

# FIBERBOND® Fiberglass Piping Systems

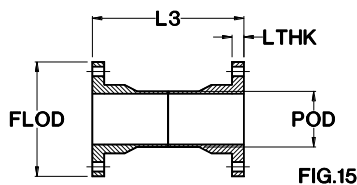
## Guidance on Flange Neck Lengths

The long (and sometimes longer) flange neck lengths can make layout of FIBERBOND® Fiberglass Piping Systems a challenge in some applications. The long neck length is required to ensure an adequate contact area for proper bonding. In general, as the pressure rating of the system increases, so does the necessary contact area and thus, so does the flange neck length.

Standard flange neck lengths are provided in the Fittings Guide for each product line (20HV, 20FR-E, 20FR16, etc.). The intent of this document is to provide some guidance as to when those flange neck lengths can be reduced.

### Scenario: Flange to Flange

In this scenario, a flange is placed directly after another flange. With FIBERBOND®'s butt weld system, no pup piece of pipe is required. So, if the neck length of the flange is 10", then a flange-to-flange length of 20" can be achieved. This is a Fig.15 fitting (basically 2ea Fig.10 flanges). It is possible to go shorter than this. Refer to the product's Fitting Guide for minimum dimensions. For example, for Series 20HV, a 10" Fig.15 flange-x-flange assembly can be made as short as 9" (or any length in between 9" and 20").



### Scenario: Flange to Elbow

If a standard Fig.10 flange plus Fig.20 elbow is too large to fit in the space required, there are a few special fittings that are available. Refer to the Special Fittings Guide and Examples document. Fig. 20SPF, 20SFF, 20TPF and 20TFF are available in sizes 2"NB thru 12"NB. Pressure rating is limited to 200 psig (14 bar).

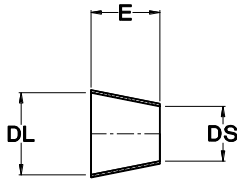
### Scenario: Flange to Tee

If a standard Fig.10 flange plus Fig.40 tee is too large to fit in the space required, there are two special fittings that are available. Refer to the Special Fittings Guide and Examples document. Fig. 40PPF and 40FE are available in sizes 2"NB thru 24"NB. Pressure rating is limited to 150 psig (10 bar).

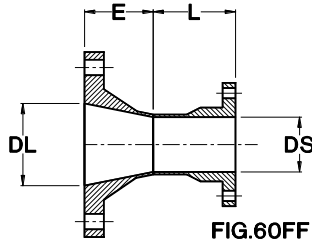
### Scenario: Flange to Reducer

The rules for minimum flange neck length on a reducer depend on whether the short flange is needed on the large side of the reducer or on the small side.

Large side: It is possible to laminate the flange directly onto the reducer, when it is laminated on the large side (this is not possible on the small side because the enlarging reducer body would interfere with the bolts on the small side). So, instead of a Fig.60 or Fig.61 PE (plain end) reducer, one can use a Fig.60FF or Fig.61FF reducer.



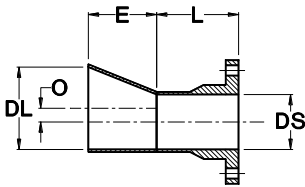
**FIG.60**



**FIG.60FF**

Note: the Fig.60FF and Fig.61FF require special fabrication techniques and can result in a longer lead time.

Small side: There is little to no flexibility on the small side of the reducer to shorten the flange neck length. A Fig.60PF and Fig.61PF is essentially a reducer plus a flange.



**FIG.61PF**

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