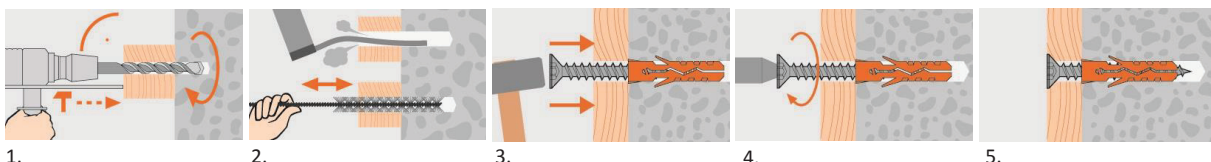


Characteristics:

1. Knock-in protection prevents premature expansion while installing,
2. M-Teeth ensures a complete radial expansion during screw insertion,
3. stabilization points prevent the plug from breaking open while inserting into the hole,
4. block profile and tapered end hold the plug firm in the hole against rotation and guarantees immediate grip as the plug expands.

3 INSTALLATION INSTRUCTIONS

Graphic installation guide for MN Nylon Plug



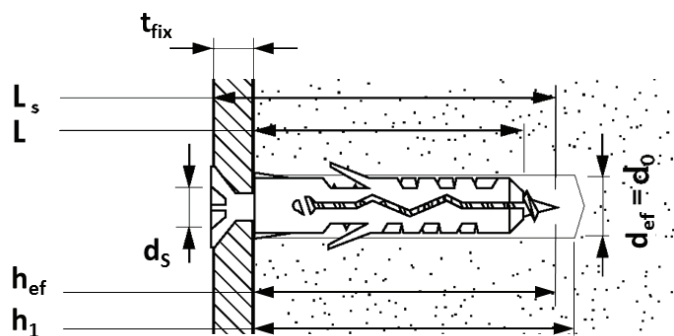
1. Make the drill hole,
2. clean the drill hole (not necessary with hollow brick),
3. put in position Nylon Plug MN and building material (face or through fixing),
4. fasten building material with a screw,
5. tightened fixation.

4 INSTALLATION DATA

Installation parameters for Mungo MN Nylon Plug for concrete or masonry

Installation parameters for Mungo MN Nylon Plug

| MN Nylon Plug size | | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 15 | 16 | 20 |
|----------------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Plug length | L [mm] | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 75 | 80 | 90 |
| Outer diameter | d ₀ [mm] | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 15 | 16 | 20 |
| Installation data | | | | | | | | | | | | |
| Drill hole diameter in substrate | d _{ef} [mm] | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 15 | 16 | 20 |
| Drilled hole depth | h ₁ [mm] | 30 | 35 | 40 | 50 | 55 | 65 | 80 | 90 | 95 | 100 | 115 |
| Screw diameter wood/chipboard | d _s [mm] | 2,2-3 | 2,6-4 | 3,5-5 | 4,5-5 | 4,5-6 | 6-8 | 8-10 | 10-12 | 10-12 | 12-14 | 14-16 |
| Screw effective anchorage depth | h _{ef} [mm] | 25 | 30 | 35 | 40 | 45 | 60 | 70 | 80 | 85 | 95 | 105 |
| Entire screw length | L _s [mm] | 25+t _{fix} | 30+t _{fix} | 35+t _{fix} | 40+t _{fix} | 45+t _{fix} | 60+t _{fix} | 70+t _{fix} | 80+t _{fix} | 85+t _{fix} | 95+t _{fix} | 105+t _{fix} |
| Screw diameter metric | d _m [mm] | — | M3 | M4 | M4 | M5 | M6 | M8 | M10 | M10 | — | — |



5 BASIC PERFORMANCE DATA

Basic performance data for MN Nylon Plug with safety factor 5

Recommended tension resistance for MN Nylon Plug

| MN Nylon Plug size | | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 15 | 16 | 20 |
|--------------------------------|-----------------------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| Plug length | L [mm] | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 75 | 80 | 90 |
| Recommended tension resistance | | | | | | | | | | | | |
| Non-cracked concrete ≥C20/25 | N _{rec} [kN] | 0.25 | 0.35 | 0.6 | 0.7 | 0.85 | 1.4 | 1.8 | 2.6 | 2.9 | 3.2 | 5.2 |
| Clay solid Brick | N _{rec} [kN] | 0.1 | 0.2 | 0.4 | 0.55 | 0.6 | 0.8 | 1 | 1.3 | 1.5 | 1.7 | 1.9 |
| Lightweight Concrete | N _{rec} [kN] | 0.02 | 0.04 | 0.06 | 0.07 | 0.09 | 0.2 | 0.4 | 0.5 | 0.6 | 0.6 | 1.0 |

Above values refer to a maximum diameter of the wood screw

6 IMPORTANT NOTICE

Values in this document are only valued for Mungo MN Nylon Plug. In recommended resistance the partial safety factor $\gamma = 5$ is considered. For combination of tensile loads, shear loads, bending moments as well as reduced edge distances or spacing's (anchor groups) above given values needs to be reduced. The data must be checked by the user under the responsibility of an engineer experienced in anchorage. This is to ensure there are no errors and all data is complete and accurate and complies with all rules and regulations for the actual conditions and application.