

OPERATING INSTRUCTIONS
INTERNAL BEAD REMOVAL KIT – MODEL 125/400



⚠ Safe Operation

Section 1

- 1.1 Users are reminded that they should read the operating instructions before attempting to use this equipment.
- 1.2 Only use equipment that has been properly maintained.
- 1.3 Care should be taken when handling the debeading heads to prevent injury from the exposed cutter blade.
- 1.4 Users are advised not to carry the unit in an assembled state.

N.B. Fusion Group PLC can provide basic training and regular maintenance where required.

Section 2 Contents:

Kit comprises:-					
Qty		Description	Qty		Description
1	✓	Storage box.	3	✓	Size 1 rod supports.
1	✓	Two grip handle.	3	✓	Size 2 rod supports.
1	✓	No 1 size head.	3	✓	Size 3 rod supports.
1	✓	No 2 size head.	3	✓	Size 4 rod supports.
1	✓	No 3 size head.	3	✓	Size 4b rod supports.
1	✓	No 4 size head.	1	✓	Rod bag .
1	✓	3 mm Allen key.	6	✓	2 metre rods.
1	✓	4 mm Allen key.	1	✓	1 metre rod.
1	✓	Set operating instructions.			

Section 3 Selecting and setting the cutter head:

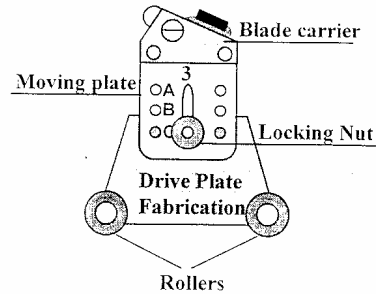
- 3.1 Prior to de-beading, the cutting head should be selected and set to suit the pipe bore as follows.
- 3.2 Using the selection chart, select the pipe outside diameter in the column 1, then move to the right along that row until the required pressure class/SDR is at the top of the column. This box contains the nominal pipe I/D, head size / setting position and pipe wall thickness. For example:-
 250 mm SDR 17 - row I, column 5 indicates a nominal I/D of 220 mm, head size / setting position 3C and pipe wall thickness of 14 mm.

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- 3.3 To adjust the head, first release the locking nut, then pull the moving plate off the drive plate until free of the locating pegs. Slide the moving plate to the desired position and re-locate on the pegs, then secure the locking nut. (Note: No 1 & 4 heads have 4 positions, A, B, C and D)
- 3.4 As a guide to correct head setting, place the bead remover head inside the pipe so that both rollers are resting on the bottom. With the blade carrier held in the horizontal position, a distance of approximately 20-25 mm for sizes 3 & 4, or 10-15 mm for sizes 1 & 2, will result between the blade carrier and the top of the pipe I/D.



Section 4 Rod Supports:

- 4.1 Rod supports are recommended at 2 (2 metre) rod length intervals, with the first rigid support positioned at least 1 metre from head unit.
- 4.2 The outside diameter of the individual support rollers are given in the table opposite. Rod supports should be selected to allow a minimum of 10 mm overall clearance between the outside diameter of the support and the inside diameter of the pipe.

<u>Rod Support</u>	<u>Outside Diameter</u>
Size 1	
Size 2	88 mm
Size 3	128 mm
Size 4	180 mm
Size 4b	240 mm
	320 mm

Section 5 Assembly:

- 5.1 Attach the selected de-beading head to the first drive rod and secure in position using the spring retainer. Slide a rigid rod support onto a second drive rod and then attach and secure to the first drive rod using the spring retainer. Attach subsequent drive rods as required positioning rigid supports on alternate rods. Finally open the two folding arms on the handle and secure in the open position, then attach the handle and secure with the spring retainer.

Note: The last rod support should be positioned near to the open end of the pipe to afford maximum support.

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Section 6 Operation:

- 6.1 Enter the de-beading head into the pipe ensuring that the rollers are positioned at the bottom of the pipe.
- 6.2 Push the de-beader into the pipe taking care so as not to rotate the rods until it stops on contact with the internal bead. Position the adjustable drive rod support at the pipe end to steady the rod and minimise effort.
- 6.3 Rotate the handle clockwise to engage the blade and continue a further 360 degrees to complete the cut. A noticeable reduction in load will be felt once the cut is complete.
- 6.4 Withdraw the de-beader from the pipe, the removed bead will be retained on the head. Do not rotate further, as this may disengage the removed bead.
- 6.5 To prevent unnecessary damage it is recommended that the drive rods are separated and the unit stored safely after use.
- 6.6 To ensure performance and reliability the cutting head should be kept clean at all times.

Note:

The removed bead may not be retained on the head if the de-beading operation is carried out before the joint has fully cooled.

Section 7 Maintenance:

- 7.1 Check the condition of the cutter blade regularly and replace if the cutting edge becomes damaged or worn or if the effort during de-beading becomes excessive.
- 7.2 Check all screws and retaining devices for security.
- 7.3 Visually inspect the cutting head, rod supports and drive rods for signs of damage, thus preventing damage to the inner pipe wall and/or injury to the operator.
- 7.4 Check drive rod spring retainers for operation - replace if spring tension is weak.
- 7.5 Check that the nylon rollers on the drive fabrication rotate freely.

Section 8 Lubrication:

- 8.1 Light lubricating oil should be applied to the blade carrier pivots - remove any excess oil.
- 8.2 Application of oil may also be required to the drive rod ends to prevent oxidation where extensive use may have removed surface coatings.

Due to Fusion's ongoing policy of continued development and improvement, we reserve the right to modify products without prior notice.

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Head Size/Setting
SELECTION CHART

* EUROPEAN PRESSURE CLASS - (SDR)												
Pipe	2,5 - (44)		3,2 - (32)		4 - (26)		6 - (17)		10 - (11)		16 - (7,3)	
O/D	I/D (w/t)	Head (size)	I/D (w/t)	Head (size)	I/D (w/t)	Head (size)	I/D (w/t)	Head (size)	I/D (w/t)	Head (size)	I/D (w/t)	Head (size)
110							97,5 (6.2)	1(B)	90 (10)	1(A)		
125							111 (7)	1(D)	102 (11.4)	1(C)	92 (17)	1(A)
140							124 (8)	2(A)	114 (13)	1(D)	101 (19)	1(C)
160	152 (4)	2(B)	150 (5)	2(B)	147 (6)	2(B)	141 (9)	2(B)	130 (15)	2(A)	116 (22)	1(D)
180	171 (4)	3(A)	169 (6)	2(C) 3(A)	166 (7)	2(C)	158 (10)	2(C)	147 (16)	2(B)	130 (25)	2(B)
200	190 (5)	3(A)	187 (6)	3(A)	184 (8)	3(A)	176 (11)	3(A)	163 (18)	2(C)	145 (27)	2(B)
225	214 (5)	3(B)	211 (7)	3(B)	207 (9)	3(B)	198 (13)	3(B)	184 (20)	3(A)	163 (31)	2(C)
250	237 (6)	3(C)	234 (8)	3(C)	230 (10)	3(C)	220 (14)	3(C)	204 (23)	3(B)	181 (34)	3(A)
280	266 (6)	4(B)	262 (9)	4(B)	258 (11)	4(B)	246 (16)	3(C) 4(A)	229 (25)	3(C)	203 (38)	3(B)
315	299 (7)	4(C)	295 (10)	4(C)	290 (12)	4(B)	277 (18)	4(B)	257 (29)	4(A)	229 (43)	3(C)
355	339 (8)	4(D)	333 (11)	4(D)	327 (14)	4(D)	312 (20)	4(C)	290 (32)	4(B)	258 (49)	4(A)
400							354 (24)	4(D)	327 (36)	4(C)	270 (55)	4(B)

* Note:- Pressure classes may vary from Country to Country and material specification, it is therefore essential to refer to the pipe wall thickness when selecting head sizes.