A / Conditions for measuring the length according to the NF EN ISO 4671 standard (Rubber and plastic hoses and assembled hoses - Methods for measuring the dimensions of hoses and the length of assembled hoses)

Unless otherwise specified, the samples have to be taken at least 16 h after the hose is manufactured and conditioned at 23 +7/−3°C at least 3 h before a measurement. The 3 hours can be included in the 16 hours.

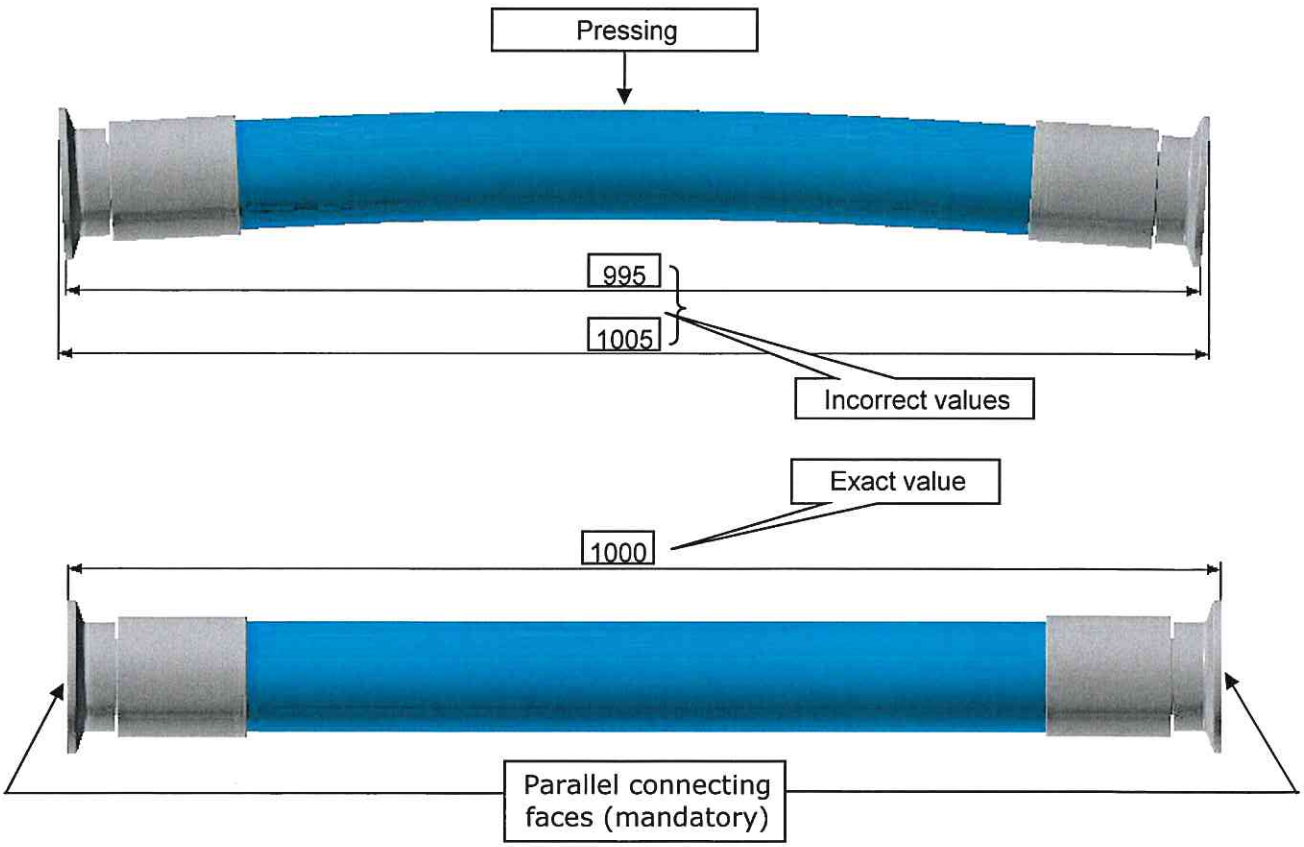
Unless otherwise specified, the measurement temperature has to be equal to 23 +7/−3°C

Measure the lengths less than or equal to 20m with a graduated steel tape or, for short lengths, with a steel ruler, or, for very short lengths, with a caliper. For lengths of more than 20m, use a graduated steel tape or a measuring wheel.

B / Length measurement according to the NF EN ISO 4671 standard

For an efficient measurement of a hose or an assembled hose, it is important to follow some recommendations:

- For a hose : Take all measurements with a rectilinear, non-stretched hose.
- For an assembled hose: Make sure that the connecting faces are parallel, and to do so, press at the centre of the hose and, for a flexible hose, pull slightly on the ends without deforming it (see figures below)



C / Measuring points according to the NF EN ISO 4671 standard

Hoses

Determine the length of the hose between the ends of the cut length.

Assembled Hoses

Unless otherwise clearly indicated by the customer, hoses are measured according to the description below. The customer's specifications can unvalide the tolerances indicated in the present document.

Make sure that the measuring points along the hose's length, are identified. Figures 6 to 10 show typical end fittings and indicate how to identify the measuring points.
For hoses whose end fittings not shown in Figures 6 to 10 of the present document, and if they are not shown in the annex "B.0010 – Identifying the measuring points" , make sure that the measuring point on the fitting is identified following the indications from the coupling's manufacturer.

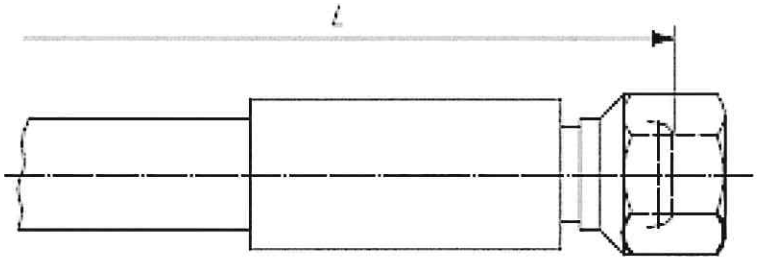


Figure 6-Length to the coupling sleeve(female)

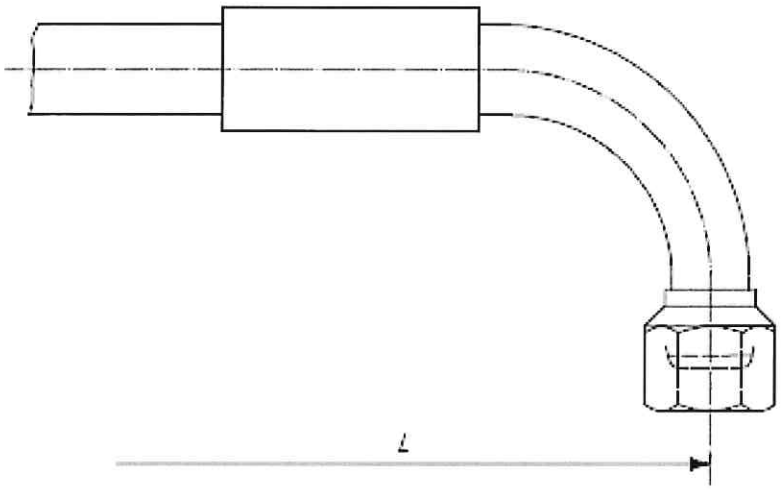


Figure 7-Length from the fitting axis (90° angle) of a fitting (female)

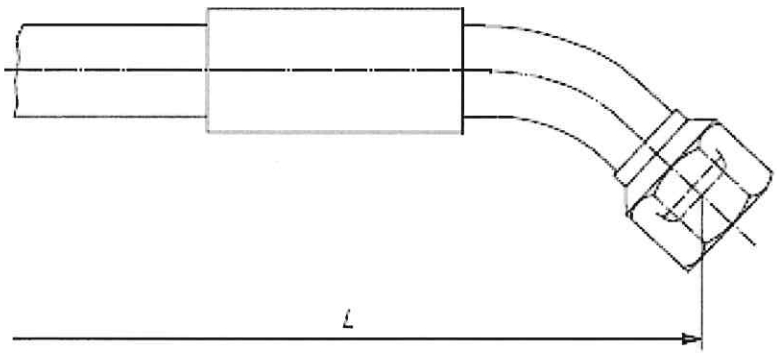


Figure 8-Length from the fitting axis (45° angle) of a fitting (female)

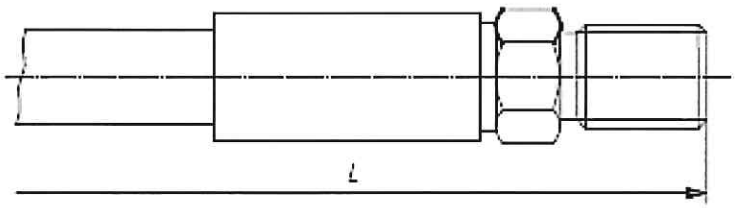


Figure 9-Length to the end fitting (male)

Unless otherwise clearly indicated by the customer, the measurement has to take place at the end (L) for all male fittings (cylindrical, tapered)

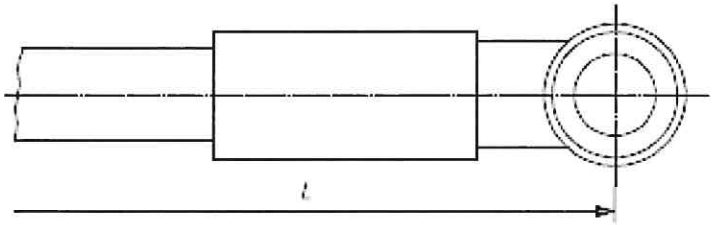
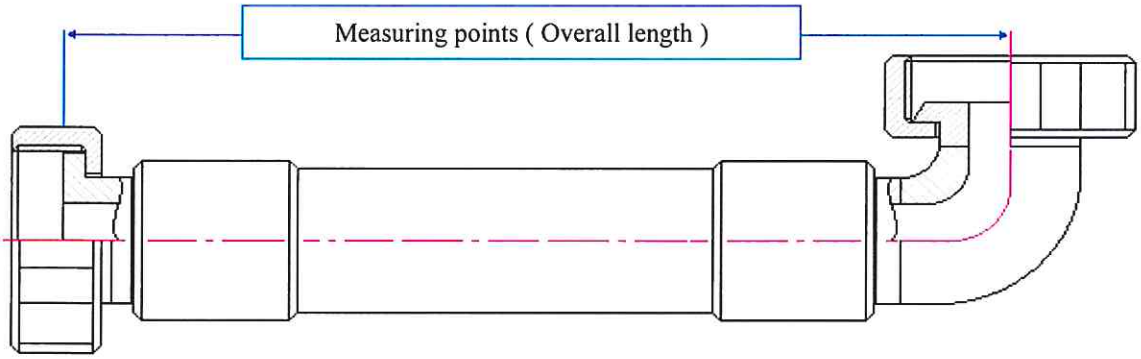
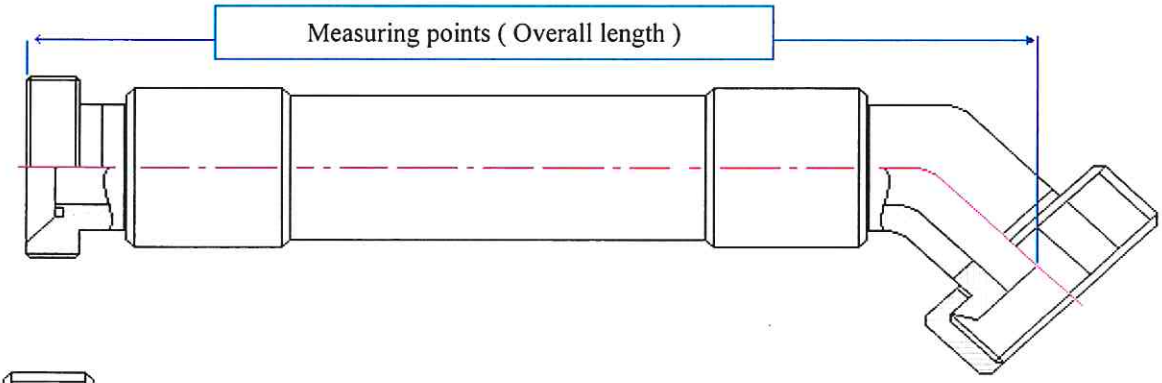
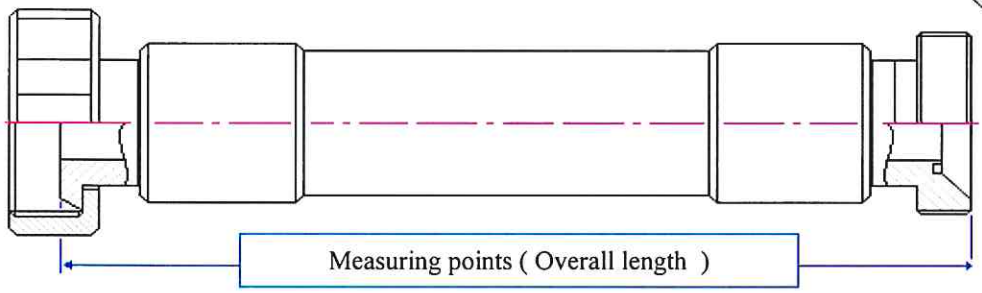


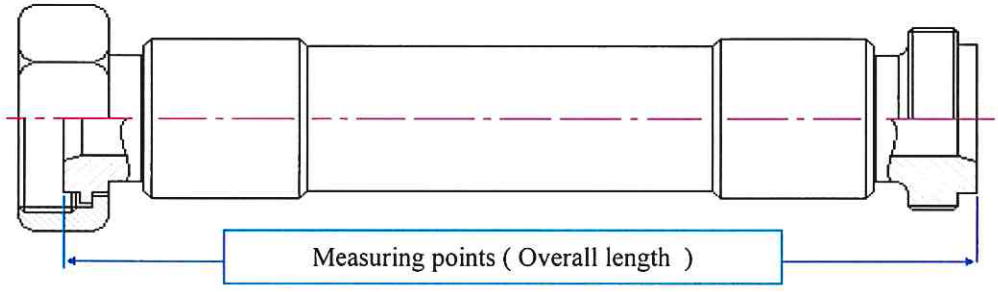
Figure 10-Length from the connection axis banjo

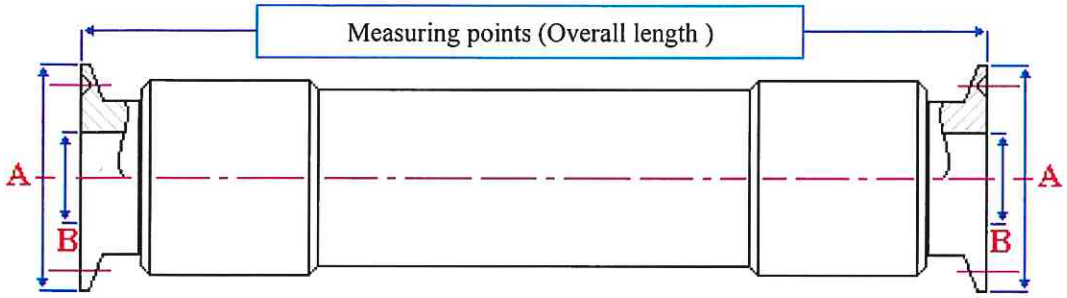
Other figures :

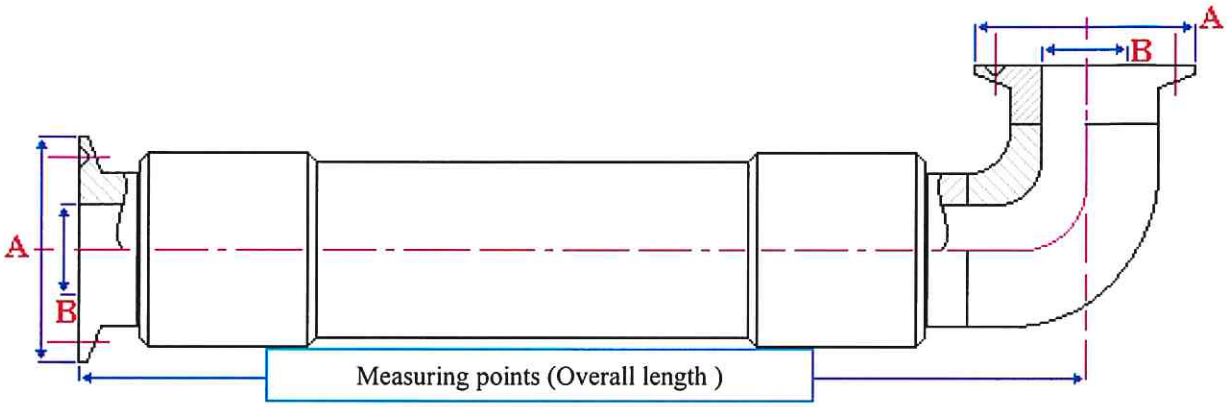


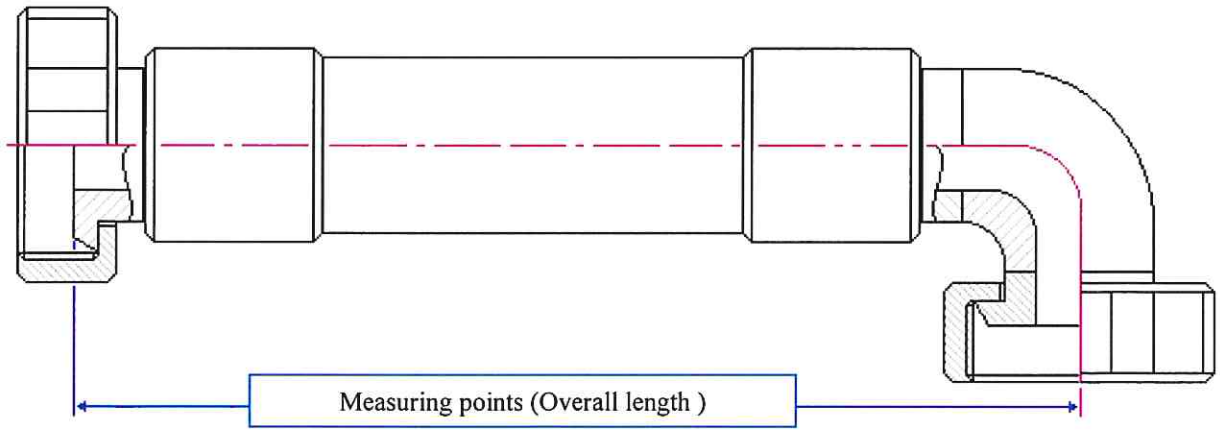


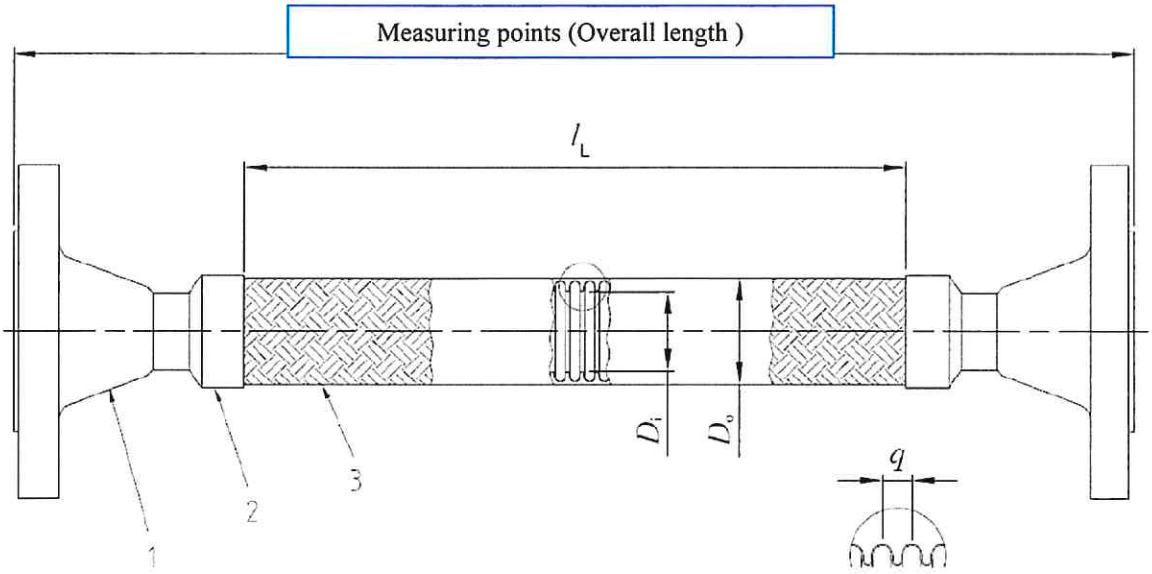












F.0041.01.0405

D / Tolerances

- Non-assembled hoses (according to the NF EN ISO 1307 standard - Rubber and plastic hoses hoses dimensions, minimum and maximum inner diameters, and tolerances along the cutting length)

Length (mm)	Tolerance
≤ 300	-/+ 3 mm
>300 et ≤ 600	-/+ 4.5 mm
>600 et ≤ 900	-/+ 6 mm
>900 et ≤ 1200	-/+ 9 mm
>1200 et ≤ 1800	-/+ 12 mm
>1800	-/+ 1 %

- Assembled hoses

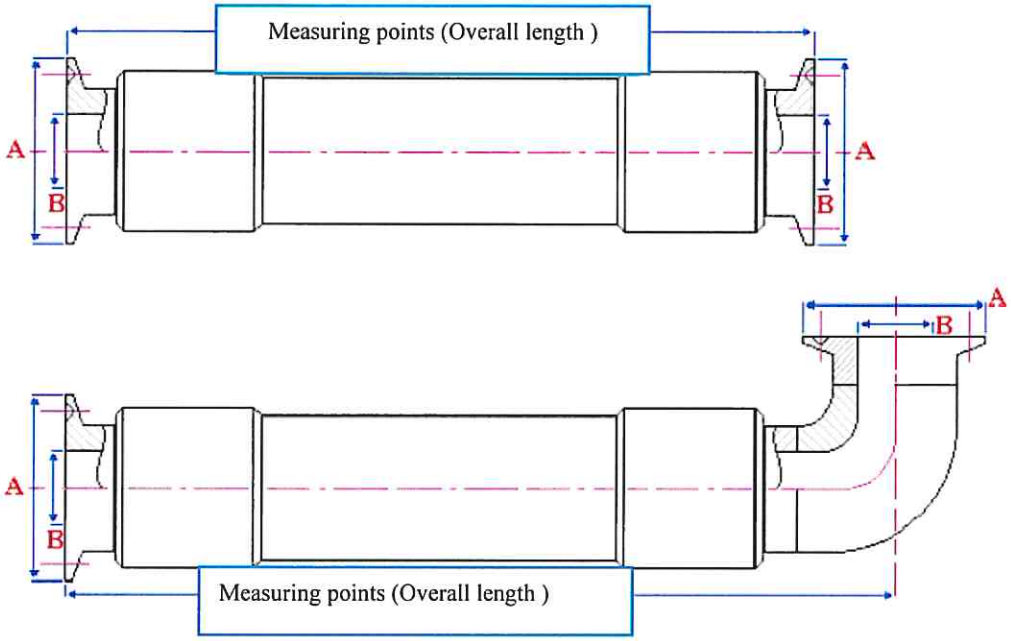
The tolerance for hoses has to be equal to -2/+3 % according to the NF EN 16821 standard (Rubber and plastic hoses for the pharmaceutical and biotechnology industries — Silicone hoses).

Unless otherwise specifically indicated to GECITECH by the customer, the overall length of a hose is the length ordered with the tolerances as defined by our standards.
For any other specific tolerance requests, contact our technical department during the request for quotation in order to make sure about the feasibility, and, in all cases, before placing the order (feasibility validation by acknowlegment).

N.B. The tolerances applied by GECITECH are at a minimum as per the pre-cited standard.

N.B. The measures and tolerances are given before any possible hydraulic testing requested by the customer. Depending upon the type of hose, its dimensions can be modified after hydraulic testing.

E / Estimating the minimum lengths for making assembled hoses

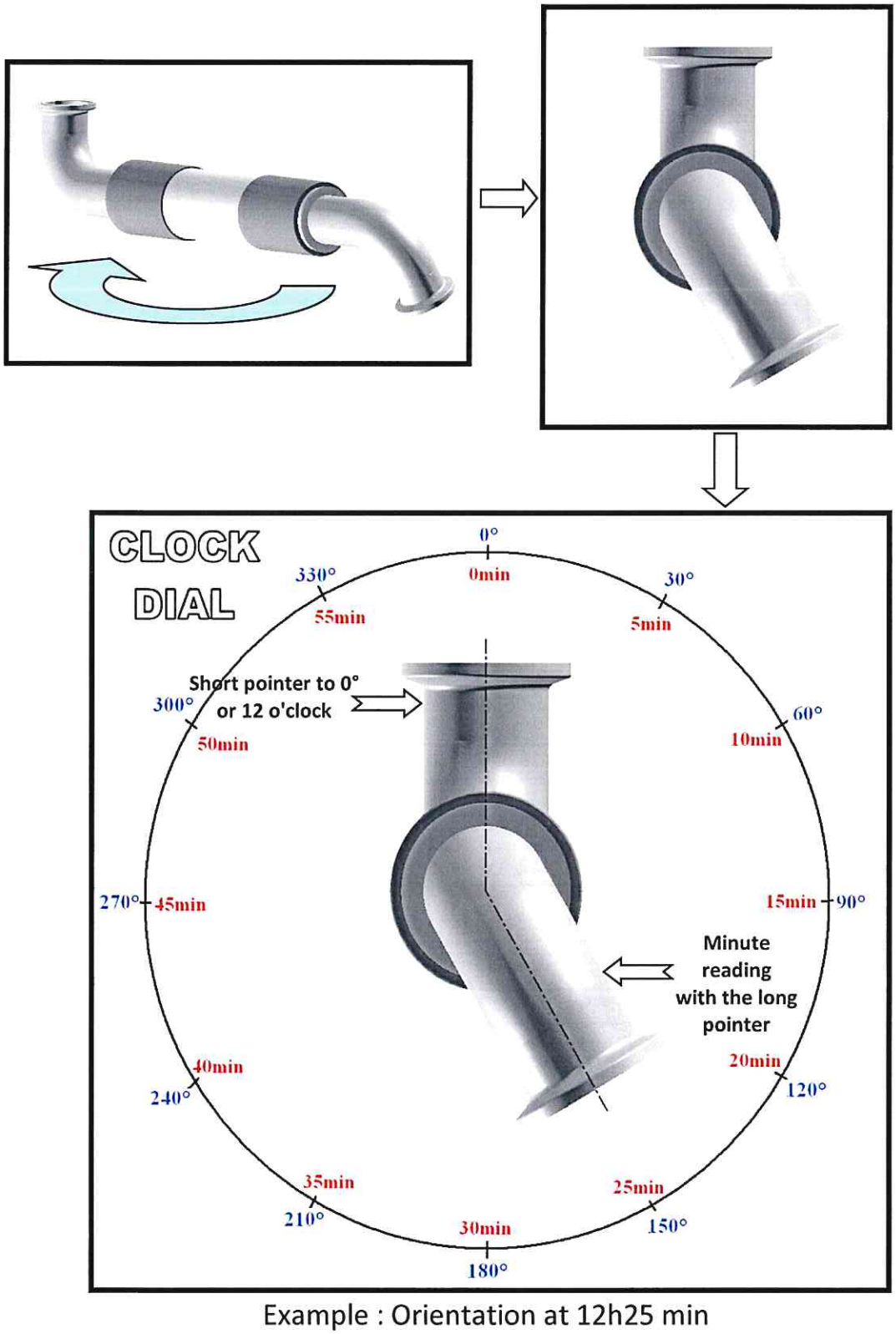


Nominal diameter (mm)	Minimal Length (mm)
6	200
8	200
10	250
13	250
16	250
18	300
19	300
20	300
22	300
25	300
32	350
35	350
38	350
51	400
63	400
76	400
100	500

The lengths are given as an indication only, for static use. For any length shorter than the above values, please contact our technical department.
For any dynamic application, longer lengths are mandatory and have to be defined depending upon the equipment. Example : loading cells, depending upon the diameter, the length has to be able to absorb all movements.

F / Fittings orientation

If two elbow fittings are not in the same plane, the angle is defined according to the drawing below.
General tolerance of the angle of rotation : ± 5 °.



Example : Orientation at 12h25 min

G / Maintenance

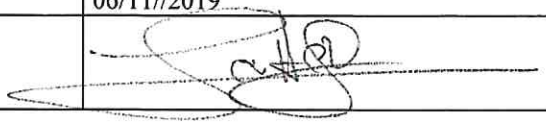
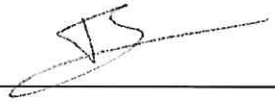
It is recommended that hoses and assembled hoses, excluding those for which there are regulations, standards or contractual requirements, be subject to periodic testing/inspections in order to establish their aptitude to stay in service. Special attention must be paid to the condition of the fitting and of the adjacent zones, and to the occurrence of anomalies revealing deterioration of the hose due to normal ageing or to harm caused by abnormal conditions of use, bad treatment or accidents in service.

The following defects are sufficient to justify removing a hose from service :

— perforations, cuts, tears, bared reinforcement ;
— cracks ;
— localised deformation, blisters, swelling under pressure ;
— sticky or softened zones.

When "limit of use" or expiry dates are present on a hose marking, it is recommended to comply with them even if the hose does not show any visible sign of deterioration.

Check the condition of the hose every year, and even every 6 months in case of intensive use.

	Rédacteur	Vérificateur - Approbateur
Fonction	Responsable Qualité	Directeur Technique
Nom	Laurent GOUTTENOIRE	Pierre BISCARRAT
Date	06/11//2019	06/11/2019
Visa		

A / Conditions for measuring the length according to the NF EN ISO 4671 standard (Rubber and plastic hoses and assembled hoses - Methods for measuring the dimensions of hoses and the length of assembled hoses)

Unless otherwise specified, the samples have to be taken at least 16 h after the hose is manufactured and conditioned at 23 +7/−3°C at least 3 h before a measurement. The 3 hours can be included in the 16 hours.

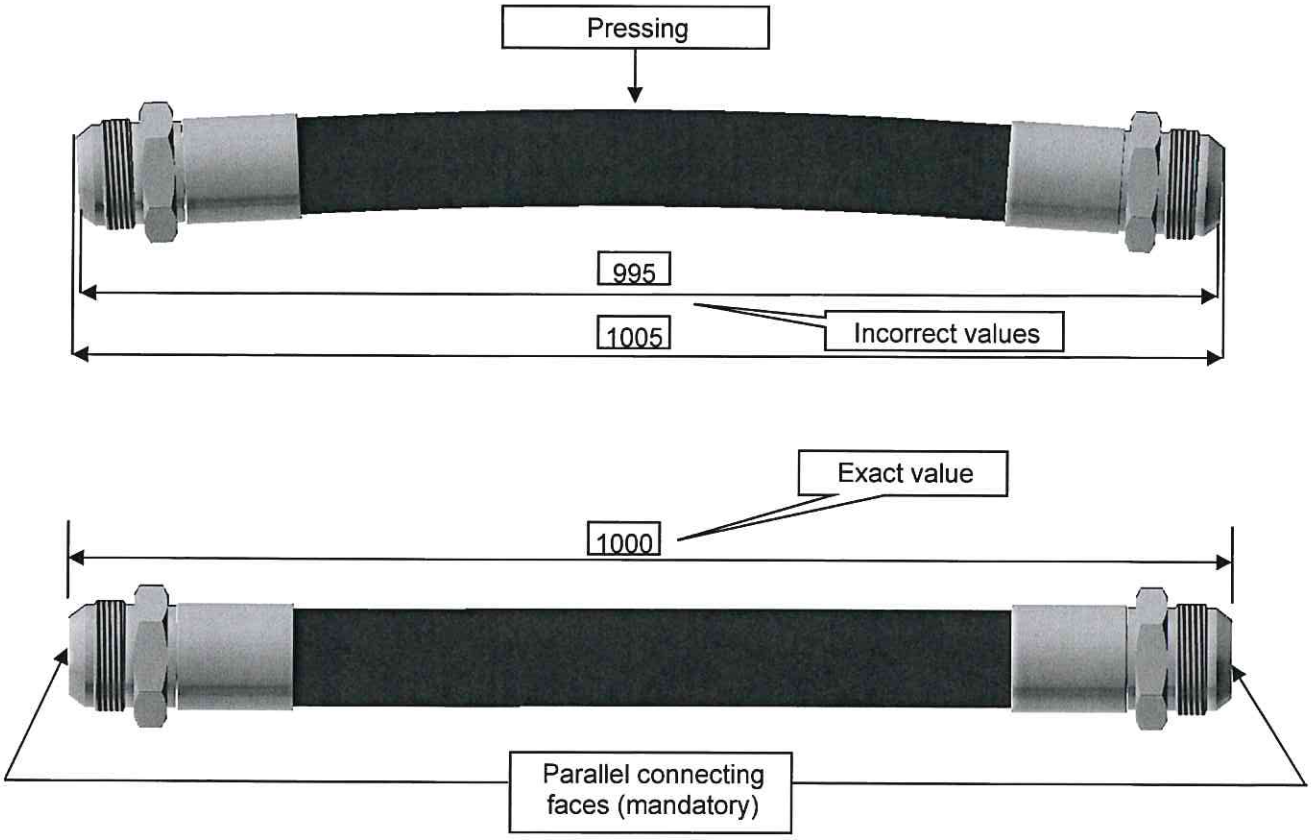
Unless otherwise specified, the measurement temperature has to be equal to 23 +7/−3°C

Measure the lengths less than or equal to 20m with a graduated steel tape or, for short lengths, with a steel ruler, or, for very short lengths, with a caliper. For lengths of more than 20m, use a graduated steel tape or a measuring wheel.

B / Length measurement according to the NF EN ISO 4671 standard

For an efficient measurement of a hose or an assembled hose, it is important to follow some recommendations:

- For a hose : Take all measurements with a rectilinear, non-stretched hose.
- For an assembled hose: Make sure that the connecting faces are parallel, and to do so, press at the centre of the hose and, for a flexible hose, pull slightly on the ends without deforming it (see figures below)



e/ Measuring points according to the NF EN ISO 4671 standard

Hoses

Determine the length of the hose between the ends of the cut length.

Assembled Hoses

Unless otherwise clearly indicated by the customer. hoses are measured according to the description below. The customer's specifications can unvalide the tolerances indicated in the present document.

Make sure that the measuring points along the hose's length, are identified. Figures 6 to 10 show typical end fittings and indicate how to identify the measuring points.
For hoses whose end fittings not shown in Figures 6 to 10 of the present document, and if they are not shown in the annex "B.0010 - Identifying the measuring points", make sure that the measuring point on the fitting is identified following the indications from the coupling's manufacturer.

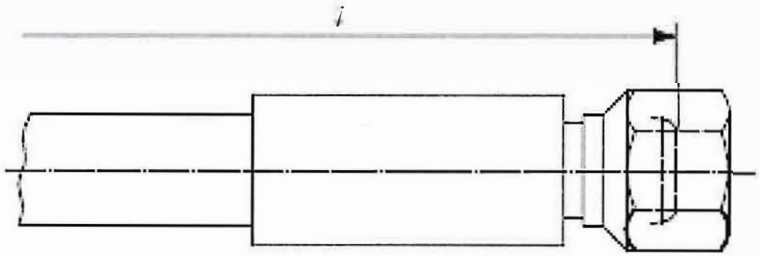


Figure 6-Length to the coupling sleeve(female}

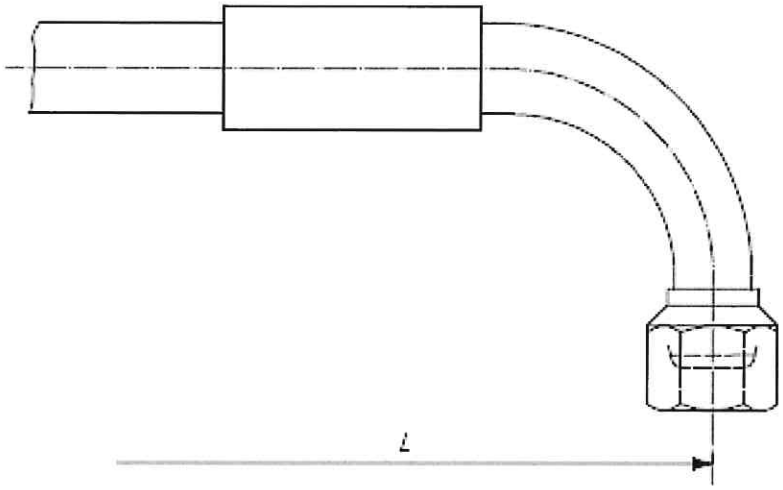


Figure 7-Length from the fitting axis (90° angle) of a fitting (female)

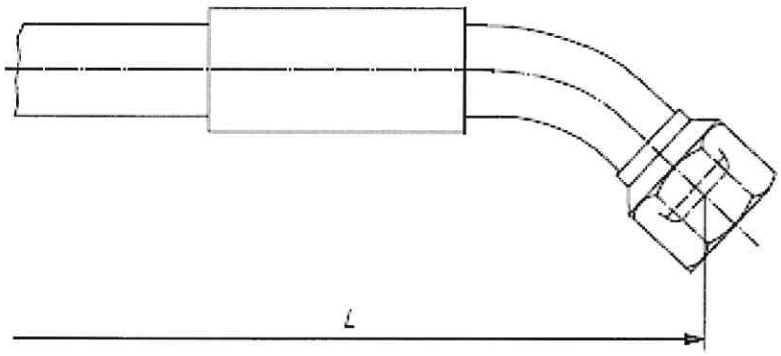


Figure 8-Length from the fitting axis (45° angle) of a fitting (female)

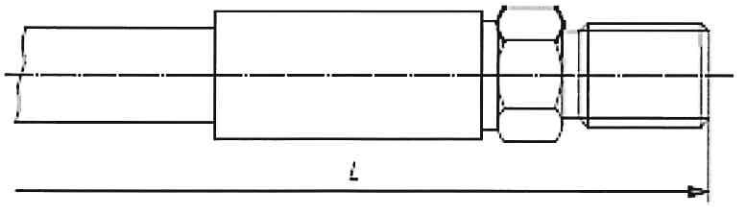
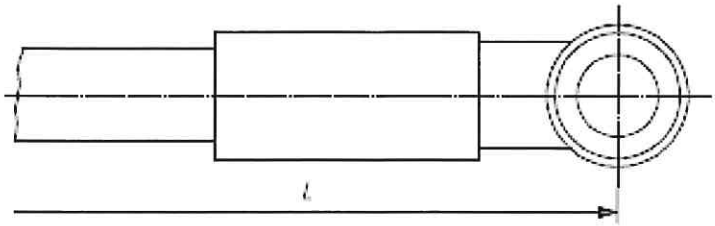


Figure 9-Length to the end fitting (male)

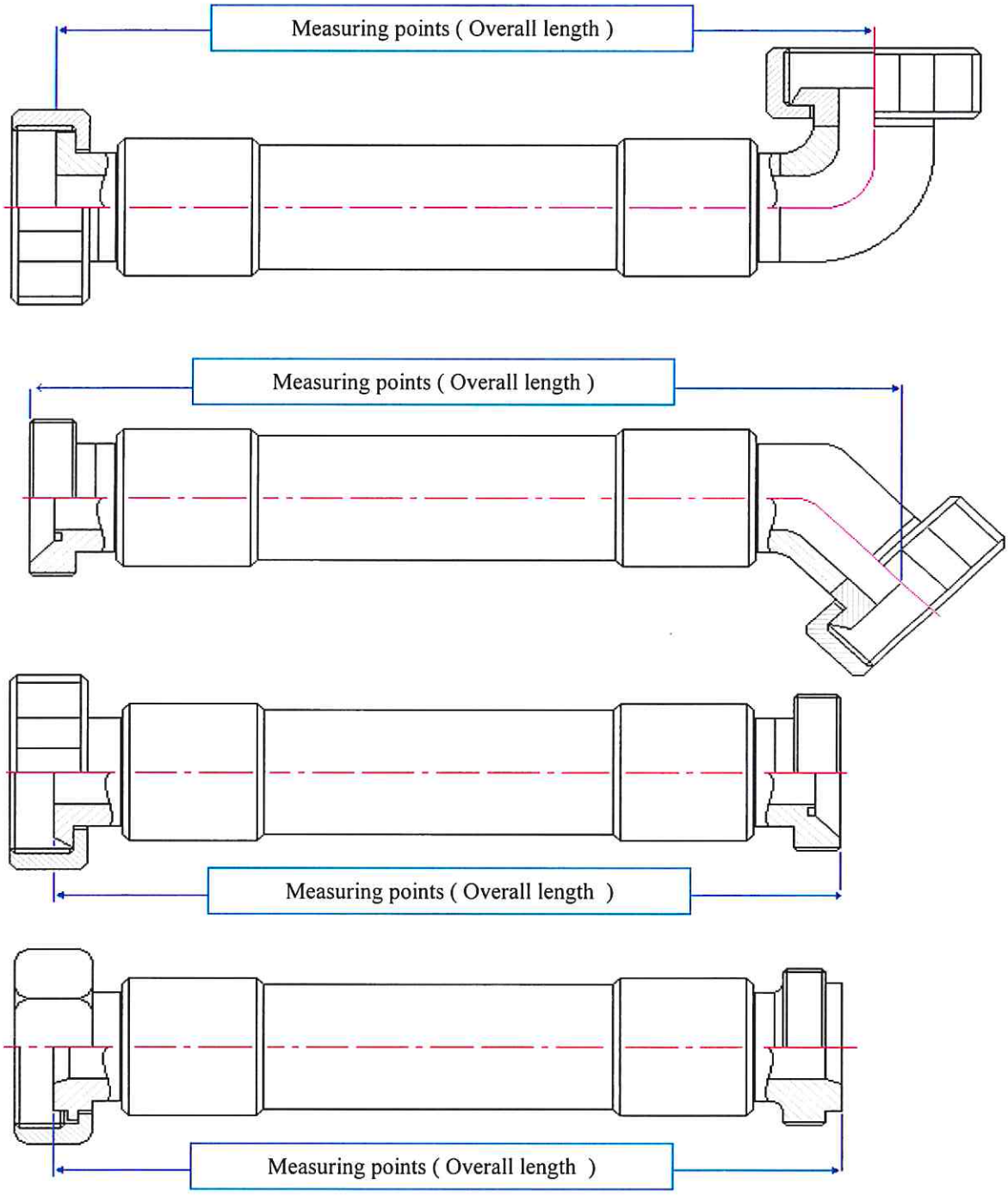
Unless otherwise clearly indicated by the customer, the measurement has to take place at the end (L) for all male fittings (cylindrical, tapered)

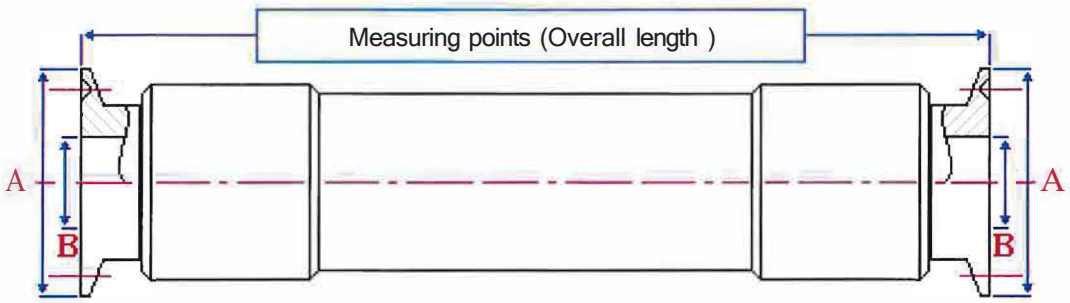


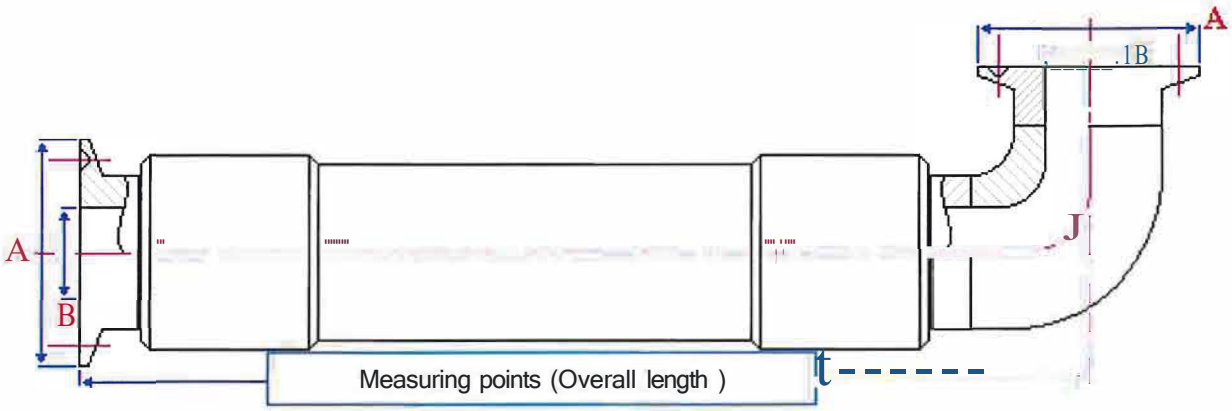
F.0041.01.0405

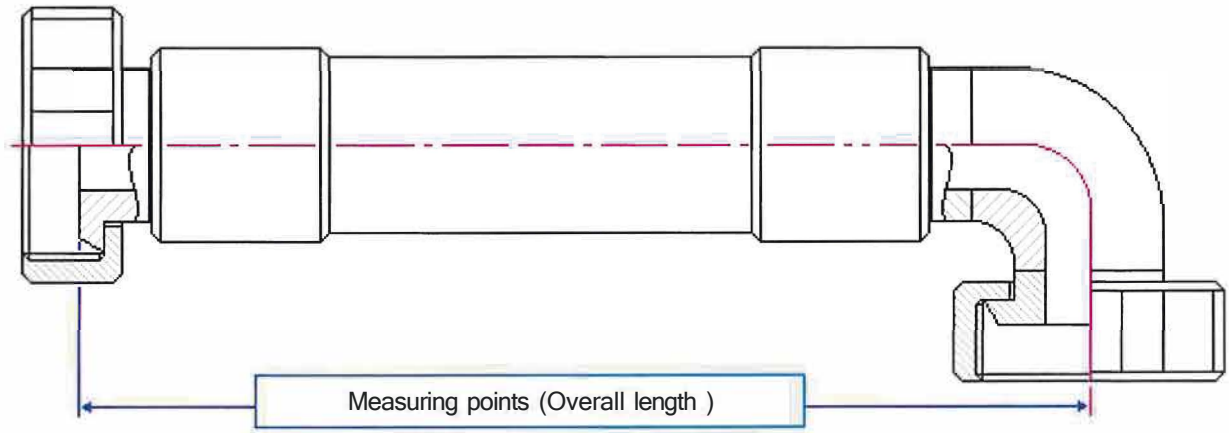
Figure 10-Length from the connection axis banjo

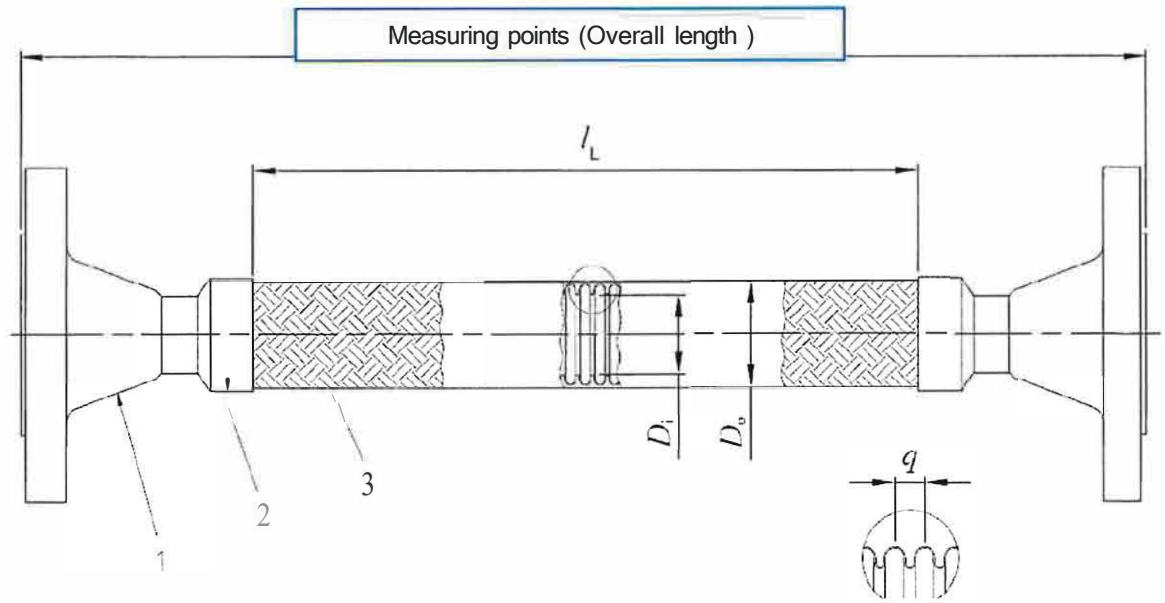
Other figures :











F.0041.01 .0405

D / Tolerances

- Non-assembled hoses (according to the NF EN ISO 1307 standard -_Rubber and plastic hoses **hoses dimensions, minimum and maximum inner diameters, and tolerances along the cutting length}**

Length (mm)	Tolerance
≤ 300	-/+ 3 mm
>300 et ≤ 600	-/+ 4.5 mm
>600 et ≤ 900	-/+ 6 mm
>900 et ≤ 1200	-/+ 9 mm
>1200 et ≤ 1800	-/+ 12 mm
>1800	-/+ 1 %

- Assembled hoses

Tolerances far hoses according to the DIN 20066 standard (Hydraulic fluid power - Hose assemblies)

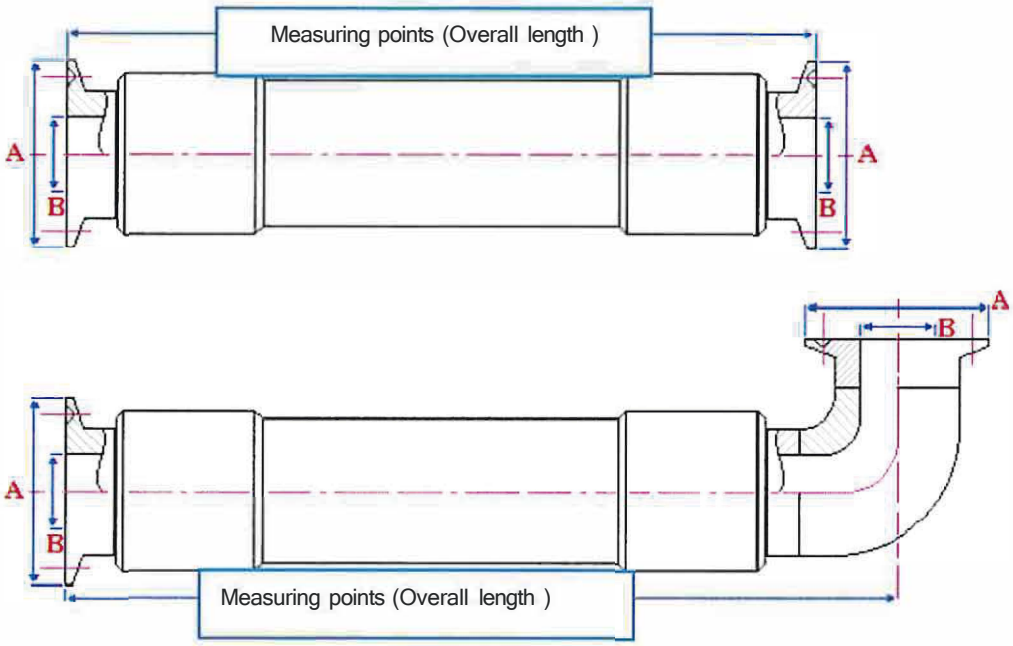
Unless otherwise specifically indicated to GECITECH by the customer, the overall length of a hose is the length ordered with the tolerances as defined by our standards.
For any other specific tolerance requests, contact our technical department during the request far quotation in order to make sure about the feasibility, and, in all cases, befare placing the arder (feasibility validation by acknowlegment).

N.B. The tolerances applied by GECITECH are ata minimum as per the pre-cited standard.

N.B. The measures and tolerances are given befare any possible hydraulic testing requested by the customer. Depending upan the type of hose, its dimensions can be modified after hydraulic testing.

Hose length	Nominal diameter		
	:s;25mm	>25&:s;50mm	>50mm
:s;G30mm	+7mm -3mm	+12mm -4mm	+25mm -6mm
>630et:::;; 1250 mm	+12mm -4mm	+20mm -6mm	
> 1250 et:::;; 2500 mm	+20mm -6mm	+25mm -Gmm	
> 2500 et:::;; 8000 mm	+1,5% -0,5%		
>8000mm	+3% -1 %		

E / Estimating the minimum lengths far making assembled hoses

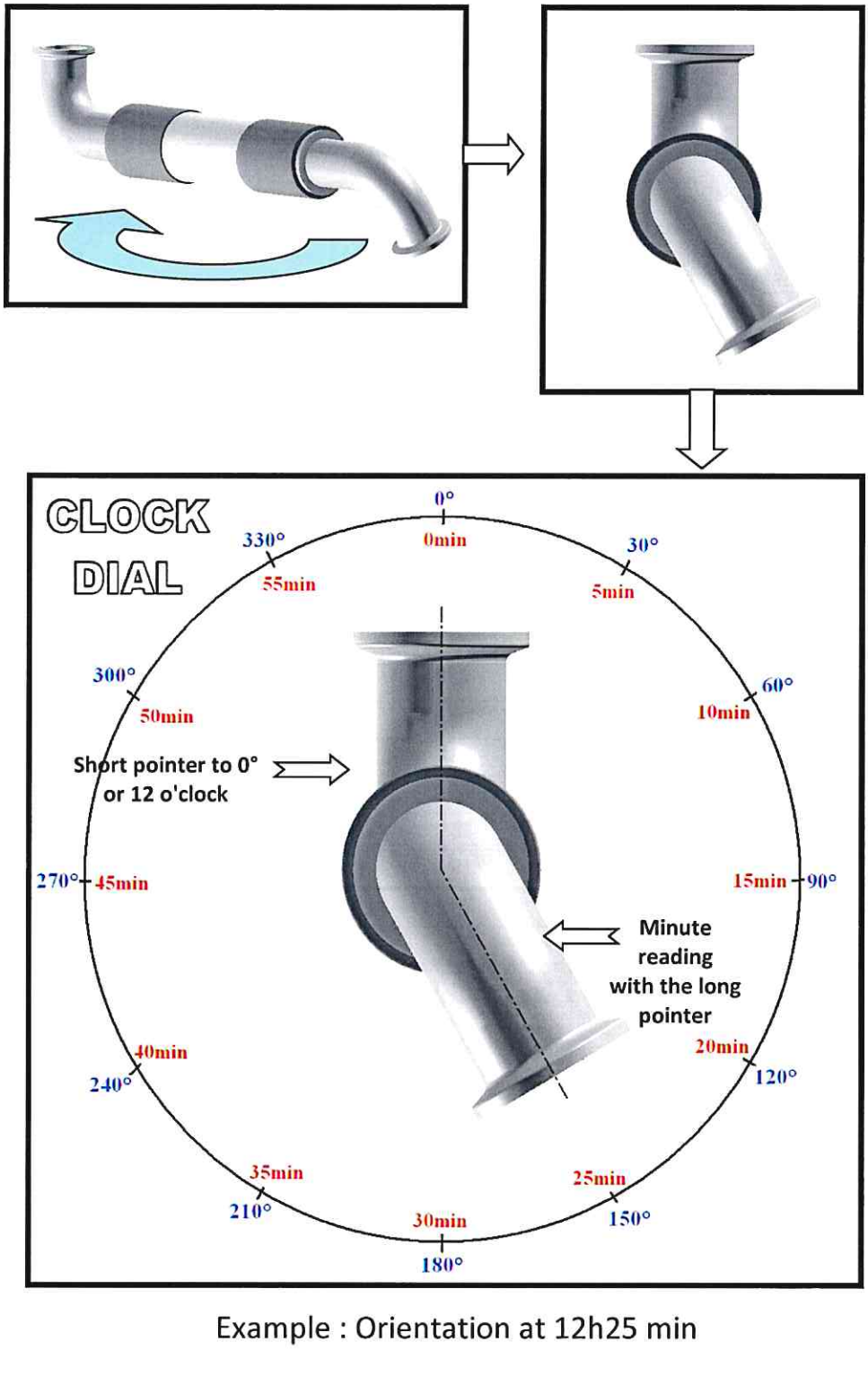


Nominal diameter (mm)	Minimal Length (mm)
6	200
8	200
10	250
13	250
16	250
18	300
19	300
20	300
22	300
25	300
32	350
35	350
38	350
51	400
63	400
76	400
100	500

The lengths are given as an indication only, for static use. For any length shorter than the above values, please contact our technical department.
For any dynamic application, longer lengths are mandatory and have to be defined depending upan the equipment. Example : loading cells, depending upan the diameter, the length has to be able to absorb all movements.

F / Fittings orientation

If two elbow fittings are not in the same plane, the angle is defined according to the drawing below.
General tolerance of the angle of rotation : ± 5 °.



Example : Orientation at 12h25 min

G / Maintenance

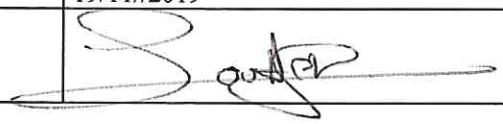
It is recommended that hoses and assembled hoses, excluding those for which there are regulations, standards or contractual requirements, be subject to periodic testing/inspections in order to establish their aptitude to stay in service. Special attention must be paid to the condition of the fitting and of the adjacent zones, and to the occurrence of anomalies revealing deterioration of the hose due to normal ageing or to harm caused by abnormal conditions of use, bad treatment or accidents in service.

The following defects are sufficient to justify removing a hose from service :

— perforations, cuts, tears, bared reinforcement ;
— cracks ;
— localised deformation, blisters, swelling under pressure ;
— sticky or softened zones.

When "limit of use" or expiry dates are present on a hose marking, it is recommended to comply with them even if the hose does not show any visible sign of deterioration.

Check the condition of the hose every year, and even every 6 months in case of intensive use.

	Rédacteur	Vérificateur - Approbateur
Fonction	Responsable Qualité	Directeur Technique
Nom	Laurent GOUTTENOIRE	Pierre BISCARRAT
Date	19/11//2019	19/11/2019
Visa		

A / Conditions for measuring the length according to the NF EN ISO 4671 standard (Rubber and plastic hoses and assembled hoses - Methods for measuring the dimensions of hoses and the length of assembled hoses)

Unless otherwise specified, the samples have to be taken at least 16 h after the hose is manufactured and conditioned at 23 +7/−3°C at least 3 h before a measurement. The 3 hours can be included in the 16 hours.

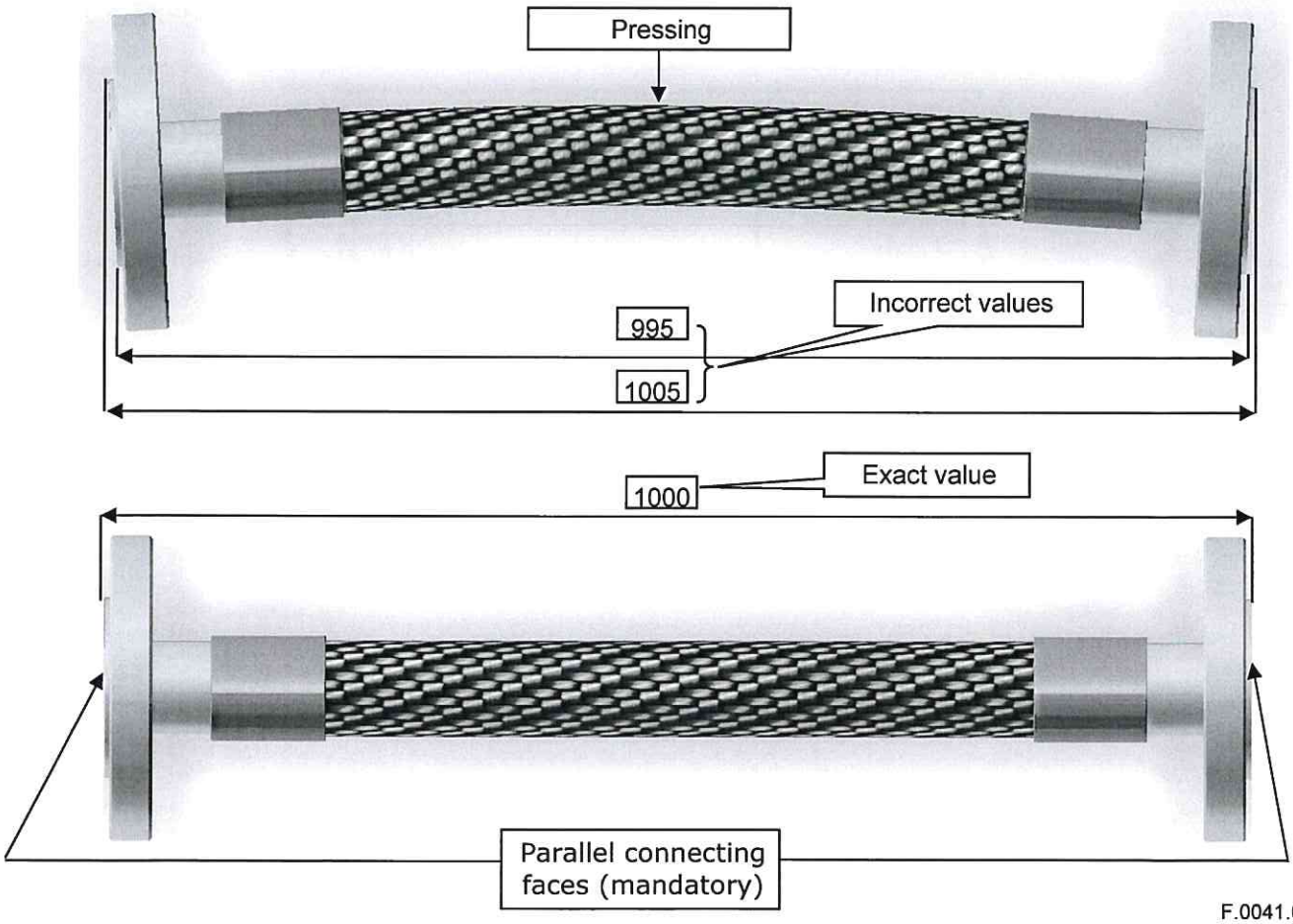
Unless otherwise specified, the measurement temperature has to be equal to 23 +7/−3°C

Measure the lengths less than or equal to 20m with a graduated steel tape or, for short lengths, with a steel ruler, or, for very short lengths, with a caliper. For lengths of more than 20m, use a graduated steel tape or a measuring wheel.

B / Length measurement according to the NF EN ISO 4671 standard

For an efficient measurement of a hose or an assembled hose, it is important to follow some recommendations:

- For a hose : Take all measurements with a rectilinear, non-stretched hose.
- For an assembled hose: Make sure that the connecting faces are parallel, and to do so, press at the centre of the hose and, for a flexible hose, pull slightly on the ends without deforming it (see figures below)



C / Measuring points according to the NF EN ISO 4671 standard

Hoses

Determine the length of the hose between the ends of the cut length.

Assembled Hoses

Unless otherwise clearly indicated by the customer, hoses are measured according to the description below. The customer's specifications can unvalide the tolerances indicated in the present document.

Make sure that the measuring points along the hose's length, are identified. Figures 6 to 10 show typical end fittings and indicate how to identify the measuring points.
For hoses whose end fittings not shown in Figures 6 to 10 of the present document, and if they are not shown in the annex "B.0010 – Identifying the measuring points" , make sure that the measuring point on the fitting is identified following the indications from the coupling's manufacturer.

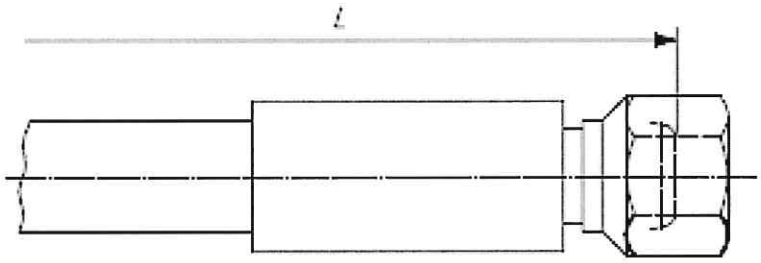


Figure 6-Length to the coupling sleeve(female)

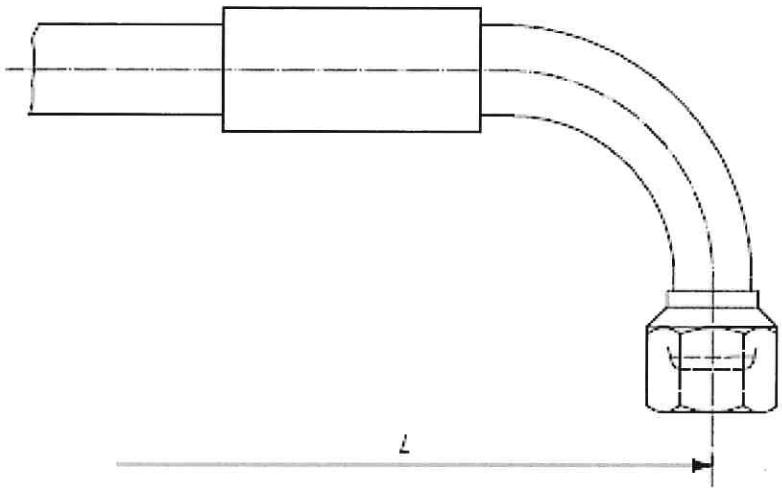


Figure 7-Length from the fitting axis (90° angle) of a fitting (female)

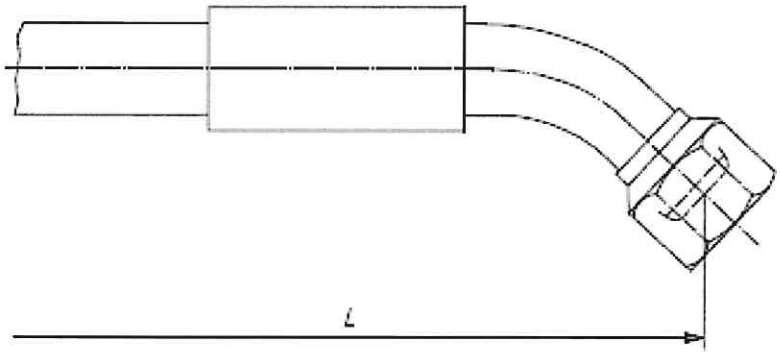


Figure 8-Length from the fitting axis (45° angle) of a fitting (female)

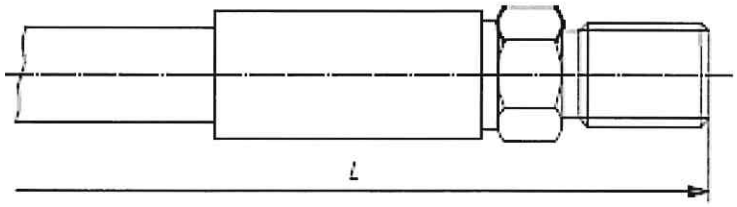


Figure 9-Length to the end fitting (male)

Unless otherwise clearly indicated by the customer, the measurement has to take place at the end (L) for all male fittings (cylindrical, tapered)

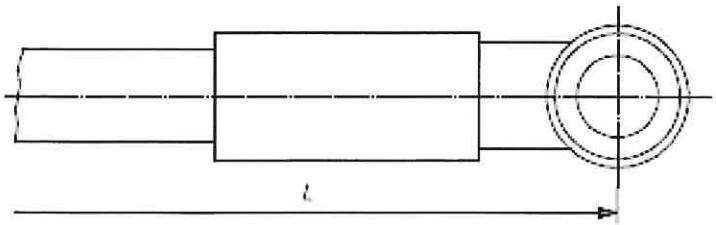
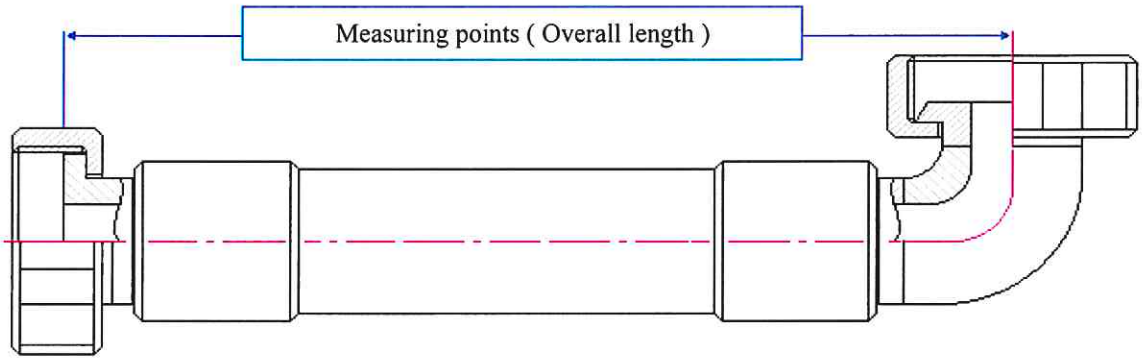
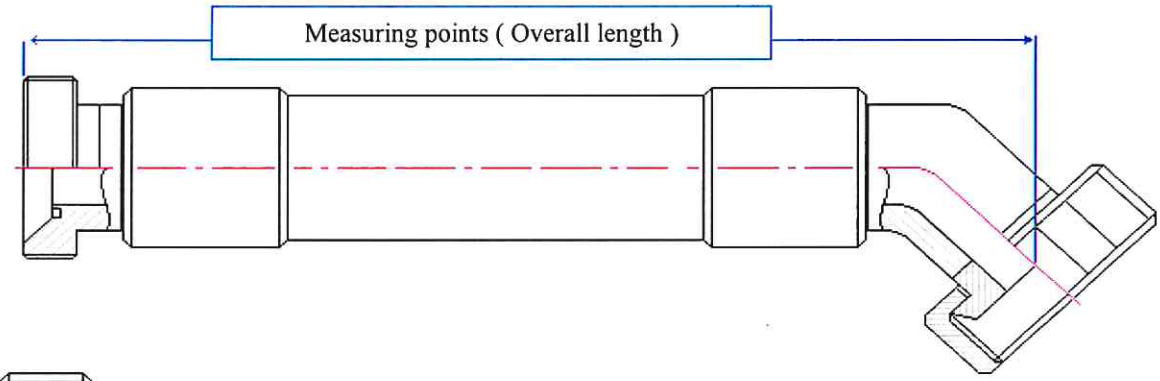
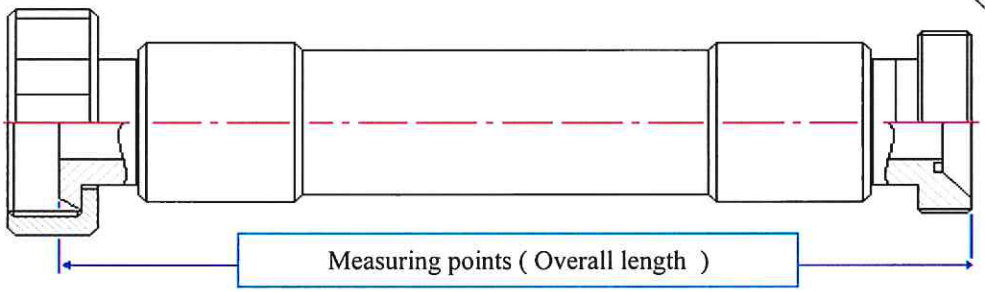


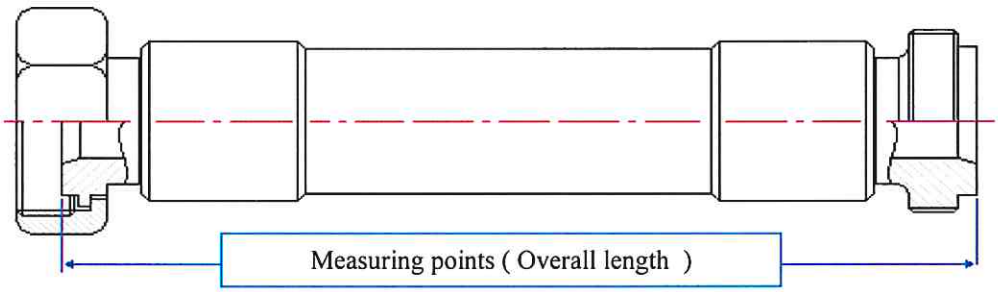
Figure 10-Length from the connection axis banjo

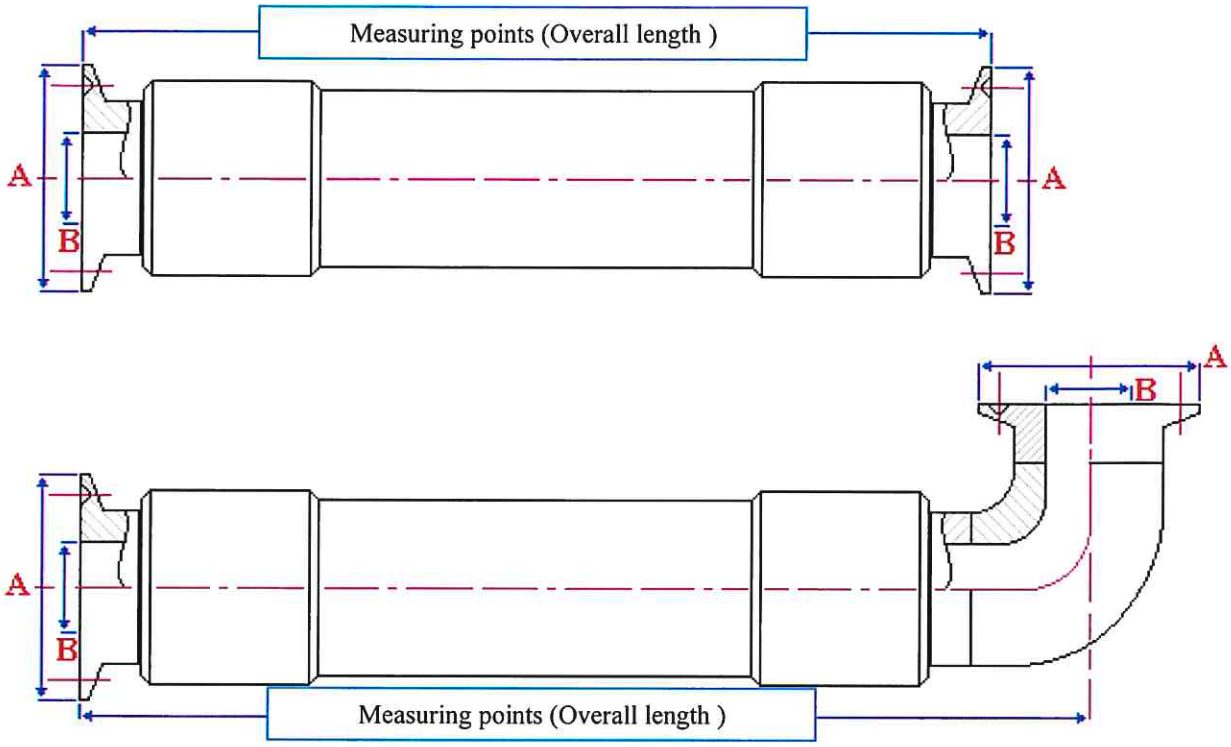
Other figures :

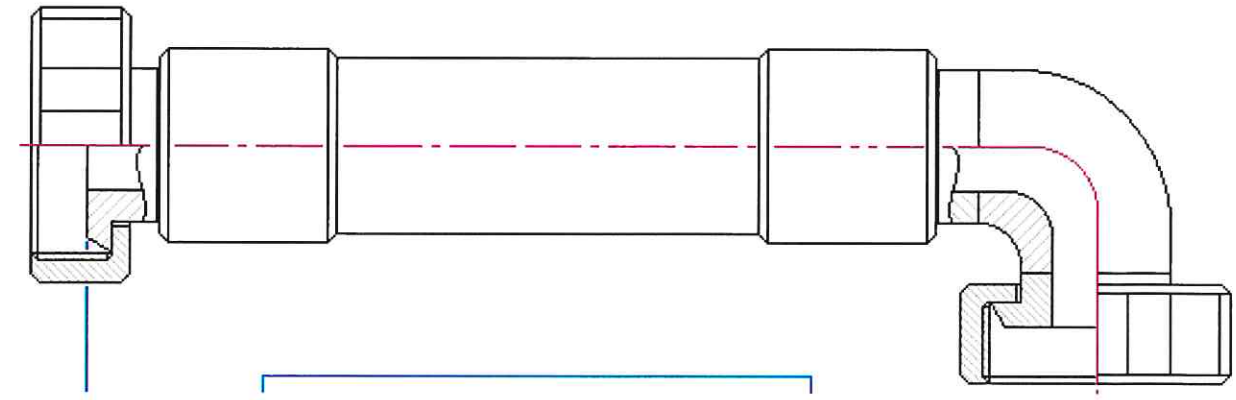


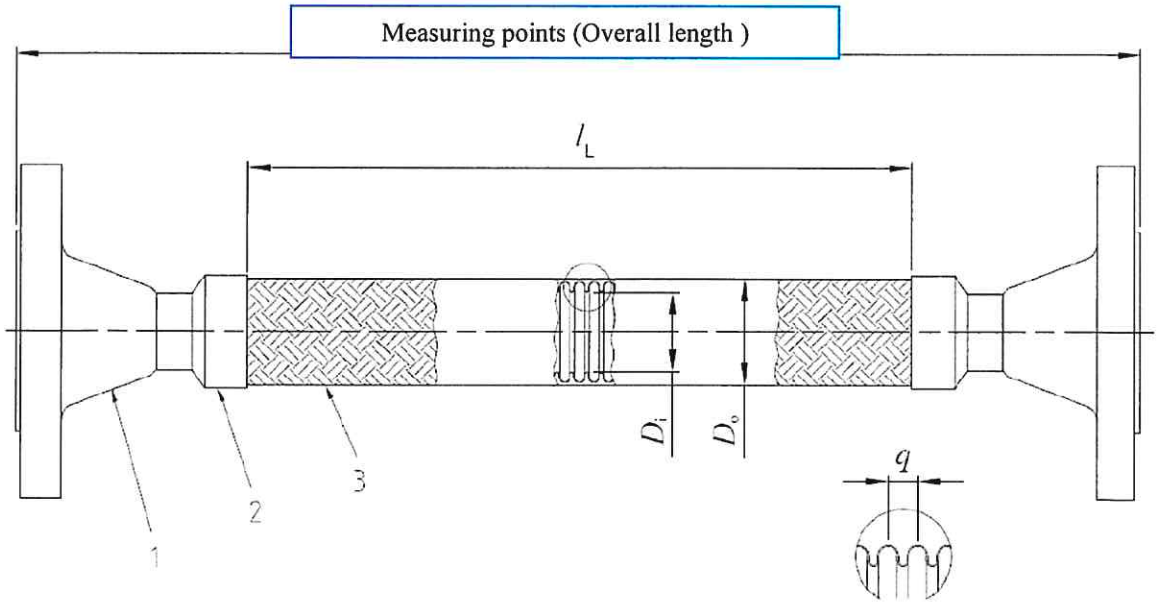












F.0041.01.0405

D / Tolerances

- Non-assembled hoses (according to the NF EN ISO 1307 standard - **Rubber and plastic hoses hoses dimensions, minimum and maximum inner diameters, and tolerances along the cutting length)**

Length (mm)	Tolerance
≤ 300	-/+ 3 mm
>300 et ≤ 600	-/+ 4.5 mm
>600 et ≤ 900	-/+ 6 mm
>900 et ≤ 1200	-/+ 9 mm
>1200 et ≤ 1800	-/+ 12 mm
>1800	-/+ 1 %

- Assembled hoses

Tolerance for hoses assemblies must be -1 / + 3% according to **NF EN ISO 10380 standard (Operating procedure for measuring a pipe or a hose - Pipework – Corrugated metal hoses and hose assemblies)**

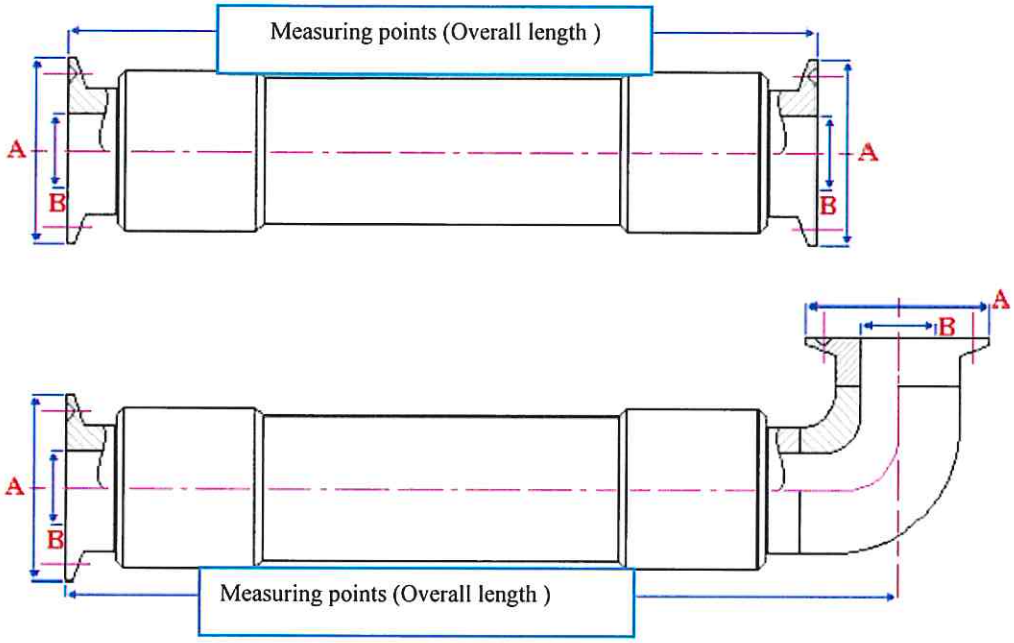
For short hoses assemblies, these tolerances do not apply because a tolerance corresponding to a corrugation is often necessary depending on the technique of fixing the fittings. The tolerance on the length must in no case be less than 99% of the length ordered.

Unless otherwise specifically indicated to GECITECH by the customer, the overall length of a hose is the length ordered with the tolerances as defined by our standards.
For any other specific tolerance requests, contact our technical department during the request for quotation in order to make sure about the feasibility, and, in all cases, before placing the order (feasibility validation by acknowlegment).

N.B. The tolerances applied by GECITECH are at a minimum as per the pre-cited standard.

N.B. The measures and tolerances are given before any possible hydraulic testing requested by the customer. Depending upon the type of hose, its dimensions can be modified after hydraulic testing.

E / Estimating the minimum lengths for making assembled hoses

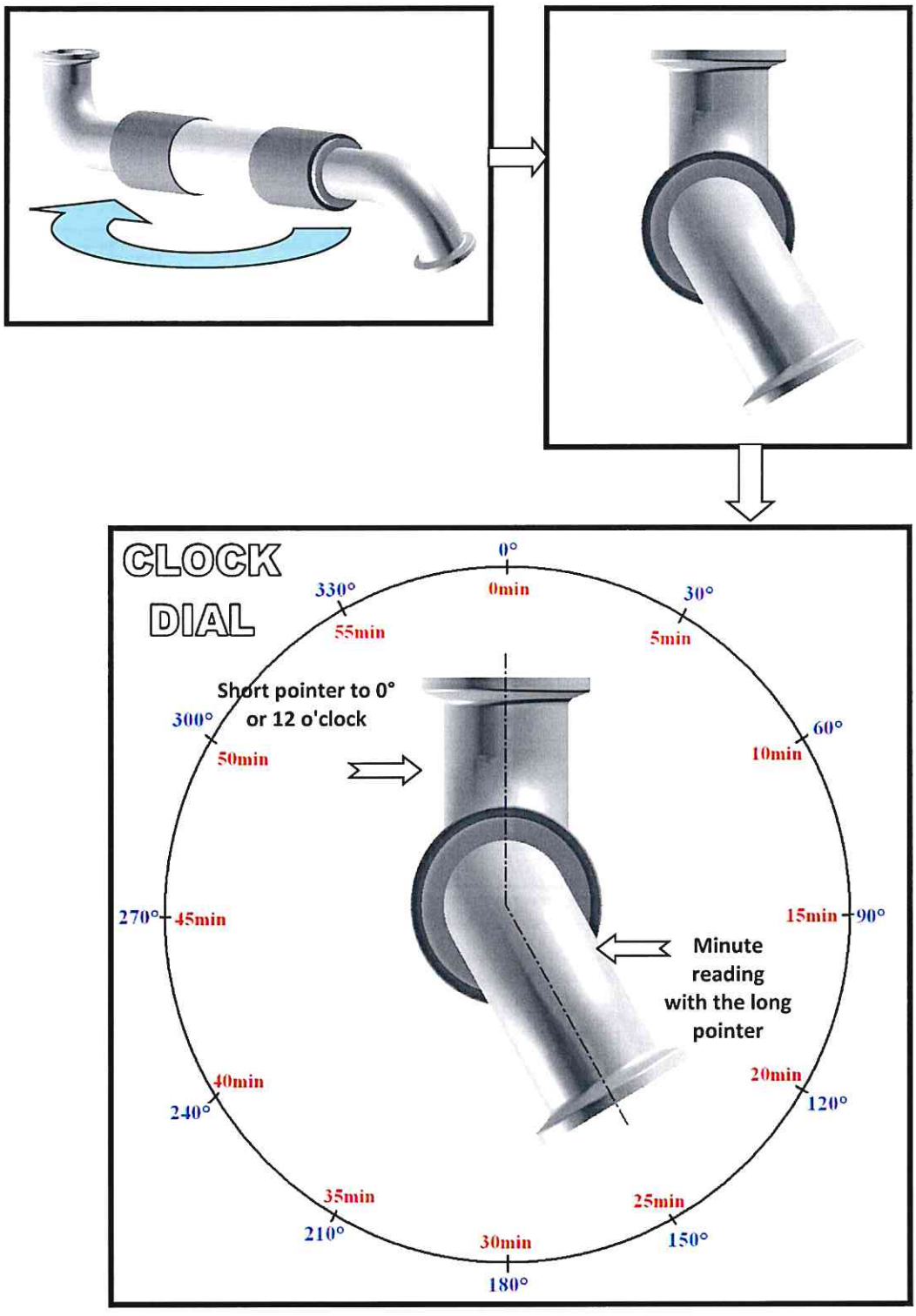


Nominal diameter (mm)	Minimal Length (mm)
6	200
8	200
10	250
13	250
16	250
18	300
19	300
20	300
22	300
25	300
32	350
35	350
38	350
51	400
63	400
76	400
100	500

The lengths are given as an indication only, for static use. For any length shorter than the above values, please contact our technical department.
For any dynamic application, longer lengths are mandatory and have to be defined depending upon the equipment. Example : loading cells, depending upon the diameter, the length has to be able to absorb all movements.

F / Fittings orientation

If two elbow fittings are not in the same plane, the angle is defined according to the drawing below.
General tolerance of the angle of rotation : ± 5 °.



Example : Orientation at 12h25 min

G / Maintenance

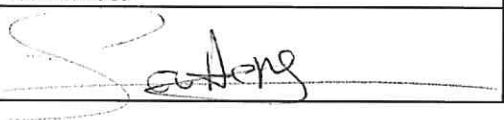
It is recommended that hoses and assembled hoses, excluding those for which there are regulations, standards or contractual requirements, be subject to periodic testing/inspections in order to establish their aptitude to stay in service. Special attention must be paid to the condition of the fitting and of the adjacent zones, and to the occurrence of anomalies revealing deterioration of the hose due to normal ageing or to harm caused by abnormal conditions of use, bad treatment or accidents in service.

The following defects are sufficient to justify removing a hose from service :

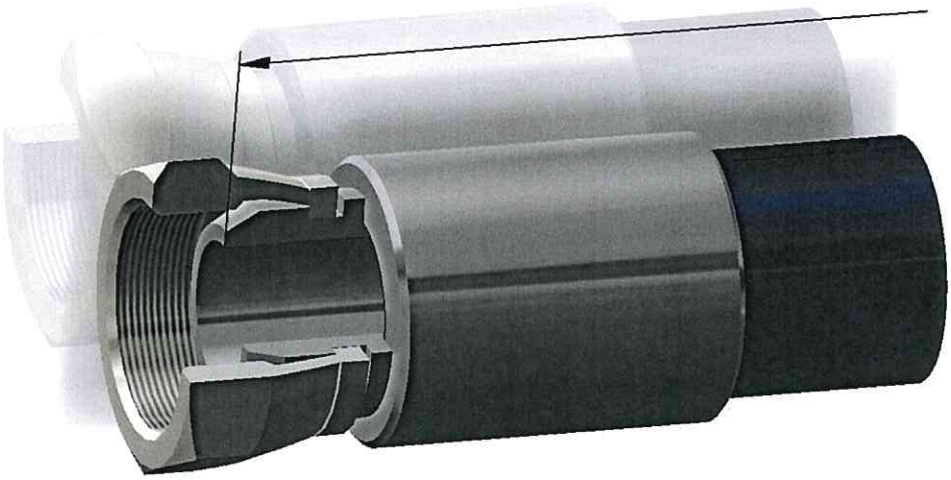
— perforations, cuts, tears, bared reinforcement ;
— cracks ;
— localised deformation, blisters, swelling under pressure ;
— pitting corrosion.

When "limit of use" or expiry dates are present on a hose marking, it is recommended to comply with them even if the hose does not show any visible sign of deterioration.

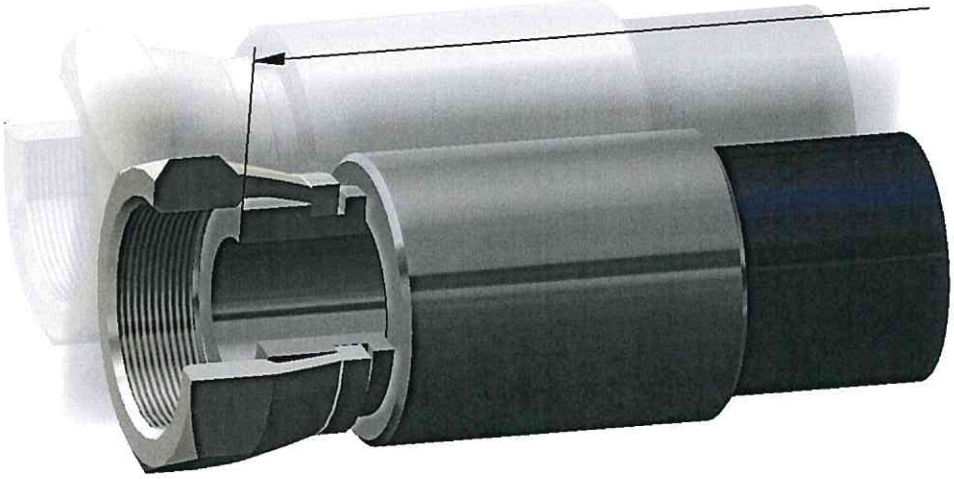
Check the condition of the hose periodically.

	Rédacteur	**Vérificateur - Approbateur**
Fonction	Responsable Qualité	Directeur Technique
Nom	Laurent GOUTTENOIRE	Pierre BISCARRAT
Date	19/11//2019	19/11/2019
Visa		

TBSP & TNPSM

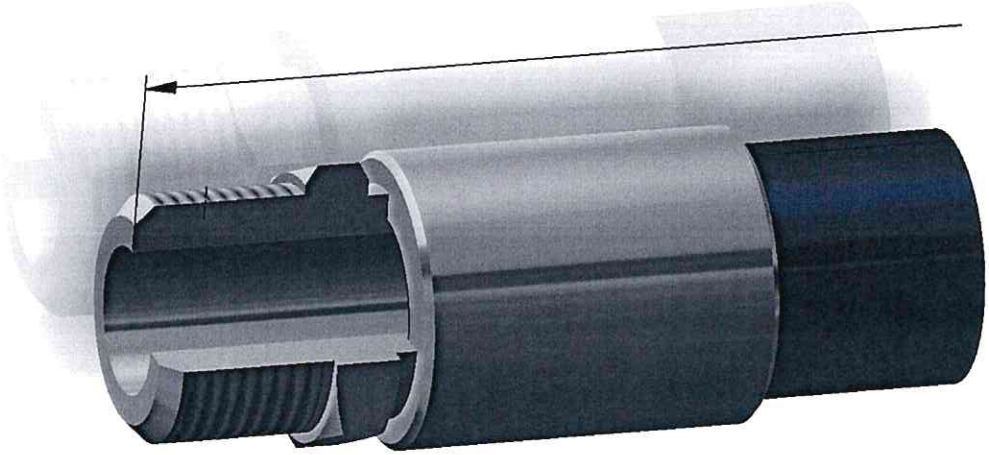


TBSP FP

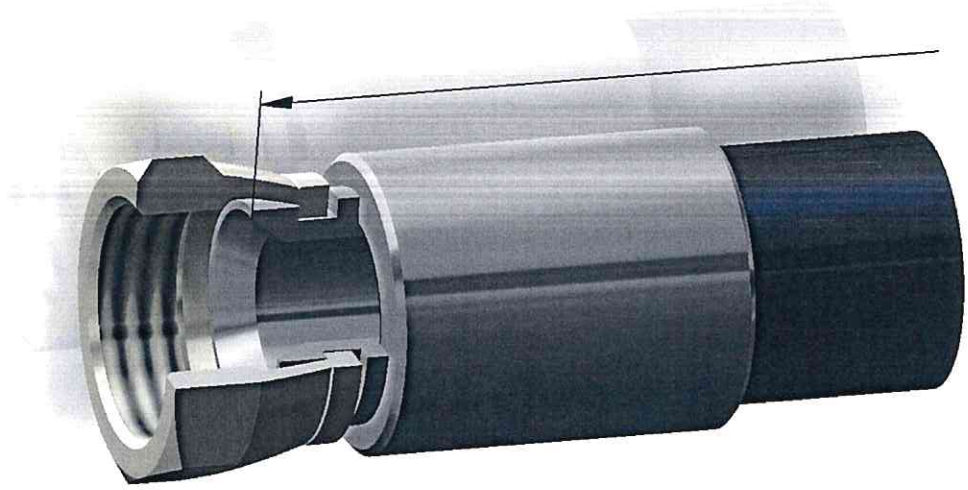


MBSP

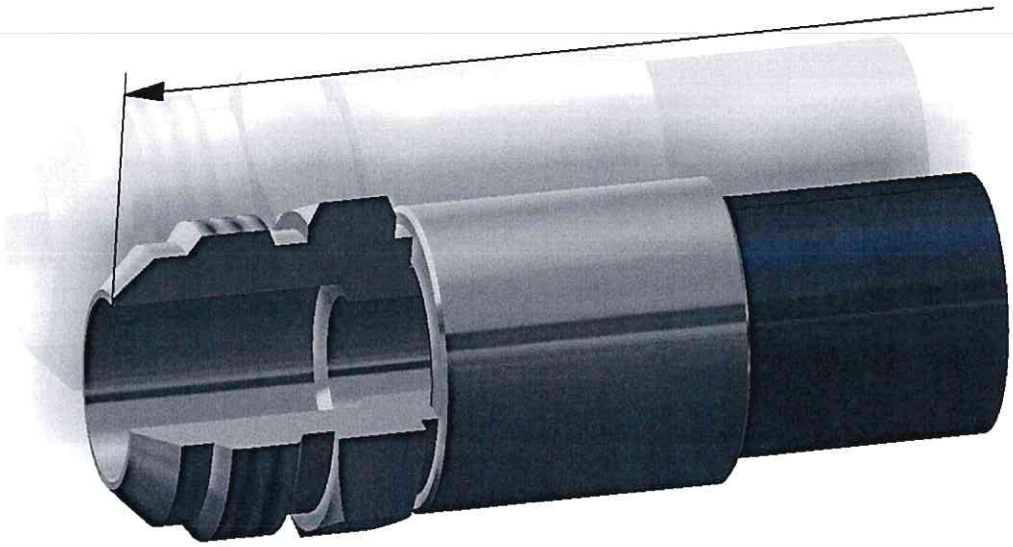
MGC & MNPT (BRIGGS)



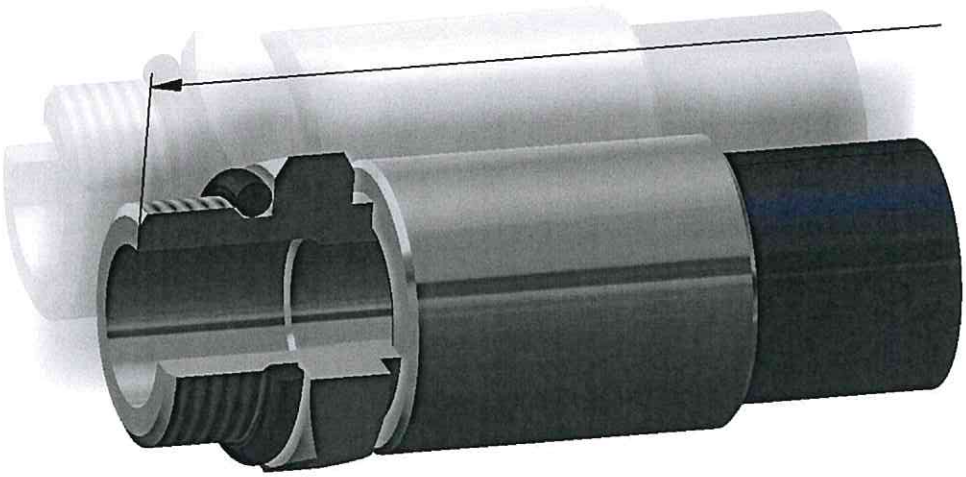
TJIC & JIS (TOYOTA) & T.SAE CONE 90°



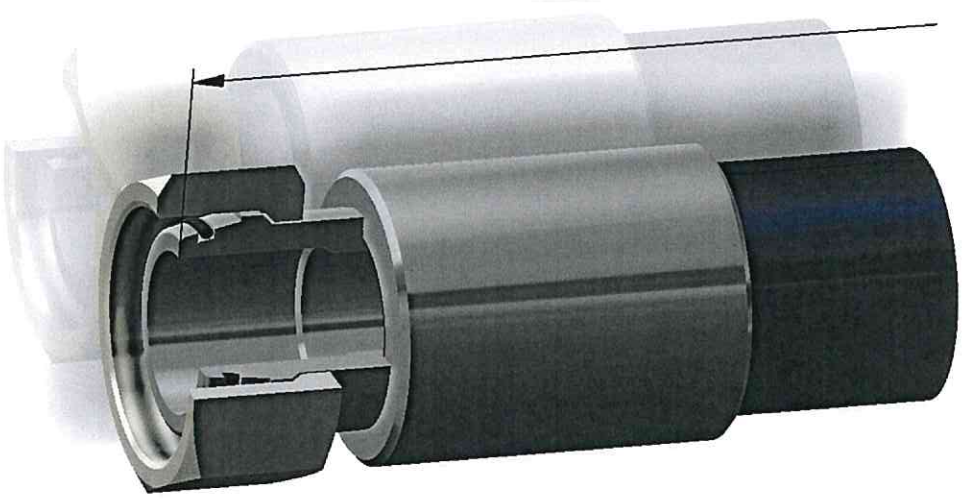
MJIC & M.SAE CONE 90°



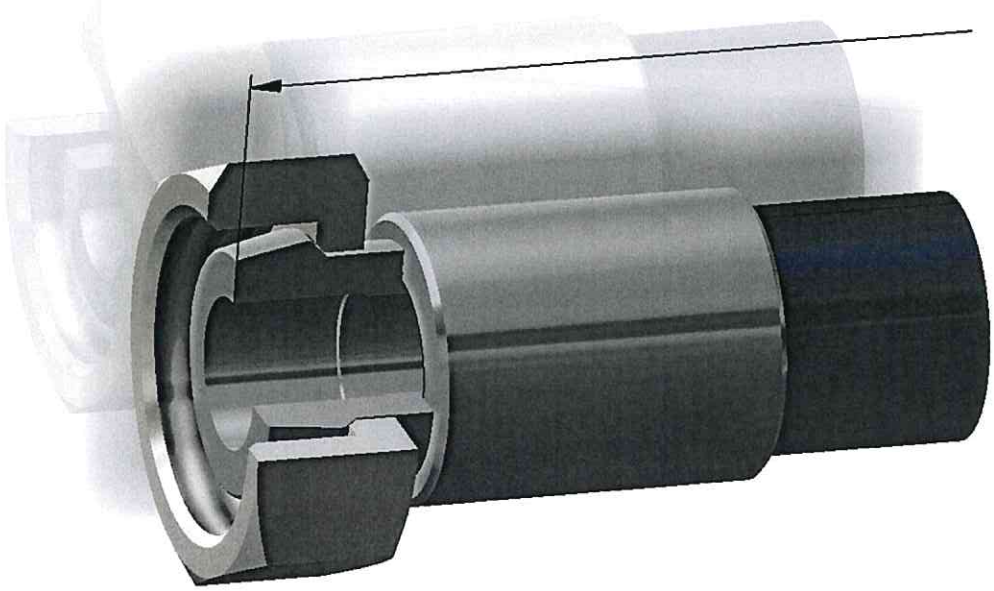
M.SAE ORING



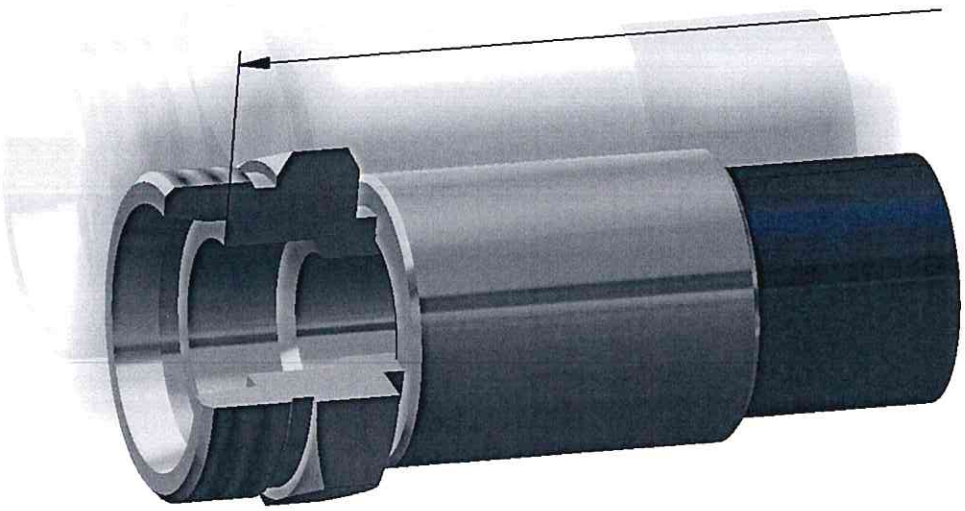
F. DIN2353 L & S (Etalo & Etafo)



ETG

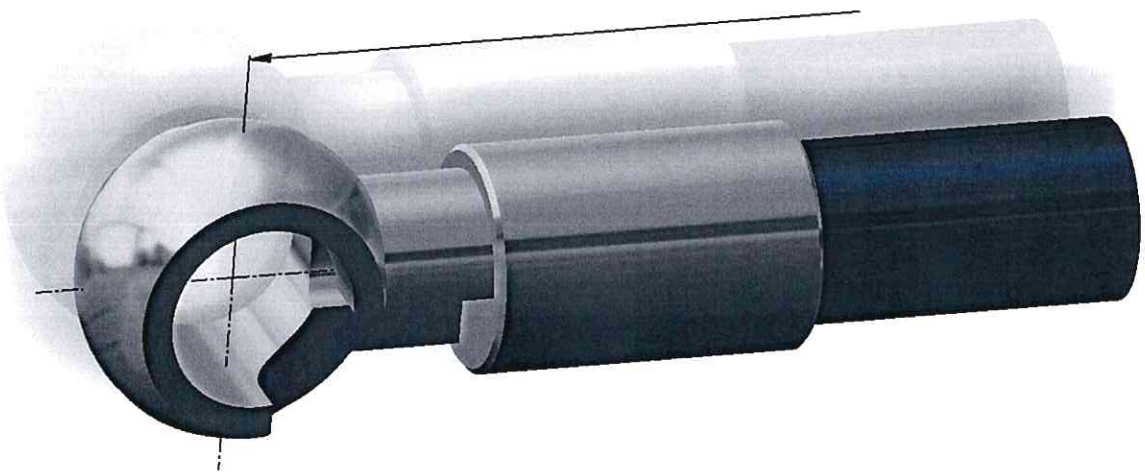


EFG, M. DIN2353 L&S

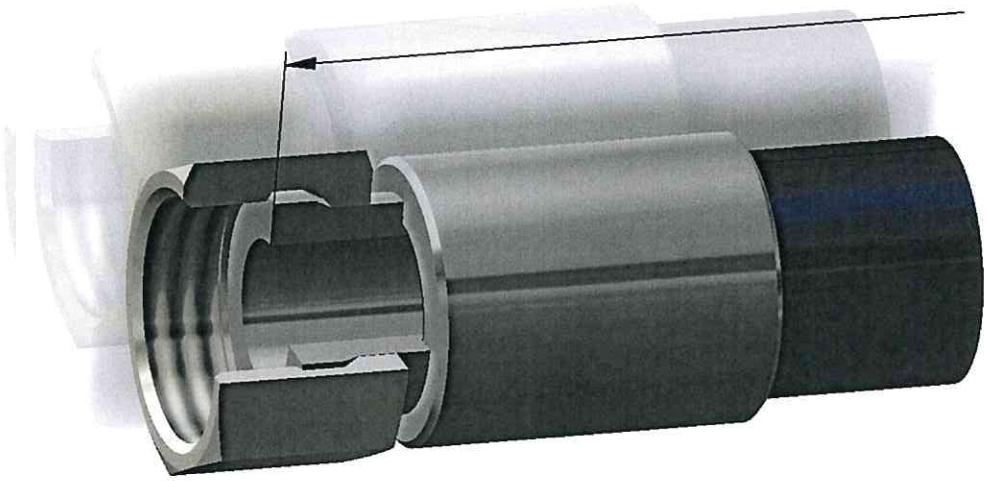


ELM & ELG

BANJO



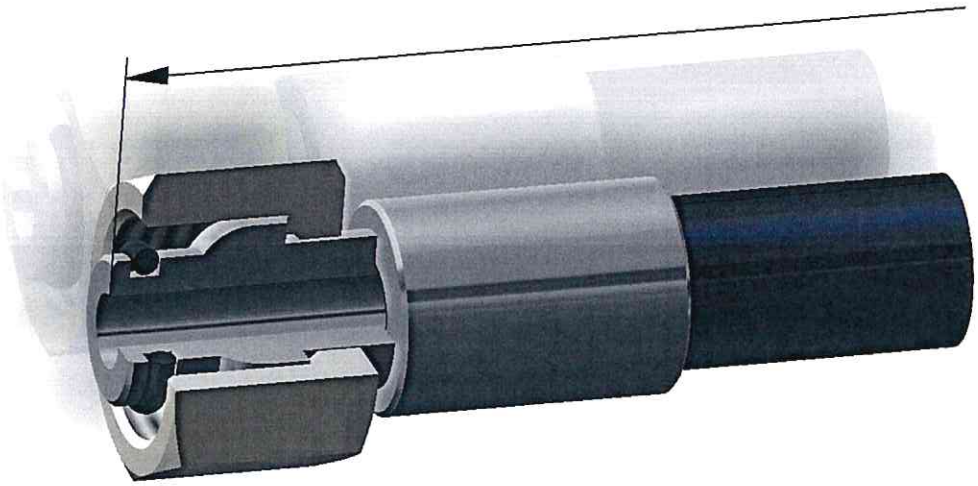
F. ORFS



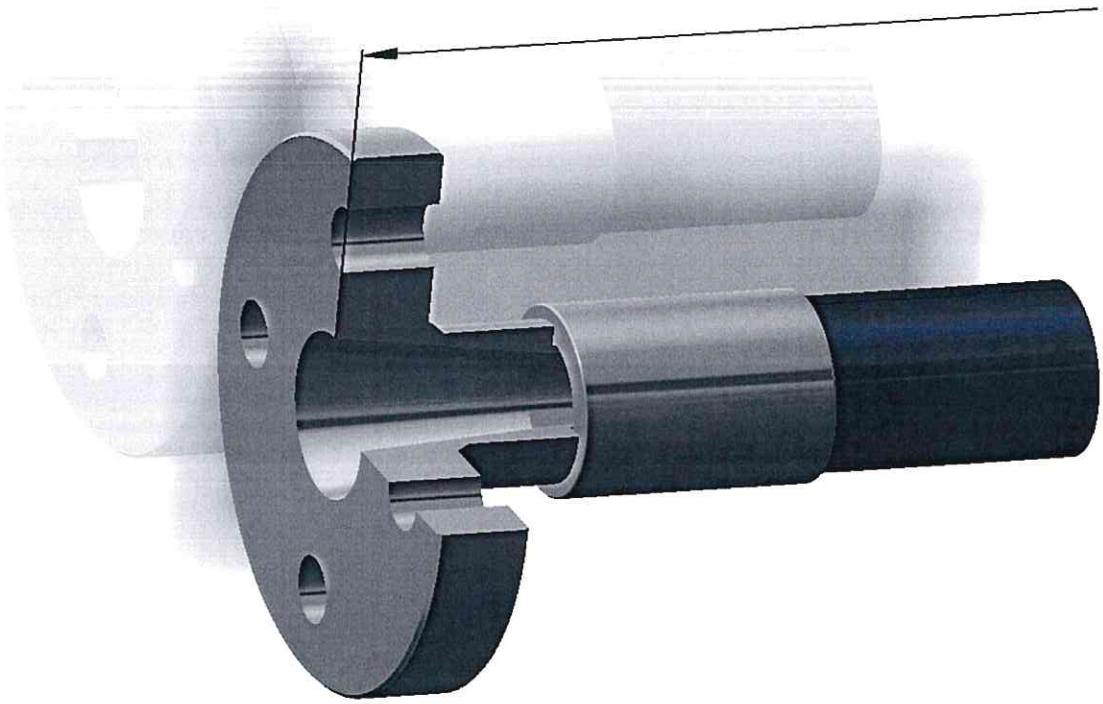
M.ORFS

BR3000 &6000 PSI

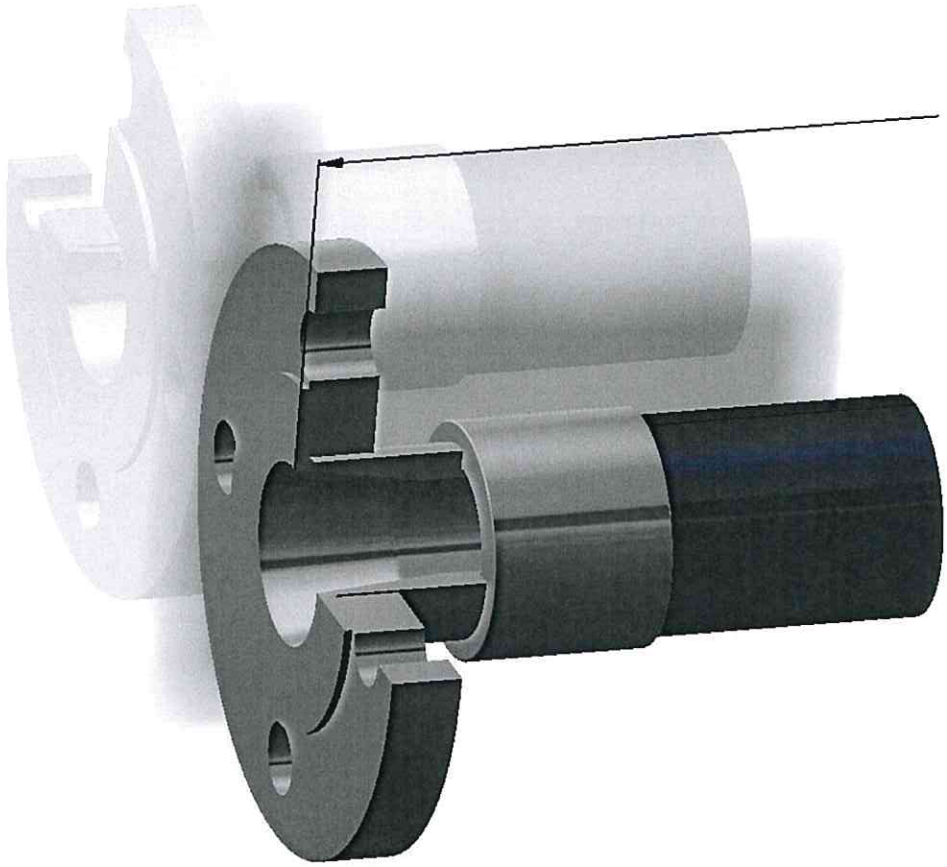
KARCHER



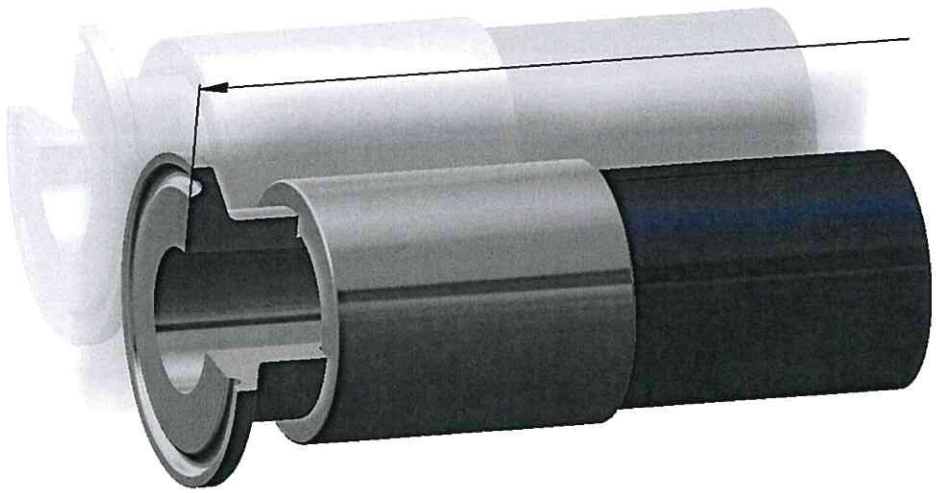
BRIDE FIXE



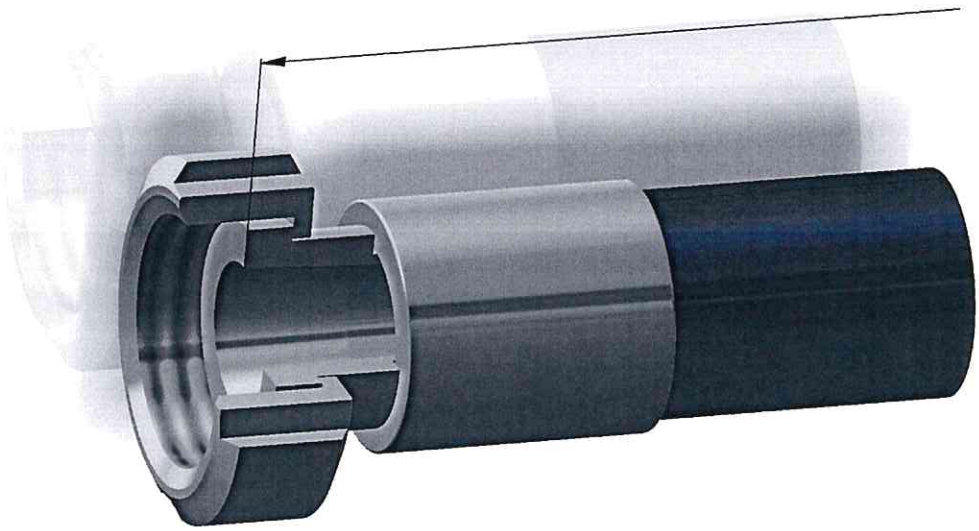
BRIDE TOURNANTE



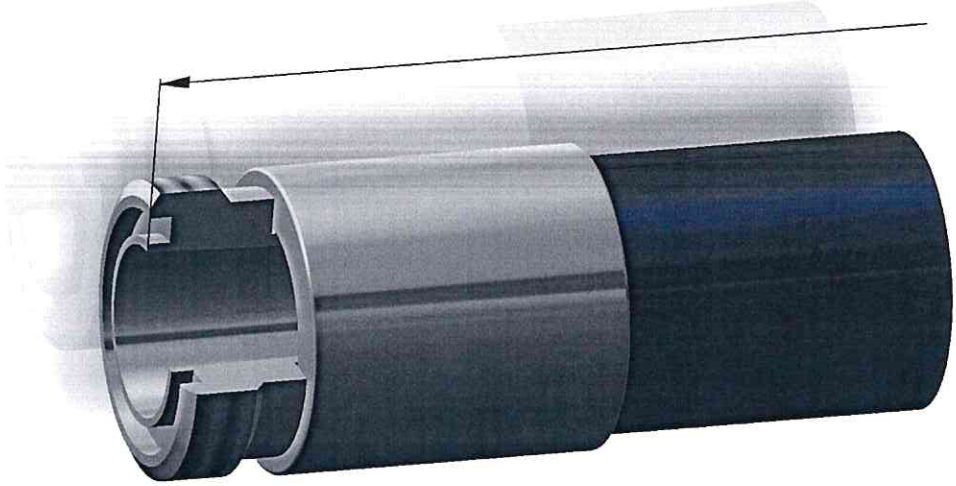
CLAMP



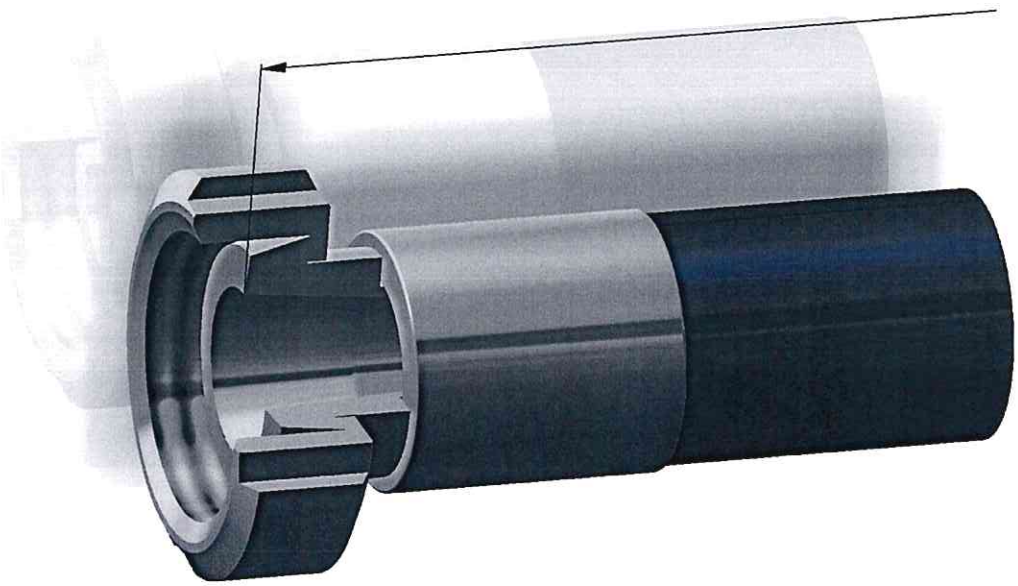
F.SMS



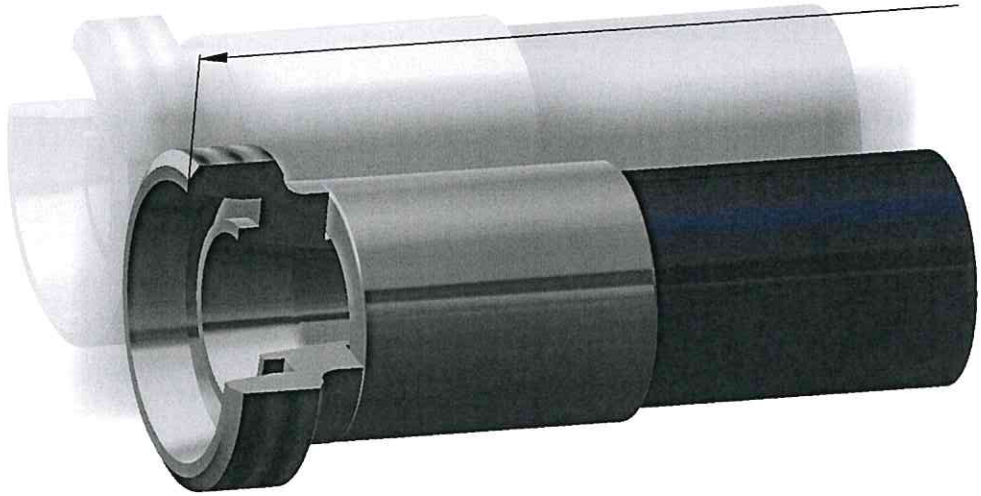
M.SMS



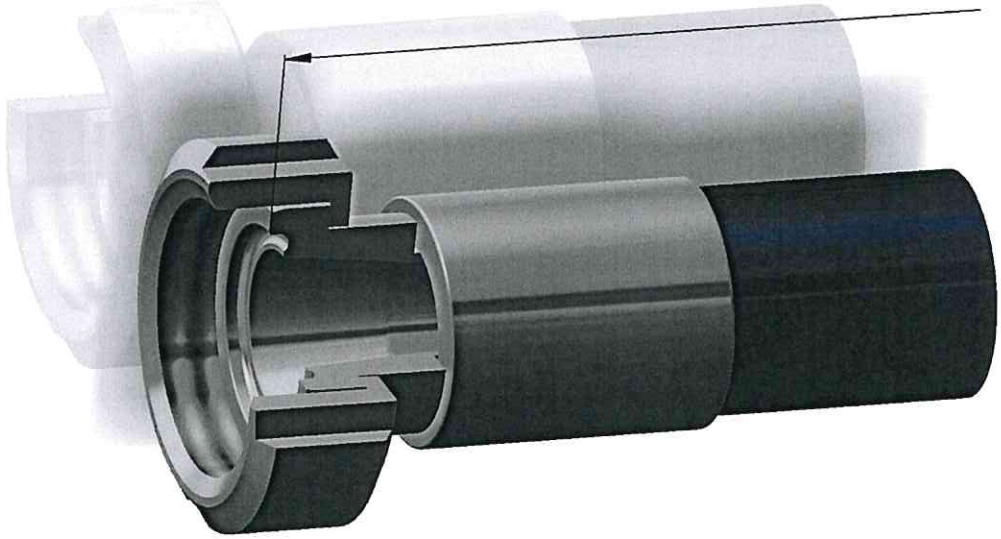
F.DIN



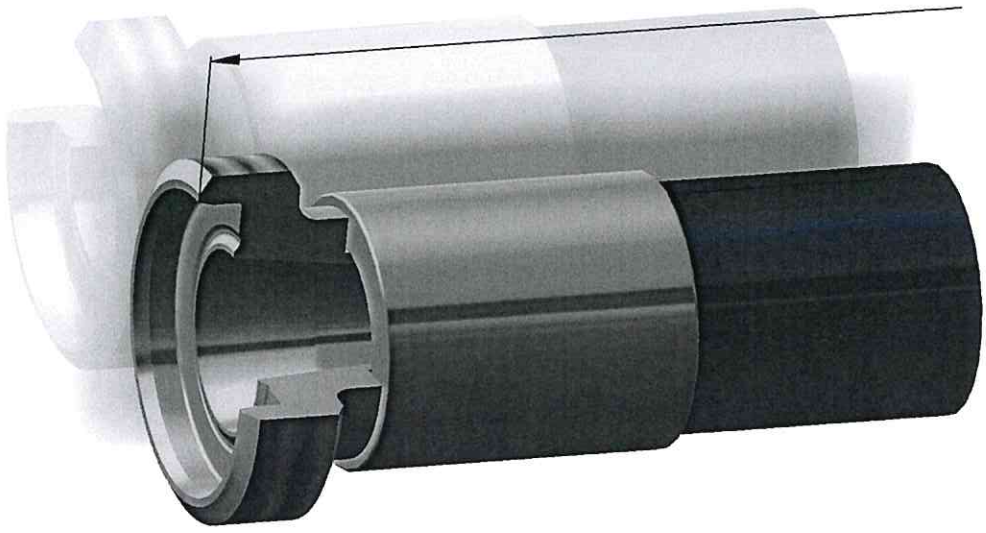
M.DIN



F. DIN11864

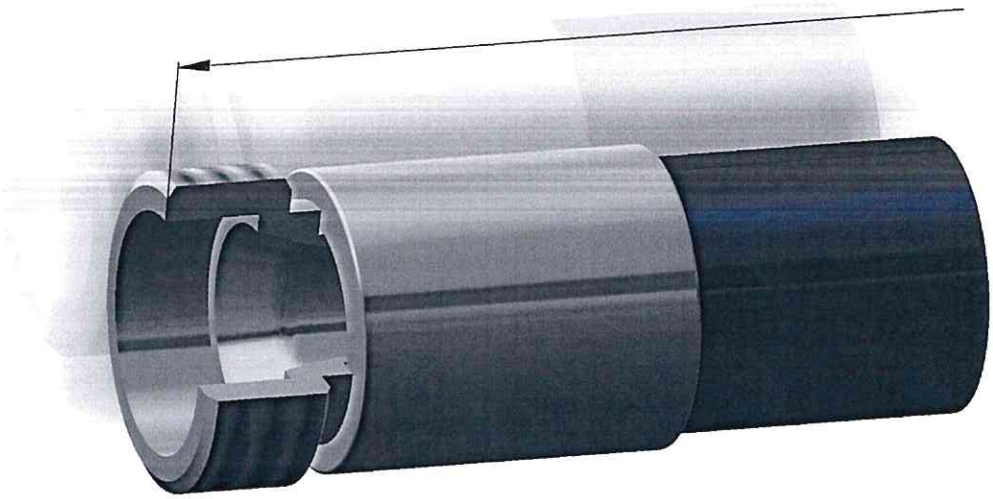


M.DIN11864

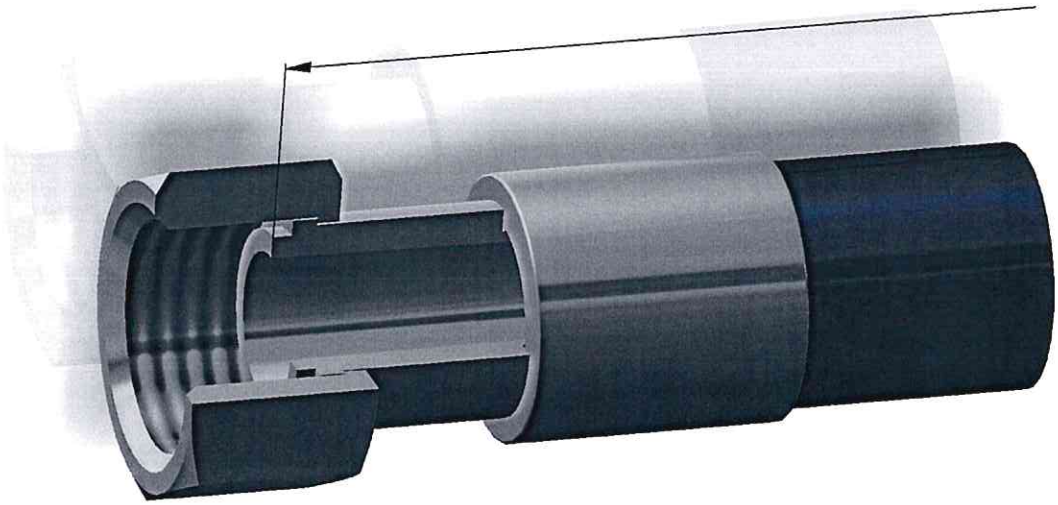


F. MACON

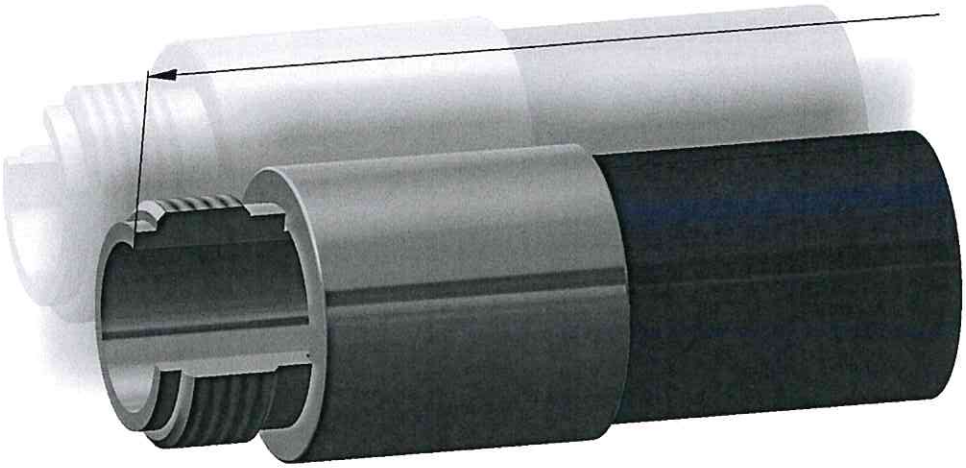
M.MACON



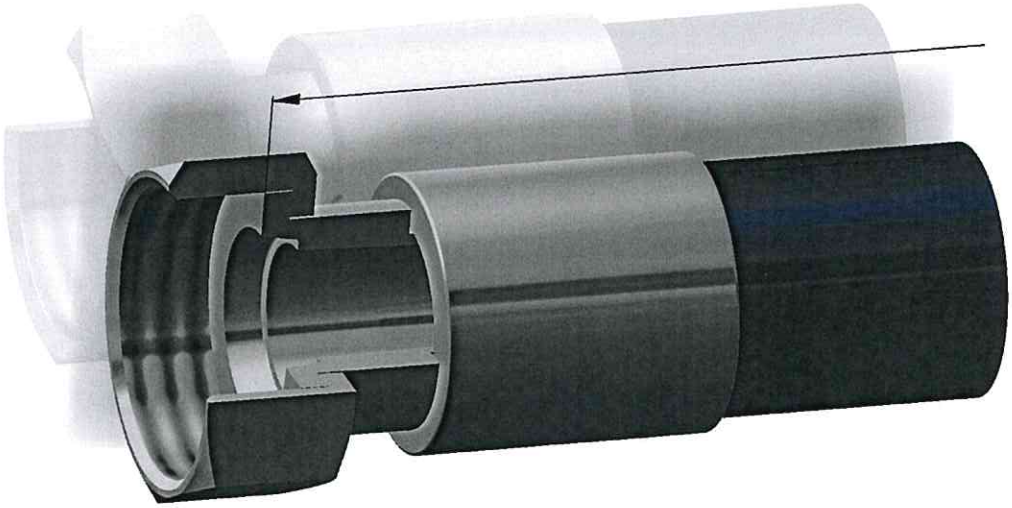
F.IDF



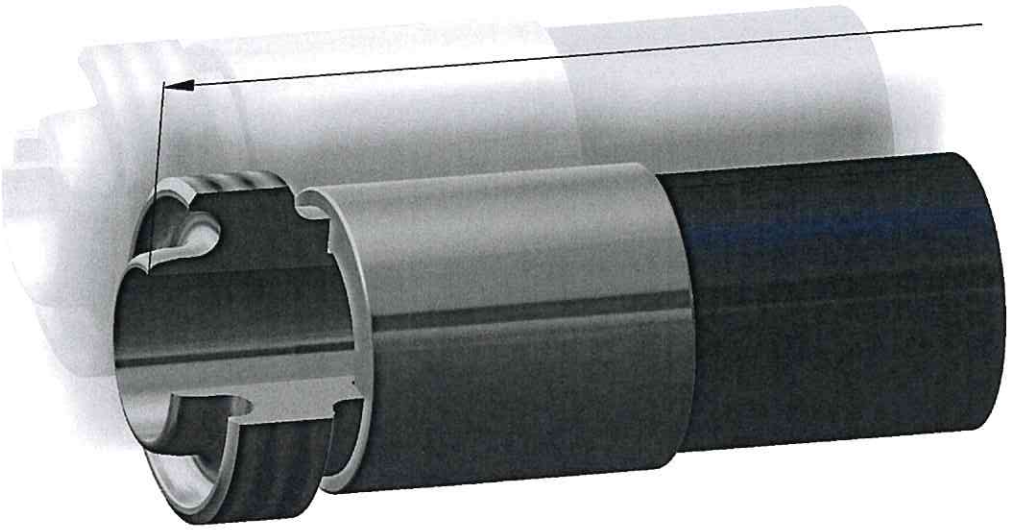
M.IDF



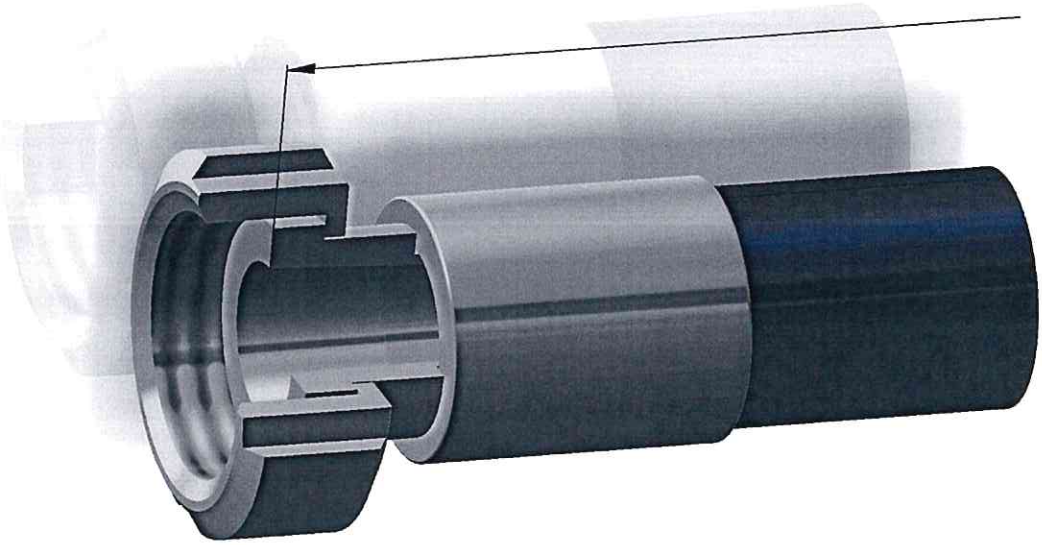
F.RJT



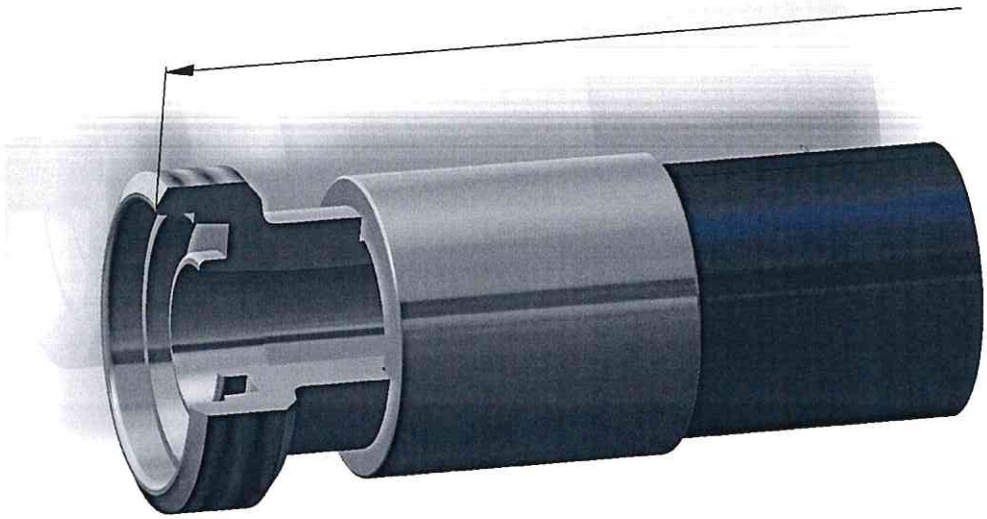
M.RJT



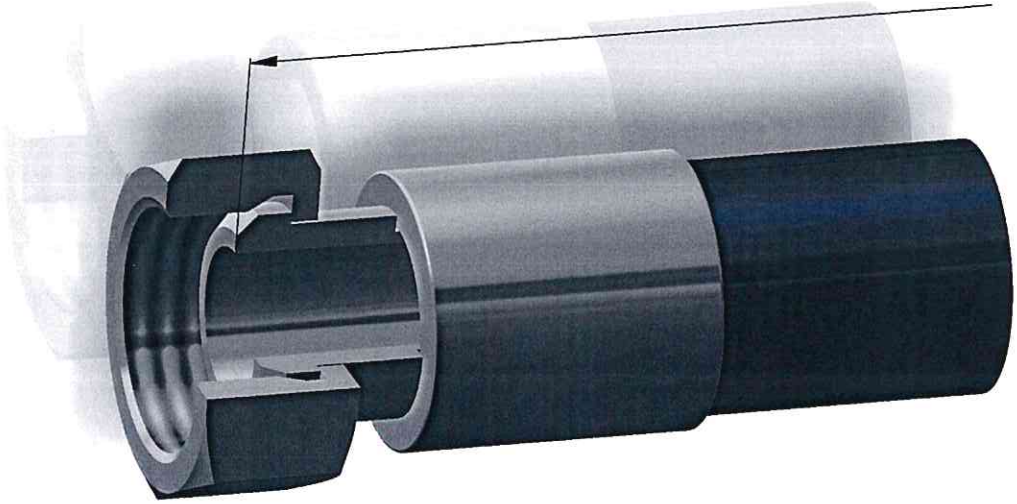
F. SUDMO



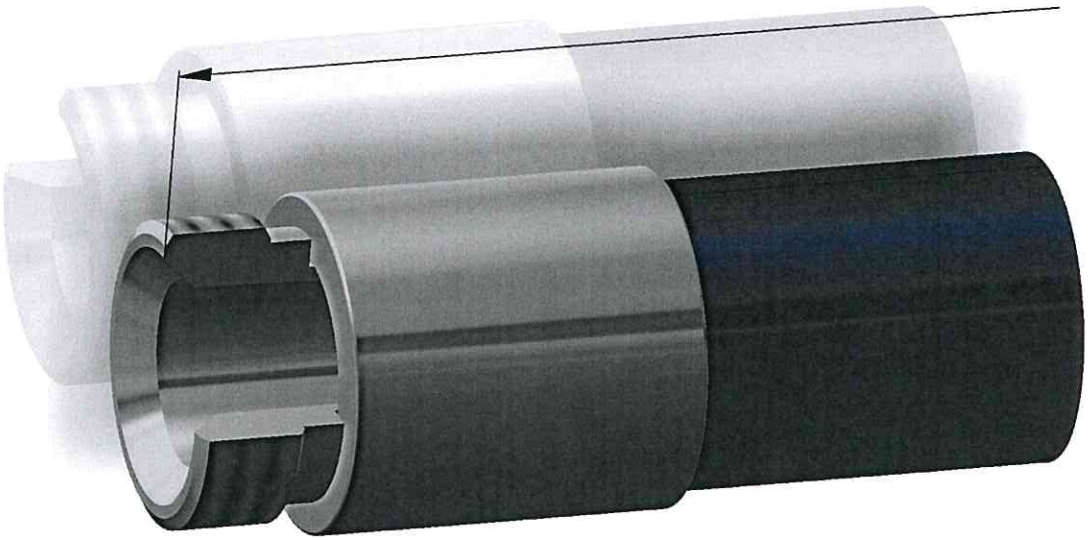
M.SUDMO



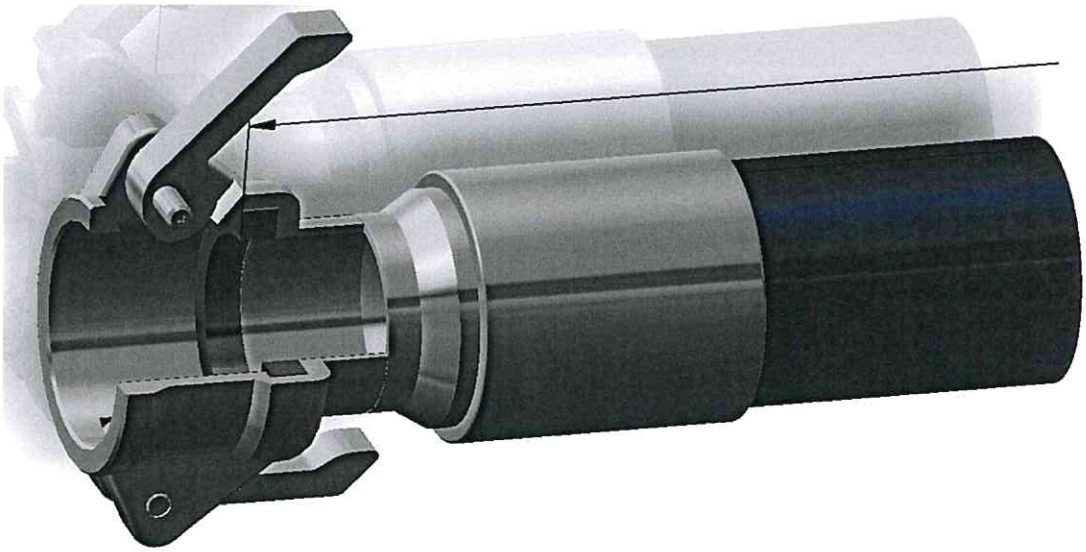
F. BEVEL SEAT



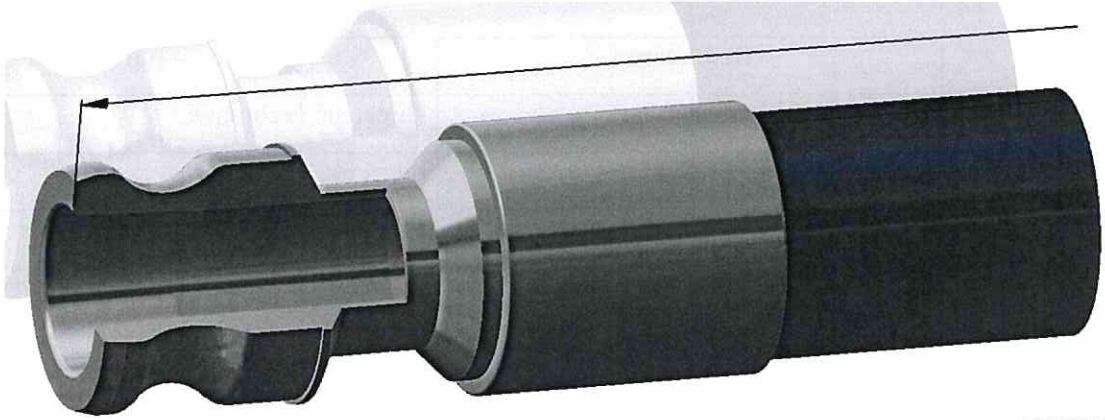
M.BEVEL SEAT



F.CAMELOCKS



M.CAMELOCKS



	Rédacteur	Vérificateur - Approbateur
Fonction	Responsable Qualité	Directeur Technique
Nom	Laurent GOUTTENOIRE	Pierre BISCARRAT
Date	15/11/2019	15/11/2019
Visa		