



PUMPS & SYSTEMS

# BARNES®

# SH Series

# TECH NOTES

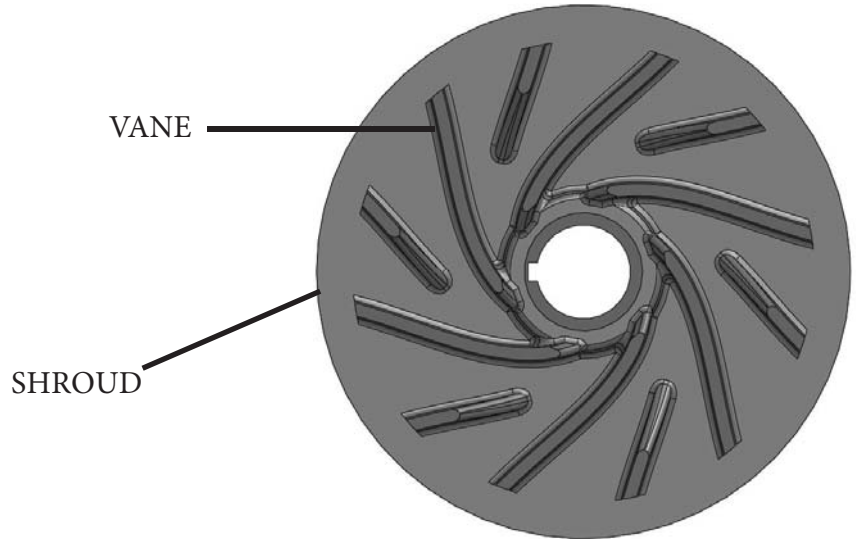
# #3

## Field Trimming of SH Impellers

One of the advantages of the SH Series compared to some competitors' designs is that the impellers can all be trimmed to adjust for changed condition points. The SH is offered with three impeller types, **vortex**, **monovane** and **dual vane**, and each style is trimmed **differently**. When trimming an SH impeller, the following instructions **must** be followed:

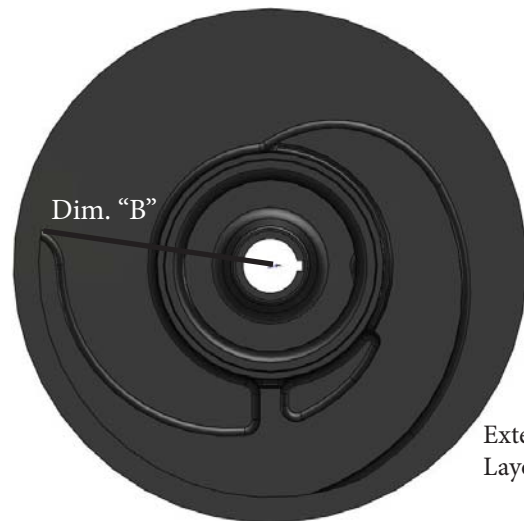
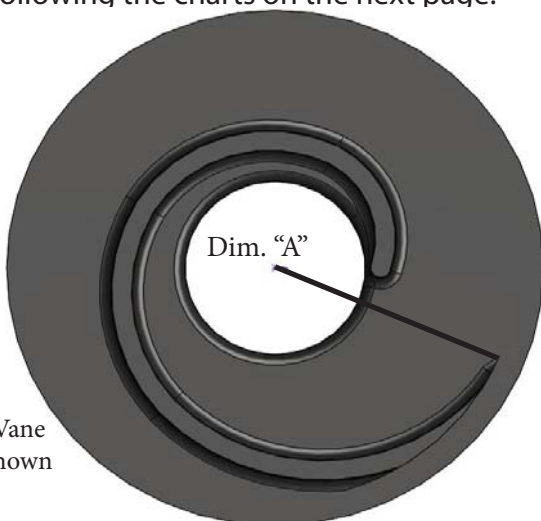
### Vortex Impellers

When trimming a **vortex** impeller, machine the impeller vanes **only**, leaving the shroud at its **original diameter**. Leaving the shroud intact ensures that solids are prevented from reaching the mechanical seal area.



### Monovane Impellers

Monovane impellers have traditionally been very hard to balance and so trimming them has been avoided. Barnes SH impellers have pump-out vanes on the outside of the shrouds designed to simplify balancing; successful trimming calls for machining both the blade and the external vanes, often to different diameters. The blade should be machined flush to the shroud, and the shrouds left at their original diameter, with the pump-out vanes machined flush with the thinner section of shroud at the OD. Please machine monovane impellers following the charts on the next page:



Internal Vane  
Layout Shown

External Lens  
Layout Shown

| Impeller | Part #   | Dim "A" |        | Dim "B" |        |
|----------|----------|---------|--------|---------|--------|
|          |          | mm      | Inches | mm      | Inches |
| C        | 127623   | 235     | 9.25   | 240     | 9.45   |
| C        | 127623TA | 230     | 9.06   | 240     | 9.45   |
| C        | 127623TB | 225     | 8.86   | 240     | 9.45   |
| C        | 127623TC | 220     | 8.66   | 230     | 9.06   |
| C        | 127623TD | 215     | 8.46   | 230     | 9.06   |
| C        | 127623TE | 210     | 8.27   | 220     | 8.66   |
| C        | 127623TF | 205     | 8.07   | 220     | 8.66   |
| C        | 127623TG | 200     | 7.87   | 220     | 8.66   |
| C        | 127623TH | 195     | 7.68   | 220     | 8.66   |
| C        | 127623TJ | 190     | 7.48   | 220     | 8.66   |
| C        | 127623TK | 185     | 7.28   | 220     | 8.66   |

| Impeller | Part #   | Dim "A" |        | Dim "B" |        |
|----------|----------|---------|--------|---------|--------|
|          |          | mm      | Inches | mm      | Inches |
| D        | 127262   | 295     | 11.61  | 305     | 12.01  |
| D        | 127262TA | 290     | 11.42  | 305     | 12.01  |
| D        | 127262TB | 285     | 11.22  | 305     | 12.01  |
| D        | 127262TC | 280     | 11.02  | 275     | 10.83  |
| D        | 127262TD | 275     | 10.83  | 275     | 10.83  |
| D        | 127262TE | 270     | 10.63  | 260     | 10.23  |
| D        | 127262TF | 265     | 10.43  | 260     | 10.23  |
| D        | 127262TG | 260     | 10.23  | 245     | 9.65   |
| D        | 127262TH | 255     | 10.04  | 245     | 9.65   |
| D        | 127262TJ | 250     | 9.84   | 230     | 9.06   |
| D        | 127262TK | 245     | 9.65   | 230     | 9.06   |
| D        | 127262TL | 240     | 9.45   | 225     | 8.86   |
| D        | 127262TM | 235     | 9.25   | 225     | 8.86   |
| D        | 127262TN | 230     | 9.06   | 225     | 8.86   |
| D        | 127262TP | 225     | 8.86   | 225     | 8.86   |
| D        | 127262TR | 220     | 8.66   | 225     | 8.86   |

| Impeller | Part #   | Dim "A" |        | Dim "B" |        |
|----------|----------|---------|--------|---------|--------|
|          |          | mm      | Inches | mm      | Inches |
| E        | 127621   | 370     | 14.57  | 370     | 14.57  |
| E        | 127261TA | 365     | 14.37  | 370     | 14.57  |
| E        | 127261TB | 360     | 14.17  | 370     | 14.57  |
| E        | 127261TC | 355     | 13.98  | 370     | 14.57  |
| E        | 127261TD | 350     | 13.78  | 370     | 14.57  |
| E        | 127261TE | 345     | 13.58  | 370     | 14.57  |
| E        | 127261TF | 340     | 13.39  | 370     | 14.57  |
| E        | 127261TG | 335     | 13.19  | 335     | 13.19  |
| E        | 127261TH | 330     | 13.00  | 335     | 13.19  |
| E        | 127261TJ | 325     | 12.80  | 320     | 12.60  |
| E        | 127261TK | 320     | 12.60  | 320     | 12.60  |
| E        | 127261TL | 315     | 12.40  | 310     | 12.20  |
| E        | 127261TM | 310     | 12.20  | 310     | 12.20  |
| E        | 127261TN | 305     | 12.01  | 310     | 12.20  |

### **Dual Vane Impellers**

Dual Vane impellers are trimmed like most other impellers. The OD of both the blades and the shrouds are machined to the desired size.