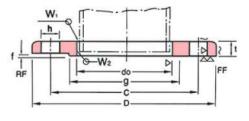
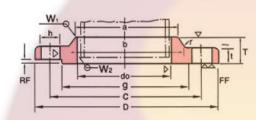
# 5Kg/Cm<sup>2</sup>

JIS B2220–1984(KSB 1503–1985) 5Kg/Cm<sup>2</sup> SLIP–ON WELDING STEEL PIPE FLANGES

SOP TYPE NOMINAL SIZE 10-1000mm



SOH TYPE NOMINAL SIZE 450-1000mm



Unit:mn

|                              | West Transport                           |                                   |                                   |                | S              | ectiona           | al Dime           | nsions           | of Flan       | ge                             | 1                              | Dia.of Bol                 | t                 |                         | W                     | eight(k                 | (g)                  |
|------------------------------|--|-----------------------------------|-----------------------------------|----------------|----------------|-------------------|-------------------|------------------|---------------|--------------------------------|--------------------------------|----------------------------|-------------------|-------------------------|-----------------------|-------------------------|----------------------|
| Nominal<br>Bore of<br>Flange | Outside<br>Diam.of<br>AppliCable<br>Pipe | Inside<br>Diam.of<br>Flange<br>do | Outside<br>Diam.of<br>Flange<br>D | t              | Т              | Diam.             | of Hub            | Rad<br>-ius<br>r | Raised face f | Diam.of<br>Raised<br>Face<br>9 | Diam.of<br>Bolt<br>Circle<br>C | Number<br>of Bolt<br>Holes | Hole<br>Diam<br>h | Nominal<br>Bolt<br>Size | SOP                   | BL                      | SOH                  |
| (10)<br>15<br>(20)           | 17.3<br>21.7<br>27.2                     | 17.8<br>22.2<br>27.7              | 75<br>80<br>85                    | 9<br>9<br>10   | -              | -                 | -                 | -                | 1 1 1         | 39<br>44<br>49                 | 55<br>60<br>65                 | 4<br>4<br>4                | 12<br>12<br>12    | M10<br>M10<br>M10       | 0.27<br>0.30<br>0.37  | 0.3<br>0.4<br>0.5       |                      |
| 25<br>(32)<br>40             | 34.0<br>42.7<br>48.6                     | 34.5<br>43.2<br>49.1              | 95<br>115<br>120                  | 10<br>12<br>12 | -              | -                 | -                 | -                | 1 2 2         | 59<br>70<br>75                 | 75<br>90<br>95                 | 4<br>4<br>4                | 12<br>15<br>15    | M10<br>M12<br>M12       | 0.45<br>0.78<br>0.83  | 0.6<br>0.9<br>1.0       |                      |
| 50<br>65<br>80               | 60.5<br>76.3<br>89.1                     | 61.1<br>77.1<br>90.0              | 130<br>155<br>180                 | 14<br>14<br>14 | -              | -                 | -                 | -                | 2<br>2<br>2   | 85<br>110<br>121               | 105<br>130<br>145              | 4<br>4<br>4                | 15<br>15<br>19    | M12<br>M12<br>M16       | 1.07<br>1.49<br>1.99  | 1.4<br>2.0<br>2.7       | -                    |
| (90)<br>100<br>125           | 101.6<br>114.3<br>139.8                  | 102.6<br>115.4<br>141.2           | 190<br>200<br>235                 | 14<br>16<br>16 | -              | -                 | -                 | -                | 2 2 2         | 131<br>141<br>176              | 155<br>165<br>200              | 4<br>8<br>8                | 19<br>19<br>19    | M16<br>M16<br>M16       | 2.09<br>2.39<br>3.23  | 3.0<br>3.7<br>5.2       | -                    |
| 150<br>(175)<br>200          | 165.2<br>190.7<br>216.3                  | 166.6<br>192.1<br>218.0           | 265<br>300<br>320                 | 18<br>18<br>20 |                | -                 | -                 | -                | 2<br>2<br>2   | 206<br>232<br>252              | 230<br>260<br>280              | 8<br>8<br>8                | 19<br>23<br>23    | M16<br>M20<br>M20       | 4.41<br>5.51<br>6.33  | 7.5<br>9.5<br>12.2      |                      |
| (225)<br>250<br>300          | 241.8<br>267.4<br>318.5                  | 243.7<br>269.5<br>321.0           | 345<br>385<br>430                 | 20<br>22<br>22 | -              | -                 | -                 | -                | 2<br>2<br>3   | 277<br>317<br>360              | 305<br>345<br>390              | 12<br>12<br>12             | 23<br>23<br>23    | M20<br>M20<br>M20       | 6.64<br>9.45<br>10.3  | 14.0<br>19.3<br>24.3    | -                    |
| 350<br>400<br>450            | 355.6<br>406.4<br>457.2                  | 358.1<br>409.0<br>460.0           | 480<br>540<br>605                 | 24<br>24<br>24 | -<br>40        | -<br>-<br>495     | -<br>-<br>500     | -<br>-<br>5      | 3<br>3<br>3   | 403<br>463<br>523              | 435<br>495<br>555              | 12<br>16<br>16             | 25<br>25<br>25    | M22<br>M22<br>M22       | 14.0<br>16.9<br>21.6  | 33.2<br>41.9<br>53.0    | 24.8                 |
| 500<br>550<br>600            | 508.0<br>558.8<br>609.6                  | 511.0<br>562.0<br>613.0           | 655<br>720<br>770                 | 24<br>26<br>26 | 40<br>42<br>44 | 546<br>597<br>648 | 552<br>603<br>654 | 5<br>5<br>5      | 3<br>3<br>3   | 573<br>630<br>680              | 605<br>665<br>715              | 20<br>20<br>20             | 25<br>27<br>27    | M22<br>M24<br>M24       | 23.1<br>30.3<br>32.7  | 61.9<br>81.2<br>93.2    | 26.9<br>34.1<br>37.5 |
| 650<br>700<br>750            | 660.4<br>711.2<br>762.0                  | 664.0<br>715.0<br>766.0           | 825<br>875<br>945                 | 26<br>26<br>28 | 48<br>48<br>52 | 702<br>751<br>802 | 708<br>758<br>810 | 5<br>5<br>5      | 3<br>3<br>3   | 735<br>785<br>840              | 770<br>820<br>880              | 24<br>24<br>24             | 27<br>27<br>33    | M24<br>M24<br>M30       | 35.9<br>38.2<br>48.7  | 106.9<br>120.6<br>150.5 | 42.8<br>45.4<br>57.4 |
| 800<br>(850)<br>900          | 812.8<br>863.6<br>914.4                  | 817.0<br>868.0<br>919.0           | 995<br>1045<br>1095               | 28<br>28<br>30 | 52<br>54<br>56 | 854<br>904<br>956 | 862<br>912<br>964 | 5<br>5<br>5      | 3<br>3<br>3   | 890<br>940<br>990              | 930<br>980<br>1030             | 24<br>24<br>24             | 33<br>33<br>33    | M30<br>M30<br>M30       | 51.2<br>54.4<br>61.1  | 167.4<br>185.1<br>218.1 | 60.8<br>63.5<br>75.3 |
| 1000<br>*(1100)<br>*1200     | 1016.0<br>1117.6<br>1219.2               | 1021.0<br>1123<br>1225            | 1195<br>1305<br>1420              | 32<br>32<br>34 | 60             | 1058              | 1066<br>-<br>-    | 5 -              | 3<br>3<br>3   | 1090<br>1200<br>1305           | 1130<br>1240<br>1350           | 28<br>28<br>32             | 33<br>33<br>33    | M30<br>M30<br>M30       | 70.5<br>81.7<br>102.0 | 277.3<br>331.9<br>417.8 | 88.5                 |
| *1350<br>*1500               | 1371.6<br>1524.0                         | -                                 | 1575<br>1730                      | 34<br>36       | -              | -                 | -                 | -                | 3             | 1460<br>1615                   | 1505<br>1660                   | 32<br>36                   | 33<br>33          | M30<br>M30              | 115.9<br>157.4        | 515.6<br>659.2          | -                    |

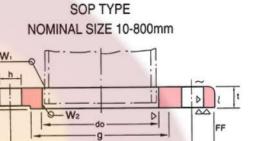
<sup>1.</sup> Flanges of parenthesized nominal diameter had letter not be used

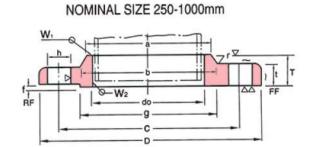
<sup>3.</sup> Nominal diameter over 1000 is manufacturer 's standard(\*).



## 10Kg/Cm<sup>2</sup>

JIS B2220-1984(KSB 1503-1985) 10Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES





SOH TYPE

### NORMAL THICKNESS FLANGE

Unit:mm

|                              |                                  |                                |                                |                | TE (58)        | enter in          |                   |                  |                     |                                |                              |                            |                   |                         |                         | U                       | nicmn                 |
|------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------|----------------|-------------------|-------------------|------------------|---------------------|--------------------------------|------------------------------|----------------------------|-------------------|-------------------------|-------------------------|-------------------------|-----------------------|
|                              |                                  |                                |                                |                | S              | ectiona           | al Dime           | nsions           | of Flan             | ge                             | 3                            | Dia.of Bo                  | It                |                         | W                       | eight(k                 | (g)                   |
| Nominal<br>Diam of<br>Flange | Outside<br>Diam.of<br>Steel Pipe | Inside<br>Diam.of<br>Flange do | Outside<br>Diam.of<br>Flange D | t              | Т              | Diam.             | ofHub<br>b        | Rad<br>-ius<br>r | Raised<br>Face<br>f | Diam.of<br>Raised<br>Face<br>9 | Bolt<br>Circle<br>Diam.<br>C | Number<br>of Bolt<br>Holes | Hole<br>Diam<br>h | Nominal<br>Bolt<br>Size | SOP                     | BL                      | SOH                   |
| 10<br>15<br>20               | 17.3<br>21.7<br>27.2             | 17.8<br>22.2<br>27.7           | 90<br>95<br>100                | 12<br>12<br>14 | -              | -                 | -                 |                  | 1 1 1               | 46<br>51<br>56                 | 65<br>70<br>75               | 4<br>4<br>4                | 15<br>15<br>15    | M12<br>M12<br>M12       | 0.52<br>0.57<br>0.73    | 0.54<br>0.61<br>0.79    | -                     |
| 25<br>32<br>40               | 34.0<br>42.7<br>48.6             | 34.5<br>43.2<br>49.1           | 125<br>135<br>140              | 14<br>16<br>16 | -              | -                 | -                 | -                | 1<br>2<br>2         | 67<br>76<br>81                 | 90<br>100<br>105             | 4<br>4<br>4                | 19<br>19<br>19    | M16<br>M16<br>M16       | 1.13<br>1.48<br>1.56    | 1.24<br>1.66<br>1.81    | -                     |
| 50<br>65<br>80               | 60.5<br>76.3<br>89.1             | 61.1<br>77.1<br>90             | 155<br>175<br>185              | 16<br>18<br>18 | 1 1 1          | -                 | -                 |                  | 2<br>2<br>2         | 96<br>116<br>126               | 120<br>140<br>150            | 4<br>4<br>8                | 19<br>19<br>19    | M16<br>M16<br>M16       | 1.88<br>2.60<br>2.61    | 2.23<br>3.3<br>3.5      |                       |
| (90)<br>100<br>125           | 101.6<br>114.3<br>139.8          | 102.6<br>115.4<br>141.2        | 195<br>210<br>250              | 18<br>18<br>20 | 1 1 1          | -                 | -                 | -                | 2<br>2<br>2         | 136<br>151<br>182              | 160<br>175<br>210            | 8<br>8<br>8                | 19<br>19<br>23    | M16<br>M16<br>M20       | 2.76<br>3.14<br>4.77    | 4.0<br>4.6<br>7.3       | -                     |
| 150<br>(175)<br>200          | 165.2<br>190.7<br>216.3          | 166.6<br>192.1<br>218          | 280<br>305<br>330              | 22<br>22<br>22 | 1 1 1          | -                 | 1 1               |                  | 2 2 2               | 212<br>237<br>262              | 240<br>265<br>290            | 8<br>12<br>12              | 23<br>23<br>23    | M20<br>M20<br>M20       | 6.34<br>6.82<br>7.53    | 10.1<br>11.8<br>14.0    |                       |
| (225)<br>250<br>300          | 241.8<br>267.4<br>318.5          | 243.7<br>269.5<br>321          | 350<br>400<br>445              | 22<br>24<br>24 | -<br>36<br>38  | 288<br>340        | -<br>292<br>346   | -<br>6<br>6      | 2<br>2<br>3         | 282<br>324<br>368              | 310<br>355<br>400            | 12<br>12<br>16             | 23<br>25<br>25    | M20<br>M22<br>M22       | 7.74<br>11.8<br>12.7    | 15.8<br>22.7<br>27.8    | 12.7<br>13.8          |
| 350<br>400<br>450            | 355.6<br>406.4<br>457.2          | 358.1<br>409<br>460            | 490<br>560<br>620              | 26<br>28<br>30 | 42<br>44<br>48 | 380<br>436<br>496 | 386<br>442<br>502 | 6<br>6           | 3<br>3<br>3         | 413<br>475<br>530              | 445<br>510<br>565            | 16<br>16<br>20             | 25<br>27<br>27    | M22<br>M24<br>M24       | 16.4<br>23.0<br>29.5    | 37.1<br>52.5<br>68.8    | 18.2<br>25.2<br>33.0  |
| 500<br>(550)<br>600          | 508<br>558.8<br>609.6            | 511<br>562<br>613              | 675<br>745<br>795              | 30<br>32<br>32 | 48<br>52<br>52 | 548<br>604<br>656 | 554<br>610<br>662 | 6<br>6<br>6      | 3<br>3<br>3         | 585<br>640<br>690              | 620<br>680<br>730            | 20<br>20<br>24             | 27<br>33<br>33    | M24<br>M30<br>M30       | 33.5<br>43.1<br>45.7    | 82.1<br>105.8<br>120.2  | 37.6<br>49.7<br>52.6  |
| (650)<br>700<br>(750)        | 660.4<br>711.2<br>762            | 664<br>715<br>766              | 845<br>905<br>970              | 34<br>34<br>36 | 56<br>58<br>62 | 706<br>762<br>816 | 712<br>770<br>824 | 6<br>6<br>6      | 3<br>3<br>3         | 740<br>800<br>855              | 780<br>840<br>900            | 24<br>24<br>24             | 33<br>33<br>33    | M30<br>M30<br>M30       | 52.1<br>59.5<br>73.2    | 145.0<br>167.2<br>204.2 | 60.6<br>70.6<br>85.8  |
| 800<br>(850)<br>900          | 812.8<br>863.6<br>914.4          | 817<br>868<br>919              | 1020<br>1070<br>1120           | 36<br>36<br>38 | 64<br>66<br>70 | 868<br>920<br>971 | 876<br>928<br>979 | 6<br>6           | 3<br>3<br>3         | 905<br>955<br>1005             | 950<br>1000<br>1050          | 28<br>28<br>28             | 33<br>33<br>33    | M30<br>M30<br>M30       | 76.4<br>80.7<br>89.4    | 225.4<br>248.8<br>288.4 | 91.2<br>98.6<br>109.0 |
| 1000<br>*(1100)<br>*1200     | 1016<br>1117.6<br>1219.2         | 1021<br>1123<br>1225           | 1235<br>1345<br>1465           | 40<br>42<br>44 | 74<br>76<br>78 | 1073<br>-<br>-    | 1081              | 6 -              | 3<br>3<br>3         | 1110<br>1220<br>1325           | 1160<br>1270<br>1380         | 28<br>28<br>32             | 39<br>39<br>39    | M36<br>M36<br>M36       | 109.2<br>131.6<br>163.5 | 367.7<br>460.0<br>572.2 | 133.0                 |
| *1350<br>*1500               | 1371.6<br>1524.0                 | -                              | 1630<br>1795                   | 48<br>50       | 82<br>90       | -                 | -                 | -                | 3                   | 1480<br>1635                   | 1540<br>1700                 | 36<br>40                   | 45<br>45          | M42<br>M42              | 204.7<br>250.2          | 769.0<br>974.9          | -                     |

<sup>1.</sup>Flanges of parenthesized nominal diameter had letter not be used.



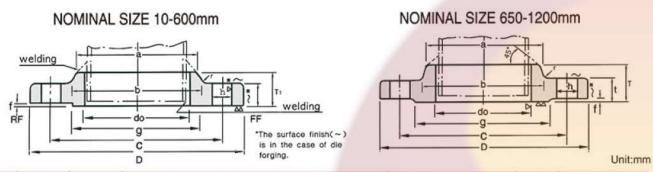
<sup>2.</sup> The facing of flanges shall conform to KS B1509(JIS B2202)1984.

<sup>2.</sup> The facing of flanges shall conform to KS B1509(JIS B2202)1984.

<sup>3.</sup>Nominal diameter over 1000 is manufacturer 's standard(\*).

## 16Kg/Cm<sup>2</sup>

JIS B2220-1984(KSB 1503-1985) 16Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES



| Nominal               | Outside                      | Inside                      |                                       | Se             | ction           | nal Dim             | ension              | s of FI          | ange        |                      |                                 | Bolt Hole                  |                       |                               | W                       | eight(k                   | (g)                     |   |
|-----------------------|------------------------------|-----------------------------|---------------------------------------|----------------|-----------------|---------------------|---------------------|------------------|-------------|----------------------|---------------------------------|----------------------------|-----------------------|-------------------------------|-------------------------|---------------------------|-------------------------|---|
| Diameter of Flange    | Diameter<br>of Steel<br>Pipe | Diameter<br>of Flange<br>do | Outside<br>Diameter<br>of<br>Flange D | t              | т               | Diam.               | of Hub              | Rad<br>-ius<br>r | f           | 9                    | Bolt<br>Circle<br>Diameter<br>C | Number<br>of Bolt<br>Holes | Hole<br>Diameter<br>h | Nominal<br>Bolt<br>Size       | SOP                     | BL                        | SOH                     |   |
| 10<br>15<br>20        | 17.3<br>21.7<br>27.2         | 17.8<br>22.2<br>27.7        | 90<br>95<br>100                       | 12<br>12<br>14 | 16<br>16<br>20  | 26<br>30<br>38      | 28<br>32<br>42      | 4 4 4            | 1 1 1       | 46<br>51<br>56       | 65<br>70<br>75                  | 4<br>4<br>4                | 15<br>15<br>15        | M12<br>M12<br>M12             | 0.52<br>0.57<br>0.73    | 0.54<br>0.61<br>0.79      | 0.52<br>0.58<br>0.75    |   |
| 25<br>32<br>40        | 34.0<br>42.7<br>48.6         | 34.5<br>43.2<br>49.1        | 125<br>135<br>140                     | 14<br>16<br>16 | 20<br>22<br>24  | 46<br>56<br>62      | 50<br>60<br>66      | 4<br>5<br>5      | 1 2 2       | 67<br>76<br>81       | 90<br>100<br>105                | 4<br>4<br>4                | 19<br>19<br>19        | M16<br>M16<br>M16             | 1.13<br>1.48<br>1.56    | 1.24<br>1.66<br>1.81      | 1.16<br>1.53<br>1.64    | , |
| 50<br>65<br>80        | 60.5<br>76.3<br>89.1         | 61.1<br>77.1<br>90.0        | 155<br>175<br>200                     | 16<br>18<br>20 | 24<br>26<br>28  | 76<br>94<br>108     | 80<br>98<br>112     | 5<br>5<br>6      | 2 2 2       | 96<br>116<br>132     | 120<br>140<br>160               | 8<br>8<br>8                | 19<br>19<br>23        | M16<br>M16<br>M20             | 1.8<br>2.5<br>3.5       | 2.3<br>3.1<br>4.5         | 1.83<br>2.58<br>3.66    |   |
| (90)<br>100<br>125    | 101.6<br>114.3<br>139.8      | 102.6<br>115.4<br>141.2     | 210<br>225<br>270                     | 20<br>22<br>22 | 30<br>34<br>34  | 120<br>134<br>164   | 124<br>138<br>170   | 6<br>6           | 2 2 2       | 145<br>160<br>195    | 170<br>185<br>225               | 8<br>8<br>8                | 23<br>23<br>25        | M20<br>M20<br>M22             | 3.7<br>4.5<br>6.5       | 5.0<br>6.3<br>9.2         | 3.95<br>4.94<br>7.0     |   |
| 150<br>200<br>250     | 165.2<br>216.3<br>267.4      | 166.6<br>218.0<br>269.5     | 305<br>350<br>430                     | 24<br>26<br>28 | 38<br>40<br>44  | 196<br>244<br>304   | 202<br>252<br>312   | 6<br>6           | 2<br>2<br>2 | 230<br>275<br>345    | 260<br>305<br>380               | 12<br>12<br>12             | 25<br>25<br>27        | M22<br>M22<br>M24             | 8.7<br>10.9<br>18.0     | 12.8<br>18.6<br>30.6      | 9.62<br>12.1<br>20.0    |   |
| 300<br>350<br>400     | 318.5<br>355.6<br>406.4      | 321.0<br>358.1<br>409.0     | 480<br>540<br>605                     | 30<br>34<br>38 | 48<br>52<br>60  | 354<br>398<br>446   | 364<br>408<br>456   | 8<br>8<br>10     | 3<br>3<br>3 | 395<br>440<br>495    | 430<br>480<br>540               | 16<br>16<br>16             | 27<br>33<br>33        | M24<br>M30 × 3<br>M30 × 3     | 21.5<br>30.8<br>42.8    | 40.7<br>57.8<br>82.2      | 24.4<br>35.0<br>46.2    |   |
| 450<br>500<br>(550)   | 457.2<br>508.0<br>558.8      | 460.0<br>511.0<br>562.0     | 675<br>730<br>795                     | 40<br>42<br>44 | 64<br>68<br>70  | 504<br>558<br>612   | 514<br>568<br>622   | 10<br>10<br>10   | 3<br>3<br>3 | 560<br>615<br>670    | 605<br>660<br>720               | 20<br>20<br>20             | 33<br>33<br>39        | M30 x 3<br>M30 x 3<br>M36 x 3 | 55.1<br>65.1<br>77.9    | 107.6<br>133.1<br>164.1   | 61.9<br>73.25<br>88.1   |   |
| 600<br>(650)<br>700   | 609.6<br>660.4<br>711.2      | 613.0<br>664<br>715         | 845<br>895<br>960                     | 46<br>48<br>50 | 74<br>77<br>80  | 666<br>704<br>754   | 676<br>726<br>776   | 10<br>10<br>10   | 3<br>5<br>5 | 720<br>770<br>820    | 770<br>820<br>875               | 24<br>24<br>24             | 39<br>39<br>42        | M36 × 3<br>M36 × 3<br>M39 × 3 | 86.0<br>96.3<br>114.1   | 193.2<br>227.5<br>272.6   | 98.8<br>101.0<br>120.0  |   |
| (750)<br>800<br>(850) | 762.0<br>812.8<br>863.6      | 766<br>817<br>868           | 1020<br>1085<br>1135                  | 52<br>54<br>56 | 83<br>86<br>89  | 806<br>865<br>916   | 832<br>885<br>936   | 10<br>10<br>10   | 5<br>5<br>5 | 930<br>980           | 935<br>990<br>1040              | 24<br>24<br>24             | 42<br>48<br>48        | M39 x 3<br>M45 x 3<br>M45 x 3 | 132.7<br>152.1<br>166.5 | 321.9<br>375.6<br>428.1   | 141.0<br>161.0<br>177.0 |   |
| 900<br>1000<br>1100   | 914.4<br>1016.0<br>1117.6    | 919<br>1021<br>1123         | 1185<br>1320<br>1420                  | 58<br>62<br>66 | 93<br>99<br>105 | 968<br>1070<br>1180 | 986<br>1098<br>1200 | 10<br>12<br>12   | 5<br>5<br>5 | 1030<br>1140<br>1240 | 1090<br>1210<br>1310            | 28<br>28<br>32             | 48<br>56<br>56        | M45 × 3<br>M52 × 3<br>M52 × 3 | 178.1<br>235.3<br>267.9 | 481.8<br>636.0<br>784.0   | 191.0<br>230.0<br>289.0 |   |
| 1200<br>1300<br>1350  | 1219.2<br>1320.8<br>1371.6   | 1225<br>1326.0<br>1377.0    | 1530<br>1645<br>1700                  | 70<br>74<br>76 | 112             | 1282<br>-<br>-      | 1302                | 12<br>-<br>-     | 5<br>5<br>5 | 1350<br>1450<br>1510 | 1420<br>1530<br>1590            | 32<br>32<br>32             | 56<br>62<br>62        | M52 × 3                       | 321.1<br>378.6<br>410.0 | 972.4<br>1185.2<br>1303.8 | 348.0                   |   |
| 1400<br>1500          | 1422.4<br>1524.0             | 1428.0<br>1529.0            | 1755<br>1865                          | 78<br>80       | -               | -                   | -                   | -                | 5<br>5      | 1560<br>1670         | 1640<br>1750                    | 36<br>36                   | 62<br>62              | 100                           | 436.0<br>496.4          | 1422.5<br>1656.6          | -                       |   |

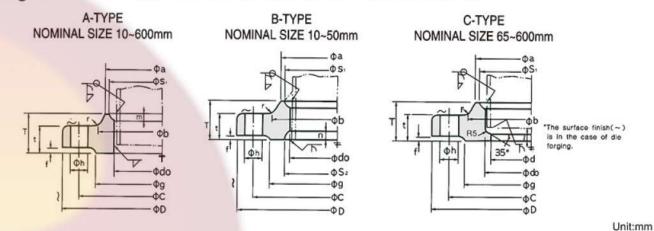
<sup>1.</sup> Flanges of parenthesized nominal diameter had better not be used.

<sup>3.</sup>In principle material shall be SS400 specified in JIS G3101, SF390A(or SF440A) specified in JIS G3201, or S20C(or S25C) specified in JIS G4051, and shall be fit for welding.



### 20Kg/Cm<sup>2</sup>

JIS B2220-1984(KSB 1503-1985)
20Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES



| A                               | 4   | A  |   |  |  |   |  |  |   |  |  |  |  |  |  |  |  |  |  |   |  |  |
|---------------------------------|---|--|---|--|--|---|--|--|---|--|--|--|--|--|--|--|--|--|--|---|--|--|
| Outside<br>Diameter<br>of Steel | Diameter,<br>of Flange  | Outside<br>Diameter,<br>of Flange  | t   | Т  | 10000000   |   | Rad<br>-ius  | f  | 9   | d  | Bolt<br>Circle<br>Dia-   | Num-<br>ber of<br>Bolt   | Hole<br>Dia<br>meter   | Nominal<br>Bolt  | S,   | m  | S2   | n  | 1  | SOP   | BL   | SOH  |
| Pipe                            | do  | D  |   |  | а  | b   |  |  |   |  | meter  | Holes  | h  | SIZO   |  |  |  |  |  |   |  |  |
| 17.3                            | 17.8  | 90   | 14  | 20   | 30   | 32  | 4  | 1  | 46  | -  | 65   | 4  | 15   | M12  | 27   | 4  | 27   | 4  | -  | 0.6   | 0.6  | 0.59   |
| 21.7                            | 22.2  | 95   | 14  | 20   | 34   | 36  | 4  | 1  | 51  | -  | 70   | 4  | 15   | M12  | 31   | 4  | 31   | 4  | -  | 0.7   | 0.7  | 0.65   |
| 27.2                            | 27.7  | 100  | 16  | 22   | 40   | 42  | 4  | 1  | 56  | -  | 75   | 4  | 15   | M12  | 37   | 4  | 37   | 4  | -  | 0.8   | 0.9  | 0.81   |
| 34.0                            | 34.5  | 125  | 16  | 24   | 48   | 50  | 4  | 1  | 67  | -  | 90   | 4  | 19   | M16  | 44   | 4  | 44   | 4.5  | -  | 1.3   | 1.5  | 1.29   |
| 42.7                            | 43.2  | 135  | 18  | 26   | 56   | 60  | 5  | 2  | 76  | -  | 100  | 4  | 19   | M16  | 52   | 4  | 53   | 5  |  | 1.6   | 1.8  | 1.6  |
| 48.6                            | 49.1  | 140  | 18  | 26   | 62   | 66  | 5  | 2  | 81  | -  | 105  | 4  | 19   | M16  | 58   | 4  | 59   | 5.5  | -  | 1.7   | 2.0  | 1.69   |
| 60.5                            | 61.1  | 155  | 18  | 26   | 76   | 80  | 5  | 2  | 96  | -  | 120  | 8  | 19   | M16  | 70   | 4  | 72   | 5.5  | -  | 1.9   | 2.4  | 1.89   |
| 76.3                            | 77.1  | 175  | 20  | 30   | 100  | 104   | 5  | 2  | 116   | 65.9   | 140  | 8  | 19   | M16  | 94   | 6  | 85   | 6  | 6  | 2.6   | 3.4  | 2.6  |
| 89.1                            | 90.0  | 200  | 22  | 34   | 113  | 117   | 6  | 2  | 132   | 78.1   | 160  | 8  | 23   | M20  | 107  | 6  | -  | -  | 6  | 3.8   | 4.9  | 3.93   |
| 101.6                           | 102.6   | 210  | 24  | 36   | 126  | 130   | 6  | 2  | 145   | 90.2   | 170  | 8  | 23   | M20  | 120  | 6  | -  | -  | 6  | 4.4   | 6.0  | 4.56   |
| 114.3                           | 115.4   | 225  | 24  | 36   | 138  | 142   | 6  | 2  | 160   | 102.3  | 185  | 8  | 23   | M20  | 132  | 6  | -  | -  | 6  | 4.9   | 6.9  | 5.13   |
| 139.8                           | 141.2   | 270  | 26  | 40   | 166  | 172   | 6  | 2  | 195   | 126.6  | 225  | 8  | 25   | M22  | 160  | 7  | -  | -  | 6  | 7.8   | 11.0   | 8.3  |
| 165.2                           | 166.6   | 305  | 28  | 42   | 196  | 202   | 6  | 2  | 230   | 151.0  | 260  | 12   | 25   | M22  | 186  | 8  | -  | -  | 6  | 10.1  | 14.9   | 10.6   |
| 216.3                           | 218.0   | 350  | 30  | 46   | 244  | 252   | 6  | 2  | 275   | 199.9  | 305  | 12   | 25   | M22  | 237  | 9  | -  | -  | 6  | 12.6  | 21,4   | 13.3   |
| 267.4                           | 269.5   | 430  | 34  | 52   | 304  | 312   | 6  | 2  | 345   | 248.8  | 380  | 12   | 27   | M24  | 290  | 10   | -  | -  | 6  | 21.9  | 37.2   | 23.4   |
|                                 | of Steel<br>Pipe<br>17.3<br>21.7<br>27.2<br>34.0<br>42.7<br>48.6<br>60.5<br>76.3<br>89.1<br>101.6<br>114.3<br>139.8<br>165.2<br>216.3 | Diameter of Steel Pipe         Diameter of Flange do           17.3         17.8           21.7         22.2           27.2         27.7           34.0         34.5           42.7         43.2           48.6         49.1           60.5         61.1           76.3         77.1           89.1         90.0           101.6         102.6           114.3         115.4           139.8         141.2           165.2         166.6           216.3         218.0 | Diameter of Steel         Diameter. of Flange do         Diameter. of Flange do           17.3         17.8         90           21.7         22.2         95           27.2         27.7         100           34.0         34.5         125           42.7         43.2         135           48.6         49.1         140           60.5         61.1         155           76.3         77.1         175           89.1         90.0         200           101.6         102.6         210           114.3         115.4         225           139.8         141.2         270           165.2         166.6         305           216.3         218.0         350 | Diameter of Steel Pipe         Diameter. of Flange do         Diameter. of Flange of | Diameter of Steel Pipe         Diameter. of Flange do         Diameter. of Flange of | Diameter of Steel         Diameter. of Flange do         Diameter. of Flange of Flange do         t         T         T           17.3         17.8         90         14         20         30           21.7         22.2         95         14         20         34           27.2         27.7         100         16         22         40           34.0         34.5         125         16         24         48           42.7         43.2         135         18         26         56           48.6         49.1         140         18         26         62           60.5         61.1         155         18         26         62           76.3         77.1         175         20         30         100           89.1         90.0         200         22         34         113           101.6         102.6         210         24         36         126           114.3         115.4         225         24         36         138           139.8         141.2         270         26         40         166           165.2         166.6         305         28 <t< td=""><td>  Diameter   Diameter   Of Flange   Of Fla</td><td>  Diameter   Diameter   Diameter   Of Flange   Of Flan</td><td>Diameter of Steel Pipe         Diameter. of Flange do         Diameter. of Flange of Flange do         t         T         Diameter of Hub of H</td><td>  Diameter   Diameter   Of Flange   Of Fla</td><td>  Diameter   Diameter   Of Flange   Of Fla</td><td>  Diameter   Diameter   Diameter   Of Flange   Of Flan</td><td>  Diameter   Diameter   Diameter   Of Flange   Of Flan</td><td>  Diameter   Diameter   Diameter   Of Flange   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diame</td><td>  Diameter   Diameter   Diameter   Of Flange   Of Flan</td><td>  Diameter   Diameter   Diameter   Of Flange   Pipe   Do</td><td>Diameter of Steel Pipe         Diameter of Flange do         Diameter of Flange Pipe         t of Flange do         t of Flange Pipe         t of Flange</td><td>  Diameter   Diameter   Diameter   Of Flange   Of Flan</td><td>  Diameter   Diameter   Diameter   Of Flange   Pipe   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diameter   Diameter   Diameter   Diameter   Diameter   Bolt   Micro   Diameter   Di</td><td>  Diameter   Diameter   Diameter   Of Flange   Pipe   Do   Diameter   Of Flange   Pipe   Do   Diameter   Of Flange   Do   Diameter   Diameter   Of Flange   Do   Diameter   Bolt   Size   S₁ m   S₂ m   I    </td><td>  Diameter   Diameter   Of Steel   Of Flange   Of Flan</td><td>  Diameter   Diameter   Of Steel   Pipe   Diameter   Of Flange   Pipe   Diameter   Of Flange   Diameter   Diam</td></t<> | Diameter   Diameter   Of Flange   Of Fla | Diameter   Diameter   Diameter   Of Flange   Of Flan | Diameter of Steel Pipe         Diameter. of Flange do         Diameter. of Flange of Flange do         t         T         Diameter of Hub of H | Diameter   Diameter   Of Flange   Of Fla | Diameter   Diameter   Of Flange   Of Fla | Diameter   Diameter   Diameter   Of Flange   Of Flan | Diameter   Diameter   Diameter   Of Flange   Of Flan | Diameter   Diameter   Diameter   Of Flange   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diame | Diameter   Diameter   Diameter   Of Flange   Of Flan | Diameter   Diameter   Diameter   Of Flange   Pipe   Do | Diameter of Steel Pipe         Diameter of Flange do         Diameter of Flange Pipe         t of Flange do         t of Flange Pipe         t of Flange | Diameter   Diameter   Diameter   Of Flange   Of Flan | Diameter   Diameter   Diameter   Of Flange   Pipe   Diameter   Of Flange   Diameter   Diameter   Of Flange   Diameter   Diameter   Diameter   Diameter   Diameter   Diameter   Bolt   Micro   Diameter   Di | Diameter   Diameter   Diameter   Of Flange   Pipe   Do   Diameter   Of Flange   Pipe   Do   Diameter   Of Flange   Do   Diameter   Diameter   Of Flange   Do   Diameter   Bolt   Size   S₁ m   S₂ m   I | Diameter   Diameter   Of Steel   Of Flange   Of Flan | Diameter   Diameter   Of Steel   Pipe   Diameter   Of Flange   Pipe   Diameter   Of Flange   Diameter   Diam |

440

495

615

670

720

790

840

900

960

1020

480 540

850

970

1030

1090

33 33

39

56

56 56

M52 x 3

M52 x 3

20

20

M30 x 3 490 15

M30 x 3 544 16

M36 x 3 595 16

560 431.8 605 20

482.6 660

533.4 720

584.2 770

Bolt Hole

995

1140

408

456

558 568

612 622

48 78 504 514

300

350

400

450

500

(550)

(650)

700

(750)

800

(850)

318.5

355.6

406.4

457.2

508.0

558.8

660.4

711.2

762.0

812.8

863.6

914.6

358.1

409 0

460.0

511.0

562.0

613.0

664.0

715.0

766.0

817.0

919.0



77.4

92.2

101.1 147.6

248.5 546.5

168.0 370.9

212.7 460.1

280.5 626.2

<sup>2.</sup> For dimensional tolerance, refer to JIS B2203.

<sup>1.</sup>Flanges of parenthesized nominal diameters had better not be used.

<sup>2.</sup> The Flange gasket surface is based on large raised facing specified in JIS B2202.

<sup>3.</sup>Size d is an example of pipe thickness for schedule 40 of JIS G3454.and JIS G3456 .But customers can order for other size as occasion demand.

<sup>4.</sup> For dimensional tolerance, refer to JIS B2203.

<sup>5.</sup>In principle, material shall be aSS400 specified in JIS G3101, SF390A(or SF440A)specified in JIS G3201, or S20C(or S25C) specified in JIS G4051.Material shall be fit for welding.

<sup>\*</sup>The surface finish is the case of forging ( 

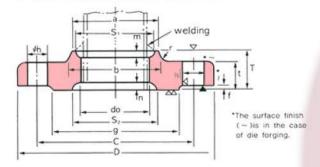
:in other cases)

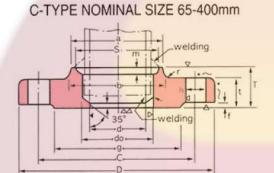
### 30Kg/Cm<sup>2</sup>

JIS B2220-1984(KSB 1503-1985)

30Kg/Cm2 SLIP-ON WELDING STEEL PIPE FLANGES

### A-TYPE NOMINAL SIZE 10-400mm B-TYPE NOMINAL SIZE 10-50mm





Unit: mm

|                           |                                 |                                  |                                  |    |    | Section | onal Dir      | mensio      | ons of | Flange |       |                | Bolt              | Hole        |                 |     | Re  | feren | ce |   | Approx | x Weight |
|---------------------------|---------------------------------|----------------------------------|----------------------------------|----|----|---------|---------------|-------------|--------|--------|-------|----------------|-------------------|-------------|-----------------|-----|-----|-------|----|---|--------|----------|
| Nominal<br>Diameter<br>of | Outside<br>Diameter<br>of Steet | Inside<br>Diameter,<br>of Flange | Outside<br>Diameter<br>of Flange | +  | т  | Diam    | neter.<br>Hub | Rad<br>-ius | f      | g      | d     | Bolt<br>Circle | Number<br>of Bolt | Hole<br>Dia | Nominal<br>Bolt | S,  | m   | S,    | n  | 1 | 10.000 | kg)      |
| Flange                    | Pipe                            | do                               | D                                |    |    | а       | ь             | £           |        |        |       | meter          | Holes             | meter       | Size            |     |     |       |    |   | SOH    | BL       |
| 10                        | 17.3                            | 17,8                             | 110                              | 16 | 24 | 30      | 34            | 4           | 1      | 52     | -     | 75             | 4                 | 19          | M16             | -   | -   | -     | -  | - | 0,99   | 1.00     |
| 15                        | 21.7                            | 22.2                             | 115                              | 18 | 26 | 36      | 40            | 5           | 1      | 55     | -     | 80             | 4                 | 19          | M16             | 31  | 4   | 40    | 5  | - | 1.23   | 1.25     |
| 20                        | 27.2                            | 27.7                             | 120                              | 18 | 28 | 42      | 46            | 5           | 1      | 60     | -     | 85             | 4                 | 19          | M16             | 37  | 5   | 44    | 5  | - | 1,34   | 1,38     |
| 25                        | 34.0                            | 34.5                             | 130                              | 20 | 30 | 50      | 54            | 5           | 1      | 70     | 1     | 95             | 4                 | 19          | M16             | 44  | 6   | 52    | 5  | - | 1.76   | 1.84     |
| 32                        | 42.7                            | 43.2                             | 140                              | 22 | 32 | 60      | 64            | 6           | 2      | 80     | -     | 105            | 4                 | 19          | M16             | 52  | 6   | 60    | 5  | - | 2.15   | 2.32     |
| 40                        | 48.6                            | 49.1                             | 160                              | 22 | 34 | 66      | 70            | 6           | 2      | 90     | -     | 120            | 4                 | 23          | M20             | 58  | 6   | 66    | 5  | - | 2.82   | 3,00     |
| 50                        | 60.5                            | 61.1                             | 165                              | 22 | 36 | 82      | 86            | 6           | 2      | 105    | -     | 130            | 8                 | 19          | M16             | 70  | 6,5 | 78    | 5  | - | 2.89   | 3.14     |
| 65                        | 76.3                            | 77.1                             | 200                              | 26 | 40 | 102     | 106           | 8           | 2      | 130    | 65.9  | 160            | 8                 | 23          | M20             | 96  | 9.5 | 94    | 5  | 6 | 4.70   | 5,50     |
| 80                        | 89.1                            | 90.0                             | 210                              | 28 | 44 | 115     | 121           | 8           | 2      | 140    | 78.1  | 170            | 8                 | 23          | M20             | 109 | 9,5 | -     | -  | 6 | 5,36   | 6,63     |
| (90)                      | 101,6                           | 102,6                            | 230                              | 30 | 46 | 128     | 134           | 8           | 2      | 150    | 90.2  | 185            | 8                 | 25          | M22             | 122 | 9.5 | -     | -  | 6 | 6,85   | 8,55     |
| 100                       | 114.3                           | 115.4                            | 240                              | 32 | 48 | 141     | 147           | 8           | 2      | 160    | 102,3 | 195            | 8                 | 25          | M22             | 135 | 9.5 | -     | -  | 6 | 7.89   | 10.0     |
| 125                       | 139.8                           | 141,2                            | 275                              | 36 | 54 | 166     | 172           | 8           | 2      | 195    | 126.6 | 230            | 8                 | 25          | M22             | 160 | 9.5 | -     | -  | 6 | 11.4   | 15.3     |
| 150                       | 165,2                           | 166,6                            | 325                              | 38 | 58 | 196     | 204           | 8           | 2      | 235    | 151.0 | 275            | 12                | 27          | M24             | 186 | 9.5 | -     | -  | 6 | 16.7   | 22.2     |
| 200                       | 216.3                           | 218.0                            | 370                              | 42 | 64 | 248     | 256           | 8           | 2      | 280    | 199.9 | 320            | 12                | 27          | M24             | 237 | 9.5 | -     | -  | 6 | 20.6   | 32.6     |
| 250                       | 267.4                           | 269,5                            | 450                              | 48 | 72 | 306     | 314           | 10          | 2      | 345    | 248.8 | 390            | 12                | 33          | M30 x 3         | 290 | 10  | 1-3   | -  | 6 | 36,1   | 55,2     |
| 300                       | 318.5                           | 321.0                            | 515                              | 52 | 78 | 360     | 370           | 10          | 3      | 405    | 297,9 | 450            | 16                | 33          | M30 x 3         | 345 | 12  | -     | -  | 6 | 49.9   | 77.9     |
| 350                       | 355.6                           | 358.1                            | 560                              | 54 | 84 | 402     | 412           | 12          | 3      | 450    | 333.4 | 495            | 16                | 33          | M30 x 3         | 383 | 13  | -     | -  | 6 | 61.2   | 96.9     |
| 400                       | 406.4                           | 409.0                            | 630                              | 60 | 92 | 456     | 468           | 15          | 3      | 510    | 381.0 | 560            | 16                | 39          | M36 × 3         | 435 | 14  | -     | -  | 7 | 85.2   | 136      |

- 1. As far as possible, nominal diameter in parenthesis should be avoid from use.
- 2. The diamensional tolerancer shall confim to JIS B2203.
- 3. The flange gasket surface is based on large raised facing specified in JIS b2202. But, if necessary, facings other than the Large raised facing specified in JIS B2201 can be designated by customers.
- 4. Sized is an example of pipe thickness for schedule 40 of JIS G3454 and JIS B3456. When other size is necessary, customers Can order it at will.
- 5. Material

Catbon Steel:S25C spedified in JIS G4051, or Sf440A specified in JIS G3201.

Molybdeum steel: 1/2 Mo steel spcified in tables 1 and 2 of JIS B2215.

Chromium-Molybdenum steel: 1/4 Cr 1/2 Mo Steel specified in tables 1 and 2 of JIS B2215.

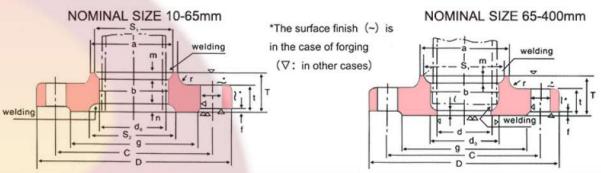
\* The surface finish is in the case of forging (\(\triangle:\) in other cases)



## 40Kg/Cm<sup>2</sup>

### JIS B 2220-2004(KS B 1503-2007)

### 40kg/cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES



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|                          | 1                            |                                |                               |                |                |                   |                   |                  |        |                   |                         | 1-                                   |                               | 0 —                        |                        |                         | •1             |                         |               |   | Unit:mm                  |
|--------------------------|------------------------------|--------------------------------|-------------------------------|----------------|----------------|-------------------|-------------------|------------------|--------|-------------------|-------------------------|--------------------------------------|-------------------------------|----------------------------|------------------------|-------------------------|----------------|-------------------------|---------------|---|--------------------------|
| Nominal                  | Outside                      | Inside                         | Outside                       |                |                | Sectio            | nal Di            | mens             | ions ( | of Flange         |                         |                                      | Bolt                          | Hole                       |                        |                         | Re             | ference                 |               |   |                          |
| Diameter<br>of<br>Flange | Diameter<br>of Steel<br>Pipe | Diameter<br>of<br>Flange<br>do | Diameter<br>of<br>Flange<br>D | t              | т              |                   | neter<br>Hub<br>b | Rad<br>-ius<br>r | f      | 9                 | d                       | Bolt<br>Circle<br>Dia-<br>meter<br>C | Number<br>of<br>Bolt<br>Holes | Hole<br>Dia-<br>meter<br>h | Nomina<br>Bolt<br>Size | s,                      | m              | S <sub>2</sub>          | n             | 1 | Approx<br>Weight<br>(kg) |
| 10<br>15<br>20           | 17.3<br>21.7<br>27.2         | 17.8<br>22.2<br>27.7           | 110<br>115<br>120             | 18<br>20<br>20 | 26<br>30<br>30 | 34<br>39<br>45    | 38<br>43<br>49    | 5 5 5            | 1 1 1  | 52<br>58<br>60    | -                       | 75<br>80<br>85                       | 4<br>4<br>4                   | 19<br>19<br>19             | M16<br>M16<br>M16      | 28.0<br>32.5<br>38.0    | 6 6            | 28.0<br>32.5<br>38.0    | 5<br>5<br>5   |   | 1.11<br>1.39<br>1.51     |
| 25<br>32<br>40           | 34.0<br>42.7<br>48.6         | 34.5<br>43.2<br>49.1           | 130<br>140<br>160             | 22<br>24<br>24 | 32<br>35<br>35 | 55<br>64<br>70    | 59<br>68<br>74    | 5 6 6            | 1 2 2  | 70<br>80<br>90    | -                       | 95<br>105<br>120                     | 4<br>4<br>4                   | 19<br>19<br>23             | M16<br>M16<br>M20      | 47.8<br>56.5<br>62.5    | 6 6            | 47.8<br>56.5<br>62.5    | 5<br>5<br>5   |   | 1.97<br>2.50<br>3.26     |
| 50<br>65<br>80           | 60.5<br>76.3<br>89.1         | 61.1<br>77.1<br>90.3           | 165<br>200<br>210             | 26<br>30<br>32 | 38<br>44<br>46 | 86<br>106<br>118  | 90<br>110<br>124  | 6 8 8            | 2 2 2  | 105<br>130<br>140 | 62.3<br>73.9            | 130<br>160<br>170                    | 8<br>8<br>8                   | 19<br>23<br>23             | M16<br>M20<br>M20      | 74.5<br>91.5<br>105.5   | 6<br>7<br>7.5  | 74.5<br>91.5<br>105.5   | 5.5<br>7<br>7 |   | 3.47<br>5.97<br>6.76     |
| 100<br>125               | 114.3<br>139.8               | 115.4<br>141.4                 | 250<br>300                    | 36<br>40       | 52<br>58       | 145<br>182        | 151<br>188        | 8                | 2 2    | 165<br>200        | 97.1<br>120.8           | 205<br>250                           | 8 8                           | 25<br>27                   | M22<br>M24             | 133.0<br>160.5          | 8.5<br>9.5     | 133.0<br>160.5          | 7 7           |   | 10.78<br>16.97           |
| 150<br>200<br>250        | 165.2<br>216.3<br>267.4      | 167.0<br>218.2<br>269.5        | 355<br>405<br>475             | 44<br>50<br>56 | 64<br>72<br>80 | 200<br>255<br>310 | 208<br>263<br>318 | 8<br>8<br>10     | 2 2 2  | 240<br>290<br>355 | 143.2<br>190.9<br>237.2 | 295<br>345<br>410                    | 12<br>12<br>12                | 33<br>33<br>33             | M30<br>M30<br>M30      | 188.0<br>243.0<br>298.0 | 11<br>13<br>15 | 188.0<br>243.0<br>298.0 | 7<br>7<br>7   |   | 22.6<br>34.9<br>41.1     |

#### REMARKS:

- 1.As far as possible, nominal diameter in parenthesis should be avoid from use.
- The diamensional tolerance shall confirm to JIS b 2203.
- 3. The flange gasket surface is based on large raised facing specified in JIS B 2202. But, if necessary, facings other than the large raised facing specified in JIS B 2201 can be designated by customers.
- 4.Size d is an example of pipe thickness for schedule 40 of JIS G 3454, and JIS B 3456. When other size is necessary, customers can order it at will.
- 5.Refer to JIS B 2216.