PLASSON®

Neede
Leidend in kunststof

Universele buisklem kit 63 tot 225 mm

Clamps

Instruction Manual

1. Dimension ranges

1.1 Pipe Clamp 16-63 m

For pipe dimensions	**[mm]**	16-63
	CTS	3/4-2″
	IPS	3/4-2″

1.2 Pipe Clamp 32-110 mm

For pipe dimensions	**[mm]**	32-110
	CTS	1 1/4-2″
	IPS	1-4″
	DIPS	3″

1.3 Pipe Clamp 63-225 mm

For pipe dimensions	**[mm]**	63-225
	IPS	2-8″
	DIPS	3-8″

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2. Safety

The basic condition for safely handling and a hassle-free operation of the product is the knowledge about the fundamental safety guidelines and safety regulations. This instruction manual contains important information on how to handle the tool safely. Everyone working with this equipment shall read and understand these instructions. These instructions shall be read and implemented in accordance with the relevant standards, workplace health and safety legislation, installation instructions, Codes of Practice and technical connection guideline in force in your country.

2.1 General safety guidelines for tools

a) Read and make sure you understand all safety guidelines and instructions. Failure to follow the safety guidelines and instructions can lead to electric shock, fire and/or serious injury.

b) Keep these safety guidelines and instructions for future use.

1) Safety in the work area

a) Keep your work area clean and well lit. Working in cluttered or dark areas can easily lead to accidents. Prevent the tool from unintentional movement or dropping and assume a secure foothold.

2) Personal safety

a) Stay alert! Watch what you are doing and use common sense when operating a tool.

b) Use personal protective equipment and always wear eye protection. The use of protective equipment such as a dust mask, non-skid safety shoes, a hard hat or hearing protection, depending on the tool and its use will reduce personal injuries.

c) Wear appropriate clothing. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can get caught by moving parts.

3) Tool usage and care

a) Keep your tools clean. Follow the servicing instructions and the instructions for changing the tools. Keep oil and grease away from the handles.

b) Care for your tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the operation of the tools. If damaged, have the tool repaired before use. Many accidents are caused by poorly maintained tools.

c) Use the tool, accessories etc. in accordance with these instructions. Take the working conditions and the work to be performed into account. The use of the tool for applications differing from the application scope could result in a hazardous situation.

4) Service

a) Have your tool repaired only by a qualified technician with identical replacement parts. This will ensure that the safety of the tool is maintained.

2.2 Specific safety guidelines for the pipe clamp

1) Personal safety

a) The operator must have a safe foothold. Working overhead in areas not completely visible (e.g. under a pipe) is prohibited.

b) Pipes and other workpieces must be firmly clamped or fixed. Poorly clamped or fixed workpieces may hurt you or affect your safe foothold.

2.3 Explanation of symbols

This instruction manual can make use of the following symbols:

2.3.1 General symbols

This symbol indicates a general advice.

These advices describe recommended courses of action to enable the user to perform steps quicker and safer. The symbol can also underline certain required precondition or mean that the user must follow certain mandatory steps.

2.3.2 Mandatory symbols

Observe the instructions!

Read the provided documentation thoroughly to prevent applications errors and to work safer and according to the scope of application with the respective product. All users of the product must thoroughly read and understand the provided documentation prior to use.

Reading the documentation thoroughly and completely helps preventing accidents due to improper use and eases the work with the product.

2.3.3 Prohibition symbols

General prohibition symbol!

There is a high risk of injury. Observe the detailed description of the prohibition.

Failure to comply with this prohibition can lead to injury or damage to devices, machines or tools.

2.3.4 Warning symbols

General warning symbol!

This symbol warns of a potentially dangerous situation.

Failure to comply with the warning and advice can lead to injury or damage to goods.

3. Introduction

3.1 Scope of application

The PF pipe clamps for the dimension ranges 16-63 mm, 32-110 mm, and 63-225 mm are solely meant for holding pipes and fittings made of polyethylene (or similar thermoplastic materials) as an accompanying measure for electrofusion (EF).

The pipe clamps can be continuously adjusted in their respective dimension ranges. When using reductions these must match the pipe dimensions of the metric series of standards.

Intended use

The product may not be used for any purposes other than those mentioned. Modifying the tool without consulting the manufacturer is forbidden and shall be considered as improper use.

The manufacturer cannot be held liable if the Pipe clamp was used improperly and outside of the scope of application!

3.2 Maintenance and service

Should the tool fail despite the great care taken in manufacturing and testing it, the necessary repairs should only be carried out by an after-sales service centre authorised by the manufacturer.

Please note that the product is a technically demanding machine for field application. In accordance to the applicable standards the tool is subject to periodical maintenance. The maintenance interval is 12 months, with heavy use shorter intervals are recommended.

During maintenance, the tool will be upgraded to the current technical standard of our devices and you get a 3-month guarantee on function for the maintained tool.

The maintenance and the related checks are important for your safety and the continuous working reliability and safety of the product. Therefore, the maintenance and all necessary repairs, have to be carried out by the manufacturer or an authorised service point.
For further information about our after-sales service centres please contact:

PF-Schweißtechnologie GmbH	**Tel.: +49-6631-9652-0**
Karl-Bröger-Str.10	**Fax: +49-6631-9652-52**
DE-36304 Alsfeld	**E-Mail: info@pfs-gmbh.com**
Germany	**Web: www.pfs-gmbh.com**

In all correspondence, please provide the serial number (S/N) as shown on the type plate of the tool.

3.3 Handling and maintenance

To achieve an optimum work results the tool has to be handled with care and maintained frequently. Pollution by sand and dirt has to be avoided or, if necessary, removed with a soft cloth or a Q-tip.

3.4 Disposal

The PF pipe clamp as well as the accessories must be disposed of in an environment-friendly way sorted by materials.

4. Scope of delivery

		Pipe clamp 16-63 mm	Pipe clamp 32-110 mm	Pipe clamp 63-225 mm
Code		**4_4300_000**	**4_4300_001**	**4_4300_009**
Instruction manual	1 ×	EN217		
Plastic suitcase	1 ×	1_2800_012	1_2800_009	
Wooden box	1 ×	-	-	1_2800_016
Support bar with clamping jaws		4 x	4 x	4 x
Base bar with elbow bracket		1 x	1 x	1 x
Hex screwdriver with T-handle 5×100	1 ×	1_2904_005		
Optionally available				
T-supplement	1 ×	-	4_4301_007	4_4301_010

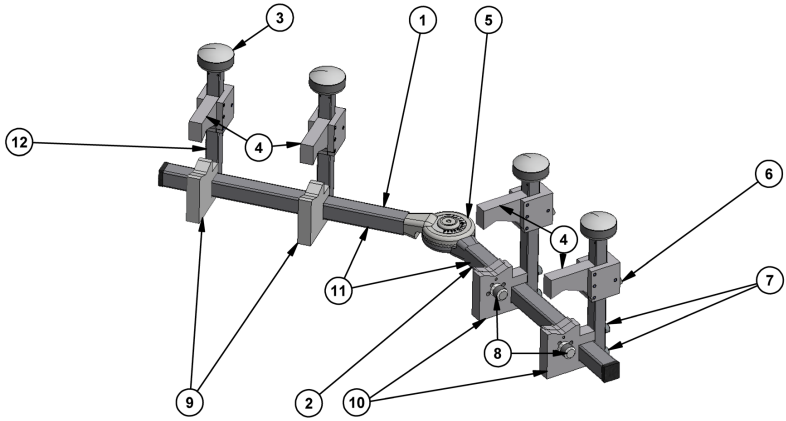
5. Technical data

		Pipe clamp 16-63 mm	Pipe clamp 32-110 mm	Pipe clamp 63-225 mm
General				
For pipe dimensions	[mm]	**16-63**	**32-100**	**63-225**
For pipe dimensions	IPS	¾-2	1-4	2-8
For pipe dimensions	DIPS	-	3	3-8
For pipe dimensions	CTS	¾-2	1 ¼ -2	-
Code		4_4300_000	4_4300_001	4_4300_009
Suitable for pipes made of		PE, PE-HD, PE-X, PP		
Angle setting		Approx. 7.5° per notch Marking at: 0°, 11°, 22,5°, 30°, 45°, 60°, 75°, 90°		
Material		Steel, galvanised		
Dimensions, weights and packaging				
Product dimensions L×W×H	[mm]	670×190×85	760×270×120	1080×260×500
Product weight	[kg]	3.4	4.8	15.4
Packaging dimensions L×W×H	[mm]	400×300×110	450×360×150	600×220×310
Packaging material		Plastic		Wood
Packaging type		Suitcase		Box
Packaging weight	[kg]	0.8	1.3	5.5
Transport weight	[kg]	4.2	6.1	21

The given technical information is valid for the standard setup of the tool. Depending on the ordered setup there may be variations.

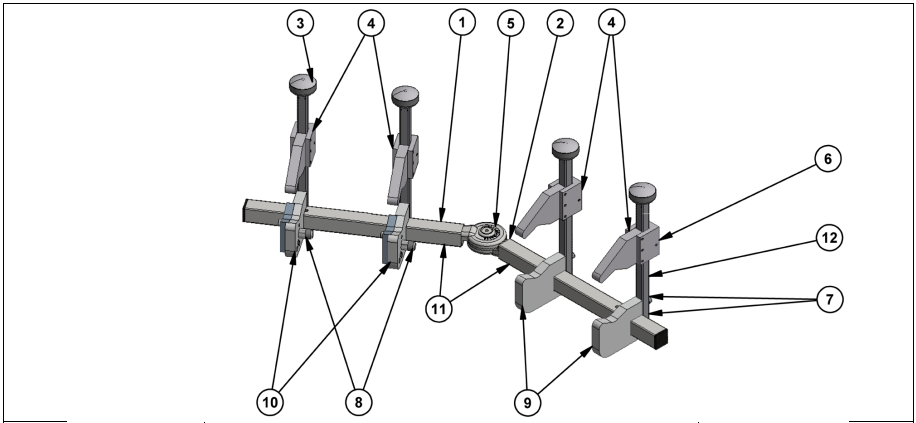
6. Overview and spare parts

6.1 Pipe Clamp 16-63 mm



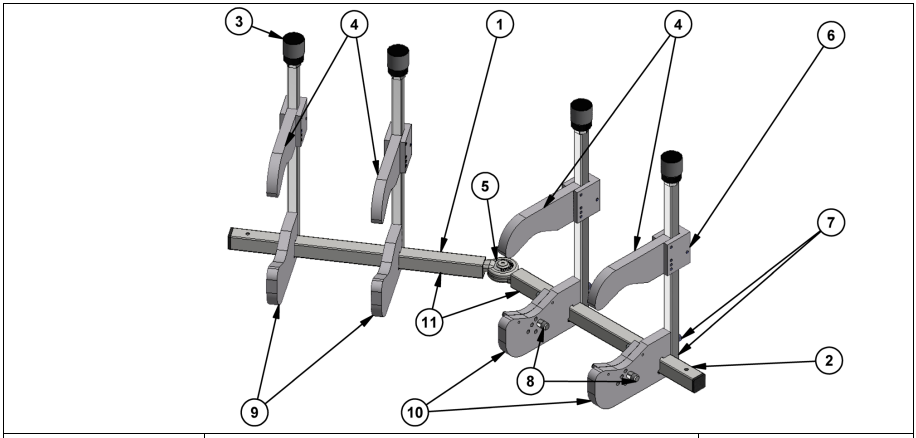
Object in graphic	Description	Code
1	Upper base bar with degree gauge	2_2510_004/1
2	Lower base bar with increments and thread	2_2510_005/1
3	Adjustment knob	1_2400_008/1
4	Upper clamping jaw	2_2510_001/1
5	Joint	-
6	Quick adjustment catch	-
7	Screws for loosening the single clamps	-
8	Retaining pin for reductions	-
9	Lower clamping jaw without reduction	2_2510_002/3
10	Lower clamping jaw with reduction	2_2510_002/2
11	Guiding rod, complete	2_2502_003/2
-	Hex screwdriver with T-handle 6×100	1_2904_006

6.2 Pipe Clamp 32-110 mm



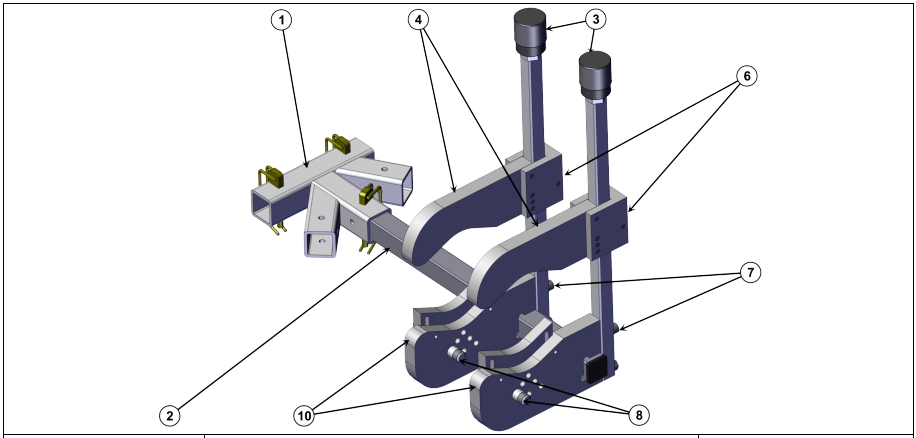
Object in graphic	Description	Code
1	Upper base bar with degree gauge	2_2510_004
2	Lower base bar with increments and thread	2_2510_005
3	Adjustment knob	1_2400_008/2
4	Upper clamping jaw	2_2510_001
5	Joint	-
6	Quick adjustment catch	-
7	Screws for loosening the single clamps	-
8	Retaining pin for reductions	-
9	Non-adjustable lower clamping jaw	2_2510_002
10	Adjustable lower clamping jaw	2_2510_002/1
11	Guiding rod, complete	2_2502_003
-	Hex screwdriver with T-handle 6×100	1_2904_006

6.3 Pipe Clamp 63-225 mm



Object in graphic	Description	Code
1	Upper base bar with degree gauge	2_2511_001
2	Lower base bar with increments and thread	2_2511_002
3	Adjustment knob	1_2511_006
4	Upper clamping jaw	2_2511_008
5	Joint	-
6	Quick adjustment catch	-
7	Screws for loosening the single clamps	-
8	Retaining pin for reductions	-
9	Non-adjustable lower clamping jaw	2_2511_009
10	Adjustable lower clamping jaw	2_2511_010
11	Guiding rod, complete	2_2511_003/1
-	Hex screwdriver with T-handle 6×100	1_2904_006

6.3.1 Optional: T supplement for Pipe Clamp 63-225 mm



Object in graphic	Description	Code
1	Angle adapter	2_2511_022/1
2	Square steel pipe	-
3	Adjustment knob	1_2511_006
4	Upper clamping jaw	2_2511_008
6	Quick adjustment catch	-
7	Screws for loosening the single clamps	-
8	Retaining pin for reductions	-
10	Adjustable lower clamping jaw	2_2511_010

6.4 Special features

- Quick tensioning and adjustment to various pipe dimensions by quick adjustment features
- Adjustable to different pipe dimensions
- Robust design
- Usable for straight pipe connections and elbows

7. Application

Attention!

When using tube bundles, the resilience of the rolled bundle can cause a risk of injury when not taken into account. Unwind the pipe before processing to reduce tensions. If necessary, use rounding rings.

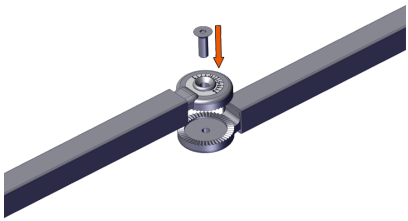
Always note the processing guidelines of the fitting manufacturer.

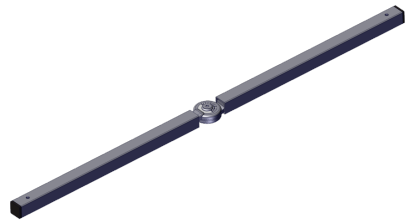
7.1 Installing the Pipe Clamp

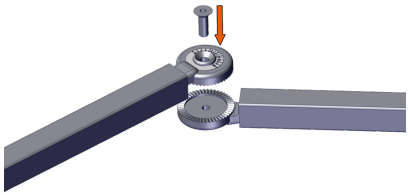
Attention!

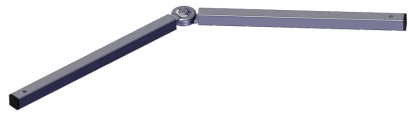
The numbers in brackets (1), refer to, if mentioned, the numbers in the overview.

Step	Action
1	**Connecting the base bars**
1.1	Connect the base bar, depending on the situation, in a straight or angled manner. The adjustment can be changed later on.
1.2	Join the base bars by screwing them together.

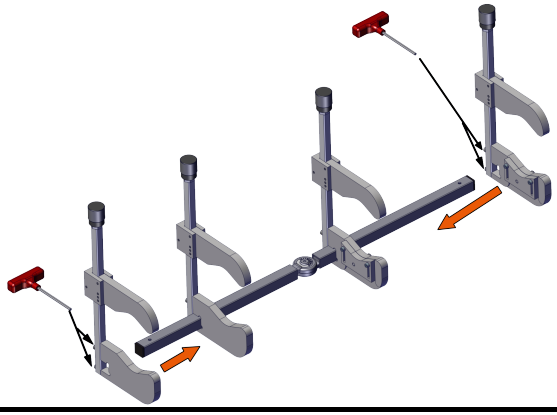








Step	Action
2	**Installing the single clamps**
2.1	Loosen the screws on the single clamps and shove them onto the base bars.
2.2	When having positioned the single clamps on the base bars tighten the screws to hold the clamps in place.



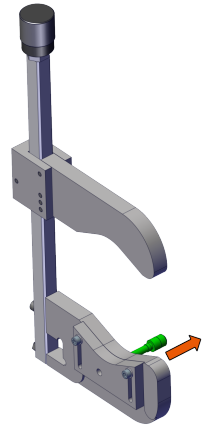
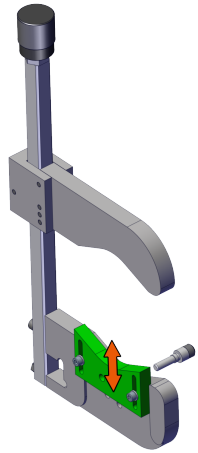
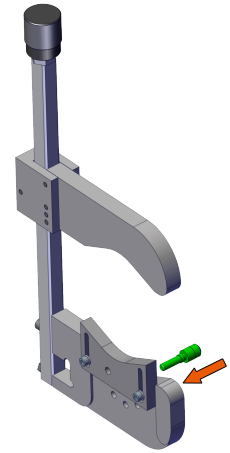
Attention!

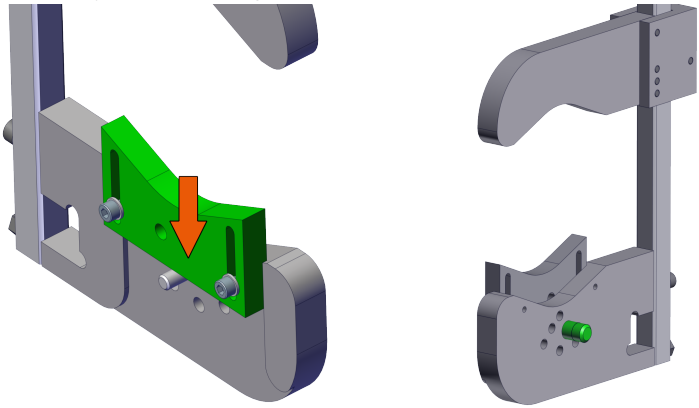
The single clamps with the adjustable reduction prism must be installed together on one base bar (!). Otherwise you cannot clamp pipes with different dimensions.

Step	Action
3	**Opening the single clamps**
3.1	Before inserting the pipe, press the quick adjustment catch and move all the upper jaws of the single clamps all the way up.

7.2 Optional: For pipes with different dimensions

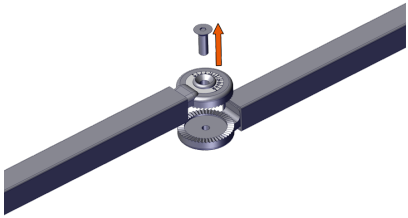
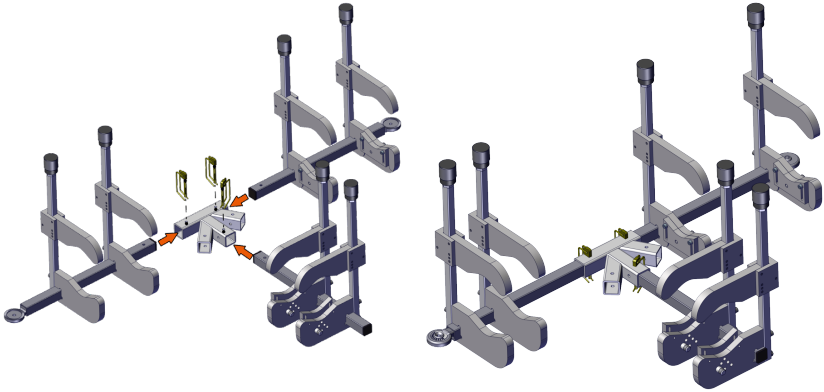
In order to clamp pipes with different dimensions (e. g. when using reductions), you must pre-set the reduction prisms on the adjustable single clamps. The overviews in chapter 7 show, in which hole the retaining pin must be screwed into for the respective reduction.

1	**Removing the retaining pin**
1.1	Unscrew the retaining pin from the reduction prism on the adjustable single clamps. 
2	**Moving the prisms all the way up**
2.1	Move the reduction prism upwards.
2.2	Then screw the retaining pin in the proper hole. Also adjust the other single clamp accordingly.  

Step	Action
3	**Lowering the reduction prisms**
3.1	When you have screwed the retaining bolt into the desired hole, lower the adjustable clamping jaws so that they sit on the retaining bolt. 
3.2	This concludes the adjustment.

7.3 Optional: Installation of the T-supplement

Step	Action
1	**Remove single clamps, disconnect and turn the base bars**
1.1	Remove the single clamps from the base bars. 

Step	Action
1.2	Remove the screw from the joint on the base bars. 
1.3	Turn the base bars so that the joints do not face each other.
2	**Equip the base bars and connect the angle adapter**
2.1	Reinstall the single clamps on the base bars. Equip the base base bar of the T-supplement also with two single clamps.
2.2	Insert the equipped base bars into the angle adapter and connect these using the pins. 
3	**Adjusting the pipe clamp**
3.1	If necessary, adjust the adjustable clamping jaws of the pipe clamp or T-supplement to the required pipe diameter.

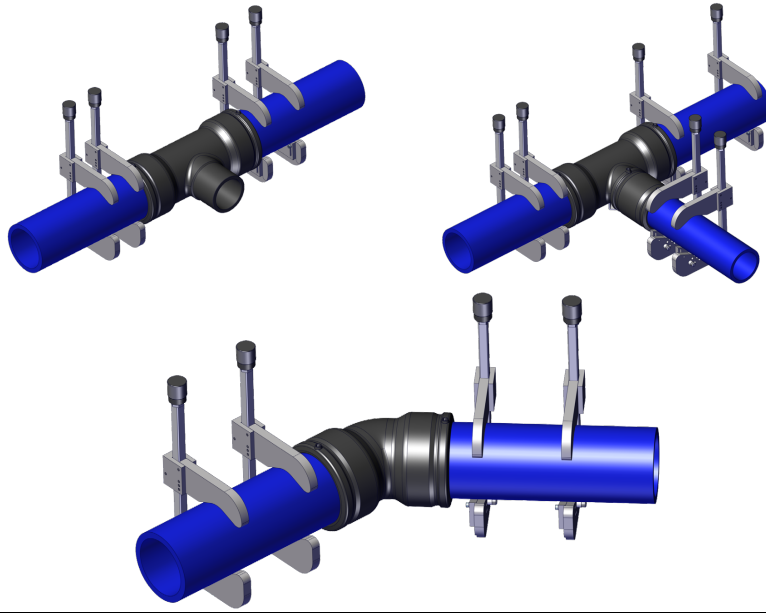
7.4 Application

Step	Action
1	**Inserting the pipes**
1.1	Insert the pipes into the single clamps and align the Pipe Clamp accordingly.
2	**Closing the outer single clamps and clamping**
2.1	Due to the quick adjustment you can simple press the upper jaws of the outer single clamps down onto the pipe surface.
2.2	The turn the adjustment knobs on the outer single clamps clockwise to apply clamping tension.
3	**Closing the inner single clamps and clamping**
3.1	Due to the quick adjustment you can simple press the upper jaws of the inner single clamps down onto the pipe surface.
3.2	The turn the adjustment knobs on the inner single clamps clockwise to apply clamping tension.

Attention!

First clamp the pipes with the outer two single clamps. Then check if the pipes are still straight in the Pipe Clamp. If that is not the cast, open the inner single clamps, realign the pipes and tension the inner single clamps again. That way the welding zone is kept free of mechanical tension.

Examples of different applications of the pipe clamp 63-225 mm



7.5 Disassembly of the pipe clamp

Attention!

Always note the processing guidelines of the fitting manufacturer. Wait for the cooling time of the coupler to pass!

Step	Action
1	**Loosening the adjustment knobs**
1.1	Only open the single clamps of the Pipe Clamp after the cooling time of the coupler has passed by turning the adjustment knobs counterclockwise.
1.2	That gradually reduces the clamping force on the pipe.
2	**Opening the clamping jaws and taking the pipes out**
2.1	Turn the adjustment knobs further counterclockwise until the clamping jaws do not have contact to the pipe surface anymore.
2.2	Then you can press the quick adjustment catches on the single clamps to fully open the clamping jaws.
2.2	Take out the pipes.
3	**Disassembly**
3.1	The disassembly of the Pipe Clamp is done in the reverse order of the assembly.
3.2	After using it store the Pipe Clamp in its transport box to protect it.

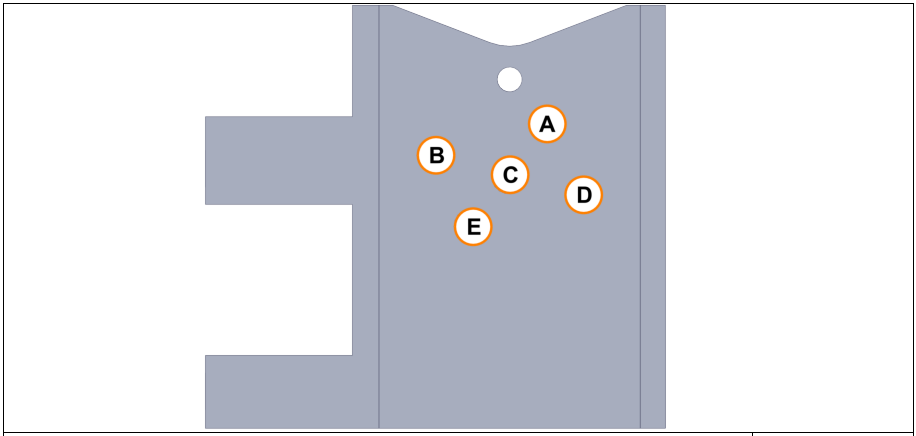
8. Setting the adjustable clamping jaws

Attention!

To enable the pipe clamp to be used when processing two different pipe dimensions, two single clamps (when having ordered the T-supplement: four of the single clamps) have adjustable lower clamping jaws.

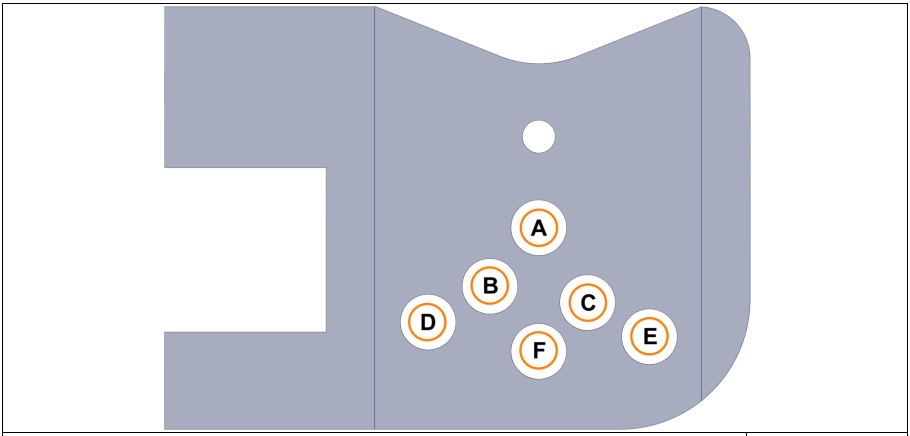
Depending on the combination of pipes dimensions you want to process, the screw must be screwed into the respective hole so that the adjustable reduction (prism) rests on it.

8.1 Settings for the Pipe Clamp 16-63 mm



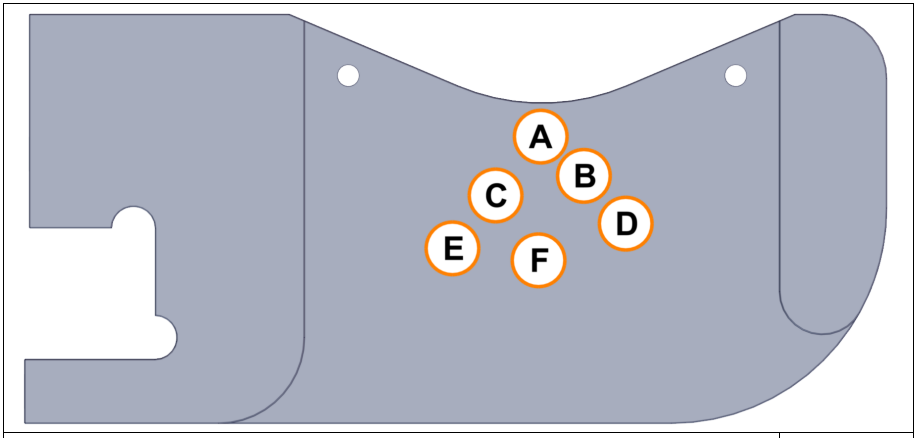
Reduction from > to				Hole/Colour
Millimeter	Inch IPS	Inch DIPS	CTS	
25 mm > 20 mm	---	---	1“ > 3/4“	E
32 mm > 20 mm	---	---	1-1/4“ > 3/4“ 1-1/2“ > 1“	D
32 mm > 25 mm	1“ > 3/4“	---	1-1/4“ > 1“	E
40 mm > 25 mm	---	---	---	C
40 mm > 32 mm	---	---	1-1/2“ > 1-1/4“	E
50 mm > 25 mm	1-1/2“ > 3/4“	---	---	B
50 mm > 32 mm	1-1/2“ > 1“	---	2“ > 1-1/4“	C
50 mm > 40 mm	---	---	---	D
63 mm > 32 mm	2“ > 1“	---	2“ > 1-1/4“	A
63 mm > 40 mm	2“ > 1-1/4“	---	---	B
63 mm > 50 mm	2“ > 1-1/2“	---	2“ > 1-1/2“	D

8.2 Settings for the Pipe Clamp 32-110 mm



Reduction from > to				Hole/Colour
Millimeter	Inch IPS	Inch DIPS	Inch CTS	
40 mm > 32 mm	1-1/4“ > 1“	---	---	F
50 mm > 32 mm		---	---	E
---	1-1/2“ > 1“	---	---	D
50 mm > 40 mm	1-1/2“ > 1-1/4“	---	---	F
63 mm > 32 mm		---	---	B
63 mm > 40 mm		---	---	C
---	2“ > 1-1/4“	---	2“ > 1-1/4“	D
63 mm > 50 mm	2“ > 1-1/2“	---	2“ > 1-1/2“	E
75 mm > 50 mm	---	---	---	C
75 mm > 63 mm	---	---	---	E
---	3“ > 1-1/2“	---	---	A
90 mm > 63 mm	3“ > 2“	---	---	B
90 mm > 75 mm	---	---	---	E
110 mm > 63 mm	---	---	---	A
110 mm > 90 mm	---	---	---	D
---	4“ > 3“	---	---	C

8.3 Settings for the Pipe Clamp 63-225 mm



Reduction from > to			Hole
Millimeter	Inch IPS	Inch DIPS	
75 mm > 63 mm	---	---	F
90 mm > 63 mm	---	---	E
90 mm > 75 mm	---	---	F
110 mm > 63 mm	---	---	C
110 mm > 90 mm	---	4“ > 3“	E
125 mm > 90 mm	---	---	D
125 mm > 110 mm	---	---	F
---	5“ > 3“	---	C
---	5“ > 4“	---	E
140 mm > 110 mm	---	---	D
140 mm > 125 mm	---	---	F
160 mm > 90 mm	---	---	A
160 mm > 110 mm	6“ > 4“	---	B
160 mm > 125 mm	---	---	D
---	6“ > 5“	---	C
160 mm > 140 mm	---	---	E
180 mm > 110 mm	---	---	A
180 mm > 125 mm	---	6“ > 4“	B
180 mm > 140 mm	---	---	C
180 mm > 160 mm	---	---	E
200 mm > 160 mm	---	---	C
200 mm > 180 mm	---	---	E
---	8“ > 6“	---	B
225 mm > 160 mm	---	---	A
225 mm > 180 mm	---	---	C
---	---	8“ > 6“	B

General

Read complete manual!
Observe fitting manifacturer's installation guide!
Follow natinal and international directives!

Cleaning

Wipe around the pipe!
Use approved cleaning agent!
Use lint-free clothes!

Marking

Do not touch the cleaned welding areas!
Mark insertion depth of fitting!
Use approved markers!

Peeling

Remove dirt from the pipe!
Mark welding area!
Use rotational peeler tools only!

Alignment

Use proper alignment tools!
Avoid mechanical stress on pipes and fitting!
Wait for cooling before pressurising!

PLASSON®

NKI Neede
Leidend in kunststof

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