CARTfit Push-in cartridge

CAMOZZI
Automation

SERIES 7700

USER MANUAL

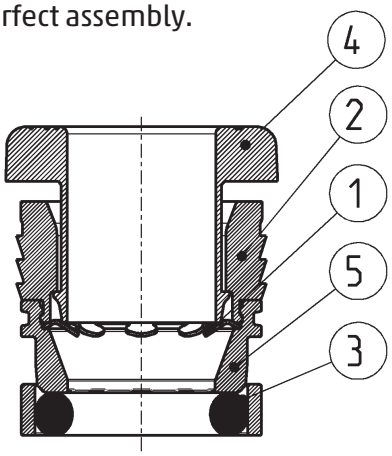
Contents

Introduction

- CARTfit Push-in cartridge Series 7700 is a solution that ensures a fully integrated connection with optimal sealing between the housing and the tube.
- The housing requires a specific cavity where the cartridge is inserted.
- This product can be inserted into various materials frequently used in the industry (Composite, Brass, Aluminum).

This manual will guide you through the various steps to follow for a perfect assembly.

1	Stainless steel gripping ring
2	Brass sleeve
3	NBR or EPDM seal
4	Polymer release button
5	Polymer gripping ring holder



Operating conditions

NBR VERSION Standard and Low temperature	
Medium	Compressed air, neutral gases and vacuum (for other media consult our technicians)
Maximum operating pressure	Up to 20 bar *
Minimum operating pressure	-0,9 bar
Operating temperature	-20°C ÷ + 80°C (Standard) -40°C ÷ + 80°C (Low temperature version)
Regulations	REACH, RoHS, ISO 14743

EPDM VERSION	
Medium	Mains and potable water, beverages, and gas (for other media, please consult our technicians)
Maximum operating pressure	Up to 20 bar *
Minimum operating pressure	-0,9 bar
Operating temperature	-20°C ÷ + 100°C
Regulations	REACH, RoHS, ISO 14743, NSF 169, 1935/2004/CE, (CE) 2023/2006, DM 174, ASTM G93/G93M-19

* depending on the material and operating temperature

Instant-use packaging

For all sizes, 50 pieces of CARTfit Series 7700 will be packed in plastic tubes for:

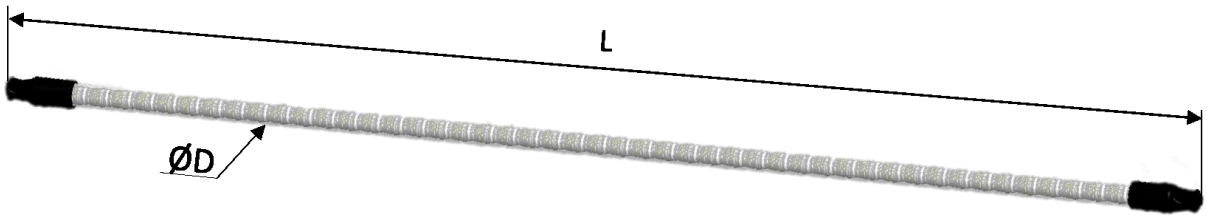
- Protection against external damage, dirt or contamination.
- Easy integration in your automated installation/assembling process.

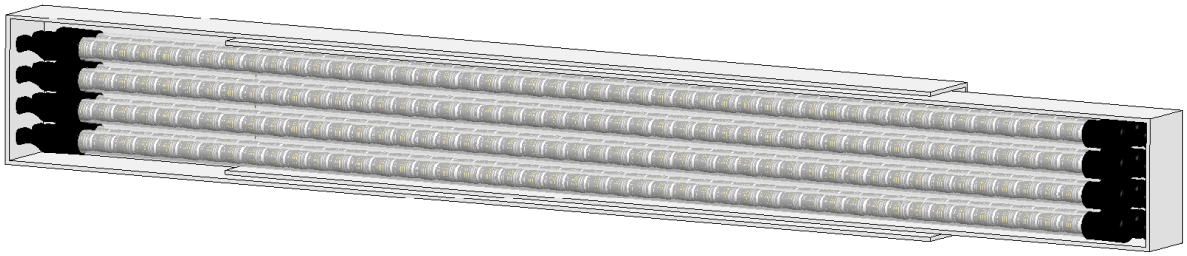
Plastic tubes will be packed in a master packaging to have:

- 24 tubes for Ø4, i.e. 1200 cartridges
- 16 tubes for Ø6, i.e. 800 cartridges
- 12 tubes for Ø8, i.e. 600 cartridges

The length of the master packaging is:

- 90 mm x 90 mm x 660 mm for Ø4
- 90 mm x 90 mm x 760 mm for Ø6
- 90 mm x 90 mm x 890 mm for Ø8





Tube O.D.	ØD [mm]	L [mm]
4 mm	11,7	650
6 mm	14,5	750
8 mm	16,7	880

Use

CARTfit Series 7700 can be mounted either manually or automatically.
The process requires manipulation, assembly, and testing in a clean environment to prevent dust or particles from affecting functionality.
It is essential to maintain cleanliness in assembly equipment and implement measures to minimize dust or dirt contamination (using fluffy wipers or wearing antistatic outfit).
After assembly, storing the final assemblies in sealed packaging is recommended.

Product handling and storage

- It is highly recommended to handle and store CARTfit Series 7700 in its original packaging to prevent contamination.
- Store the product at room temperature (23°C) with a humidity of 60% ÷ 80%.
- Avoid impact during transport or stacking of plastic tubes.
- Pay attention to the seal: no element must enter in contact with it.
- The polymer gripping ring holder area, which retains the seal, should not undergo mechanical strain.

Housing materials and cavities description

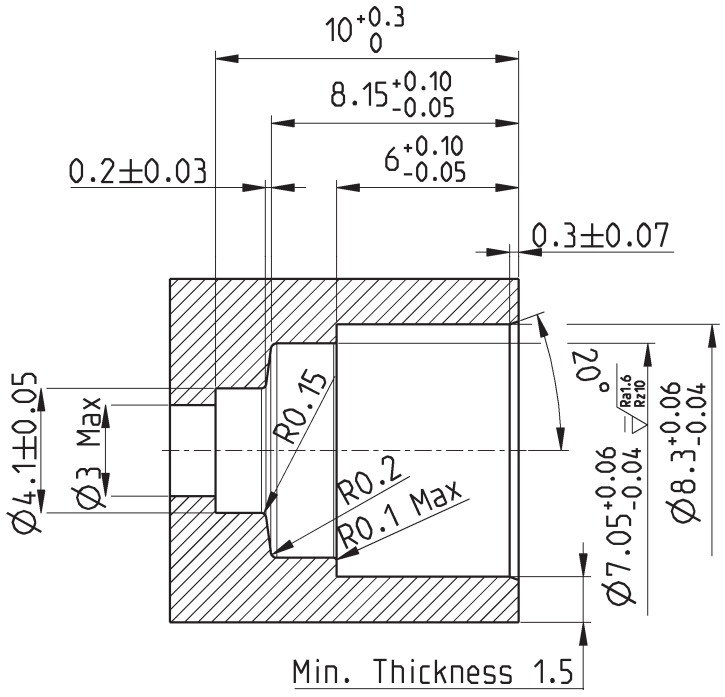
The housing for the CARTfit Series 7700 can be made of various materials such as polyamide, brass and aluminum.
The cartridge can be inserted into a Camozzi cavity, and is interchangeable with other cavities with corresponding dimensions. Each OD has its own specific cavity, which can be either machined or molded.
The cavity dimensions must adhere to the specifications in the referenced drawing, and they should be monitored using the proper equipment to ensure the cavity's compliance.
Make sure there are no chips left after the cavity's machining.
Any deviation from the specified tolerances can result in product malfunction.

HOUSING MATERIALS
Brass nickel plated or not
Polyamide glass fibre reinforced
Polyvinyl chloride
Polycarbonate
Polyphenylene sulfide 40% glass fiber reinforced
Polyoxymethylene
Aluminium anodized or not
Polyphenylsulfone

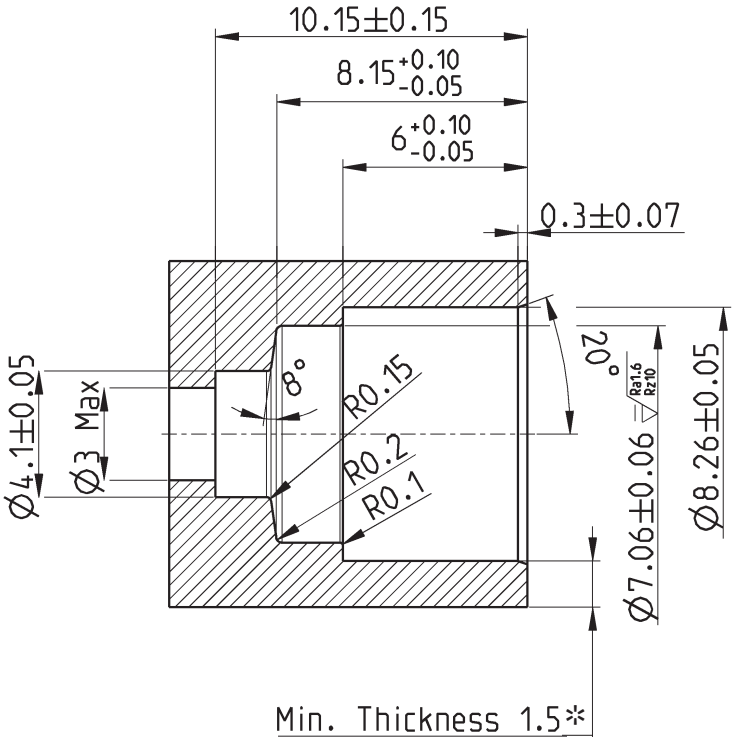
for other materials, please contact us

6.1 EPDM, NBR Standard - OD tube = 4 mm

Brass and aluminum housing



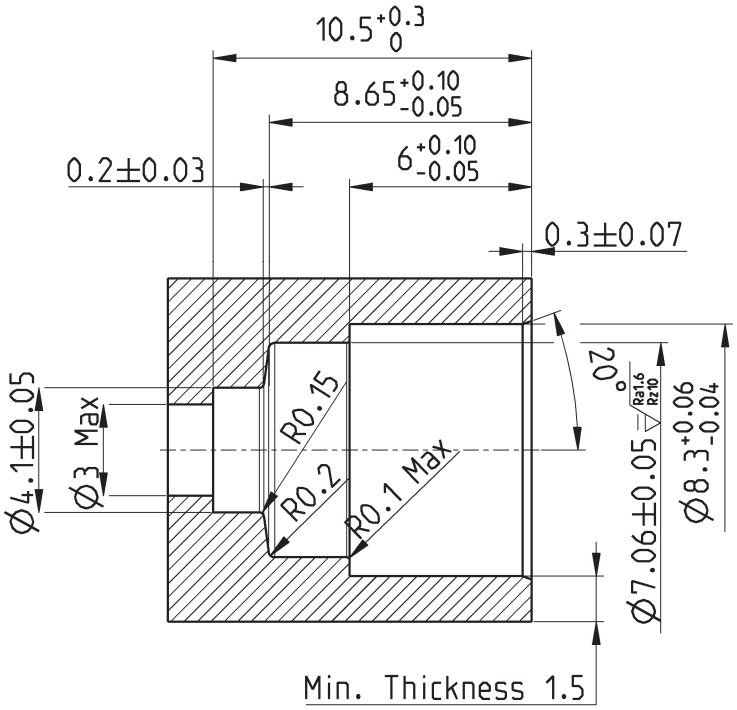
Polymer housing



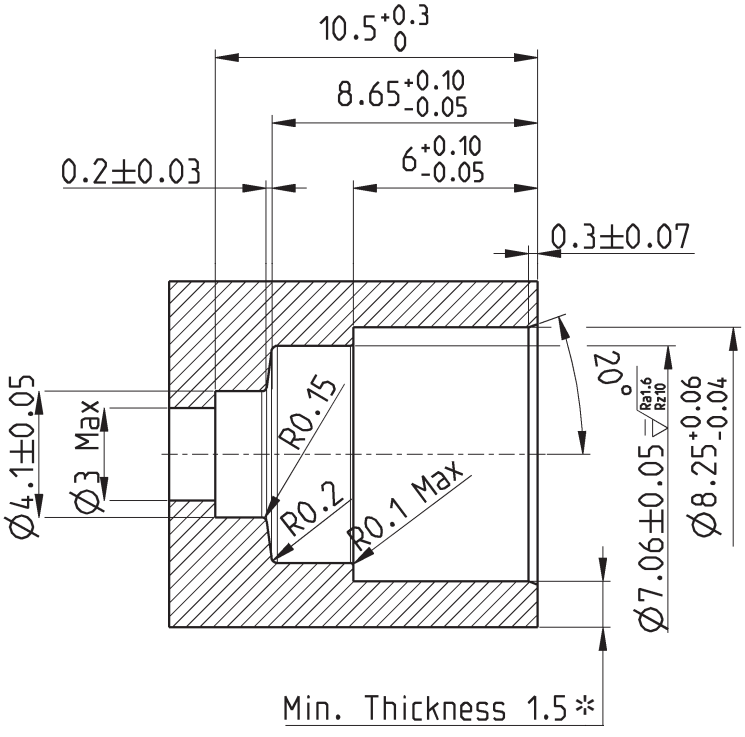
* Min thickness 2 mm for PPS, PPSU

6.2 NBR Low temperature - OD tube = 4 mm

Brass and aluminum housing



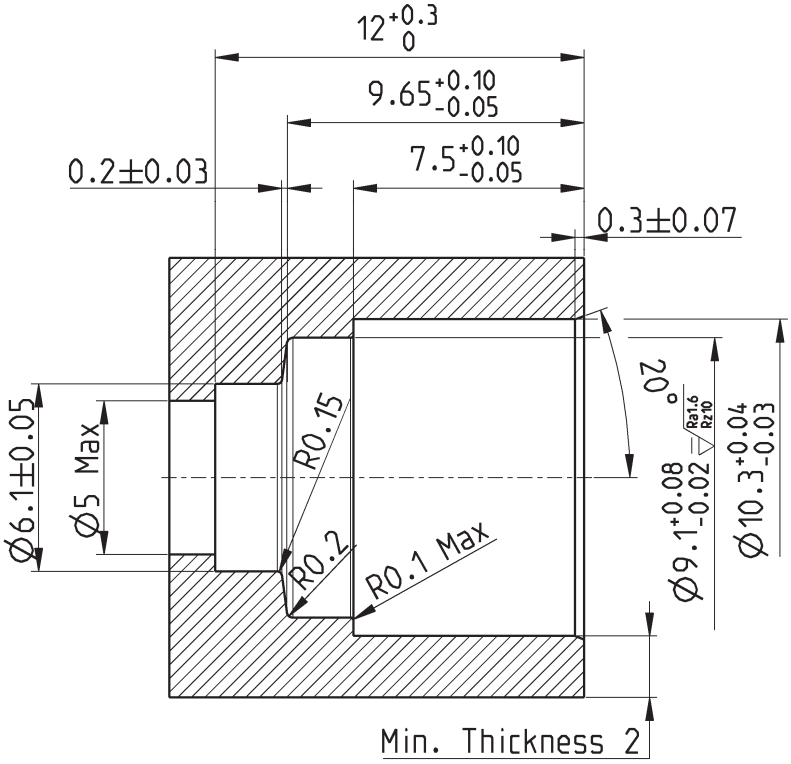
Polymer housing



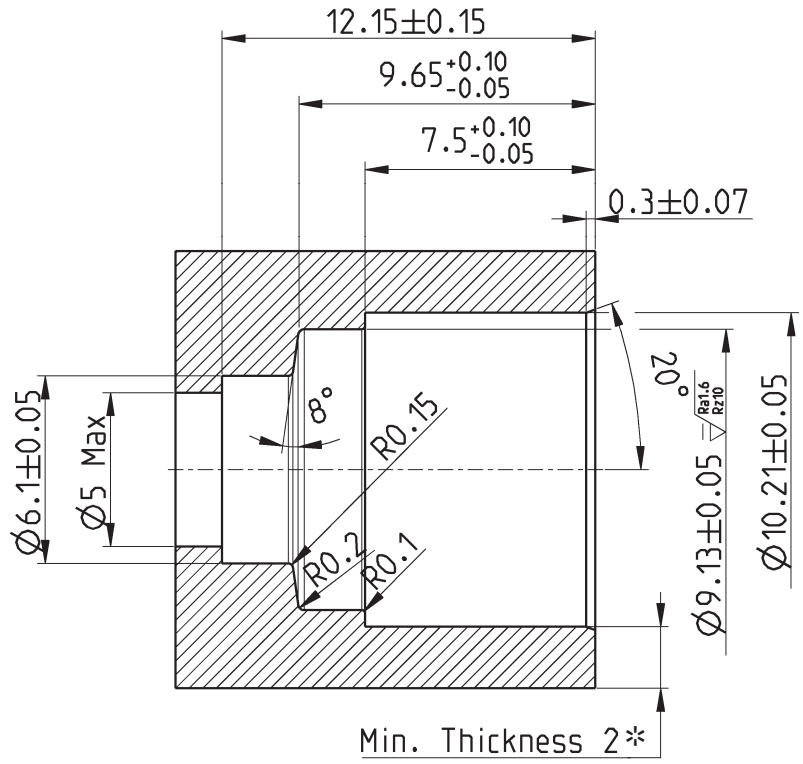
* Min thickness 2 mm for PPS, PPSU

6.3 EPDM, NBR Standard - OD tube = 6 mm

Brass and aluminum housing



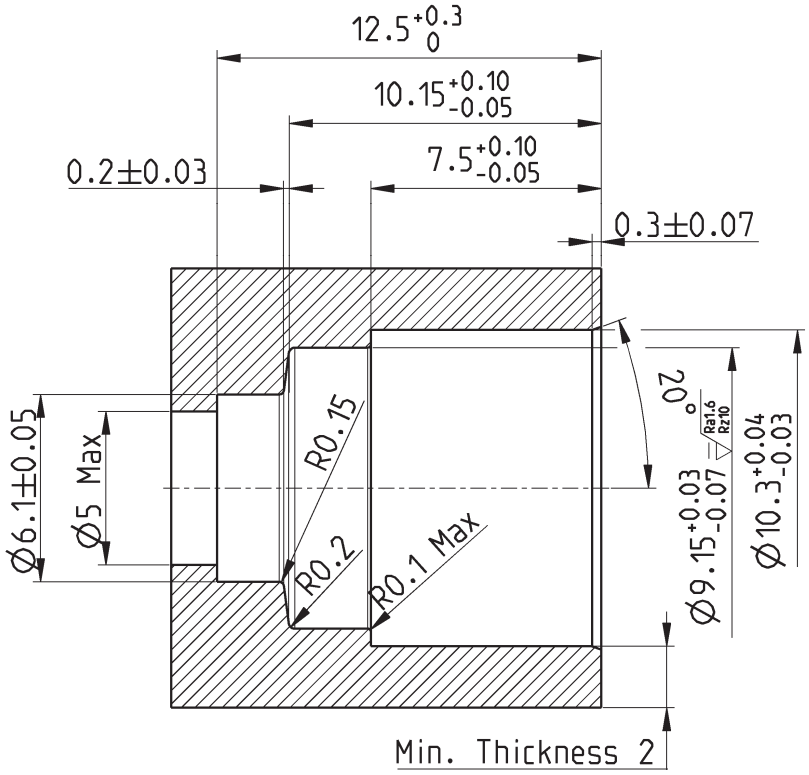
Polymer housing



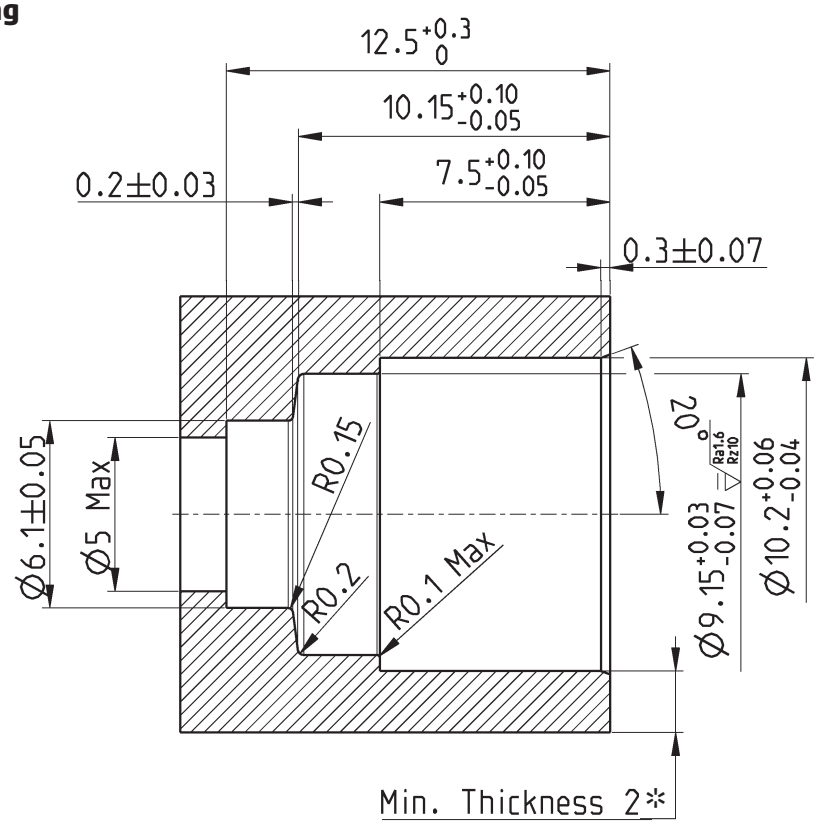
* Min thickness 2,5 mm for PPS, PPSU

6.4 NBR Low temperature - OD tube = 6 mm

Brass and aluminum housing



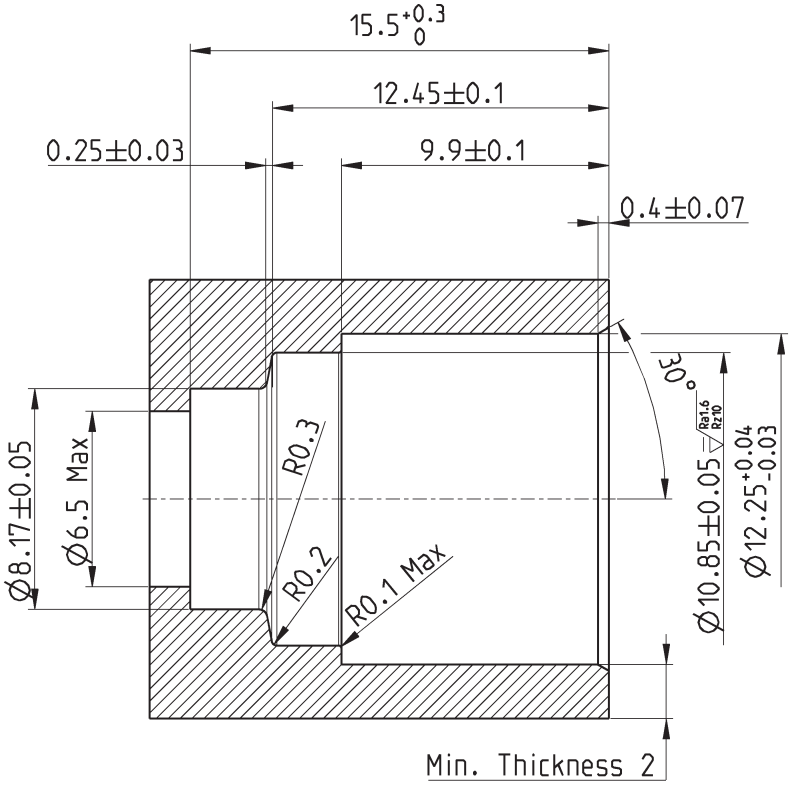
Polymer housing



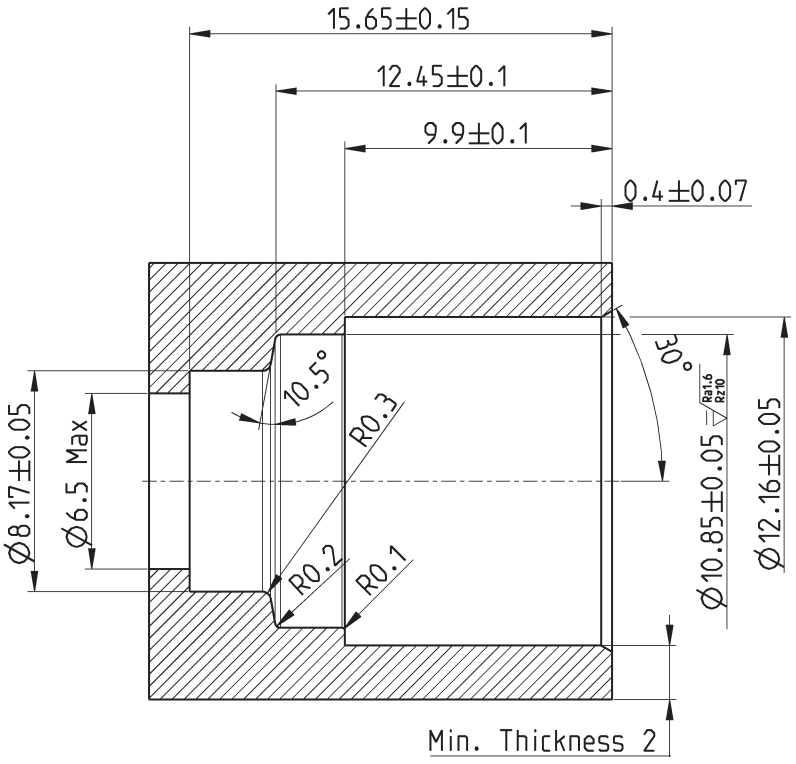
* Min thickness 2,5 mm for PPS, PPSU

6.5 EPDM, NBR Standard - OD tube = 8 mm

Brass and aluminum housing

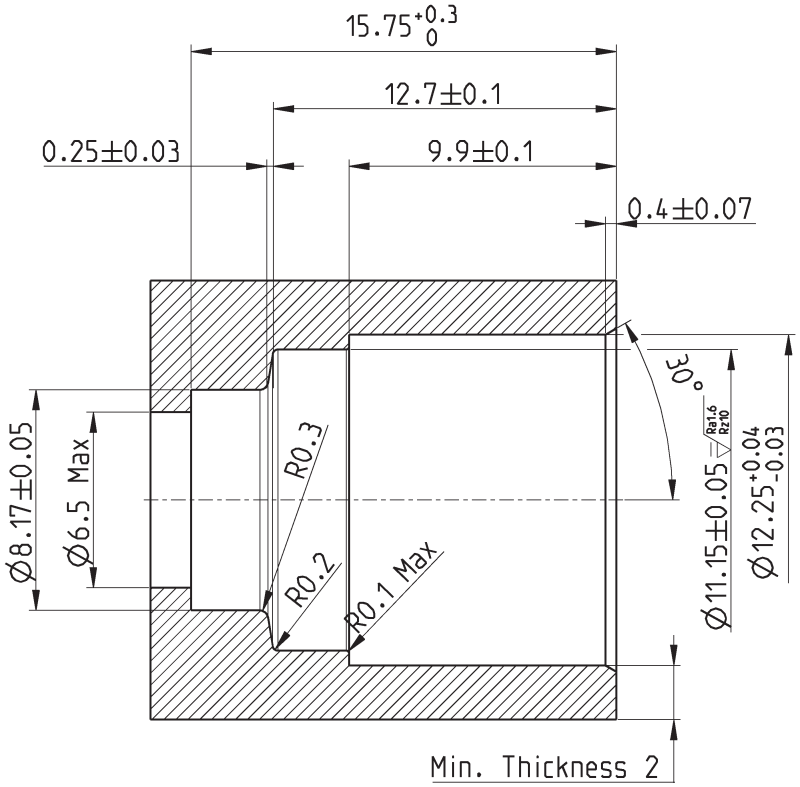


Polymer housing

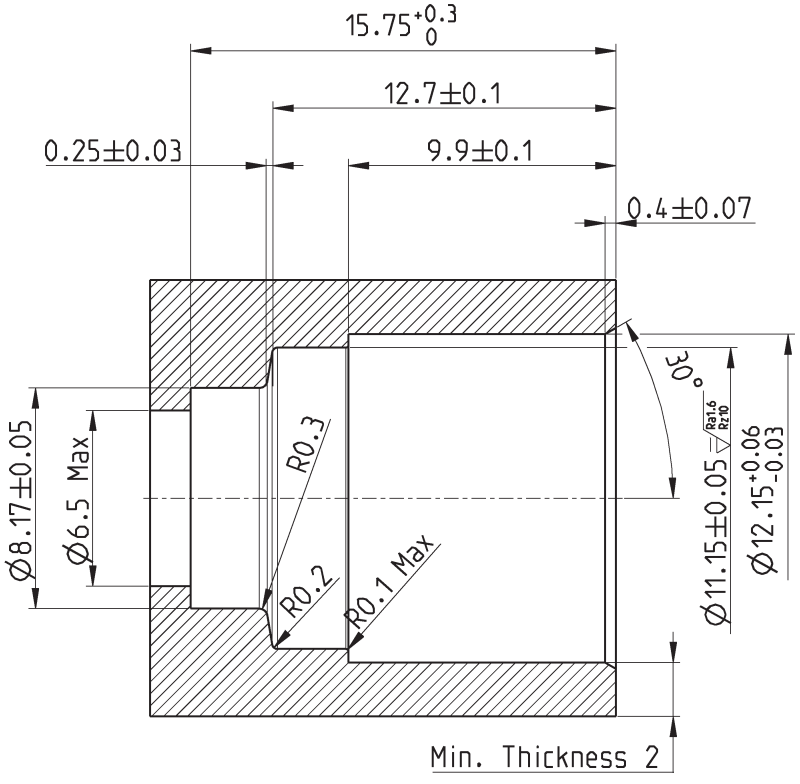


6.6 NBR Low temperature - OD tube = 8 mm

Brass and aluminum housing



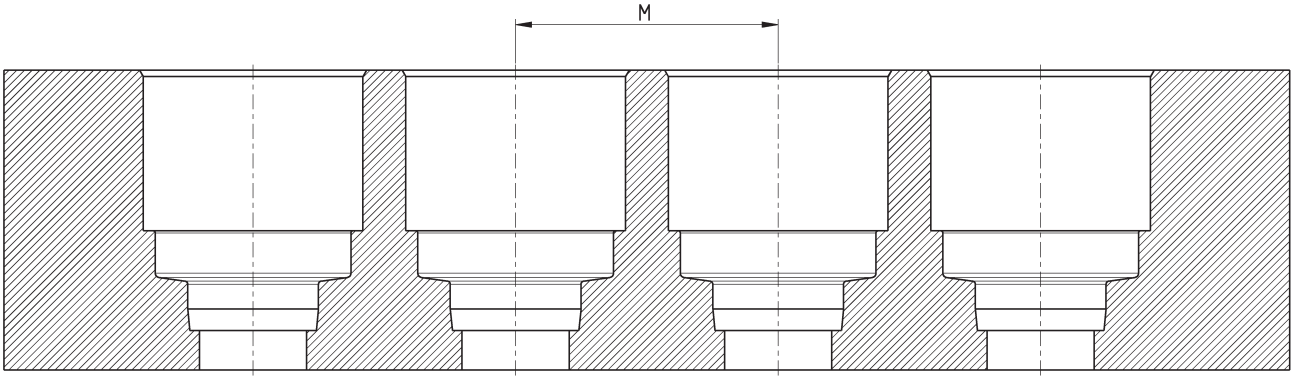
Polymer housing



6.7 Center distances to be respected

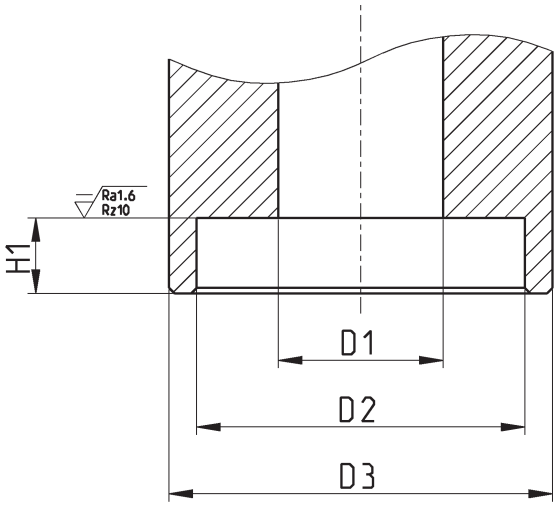
Tube	M [mm]
4 mm	10,9 min
6 mm	12,6 min
8 mm	14,8 min

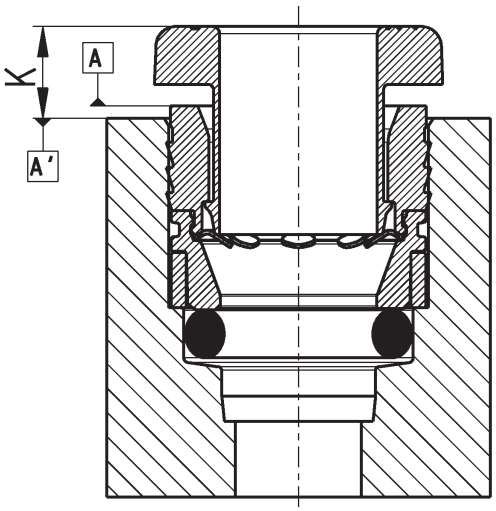
* Accordingly to minimum thickness



Mounting tool

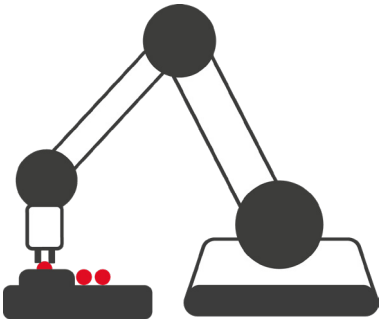
It is strongly recommended to respect the dimensions of the mounting tool.
The most important dimension is H1 because it determines the deviation between A and A'.
Any deviation from this tolerance may result in product failure.



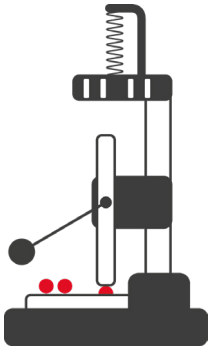


Tube	D1 [mm]	D2 [mm]	D3 [mm]	H1 [mm]	A-A' [mm]	K [mm]
4 mm	4 max	9,7 ±0,1	11,7 min	2,25 ±0,05	0,25	3
6 mm	6 max	11,95±0,1	13,95 min	2,75 ±0,05	0,5	3,65
8 mm	8 max	14,25 ±0,1	16,25 min	2,3±0,05	0	3,25

Tube	Maximum insertion force [N]
4 mm	3000
6 mm	3000
8 mm	3500



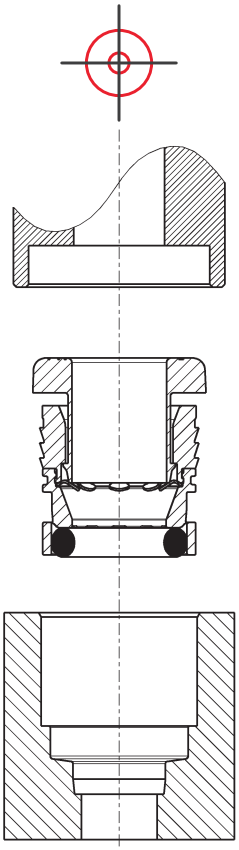
Automatic Mounting

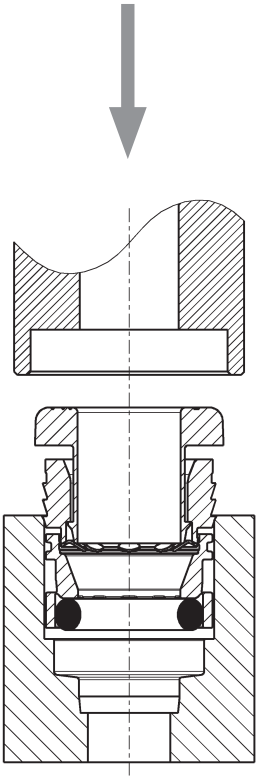


Manual Mounting

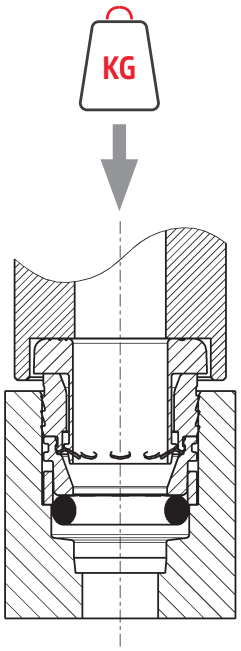
Mounting

- Ensure the assembly area is clean and free from any dust or debris. A clean environment is crucial for a proper mounting and functioning of the CARTfit Series 7700.
- Carefully align the cartridge with the cavity. Ensure there is no misalignment, as this can cause damage or improper sealing.

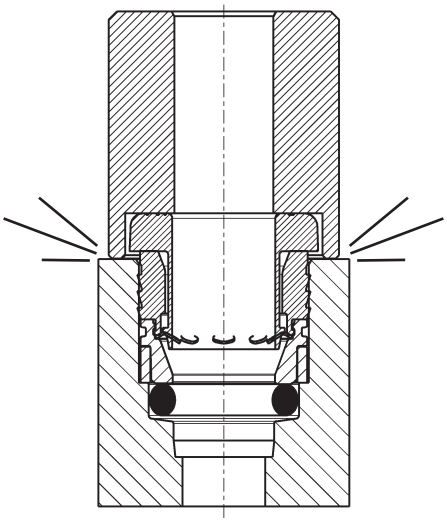




- Follow the specific mounting force requirements to correctly fit the cartridge in the cavity.
- The movement of insertion must be linear.

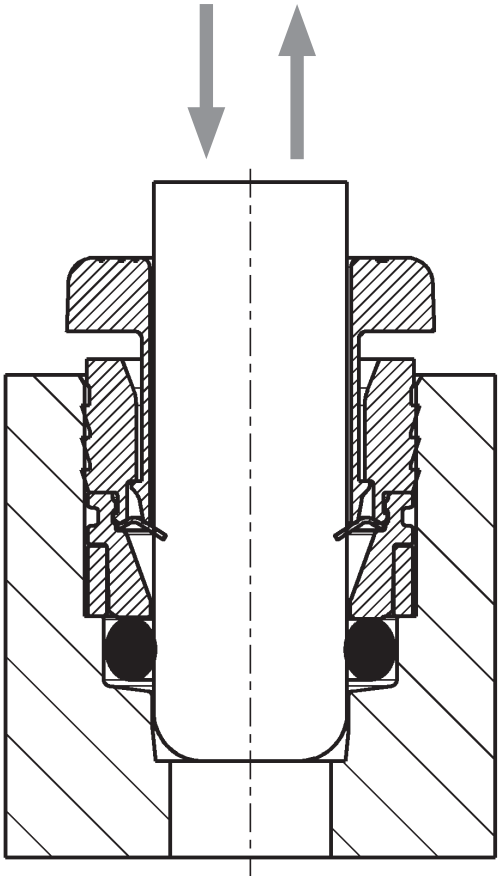


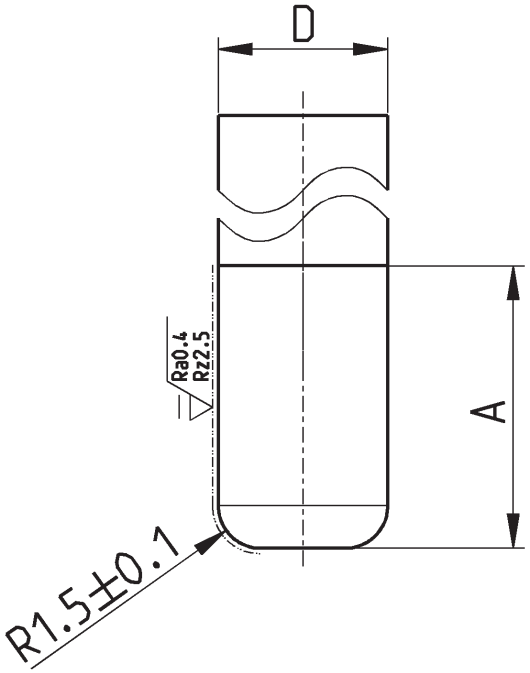
- The end of stroke is reached when the tool comes into contact with the seat.



Assembly test

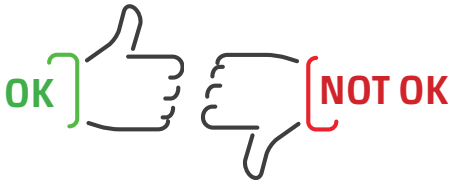
- This process is not mandatory. Some applications require a 100% system leak test. For this purpose, Camozzi has developed a tool for automatic testing, without human intervention. The drawing of the gauge is shown in the figure.
- The gauge must be aligned with the cartridge to prevent damage during insertion.
- Insertion of the control gauge once CARTfit Series 7700 is fully inserted.
- Removal of the control gauge once the leakage control is performed.





Material: 35 NCD 16

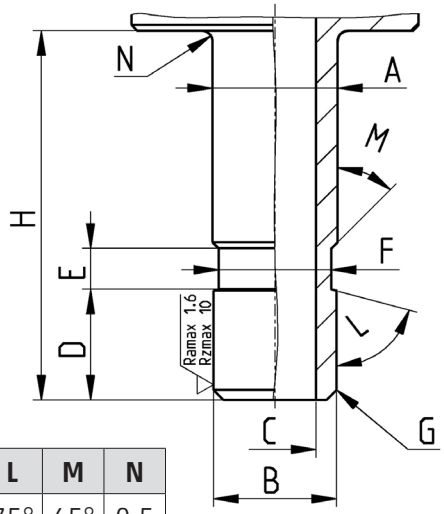
Treatment: Quenching and hardening 54 HRC



Tube	D [mm]	A [mm]
4 mm	3,9 0/-0,05	Min 8
6 mm	5,9 0/-0,05	Min 10
8 mm	7,9 0/-0,05	Min 12

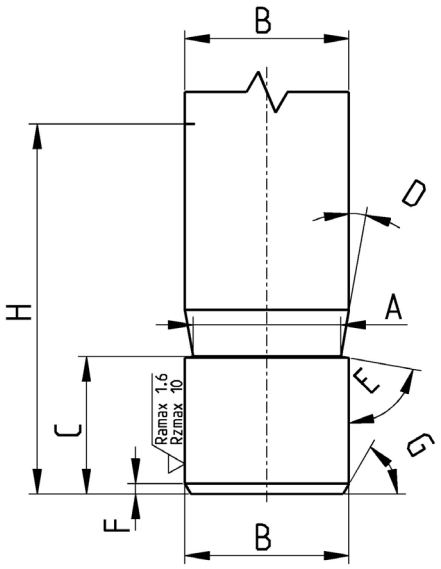
Groove for metal stem

- CARTfit Series 7700 can also be connected with a plastic or metal stem.
- A metal stem connector requires a groove to ensure a correct connection.
- It is recommended to respect the dimensions indicated in the drawing.



Produced by machining

A	B	C	D	E	F	G	H min	L	M	N
4,1 mm	4 mm	2 mm	5,3 mm	2 mm	3,5	0,5x45°	16,5 mm	75°	45°	0,5
6,1 mm	6 mm	4 mm	5,4mm	2 mm	5,5	0,5x45°	18 mm	75°	45°	0,5
8,1 mm	8 mm	6 mm	6 mm	2 mm	7,5	0,5x45°	20,5 mm	75°	45°	0,5



Produced by pipe cutting machine 8TRT (or by machining)

A	B	C	D	E	F	G	H min
3,4 mm	4 mm	5,3 mm	10°	80°	0,5 mm	30°	16,5 mm
5,2 mm	6 mm	6,25 mm	10°	80°	0,5 mm	30°	18 mm
7,2 mm	8 mm	6,4 mm	10°	80°	0,5 mm	30°	20 mm

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