

### 2"-24" (50mm-600mm)

Bray Controls is proud to offer a line of superior quality, high pressure manual butterfly valves that meet today's Heating, Ventilating & Air Conditioning (HVAC) requirements. The Series 31H lug type is rated for 250 psi bidirectional dead end service, the Series 36H is rated 150 psi bidirectional dead end service.

#### **FEATURES**

Lug valves (S31H, 2-20") and flanged (S36H, 24") are drilled and tapped to meet ANSI Class 125/150 flanges.
Bidirectional and tested to 110% of full

Brunechonar and tested to 110% of full pressure rating.
The unique close tolerance, double "D"

connection drives the valve disc on S31H. This design eliminates the need for exposed stem retention components, such as disc screws, to the line media which commonly results in leak paths, corrosion, and vibration failures. Due to wear and corrosion, disc screws often require difficult machining for disassembly. Disassembly of the Bray stem is just a matter of pulling the stem out of the disc. • Disc casting is spherically machined and hand polished to provide a bubble tight shutoff, with minimum torque and an extended seat cycle life.

• Patented "Spirolox<sup>®</sup>" retaining ring and stem retaining C-rings provide a blow-out proof stem on S31H.

• Unique "tongue and groove" seat design, bonded to the body by aerospace adhesive, is designed to seal with slip-on or weld-neck flanges. Seat totally encases the valve interior to isolate the line media from the body.

• Molded seat O-ring provides seal between valve and pipe flanges. Flange gaskets should not be used with this valve.

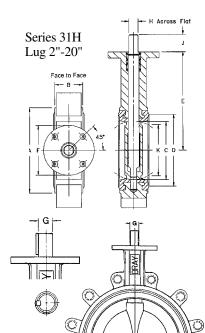
• Primary and secondary seals are interference fits between seat and disc hub, and stem and seat stem hole respectively.

• Non corrosive, heavy duty acetal bushing absorbs side thrusts on S31H, bronze bearing on S36H.

Stem packing gland on S31H is a selfadjusting double "U" cup design and gives positive sealing in both directions, preventing external substances from entering the stem bore. The S36H has an adjustable packing gland.
Mounting flange meets ISO 5211 and allows direct mounting of Bray manual operators. **SERIES 31H/36H** Lug 2"- 20" (50mm - 500mm) 250 psi 24" (600mm) 150 psi

# PRESSURE RATINGS

For bidirectional or dead end service, bubble-tight shut off, disc in closed position: 2"-20" (50mm-500mm) 250 psi 24" (600mm) 150 psi



# **TEMPERATURE RANGE OF SEATS**

Aerospace-Bonded EPDM: -40°F (-40°C) to 250°F (+121°C)

## **VELOCITY LIMITS**

For On/Off Services: Fluids - 30 ft/sec (9m/sec) Gases – 175 ft/sec (54m/sec)

# **HOW TO ORDER**

2"-20": 31-Valve Size-13000-120 24": 36-2400-13010-120

# **Cy VALUES-VALVE SIZING COEFFICIENT**

- V	e Size	Disc Position (degrees)													
ins	mm	90°	80°	70°	60°	50°	40°	30°	20°	10°					
2	50	144	114	84	61	43	27	16	7	1					
2 <sup>1</sup> / <sub>2</sub>	65	282	223	163	107	67	43	24	11	1.5					
3	80	461	364	267	154	96	61	35	15	2					
4	100	841	701	496	274	171	109	62	27	3					
5	125	1376	1146	775	428	268	170	98	43	5					
6	150	1850	1542	1025	567	354	225	129	56	6					
8	200	3316	2842	1862	1081	680	421	241	102	12					
10	250	5430	4525	2948	1710	1076	667	382	162	19					
12	300	8077	6731	4393	2563	1594	1005	555	235	27					
14	350	10538	8874	5939	3384	2149	1320	756	299	34					
16	400	13966	11761	7867	4483	2847	1749	1001	397	45					
18	450	17214	14496	10065	5736	3643	2237	1281	507	58					
20	500	22339	18812	12535	7144	4536	2786	1595	632	72					
24	600	33154	27186	18235	11040	6962	4244	2387	1028	259					

Cv is defined as the volume of water in U.S.G.P.M. that will flow through a given restriction or valve opening with a pressure drop of one (1) p.s.i. at room temperature. Recommended control angles are between  $25^{\circ}$ – $70^{\circ}$  open. Preferred angle for control valve sizing is  $60^{\circ}$ – $65^{\circ}$  open.

# **DIMENSIONS** Series 31H Lug 2"-20". Series 36H Double Flanged 24"

|                               | LIND  |  | SCII  
  | 55511  | I Lug   | , 2 -20  | J, 50  
   
   | 103 50  | 511 D   
   | Jubic   
   | 1 Iung   | 30u 2  
   | т<br>   |   |   |  |   |
|-------------------------------|---|--
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---|
| Valve Size                    |   | A  |   
  |  |   | -  | Г  
   
   | Mounting Flange Drig.   |   
   |   
   | 0  |  
   |   |   | Lug Bolting Data  |  |   |
| ins                           | mm  | А  | в   
  |  | ט   | E  | Г  
   
   | BC  | No.<br>Holes  
   | Hole<br>Dia.  
   | G  | Н  
   | J   | ĸ   | BC  | No.<br>Holes   | Threads<br>UNC-2B   |
| 2                             | 50  | 3.69   | 1.62  
  | 2.00   | 2.84  | 5.50   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .55  | .39  
   | 1.25  | 1.32  | 4.75  | 4  | 5/8-11  |
| 2 <sup>1</sup> / <sub>2</sub> | 65  | 4.19   | 1.75  
  | 2.50   | 3.34  | 6.00   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .55  | .39  
   | 1.25  | 1.91  | 5.50  | 4  | 5/8-11  |
| 3                             | 80  | 4.88   | 1.75  
  | 3.00   | 4.03  | 6.25   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .55  | .39  
   | 1.25  | 2.55  | 6.00  | 4  | 5/8-11  |
| 4                             | 100   | 6.06   | 2.00  
  | 4.00   | 5.16  | 7.00   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .63  | .43  
   | 1.25  | 3.57  | 7.50  | 8  | 5/8-11  |
| 5                             | 125   | 7.12   | 2.12  
  | 5.00   | 6.16  | 7.50   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .75  | .51  
   | 1.25  | 4.63  | 8.50  | 8  | 3/4-10  |
| 6                             | 150   | 8.12   | 2.12  
  | 5.75   | 7.02  | 8.00   | 3.54   
   
   | 2.76  | 4   
   | .38   
   | .75  | .51  
   | 1.25  | 5.45  | 9.50  | 8  | 3/4-10  |
| 8                             | 200   | 10.50  | 2.50  
  | 7.75   | 9.47  | 9.50   | 5.91   
   
   | 4.92  | 4   
   | .56   
   | .87  | .63  
   | 1.25  | 7.45  | 11.75   | 8  | 3/4-10  |
| 10                            | 250   | 12.75  | 2.50  
  | 9.75   | 11.47   | 10.75  | 5.91   
   
   | 4.92  | 4   
   | .56   
   | 1.18   | .87  
   | 2.00  | 9.53  | 14.25   | 12   | 7/8-9   |
| 12                            | 300   | 14.88  | 3.00  
  | 11.75  | 13.47   | 12.25  | 5.91   
   
   | 4.92  | 4   
   | .56   
   | 1.18   | .87  
   | 2.00  | 11.47   | 17.00   | 12   | 7/8-9   |
| Valve Size                    |   | •  | <b>_</b>  
  | <u> </u>   | <b>_</b>  | _  | _  
   
   | Mounting Flange Drig.   |   
   |   
   | •  |  
   | KEV   |   | Lug Bolting Data  |  |   |
| ins                           | mm  | A  | В   
  |  | טן  | E  |  
   
   | BC  | No.<br>Holes  
   | Hole<br>Dia.  
   | GH   | Н  
   | SIZE  | ĸ   | BC  | No.<br>Holes   | Threads<br>UNC-2B   |
| 14                            | 350   | 16.94  | 3.00  
  | 13.25  | 15.28   | 13.62  | 5.91   
   
   | 4.92  | 4   
   | .56   
   | 1.38   | 2.00   
   | .39x.39   | 13.04   | 18.75   | 12   | 1-8   |
| 16                            | 400   | 19.06  | 4.00  
  | 15.25  | 17.41   | 14.75  | 5.91   
   
   | 4.92  | 4   
   | .56   
   | 1.38   | 2.00   
   | .39x.39   | 14.85   | 21.25   | 16   | 1-8   |
| 18                            | 450   | 21.12  | 4.25  
  | 17.25  | 19.47   | 16.00  | 8.27   
   
   | 6.50  | 4   
   | .81   
   | 1.97   | 2.50   
   | .39x.47   | 16.85   | 22.75   | 16   | 1 1/8-7   |
| 20                            | 500   | 23.25  | 5.00  
  | 19.25  | 21.59   | 17.25  | 8.27   
   
   | 6.50  | 4   
   | .81   
   | 1.97   | 2.50   
   | .39x.47   | 18.73   | 25.00   | 20   | 1 1/8-7   |
| 24                            | 600   | 33.00  | 5.94  
  | 23.25  | 25.75   | 19.50  | 8.27   
   
   | 6.50  | 4   
   | .81   
   | 2.50   | 4.00   
   | .62x.62   | 22.69   | 29.50   | 20   | 11/4-7  |
|                               | Valve<br>ins<br>2<br>2 <sup>1</sup> / <sub>2</sub><br>3<br>4<br>5<br>5<br>6<br>8<br>8<br>10<br>12<br>12<br>Valve<br>ins<br>14<br>16<br>18<br>20 | Valve Size           ins         mm           2         50           2'/2         65           3         80           4         100           5         125           6         150           8         200           10         250           12         300           Yalve Size           ins         mm           14         350           16         400           18         450 | Valve Size         A           ins         inm           2         50         3.69           2½         65         4.19           3         80         4.88           4         100         6.06           5         125         7.12           6         150         8.12           8         200         10.50           10         250         12.75           12         300         14.88           Yate Size            Yate Size <td>Valve Size         A         B           ins         inm         A         B           2         50         3.69         1.62           <math>2^{1}/_{2}</math>         65         4.19         1.75           3         80         4.88         1.75           4         100         6.06         2.00           5         125         7.12         2.12           6         150         8.12         2.12           6         125         7.12         2.12           10         250         12.75         2.50           112         300         14.88         3.00           12         300         14.88         3.00           Home Size           Home Size           Image: Size Size           Image: Size Size Size           Image: Size Size Size Size           Image: Size Size Size Size Size           Image: Size Size Size Size Size Size Size Size</td> <td>Valve Size         <math>A</math> <math>B</math> <math>C</math>           ins         inm         <math>A</math> <math>B</math> <math>C</math> <math>2</math> <math>50</math> <math>3.69</math> <math>1.62</math> <math>2.00</math> <math>2^{1/_2}</math> <math>65</math> <math>4.19</math> <math>1.75</math> <math>2.50</math> <math>3</math> <math>80</math> <math>4.88</math> <math>1.75</math> <math>3.00</math> <math>4</math> <math>100</math> <math>6.06</math> <math>2.00</math> <math>4.00</math> <math>4</math> <math>100</math> <math>6.06</math> <math>2.00</math> <math>4.00</math> <math>5</math> <math>125</math> <math>7.12</math> <math>2.12</math> <math>5.00</math> <math>6</math> <math>150</math> <math>8.12</math> <math>2.12</math> <math>5.00</math> <math>6</math> <math>125</math> <math>7.12</math> <math>2.50</math> <math>7.51</math> <math>10</math> <math>250</math> <math>12.75</math> <math>2.50</math> <math>7.51</math> <math>10</math> <math>250</math> <math>12.75</math> <math>2.50</math> <math>9.75</math> <math>12</math> <math>300</math> <math>14.88</math> <math>3.00</math> <math>11.75</math> <math>12</math> <math>300</math> <math>14.88</math> <math>3.00</math> <math>13.25</math> <math>14</math> <math>350</math> <math>16.94</math> <math>3.00</math> <math>13.25</math> <math>14</math></td> <td>Valve Size         A         B         C         D           ins         mm         A         B         C         D           2         50         3.69         1.62         2.00         2.84           <math>2'/_2</math>         65         4.19         1.75         2.50         3.34           3         80         4.88         1.75         3.00         4.03           4         100         6.06         2.00         4.03         5.16           5         125         7.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         7.02           8         200         10.50         2.50         7.75         9.47           10         250         12.75         2.50         9.75         14.47           12         300         14.88         3.00         11.75         13.47</td> <td>Valve Size         A         B         C         D         E           ins         mm         A         B         C         D         E           2         50         3.69         1.62         2.00         2.84         5.50           2'/2         65         4.19         1.75         2.50         3.34         6.00           3         80         4.88         1.75         3.00         4.03         6.25           4         100         6.06         2.00         4.00         5.16         7.00           5         125         7.12         2.12         5.00         6.16         7.50           6         150         8.12         2.12         5.75         7.02         8.00           6         150         8.12         2.12         5.75         7.02         8.00           8         200         10.50         2.50         7.75         9.47         9.50           10         250         12.75         2.50         9.75         14.47         10.75           12         300         14.88         3.00         11.75         3.47         12.25           ins         mm<td>Valve Size         A         B         C         D         E         F           ins         mm         A         B         C         D         E         F           2         50         3.69         1.62         2.00         2.84         5.50         3.54           2<math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54           3         80         4.88         1.75         3.00         4.03         6.25         3.54           4         100         6.06         2.00         4.00         5.16         7.00         3.54           5         125         7.12         2.12         5.00         6.16         7.50         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           10         250         12.75         2.50         9.75         14.47         10.75         5.</td><td>Valve Size         A         B         C         D         E         Mountine           ins         mm         A         B         C         D         E         F         Mountine           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76           2<sup>1</sup>/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76           8         200         10.50         2.50         7.75         9.47         9.50         5.91         4.92           10         250         12.75         2.50         9.75         11.47         10.75         5.91<!--</td--><td>Valve Size         A         B         C         D         E         Mountury         Mountury         Mountury           ins         mm         A         B         C         D         E         F         Mountury         Mountury           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76         4           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76         4           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76         4           10         250         12.75         2.50         9.75         14.47         10.75         5.91         4.92<td>Valve Size         A         B         C         D         E         <math>H_{e}</math> <math>H_{oes}</math> <math>H_{oes}</math><!--</td--><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO<td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td><td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td><td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td></td></td></td></td></td> | Valve Size         A         B           ins         inm         A         B           2         50         3.69         1.62 $2^{1}/_{2}$ 65         4.19         1.75           3         80         4.88         1.75           4         100         6.06         2.00           5         125         7.12         2.12           6         150         8.12         2.12           6         125         7.12         2.12           10         250         12.75         2.50           112         300         14.88         3.00           12         300         14.88         3.00           Home Size           Home Size           Image: Size Size           Image: Size Size Size           Image: Size Size Size Size           Image: Size Size Size Size Size           Image: Size Size Size Size Size Size Size Size | Valve Size $A$ $B$ $C$ ins         inm $A$ $B$ $C$ $2$ $50$ $3.69$ $1.62$ $2.00$ $2^{1/_2}$ $65$ $4.19$ $1.75$ $2.50$ $3$ $80$ $4.88$ $1.75$ $3.00$ $4$ $100$ $6.06$ $2.00$ $4.00$ $4$ $100$ $6.06$ $2.00$ $4.00$ $5$ $125$ $7.12$ $2.12$ $5.00$ $6$ $150$ $8.12$ $2.12$ $5.00$ $6$ $125$ $7.12$ $2.50$ $7.51$ $10$ $250$ $12.75$ $2.50$ $7.51$ $10$ $250$ $12.75$ $2.50$ $9.75$ $12$ $300$ $14.88$ $3.00$ $11.75$ $12$ $300$ $14.88$ $3.00$ $13.25$ $14$ $350$ $16.94$ $3.00$ $13.25$ $14$ | Valve Size         A         B         C         D           ins         mm         A         B         C         D           2         50         3.69         1.62         2.00         2.84 $2'/_2$ 65         4.19         1.75         2.50         3.34           3         80         4.88         1.75         3.00         4.03           4         100         6.06         2.00         4.03         5.16           5         125         7.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         6.16           6         150         8.12         2.12         5.00         7.02           8         200         10.50         2.50         7.75         9.47           10         250         12.75         2.50         9.75         14.47           12         300         14.88         3.00         11.75         13.47 | Valve Size         A         B         C         D         E           ins         mm         A         B         C         D         E           2         50         3.69         1.62         2.00         2.84         5.50           2'/2         65         4.19         1.75         2.50         3.34         6.00           3         80         4.88         1.75         3.00         4.03         6.25           4         100         6.06         2.00         4.00         5.16         7.00           5         125         7.12         2.12         5.00         6.16         7.50           6         150         8.12         2.12         5.75         7.02         8.00           6         150         8.12         2.12         5.75         7.02         8.00           8         200         10.50         2.50         7.75         9.47         9.50           10         250         12.75         2.50         9.75         14.47         10.75           12         300         14.88         3.00         11.75         3.47         12.25           ins         mm <td>Valve Size         A         B         C         D         E         F           ins         mm         A         B         C         D         E         F           2         50         3.69         1.62         2.00         2.84         5.50         3.54           2<math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54           3         80         4.88         1.75         3.00         4.03         6.25         3.54           4         100         6.06         2.00         4.00         5.16         7.00         3.54           5         125         7.12         2.12         5.00         6.16         7.50         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           10         250         12.75         2.50         9.75         14.47         10.75         5.</td> <td>Valve Size         A         B         C         D         E         Mountine           ins         mm         A         B         C         D         E         F         Mountine           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76           2<sup>1</sup>/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76           8         200         10.50         2.50         7.75         9.47         9.50         5.91         4.92           10         250         12.75         2.50         9.75         11.47         10.75         5.91<!--</td--><td>Valve Size         A         B         C         D         E         Mountury         Mountury         Mountury           ins         mm         A         B         C         D         E         F         Mountury         Mountury           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76         4           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76         4           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76         4           10         250         12.75         2.50         9.75         14.47         10.75         5.91         4.92<td>Valve Size         A         B         C         D         E         <math>H_{e}</math> <math>H_{oes}</math> <math>H_{oes}</math><!--</td--><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO<td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td><td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td><td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td></td></td></td></td> | Valve Size         A         B         C         D         E         F           ins         mm         A         B         C         D         E         F           2         50         3.69         1.62         2.00         2.84         5.50         3.54           2 $'/_2$ 65         4.19         1.75         2.50         3.34         6.00         3.54           3         80         4.88         1.75         3.00         4.03         6.25         3.54           4         100         6.06         2.00         4.00         5.16         7.00         3.54           5         125         7.12         2.12         5.00         6.16         7.50         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           6         150         8.12         2.12         5.75         7.02         8.00         3.54           10         250         12.75         2.50         9.75         14.47         10.75         5. | Valve Size         A         B         C         D         E         Mountine           ins         mm         A         B         C         D         E         F         Mountine           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76           2 <sup>1</sup> /2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76           8         200         10.50         2.50         7.75         9.47         9.50         5.91         4.92           10         250         12.75         2.50         9.75         11.47         10.75         5.91 </td <td>Valve Size         A         B         C         D         E         Mountury         Mountury         Mountury           ins         mm         A         B         C         D         E         F         Mountury         Mountury           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76         4           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76         4           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76         4           10         250         12.75         2.50         9.75         14.47         10.75         5.91         4.92<td>Valve Size         A         B         C         D         E         <math>H_{e}</math> <math>H_{oes}</math> <math>H_{oes}</math><!--</td--><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO<td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td><td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td><td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td></td></td></td> | Valve Size         A         B         C         D         E         Mountury         Mountury         Mountury           ins         mm         A         B         C         D         E         F         Mountury         Mountury           2         50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4           4         100         6.06         2.00         4.00         5.16         7.00         3.54         2.76         4           5         125         7.12         2.12         5.00         6.16         7.50         3.54         2.76         4           6         150         8.12         2.12         5.75         7.02         8.00         3.54         2.76         4           10         250         12.75         2.50         9.75         14.47         10.75         5.91         4.92 <td>Valve Size         A         B         C         D         E         <math>H_{e}</math> <math>H_{oes}</math> <math>H_{oes}</math><!--</td--><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO<td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td><td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td><td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td></td></td> | Valve Size         A         B         C         D         E $H_{e}$ $H_{oes}$ </td <td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO<td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td><td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td><td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td><td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td></td> | Valve Size         A         B         C         D         E         F         Mounture Flame         D         G           ins         mm         A         B         C         D         E         F         Mounture Flame         D         BC         MO         MO <td>Valve Size         A         B         C         D         E         <math>H</math> <math>H_{oles}</math> <math>H</math></td> <td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td> <td>Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 <math>'/_2</math>         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1.</td> <td>Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55</td> <td>ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD</td> | Valve Size         A         B         C         D         E $H$ $H_{oles}$ $H$ | $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Valve Size         A         B         C         D         E         F         Mounture Flagges         G         H         J         K           ins         mm         A         B         C         0.2         5.50         3.69         1.62         2.00         2.84         5.50         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           2 $'/_2$ 65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         3.88         5.55         3.99         1.25         1.32           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         5.55         3.99         1.25         1.91           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         3.88         6.33         4.33         1.25         3.57           5         125         7.12         2.12         5.75         7.02         8.00         3.54         2.76         4         .38         .75         5.1         1. | Valve Size         A         B         C         D         E         F         Mounture Flame         D         G         H         J         K         Lug E           ins         mm         A         B         C         D         E         F         Mounture Flame         Fole         G         H         J         K         BC         A         38         55         39         1.25         1.32         4.75           2'/2         65         4.19         1.75         2.50         3.34         6.00         3.54         2.76         4         38         5.55         39         1.25         1.91         5.50           3         80         4.88         1.75         3.00         4.03         6.25         3.54         2.76         4         .38         .55         .39         1.25         3.57         7.50         6.00         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         3.57         7.50         8.55         .39         1.25         5.51         1.51         1.25         5.61         8.55 | ins         ind         A         B         C         D         E         F         isc         Hole         BC         Hole         BC         Hole         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         BD         Hole         BD         Hole         BD         BD         Hole         BD         BD         BD         Holes         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD         BD         Holes         BD         BD |

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**MATERIALS SELECTION** 

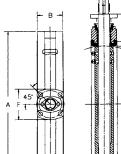
BODY: Cast Iron, ASTM A126 Class B DISC: Aluminum Bronze, ASTM B148-954 STEM: Type 416 Stainless Steel, ASTM A 582 SEAT: EPDM

# INSTALLATION AND MAINTENANCE

Please refer to Bray Technical Bulletin 1071 for Series 31 valves and Technical Bulletin 1114 for Series 36 valves.

PECIFICATIONS

Series 36H Double Flanged 24"



# Four tapp Flange