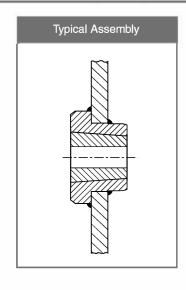
# Weld-on-Hubs

Taper Bore Weld-on-Hubs are made out of steel, drilled, tapped and taper bored to receive standard Taper Bushes. The extended flange provides a convenient means of welding hubs into fan rotors, steel pulleys, plate sprockets, impellers, agitators and many other devices which must be firmly fastened to the shaft.

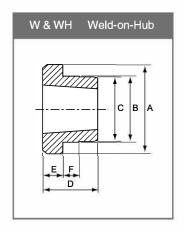
Challenge Weld-on-Hubs are manufactured to complement the Taper Bush range and include W, WH and WM Taper Bore Hubs. All are manufactured to world standards using low carbon steel.





### W Weld-on-Hubs

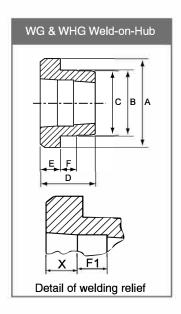
| Hub<br>Reference | Bush<br>Size | А   | В   | С   | D   | Е  | F  | F1 | Х   |
|------------------|--------------|-----|-----|-----|-----|----|----|----|-----|
| W12              | 1215         | 73  | 64  | 63  | 38  | 16 | 10 | -  | - 1 |
| W16              | 1615         | 83  | 73  | 72  | 38  | 16 | 10 | -  | -   |
| W25              | 2517         | 127 | 111 | 110 | 44  | 19 | 13 | -  | -   |
| WG30             | 3030         | 150 | 133 | 133 | 76  | 25 | 19 | 23 | 23  |
| WG35             | 3535         | 184 | 159 | 158 | 89  | 32 | 25 | 30 | 30  |
| WG40             | 4040         | 225 | 197 | 196 | 102 | 32 | 32 | 34 | 34  |
| WG45             | 4545         | 254 | 222 | 221 | 114 | 38 | 38 | 38 | 38  |
| WG50             | 5050         | 276 | 241 | 240 | 127 | 38 | 38 | 42 | 42  |
| WG60             | 6050         | 375 | 343 | 342 | 127 | 38 | 38 | 42 | 42  |
| WG70             | 7060         | 425 | 375 | 374 | 153 | 51 | 51 | 51 | 51  |
| WG80             | 8065         | 445 | 394 | 393 | 165 | 51 | 51 | 55 | 55  |
| WG100            | 10085        | 559 | 495 | 494 | 216 | 51 | 51 | 72 | 72  |



### WH Weld-on-Hubs

| Hub<br>Reference | Bush<br>Size | А   | В   | С     | D   | Е  | F  | F1 | Х  |
|------------------|--------------|-----|-----|-------|-----|----|----|----|----|
| WH12             | 1210         | 70  | 65  | 64.5  | 25  | 9  | 10 | -  | -  |
| WH16-1           | 1610         | 80  | 75  | 74.5  | 25  | 9  | 10 | -  | -  |
| WH20             | 2012         | 95  | 90  | 89.5  | 32  | 12 | 12 | -  | -  |
| WH25             | 2517         | 115 | 110 | 109.5 | 44  | 19 | 15 | -  | -  |
| WHG30-2          | 3020         | 145 | 140 | 139.5 | 50  | 20 | 15 | 17 | 17 |
| WHG35            | 3525         | 190 | 180 | 179.5 | 65  | 25 | 25 | 22 | 22 |
| WHG40-1          | 4030         | 200 | 190 | 189.0 | 76  | 32 | 30 | 25 | 25 |
| WHG40-2          | 4040         | 200 | 190 | 189.5 | 101 | 32 | 30 | 34 | 34 |
| WHG45-1          | 4535         | 210 | 200 | 199.5 | 89  | 40 | 30 | 30 | 30 |
| WHG45-2          | 4545         | 210 | 200 | 199.5 | 114 | 40 | 30 | 38 | 38 |
| WHG50-1          | 5040         | 230 | 220 | 219.5 | 102 | 40 | 35 | 34 | 34 |
| WHG50-2          | 5050         | 230 | 220 | 219.5 | 127 | 40 | 35 | 42 | 42 |

<sup>&</sup>quot;G" notation represents welding relief.



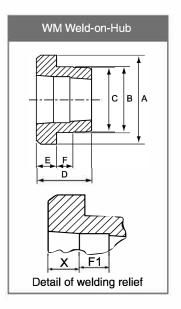
<sup>&</sup>quot;G" notation represents welding relief.

## Weld-on-Hubs

#### WM Weld-on-Hubs

| Hub<br>Reference | Bush<br>Size | А   | В   | С   | D   | Е  | F  | F1 | Х  |
|------------------|--------------|-----|-----|-----|-----|----|----|----|----|
| WMG12            | 1210         | 70  | 60  | 58  | 26  | 9  | 10 | 9  | 9  |
| WMG16-1          | 1610         | 83  | 70  | 68  | 26  | 9  | 10 | 9  | 9  |
| WMG16-2          | 1615         | 83  | 70  | 68  | 38  | 16 | 11 | 13 | 13 |
| WMG20            | 2012         | 95  | 90  | 88  | 32  | 12 | 12 | 11 | 11 |
| WMG25            | 2517         | 127 | 110 | 108 | 44  | 19 | 13 | 15 | 15 |
| WMG30-2          | 3020         | 152 | 130 | 125 | 50  | 20 | 15 | 17 | 17 |
| WMG30-3          | 3030         | 152 | 130 | 125 | 76  | 25 | 19 | 25 | 25 |
| WMG35            | 3535         | 184 | 155 | 151 | 89  | 32 | 25 | 30 | 30 |
| WMG40            | 4040         | 225 | 195 | 187 | 102 | 32 | 32 | 34 | 34 |
| WMG45            | 4545         | 254 | 220 | 213 | 114 | 38 | 38 | 38 | 38 |
| WMG50            | 5050         | 276 | 242 | 228 | 127 | 38 | 38 | 42 | 42 |

<sup>&</sup>quot;G" notation represents welding relief.



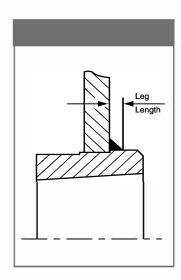
### WELD-ON-HUB WELDING INSTRUCTIONS

Challenge Weld-on-Hubs are made from steel, drilled, tapped and taper bored to receive standard Taper Bushes. The external flange provides a convenient means of welding hubs into fan rotors, steel pulleys, plate sprockets, impellers and many other devices which need to be firmly fastened to a shaft.

It is recommended that a continuous 45° mitre weld be used, working on the larger hub diameter section only. To ensure accuracy in the welded assembly it is essential to apply only sufficient weld to achieve sufficient strength. Excess weld should not be necessary for normal use which, due to greater heat input, gives a higher risk of distortion. The Table A shows the recommended continuous fillet weld requirements for each hub size.

For electric arc welding, low hydrogen electrodes are recommended.

Please note: the "G" reference on Challenge welding-on-hubs represents a welding relief inside the bore to help avoid problems with distortion caused by welding hook. (see F1)



| Hub Size. | Leg Length<br>mm |  |  |  |  |
|-----------|------------------|--|--|--|--|
| WH12      | 4                |  |  |  |  |
| WH16      | 4                |  |  |  |  |
| WH20      | 5                |  |  |  |  |
| WH25      | 5                |  |  |  |  |
| WH30      | 6                |  |  |  |  |
| WH35      | 6                |  |  |  |  |
| WH40      | 8                |  |  |  |  |
| WH45      | 8                |  |  |  |  |
| WH50      | 10               |  |  |  |  |

Table A