

### COUPLER

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE | L (mm) | L1 (mm) | D (mm) | D1 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|---------|--------|---------|--------------------|---------------------|-------------|--------------|
| 20mm         | 77     | 37.5    | 29     | 20      | 35                 | 3                   | 0.033       | 80           |
| 25mm         | 77     | 37.5    | 33.5   | 25      | 30                 | 3                   | 0.037       | 80           |
| 32mm         | 77     | 37.5    | 43     | 32      | 45                 | 3                   | 0.057       | 75/100       |
| 40mm         | 90     | 44      | 51.5   | 40      | 40                 | 5                   | 0.08        | 90           |
| 50mm         | 91     | 44      | 61.5   | 50      | 90                 | 5                   | 0.096       | 70           |
| 63mm         | 102    | 49      | 77     | 63      | 35                 | 3                   | 0.148       | 25/20        |
| 75mm         | 120    | 59      | 92     | 75      | 50                 | 5                   | 0.22        | 45           |
| 90mm         | 122    | 60      | 110    | 90      | 90                 | 10                  | 0.333       | 30/27        |
| 110mm        | 144    | 70      | 133    | 110     | 160                | 10                  | 0.52        | 18/10        |
| 125mm        | 154    | 75      | 151    | 125     | 200                | 10                  | 0.74        | 12           |
| 140mm        | 181    | 89      | 176    | 140     | 200                | 10                  | 1.45        | 6            |
| 160mm        | 175    | 86      | 195    | 160     | 300                | 20                  | 1.409       | 4            |
| 180mm        | 185    | 91      | 220    | 180     | 360                | 20                  | 1.906       | 4            |
| 200mm        | 186    | 92      | 243    | 200     | 440                | 20                  | 2.301       | 4            |
| 225mm        | 222    | 109     | 276    | 225     | 600                | 30                  | 4.15        | 2            |
| 250mm        | 220    | 108     | 301    | 250     | 600                | 30                  | 4.28        | 2            |
| 280mm (40V)  | 260    | 127     | 345    | 280     | 600                | 30                  | 8.32        | 1            |
| 315mm (40V)  | 261    | 128     | 386    | 315     | 900                | 30                  | 10.1        | 1            |
| 355mm (40V)  | 260    | 126     | 437    | 355     | 900                | 30                  | 12.3        | 1            |
| 400mm (40V)  | 290    | 142     | 475    | 400     | TBC                | TBC                 | 14.5        | 1            |

### EQUAL TEE

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE      | L (mm) | L1 (mm) | D (mm) | D1 (mm) | D2 (mm) | A (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|-------------------|--------|---------|--------|---------|---------|--------|--------------------|---------------------|-------------|--------------|
| 20 x 20 x 20mm    | 98     | 35      | 44     | 20      | 20      | 78     | 30                 | 3                   | 0.13        | 75           |
| 25 x 25 x 25mm    | 98     | 35      | 44     | 25      | 25      | 78     | 35                 | 3                   | 0.12        | 75           |
| 32 x 32 x 32mm    | 98     | 35      | 44     | 32      | 32      | 78     | 50                 | 3                   | 0.1         | 50           |
| 40 x 40 x 40mm    | 131    | 44      | 52     | 40      | 40      | 91     | 80                 | 5                   | 0.163       | 18           |
| 50 x 50 x 50mm    | 141    | 43      | 64     | 50      | 50      | 104    | 90                 | 5                   | 0.23        | 25           |
| 63 x 63 x 63mm    | 156    | 50      | 82     | 63      | 63      | 114    | 40                 | 5                   | 0.445       | 20           |
| 75 x 75 x 75mm    | 174    | 60      | 97     | 75      | 75      | 126    | 120                | 10                  | 0.597       | 12           |
| 90 x 90 x 90mm    | 201    | 55      | 115    | 90      | 90      | 143    | 110                | 8                   | 0.97        | 7            |
| 110 x 110 x 110mm | 239    | 73      | 139    | 110     | 110     | 167    | 140                | 10                  | 1.67        | 6            |
| 125 x 125 x 125mm | 262    | 79      | 156    | 125     | 125     | 196    | 200                | 15                  | 2.3         | 4            |
| 160 x 160 x 160mm | 313    | 89      | 200    | 160     | 160     | 211    | 360                | 20                  | 4.06        | 2            |
| 180 x 180 x 180mm | 330    | 89      | 224    | 180     | 180     | 231    | 360                | 19                  | 5.3         | 2            |

### REDUCING TEE

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE      | L (mm) | L1 (mm) | D (mm) | D1 (mm) | D2 (mm) | A (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|-------------------|--------|---------|--------|---------|---------|--------|--------------------|---------------------|-------------|--------------|
| 20 x 20 x 32mm    | 98     | 35      | 44     | 20      | 32      | 78     | 50                 | 3                   | 0.13        | 50           |
| 25 x 25 x 32mm    | 98     | 35      | 44     | 25      | 32      | 78     | 35                 | 3                   | 0.126       | 50           |
| 50 x 50 x 40mm    | 144    | 49      | 67     | 50      | 40      | 101    | 120                | 10                  | 0.3         | 25           |
| 63 x 63 x 40mm    | 154    | 34      | 81     | 63      | 40      | 108    | 40                 | 5                   | 0.4         | 24           |
| 63 x 63 x 50mm    | 157    | 51      | 83     | 63      | 50      | 118    | 40                 | 5                   | 0.42        | 18           |
| 90 x 90 x 63mm    | 206    | 63      | 115.5  | 90      | 63      | 138    | 110                | 8                   | 0.88        | 8            |
| 110 x 110 x 63mm  | 239    | 73      | 139    | 110     | 63      | 163    | 140                | 10                  | 1.47        | 8            |
| 110 x 110 x 90mm  | 239    | 73      | 139    | 110     | 90      | 158    | 140                | 10                  | 1.41        | 6            |
| 125 x 125 x 63mm  | 266    | 79      | 157    | 125     | 63      | 500    | 200                | 15                  | 3           | 1            |
| 125 x 125 x 90mm  | 262    | 76      | 156    | 125     | 90      | 197    | 200                | 15                  | 2.12        | 4            |
| 125 x 125 x 110mm | 262    | 76      | 156    | 125     | 110     | 359    | 200                | 15                  | 2.8         | 1            |
| 160 x 160 x 63mm  | 367    | 112     | 210    | 160     | 63      | 385    | 360                | 20                  | 4.1         | 2            |
| 160 x 160 x 90mm  | 365    | 112     | 210    | 160     | 90      | 385    | 360                | 20                  | 4.1         | 2            |
| 160 x 160 x 110mm | 365    | 112     | 210    | 160     | 110     | 203    | 360                | 20                  | 3.77        | 2            |
| 160 x 160 x 125mm | 367    | 112     | 213    | 160     | 125     | 410    | 200                | 10                  | 7.45        | 2            |
| 180 x 180 x 125mm | 372    | 105     | 213    | 180     | 125     | 219    | 360                | 19                  | 4.85        | 2            |

### 90° ELBOW

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE  | L (mm) | L1 (mm) | L2 (mm) | D (mm) | D1 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|---------------|--------|---------|---------|--------|---------|--------------------|---------------------|-------------|--------------|
| 20mm x 90deg  | 82     | 44      | 64      | 36     | 20      | 35                 | 3                   | 0.141       | 40           |
| 25mm x 90deg  | 72.4   | 37.5    | 55.4    | 33.85  | 25      | 30                 | 3                   | 0.062       | 100          |
| 32mm x 90deg  | 84     | 40      | 62      | 44     | 32      | 60                 | 5                   | 0.097       | 80           |
| 40mm x 90deg  | 116    | 50      | 83      | 67     | 40      | 50                 | 5                   | 0.34        | 55           |
| 50mm x 90deg  | 116    | 50      | 83      | 67     | 50      | 90                 | 5                   | 0.241       | 50           |
| 63mm x 90deg  | 123.3  | 50      | 84.1    | 80     | 63      | 35                 | 5                   | 0.294       | 25           |
| 75mm x 90deg  | 141    | 53      | 92      | 95     | 75      | 70                 | 5                   | 0.425       | 25           |
| 90mm x 90deg  | 165    | 59      | 106     | 113    | 90      | 90                 | 10                  | 0.685       | 15           |
| 110mm x 90deg | 205    | 71      | 135     | 137    | 110     | 160                | 15                  | 1.12        | 6            |
| 125mm x 90deg | 228    | 72      | 152     | 154    | 125     | 200                | 15                  | 1.57        | 6            |
| 160mm x 90deg | 320    | 104     | 211     | 213    | 160     | 200                | 10                  | 5           | 2            |
| 180mm x 90deg | 320    | 104     | 211     | 213    | 180     | 300                | 20                  | 4.12        | 2            |

### 45° ELBOW

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE  | L (mm) | L1 (mm) | D (mm) | D1 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|---------------|--------|---------|--------|---------|--------------------|---------------------|-------------|--------------|
| 32mm x 45deg  | 95     | 39      | 44     | 32      | 45                 | 3                   | 0.08        | 100          |
| 40mm x 45deg  | 108    | 41.5    | 53     | 40      | 50                 | 5                   | 0.1         | 70           |
| 50mm x 45deg  | 124    | 44.5    | 63.8   | 50      | 80                 | 5                   | 0.134       | 50           |
| 63mm x 45deg  | 136.4  | 50      | 78.5   | 63      | 35                 | 5                   | 0.25        | 30           |
| 75mm x 45deg  | 165    | 62      | 97     | 75      | 70                 | 5                   | 0.427       | 35           |
| 90mm x 45deg  | 192    | 60      | 117    | 90      | 110                | 10                  | 0.765       | 18           |
| 110mm x 45deg | 213    | 75      | 137    | 110     | 140                | 10                  | 0.894       | 10           |
| 125mm x 45deg | 240    | 81      | 154    | 125     | 140                | 10                  | 1.22        | 6            |
| 160mm x 45deg | 320    | 105     | 217    | 160     | 240                | 10                  | 4.5         | 2            |
| 180mm x 45deg | 320    | 105     | 217    | 180     | 240                | 20                  | 3.13        | 2            |

### REDUCER

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar

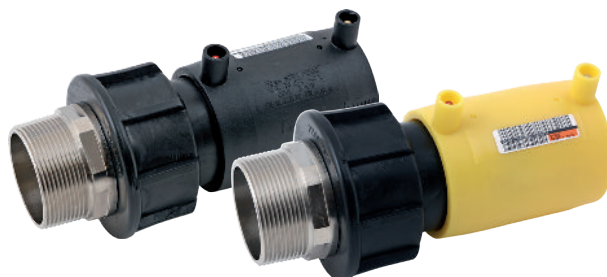


| L (mm) | L1 (mm) | D (mm) | D1 (mm) | L2 (mm) | D2 (mm) | D3 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------|---------|--------|---------|---------|---------|---------|--------------------|---------------------|-------------|--------------|
| 77     | 38.5    | 34     | 25      | 36.5    | 29      | 20      | 35                 | 3                   | 0.035       | 80           |
| 77     | 38.5    | 43     | 32      | 36.5    | 29      | 20      | 40                 | 3                   | 0.048       | 75           |
| 77     | 38.5    | 43     | 32      | 36.5    | 34      | 25      | 30                 | 3                   | 0.052       | 75           |
| 84     | 41      | 52     | 40      | 41      | 43      | 32      | 50                 | 5                   | 0.104       | 100          |
| 91     | 46.5    | 62     | 50      | 41      | 44      | 32      | 60                 | 5                   | 0.087       | 80           |
| 91     | 46.5    | 62     | 50      | 43      | 52      | 40      | 60                 | 5                   | 0.92        | 80           |
| 102    | 52      | 78     | 63      | 44      | 44      | 32      | 90                 | 5                   | 0.13        | 60           |
| 102    | 52.3    | 77     | 63      | 45      | 52      | 40      | 70                 | 5                   | 0.103       | 60           |
| 102    | 52      | 78     | 63      | 48      | 62      | 50      | 120                | 10                  | 0.138       | 60           |
| 126    | 61      | 98     | 75      | 57      | 82      | 63      | 80                 | 7                   | 0.44        | 28           |
| 122.5  | 61      | 109.5  | 90      | 55      | 79      | 63      | 80                 | 5                   | 0.3         | 35           |
| 158    | 80      | 140    | 110     | 58      | 98      | 63      | 70                 | 10                  | 0.62        | 18           |
| 137.5  | 70      | 134    | 110     | 62      | 111     | 90      | 120                | 10                  | 0.535       | 20           |
| 145    | 75      | 152    | 125     | 62.5    | 112     | 90      | 160                | 10                  | 0.7         | 12           |
| 192    | 96      | 200    | 160     | 73      | 117     | 90      | 200                | 22                  | 1.44        | 4            |
| 193    | 96      | 200    | 160     | 80      | 140     | 110     | 200                | 22                  | 1.52        | 6            |
| 221    | 101     | 216    | 180     | 83      | 157     | 125     | 220                | 10                  | 2.09        | 4            |

### MALE TRANSITION COUPLER

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 6 Bar

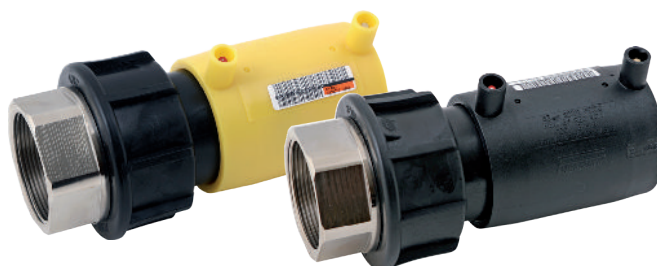


| FITTING SIZE | L (mm) | L1 (mm) | L2 (mm) | D (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|---------|---------|--------|--------------------|---------------------|-------------|--------------|
| 25mm x ¾"    | 114    | 79      | 34      | 17     | 30                 | 3                   | 0.4         | 60           |
| 32mm x ½"    | 114    | 79      | 34      | 23     | 45                 | 3                   | 0.425       | 50           |
| 32mm x ¾"    | 114    | 79      | 34      | 23     | 45                 | 3                   | 0.425       | 50           |
| 32mm x 1"    | 114    | 79      | 34      | 23     | 45                 | 3                   | 0.426       | 50           |
| 32mm x 1¼"   | 114    | 79      | 34      | 23     | 45                 | 3                   | 0.431       | 50           |
| 32mm x 1½"   | 114    | 79      | 34      | 23     | 45                 | 3                   | 0.431       | 50           |
| 40mm x 1"    | 126    | 81      | 34      | 29     | 40                 | 5                   | 0.468       | 30           |
| 40mm x 1¼"   | 126    | 83      | 34      | 29     | 40                 | 5                   | 0.468       | 30           |
| 40mm x 1½"   | 126    | 83      | 34      | 29     | 40                 | 5                   | 0.468       | 30           |
| 40mm x 2"    | 126    | 88      | 34      | 29     | 40                 | 5                   | 0.471       | 30           |
| 50mm x 1"    | 134    | 86      | 34      | 38     | 80                 | 5                   | 0.418       | 20           |
| 50mm x 1¼"   | 136    | 88      | 36      | 38     | 80                 | 5                   | 0.548       | 20           |
| 50mm x 1½"   | 136    | 88      | 36      | 38     | 80                 | 5                   | 0.548       | 20           |
| 50mm x 2"    | 141    | 93      | 41      | 38     | 80                 | 5                   | 0.569       | 15           |
| 63mm x 1¼"   | 154    | 97      | 36      | 48     | 35                 | 3                   | 0.704       | 15           |
| 63mm x 1½"   | 154    | 97      | 36      | 48     | 35                 | 3                   | 0.704       | 15           |
| 63mm x 2"    | 159    | 102     | 41      | 48     | 35                 | 3                   | 0.894       | 15           |

### FEMALE TRANSITION COUPLER

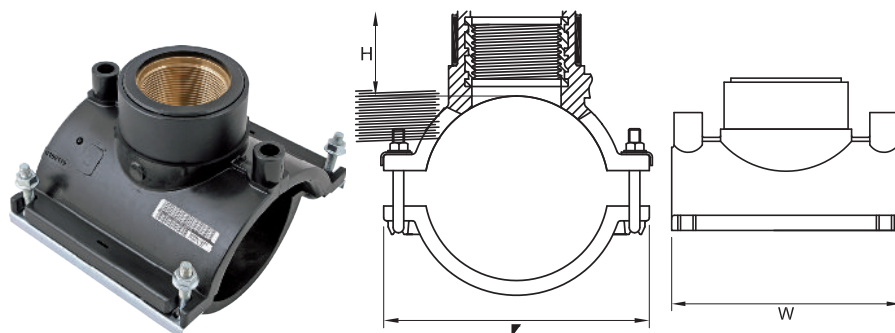
PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 6 Bar



| FITTING SIZE | L (mm) | L1 (mm) | L2 (mm) | D (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|---------|---------|--------|--------------------|---------------------|-------------|--------------|
| 25mm x ¾"    | 106    | 68      | 26      | 17     | 30                 | 3                   | 0.4         | 60           |
| 32mm x 1"    | 106    | 68      | 26      | 23     | 45                 | 3                   | 0.426       | 50           |
| 40mm x 1"    | 116    | 73      | 26      | 29     | 40                 | 5                   | 0.418       | 30           |
| 40mm x 1¼"   | 116    | 73      | 26      | 29     | 40                 | 5                   | 0.418       | 30           |
| 40mm x 1½"   | 116    | 73      | 26      | 29     | 40                 | 5                   | 0.408       | 30           |
| 50mm x 1½"   | 126    | 78      | 26      | 38     | 80                 | 5                   | 0.588       | 20           |
| 50mm x 2"    | 126    | 78      | 26      | 38     | 80                 | 5                   | 0.588       | 15           |
| 63mm x 1½"   | 148    | 91      | 30      | 48     | 35                 | 3                   | 0.924       | 15           |
| 63mm x 2"    | 148    | 91      | 30      | 48     | 35                 | 3                   | 0.894       | 15           |

### TRANSITION SADDLE PE100 Black - Gas 10 Bar / Water PN16



| FITTING SIZE | H (mm) | W (mm) | E (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|--------|--------|--------------------|---------------------|-------------|--------------|
| 63mm x 1¼"   | 90     | 118    | 102    | 120                | 10                  | 0.75        | 10           |
| 63mm x 1½"   | 90     | 118    | 102    | 120                | 10                  | 0.7         | 10           |
| 90mm x 1¼"   | 57     | 118    | 156    | 160                | 10                  | 1.2         | 10           |
| 90mm x 1½"   | 57     | 118    | 156    | 160                | 10                  | 1.17        | 10           |
| 90mm x 2"    | 57     | 118    | 156    | 160                | 10                  | 1.04        | 10           |
| 110mm x 1¼"  | 56     | 118    | 180    | 120                | 10                  | 1.16        | 10           |
| 110mm x 1½"  | 56     | 118    | 180    | 120                | 10                  | 1.135       | 8            |
| 110mm x 2"   | 56     | 118    | 180    | 120                | 10                  | 1.16        | 8            |
| 125mm x 1¼"  | 58     | 118    | 180    | 120                | 10                  | 1.12        | 8            |
| 125mm x 1½"  | 58     | 118    | 180    | 120                | 10                  | 1.079       | 8            |
| 125mm x 2"   | 58     | 118    | 180    | 120                | 10                  | 1.12        | 8            |
| 160mm x 1¼"  | 62     | 118    | 236    | 120                | 10                  | 1.7         | 2            |
| 160mm x 1½"  | 62     | 118    | 236    | 120                | 10                  | 1.6         | 2            |
| 160mm x 2"   | 62     | 118    | 236    | 120                | 10                  | 1.45        | 2            |
| 180mm x 1¼"  | 60     | 118    | 236    | 120                | 10                  | 1.7         | 2            |
| 180mm x 1½"  | 60     | 118    | 236    | 120                | 10                  | 1.6         | 2            |
| 180mm x 2"   | 60     | 118    | 236    | 120                | 10                  | 1.5         | 2            |
| 200mm x 2"   | 67     | 165    | 263    | 120                | 10                  | 2.17        | 3            |
| 225mm x 2"   | 66     | 165    | 288    | 120                | 10                  | 2.3         | 2            |
| 250mm x 2"   | 74     | 165    | 316    | 120                | 10                  | 2.42        | 2            |

### END CAP

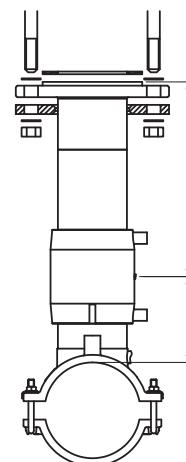
PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 7 Bar



| FITTING SIZE | L (mm) | L1 (mm) | D (mm) | D1 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|---------|--------|---------|--------------------|---------------------|-------------|--------------|
| 20mm         | 82     | 37.5    | 29     | 20      | 35                 | 3                   | 0.041       | 80           |
| 25mm         | 82     | 37.5    | 33.5   | 25      | 30                 | 3                   | 0.048       | 80           |
| 32mm         | 84     | 37.5    | 46     | 32      | 45                 | 3                   | 0.073       | 75/100       |
| 40mm         | 97     | 44      | 51.5   | 40      | 40                 | 5                   | 0.102       | 90           |
| 50mm         | 101    | 44      | 61.5   | 50      | 90                 | 5                   | 0.15        | 70           |
| 63mm         | 115    | 49      | 77     | 63      | 35                 | 5                   | 0.226       | 25/20        |
| 75mm         | 125    | 59      | 92     | 75      | 50                 | 5                   | 0.553       | 45           |
| 90mm         | 138    | 60      | 110    | 90      | 90                 | 10                  | 0.521       | 30           |
| 110mm        | 164    | 70      | 133    | 110     | 160                | 10                  | 0.97        | 18/10        |
| 125mm        | 175    | 75      | 151    | 125     | 200                | 10                  | 1.24        | 10           |
| 140mm        | 236    | 89      | 176    | 140     | 200                | 10                  | 2.25        | 6            |
| 160mm        | 202    | 85      | 196    | 160     | 300                | 20                  | 2.21        | 4            |
| 180mm        | 214    | 91      | 220    | 180     | 360                | 20                  | 2.32        | 4            |
| 200mm        | 215    | 108     | 243    | 200     | 440                | 30                  | 4.2         | 2            |
| 225mm        | 222    | 109     | 276    | 225     | 600                | 30                  | 7           | 2            |
| 250mm        | 220    | 108     | 301    | 250     | 600                | 30                  | 8.1         | 2            |

### HYDRANT BRANCH SADDLE KIT PE100 Black - Water PN16



| FITTING SIZE | L (mm) | L1 (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|---------|--------------------|---------------------|-------------|--------------|
| 90mm x 80K   | 455    | 124     | 160                | 10                  | 6.6         | 1            |
| 110mm x 80K  | 455    | 121     | 120                | 10                  | 6.55        | 1            |
| 125mm x 80K  | 455    | 114     | 120                | 10                  | 6.5         | 1            |
| 160mm x 80K  | 455    | 110     | 120                | 10                  | 7.64        | 1            |
| 180mm x 80K  | 455    | 100     | 120                | 10                  | 7.6         | 1            |
| 200mm x 80K  | 455    | 115     | 120                | 10                  | 10          | 1            |
| 225mm x 80K  | 455    | 112     | 120                | 10                  | 10.2        | 1            |
| 250mm x 80K  | 455    | 120     | 120                | 10                  | 10.27       | 1            |

Kit: E/F hydrant branch saddle, coupler<sup>1</sup>, riser, flange gasket, backing ring<sup>2</sup>, bolts<sup>2</sup>, nuts<sup>2</sup>, washers<sup>2</sup>

<sup>1</sup> Coupler in kit is 90mm - see coupler chart for dimensional details

<sup>2</sup> Rilsan coated

### MULTISEAL TAPPING TEE S/L

PE100 Black - Gas 10 Bar / Water PN16

PE80 Yellow - Gas 6 Bar



| FITTING SIZE | L (mm) | H (mm) | h (mm) | W (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|--------|--------|--------|--------------------|---------------------|-------------|--------------|
| 63 x 20mm    | 105    | 119    | 62     | 120    | 80                 | 10                  | 0.34        | 15           |
| 63 x 25mm    | 105    | 119    | 62     | 120    | 80                 | 10                  | 0.34        | 15           |
| 63 x 32mm    | 105    | 119    | 62     | 120    | 80                 | 10                  | 0.34        | 15           |
| 75 x 20mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 75 x 25mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 75 x 32mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 90 x 20mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 90 x 25mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 90 x 32mm    | 105    | 110    | 77     | 120    | 100                | 10                  | 0.35        | 15           |
| 110 x 20mm   | 105    | 117    | 87     | 120    | 80                 | 10                  | 0.37        | 15           |
| 110 x 25mm   | 105    | 117    | 87     | 120    | 80                 | 10                  | 0.37        | 15           |
| 110 x 32mm   | 105    | 117    | 87     | 120    | 80                 | 10                  | 0.37        | 15           |
| 125 x 20mm   | 105    | 117    | 95     | 120    | 80                 | 10                  | 0.38        | 15           |
| 125 x 25mm   | 105    | 117    | 95     | 120    | 80                 | 10                  | 0.38        | 15           |
| 125 x 32mm   | 105    | 117    | 95     | 120    | 80                 | 10                  | 0.38        | 15           |
| 160 x 20mm   | 105    | 122    | 112    | 120    | 100                | 10                  | 0.39        | 15           |
| 160 x 25mm   | 105    | 122    | 112    | 120    | 100                | 10                  | 0.39        | 15           |
| 160 x 32mm   | 105    | 122    | 112    | 120    | 100                | 10                  | 0.39        | 15           |
| 180 x 20mm   | 105    | 122    | 122    | 120    | 100                | 10                  | 0.38        | 15           |
| 180 x 25mm   | 105    | 122    | 122    | 120    | 100                | 10                  | 0.38        | 15           |
| 180 x 32mm   | 105    | 122    | 122    | 120    | 100                | 10                  | 0.38        | 15           |
| 200 x 20mm   | 105    | 122    | 132    | 120    | 100                | 10                  | 0.38        | 15           |
| 200 x 25mm   | 105    | 122    | 132    | 120    | 100                | 10                  | 0.38        | 15           |
| 200 x 32mm   | 105    | 122    | 132    | 120    | 100                | 10                  | 0.38        | 15           |
| 225 x 20mm   | 105    | 122    | 145    | 120    | 100                | 10                  | 0.36        | 15           |
| 225 x 25mm   | 105    | 122    | 145    | 120    | 100                | 10                  | 0.36        | 15           |
| 225 x 32mm   | 105    | 122    | 145    | 120    | 100                | 10                  | 0.36        | 15           |
| 250 x 20mm   | 105    | 122    | 158    | 118    | 100                | 10                  | 0.36        | 15           |
| 250 x 25mm   | 105    | 122    | 158    | 118    | 100                | 10                  | 0.36        | 15           |
| 250 x 32mm   | 105    | 122    | 158    | 118    | 100                | 10                  | 0.36        | 15           |
| 280 x 32mm   | TBC    | TBC    | TBC    | TBC    | TBC                | TBC                 | TBC         | TBC          |
| 315 x 32mm   | TBC    | TBC    | TBC    | TBC    | TBC                | TBC                 | TBC         | TBC          |
| 355 x 32mm   | TBC    | TBC    | TBC    | TBC    | TBC                | TBC                 | TBC         | TBC          |

### BRANCH SADDLE U/P

PE100 Black - Gas 10 Bar / Water PN16



| FITTING SIZE | H (mm) | h (mm) | W (mm) | E (mm) | FUSION TIME (secs) | COOLING TIME (mins) | WEIGHT (kg) | BOX QUANTITY |
|--------------|--------|--------|--------|--------|--------------------|---------------------|-------------|--------------|
| 63 x 40mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 63 x 50mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 63 x 63mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 75 x 40mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 75 x 50mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 75 x 63mm    | 115    | 75     | 147    | 119    | 100                | 10                  | 0.475       | 10           |
| 90 x 40mm    | 115    | 75     | 147    | 122    | 100                | 10                  | 0.588       | 10           |
| 90 x 50mm    | 115    | 75     | 147    | 122    | 100                | 10                  | 0.588       | 10           |
| 90 x 63mm    | 115    | 75     | 147    | 122    | 100                | 10                  | 0.588       | 10           |
| 110 x 40mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.596       | 10           |
| 110 x 50mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.596       | 10           |
| 110 x 63mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.596       | 10           |
| 125 x 40mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.608       | 10           |
| 125 x 50mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.608       | 10           |
| 125 x 63mm   | 118    | 75     | 147    | 122    | 100                | 10                  | 0.608       | 10           |
| 160 x 40mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.652       | 10           |
| 160 x 50mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.652       | 10           |
| 160 x 63mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.652       | 10           |
| 180x 40 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.672       | 10           |
| 180x 50 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.672       | 10           |
| 180x 63 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.672       | 10           |
| 200x 40 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.677       | 10           |
| 200x 50 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.677       | 10           |
| 200x 63 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.677       | 10           |
| 225x 40 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.706       | 10           |
| 225x 50 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.706       | 10           |
| 225x 63 mm   | 125    | 75     | 147    | 122    | 100                | 10                  | 0.706       | 10           |

## Pressure ratings

The maximum pressure rating for each type of electrofusion fitting is included in the detailed product specifications provided in pages 12 to 29. The table below provides a summary of the pressure ratings of the most common fittings.

| FITTING TYPE        | WATER (COLD)<br>BLACK PE100 | GAS (1)<br>BLACK PE100 | GAS (2)<br>YELLOW PE80 |
|---------------------|-----------------------------|------------------------|------------------------|
| Coupler             | PN16                        | 10 Bar                 | 7 Bar                  |
| Elbow               | PN16                        | 10 Bar                 | 7 Bar                  |
| Equal tee           | PN16                        | 10 Bar                 | 7 Bar                  |
| Reducer             | PN16                        | 10 Bar                 | 7 Bar                  |
| Tapping tee         | PN16                        | 10 Bar                 | 6 Bar                  |
| Branch saddle       | PN16                        | 10 Bar                 | 6 Bar                  |
| Hydrant products    | PN16                        | n/a                    | n/a                    |
| Transition fittings | PN16                        | 10 Bar                 | 6 Bar                  |

(1) Rated to 10 bar under EN-1555-3. A black PE100 Fusamatic fitting can be used in the UK if its use is signed off by a qualified gas engineer.

(2) Rated under GIS/PL2-4 to either 7 bar for class B or 6 bar for class C

## SDR ratings

The appropriate pipe SDR rating for electrofusion fittings is in accordance with the tables below:

| FITTING SIZES BELOW 63mm |          |
|--------------------------|----------|
| FITTING TYPE             | PIPE SDR |
| Coupler                  | 11       |
| Elbow                    | 11       |
| Reducer                  | 11       |
| Equal tee                | 11       |
| Tapping tee              | 11       |
| Branch saddle            | 11       |
| Transition fittings      | 11       |

| FITTING SIZES 63mm AND ABOVE |            |
|------------------------------|------------|
| FITTING TYPE                 | PIPE SDR   |
| Coupler                      | 11 to 17.6 |
| Elbow                        | 11 to 17.6 |
| Equal tee                    | 11 to 17.6 |
| Reducer                      | 11 to 17.6 |
| Tapping tee *                | 11 to 17.6 |
| Branch saddle                | 11 to 17.6 |
| Hydrant products             | 11 to 17.6 |
| Transition fittings          | 11 to 17.6 |

\* Tapping tees for 63mm mains only are not suitable for SDR17 pressurised pipe applications.

## PRE JOINTING CHECKS

- Use equipment that is clean, in good condition, regularly maintained and within required calibration/service.
- Ensure that cutters/blades and scrapers are clean and in good condition.
- Mechanical scrapers must be used wherever possible.
- Check that restraining clamps are in good condition.
- Check that you have somewhere clean and dry to place tools and equipment during the electrofusion process.
- Do not start the jointing process unless it can be completed in one go.

## DO'S

- Understand the principles of electrofusion (refer to pipe manufacturer's details in van pack if necessary).
- Use a shelter and ground sheet, both in dry and wet conditions, to minimise contamination.
- Use pipe end covers wherever possible.
- Always enter your details into the electrofusion control box if the box requests it; your operator code and job code must be entered to allow full traceability.
- Always use clamps for alignment/restraining/re-rounding.
- Ensure control box voltage is compatible with fitting.
- Ensure pipe and fittings to be jointed are compatible with each other.
- Cut pipe ends square for all electrofusion socket fittings.
- Fully scrape pipe and/or spigot surfaces. (Secura-Line pipes need not be scraped prior to electrofusion if outer skin has been freshly peeled

and the core pipe is pristine. Should the peeled pipe ends become contaminated then they should be treated in the same way as standard PE pipe).

- Keep scraped pipe and/or spigot surfaces and fittings clean.
- Assemble joint and fuse immediately after scraping the pipe.
- If Fusion automatic fittings and boxes are being used, connect the red lead to the fitting terminal with the red pin and the black lead to the plain pin.
- In all cases check that the fusion time displayed by the control box matches the fusion time on the fitting. If different do not continue to weld. Replace with a new bagged fitting or enter fitting time manually.
- Ensure correct fusion and cooling times are observed and adhered to.
- Ensure all fusion indicators have risen. If not, cut out and make new weld.
- Drilling/tapping through fitting/pipe should only be carried out following the required quality inspections and pressure testing.
- Always ensure you mark the completed joint with the number issued from the electrofusion control box, along with the date. This is imperative for full traceability.

## DON'TS

- Do not start any electrofusion joint unless it can be completed without interruption.
- Do not use an electrofusion box within an excavation.
- Under no circumstances should an attempt be made to carry out a second fusion cycle on any fitting. This is a WIS 4-32-08 requirement and must be adhered to.
- Incomplete, interrupted, failed or aborted fittings should ALWAYS be cut out, bagged and numbered with corresponding joint number for submission to a supervisor for inspection.

**(CONTINUED....)**

## DON'TS (...CONTINUED)

- Do not use dirty or contaminated fittings, or those from split or torn bags or touch prepared surfaces.
- Do not leave fittings out of their protective bags or remove them from bags until immediately before use.
- Do not allow prepared fusion/jointing surfaces to become wet or damp.
- Do not remove clamps from fitting until cooling time has elapsed.
- Do not remove integral cutter from the stack/saddle once the main has been drilled.
- **IF EVER IN DOUBT - CUT IT OUT**

## THE USE OF WET WIPES

**The preferred position is to make electrofusion joints without the use of wet wipes.** This guidance pertains as long as the pipes are freshly scraped, the fitting has just been debagged and the assembly and fusion of the joint follows immediately.

If any deviation from the above occurs, which may result in contamination of either the scraped pipe or the debagged fitting, then prescribed wet wipes can be used. Separate fresh wet wipes are to be used for the scraped pipes and the debagged fitting if both are contaminated. Whether wiping both scraped pipe or fitting or just one of them, wiped surfaces must be allowed to visibly dry (do not touch the wet surface), then the joint assembled and fused. Failure to allow the jointing surfaces to dry will increase the risk of voids at the weld interface.

N.B. In butt fusion jointing wet wipes are not used for cleaning pipes that have already been machined/trimmed.

## HEALTH AND SAFETY

Fusion Provida makes every effort in the design and manufacture of its pipes, fittings and equipment to ensure safety in use. The following precautions are however worth bearing in mind:

- Never allow hot polyethylene to come into contact with the skin. In such an event cold water should be used to cool the affected area. Expert medical advice should be sought.
- Under no circumstances should any attempt be made to remove any material that becomes stuck on the skin without medical supervision as this would risk a more serious injury.
- Heavy pipes, fittings and equipment should not be handled without assistance or mechanical aid. The requirements of 'manual handling' legislation should be adhered to.
- Health and safety regulations insist upon the wearing of personal protective equipment such as gloves, safety glasses and safety boots whilst carrying out electrofusion joints.
- Care should be exercised, by taking normal precautions, when using electrical equipment on site, particularly in wet conditions.
- Normal precautions should be observed when handling electrical equipment and, for safety reasons, all 110v portable generator sets should be 'centre tapped' for site use +55/0/-55 volts.

**ALWAYS REMEMBER THAT ALL JOINT RECORDS ARE AUTOMATICALLY STORED AND SHOULD BE DOWNLOADED ON A REGULAR BASIS TO ENSURE FULL TRACEABILITY AND INTEGRITY OF WORKMANSHIP.**