

## Wilo Suction Diffuser / Flow Inverter

### Technical Bulletin

## 1 Features / Advantages

**Diffuser** – Provides ideal flow conditions for the pump providing NPSH requirements are met. Diffuser orifice cylinder serves as pump strainer with much more free area than conventional strainers.

**Direct Mounting** – Horizontal or vertical position. Flanges are Class 125# ANSI (ASA) flat faced (For Class 300# flanges consult factory).

**Start-Up Strainer** – A necessity for hydronic systems and standard for suction diffusers for closed and domestic water systems. Remove it later without losing the protection of the larger perforations in the orifice cylinder.

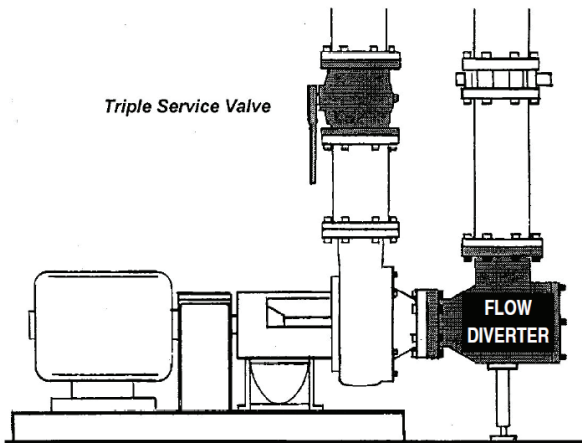
**Saves Time** – No intermediate piping. Fewer joints to make.

**Saves Space** – Eliminates long pipe entrance, conventional strainer, pipe saddle, and floor flange.

**Saves Money** – Diffuser, strainer ... all in one piece. Fewer pipe joints. Faster to install.

**Eliminates Trouble** – Good flow conditions promote trouble-free operation.

**Angle Body** – Provides a 90 degree elbow /strainer combination which facilitates a close transition between system return piping and the system pump suction.



## 2 Operational Limits

**Maximum Working Pressure:**  
175 psi (12 bar) standard for Ductile Iron Models

**Maximum operating Temperature:**  
250°F (121°C)

## 3 Materials of Construction

- 1. Body: ASTM A536 Ductile Iron /Class 125 /150
- 2. O-Ring: Nitrile Rubber O-Ring
- 3. Cover: ASTM A536 Ductile Iron
- 4. Screen: 3/16" Perforated 304 Stainless Steel
- 5. Start-up Screen: 20 Mesh 304 Stainless Steel
- 6. Bolts: ASTM 304 Stainless Steel
- 7. Nuts: ASTM 304 Stainless Steel
- 8. Pipe Plugs: ASTM A536 Ductile Iron

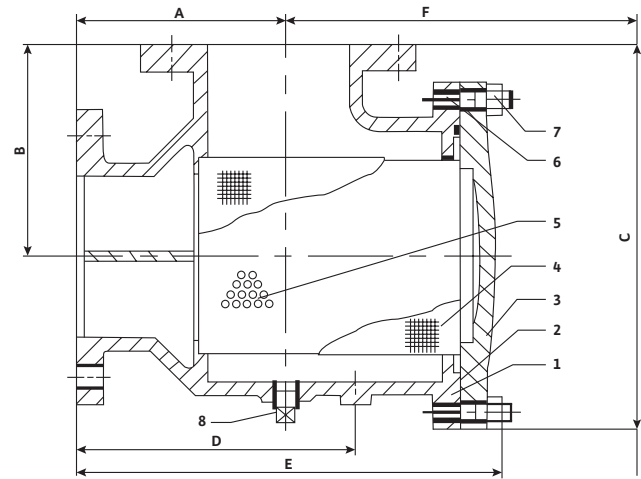


Figure 1: Cross-Section of Suction Diffuser

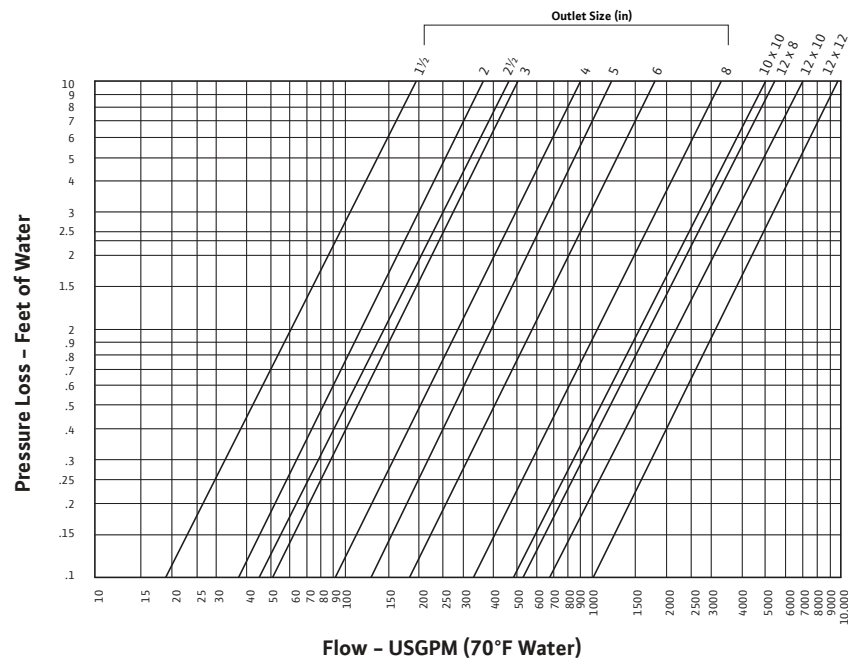


Table 1: Suction Diffuser Performance Characteristics

#### 4 Dimensions and Weights

| Part Number | Inlet/Outlet | A           | B           | C           | D           | E           | F           | NPT Plug | Pipe Support | Wt. lbs   |
|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|--------------|-----------|
| 2712709     | 2" x 1.5"    | 4.50 (114)  | 4.50 (114)  | 6.88 (175)  | 6.13 (156)  | 9.38 (238)  | 8.88 (226)  | 3/4      | 1.00 (25)    | 20 (9)    |
| 2712710     | 2" x 2"      | 4.50 (114)  | 4.50 (114)  | 6.88 (175)  | 6.13 (156)  | 9.38 (238)  | 8.88 (226)  | 3/4      | 1.00 (25)    | 23 (10)   |
| 2712711     | 2.5" x 2"    | 5.00 (127)  | 5.00 (127)  | 7.63 (194)  | 6.50 (165)  | 10.38 (264) | 9.38 (238)  | 3/4      | 1.50 (38)    | 30 (14)   |
| 2712712     | 2.5" x 2.5"  | 5.00 (127)  | 5.00 (127)  | 7.63 (194)  | 6.50 (165)  | 10.38 (264) | 9.38 (238)  | 3/4      | 1.50 (38)    | 35 (16)   |
| 2712713     | 3" x 2"      | 5.50 (140)  | 5.50 (140)  | 8.50 (216)  | 7.13 (181)  | 10.88 (276) | 9.38 (238)  | 3/4      | 1.50 (38)    | 42 (19)   |
| 2712714     | 3" x 2.5"    | 5.50 (140)  | 5.50 (140)  | 8.50 (216)  | 7.13 (181)  | 10.88 (276) | 9.38 (238)  | 3/4      | 1.50 (38)    | 48 (22)   |
| 2712715     | 3" x 3"      | 5.50 (140)  | 5.50 (140)  | 8.50 (216)  | 7.13 (181)  | 10.88 (276) | 9.38 (238)  | 3/4      | 1.50 (38)    | 52 (24)   |
| 2712716     | 4" x 3"      | 6.50 (165)  | 6.50 (165)  | 11.00 (279) | 8.75 (222)  | 12.25 (311) | 11.13 (283) | 1        | 1.50 (38)    | 66 (30)   |
| 2712717     | 4" x 4"      | 6.50 (165)  | 6.75 (171)  | 11.00 (279) | 8.75 (222)  | 12.25 (311) | 11.13 (283) | 1        | 1.50 (38)    | 72 (33)   |
| 2712718     | 5" x 4"      | 7.50 (191)  | 7.50 (191)  | 13.00 (330) | 14.88 (379) | 14.88 (379) | 14.50 (368) | 1        | 1.50 (38)    | 93 (42)   |
| 2712719     | 5" x 5"      | 7.50 (191)  | 7.50 (191)  | 13.00 (330) | 14.88 (379) | 14.88 (379) | 14.50 (368) | 1        | 1.50 (38)    | 100 (45)  |
| 2712720     | 6" x 4"      | 8.00 (203)  | 8.00 (203)  | 14.50 (368) | 10.50 (267) | 16.00 (406) | 16.25 (413) | 1        | 1.50 (38)    | 122 (55)  |
| 2712721     | 6" x 5"      | 8.00 (203)  | 8.00 (203)  | 14.50 (368) | 10.50 (267) | 16.00 (406) | 16.25 (413) | 1        | 1.50 (38)    | 134 (61)  |
| 2712722     | 6" x 6"      | 8.00 (203)  | 8.00 (203)  | 14.50 (368) | 10.50 (267) | 16.00 (406) | 16.25 (413) | 1        | 1.50 (38)    | 140 (64)  |
| 2712723     | 8" x 6"      | 9.00 (229)  | 9.00 (229)  | 11.50 (292) | 11.50 (292) | 18.00 (457) | 18.00 (457) | 1        | 1.50 (38)    | 170 (77)  |
| 2712724     | 8" x 8"      | 9.00 (229)  | 9.00 (229)  | 16.88 (429) | 11.75 (298) | 22.13 (562) | 22.13 (562) | 1 1/4    | 1.50 (38)    | 245 (111) |
| 2712725     | 10" x 8"     | 9.00 (229)  | 11.00 (279) | 18.88 (480) | 11.75 (298) | 22.13 (562) | 22.13 (562) | 1 1/4    | 1.50 (38)    | 264 (120) |
| 2712726     | 10" x 10"    | 11.00 (279) | 11.00 (279) | 20.75 (527) | 14.00 (356) | 29.88 (759) | 29.88 (759) | 1 1/4    | 1.50 (38)    | 461 (209) |
| 2712727     | 12" x 8"     | 9.00 (229)  | 12.00 (305) | 21.75 (552) | 11.75 (298) | 22.13 (562) | 22.13 (562) | 1 1/4    | 1.50 (38)    | 316 (143) |
| 2712728     | 12" x 12"    | 11.00 (279) | 12.00 (305) | 21.75 (552) | 14.00 (356) | 29.88 (759) | 29.88 (759) | 1 1/4    | 1.50 (38)    | 460 (209) |
| 2712729     | 12" x 12"    | 12.00 (305) | 12.00 (305) | 21.75 (552) | 15.00 (381) | 28.63 (727) | 28.63 (727) | 1 1/4    | 1.50 (38)    | 490 (222) |

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