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PPS SQ



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PREVOST PIPING SYSTEM - PPS

- OUTILS NÉCESSAIRES À L'INSTALLATION
- INSTALLATION TOOLS REQUIRED
- BENÖTIGTE MONTAGEWERKZEUGE
- HERRAMIENTAS NECESARIAS PARA LA INSTALACIÓN
- UTENSILI NECESSARI PER L'INSTALLAZIONE

PPS CH / PPS CHPD

Outil à chanfreiner pour tube /
Pipe chamfering tool /
Rohrentgrater /
Herramienta de biselado para tubos /
Utensile per smussatura tubo



PPS CHERAP

Outil d'ébavurage /
Deburring tool / Werkzeug zum
Handentgrater / Herramienta para besbar-
bar / Utensile per sbavatura



PPS1 CLE

Clé de serrage /
Tightening wrench /
Montageschlüssel / Llave de apriete /
Chiave di serraggio



PPS1 CLESTD

Clé de maintien à ergot /
Hook spanner / Hakenschlüssel /
Llave de pico de loro ajustable /
Chiave a dente per tenuta



PPS CTU

Coupe tube / Pipe cutter /
Werkzeug zum Entgraten /
Rohrschneider / Cortatubos / Tagliatubo



PPS AL

Gel lubrifiant pour opération
d'assemblage /
Assembly gel / Montagepaste zum Zusam-
menfügen / Gel lubrificante
para operaciones de ensamblaje /
Gel lubrificante per assemblaggio



PPS SP

Foret de perçage / Tapping flange drill bit /
Bohrer / Broca
de perforación / Punta per foratura



PPS INS

Outil d'aide à l'insertion tube sur raccord
PPS / Insertion tool guide for PPS pipe
and fittings/ Einschubwerkzeug zur
Fittingmontage / Herramienta de asistencia
para la inserción tubo/racor / Utensile per
inserimento tubo nel raccordo PPS



TTW

Clés dynamométriques /
Torque wrenches /
Drehmomentschlüssel /
Llaves dinámométricas /
Chiavi dinamometriche



Douille hexagonale /
Hex socket /
Sechskantstecknuss /
Casquillo hexagonal /
Bussola esagonale



Perceuse /
Drill /
Bohrmaschine /
Taladro /
Foratrice



Marqueur /
Marker /
Markierstift /
Marcador /
Pennarello per marcatura



Mètre ruban /
Tape measure /
Maßband /
Metro /
Metro a nastro



Gants de protection /
Gloves /
Schutzhandschuhe /
Guantes de protección /
Guanti di protezione



Lunettes de protection /
Protective goggles /
Schutzbrille /
Gafas de protección /
Occhiali di protezione



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A- LES RÈGLES D'INSTALLATION D'UN RÉSEAU D'AIR COMPRIMÉ

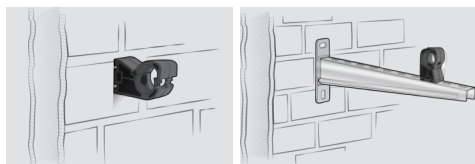
■ PRÉREQUIS AVANT INSTALLATION

La **salle** des compresseurs est de préférence **spacieuse, bien ventilée, bien isolée et séparée du reste des ateliers.**

Les machines seront connectées au réseau **PPS** par des **flexibles** afin d'éliminer les risques liés aux vibrations et permettre une maintenance plus facile (Flexibles LEF et LEM). Il est important **d'installer des by-pass entre chaque machine**, entre le(s) réservoir(s) et les différents filtres.

Le **réseau** principal doit être **bouclé** et doit être installé pour des raisons de sécurité à une hauteur minimale de **2,5 m** du sol.

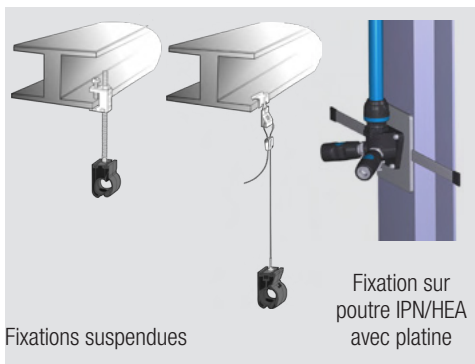
■ FIXATION DU RÉSEAU



Fixations murales

Les **condensats résiduels** seront **évacués** de la ligne principale **par des descentes directes** réalisées sous la génératrice inférieure du tube et **équipées** d'un système de purge automatique.

Le diamètre de la canalisation principale (canalisation primaire) sera suffisamment important pour éviter les pertes de charge et répondre aux extensions futures. Elle sera fixée avec un **nombre suffisant de colliers coulissants** pour assurer son maintien tout en permettant la dilatation ou la contraction du tube (Colliers PPS CI). Une pente de **1%** est aussi recommandée afin de diriger les condensats vers les points bas (purges).



Fixations suspendues

Fixation sur poutre IPN/HEA avec platine

Les modes de fixation du réseau sont définis en fonction de la configuration du bâtiment et doivent être réalisés de façon à obtenir un **alignement parfait et une bonne solidité de l'ensemble.**

Il est donc important de **respecter les écartements de supportage du tube**, l'espace à respecter entre deux colliers de fixation est en moyenne de **3 mètres.**

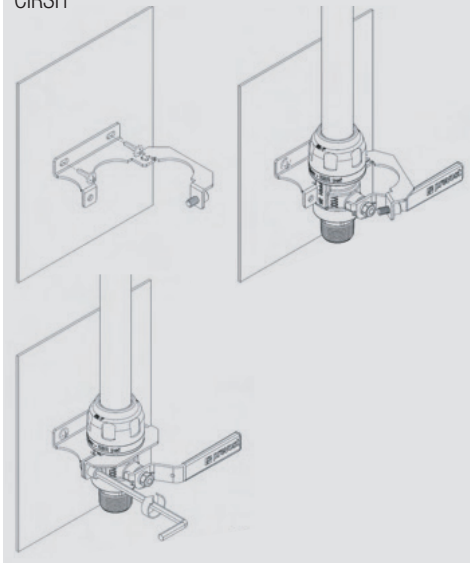
L'espacement entre 2 colliers est défini en fonction du diamètre, de la température et du poids du fluide transporté. Il est conseillé de suivre les espacements suivants :

∅	Espacement exprimé en mètres selon la température			
	mm	<20°C	30°C	40°C
∅ 16		2 m	2 m	1,5 m
∅ 20		2,5 m	2 m	1,5 m
∅ 25		3 m	2,5 m	2 m
∅ 32		3,5 m	3 m	2,5 m
∅ 40		4 m	3,5 m	3 m
∅ 50		3,5 m	3 m	2,5 m
∅ 63		3,5 m	3 m	2,5 m
∅ 80		3,5 m	3 m	2,5 m
∅ 100		3,5 m	3 m	2,5 m
∅ 160		3,5 m	3 m	2,5 m

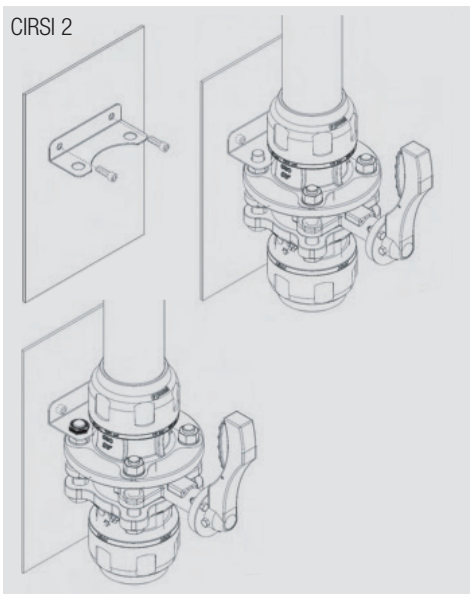


Les colliers ne doivent pas être mis en contact avec des raccords ou d'autres accessoires dans le but de ne pas bloquer le glissement du tuyau.

CIRSI1



CIRSI 2



■ PLATINES DE FIXATION SUR POUTRE IPN/HEA POUR ACCESSOIRES DE RÉSEAU

Elles permettent un **aménagement ergonomique et sécurisé** des postes de travail.

Les platines métalliques, associées à des systèmes d'accroche adaptés aux poutres IPN/HEA, permettent de **fixer rapidement** des équipements **en toute sécurité, sans perçage ni soudure, en conformité avec les prescriptions en vigueur**. Les platines sont conçues pour permettre la fixation de :

- Enrouleurs ouverts et fermés
- Appliques murales
- Ensembles de traitement d'air **Prevost Filtration**
- Supports universels + accessoires

■ DILATATION DES MATÉRIAUX

L'aluminium subit des phénomènes de dilatation ou de contraction en cas de variations thermiques qui peuvent être compensés par des dispositifs d'absorption sur la canalisation.

Le flexible joue ce rôle sur les petits diamètres de tubes et permet également de réaliser des changements de direction (angles), ou des contournements d'obstacles (piliers, poutres etc.). Pour les diamètres plus importants, des kits de dilatation remplissent cette fonction.

Coefficient de dilatation : 0,024 mm par mètre et par °C. La dilatation se calcule de la façon suivante :

C = Coefficient de dilatation

L = Longueur de la ligne droite (entre 2 points fixes)

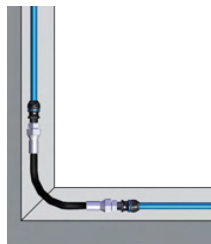
ΔT° = Écart entre la température ambiante maximum et minimum en °C.

DL = Dilatation globale

Soit DL = C x L x ΔT°

Exemple : une ligne de 20 mètres posée en Ø 40 mm, à une température ambiante de 15 °C pouvant subir une température maxi de 40 °C soit 25 °C de différence.

DL : 0,024 x 20 (m) x 25 °C (40 °C - 15 °C) = **12 mm**



Flexible



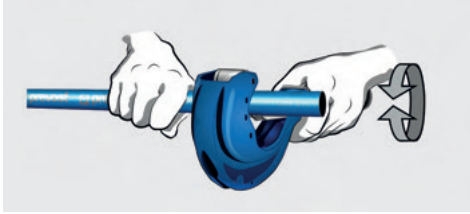
Kit de dilatation

B - PROCÉDURE D'INSTALLATION PPS

1 - COUPER LE TUBE

! **Attention** : la coupe doit être droite et perpendiculaire à l'axe du tuyau.

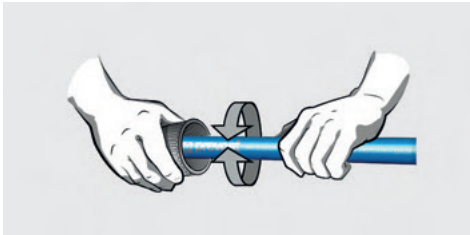
Remarque : vérifiez que la surface à l'extrémité du tuyau n'est pas endommagée. Évitez les rayures, les impacts pour assurer une opération de qualité.



Ø (mm)	Coupe tube
Ø 16 à 63	PPS CTU63
Ø 63 à 100	PPS CTU110
Ø 160	PPS CTU160

2 -CHANFREINAGE - ÉBAVURAGE ■ MANUEL

Après la coupe, ébavurer le tube à l'intérieur avec l'outil **PPS CHERAP** et exécuter impérativement un chanfrein à l'extérieur avec les outils adaptés. S'assurer de la bonne qualité du chanfrein et de l'absence de copeau à l'intérieur du tube.



Ø (mm)	Outils à chanfreiner
Ø 16 à 50	PPS CH50
Ø 63 à 100	PPS CH110

■ CHANFREINAGE MÉCANIQUE

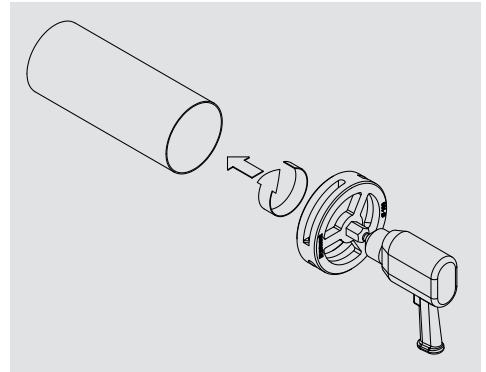


Ø (mm)	Outils à chanfreiner
Ø 16 à 20	PPS CHPD2016
Ø 25	PPS CHPD25
Ø 32	PPS CHPD32
Ø 40	PPS CHPD40
Ø 50	PPS CHPD50
Ø 63	PPS CHPD63
Ø 80	PPS CHPD80
Ø 100	PPS CHPD100
Ø 160	PPS CHPD160

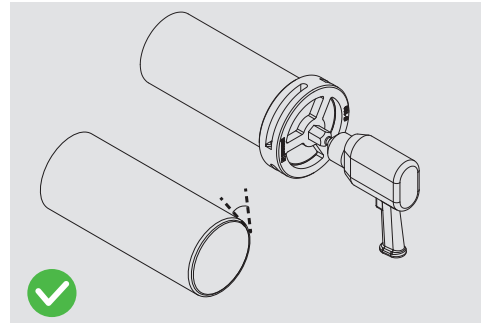
! **Attention** : portez des lunettes et gants de protection.

! **Attention** : il est impératif de suivre cette étape pour faciliter l'installation et éviter d'endommager le joint du raccord.

Vérifier le sens de rotation de la perceuse avant de débiter l'action sur le tube.

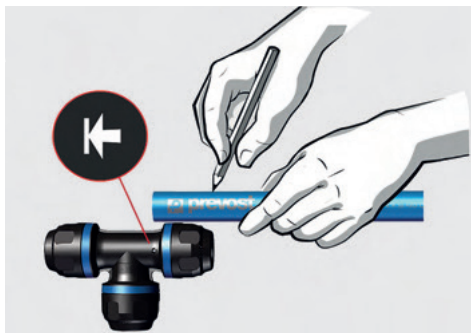


Ne forcez pas trop en direction du tube.



3 - MARQUER LE TUBE

Tracer un repère sur le tube afin de déterminer la longueur de pénétration du tube dans le raccord (cf tableau). L'utilisation du repère sur le raccord (ou sur la clé de serrage **PPS1 CLE**) permet de déterminer facilement la longueur d'emmanchement.

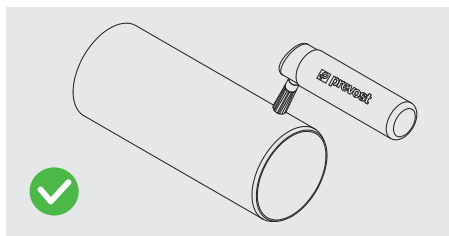


Ø (mm)	Longueur (mm)
Ø 16	32
Ø 20	38
Ø 25	44
Ø 32	52
Ø 40	62
Ø 50	72
Ø 63	83
Ø 80	95
Ø 100	95
Ø 160	120

4 - LUBRIFICATION DU TUBE

Après la coupe, contrôler l'état de surface et éliminer les résidus à l'aide d'un chiffon humide et d'un produit dégraissant non agressif.

Pour faciliter l'assemblage des différentes pièces, il est impératif d'utiliser le gel d'assemblage **PPS AL** (l'utilisation de lubrifiants, huiles ou corps gras dont la compatibilité chimique n'est pas assurée est à proscrire).

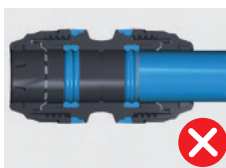
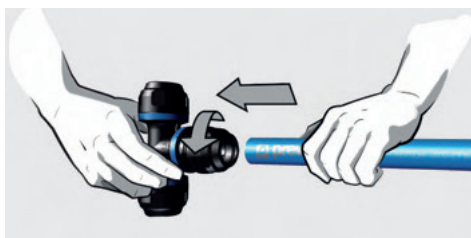


5 - ASSEMBLAGE RACCORD SUR TUBE

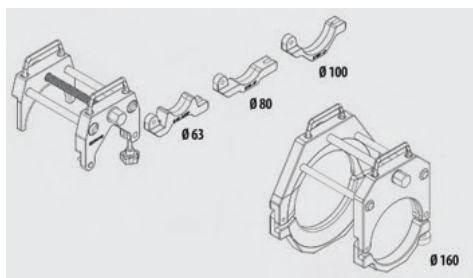
5.1. EMMANCHEMENT

5.1.b Manuel Ø 16 - 80

2. Desserrer l'écrou d'un tour minimum sans le démonter.
3. Contrôler la présence et le positionnement de tous les composants dans le raccord.
Vérifier l'orientation des griffes sans démonter le raccord (cf schéma).
4. Emboîter le tube en exerçant une légère rotation pour atteindre la longueur d'emmanchement. En cas de difficultés, il est recommandé d'appliquer sur les extrémités des tubes et des raccords le gel d'assemblage **Prevest (PPS AL)**. L'utilisation de lubrifiants, huiles ou corps gras dont la compatibilité chimique n'est pas assurée est à proscrire.



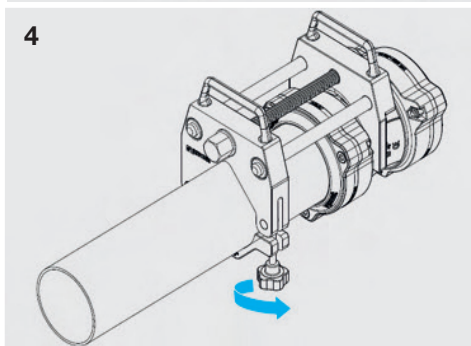
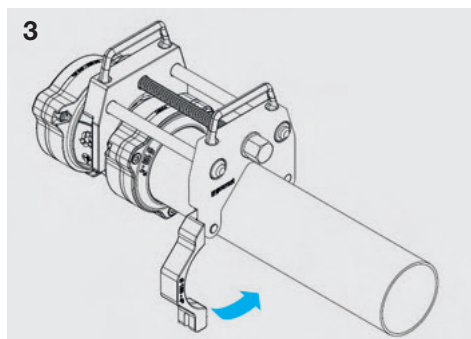
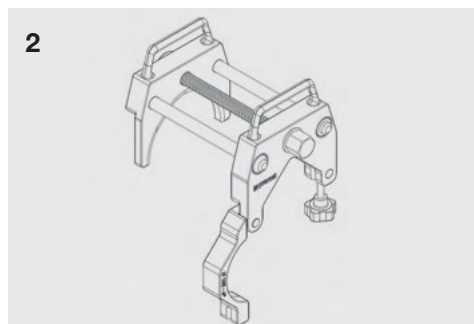
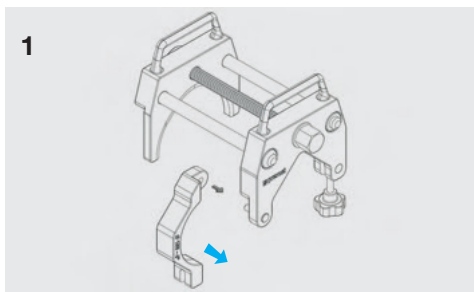
5.1.b Emmanchement mécanique (PPS INS) Ø 63 - 160



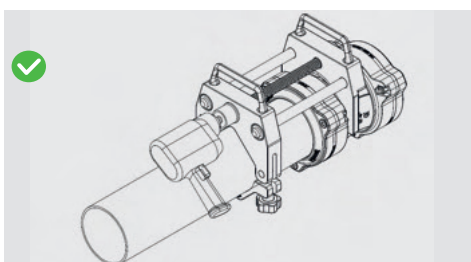
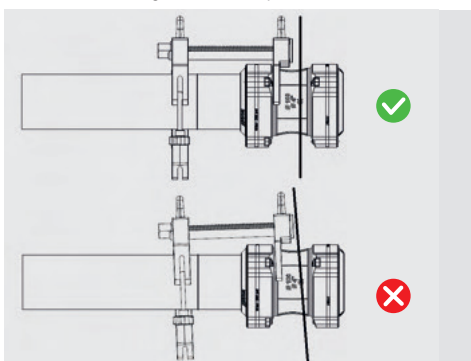
Ø Tube PPS (mm)	Référence
Ø 63 - Ø 80 - Ø 100	PPS INS63100
Ø 160	PPS1 INS160

! Attention : il est obligatoire d'ébavurer le tube avant d'utiliser cet outil. Sans cette action vous pouvez endommager le joint.

Comment positionner l'outil sur le tube et le raccord ?

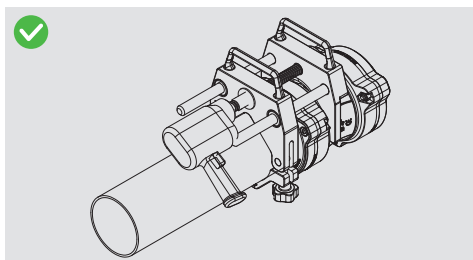
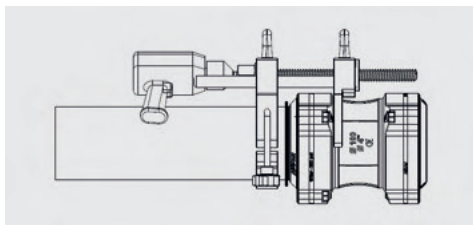


! REMARQUE: pour un serrage d'écrou de qualité, contrôler l'alignement des pièces à assembler



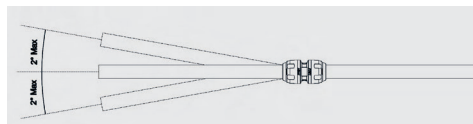
Lors du serrage maintenir le raccord en position à l'extrémité du tuyau.

! Ne pas utiliser l'outil d'emmanchement avec des raccords CC ou FL pré-assemblés (ex: PPS1 DK, PPS1 RSI)

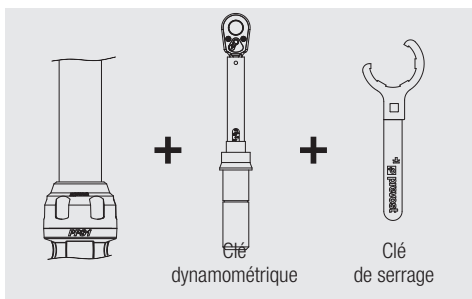


5.2 SERRAGE

! Attention : avant de serrer l'écrou, assurez-vous du bon alignement du tube avec le raccord afin d'éviter les fuites.



Écrous du Ø 16 au Ø 80



Saisissez le corps du raccord avec la clé **PPS1 CLESTD** (contre-couple) pour vous assurer que les autres raccords restent serrés.

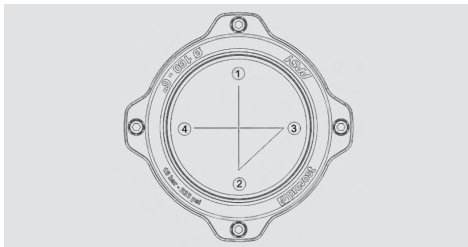
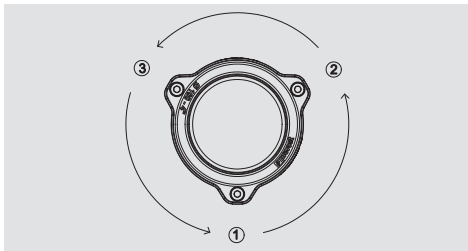
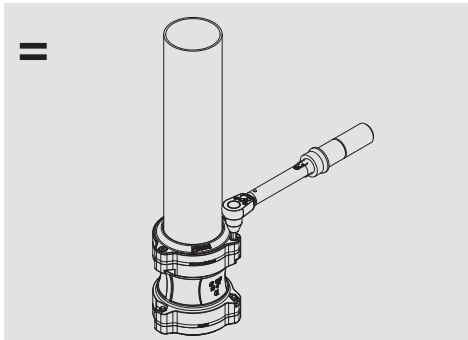
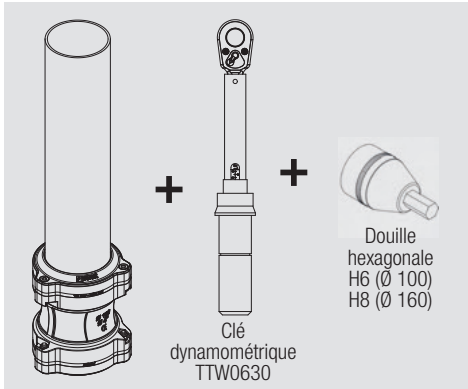
Ø PPS (mm)	Référence
Ø 16	PPS1 CLE16
Ø 20	PPS1 CLE20
Ø 25	PPS1 CLE25
Ø 32	PPS1 CLE32
Ø 40	PPS1 CLE40
Ø 50	PPS1 CLE50
Ø 63	PPS1 CLE63
Ø 80	PPS1 CLE80
Ø 16-20-25-100-160	TTW 0630
Ø 20-32-40-50-63-80	TTW 20100
Ø 16 au Ø 80	PPS1 CLESTD

Ø (mm)	Couple de serrage (Nm)	
	Min	Max
Ø 16	8	12
Ø 20	15	25
Ø 25	21	35
Ø 32	32	50
Ø 40	32	50
Ø 50	55	85
Ø 63	65	95
Ø 80	70	100
Ø 100	25	28
Ø 160	25	28

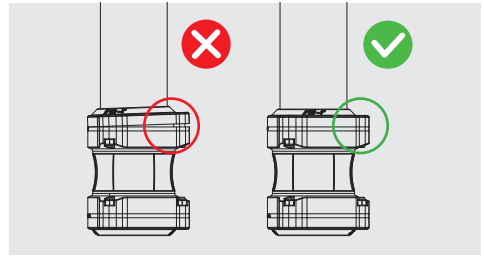
Vis pour Ø 100 - ø 160

! Attention : veillez à serrer les 3 ou 4 vis M8 en atteignant la valeur de couple préconisé de 25 Nm.

Répétez cette étape jusqu'à atteindre la valeur de serrage souhaitée.



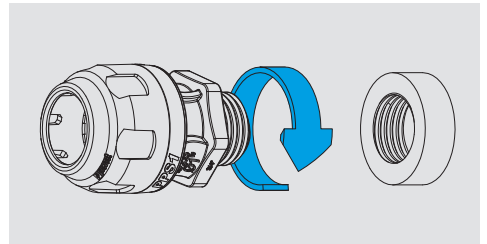
! Attention : pour un serrage des vis de qualité, contrôler l'alignement.



6 - AUTRES ASSEMBLAGES

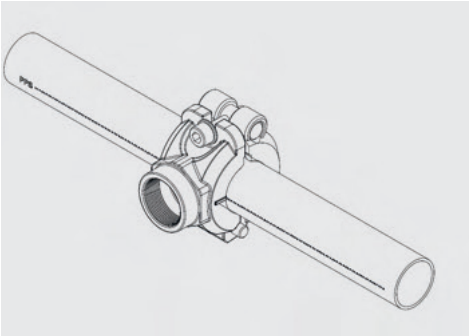
6.1 ASSEMBLAGE DE PIÈCES FILETÉES

Pour assembler les filetages mâle et femelle, nous recommandons d'utiliser du Teflon® (**TEFLON 12**), du ruban Téflon ou un autre produit d'étanchéité de plombier.

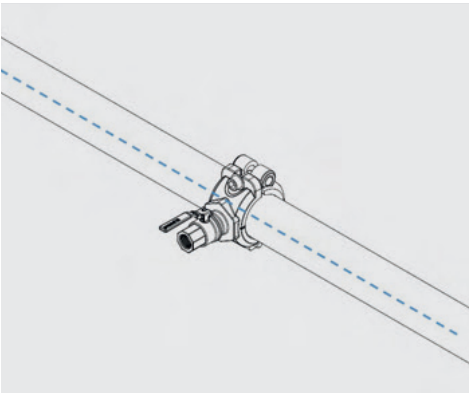


Filetage	Tours de Teflon	Couple de serrage Max. (Nm)
3/8"	2 - 3	10
1/2"	2 - 3	12
3/4"	2 - 3	20
1"	2 - 3	35
1 1/4"	3 - 4	45
1 1/2"	3 - 4	55
2"	3 - 4	65
2 1/2"	4 - 5	70
3"	4 - 5	80

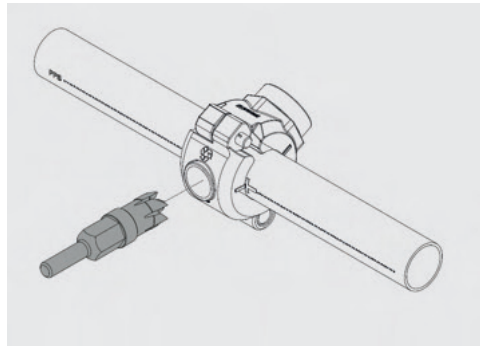
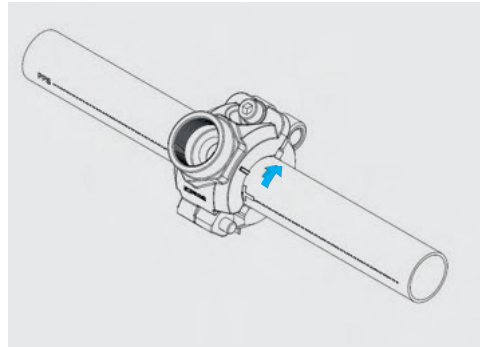
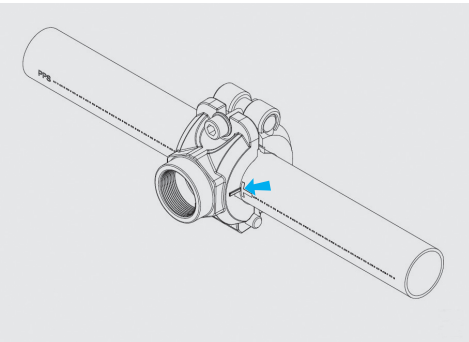
6.2 Bride de piquage droite PPS1 BFT / PPS1 BFV



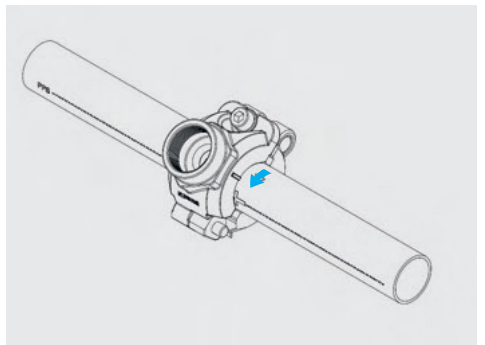
Réglez la bride de piquage dans la position souhaitée à l'aide du double marquage sur le tuyau.

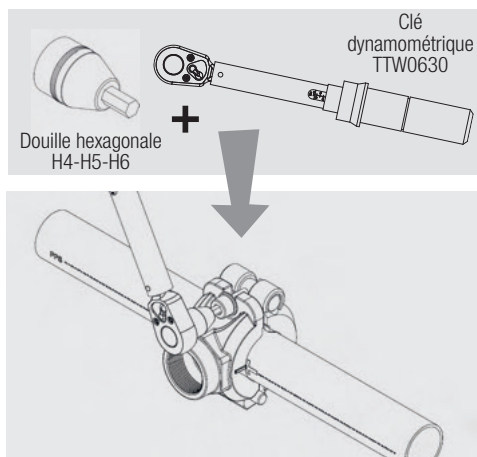


Marquez la position présélectionnée en utilisant les repères prévus à cet effet (encoches).



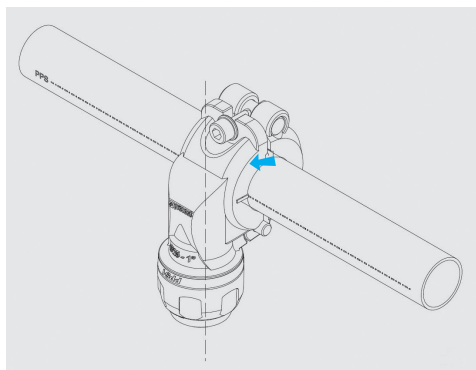
Ø ext. du tube (mm)	Référence
Ø 25 à 32	PPS SP16
Ø 40 à 50	PPS SP22
Ø 63 à 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64



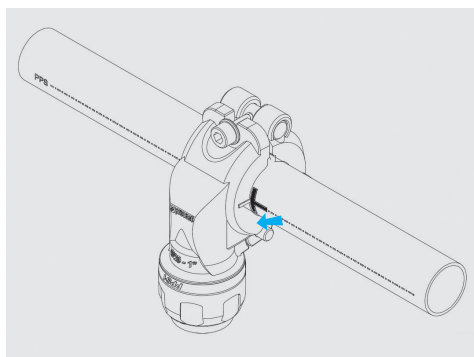


PPS1 BFT PPS1 BFV	Couple de serrage (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14
Ø 160	20	25

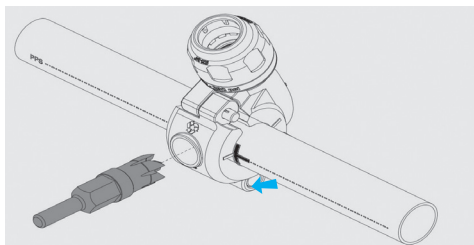
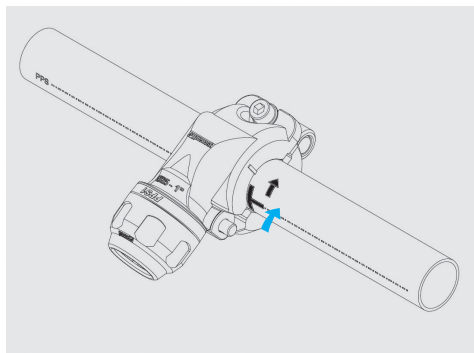
Bride de piquage - PPS1 BP / PPS1 BT



Réglez la bride de piquage dans la position souhaitée à l'aide du double marquage sur le tuyau.

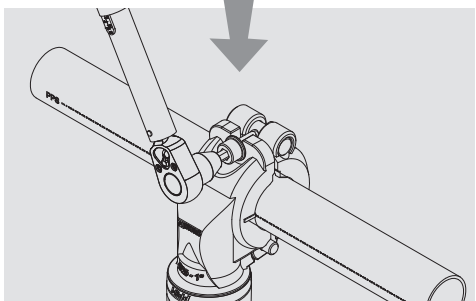
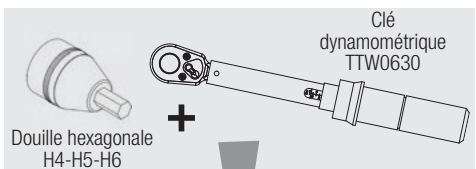
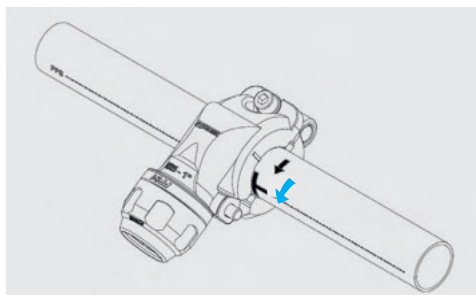


Marquez la position présélectionnée en utilisant les repères prévus à cet effet (encoches).



! Attention : il est obligatoire d'ébavurer le tube avant d'utiliser cet outil. Sans cette action vous pouvez endommager le joint.

Ø ext. du tube (mm)	Référence
Ø 25 à 32	PPS SP16
Ø 40 à 50	PPS SP22
Ø 63 à 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64

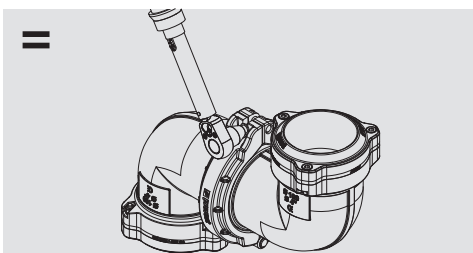
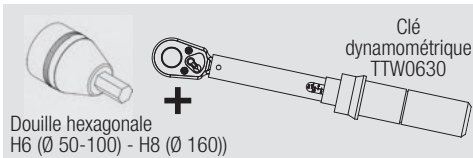
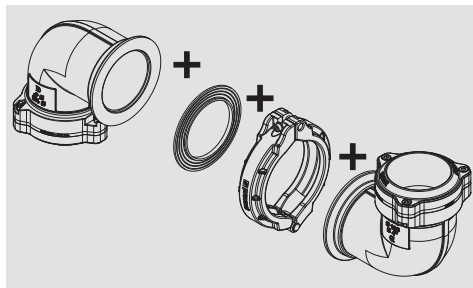


PPS1 BP PPS1 BT	Couple de serrage (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14

6.3 CONCEPT DE CONNEXION COMPACT - CC CONCEPT

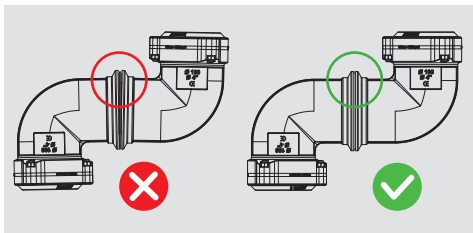
Vous pouvez créer la configuration de raccords dont vous avez besoin avec les options suivantes :

Collier de connexion - PPS1 CC

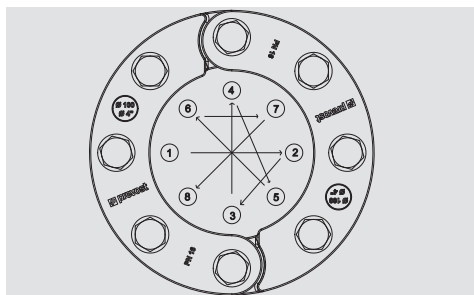
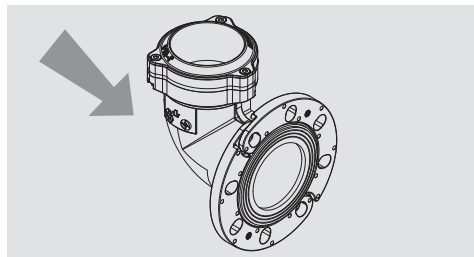
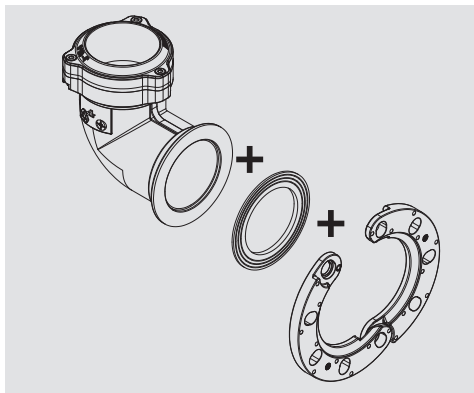


Pour PPS1 CC	Couple de serrage (Nm)	
	Min	Max
Ø 50 - 63 - 80 - 100 - 160 mm	20	25

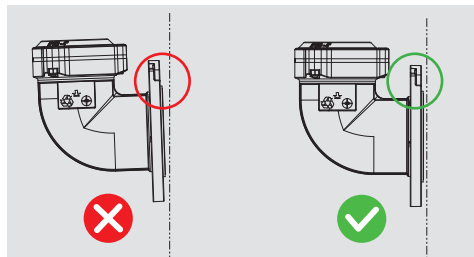
Attention : pour un serrage de qualité, contrôler l'alignement.



Bride de connexion - PPS1 FL



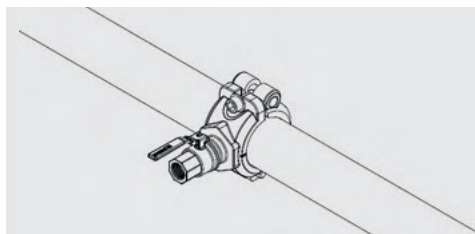
Suivez cette étape 2 ou 3 fois jusqu'à atteindre 30 Nm.



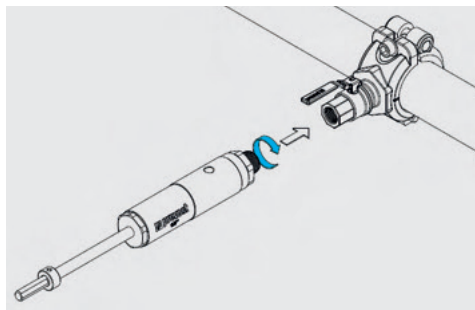
! Attention : pour un serrage de qualité, contrôler l'alignement.

6.4 PERÇAGE SOUS PRESSION

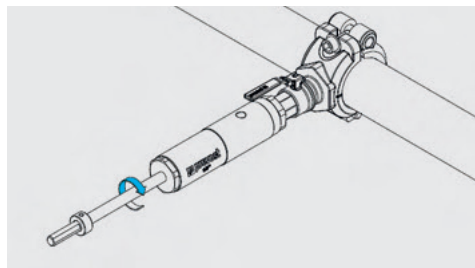
! Attention : le réseau est sous pression.
Positionner la bride de piquage droite **PPS1 BFV**.



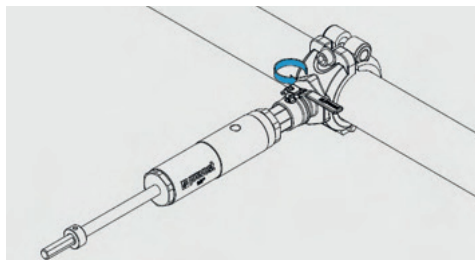
Visser l'outil de perçage **PPS DRIL**.



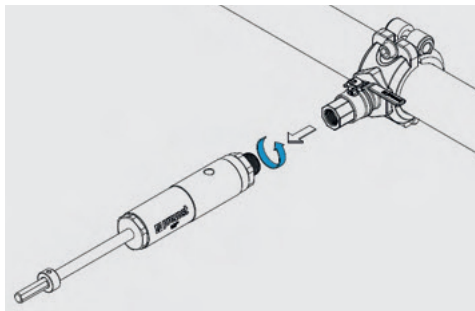
Percer.



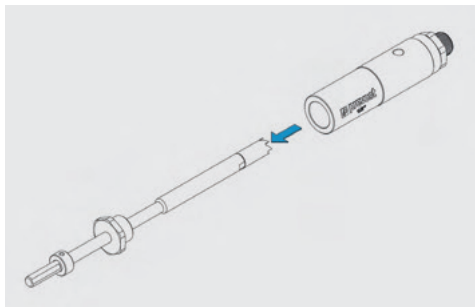
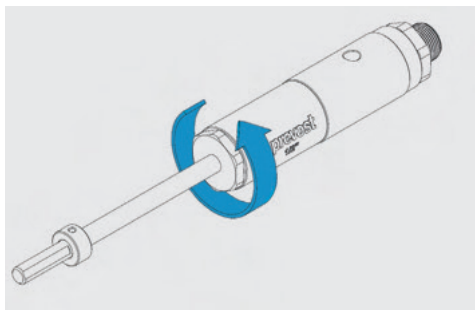
Fermer la vanne.



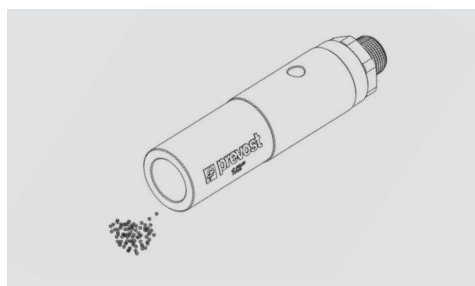
Devissier l'outil de perçage **PPS DRIL**.



Maintenance du **PPS DRIL**. Dévisser.

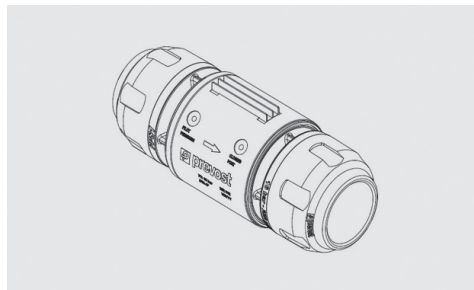


Vider les copeaux.

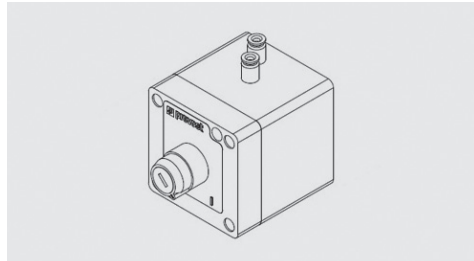


6.5 VANNE PNEUMATIQUE COMMANDÉE DISTANCE

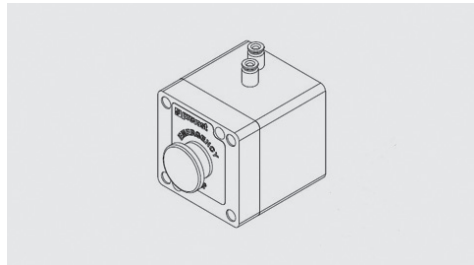
PPS1 VP



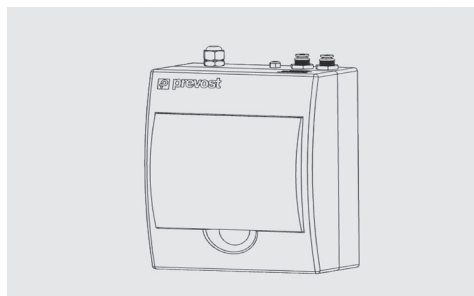
PPS RPK Pilote à distance avec interrupteur cadenassable.



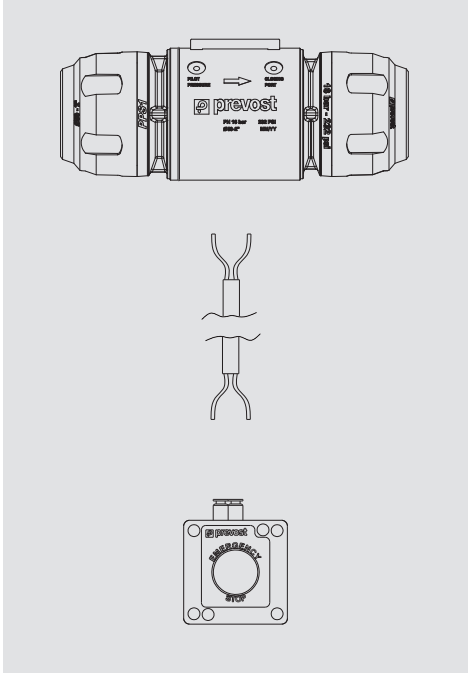
PPS RPE Pilote à distance avec bouton d'arrêt d'urgence.



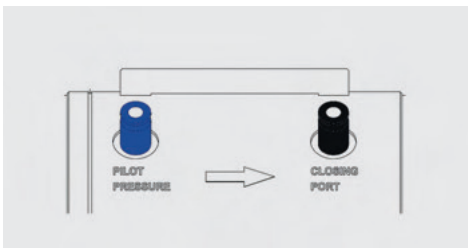
PPS RPWT Pilote à distance avec minuterie.



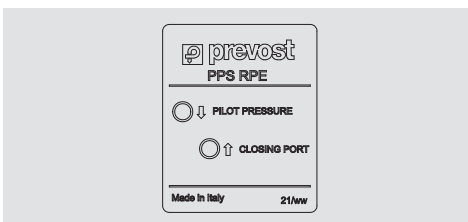
PPS MTPA270412 PA 12 multitube 2 gaines couleur
 Ø ext. 4 mm - 12 m de long



Réaliser la liaison entre la vanne pneumatique et le pilote à distance en connectant les 2 tubes PA Ø 4 en respectant les repérages “PILOT PRESSURE” et “CLOSING PORT” indiqués sur chacun des produits.



Étiquette sur le boîtier



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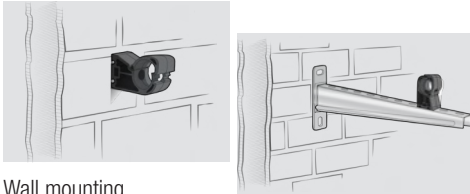
A- COMPRESSED AIR NETWORK INSTALLATION GUIDE

■ PRIOR TO INSTALLATION

Ideally, the **compressor room should be spacious, well ventilated, insulated and separate from the rest of the workshop.**

To eliminate vibration issues and easy maintenance access, connect any machinery to the **PPS** network with flexible hoses (part numbers LEF and LEM). It is important to **install bypasses between each machine**, the tank(s) and filters.

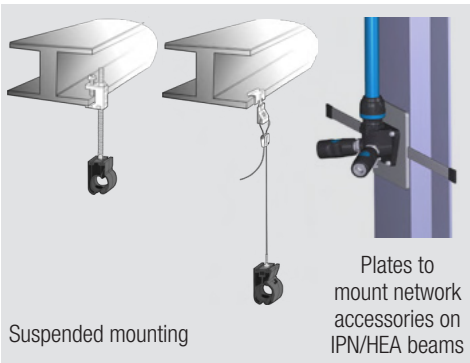
■ MOUNT THE NETWORK SYSTEM



Wall mounting

The main network should form a loop mounted at a minimum of 2.5 m (8 ft.) above the ground for safety. Install drains with **an automatic trap** at the bottom of each drop to remove residual condensates.

The diameter of the main line must be sufficient to avoid pressure loss and allow for future expansion. Mount the pipe with **an appropriate number of sliding clamps** to securely hold it in place but still allow for expansion and contraction to occur. (PPS CI clamps). We recommend a slope of 1% to direct condensates to low points (drains).



Suspended mounting

Plates to mount network accessories on IPN/HEA beams

To guarantee the system is aligned and solidly attached, select an appropriate mounting option depending on the configuration of the building. For safety purposes, we recommended mounting clamps no more than 3 m (9 ft.) apart.

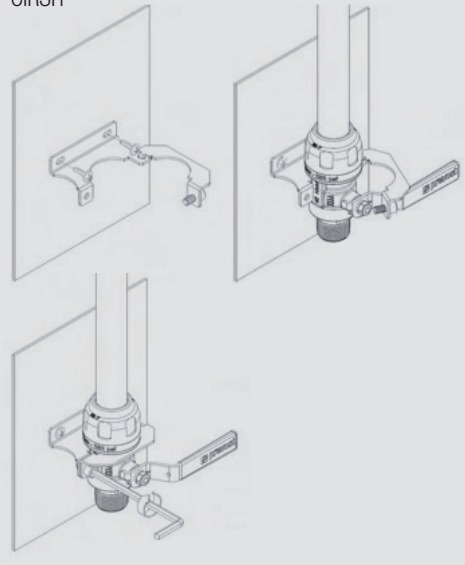
Determine the spacing between two clamps by the pipe's diameter, environmental temperature and weight of the conveyed fluid. The recommended spacing guidelines are below.

∅	Spacing expressed in meter or inches depending on the temperature		
	mm	<20°C	30°C
∅ 16	2 m	2 m	1,5 m
∅ 20	2,5 m	2 m	1,5 m
∅ 25	3 m	2,5 m	2 m
∅ 32	3,5 m	3 m	2,5 m
∅ 40	4 m	3,5 m	3 m
∅ 50	3,5 m	3 m	2,5 m
∅ 63	3,5 m	3 m	2,5 m
∅ 80	3,5 m	3 m	2,5 m
∅ 100	3,5 m	3 m	2,5 m
∅ 160	3,5 m	3 m	2,5 m
in	<68°F	86°F	104°F
1/2"	785 in	785 in	59 in
3/4"	98 in	785 in	59 in
1"	118 in	98 in	785 in
1 1/4"	137.5 in	118 in	98 in
1 1/2"	157.5 in	137.5 in	118 in
2"	137.5 in	118 in	98 in
2 1/2 "	137.5 in	118 in	98 in
3 "	137.5 in	118 in	98 in
4"	137.5 in	118 in	98 in
6"	137.5 in	118 in	98 in

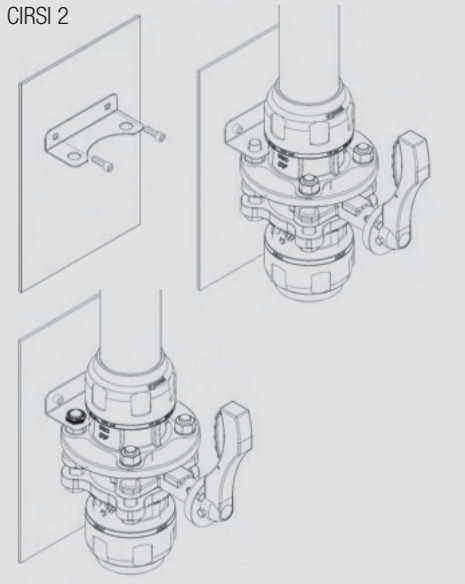


Do not attach fittings or other accessories that will block the clamps from sliding.

CIRSI1



CIRSI 2



■ ATTACH SYSTEM ACCESSORIES TO IPN/HEA BEAMS

To create an **organized and safe** work environment many of our products attach to metal plates, which fasten to IPN/HEA beams. The plates **quickly install without drilling or welding** and are **compliant with industry standards**.

Plates are available for the following products:

- Open and closed hose reels
- Wall brackets
- **Prevost filtration** air treatment systems
- Universal supports + accessories

■ MATERIAL EXPANSION

Like many other pipe options, aluminium expands and contracts depending on temperature fluctuations. Various components can accommodate this movement.

For small pipe diameters, use a flexible hose to change direction (angles/corners) or bypass obstacles (pillars, beams etc.). For larger diameters, expansion (dilation) kits work best.

Expansion coefficient: 0.024 mm per meter and per °C or 13.7 x 106 inch per inch per °F.

Calculate Expansion:

C = Expansion coefficient

L = Length of the straight stretch (between two fixed points)

ΔT° = Difference between the maximum and minimum ambient temperatures in °F

DL = Overall expansion

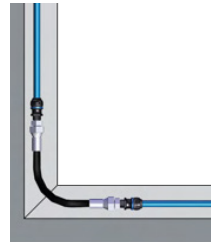
ex. DL = $C \times L \times \Delta T^\circ$

Example: a 20-meter line using 40 mm tubing, at an ambient temperature of 15°C with a maximum temperature of 40°C, i.e. a difference of 25°C.

DL: $0.024 \times 20 \text{ (m)} \times 25^\circ\text{C} \text{ (} 40^\circ\text{C} - 15^\circ\text{C)} = 12 \text{ mm}$

Example: 60 feet (720 inches) line using 1 1/2" piping, at an ambient temperature of 60°F with a maximum temperature of 100°F, i.e. a difference of 40°F.

DL: $13.7 \times 106 \times 720 \text{ (in)} \times 40^\circ\text{F} = 0.39 \text{ in}$



Flexible



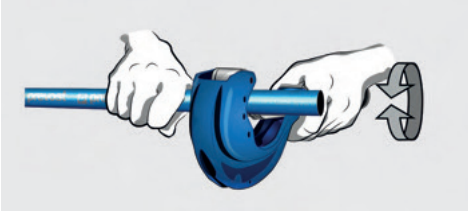
Expansion kit

B - ASSEMBLY INSTRUCTIONS

1 - CUT THE PIPE

WARNING: The cut must be straight and perpendicular to the axis of the pipe.

Note: Inspect the surface at the end of the pipe for damage. Avoid scratches and impacts to guarantee proper assembly.

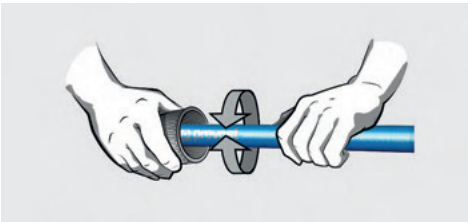


Ø (mm)	Ø (in)	Pipe cut
Ø 16 to 63	Ø 1/2" to 2 1/2"	PPS CTU63
Ø 63 to 100	Ø 2 1/2" to 4"	PPS CTU110
Ø 160	Ø 6"	PPS CTU160

2 - CHAMFERING - DEBURRING

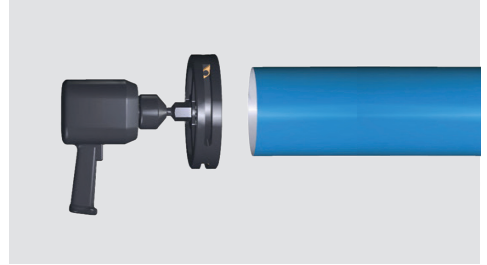
■ MANUAL

After cutting, deburr the inside of the pipe with the **PPS CHERAP** tool and outside with the correct size **PPS CH**. Remove any excess shavings inside the pipe and check for a good, quality chamfered edge.



Ø (mm)	Ø (in)	Bevelling/ deburring tools
Ø 16 to 50	Ø 1/2" to 2 1/2"	PPS CH50
Ø 63 to 100	Ø 2 1/2" to 4"	PPS CH110

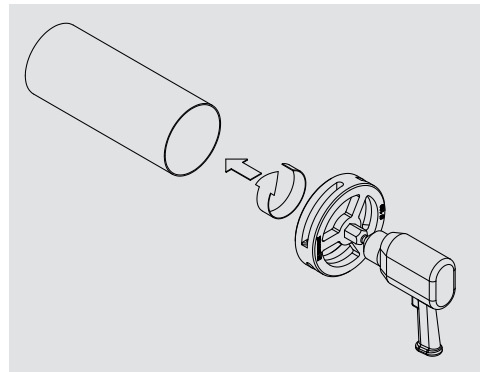
■ MECHANICAL CHAMFERING



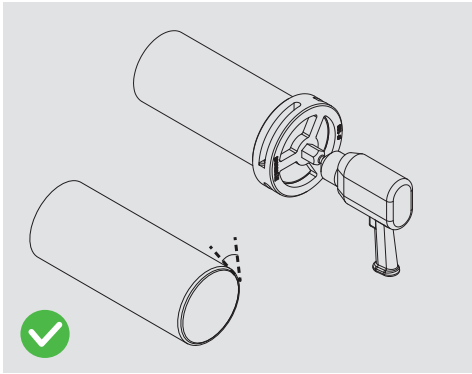
Ø (mm)	Ø (in)	Bevelling/ deburring tools
Ø 16 to 20	Ø 3/4" to 1/2"	PPS CHPD2016
Ø 25	Ø 1"	PPS CHPD25
Ø 32	Ø 1 1/4"	PPS CHPD32
Ø 40	Ø 1 1/2"	PPS CHPD40
Ø 50	Ø 2"	PPS CHPD50
Ø 63	Ø 2 1/2"	PPS CHPD63
Ø 80	Ø 3"	PPS CHPD80
Ø 100	Ø 4"	PPS CHPD100
Ø 160	Ø 6"	PPS CHPD160

WARNING: Wear protective glasses and gloves

Note: To avoid damage to the internal seal of the fitting, this step must be followed. Check the rotation direction of the drill prior to working on the pipe.

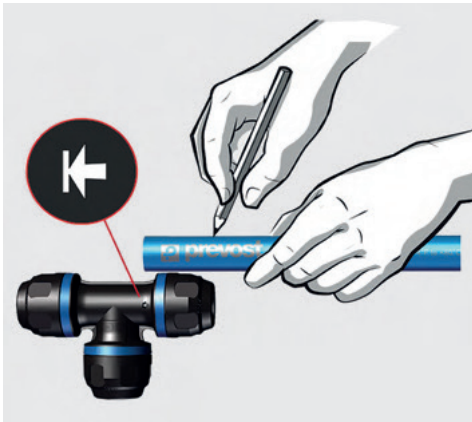


Do not exert excessive pressure on the pipe.



3 - MARK THE PIPE

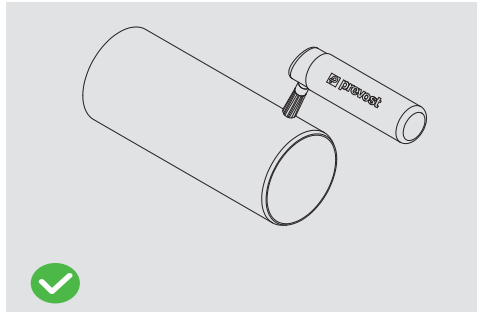
Mark the pipe to determine the insertion depth of the pipe in the fitting (see table). Use the mark on the fitting (or on the **PPS1 CLE** tightening wrench) to easily determine the insertion depth.



Ø (mm)	Depth (mm)	Ø (in)	Depth (in)
Ø 16	32	1/2 "	1.25
Ø 20	38	Ø 3/4 "	1.5
Ø 25	44	Ø 1 "	1.73
Ø 32	52	Ø 1 1/4 "	2
Ø 40	62	Ø 1 1/2 "	2.44
Ø 50	72	Ø 2 "	2.8
Ø 63	83	Ø 2 1/2 "	3.25
Ø 80	95	Ø 3 "	3.7
Ø 100	95	Ø 4 "	3.7
Ø 160	120	Ø 6 "	4.7

4 - LUBRICATING THE PIPE

After cutting, check the surface and remove any remaining shavings with a damp cloth and non-aggressive cleaning solution. We recommend using PPS AL gel to lubricate the pipe so it slides easily into the fittings without resistance. (Lubricants, oils or fats that are not chemically compatible should not be used.)



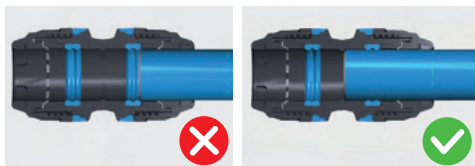
5 - ASSEMBLING FITTINGS ON THE PIPE

5.1 PIPE/CONNECTOR INSERTION TOOL

5.1.a Manual Insertion Ø 16 - 80

2. Loosen the nut by at least one turn but without disassembling it.





3. Check the presence and positioning of all components in the fitting.

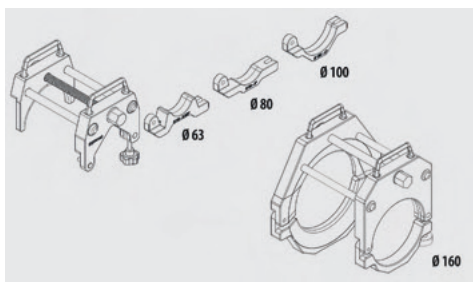
Check the orientation of the grip ring's teeth without disassembling the fitting (see diagram).



4. Push the pipe in with a slight rotation to reach the insertion length. It is recommended to apply the Prevost assembly gel (**PPS AL**) on the ends of the tubes and fittings. Lubricants, oils or fats that are not chemically compatible should not be used.

5.1.b Mechanical Insertion

(PPS INS TOOL): Ø 63 - 160

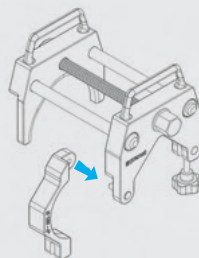


Ø PPS pipe (mm)	Ø PPS pipe (in)	Part number
Ø 63 - Ø 80 - Ø 100	Ø 2 1/2" - Ø 3" - Ø 4"	PPS INS63100
Ø 160	Ø 6"	PPS1 INS160

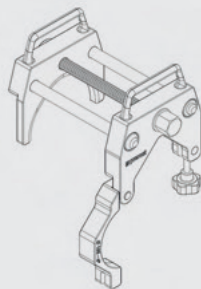
Warning: The pipe must be deburred before using this tool.
Failure to do so may damage the seal.

Align the tool on the pipe and fitting

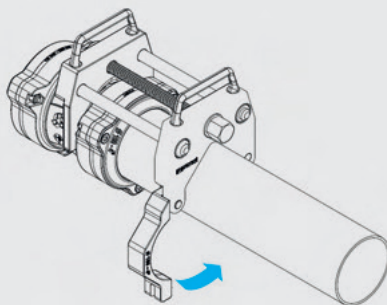
1



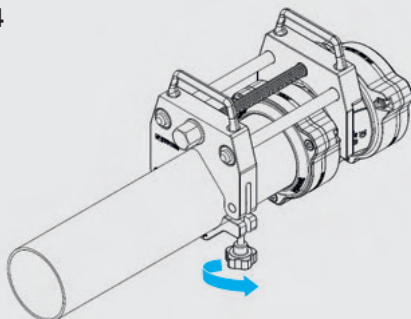
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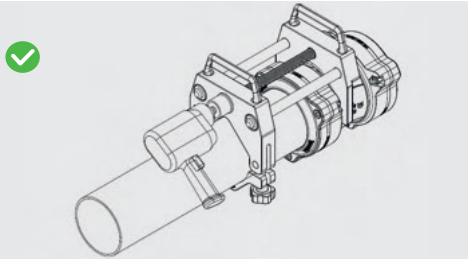
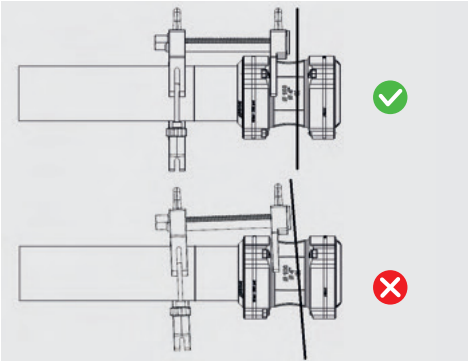
3



4

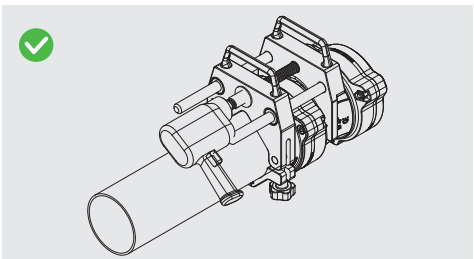
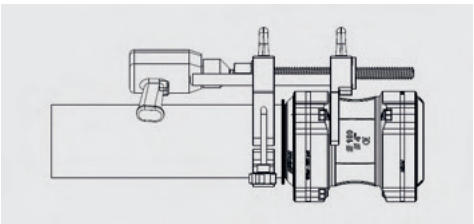


⚠ WARNING: Check for proper alignment of the pipe and the fitting to avoid leaks prior to tightening the nut.



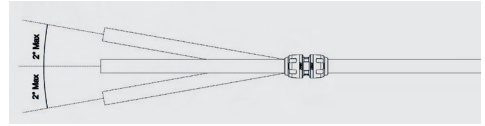
For a secure fit, all parts of the fitting must be aligned on the pipe.

⚠ Don't use the insert pipe tool with pre-assembled CC or FL fittings (ex: PPS1 DK , PPS1 RSI)

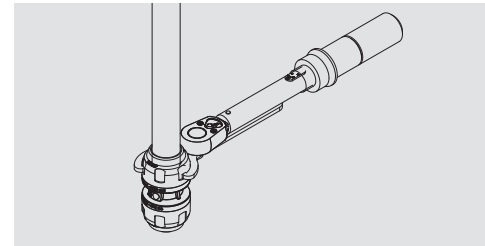
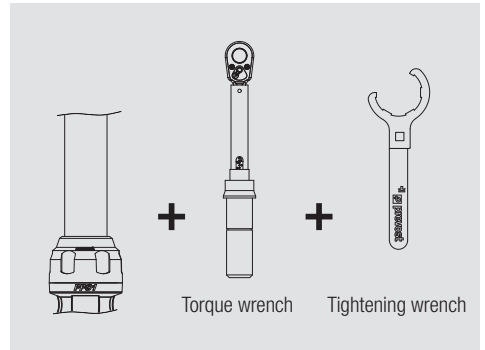


5.2 TIGHTENING

⚠ WARNING: When tightening the nuts, hold the fitting in position.



**Nuts from Ø 16 mm to Ø 80 mm
- Ø 1/2 to Ø 3**



⚠ WARNING: Tighten each nut to the recommended torque value.



Use the **PPS1 CLESTD** (neutral hook spanner) to hold the body of the fitting in position while using the **PPS1 CLE** wrench to tighten the nuts.

Ø (mm)	Tightening torque (Nm)	
	Min	Max
Ø 16	8	12
Ø 20	15	25
Ø 25	21	35
Ø 32	32	50
Ø 40	32	50
Ø 50	55	85
Ø 63	65	95
Ø 80	70	100
Ø 100	25	28
Ø 160	25	28

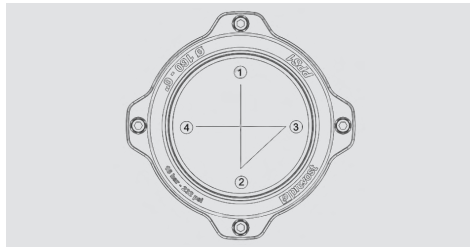
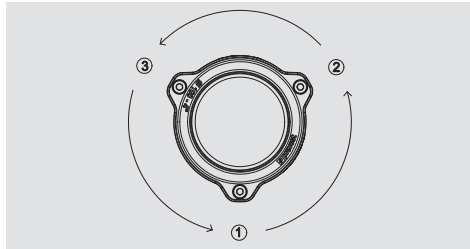
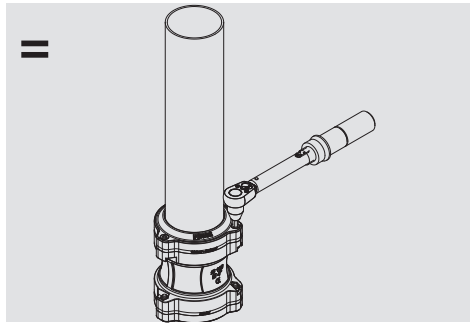
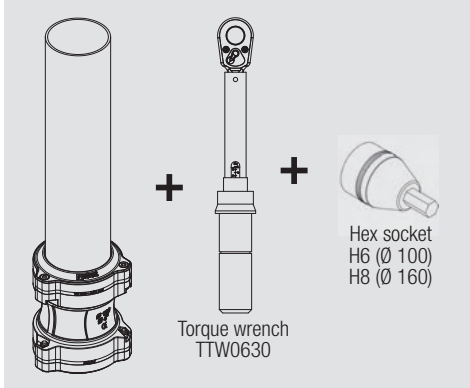
Ø (in)	Tightening torque (lbf ft.)	
	Min	Max
Ø 1/2"	5.9	8.85
Ø 3/4"	11.06	18.44
Ø 1"	15.48	25.81
Ø 1 1/4"	23.60	36.88
Ø 1 1/2"	23.60	36.88
Ø 2"	40.56	62.69
Ø 2 1/2"	47.94	70.07
Ø 3"	51.63	73.75
Ø 4"	18.44	20.65

Ø PPS (mm)	Ø PPS (in)	Part number
Ø 16	Ø 1/2"	PPS1 CLE16
Ø 20	Ø 3/4"	PPS1 CLE20
Ø 25	Ø 1"	PPS1 CLE25
Ø 32	Ø 1 1/4"	PPS1 CLE32
Ø 40	Ø 1 1/2"	PPS1 CLE40
Ø 50	Ø 2"	PPS1 CLE50
Ø 63	Ø 2 1/2"	PPS1 CLE63
Ø 80	Ø 3"	PPS1 CLE80
Ø 16-20-25-100-160	Ø 1/2" - 3/4" - 1" - 4"	TTW 0630
Ø 20-32-40-50-63-80	Ø 1 1/4" - 1 1/2" - 2" - 2 1/2" - 3"	TTW 20100
Ø 16 to Ø 80	Ø 1 1/4" to 3"	PPS1 CLESTD

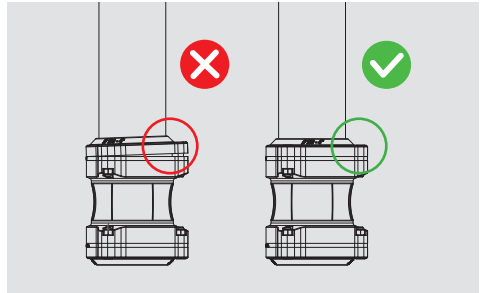
Screw for Ø 100 mm - ø 160

! **WARNING:** Tighten the 4 M8 screws to the recommended torque value of 25 Nm (18.44 lbf ft.)

Repeat this step until the recommended torque value is reached.



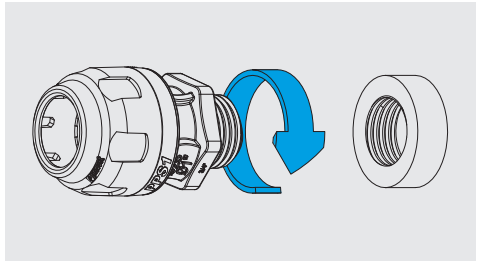
! **WARNING:** Visually check the screws to make sure they are properly aligned.



6 - OTHER ASSEMBLY

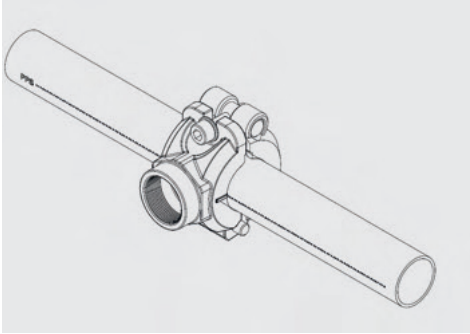
6.1 ASSEMBLY OF THREADED PARTS

Wrap or coat the male and female threads with Teflon® (**TEFLON 12**), tape or other sealant.

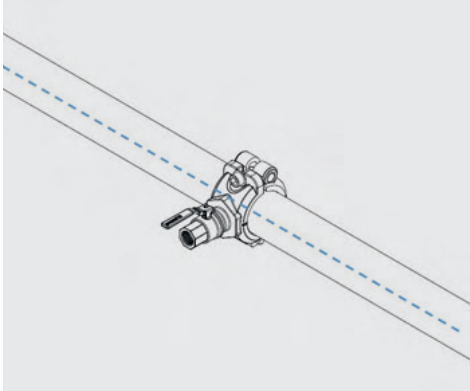


Thread	Turns of Teflon	Max. tightening torque (Nm)	Max. tightening torque (lbf ft)
3/8"	2 – 3	10	7.37
1/2"	2 – 3	12	8.85
3/4"	2 – 3	20	14.75
1"	2 – 3	35	25.81
1 1/4"	3 – 4	45	33.19
1 1/2"	3 – 4	55	40.56
2"	3 – 4	65	47.94
2 1/2"	4 – 5	70	51.63
3"	4 – 5	80	59

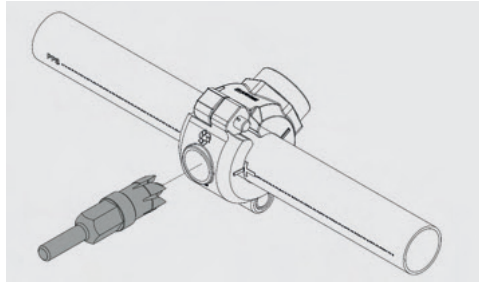
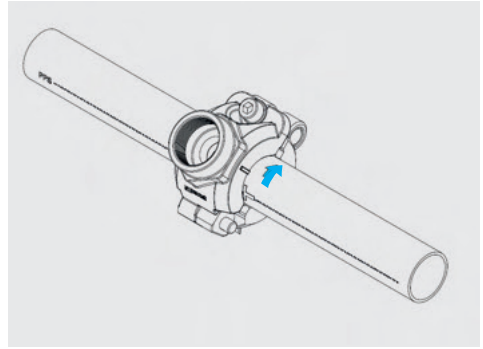
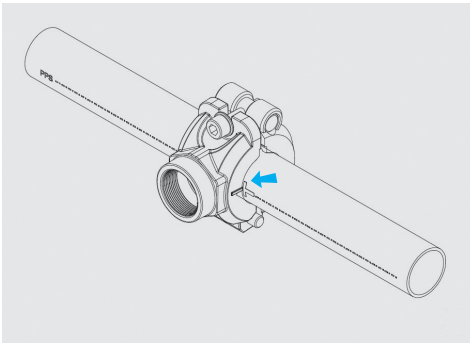
6.2 Straight Tapping flange - PPS1 BFT / PPS1 BFV



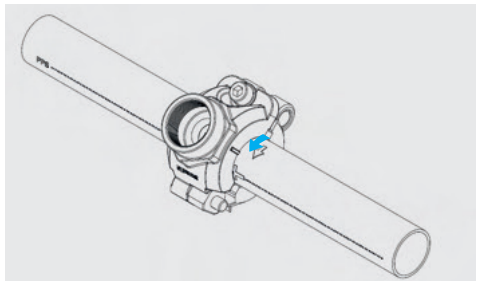
Use the notches on each side of the tapping flange to set the fitting to its desired position on the pipe.

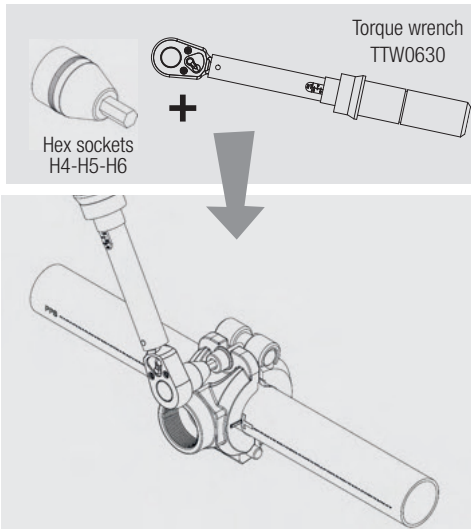


Use the notches as a guide to mark the position on the pipe with a felt tip marker.



Ø ext. For pipe OD		Part number
(mm)	(in)	
Ø 25 to 32	Ø 1" to 1 1/4"	PPS SP16
Ø 40 to 50	Ø 1 1/2" to 2"	PPS SP22
Ø 63 to 80	Ø 2 1/2" to 3"	PPS SP30
Ø 100	Ø 4"	PPS SP41
Ø 160	Ø 6"	PPS SP64

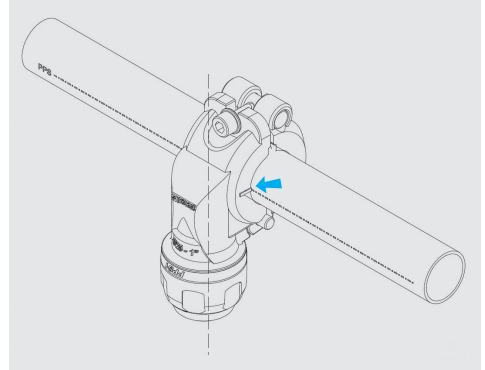




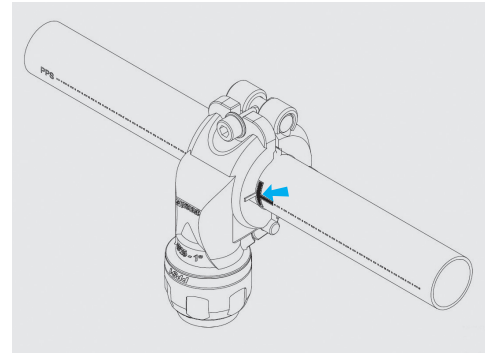
PPS1 BFT - PPS1 BFV (mm)	Tightening torque (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14
Ø 160	12	14

PPS1 BFT - PPS1 BFV (in)	Tightening torque (lbf ft.)	
	Min	Max
Ø 1"	5.9	7.37
Ø 1 1/4"	5.9	7.37
Ø 1 1/2"	7.37	8.85
Ø 2"	7.37	8.85
Ø 2 1/2"	8.85	10.32
Ø 3"	8.85	10.32
Ø 4"	8.85	10.32
Ø 6"	8.85	10.32

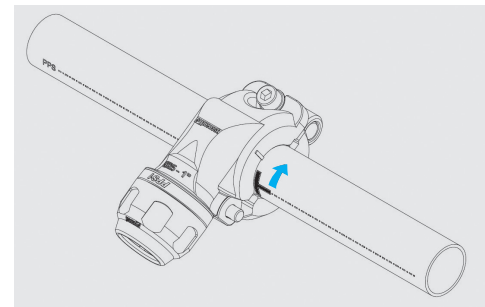
Tapping flange - PPS1 BP / PPS1 BT

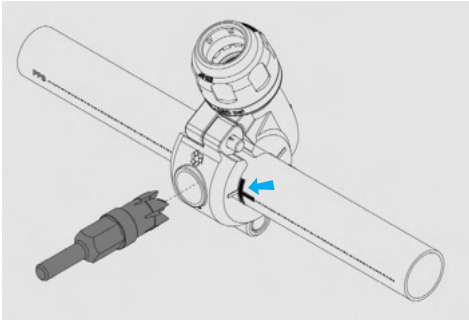


Use the notches on each side of the tapping flange to set the fitting to its desired position on the pipe.



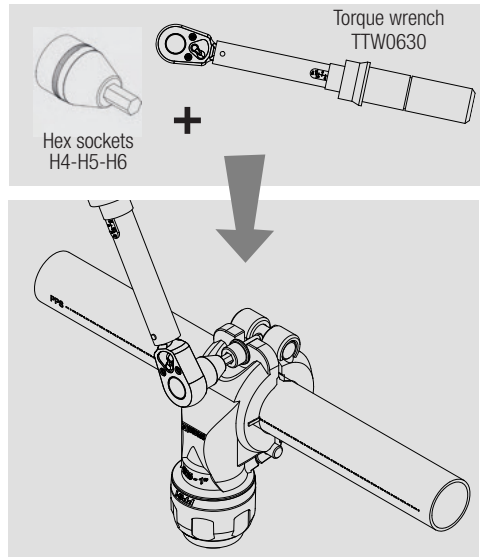
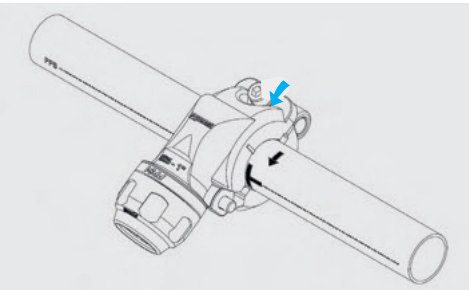
Use the notches as a guide to mark the position on the pipe with a felt tip marker.





Warning: The pipe must be deburred before using this tool.
Failure to do so may damage the seal.

Ø ext. For pipe OD		Part number
(mm)	(in)	
Ø 25 to 32	Ø 1" to 1 1/4"	PPS SP16
Ø 40 to 50	Ø 1 1/2" to 2"	PPS SP22
Ø 63 to 80	Ø 2 1/2" to 3"	PPS SP30
Ø 100	Ø 4"	PPS SP41



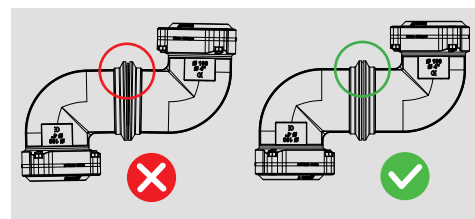
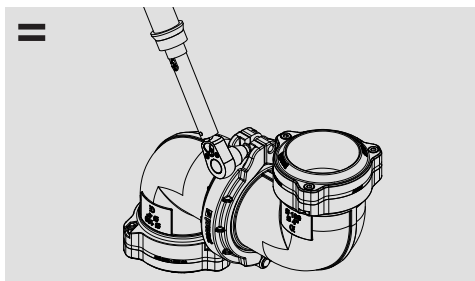
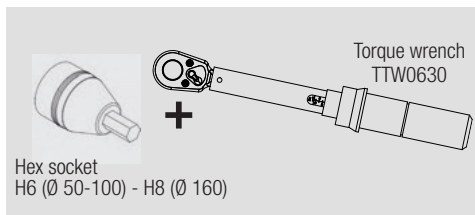
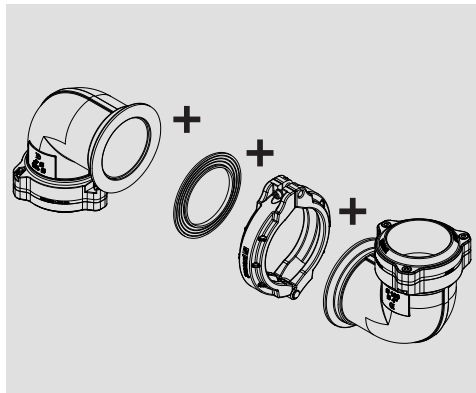
PPS1 BP - PPS1 BT (mm)	Tightening torque (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14

PPS1 BP - PPS1 BT (in)	Tightening torque (lbf ft.)	
	Min	Max
Ø 1"	5.9	7.37
Ø 1 1/4"	5.9	7.37
Ø 1 1/2"	7.37	8.85
Ø 2"	7.37	8.85
Ø 2 1/2"	8.85	10.32
Ø 3"	8.85	10.32
Ø 4"	8.85	10.32

6.3 COMPACT CONNECTION CONCEPT - CC CONCEPT

You can create the fitting configuration you need by using the following options:

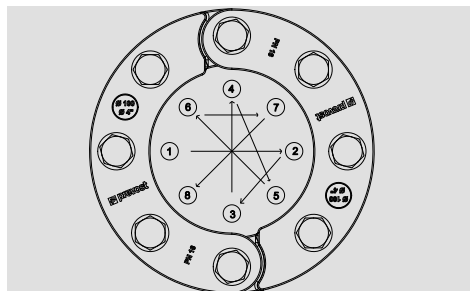
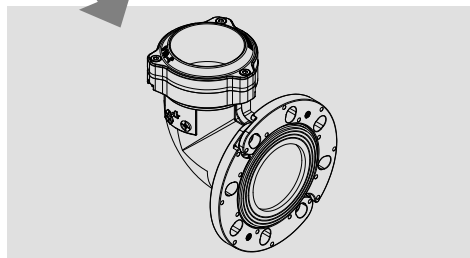
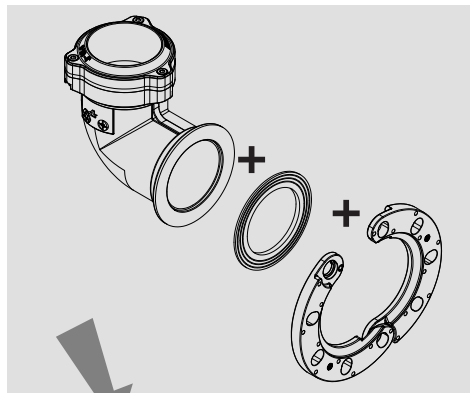
Connection clamp – PPS1 CC



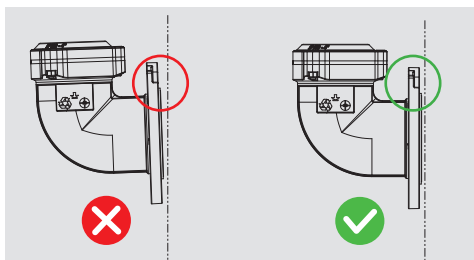
For PPS1 CC	Tightening torque (Nm)		Tightening torque (lbf ft)	
	Min	Max	Min	Max
Ø 50 - 63 - 80 - 100 - 160 mm	20	25	14.75	18.44
Ø 2" - 2 1/2" - 3" - 4" - 6"				

! WARNING: Check alignment before tightening for a secure connection.

Connection flange – PPS1 FL



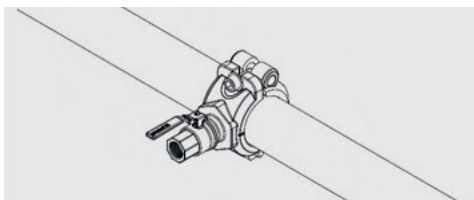
Repeat this step 2 or 3 times, until tightening torque 30 Nm is reached.



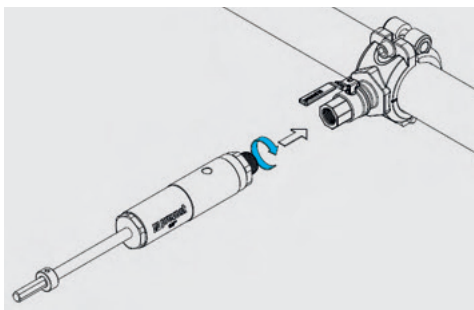
! WARNING: Check alignment before tightening for a secure connection.

6.4 DRILLING TOOL FOR PRESSURIZED NETWORKS

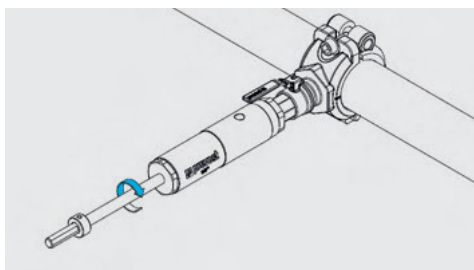
! WARNING: The network is under pressure. Position the straight tapping flange **PPS1 BFV**.



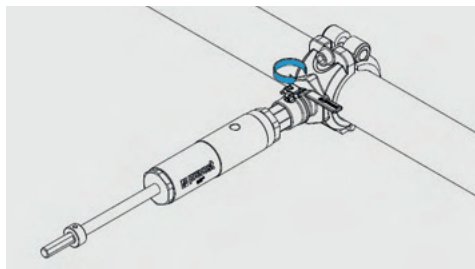
Screw on the drilling tool **PPS DRIL**.



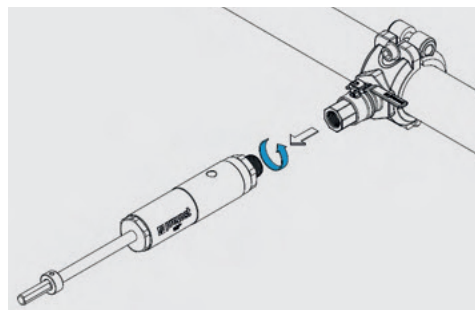
Drill.



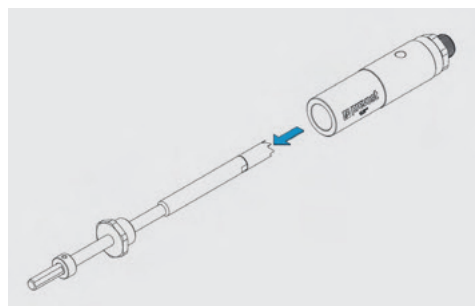
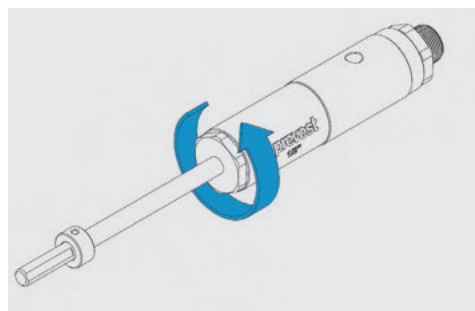
Close the valve.



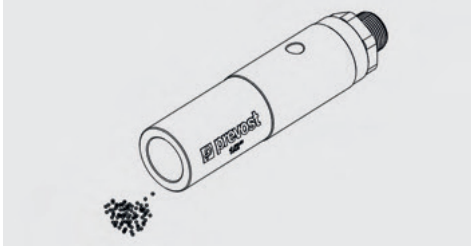
Unscrew the drilling tool **PPS DRIL**.



Clean the **PPS DRIL**. Unscrew.

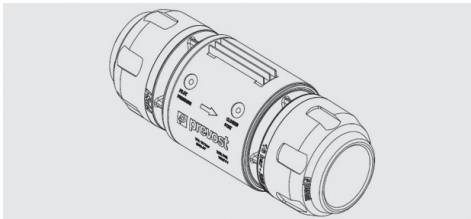


Remove the shavings.

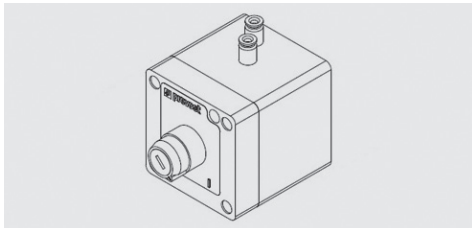


6.5 REMOTE CONTROLLED PNEUMATIC VALVE

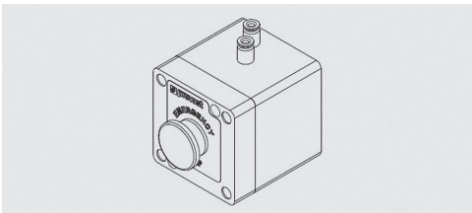
PPS1 VP



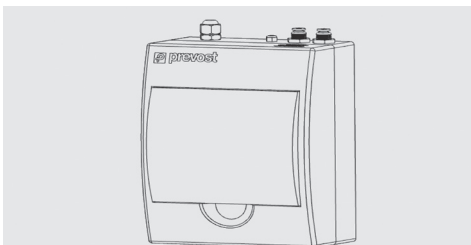
PPS RPK Remote control with lockable switch.



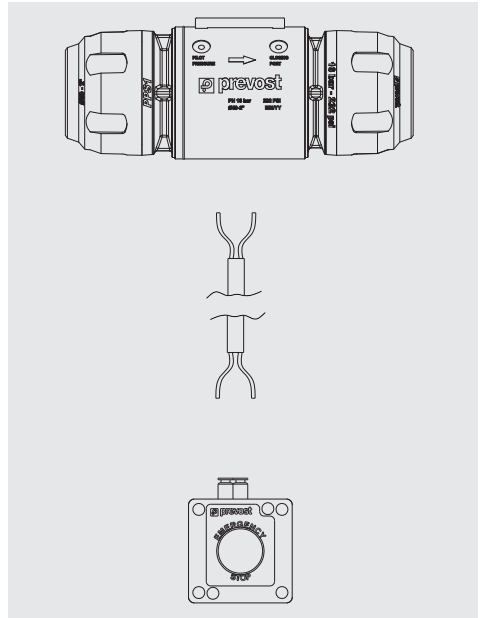
PPS RPE Remote control with emergency stop button.



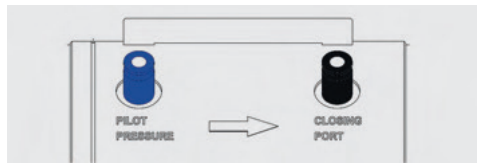
PPS RPWT Remote control with timer.



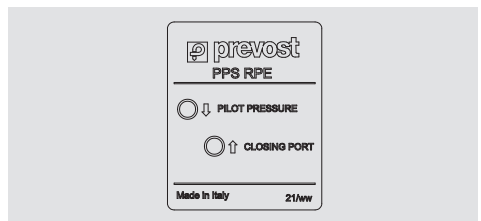
PPS MTPA270412 PA 12 multitube 2 colors sleeves
 Ø ext. 4 mm - 12 m long (Ø ext. 0.16" - 39' long)



Connect the pneumatic valve to the remote pilot using 2, Ø 4mm PA tubes. Note the "PILOT PRESSURE" and "CLOSING PORT" areas on the unit.



Label on the box.



INHALT

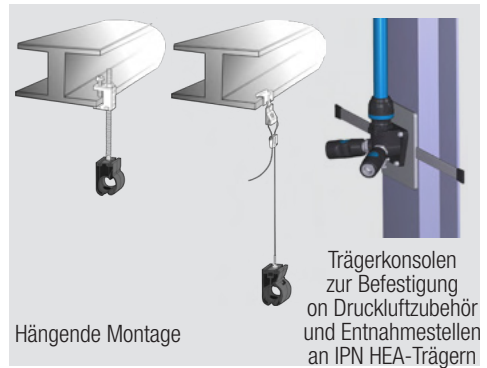
A- GRUNDREGELN ZUR INSTALLATION EINES DRUCKLUFTNETZES	36
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A- GRUNDREGELN ZUR INSTALLATION EINES DRUCKLUFTNETZES

■ VORAUSSETZUNGEN UND ANFORDERUNGEN FÜR DIE INSTALLATION

Der Kompressorraum sollte **geräumig, gut belüftet, gut isoliert und vom Rest des Arbeitsbereiches** abgetrennt sein.

Die Geräte werden mit Schläuchen an das **PPS**-Leitungsnetz angeschlossen, um Gefahren durch Vibrationen zu vermeiden und die Wartung zu erleichtern (Bestellnr. LEF und LEM). Für die einzelnen Geräte sind zwischen den Filterelementen und Behältern jeweils Bypässe zu installieren.



■ ANBRINGUNG DER LEITUNGEN



Wandmontage

Die Hauptleitung ist als geschlossener Ring zu verlegen und muss aus Sicherheitsgründen mindestens 2,5 m über dem Boden installiert werden. Mögliche Restkondensate werden von der Hauptleitung über direkte Kondensatablassleitungen, die mit einem automatischen Ablasssystem ausgerüstet sind, abgeleitet.

Der Durchmesser der Hauptleitung sollte groß genug sein, um Druckverluste zu vermeiden und künftige Leitungserweiterungen zuzulassen. Die Leitungen sind mit einer ausreichenden Anzahl Gleitrohrklemmen zu montieren, um eine sichere Befestigung zu gewährleisten und Dilatationen bzw. Kontraktionen der Leitung auszugleichen (Klemmen PPS CI). Zudem ist ein Gefälle von 1% bei der Hauptleitung einzuplanen damit das Kondenswasser nach unten ablaufen kann (Ablässe).

Die Anbringung der Leitungen hängt von der Anordnung der Werkstatt und Gebäudestruktur ab; sie sind jedoch in jedem Fall perfekt aneinander ausgerichtet zu montieren, wobei darauf zu achten ist, dass ein solides Leitungssystem entsteht.

Folglich sind die Abstandsvorgaben zwischen den Leitungsaufhängungen einzuhalten; der Abstand zwischen zwei Rohrklammern sollte etwa 3 Meter betragen.

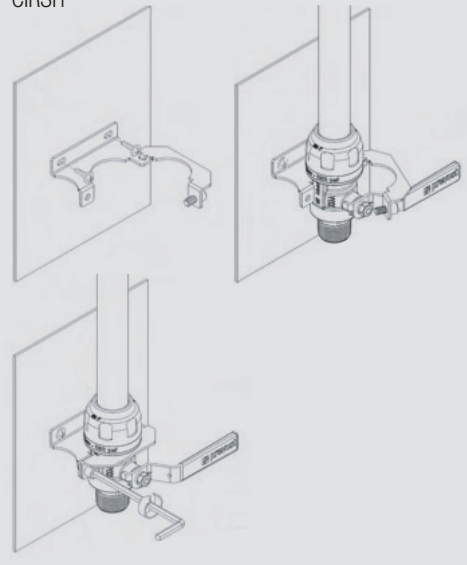
Der Abstand zwischen 2 Rohrklammern hängt vom Rohrdurchmesser, der Temperatur und dem Gewicht des zu befördernden Mediums ab. Es sollten folgende Abstände eingehalten werden:

∅	Abstand in Metern, abhängig von der Temperatur		
	mm	<20°C	30°C
∅ 16	2 m	2 m	1,5 m
∅ 20	2,5 m	2 m	1,5 m
∅ 25	3 m	2,5 m	2 m
∅ 32	3,5 m	3 m	2,5 m
∅ 40	4 m	3,5 m	3 m
∅ 50	3,5 m	3 m	2,5 m
∅ 63	3,5 m	3 m	2,5 m
∅ 80	3,5 m	3 m	2,5 m
∅ 100	3,5 m	3 m	2,5 m
∅ 160	3,5 m	3 m	2,5 m

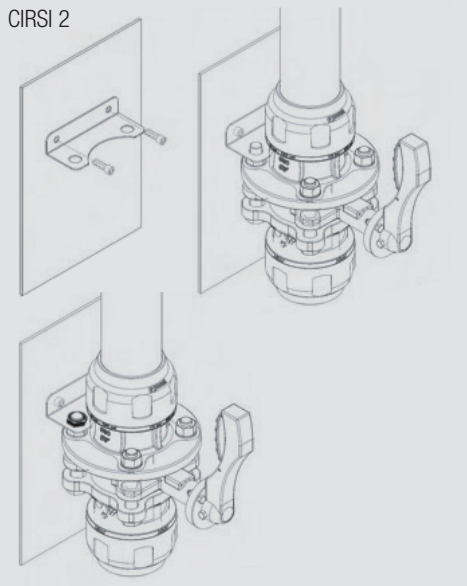


Die Klemmen dürfen die Fittings oder andere Zubehörteile nicht berühren, um das freie Gleiten der Rohrleitung nicht zu behindern.

CIRSI 1



CIRSI 2



■ TRÄGERKONSOLEN FÜR IPN-/HEA-TRÄGER ZUM ANBRINGEN VON ZUBEHÖR

Die Trägerkonsolen ermöglichen eine **ergonomische und sichere Anordnung** des Arbeitsplatzes.

An den Metallträgerkonsolen lassen sich mithilfe von Aufhängungen für IPN/HEA-Träger die Geräte sicher und schnell – ohne Bohren oder Schweißen – gemäß den geltenden Vorschriften anbringen. Die Trägerkonsolen dienen zur Anbringung von:

- Offenen und geschlossenen Schlauchaufrollern
- Wandverteileranschlüssen
- Luftaufbereitungssystemen **Prevost Filtration**
- Universalhalterungen + Zubehör

■ MATERIALDILATATION

Bei Temperaturschwankungen dehnt sich das Aluminium aus bzw. zieht es sich zusammen (Dilatation und Kontraktion), was sich durch Absorptionsvorrichtungen an den Leitungen ausgleichen lässt.

Bei kleinen Leitungsdurchmessern übernimmt ein Schlauchstück diese Aufgabe und ermöglicht zudem Richtungsänderungen (Winkel) oder das Umgehen von Hindernissen in der Werkstatt (Pfosten, Pfeiler usw...). Bei größeren Leitungsdurchmessern ist ein Dilatationsset erforderlich.

Dilatationskoeffizient: 0,024 mm pro Meter und °C.
Die Dilatation errechnet sich wie folgt:

C = Dilatationskoeffizient

L = Länge der Geraden (zwischen 2 Festpunkten)

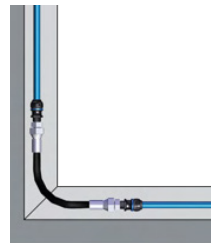
ΔT° = Abweichung zwischen Höchst- und Tiefsttemperatur im Raum in °C.

DL = Gesamtdilatation

D.H. DL = $C \times L \times \Delta T^\circ$

Beispiel: Verlegung einer 20 m langen Leitung mit Ø 40 und einer Raumtemperatur von 15°C, die einer Temperatur von max. 40°C standhalten soll, d.h. einer Temperaturdifferenz von 25°C ausgesetzt ist.

DL : $0,024 \times 20 \text{ (m)} \times 25^\circ \text{ (} 40^\circ\text{C} - 15^\circ\text{C)} = 12 \text{ mm}$



Schlauch



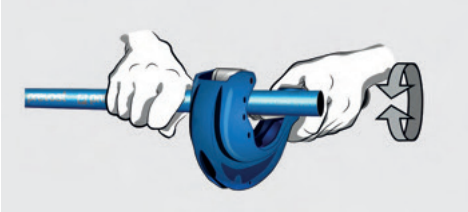
Dilatationsset

B- MONTAGEANLEITUNG

1 - ZUSCHNEIDEN DES ROHRS

! Achtung: Der Schnitt muss gerade sein und senkrecht zur Rohrachse erfolgen.

Hinweis: Kontrollieren, ob das Rohr nicht beschädigt ist. Für eine einwandfreie Installation dürfen keine Kratzer oder Stoßschäden am Rohr sein.

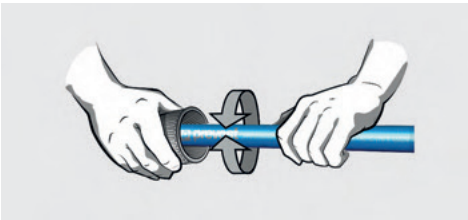


Ø (mm)	Entgrater
Ø 16 bis 63	PPS CTU63
Ø 63 bis 100	PPS CTU110
Ø 160	PPS CTU160

2 - ENTGRATEN

■ MANUELLES

Nach dem Schnitt das Rohr mit dem Werkzeug **PPS CHERAP** innen entgraten und außen unbedingt mit geeignetem Werkzeug entgraten. Die Qualität der Fase überprüfen und sicherstellen, dass sich keine Späne im Rohr befinden.



Ø (mm)	Entgrater
Ø 16 bis 50	PPS CH50
Ø 63 bis 100	PPS CH110

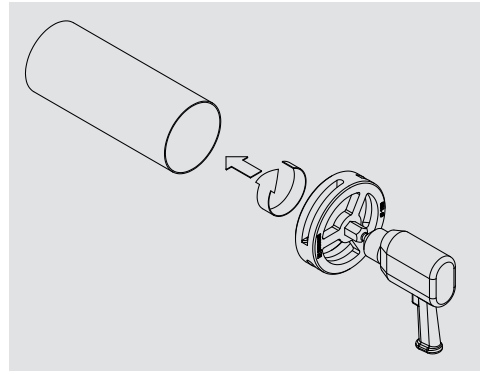
■ MASCHINELLES ENTGRATEN



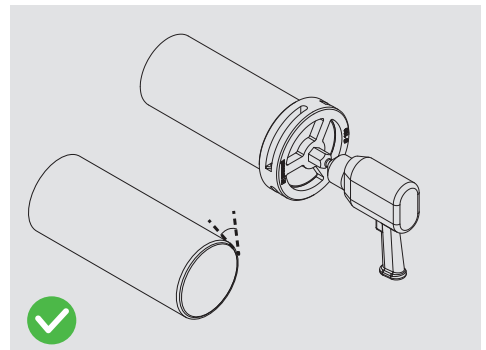
Ø (mm)	Entgrater
Ø 16 bis 20	PPS CHPD2016
Ø 25	PPS CHPD25
Ø 32	PPS CHPD32
Ø 40	PPS CHPD40
Ø 50	PPS CHPD50
Ø 63	PPS CHPD63
Ø 80	PPS CHPD80
Ø 100	PPS CHPD100
Ø 160	PPS CHPD160

! Achtung: Schutzbrille und Schutzhandschuhe tragen.

! Achtung: Der folgende Schritt ist unbedingt erforderlich, um die Installation zu erleichtern und eine Beschädigung der Fittingdichtung zu vermeiden. Vor dem Entgraten am Rohr die Rotationsrichtung der Bohrmaschine überprüfen.

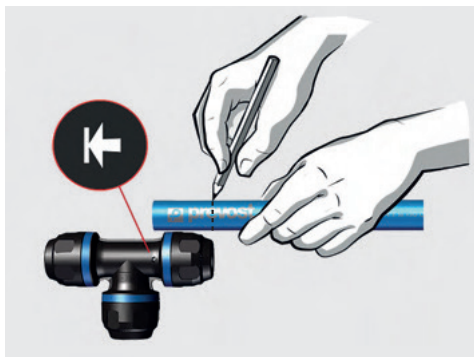


Nicht zu stark in Rohrrichtung drücken.



3 - Rohr markieren

Am Rohr die Einstecktiefe des Rohrs in den Fitting anzeichnen (siehe Tabelle). Durch Nutzung der Markierung an dem Fitting (oder dem Schraubenschlüssel **PPS1 CLE**) kann die Einstecklänge leichter ermittelt werden.

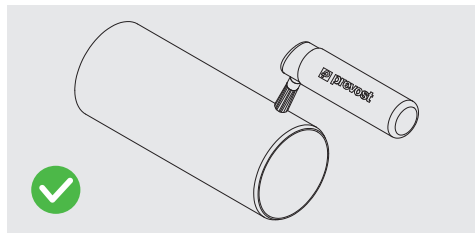


Ø (mm)	Länge (mm)
Ø 16	32
Ø 20	38
Ø 25	44
Ø 32	52
Ø 40	62
Ø 50	72
Ø 63	83
Ø 80	95
Ø 100	95
Ø 160	120

4 - SCHMIERUNG DES ROHR

Nach dem Rohrschnitt die Flächen kontrollieren, reinigen und alle Verunreinigungen mit einem sauberen, feuchten Tuch und einem milden, geeigneten Reinigungsmittel entfernen.

Zum leichteren Zusammensetzen der Teile sollte unbedingt die Montagepaste **PPS AL** verwendet werden. (Keine Schmiermittel, Öle oder Fette verwenden, deren chemische Vereinbarkeit mit dem System nicht sicher ist).



5 - MONTAGE DER ANSCHLÜSSE AUF DEM ROHR

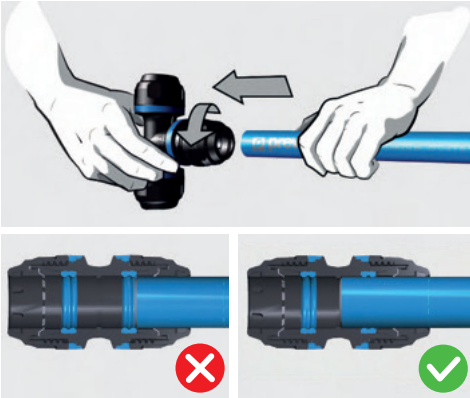
5.1 MONTAGEWERKZEUG ROHR/ FITTING

5.1.a Manuelles Ø 16 - 80

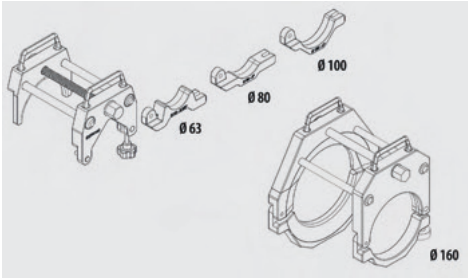
- Den Überwurf um mindestens eine Umdrehung lösen, jedoch ohne ihn ganz abzuschrauben
 - Kontrollieren, ob alle Komponenten des Fittings vorhanden und korrekt positioniert sind.
- Die Ausrichtung der Greifer prüfen, OHNE den Fitting auseinanderzunehmen (siehe Abb.).



- Beim Einstecken das Rohr leicht drehen, um die gewünschte Einstecktiefe zu erreichen. Es wird empfohlen, das Montagegel von Prevost (**PPS AL**) auf die Enden der Rohre und Verbindungen aufzutragen. Keine Schmiermittel, Öle oder Fette verwenden, deren chemische Vereinbarkeit mit dem System nicht sicher ist.



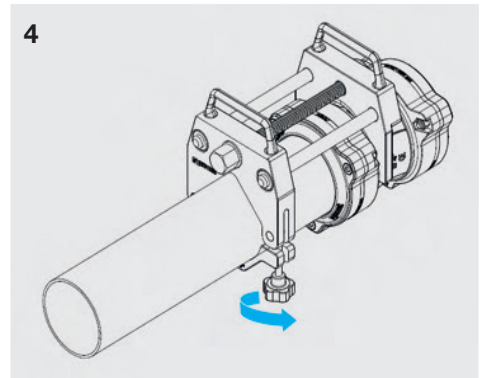
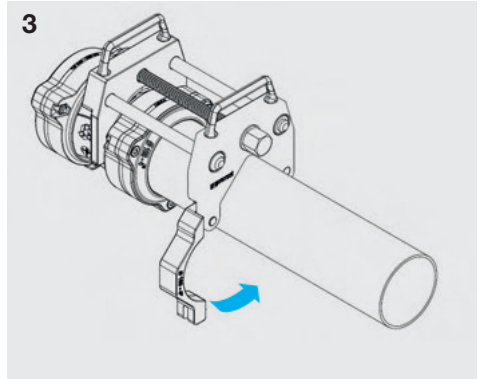
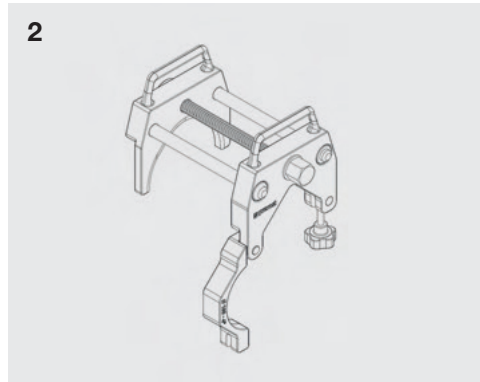
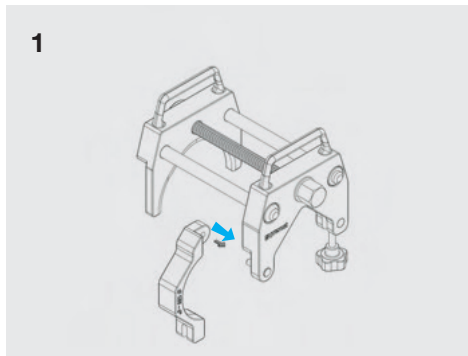
5.1.b Maschinelles (PPS INS) Ø 63 - 160



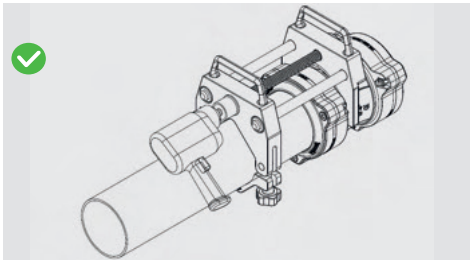
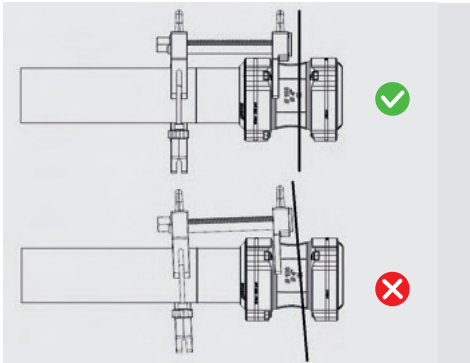
Rohr-Ø PPS (mm)	Bestellnr.
Ø 63 - Ø 80 - Ø 100	PPS INS63100
Ø 160	PPS1 INS160

! **Achtung:** Vor Verwendung dieses Werkzeugs ist das Rohr unbedingt zu entgraten. Ansonsten kann die Dichtung beschädigt werden.

Anlegen des Werkzeugs an Rohr und Fitting

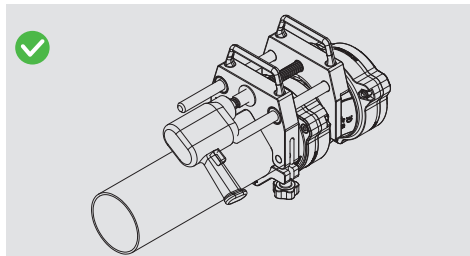
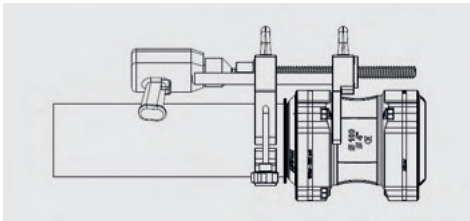


⚠ ACHTUNG: Zum einwandfreien Montieren des Fittings auf die korrekte Ausrichtung der zu montierenden Teile achten.



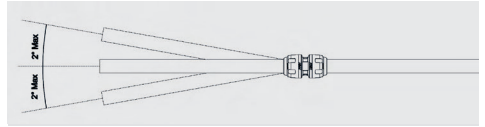
Zum Anziehen den Fitting am Rohrende in Position halten

⚠ Verwenden Sie das Einsteckrohrwerkzeug nicht mit vormontierten CC- oder FL-Fittings (z. B.: PPS1 DK, PPS1 RSI)

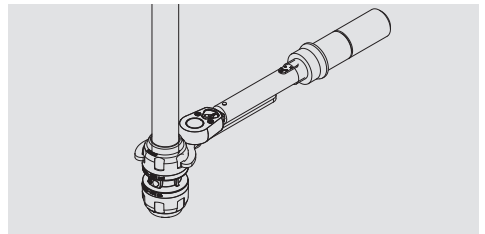
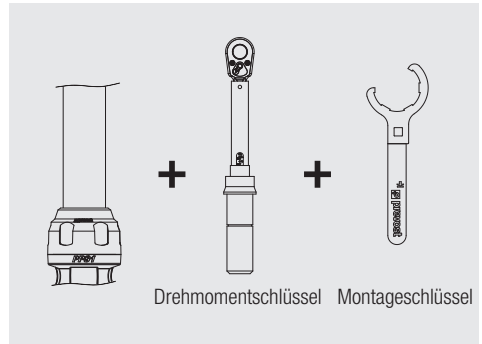


5.2 ANZIEHEN

⚠ Achtung: Vor dem Festziehen des Überwurfes prüfen, ob Rohr und Fitting korrekt zueinander ausgerichtet sind, um Leckage zu vermeiden.



Werkzeuge für Ø 16 bis Ø 80



⚠ Achtung: Jeden Überwurf exakt mit dem vorgegebenen Anzugsmoment festziehen

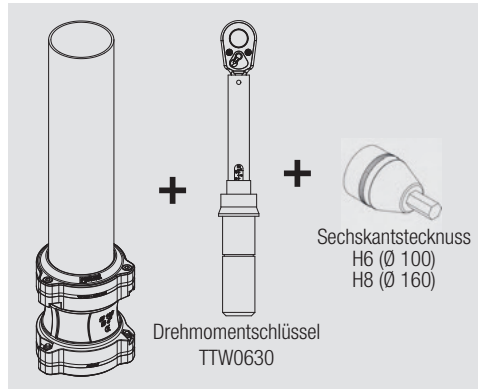


Den Fitting mit dem Hakenschlüssel **PPS1 CLESTD** halten (gegenhalten), damit die bereits festgezogenen Fittings sich nicht wieder lockern.

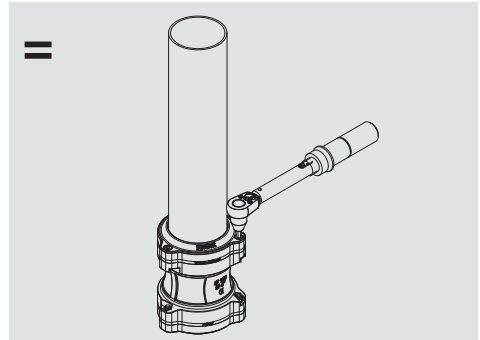
Ø PPS (mm)	Bestellnr.
Ø 16	PPS1 CLE16
Ø 20	PPS1 CLE20
Ø 25	PPS1 CLE25
Ø 32	PPS1 CLE32
Ø 40	PPS1 CLE40
Ø 50	PPS1 CLE50
Ø 63	PPS1 CLE63
Ø 80	PPS1 CLE80
Ø 16-20-25-100-160	TTW 0630
Ø 20-32-40-50-63-80	TTW 20100
Ø 16 bis Ø 80	PPS1 CLESTD

Ø (mm)	Anzugsmoment (Nm)	
	Min	Max
Ø 16	8	12
Ø 20	15	25
Ø 25	21	35
Ø 32	32	50
Ø 40	32	50
Ø 50	55	85
Ø 63	65	95
Ø 80	70	100
Ø 100	25	28
Ø 160	25	28

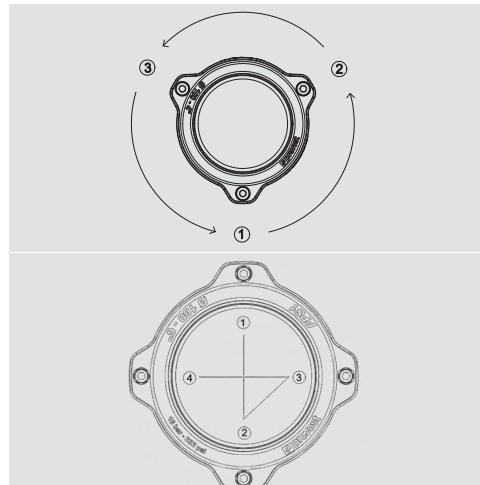
Werkzeuge für Ø 100 - ø 160



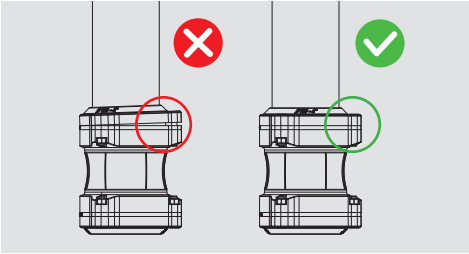
! Achtung: Die 4 M8-Schrauben exakt mit dem vorgegebenen Anzugsmoment von 25 Nm festziehen.



Diesen Vorgang solange wiederholen, bis das erforderliche Anzugsmoment erreicht ist.



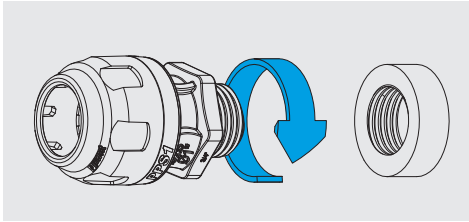
Achtung: Zum einwandfreien Anziehen der Schrauben auf die korrekte Ausrichtung achten.



6 - ANDERE MONTAGE

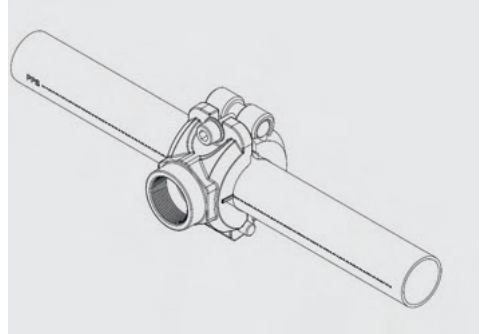
6.1 MONTAGE DER GEWINDEFITTINGS

Zur Montage der Außen- und Innengewinde sollte Teflon® (**TEFLON 12**), Teflon-Band oder ein vergleichbares Installationsdichtungsmittel verwendet werden.

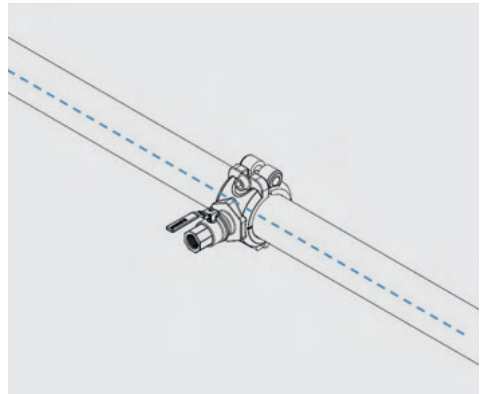


Gewinde	Teflon- umwicklungen	Max. Anzugsmoment (Nm)
3/8"	2 - 3	10
1/2"	2 - 3	12
3/4"	2 - 3	20
1"	2 - 3	35
1 1/4"	3 - 4	45
1 1/2"	3 - 4	55
2"	3 - 4	65
2 1/2"	4 - 5	70
3"	4 - 5	80

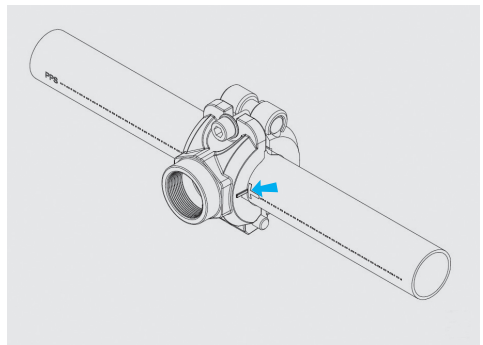
6.2 Gerader Abzweigflansch PPS1 BFT / PPS1 BFV

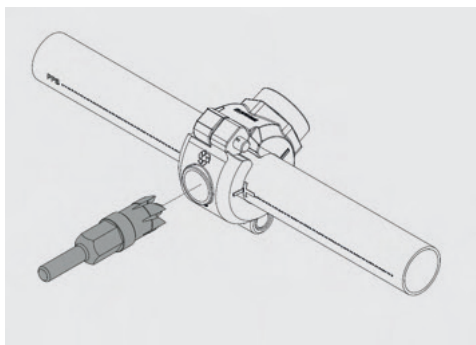
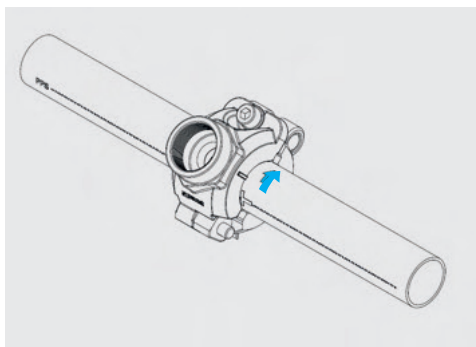


Den Abzweigflansch anhand der doppelten Rohrmarkierung in der benötigten Stellung ausrichten.



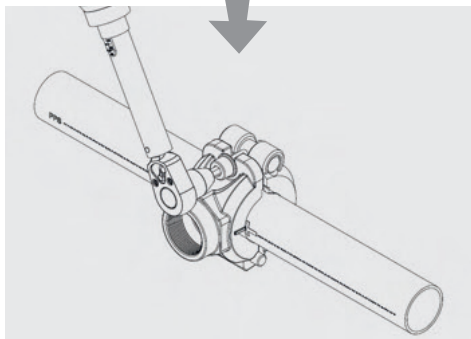
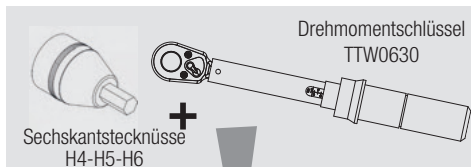
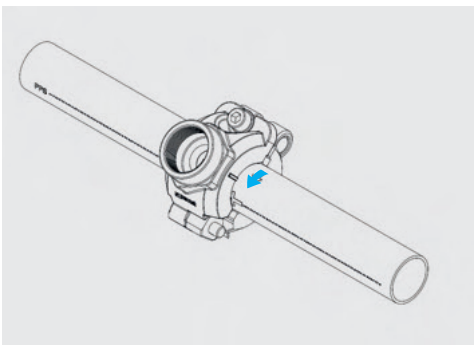
Diese Stellung anhand der vorgesehenen Markierungsstellen (Striche) markieren.





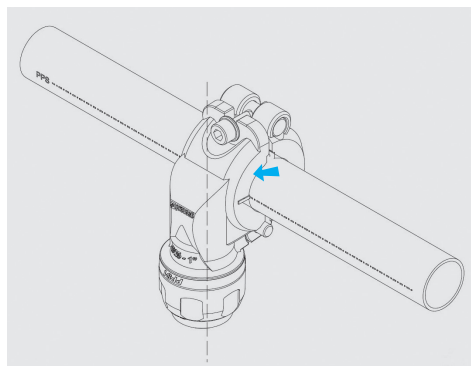
! **Achtung:** Vor Verwendung dieses Werkzeugs ist das Rohr unbedingt zu entgraten.
Ansonsten kann die Dichtung beschädigt werden.

Ø ext. (mm)	Bestellnr.
Ø 25 bis 32	PPS SP16
Ø 40 bis 50	PPS SP22
Ø 63 bis 80	PPS SP30
Ø 100	PPS SP41

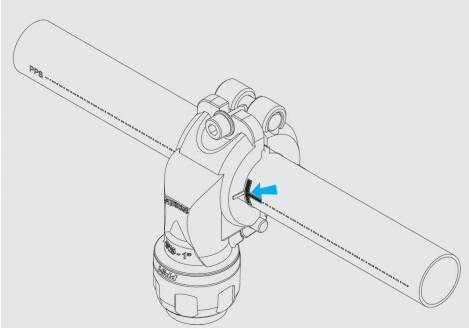


PPS1 BFT PPS1 BFV	Anzugsmoment (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14
Ø 160	12	14

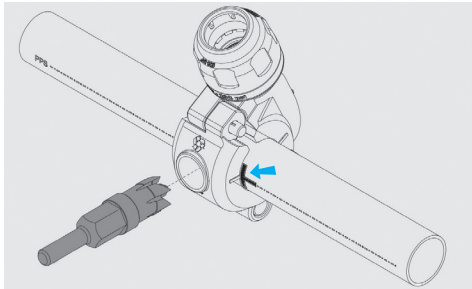
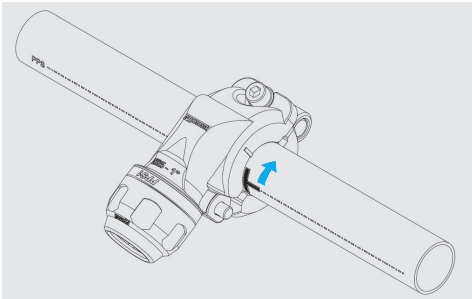
Abzweigflansch – PPS1 BP / PPS1 BT



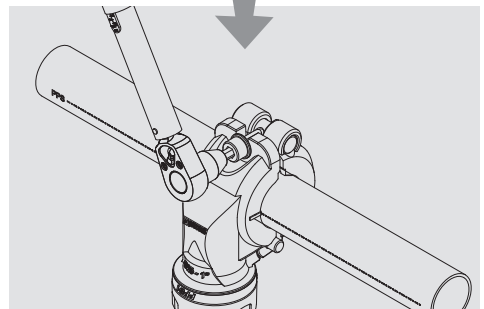
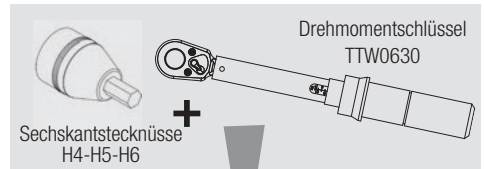
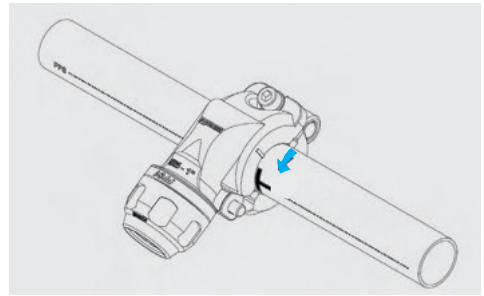
Den Abzweigflansch anhand der doppelten Rohrmarkierung in der benötigten Stellung ausrichten.



Diese Stellung anhand der vorgesehenen Markierungsstellen (Kerben) markieren.



Außen-Ø (mm)	Bestellnr.
Ø 25 bis 32	PPS SP16
Ø 40 bis 50	PPS SP22
Ø 63 bis 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64

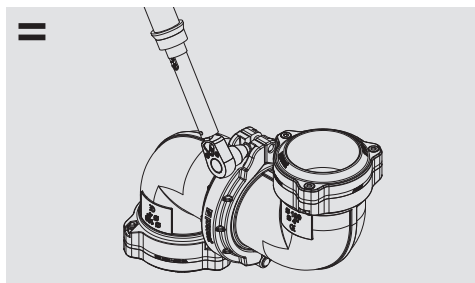
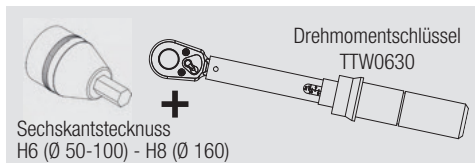
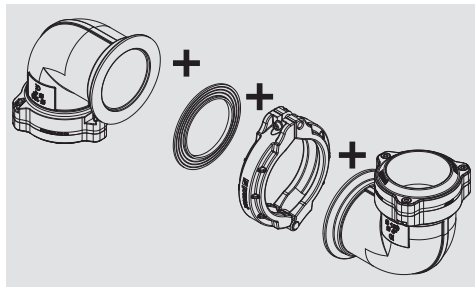


PPS1 BP PPS1 BT	Anzugsmoment (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14

6.3 COMPACT CONNECTOR CONCEPT - CC CONCEPT

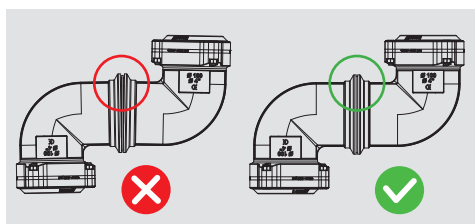
Mit dem folgenden Zubehör können Sie die Fittingkonfigurationen bedarfsgerecht installieren:

Anschlussklemme – PPS1 CC

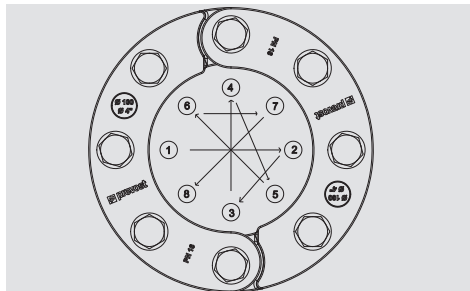
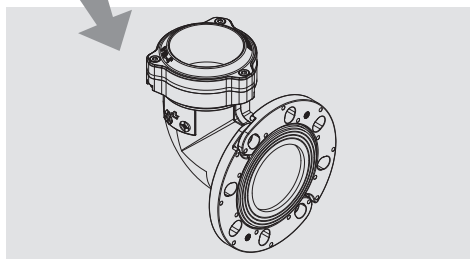
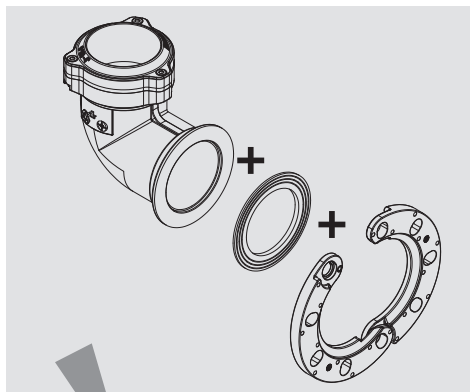


Für PPS1 CC	Anzugsmoment (Nm)	
	Min	Max
Ø 50 - 63 - 80 - 100 - 160 mm	20	25

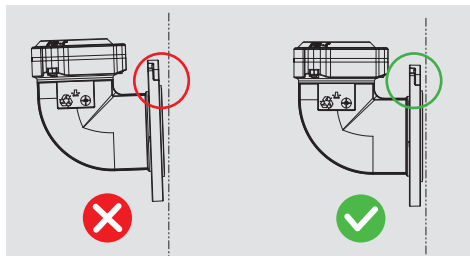
! Achtung: Zum richtigen Anziehen auf eine korrekte Ausrichtung achten.



Anschlussflansch – PPS1 FL



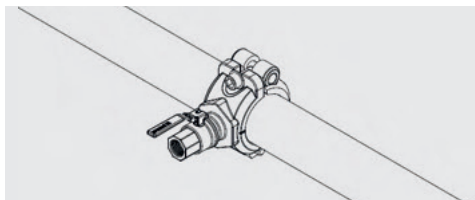
Diesen Vorgang 2 oder 3 Mal wiederholen, bis das vorgegebene Anzugsmoment erreicht ist (30 Nm).



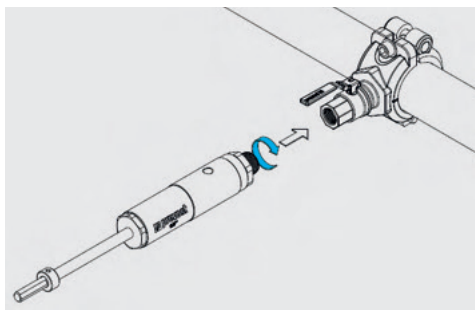
! Achtung: Zum richtigen Anziehen auf eine korrekte Ausrichtung achten.

6.4 ANBOHRWERKZEUG

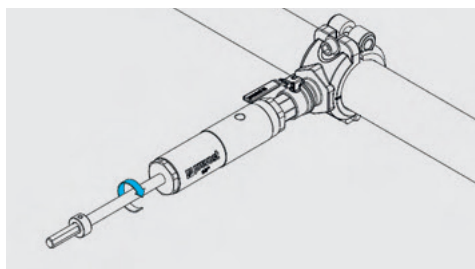
Achtung: Das Leitungsnetz ist mit Druck beaufschlagt. Den geraden Abzweigflansch **PPS1 BFV** montieren.



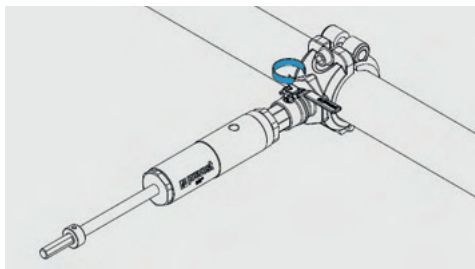
Bohrwerkzeug **PPS DRIL** anschrauben.



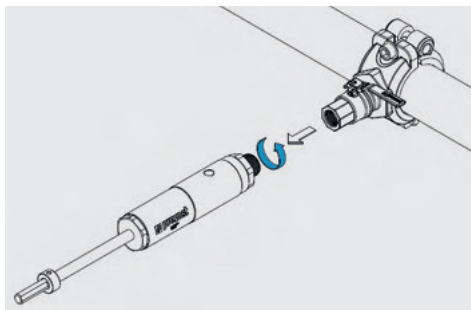
Bohren.



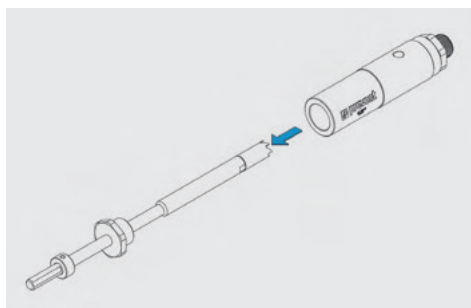
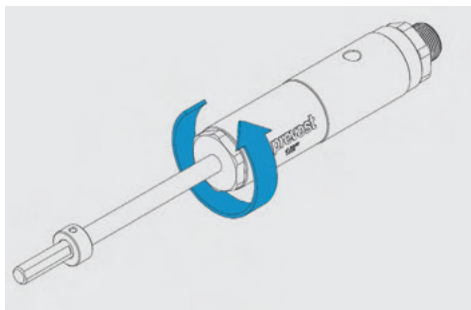
Kugelhahn schließen.



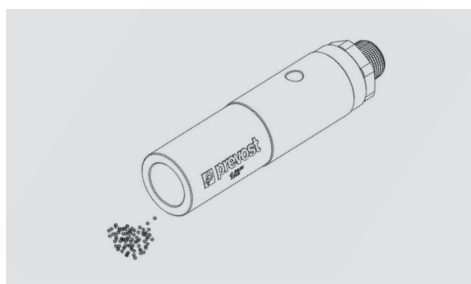
Bohrwerkzeug **PPS DRIL** wieder abschrauben.



Zur Reinigung des **PPS DRILL** abschrauben

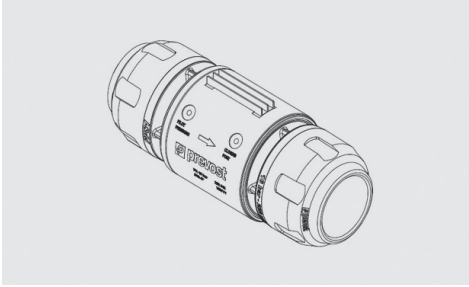


Späne entfernen.

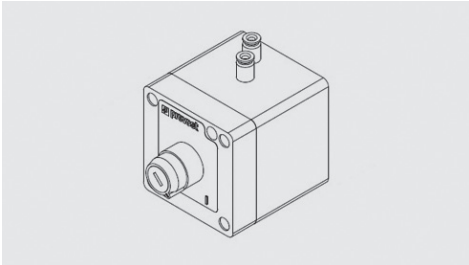


6.5 FERNGESTEUERTES DRUCKLUFTVENTIL

PPS1 VP



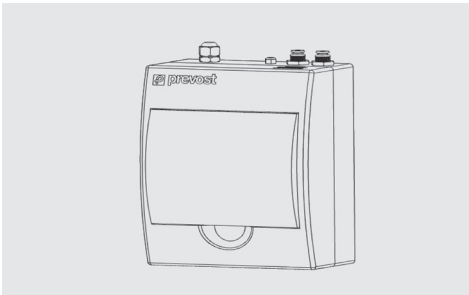
PPS RPK Fernsteuerung mit Nottaster.



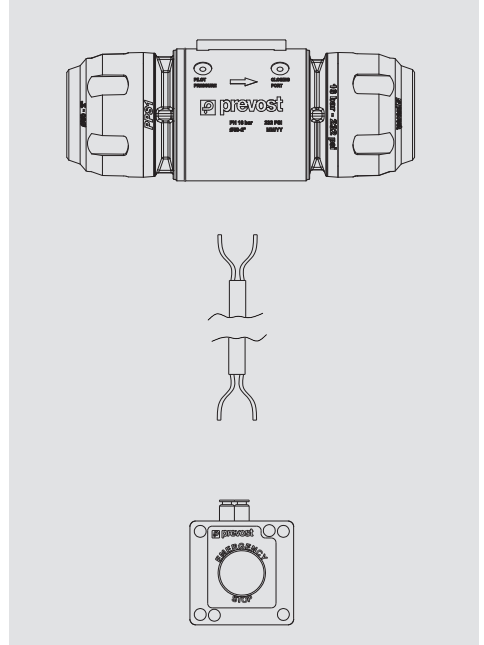
PPS RPE Fernsteuerung mit Schlüsselschalter.



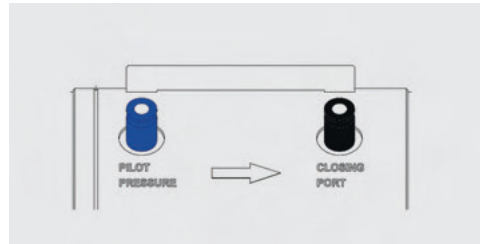
PPS RPWT Fernsteuerung mit Zeitschaltung.



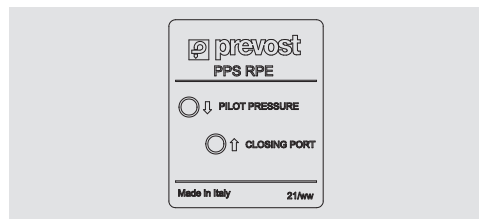
PPS MTPA270412 12 mm Schlauch mit 2 farbigen
Innenleitungen AD Ø 4 mm - Länge 12 Meter



Verbinden Sie das Sicherheitsventil mit der Fernbedienung, indem Sie die beiden 4 mm PA Schläuche unter Beachtung der auf jedem Produkt angegebenen Markierungen "PILOT PRESSURE" und "CLOSING PORT" anschließen.



Etikett auf Karton.



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A- LAS REGLAS DE UN INSTALACION DE AIRE COMPRIMIDO

■ REQUISITOS PREVIOS ANTES DE UNA INSTALACION

La sala de compresores debe ser preferentemente amplia, bien ventilada, bien aislado y separado del resto del taller.

Los compresores serán conectados a la red **PPS** por flexibles con el fin de eliminar los riesgos liados a las vibraciones y permite un mantenimiento más cómodo (Flexibles LEF et LEM). Es importante instalar un bypass entre los compresores, entre el o los depósitos y los diferentes filtros.

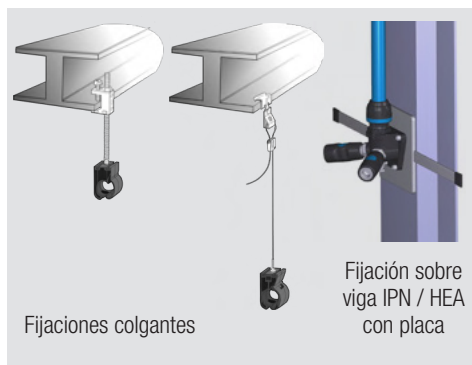
■ FIJACION DE LA RED



Fijaciones de pared

La red principal debe estar cerrada y debe ser instalada por razones de seguridad a una altura mínima de 2,5 m del suelo. Los condensados residuales serán evacuados de la red principal por bajadas directas a través de una te y equipados de un sistema de purgas automáticas.

Los diámetros de la red principal (canalización primaria) será suficientemente importante para evitar las pérdidas de cargas y responder a las ampliaciones futuras. Será fijadas con **un número suficiente de abrazaderas** deslizantes para asegurar su mantenimiento y permitir la dilatación o la contracción del tubo (Abrazaderas PPS Cl). Una pendiente de 1% es también recomendada con el fin de dirigir los condensados hacia el punto más bajo (purgas).



Los modelos de fijación son definidos en función de la configuración del edificio y debe ser realizado de manera óptima para obtener una alineación perfecta y una solidez del conjunto de la estructura.

Es importante respetar la distancia entre las abrazaderas en la red principal. La distancia entre dos abrazaderas es de media unos 3 metros.

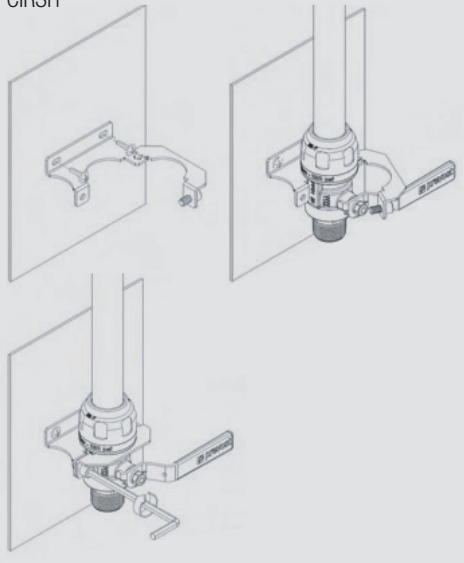
El espacio entre 2 abrazaderas está definido en función del diámetro, de la temperatura, y del peso del fluido transportado. Está aconsejado seguir las separaciones siguientes:

∅	Distanciamiento expresado en metros según la temperatura			
	mm	<20°C	30°C	40°C
∅ 16		2 m	2 m	1,5 m
∅ 20		2,5 m	2 m	1,5 m
∅ 25		3 m	2,5 m	2 m
∅ 32		3,5 m	3 m	2,5 m
∅ 40		4 m	3,5 m	3 m
∅ 50		3,5 m	3 m	2,5 m
∅ 63		3,5 m	3 m	2,5 m
∅ 80		3,5 m	3 m	2,5 m
∅ 100		3,5 m	3 m	2,5 m
∅ 160		3,5 m	3 m	2,5 m

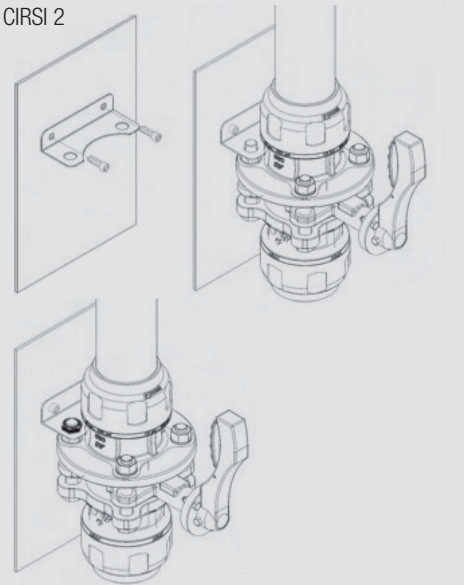


Las abrazaderas no deben estar próximas a los racores **PPS** u otros accesorios con el fin de no bloquear el deslizamiento del tubo.

CIRSI1



CIRSI 2



■ PLETINAS DE FIJACIÓN SOBRE LAS VIGAS IPN/HEA PARA LOS ACCESORIOS DE LA RED

Permiten colocar de forma ergonómica y segura los puestos de trabajo.

Las pletinas metálicas tienen unos sistemas de agarre adaptados para las vigas IPN/HEA, permitiendo fijar rápidamente los elementos necesarios con toda seguridad, sin taladrar, sin soldar, en conformidad con las normas en vigor. Las pletinas están diseñadas para permitir el montaje de:

- Enrolladores abiertos o cerrados
- Apliques murales
- Conjuntos de tratamiento de aire **Prevost filtration**
- Soportes universales + accesorios

■ DILATACION DE LOS MATERIALES

El aluminio está sujeto a la dilatación o la contracción en caso de variantes térmicas, estas pueden ser compensadas con dispositivos de absorción sobre la red principal.

Los flexibles juegan un papel fundamental sobre los tubos de diámetro pequeño y permiten igualmente realizar cambio de dirección (ángulos), o contornar obstáculos (pilares, vigas, etc.). Para los tubos de diámetros grandes, tenemos kits de dilatación que realizan esta función.

Coefficiente de dilatación: 0,024 mm por metro y por grado °C. La dilatación se calcula de la forma siguiente:

C = Coeficiente de dilatación

L = Longitud de la línea recta (entre 2 puntos fijos)

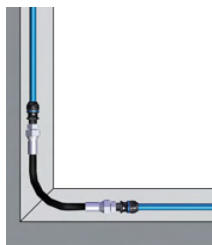
ΔT° = Diferencia ente la temperatura ambiente máxima y mínima en ° C.

DL = Dilatación global

Es decir DL = C x L x ΔT°

Ejemplo: una línea de 20 metros en Ø 40 mm, a una temperatura ambiente de 15°C y que puede alcanzar una temperatura máxima de 40°C es decir 25° de diferencia.

DL : 0,024 x 20 (m) x 25° (40° C – 15° C) = 12 mm



Flexibile



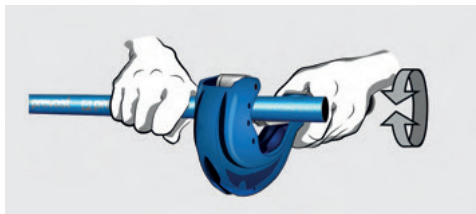
Kit de dilatación

B - INSTRUCCIONES DE MONTAJE

1 - CORTAR EL TUBO

! **Cuidado:** El corte debe ser recto y perpendicular al eje del tubo.

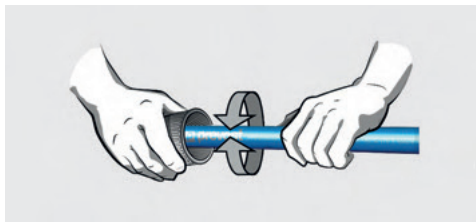
Nota: Compruebe que la superficie del extremo del tubo no esté dañada. Evite los arañazos y los impactos para lograr una operación de calidad.



Ø (mm)	Cortatubos
Ø 16 a 63	PPS CTU63
Ø 63 a 100	PPS CTU110
Ø 160	PPS CTU160

2 - BISELADO Y DESBARBADO ■ MANUAL

Tras el corte, desbarbe el tubo por el interior con la herramienta **PPS CHERAP** y realice siempre un biselado exterior con las herramientas adaptadas. Compruebe la buena calidad del biselado y la ausencia de virutas dentro del tubo.



Ø (mm)	Herramientas de biselado
Ø 16 a 50	PPS CH50
Ø 63 a 100	PPS CH110

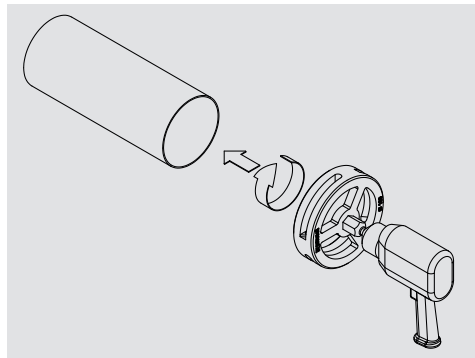
■ BISELADO MECÁNICO



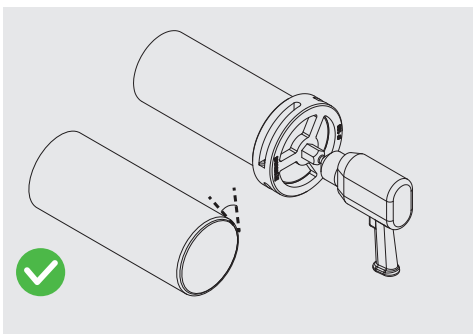
Ø (mm)	Herramientas de biselado
Ø 16 a 20	PPS CHPD2016
Ø 25	PPS CHPD25
Ø 32	PPS CHPD32
Ø 40	PPS CHPD40
Ø 50	PPS CHPD50
Ø 63	PPS CHPD63
Ø 80	PPS CHPD80
Ø 100	PPS CHPD100
Ø 160	PPS CHPD160

! **Cuidado:** Utilice gafas y guantes de protección.

! **Cuidado:** Es imprescindible seguir esta etapa para facilitar la instalación y evitar dañar la junta del racor. Compruebe el sentido de rotación del taladro antes de empezar a actuar en el tubo.

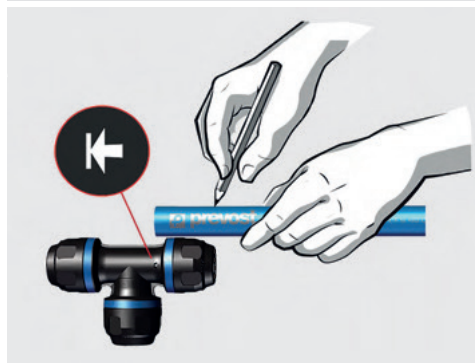
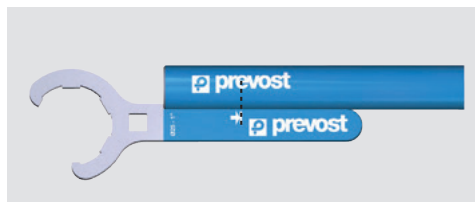


No fuerce demasiado en dirección al tubo.



3 - MARQUE EL TUBO

Marque una referencia en el tubo para determinar la longitud de penetración del tubo en el racor (según tabla). La referencia en el enchufe (o en la llave de apriete **PPS1 CLE**) permite determinar más fácilmente la longitud de penetración.

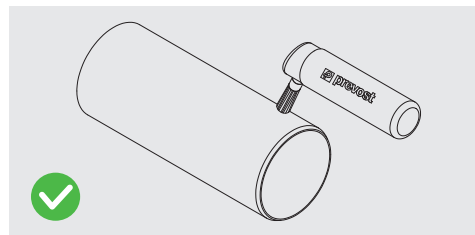


Ø (mm)	Longitud(mm)
Ø 16	32
Ø 20	38
Ø 25	44
Ø 32	52
Ø 40	62
Ø 50	72
Ø 63	83
Ø 80	95
Ø 100	95
Ø 160	120

4- LUBRICADO DEL TUBO

Tras el corte, compruebe el estado de la superficie y elimine los residuos con un trapo húmedo y un producto desengrasante no agresivo.

Para facilitar el ensamblaje de las diferentes piezas, utilice siempre el gel de montaje **PPS AL** (Evite utilizar lubricantes, aceites o cuerpos grasos de compatibilidad química dudosa).

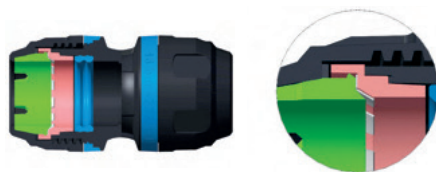


5 - ENSAMBLAJE DE LOS RACORES AL TUBO

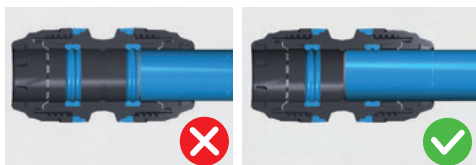
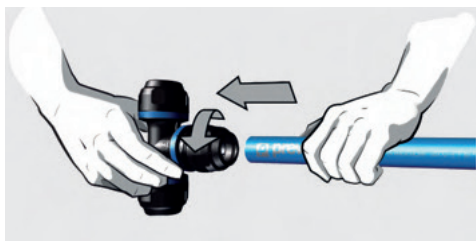
5.1 MONTAJE TUBO/RACOR

5.1.a Inserción manual Ø 16 - 80

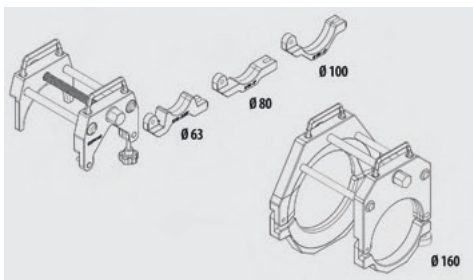
- Afloje como mínimo una vuelta la tuerca sin desmontarla.
- Compruebe la presencia y la posición de todos los componentes en el racor. Compruebe la orientación de las mordazas sin desmontar el racor (según esquema).



- Encaje el tubo ejerciendo una ligera rotación hasta alcanzar la longitud de penetración. Se recomienda aplicar el gel de montaje Prevost (PPS AL) en los extremos de los tubos y las conexiones. Evite utilizar lubricantes, aceites o cuerpos grasos de compatibilidad química dudosa.



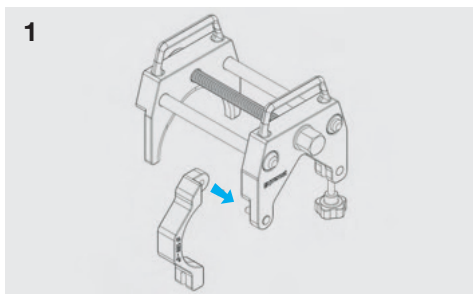
5.1.b Herramienta de montaje tubo/ racor (PPS INS) Ø 63 - 160



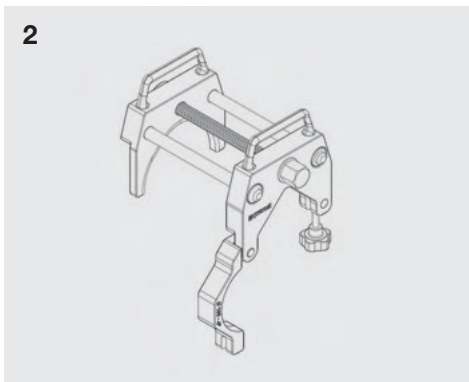
Ø Tubo PPS (mm)	Referencia
Ø 63 - Ø 80 - Ø 100	PPS INS63100
Ø 160	PPS1 INS160

! **Cuidado:** Es obligatorio desbarbar el tubo antes de utilizar esta herramienta. Sin esta acción podría dañar la junta.

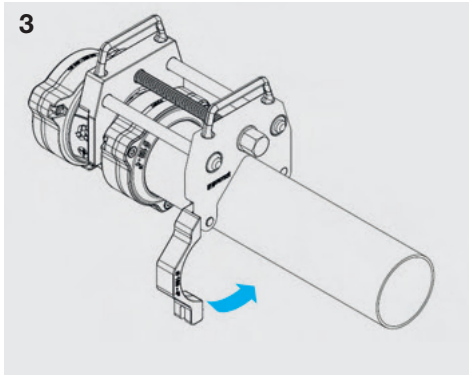
Cómo posicionar la herramienta sobre el tubo y el racor



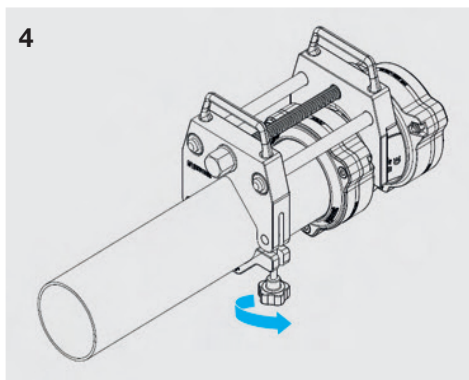
2



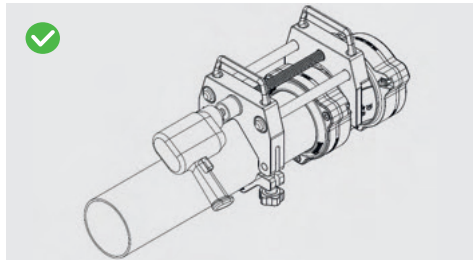
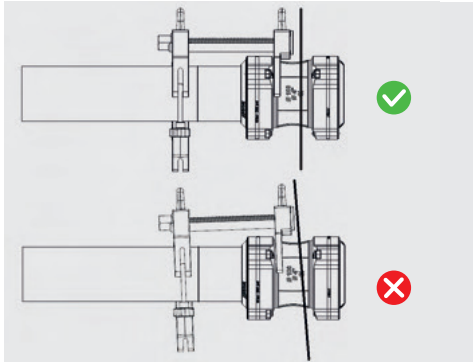
3



4

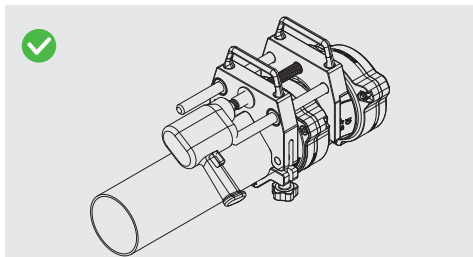
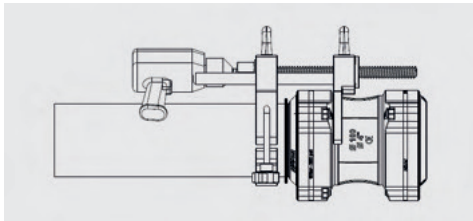


! CUIDADO: Para un apriete de calidad, controle la alineación de las piezas am ensamblarlas..



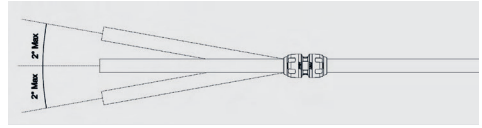
Durante el apriete, mantenga el racor en posición en el extremo del tubo

! No utilice la herramienta de presión con accesorios CC o FL premontados (ex: PPS1 DK , PPS1 RS)

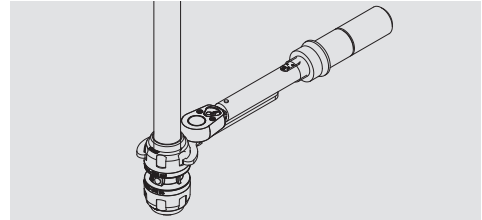
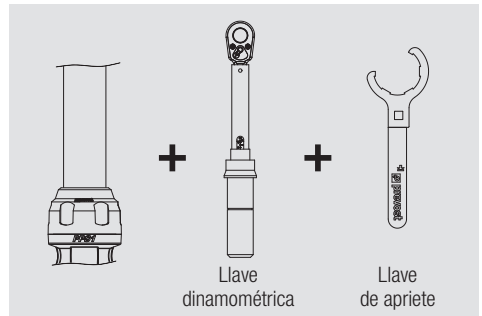


5.2 APRIETE

! Cuidado: Antes de apretar la tuerca, compruebe la correcta alineación del tubo con el racor para evitar fugas.



Tuercas del Ø 16 al Ø 80



! Cuidado: Apriete cada tuerca hasta el valor de par recomendado.

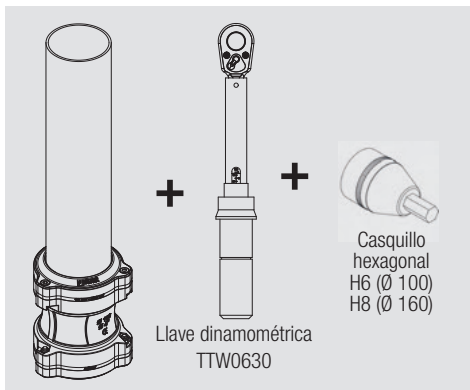


Sujete el cuerpo del racor con la llave **PPS1 CLESTD** para asegurarse de que los demás racores queden apretados.

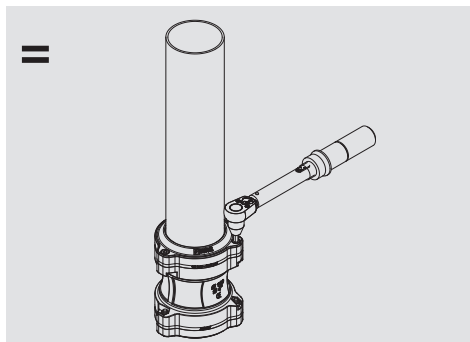
Ø PPS (mm)	Referencia
Ø 16	PPS1 CLE16
Ø 20	PPS1 CLE20
Ø 25	PPS1 CLE25
Ø 32	PPS1 CLE32
Ø 40	PPS1 CLE40
Ø 50	PPS1 CLE50
Ø 63	PPS1 CLE63
Ø 80	PPS1 CLE80
Ø 16-20-25-100-160	TTW 0630
Ø 20-32-40-50-63-80	TTW 20100
Ø 16 al Ø 80	PPS1 CLESTD

Ø (mm)	Par de apriete (Nm)	
	Min	Max
Ø 16	8	12
Ø 20	15	25
Ø 25	21	35
Ø 32	32	50
Ø 40	32	50
Ø 50	55	85
Ø 63	65	95
Ø 80	70	100
Ø 100	25	28
Ø 160	25	28

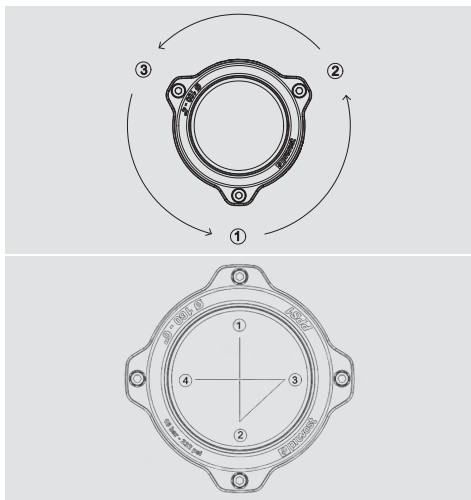
Tornillo para Ø 100 - Ø 160



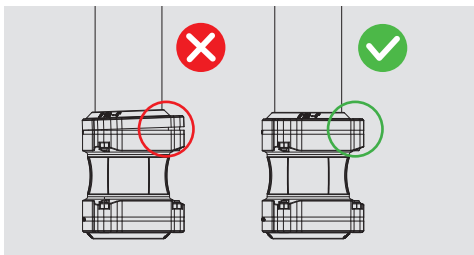
! Cuidado: Apriete los tres 3 tornillos M8 hasta el valor de par recomendado de 25 Nm.



Repita esta etapa hasta alcanzar el valor de apriete deseado.



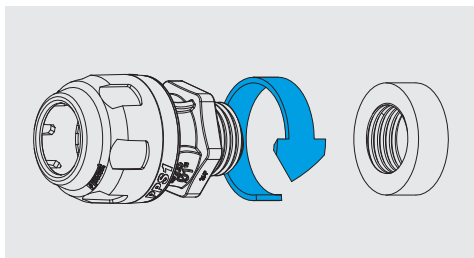
! **Cuidado:** Para un apriete de los tornillos de calidad, compruebe la alineación.



6 - OTROS ENSAMBLAJES

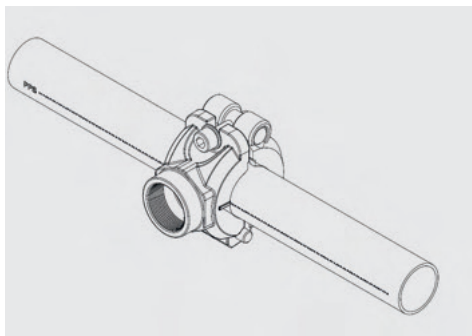
6.1 ENSAMBLAJE DE PIEZAS ROSCADAS

Para ensamblar las rocas macho y hembra, recomendamos utilizar Teflon® (**TEFLON 12**), cinta Teflon u otro producto de estanqueidad de fontanería.

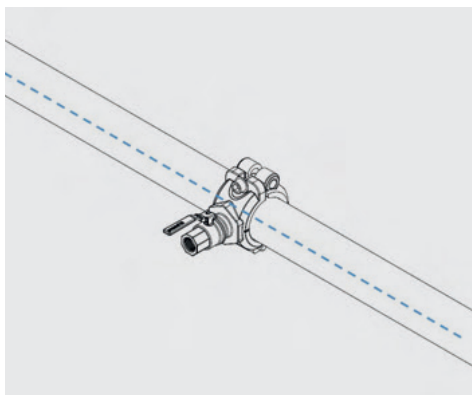


Rosca	Vueltas de Teflon	Par de apriete máx. (Nm)
3/8"	2 - 3	10
1/2"	2 - 3	12
3/4"	2 - 3	20
1"	2 - 3	35
1 1/4"	3 - 4	45
1 1/2"	3 - 4	55
2"	3 - 4	65
2 1/2"	4 - 5	70
3"	4 - 5	80

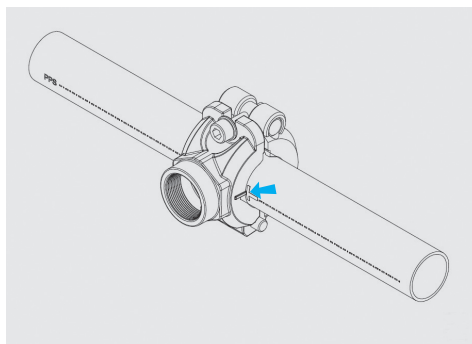
6.2 BRIDA DE DERIVACIÓN RECTA PPS1 BFT / PPS1 BFV

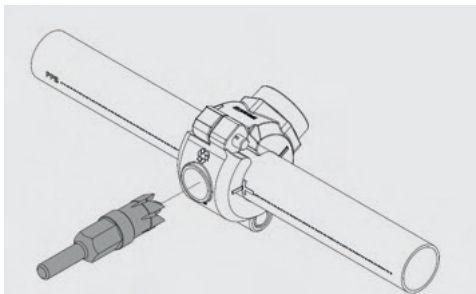
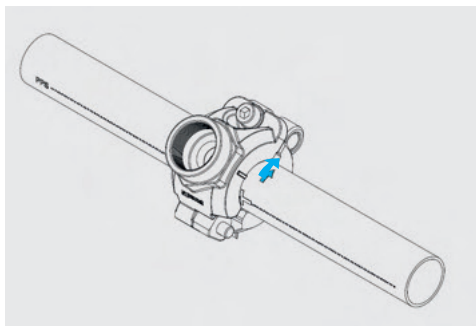


Ajuste la brida de derivación en la posición deseada utilizando el doble marcado en el tubo.

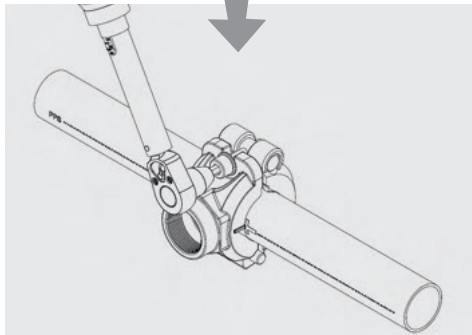
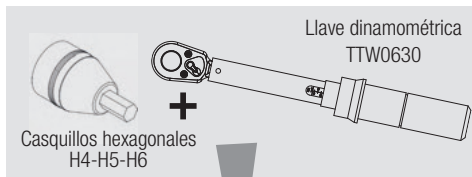
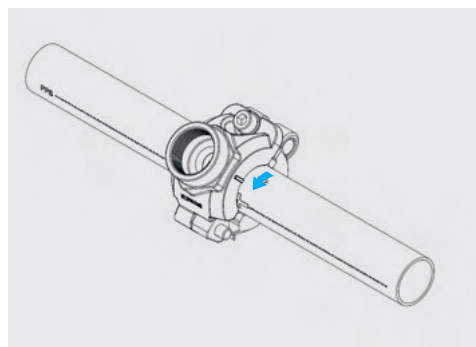


Marque la posición preseleccionada utilizando las referencias previstas a dicho efecto (muescas).



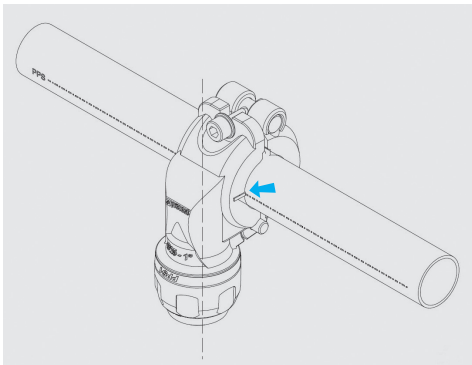


Ø ext. (mm)	Referencia
Ø 25 a 32	PPS SP16
Ø 40 a 50	PPS SP22
Ø 63 a 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64

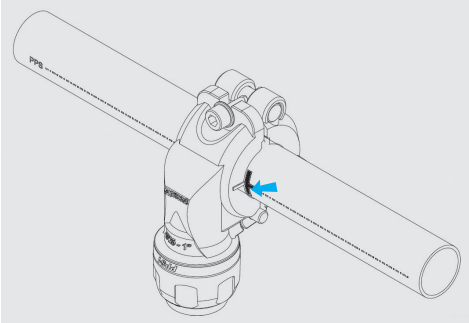


PPS1 BFT PPS1 BFV	Par de apriete (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14
Ø 160	12	14

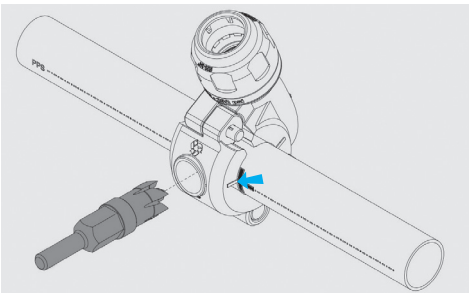
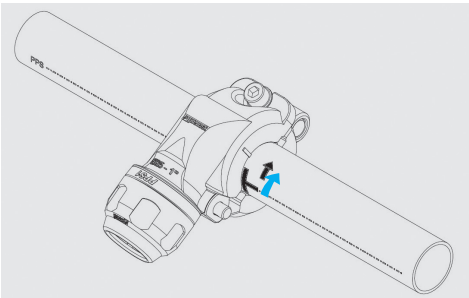
Brida de derivación PPS1 BP / PPS1 BT



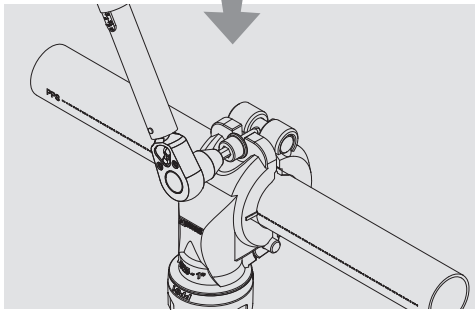
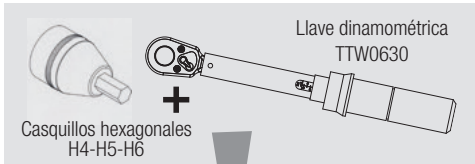
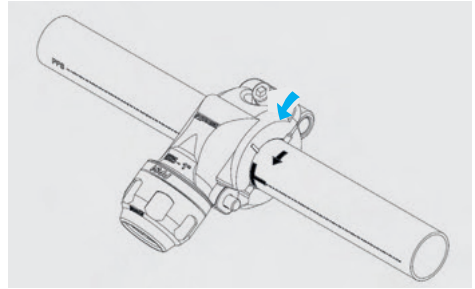
Ajuste la brida de derivación en la posición deseada utilizando el doble marcado en el tubo.



Marque la posición preseleccionada utilizando las referencias previstas a dicho efecto (muestras).



! **Cuidado:** Es obligatorio desbarbar el tubo antes de utilizar esta herramienta. Sin esta acción podría dañar la junta.



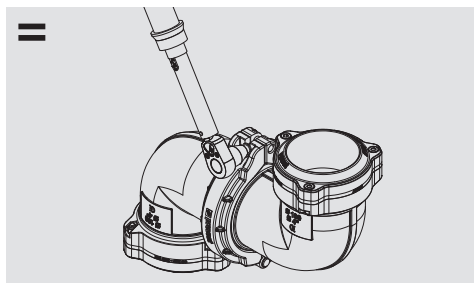
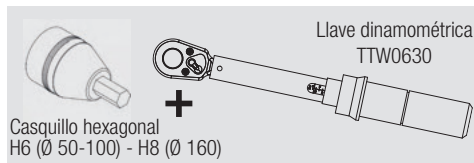
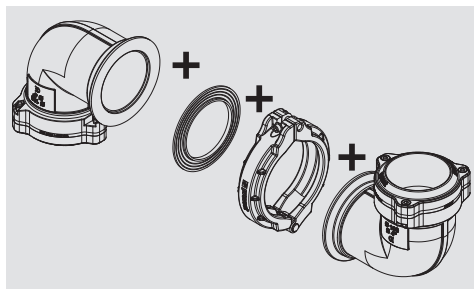
PPS1 BP PPS1 BT	Par de apriete (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14

Ø ext. (mm)	Referencia
Ø 25 a 32	PPS SP16
Ø 40 a 50	PPS SP22
Ø 63 a 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64

6.3 CONCEPTO DE CONEXIÓN COMPACTA - CC CONCEPT

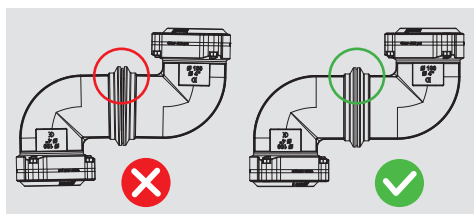
Puede crear la configuración de enchufes que necesita con las opciones siguientes:

Abrazadera de conexión – PPS1 CC

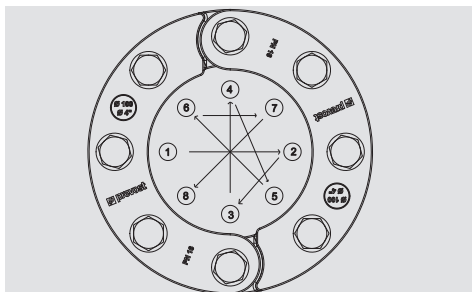
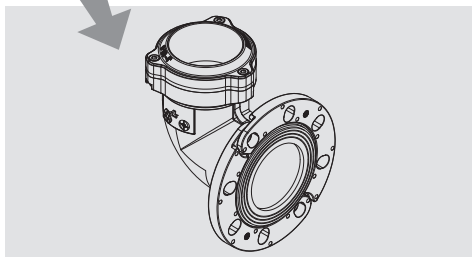
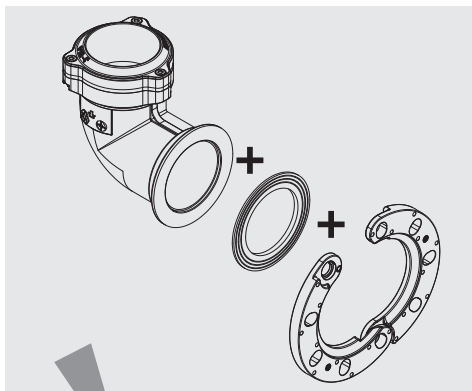


Para PPS1 CC	Par de apriete (Nm)	
	Min	Max
Ø 50 - 63 - 80 - 100 - 160 mm	20	25

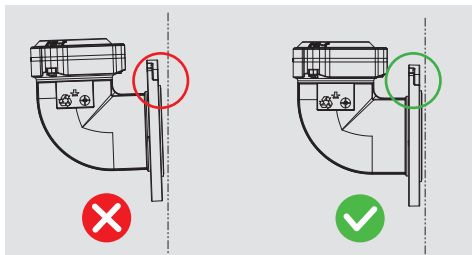
! Cuidado: Para un apriete de calidad, compruebe la alineación.



Abrazadera de conexión – PPS1 FL



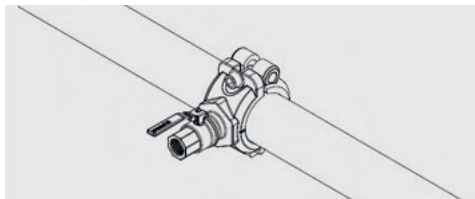
Repita esta etapa 2 o 3 veces hasta alcanzar el valor de apriete deseado (30 Nm).



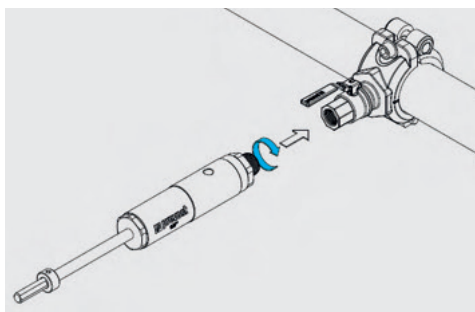
! Cuidado: Para un apriete de calidad, compruebe la alineación.

6.4 HERRAMIENTA DE PERFORACIÓN BAJO PRESIÓN

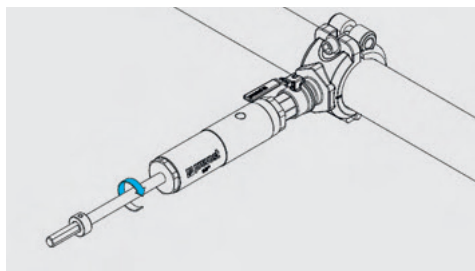
! **Cuidado:** La red está presurizada.
Posicione la brida de derivación recta **PPS1 BFV**.



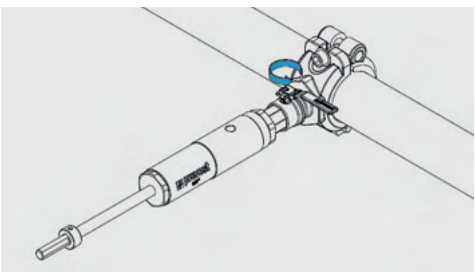
Atornille la herramienta de perforación **PPS DRIL**.



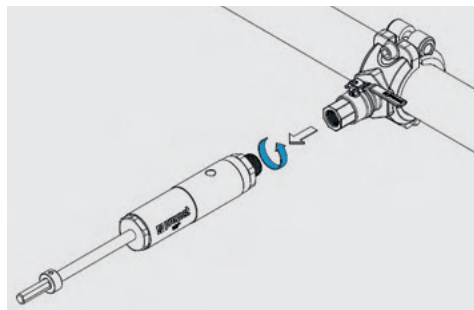
Perfore.



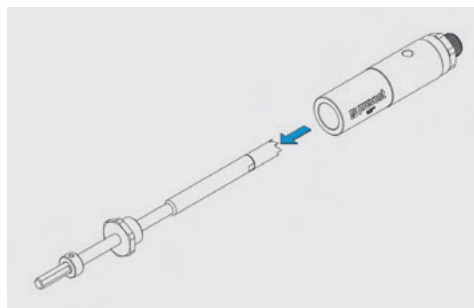
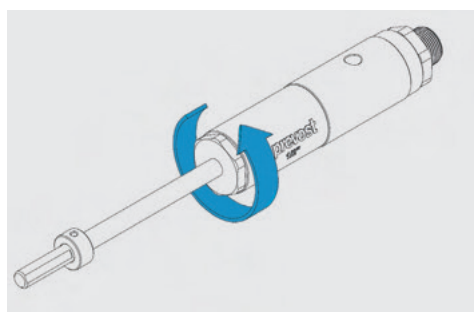
Cierre la válvula.



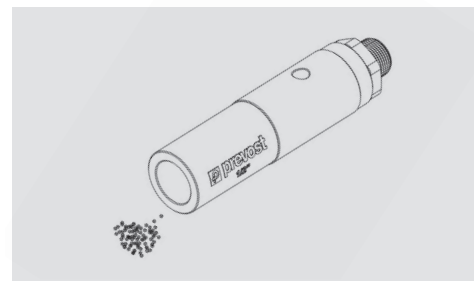
Desatornille la herramienta de perforación **PPS DRIL**.



Sujete le herramienta **PPS DRIL**. Desatornille.

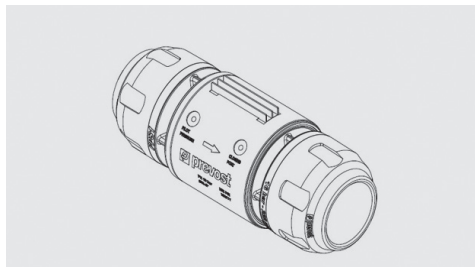


Elimine las virutas.

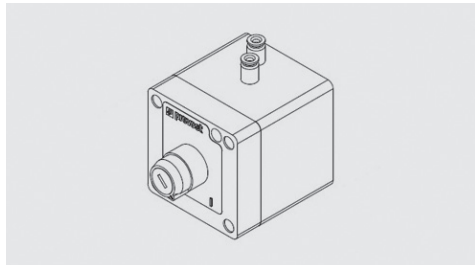


6.5 VÁLVULA NEUMÁTICA CON CONTROL REMOTO

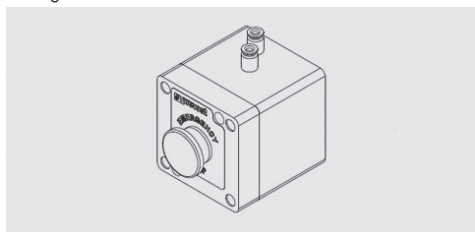
PPS1 VP



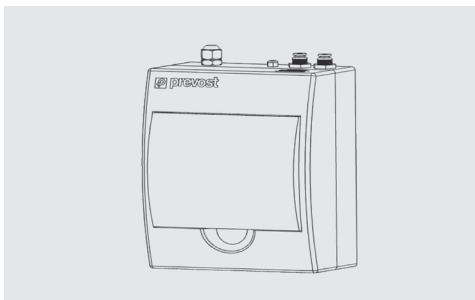
PPS RPK Control remoto con interruptor con candado.



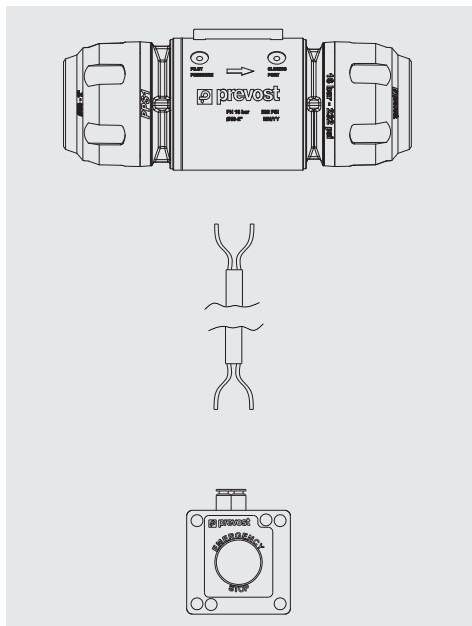
PPS RPE Control remoto con botón de parada de emergencia.



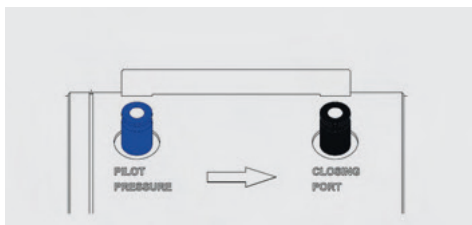
PPS RPWT Control remoto con temporizador.



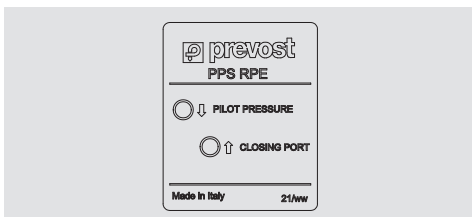
PPS MTPA270412 PA 12 multitubo 2 conductos color
 Ø ext. 4 mm - 12 m de longitud



Realicen la unión entre la válvula neumática y el control remoto conectando los 2 tubos PA Ø 4 mm respetando los indicadores "PILOT PRESSURE" y "CLOSING PORT" señalados en cada uno de los productos.



Etiqueta en la carcasa.



INDICE

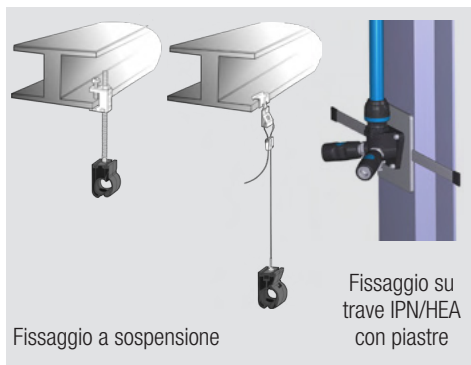
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A- GUIDA ALL'INSTALLAZIONE DI UN IMPIANTO PER ARIA COMPRESSA

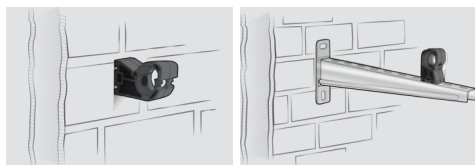
■ REQUISITI PRE-INSTALLAZIONE

Idealmente, la sala compressori dovrebbe essere spaziosa, ben ventilata, isolata e separata dal resto dell'officina.

Per eliminare i problemi di vibrazione e garantire un facile accesso per la manutenzione, collegare qualsiasi macchinario alla rete PPS con tubi flessibili (codici LEF e LEM). È importante installare dei bypass tra ciascuna macchina, i serbatoi e i filtri.



■ MONTAGGIO DELL'IMPIANTO



Fissaggio a muro

La rete principale deve formare un anello e, per sicurezza, montarla ad un minimo di 2,5 m dal suolo. Installare gli scaricatori automatici nella parte inferiore di ogni calata per rimuovere la condensa residua.

Il diametro della linea principale deve essere sufficiente per evitare perdite di carico e consentire future espansioni. Montare il tubo con un numero appropriato di supporti scorrevoli per tenerlo saldamente in posizione ma consentire comunque l'espansione e la contrazione. (Fermatubo PPS Cl). Si consiglia una pendenza dell'1% per dirigere i condensati nei punti bassi (scarichi).

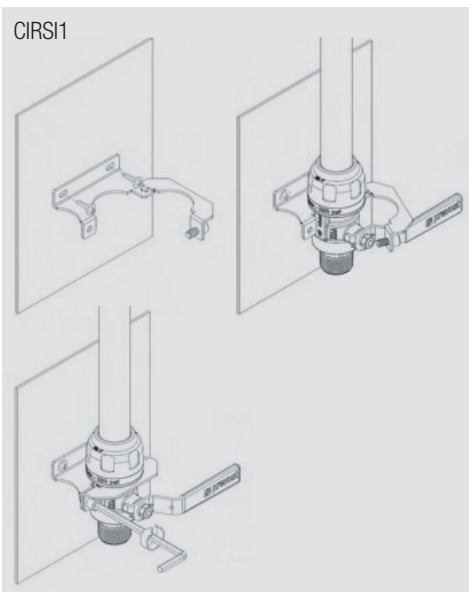
Per garantire che il sistema sia allineato e fissato saldamente, selezionare la corretta opzione di montaggio a seconda della configurazione dell'edificio. Per motivi di sicurezza, si consiglia di montare i supporti per tubo a non più di 3m di distanza l'uno dall'altro. Determinare la distanza tra 2 morsetti in base al diametro del tubo, alla temperatura ambientale e al peso del fluido convogliato. Di seguito sono riportate le linee guida per la spaziatura consigliate.

Ø	Distanza a seconda della temperatura		
	<20°C	30°C	40°C
Ø 16	2 m	2 m	1,5 m
Ø 20	2,5 m	2 m	1,5 m
Ø 25	3 m	2,5 m	2 m
Ø 32	3,5 m	3 m	2,5 m
Ø 40	4 m	3,5 m	3 m
Ø 50	3,5 m	3 m	2,5 m
Ø 63	3,5 m	3 m	2,5 m
Ø 80	3,5 m	3 m	2,5 m
Ø 100	3,5 m	3 m	2,5 m
Ø 160	3,5 m	3 m	2,5 m

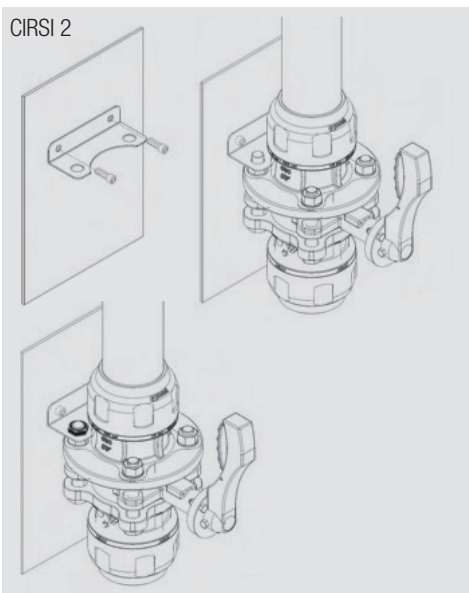


Non adottare raccordi o altri accessori che impediscano lo scorrimento.

CIRSI1



CIRSI 2



■ SISTEMA DI ANCORAGGIO A TRAVI IPN/HEA

Per creare un ambiente di lavoro organizzato e sicuro, molti dei nostri prodotti si attaccano a piastre metalliche, che a loro volta vengono fissate su travi IPN / HEA. Le piastre si installano rapidamente senza forare o saldare e sono conformi agli standard del settore.

Le piastre sono disponibili per montare i seguenti prodotti:

- Avvolgitubo
- Blocchetti di distribuzione
- Sistema di trattamento **Prevost Filtration**
- Supporti universali e accessori

■ DILATAZIONE DEL MATERIALE

Come ogni altro materiale, l'alluminio si espande e si contrae a seconda delle variazioni di temperatura. Vari componenti possono compensare questo movimento. Per tubi di piccolo diametro, utilizzare un tubo flessibile nei cambi di direzione (angoli) o nel bypassare ostacoli (pilastri, travi ecc...). Per diametri maggiori, i kit di espansione garantiscono la massima efficienza.

Coefficiente di espansione: 0.024 mm per metro e per °C.

Calcolo espansione:

C = Coefficiente di espansione

L = Lunghezza di un tratto dritto fra due punti fissi

ΔT° = Differenza fra temperature massima e minima in °C

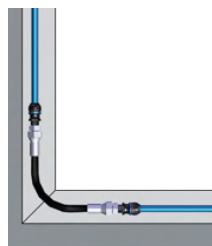
DL = Espansione complessiva

Cioè DL = C x L x ΔT°

Esempio: linea di 20m con tubo da 40 mm.

Temperatura 15°C con massima temperatura di 40°C
-> differenza di 25°C.

DL : 0,024 x 20 (m) x 25° (40° C – 15° C) = **12 mm**



Flessibile



Kit Dilatazione

B- ISTRUZIONI DI MONTAGGIO

1 - TAGLIARE IL TUBO

! Attenzione: Il taglio deve essere diritto e perpendicolare all'asse del tubo.

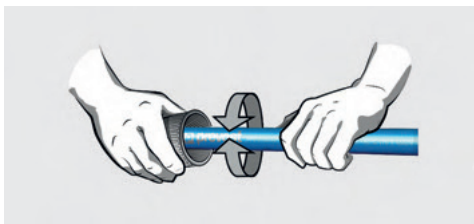
Nota: Verificare che la superficie all'estremità del tubo non sia danneggiata. Evitare graffi e impatti per garantire la buona qualità dell'operazione.



Ø (mm)	Tagliatubo
Da Ø 16 a 63	PPS CTU63
Da Ø 63 a 100	PPS CTU110
Ø 160	PPS CTU160

2 - SMUSSATURA - SBAVATURA ■ MANUALE

Dopo il taglio, sbavare il tubo all'interno con l'utensile **PPS CHERAP** ed eseguire uno smusso all'esterno con gli strumenti idonei. Verificare che la qualità della smussatura sia buona e che non vi siano trucioli all'interno del tubo.



Ø (mm)	Utensili per smussatura
Da Ø 16 a 50	PPS CH50
Da Ø 63 a 100	PPS CH110

■ SMUSSATURA MECCANICA

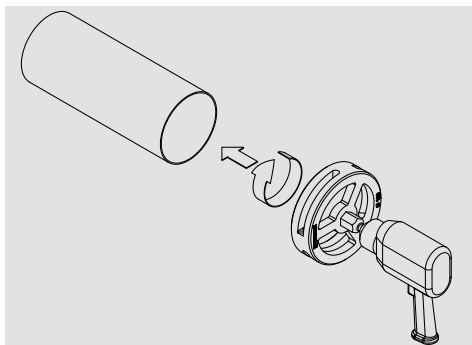


Ø (mm)	Utensili per smussatura
Da Ø 16 a 20	PPS CHPD2016
Ø 25	PPS CHPD25
Ø 32	PPS CHPD32
Ø 40	PPS CHPD40
Ø 50	PPS CHPD50
Ø 63	PPS CHPD63
Ø 80	PPS CHPD80
Ø 100	PPS CHPD100
Ø 160	PPS CHPD160

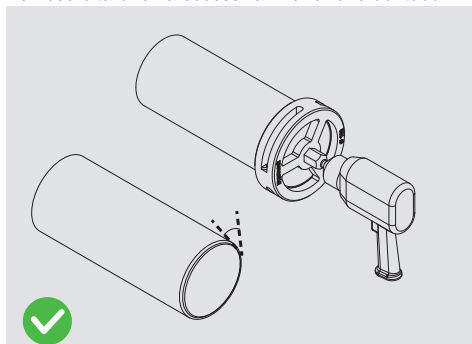
! Attenzione: Indossare occhiali e guanti di protezione.

! Nota: Eseguire tassativamente questo passaggio per agevolare l'installazione ed evitare di danneggiare la guarnizione del raccordo

Verificare il senso di rotazione della foratrice prima di eseguire l'operazione sul tubo.

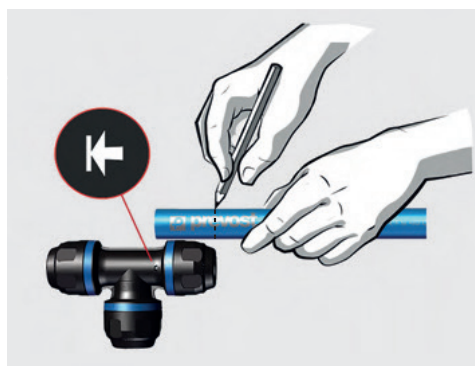
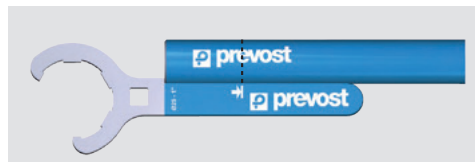


Non esercitare forza eccessiva in direzione del tubo.



3 - SEGNARE IL TUBO

Tracciare un segno sul tubo per determinare la lunghezza di penetrazione del tubo nel raccordo (cfr. tabella). Il riferimento sul raccordo (o sulla chiave di serraggio **PPS1 CLE**) consente di determinare più facilmente la lunghezza di innesto.

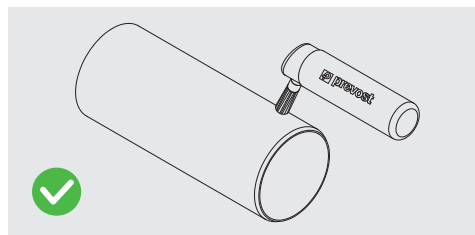


Ø (mm)	Lunghezza (mm)
Ø 16	32
Ø 20	38
Ø 25	44
Ø 32	52
Ø 40	62
Ø 50	72
Ø 63	83
Ø 80	95
Ø 100	95
Ø 160	120

4- LUBRIFICAZIONE DEL TUBO

Dopo il taglio, controllare lo stato della superficie ed eliminare i residui con un panno umido e un prodotto sgrassatore non aggressivo.

Per facilitare il montaggio dei vari componenti, utilizzare tassativamente il gel **PPS AL** (Non utilizzare lubrificanti, oli o sostanze grasse la cui compatibilità chimica non sia stata confermata).



5 - MONTAGGIO DEI RACCORDI SUL TUBO

5.1 INSERIMENTO TUBO/RACCORDO

5.1.a Inserimento manuale Ø 16 - 80

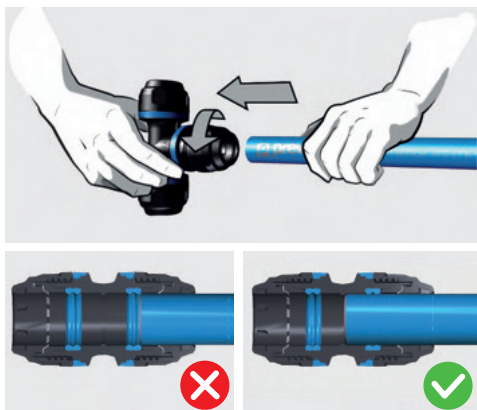
2. Allentare il dado di almeno un giro senza rimuoverlo.

3. Verificare la presenza e il posizionamento di tutti i componenti nel raccordo.

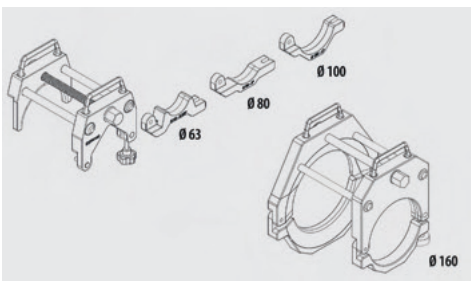
Controllare l'orientamento dei denti senza smontare il raccordo (cfr. schema).



4. Inserire il tubo facendolo ruotare leggermente per raggiungere la sede del raccordo. In caso di difficoltà, si consiglia di applicare gel **Prevost (PPS AL)** sulle estremità dei tubi e dei raccordi. Non utilizzare lubrificanti, oli o sostanze grasse la cui compatibilità chimica non sia stata confermata.



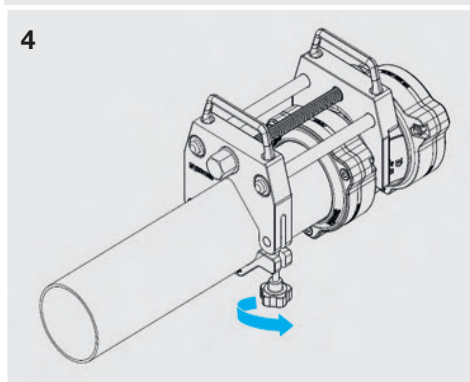
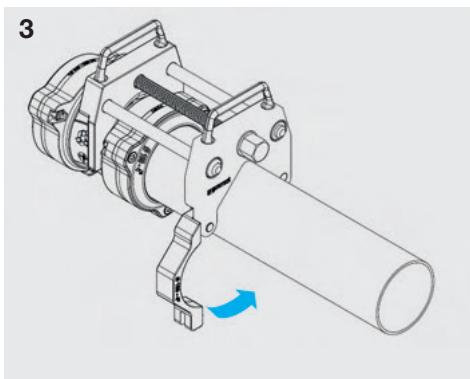
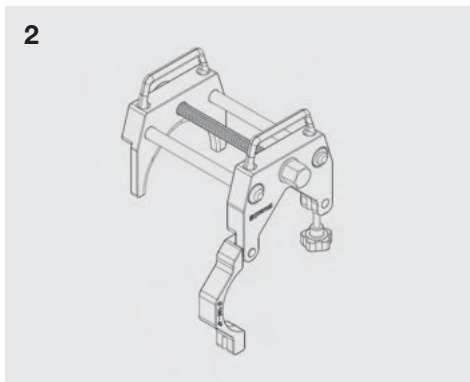
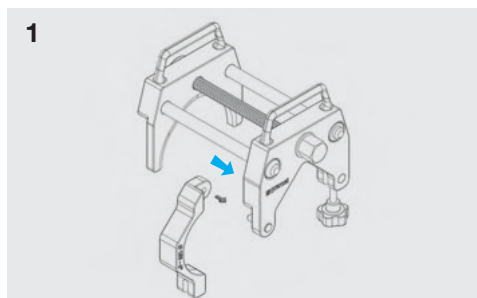
**5.1.b Utensile per innesto tubo/
raccordo (PPS INS): Ø 63 - 160**



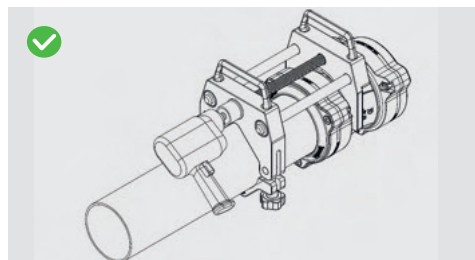
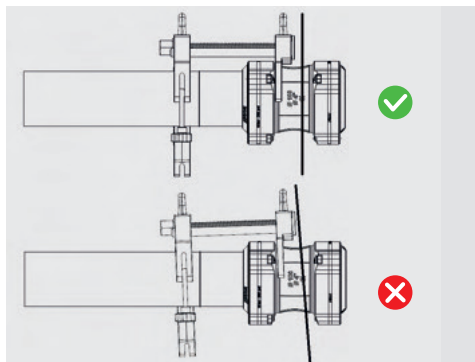
Ø Tubo PPS (mm)	Riferimento
Ø 63 - Ø 80 - Ø 100	PPS INS63100
Ø 160	PPS1 INS160

! **Attenzione:** Sbavare il tubo prima di utilizzare questo utensile.
In caso contrario, si può danneggiare la guarnizione

Come posizionare l'utensile sul tubo e sul raccordo

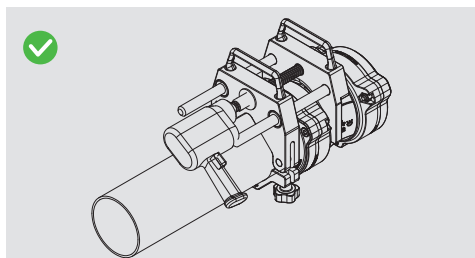
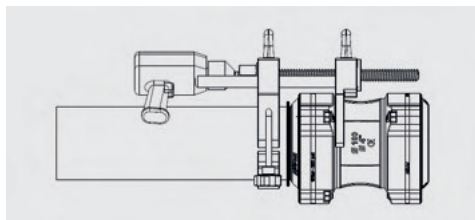


! NOTA: Per il corretto serraggio del dado, controllare l'allineamento dei componenti da assemblare.



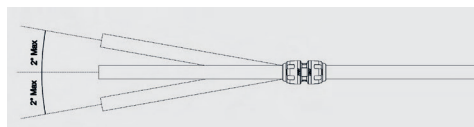
Durante il serraggio, mantenere il raccordo in posizione all'estremità del tubo.

! Non utilizzare l'attrezzo a pressione con raccordi CC o FL preassemblati (ex: PPS1 DK , PPS1 RS!)

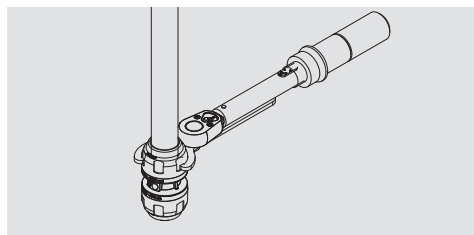
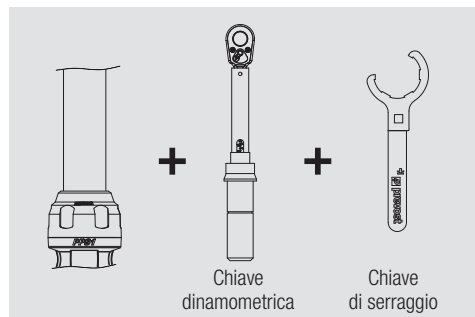


5.2 SERRAGGIO

! Attenzione: Prima di serrare la ghiera, assicurarsi che il tubo sia allineato correttamente con il raccordo per evitare eventuali perdite.



GHIERE DA Ø 16 a Ø 80



! Attenzione: Serrare tutte le ghiera rispettando il valore di coppia raccomandato.

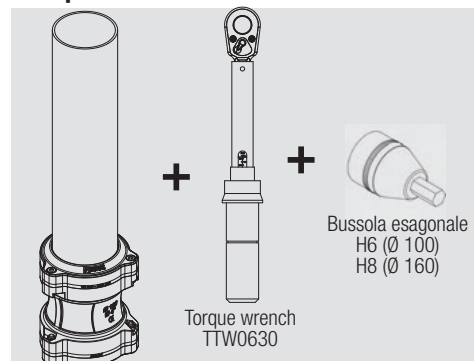


Inserire il corpo del raccordo con la **PPS1 CLESTD** (controcoppia) per garantire il serraggio degli altri raccordi.

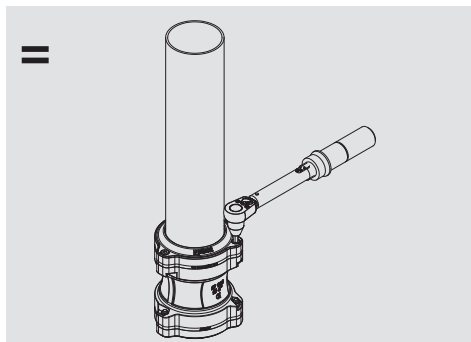
Ø PPS (mm)	Riferimento
Ø 16	PPS1 CLE16
Ø 20	PPS1 CLE20
Ø 25	PPS1 CLE25
Ø 32	PPS1 CLE32
Ø 40	PPS1 CLE40
Ø 50	PPS1 CLE50
Ø 63	PPS1 CLE63
Ø 80	PPS1 CLE80
Ø 16-20-25-100-160	TTW 0630
Ø 20-32-40-50-63-80	TTW 20100
Da Ø 16 a Ø 80	PPS1 CLESTD

Ø (mm)	Coppia di serraggio (Nm)	
	Min	Max
Ø 16	8	12
Ø 20	15	25
Ø 25	21	35
Ø 32	32	50
Ø 40	32	50
Ø 50	55	85
Ø 63	65	95
Ø 80	70	100
Ø 100	25	28
Ø 160	25	28

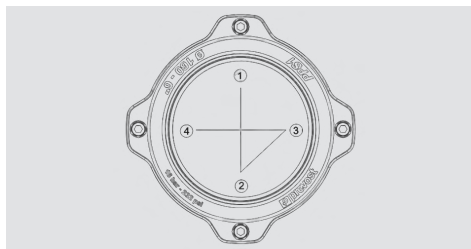
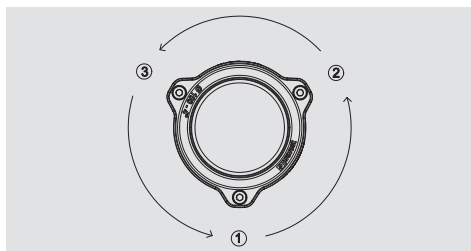
Vite per Ø 100 - Ø 160



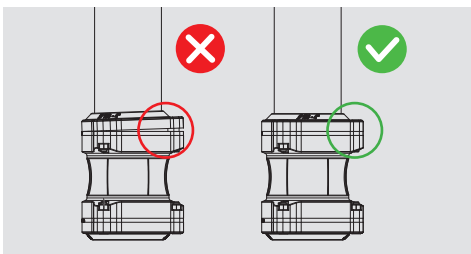
! **Attenzione:** Serrare le 4 viti M8 rispettando il valore di coppia raccomandato di 25 Nm.



Ripetere questo passaggio fino a raggiungere il valore di serraggio desiderato



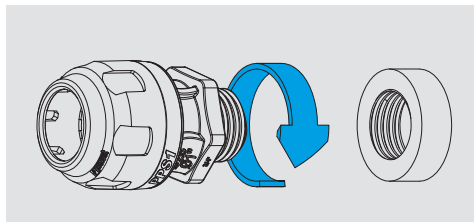
! **Attenzione:** Per il corretto serraggio delle viti, controllare l'allineamento.



6 - ALTRI ASSEMBLAGGI

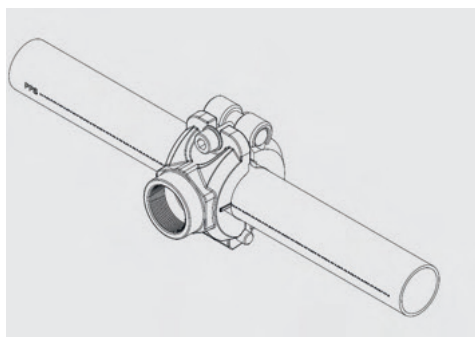
6.1 ASSEMBLAGGIO DEI RACCORDI FILETTATI

Per assemblare le filettature maschio e femmina, si consiglia di utilizzare del Teflon® (**TEFLON 12**), del nastro Teflon o altro prodotto di tenuta idraulica.

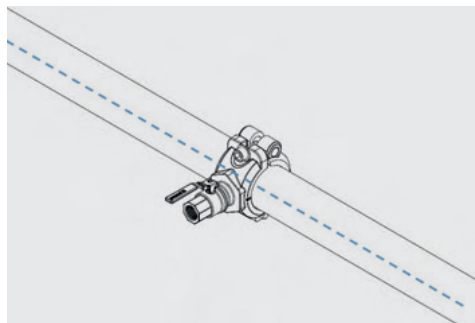


Filettatura	Giri di Teflon	Coppia di serraggio Max. (Nm)
3/8"	2 - 3	10
1/2"	2 - 3	12
3/4"	2 - 3	20
1"	2 - 3	35
1 1/4"	3 - 4	45
1 1/2"	3 - 4	55
2"	3 - 4	65
2 1/2"	4 - 5	70
3"	4 - 5	80

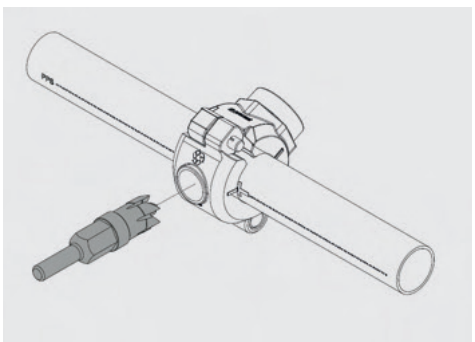
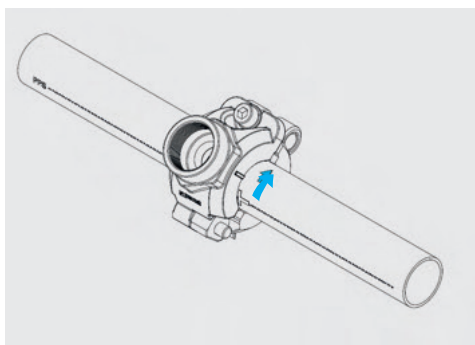
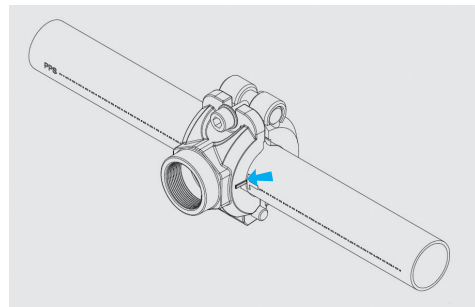
6.2 PRESA DI DERIVAZIONE DRITTA PPS1 BFT / PPS1 BFV



Regolare la presa di derivazione nella posizione desiderata con l'ausilio di una doppia marcatura sul tubo.



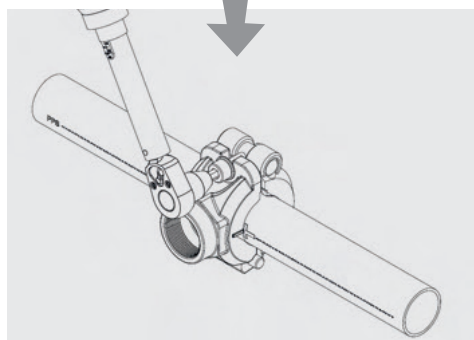
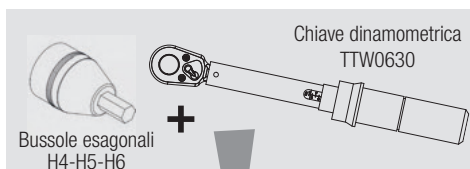
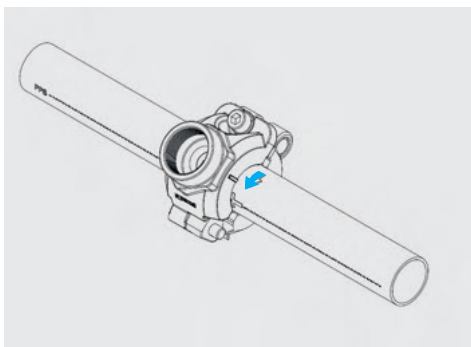
Segnare la posizione selezionata precedentemente utilizzando gli appositi riferimenti.



Attenzione: Sbavare il tubo prima di utilizzare questo utensile.

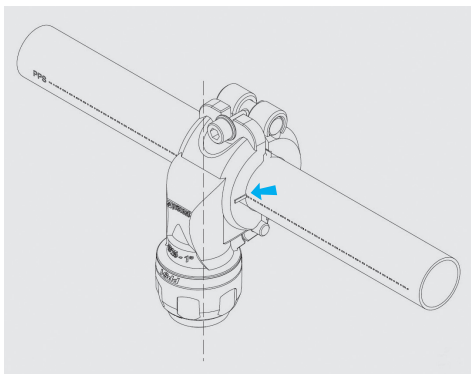
In caso contrario, si può danneggiare la guarnizione.

Ø est. (mm)	Riferimento
Da Ø 25 a 32	PPS SP16
Da Ø 40 a 50	PPS SP22
Da Ø 63 a 80	PPS SP30
Ø 100	PPS SP41
Ø 160	PPS SP64

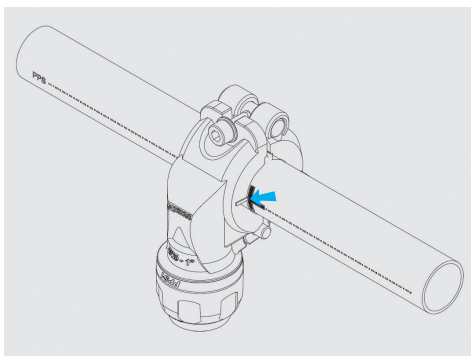


PPS1 BFT PPS1 BFV	Coppia di serraggio (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14
Ø 160	12	14

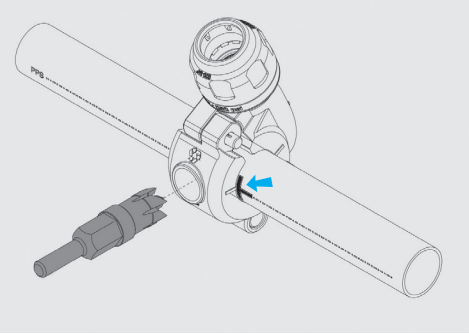
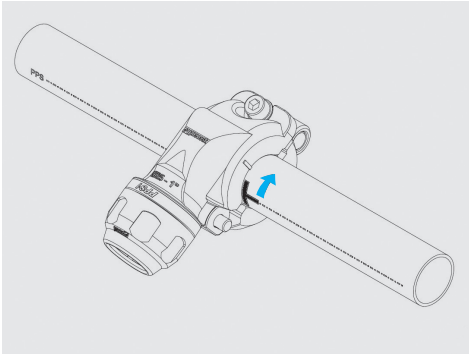
Preso di derivazione - PPS1 BP / PPS1 BT



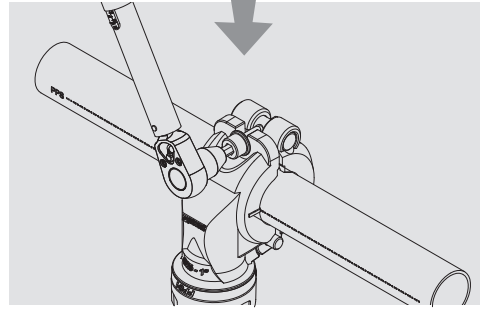
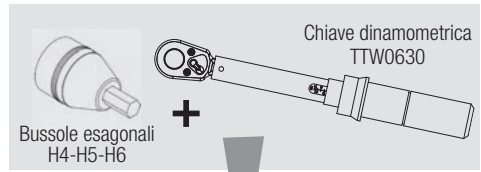
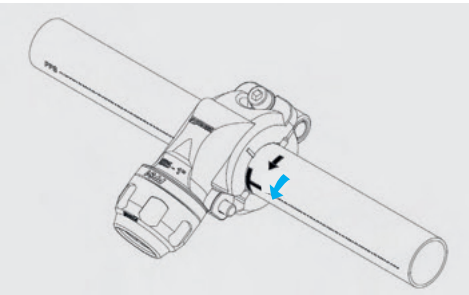
Regolare la presa di derivazione nella posizione desiderata con l'ausilio di una doppia marcatura sul tubo.



Segnare la posizione selezionata precedentemente utilizzando gli appositi riferimenti.



Ø est. (mm)	Riferimento
Da Ø 25 a 32	PPS SP16
Da Ø 40 a 50	PPS SP22
Da Ø 63 a 80	PPS SP30
Ø 100	PPS SP41

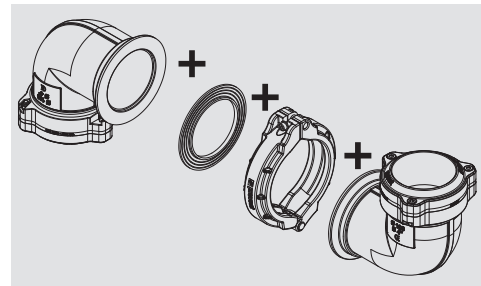


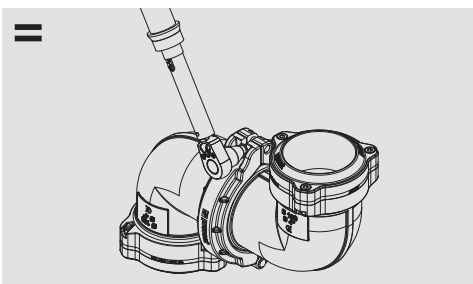
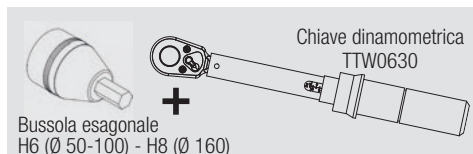
PPS1 BP PPS1 BT	Coppia di serraggio (Nm)	
	Min	Max
Ø 25	8	10
Ø 32	8	10
Ø 40	10	12
Ø 50	10	12
Ø 63	12	14
Ø 80	12	14
Ø 100	12	14

6.3 CONCETTO DI COLLEGAMENTO COMPATTO - CC CONCEPT

Le seguenti opzioni consentono di realizzare la configurazione desiderata di raccordi:

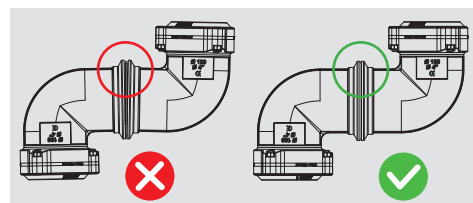
Fascetta di collegamento - PPS1 CC



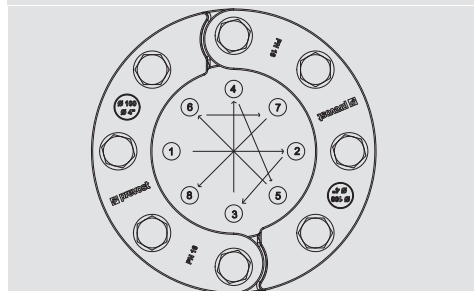
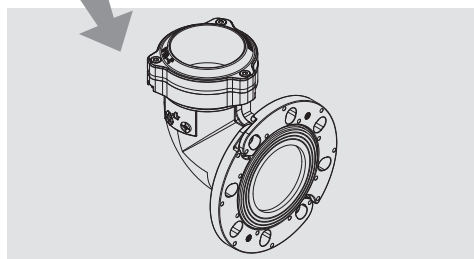
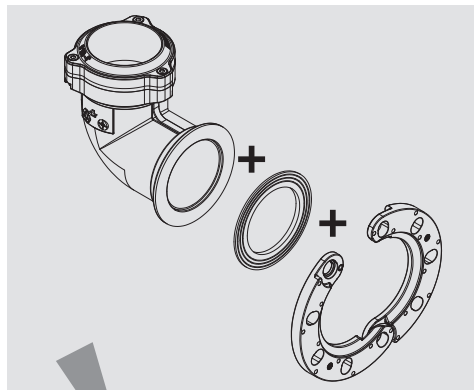


Per PPS1 CC	Coppia di serraggio (Nm)	
	Min	Max
Ø 50 - 63 - 80 - 100 - 160 mm	20	25

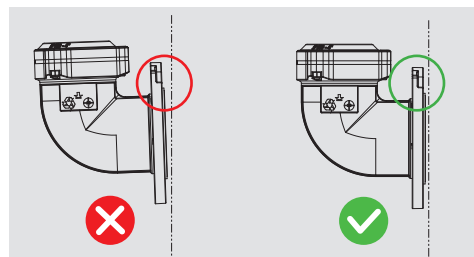
! **Attenzione:** Per il corretto serraggio, controllare l'allineamento.



Flangia di collegamento - PPS1 FL



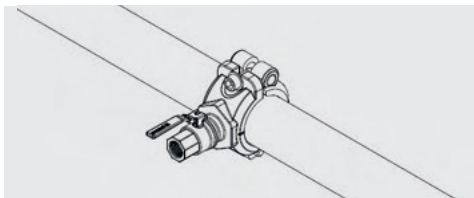
Eseguire questo passaggio 2 o 3 volte fino a raggiungere il valore di serraggio desiderato (30 Nm).



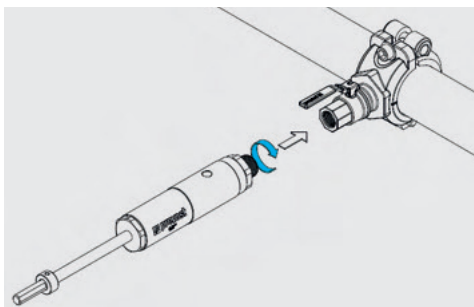
! **Attenzione:** Per il corretto serraggio, controllare l'allineamento.

6.4 UTENSILE PER FORATURA SOTTO PRESSIONE

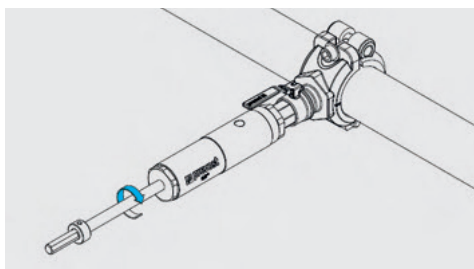
Attenzione: La rete è sotto pressione.
Posizionare la presa di derivazione dritta **PPS1 BFV**.



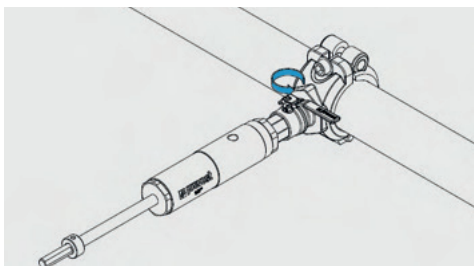
Avvitare l'utensile per foratura **PPS DRIL**.



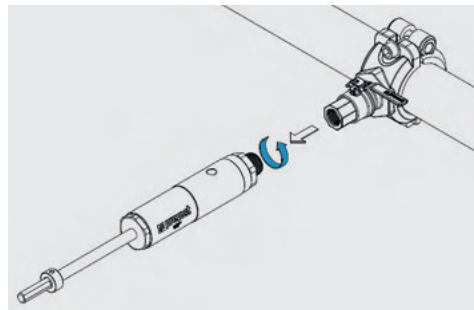
Forare.



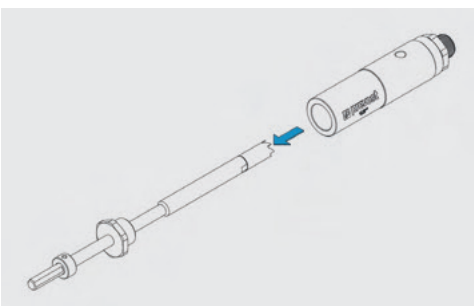
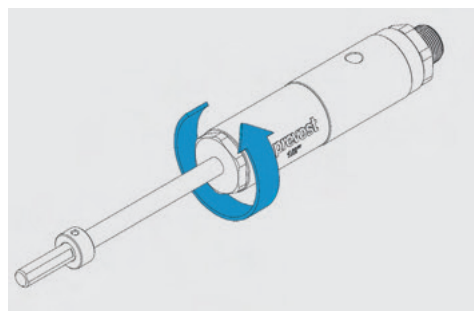
Chiudere la valvola.



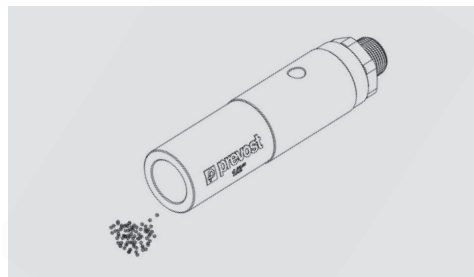
Svitare l'utensile per foratura **PPS DRIL**.



Manutenzione di **PPS DRIL**. Svitare.

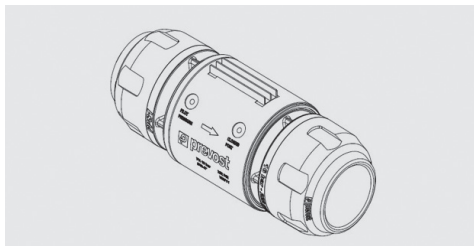


Rimuovere i trucioli.



6.5 VALVOLA PNEUMATICA CON COMANDO A DISTANZA

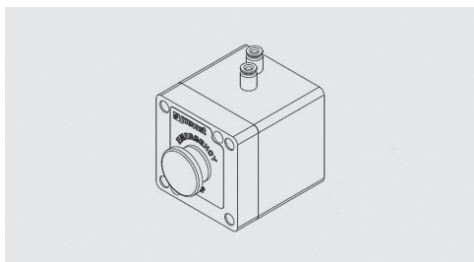
PPS1 VP



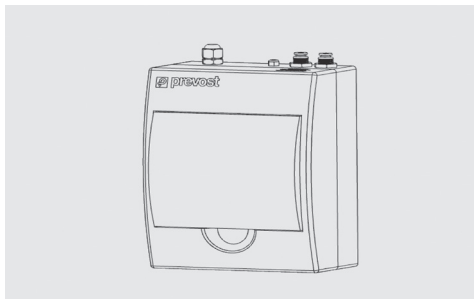
PPS RPK Comando a distanza con interruttore lucchettabile.



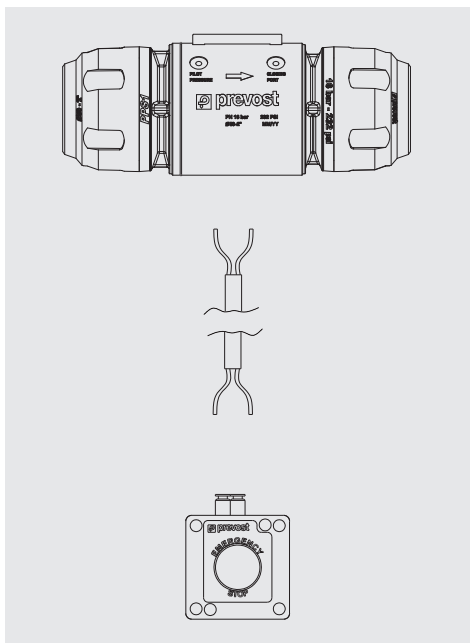
PPS RPE Comando a distanza con pulsante di arresto d'emergenza.



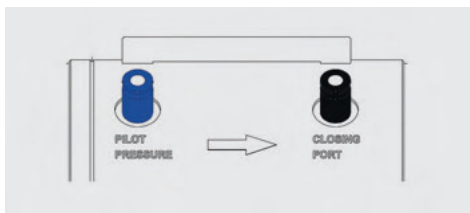
PPS RPWT Comando a distanza con interruttore a tempo.



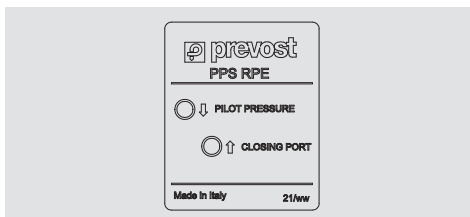
PPS MTPA270412 PA 12 multitubo 2 guaine colorate
Ø est.4 mm - 12 m di lunghezza



Effettuare la connessione della valvola pneumatica con il comando a distanza collegando i 2 tubi PA Ø 4 verificando le indicazioni “PILOT PRESSURE” e “CLOSING PORT” presenti su entrambi i componenti.

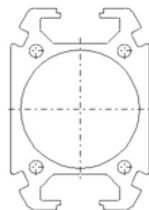


Etichetta sulla scatola.



PREVOST PIPING SYSTEM - PPS SQ

- OUTILS NÉCESSAIRES À L'INSTALLATION
- INSTALLATION TOOLS REQUIRED
- BENÖTIGTE MONTAGEWERKZEUGE
- HERRAMIENTAS NECESARIAS PARA LA INSTALACIÓN
- UTENSILI NECESSARI PER L'INSTALLAZIONE



PPS SQCHPD

Outil à chanfreiner pour tube /
Pipe chamfering tool /
Rohrentgrater /
Herramienta de biselado para tubos /
Utensile per smussatura tubo



PPS CHERAP

Outil d'ébavurage /
Deburring tool / Werkzeug zum
Handentgrater / Herramienta para
besbarbar / Utensile per sbavatura



PPS AL

Gel lubrifiant pour opération
d'assemblage /
Assembly gel / Montagepaste zum
Zusammenfügen / Gel lubrificante
para operaciones de ensamblaje /
Gel lubrificante per assemblaggio



PPS SQCHPD25

Foret de perçage / Tapping flange drill bit /
Bohrer / Broca de perforación /
Punta per foratura



PPS SQHNM

Ecrou marteau pour profil carré / Hammer
nut for square profile / Nutenstein für
Vierkantrrohr / Tuerca martillo para perfil
cuadrado / Dado a martello per profilo
quadrato



PPS SQCI

Collier de fixation pour profil carré / Clamp
for square profile / Montageclips für
Vierkantrrohr / Pinza para perfil cuadra-
do / Morsetto per profilo quadrato



PPS1 SQSH

Mousqueton coulissant pour profil
carré / Sliding hanger for square profile /
Gleitkarabiner für Vierkantrrohr / Mos-
quetón deslizante para perfil cuadrado
/ Moschettone scorrevole per profilo
quadrato



PPS DRIL

Outil de perçage sous pression / Drilling
tool under pressure / Anbohrwerkzeug
für Anbohrschellen / Herramienta para
taladrar bajo presión / Utensile per
foratura tubo in pressione



TTW

Clés dynamométriques /
Torque wrenches /
Drehmomentschlüssel /
Llaves dinámicas /
Chiavi dinamometriche



Douille hexagonale /
Hex socket /
Sechskantstecknuss /
Casquillo hexagonal /
Bussola esagonale



Perceuse /
Drill /
Bohrmaschine /
Taladro /
Foratrice



Marqueur /
Marker /
Markierstift /
Marcador /
Pennarello per marcatura



Mètre ruban /
Tape measure /
Maßband /
Metro /
Metro a nastro



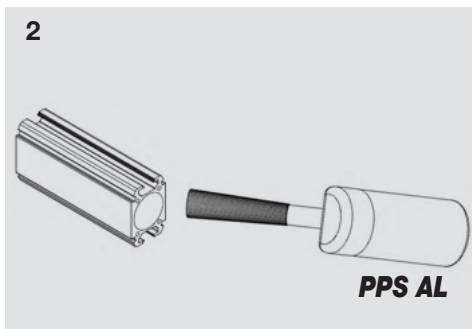
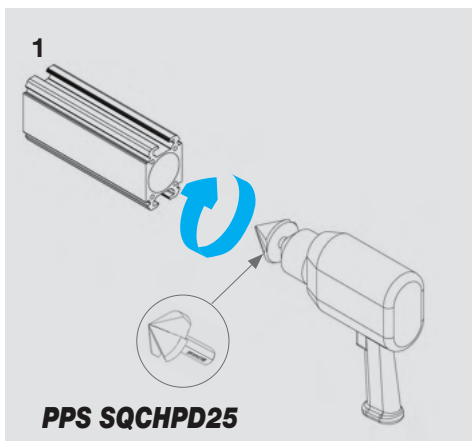
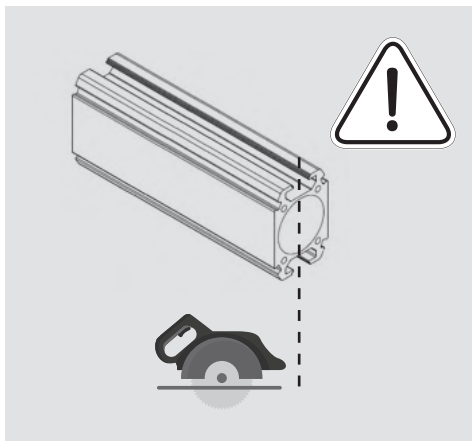
Gants de protection /
Gloves /
Schutzhandschuhe /
Guantes de protección /
Guanti di protezione



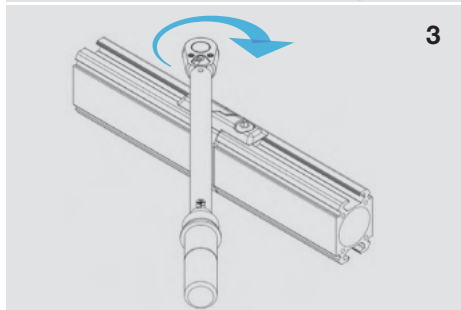
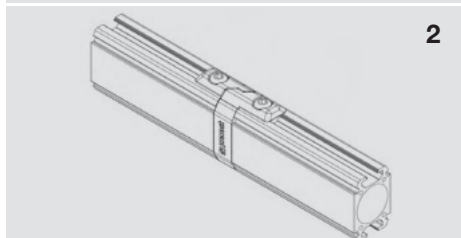
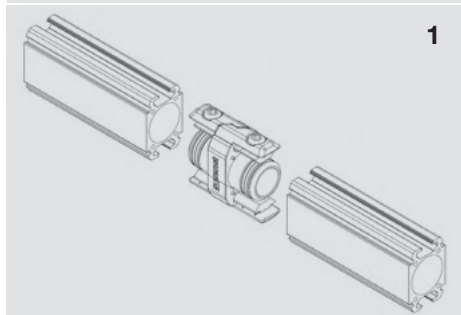
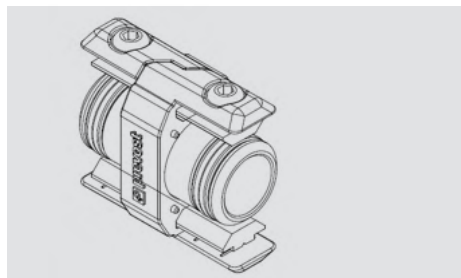
Lunettes de protection /
Protective goggles /
Schutzbrille /
Gafas de protección /
Occhiali di protezione



PPS SQ

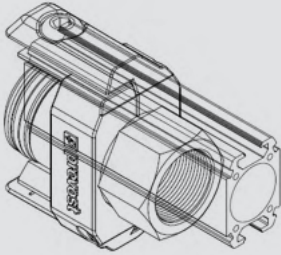


PPS SQUN

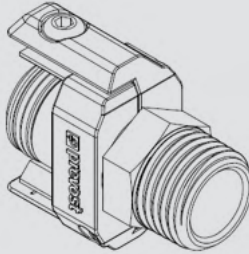


\emptyset	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
$\emptyset 25 \text{ mm}$	8	+/- 1
$\emptyset 1''$	5.9 ft-lb	+/- 0.74 ft-lb

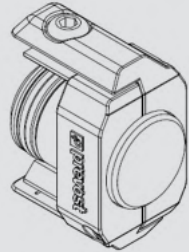
PPS SQMF - PPS SQMM - PPS SQBO



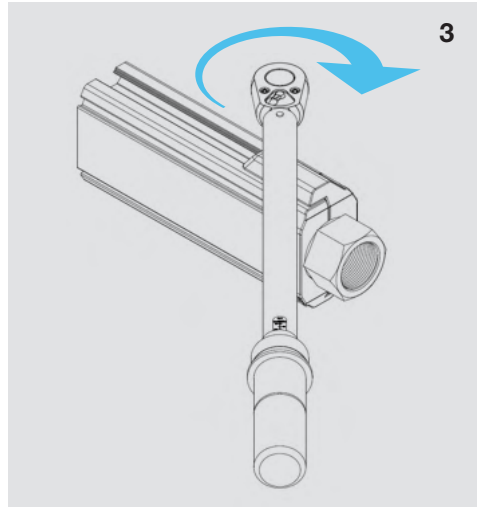
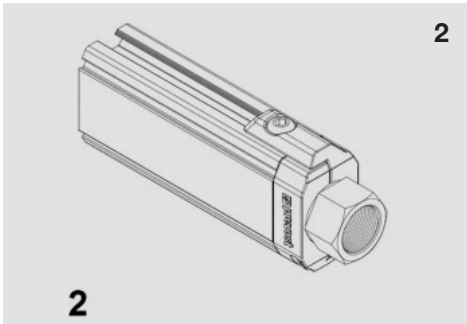
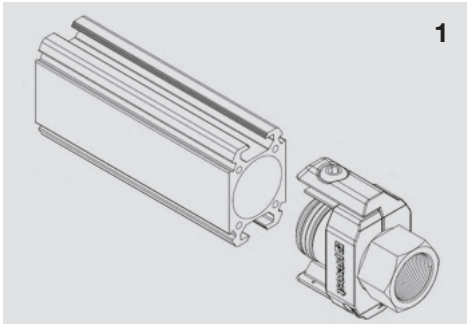
PPS SQMF



PPS SQMM

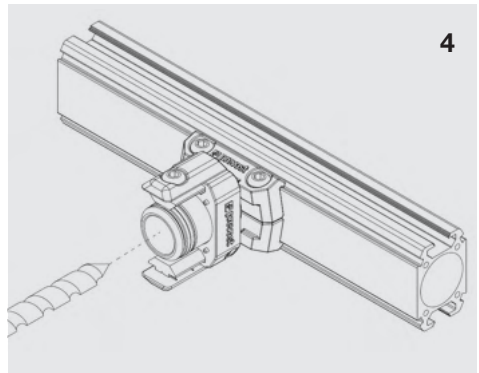
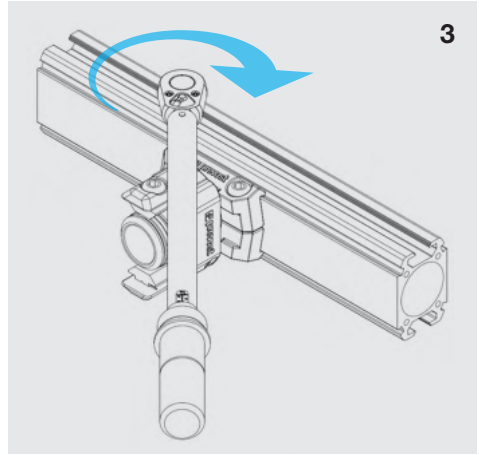
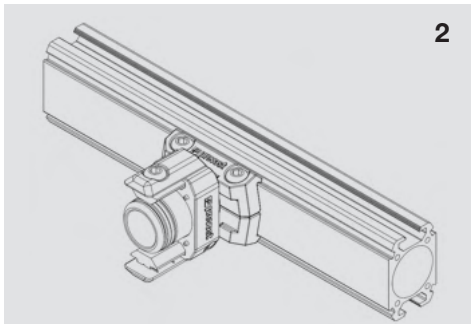
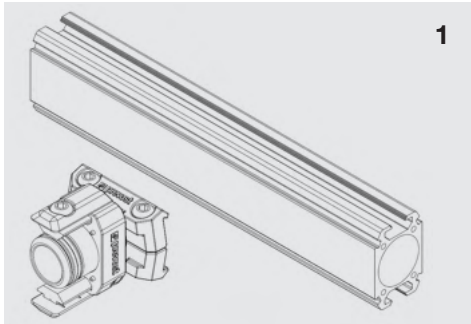
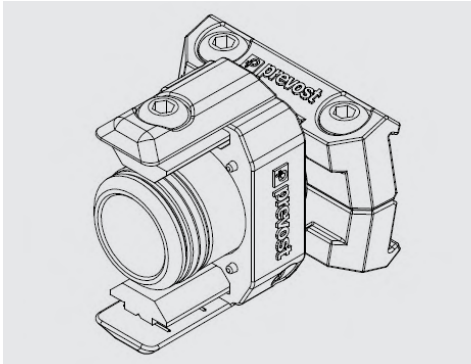


PPS SQBO



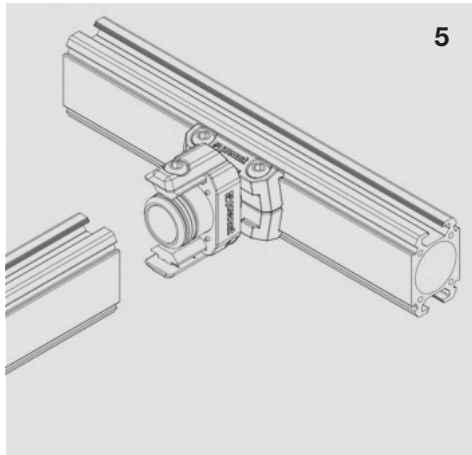
Ø	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
	Ø 25 mm	8
Ø 1"	5.9 ft-lb	+/- 0.74 ft-lb

PPS SQ PPS SQBTE

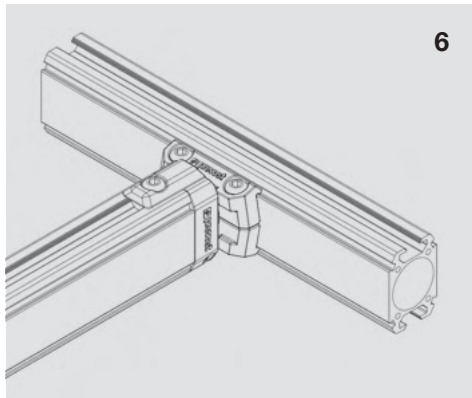


\emptyset	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
\emptyset 25 mm	3	+/- 1
\emptyset 1"	2.21 ft-lb	+/- 0.74 ft-lb

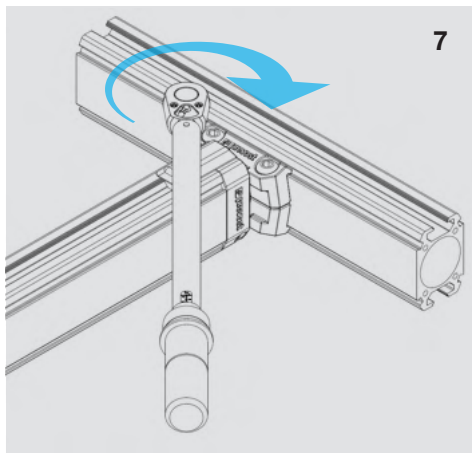
PPS SQ PPS SQBTE



5



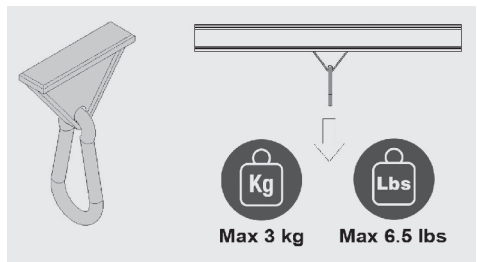
6



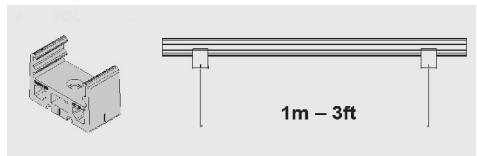
7

\emptyset	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
\emptyset 25 mm	8	+/- 1
\emptyset 1"	5.9 ft-lb	+/- 0.74 ft-lb

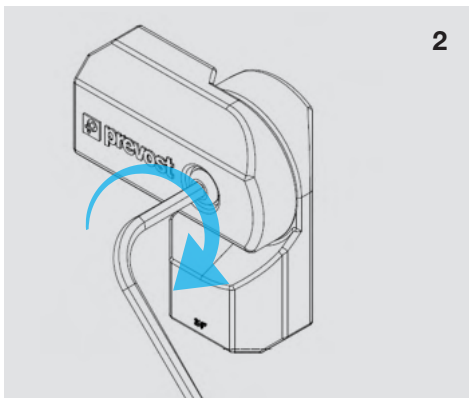
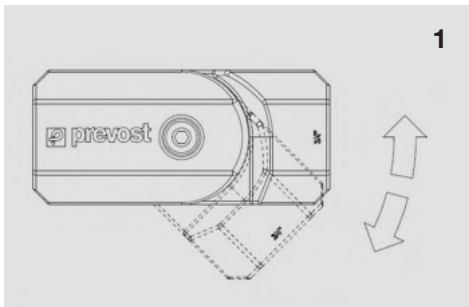
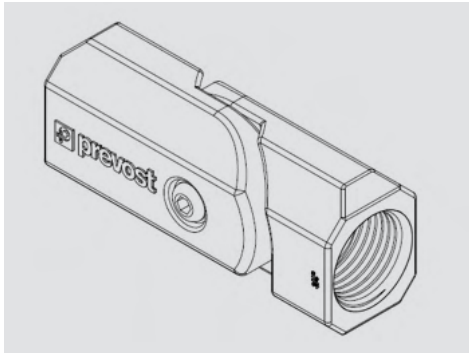
PPS SQSH25



PPS SQI25 - PPS SQI25UNC

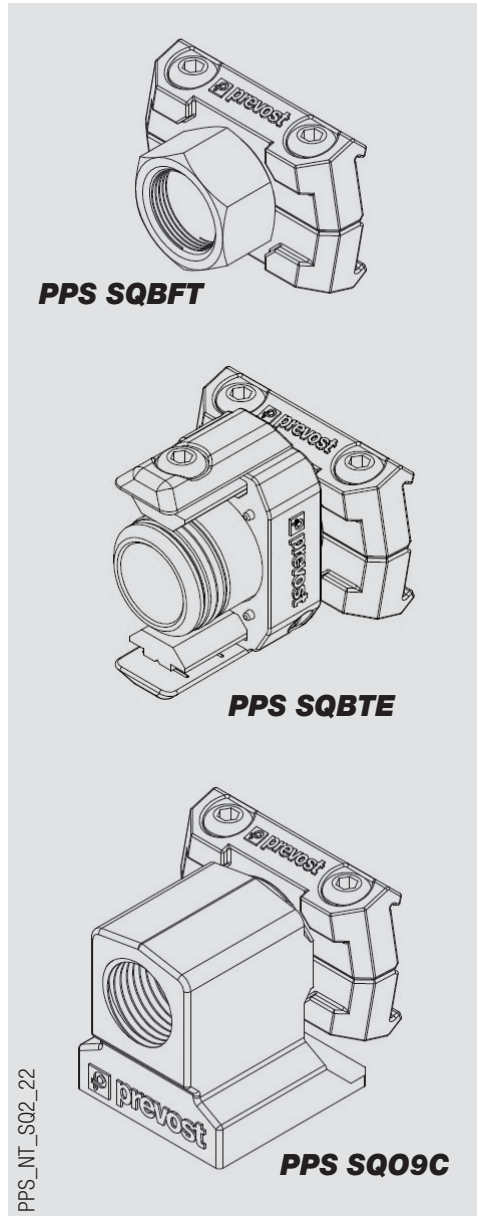


PPS JN

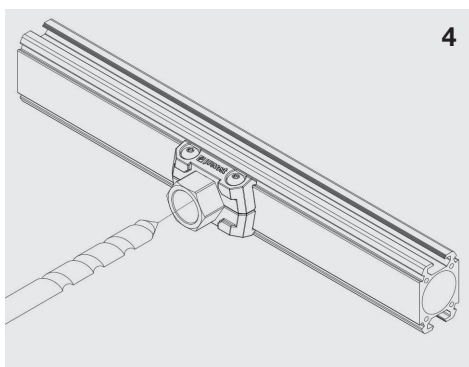
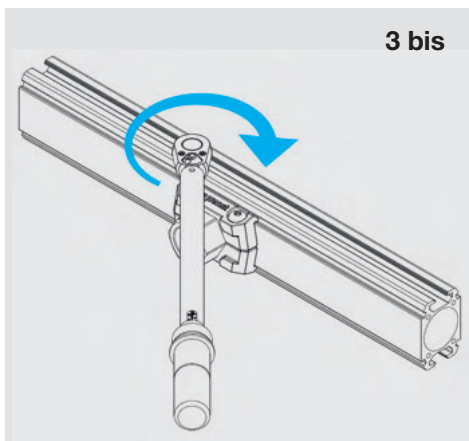
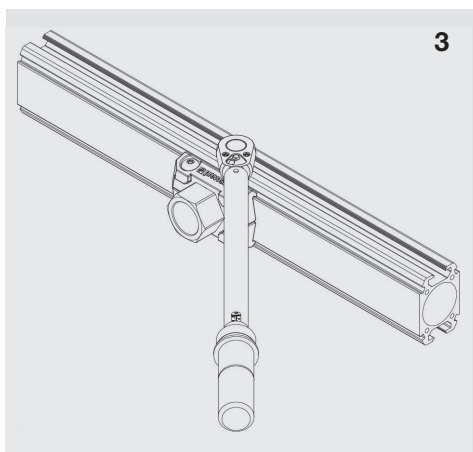
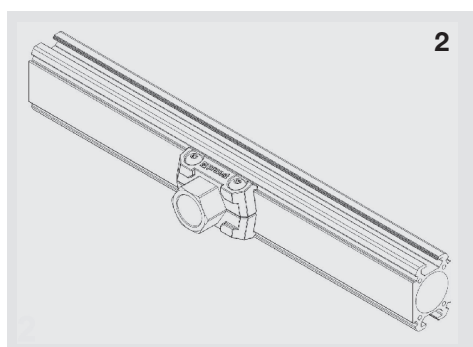
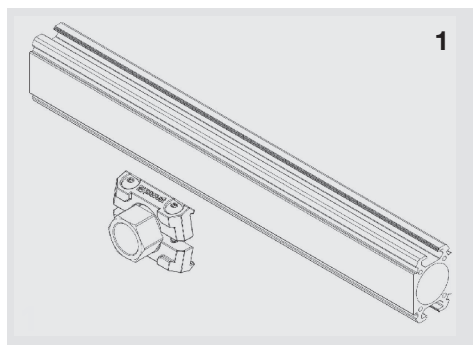


\emptyset	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
\emptyset 25 mm	3	+/- 1
\emptyset 1"	2.21 ft-lb	+/- 0.74 ft-lb

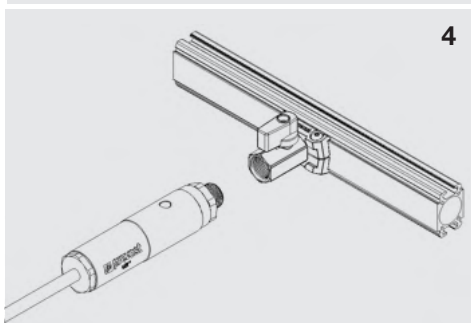
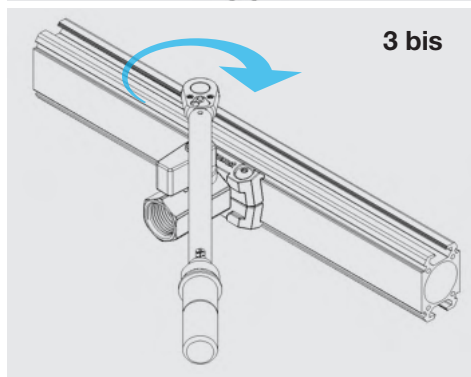
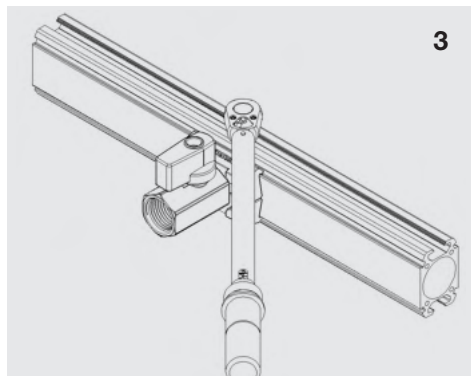
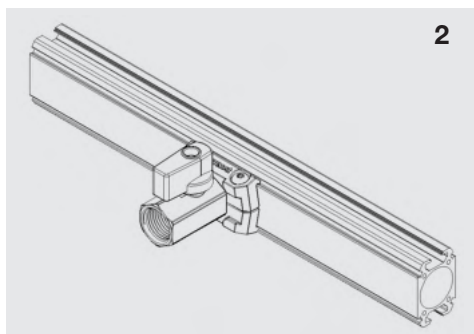
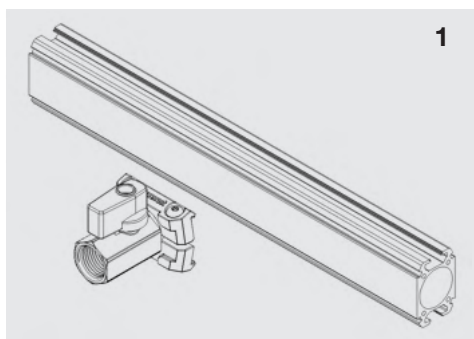
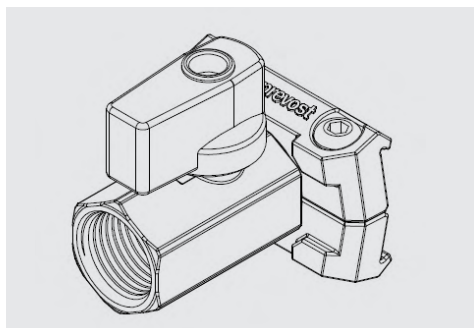
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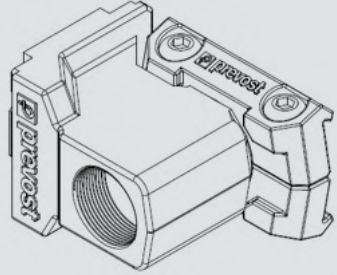
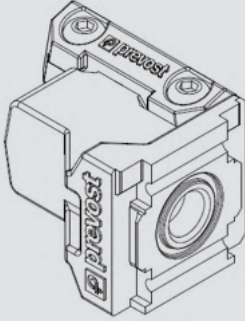
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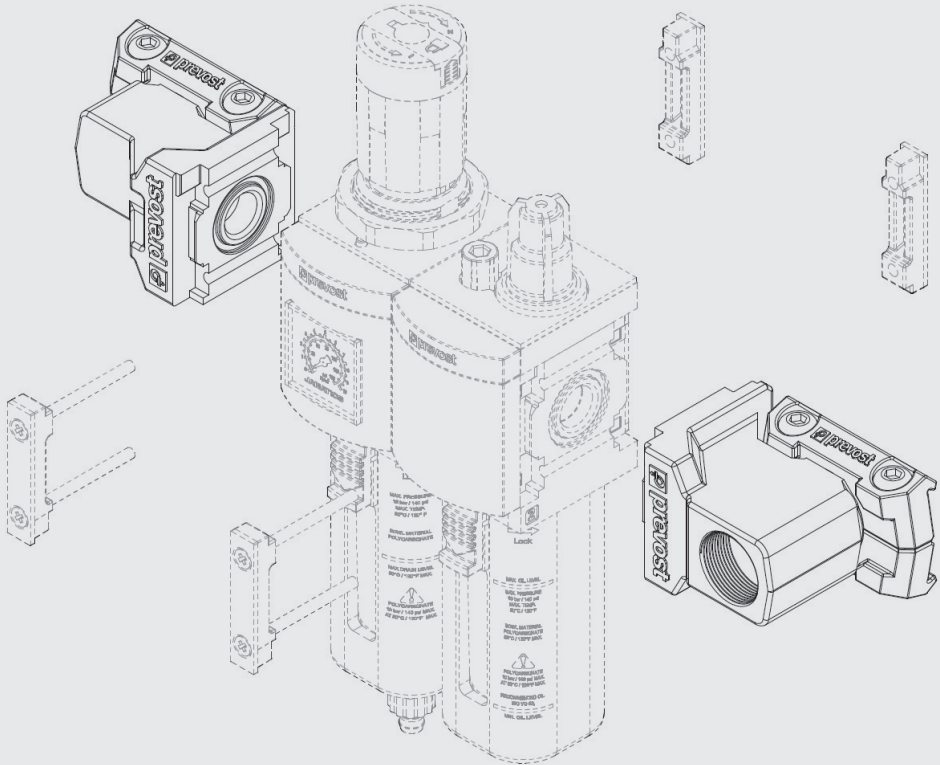
Ø	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
	Min	Max
Ø 25 mm	3 Nm	+/- 1 Nm
Ø 1"	2.21 ft-lb	+/- 0.74 ft-lb

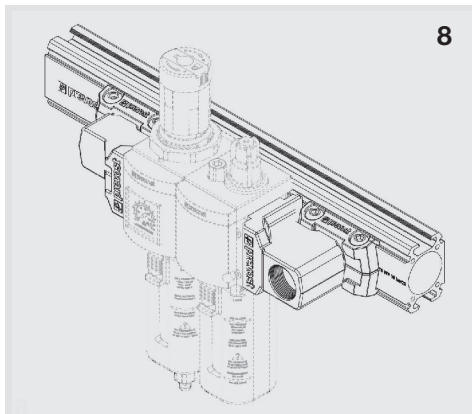
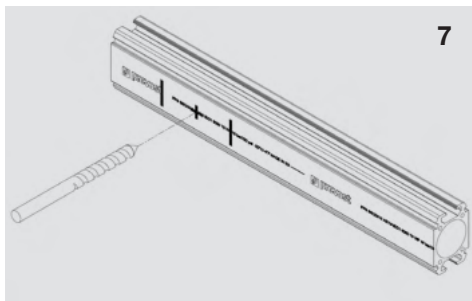
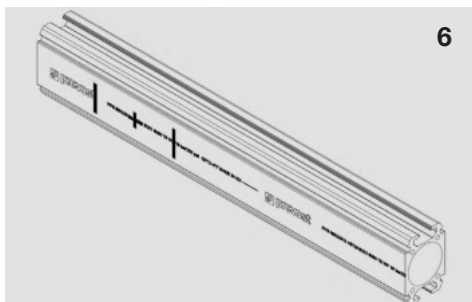
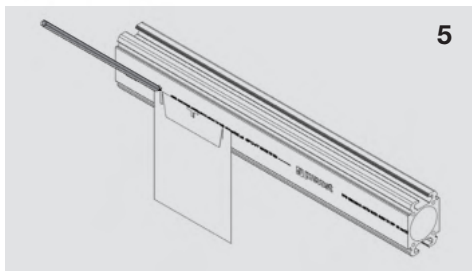
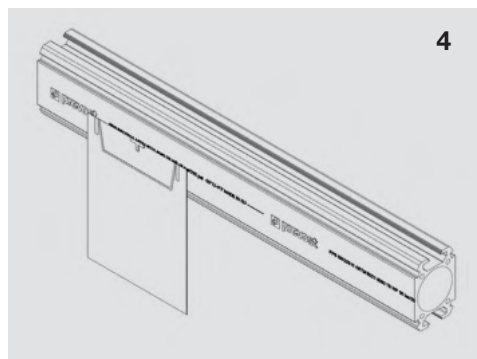
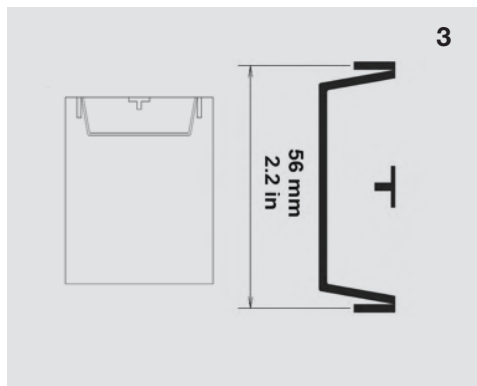
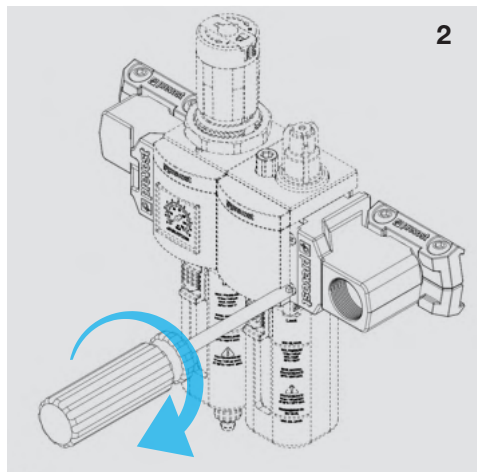


	Couple de serrage / Tightening torque / Anzugsmoment / Par de apriete / Coppia di serraggio (Nm)	
Ø	Min	Max
Ø 25 mm	3 Nm	+/- 1 Nm
Ø 1"	2.21 ft-lb	+/- 0.74 ft-lb

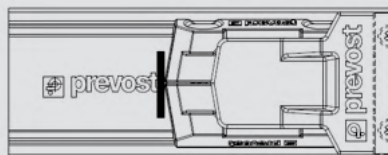


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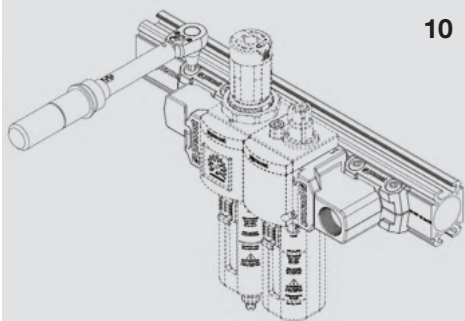




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**Couple de serrage /
Tightening torque /
Anzugsmoment / Par de apriete /
Coppia di serraggio (Nm)**

Ø	Min	Max
Ø 25 mm	3 Nm	+/- 1 Nm
Ø 1"	2.21 ft-lb	+/- 0.74 ft-lb

Prevost SAS

15, rue du Pré Faucon - C.S. 90208 - Annecy-le-Vieux

74940 Annecy - France

Tél. + 33 (0)4 50 64 04 45 - sales@prevost.eu

www.prevost.eu

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