### Flow Coefficients through Argus Pig Valves

### 1.0 PURPOSE

To outline flow coefficients of Argus Pig Valve without and with Pig Stopper.

### 2.0 SCOPE

The flow coefficient ($C_v$) is defined as the volume of water (in US gallons) per minute that will pass through an Argus Pig Valve with a pressure drop of 1 psi at 60 °F (16 °C). This can be mathematically expressed as:

$$C_v = Q \sqrt{\frac{SG}{\Delta P}}$$

$C_v$ = Flow Coefficient
$Q$ = Flow Rate
$SG$ = Specific Gravity of Fluid
    $= 1$ (Water @ 60 °F)
$\Delta P$ = Pressure Drop Across Pig Valve
    $= 1\ psi$

Table 1.0: Flow Coefficients ($C_v$) Through Pig Valve Without and With Pig Stopper

| Size | Model | ASME Class | $C_v$ (USG/min) | |
|---|---|---|---|---|
| | | | *Without Pig Stopper* | *With Pig Stopper* |
| 2" | F | 150-900 | 199 | 99 |
| 3" | P | 150-900 | 586 | 202 |
| 4" | C | 150-900 | 1220 | 341 |
| | P | 1500 | 823 | 334 |
| 6" | P | 150-600 | 2717 | 549 |
| | D | 900/1500 | 2498 | 489 |
| 8" | D | 150-600 | 4146 | 1195 |
| | | 900 | 4385 | 1238 |
| | | 1500 | 4284 | 1210 |
| 10" | D | 150-600 | 7387 | 2448 |
| 12" | D | 150-900 | 11614 | 3466 |
| 14" | D | 150-600 | 15148 | 3690 |
| 16" | D | 300-600 | 21336 | 5113 |
| 18" | D | 150 | 30260 | 7357 |
| 20" | D | 150 | 40166 | 8468 |

**Notes:** The flow coefficients listed above represent the longest face-to-face length of the Pig Valve using an RTJ style flange (except the 18" and 20" which use a RF style flange). Flow coefficients corresponding to a specific size, ASME Class, and flange style may be available upon request.

| Specifications are Subject to Change Without Prior Notice – All Dimensions: inch [mm] | | |
|---|---|---|
| | | Created By:  S. Eckford |
| | | Created Date:  23 Aug 2006 |
| | | Approved By: |
| | | Approved Date: |
| | | ECN No.:  02704 |
| | | Page:  1 of 1 |