

**RAJEEV & COMPANY**

103/3, DEWARWADI VILLAGE,  
CHANDGAD TALUK,  
KOLHAPUR DIST.,  
MAHARASTRA

**BREAKAWAY TORQUE  
VALUES  
KAVAATA BALL VALVES**

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**FORGED CARBON STEEL (REDUCED BORE)**

| TORQUE N-m | SIZE |      |      |      |      |
|------------|------|------|------|------|------|
|            | 15FB | 20RB | 25RB | 40RB | 50RB |
|            | 2    | 2.35 | 3.15 | 9.32 | 15.7 |

**INVESTMENT CAST CLASS 150# DESIGN (FULL BORE)**

FLANGED/ SCREWED/ SOCKET WELD ENDS

| TORQUE N-m | SIZE |      |      |      |      |      |      |
|------------|------|------|------|------|------|------|------|
|            | 15FB | 20FB | 25FB | 40FB | 50FB | 65FB | 80FB |
|            | 8    | 10   | 15   | 25   | 32   | 60   | 90   |

**INVESTMENT CAST 3 WAY BALL VALVES (FULL BORE)**

FLANGED

| TORQUE N-m | SIZE |      |      |       |
|------------|------|------|------|-------|
|            | 40FB | 50FB | 80FB | 100FB |
|            | 25   | 35   | 90   | 120   |

Note:

1. The above torque values are for valves with PTFE seats.
2. Multiply the values by approximately 1.5 to arrive at values for GFT seats.
3. Please use the appropriate media and service factors given below to arrive at actuator size

| Media Factors*   | Multiplier |
|--|------------|
| Clean, particle free, non lubricating (water, alcohol etc) | 1          |
| Clean, particle free, lubricating (oils, hydraulics etc)   | 0.8        |
| Slurries, heavily corroded and contaminated systems        | 2          |
| Gas or saturated steam, clean and wet                      | 1          |
| Gas or superheated steam, clean and dry                    | 1.3        |
| Gas, dirty unfiltered                                      | 1.5        |

| Service Factors*                                    | Multiplier |
|---|------------|
| Simple on and off                                   | 1          |
| Throttling  | 1.2        |
| Positioner Control                                  | 1.5        |
| Once per day Operations                             | 1.2        |
| Once every two days or a "Plant Critical" operation | 1.5        |

| Design Factors*        | Multiplier |
|------------------------|------------|
| Spring Return Actuator | 0.8        |
| All other Actuators    | 1          |

**Torque Determination Example\*:**

**Breakaway Torque X Design Factor X Media Factor X Service Factor = Sizing Torque**

\* Source: Sharpe Valves EB-2001 Rev 11/06 Page 8