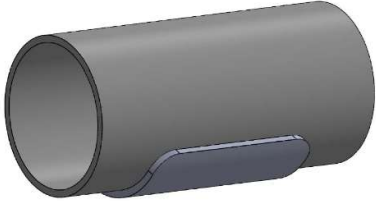







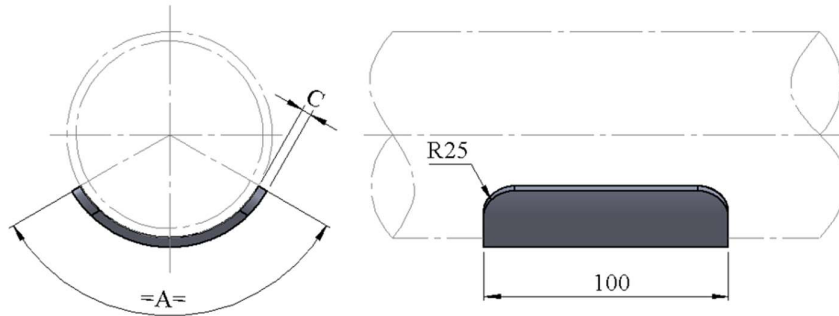


| | | |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24 | WEAR PLATES | |
| 24.1 | T-WP-001 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 100 mm LONG  | 24.4 T-WP-004 WEAR PLATE FOR CS , SS & ALLOY LINES , 300 mm LONG  |
| 24.2 | T-WP-002 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 150 mm LONG  | 24.5 T-WP-005 WEAR PLATE FOR CS , SS & ALLOY LINES , 400 mm LONG  |
| 24.3 | T-WP-003 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 200 mm LONG  | 24.6 T-WP-006 WEAR PLATE FOR CS , SS & ALLOY LINES , 500 mm LONG  |

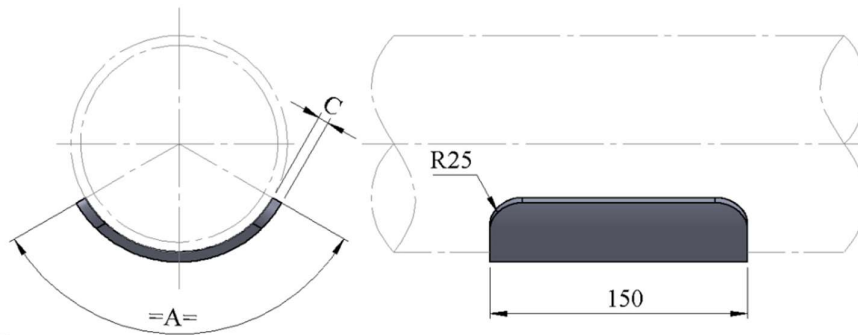
| | | | |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 24 | WEAR PLATES | | |
| 24.7 | <p>T-WP-007 WEAR PLATE FOR CS , SS & ALLOY LINES , 600 mm LONG</p>  | | |
| 24.8 | <p>T-WP-900 SPECIAL WEAR PLATE FOR CS , SS & ALLOY LINES , (VARIABLE LENGTH)</p>  | | |

24.1 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 100mm LONG
WP-001


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-001-(DN)-SS | SS | 350°c | -196°c (-105°c) (Refer Note) |
| T-WP-001-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-001-(DN)-LCS | LCS | 350°c | (-) 46 °C |
| T-WP-001-(DN)-DU | Du | 100°c (Operating) | (-) 46 °C |
| T-WP-001-(DN)-6Mo | 6Mo | 120°c (Operating) | -196°c (-105°c) (Refer Note) |
| T-WP-001-(DN)-Ti** | Ti | 350°c | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-001-0080 | DN 80 | 3" | 88.9 | 100 | 6 ** | 0.47 | 0.48 |
| T-WP-001-0100 | DN 100 | 4" | 114.3 | 100 | 6 ** | 0.47 | 0.48 |
| T-WP-001-0125 | DN 125 | 5" | 141.3 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0150 | DN 150 | 6" | 168.3 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0200 | DN 200 | 8" | 219.1 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0250 | DN 250 | 10" | 273.0 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0300 | DN 300 | 12" | 323.8 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0350 | DN 350 | 14" | 355.6 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0400 | DN 400 | 16" | 406.4 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0450 | DN 450 | 18" | 457.2 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0500 | DN 500 | 20" | 508 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0550 | DN 550 | 22" | 558.8 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0600 | DN 600 | 24" | 609.6 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0650 | DN 650 | 26" | 660.4 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0700 | DN 700 | 28" | 711.2 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0750 | DN 750 | 30" | 762 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0800 | DN 800 | 32" | 812.8 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0850 | DN 850 | 34" | 863.6 | 100 | 6 | 0.47 | 0.48 |
| T-WP-001-0900 | DN 900 | 36" | 914.4 | 100 | 6 | 0.47 | 0.80 |
| T-WP-001-0950 | DN 950 | 38" | 965.2 | 100 | 10 | 0.78 | 0.80 |
| T-WP-001-1000 | DN 1000 | 40" | 1016 | 100 | 10 | 0.78 | 0.80 |
| T-WP-001-1050 | DN 1050 | 42" | 1066.8 | 100 | 10 | 0.78 | 0.80 |
| T-WP-001-1100 | DN 1100 | 44" | 1117.6 | 100 | 10 | 0.78 | 0.80 |
| T-WP-001-1150 | DN 1150 | 46" | 1168.4 | 100 | 10 | 0.78 | 0.80 |
| T-WP-001-1200 | DN 1200 | 48" | 1219.2 | 100 | 10 | 0.78 | 0.80 |

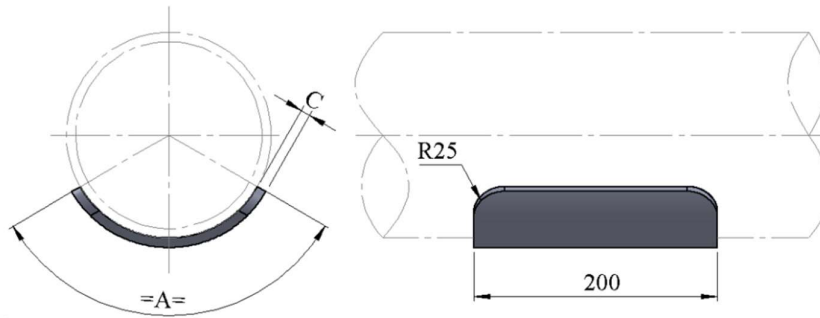
** Titanium (Ti) wear plates for DN80 and DN 100 are 4mm thick
 All welds to be a=0.7 x W.T , but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Req'd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.2 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 150mm LONG
WP-002


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-002-(DN)-SS | SS | 350°C | -196°C (-105°C) (Refer Note) |
| T-WP-002-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-002-(DN)-LCS | LCS | 350°C | (-) 46 °C |
| T-WP-002-(DN)-DU | Du | 100°C (Operating) | (-) 46 °C |
| T-WP-002-(DN)-6Mo | 6Mo | 120°C (Operating) | -196°C (-105°C) (Refer Note) |
| T-WP-002-(DN)-Ti** | Ti | 350°C | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|-----------|---------------|-------------|--------------------|------|---------------|-----|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-002-0080 | DN 80 | 3" | 88.9 | 110 | 6 ** | 0.8 | 0.8 |
| T-WP-002-0100 | DN 100 | 4" | 114.3 | 130 | 6 ** | 0.9 | 0.9 |
| T-WP-002-0125 | DN 125 | 5" | 141.3 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0150 | DN 150 | 6" | 168.3 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0200 | DN 200 | 8" | 219.1 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0250 | DN 250 | 10" | 273.0 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0300 | DN 300 | 12" | 323.8 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0350 | DN 350 | 14" | 355.6 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0400 | DN 400 | 16" | 406.4 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0450 | DN 450 | 18" | 457.2 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0500 | DN 500 | 20" | 508 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0550 | DN 550 | 22" | 558.8 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0600 | DN 600 | 24" | 609.6 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0650 | DN 650 | 26" | 660.4 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0700 | DN 700 | 28" | 711.2 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0750 | DN 750 | 30" | 762 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0800 | DN 800 | 32" | 812.8 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0850 | DN 850 | 34" | 863.6 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0900 | DN 900 | 36" | 914.4 | 150 | 6 | 1.1 | 1.1 |
| T-WP-002-0950 | DN 950 | 38" | 965.2 | 150 | 10 | 1.8 | 1.8 |
| T-WP-002-1000 | DN 1000 | 40" | 1016 | 150 | 10 | 1.8 | 1.8 |
| T-WP-002-1050 | DN 1050 | 42" | 1066.8 | 150 | 10 | 1.8 | 1.8 |
| T-WP-002-1100 | DN 1100 | 44" | 1117.6 | 150 | 10 | 1.8 | 1.8 |
| T-WP-002-1150 | DN 1150 | 46" | 1168.4 | 150 | 10 | 1.8 | 1.8 |
| T-WP-002-1200 | DN 1200 | 48" | 1219.2 | 150 | 10 | 1.8 | 1.8 |

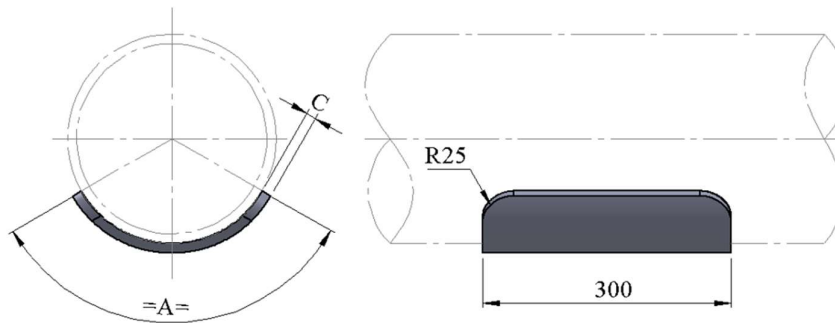
** Titanium (Ti) wear Plates for DN80 and DN 100 are 4mm thick
 All welds to be a=0.7 x W.T, but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue
 Impact Test Req. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°C.

24.3 SHORT WEAR PLATE FOR CS , SS & ALLOY LINES , 200mm LONG
WP-003


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-003-(DN)-SS | SS | 350°c | -196°c (-105°c) (Refer Note) |
| T-WP-003-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-003-(DN)-LCS | LCS | 350°c | (-) 46 °C |
| T-WP-003-(DN)-DU | Du | 100°c (Operating) | (-) 46 °C |
| T-WP-003-(DN)-6Mo | 6Mo | 120°c (Operating) | -196°c (-105°c) (Refer Note) |
| T-WP-003-(DN)-Ti** | Ti | 350°c | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|-----|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-003-0080 | DN 80 | 3" | 88.9 | 110 | 6 ** | 1.0 | 1.1 |
| T-WP-003-0100 | DN 100 | 4" | 114.3 | 130 | 6 ** | 1.2 | 1.2 |
| T-WP-003-0125 | DN 125 | 5" | 141.3 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0150 | DN 150 | 6" | 168.3 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0200 | DN 200 | 8" | 219.1 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0250 | DN 250 | 10" | 273.0 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0300 | DN 300 | 12" | 323.8 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0350 | DN 350 | 14" | 355.6 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0400 | DN 400 | 16" | 406.4 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0450 | DN 450 | 18" | 457.2 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0500 | DN 500 | 20" | 508 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0550 | DN 550 | 22" | 558.8 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0600 | DN 600 | 24" | 609.6 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0650 | DN 650 | 26" | 660.4 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0700 | DN 700 | 28" | 711.2 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0750 | DN 750 | 30" | 762 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0800 | DN 800 | 32" | 812.8 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0850 | DN 850 | 34" | 863.6 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0900 | DN 900 | 36" | 914.4 | 150 | 6 | 1.4 | 1.4 |
| T-WP-003-0950 | DN 950 | 38" | 965.2 | 150 | 10 | 2.4 | 2.4 |
| T-WP-003-1000 | DN 1000 | 40" | 1016 | 150 | 10 | 2.4 | 2.4 |
| T-WP-003-1050 | DN 1050 | 42" | 1066.8 | 150 | 10 | 2.4 | 2.4 |
| T-WP-003-1100 | DN 1100 | 44" | 1117.6 | 150 | 10 | 2.4 | 2.4 |
| T-WP-003-1150 | DN 1150 | 46" | 1168.4 | 150 | 10 | 2.4 | 2.4 |
| T-WP-003-1200 | DN 1200 | 48" | 1219.2 | 150 | 10 | 2.4 | 2.4 |

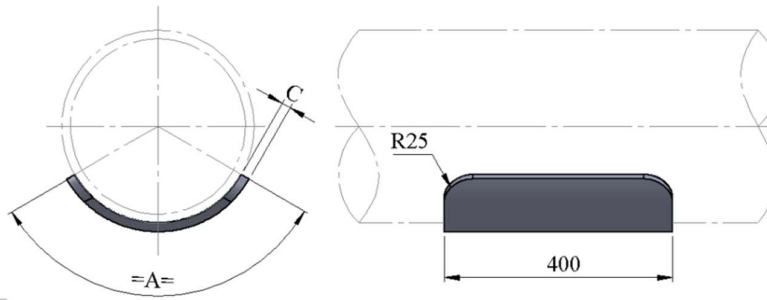
** Titanium (TI) wear Plates for DN80 and DN 100 are 4mm thick
 All welds to be $a=0.7 \times W.T$, but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Reqd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.4 WEAR PLATE FOR CS , SS & ALLOY LINES , 300mm LONG
WP-004


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-004-(DN)-SS | SS | 350°c | -196°c (-105°c) (Refer Note) |
| T-WP-004-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-004-(DN)-LCS | LCS | 350°c | (-) 46 °C |
| T-WP-004-(DN)-DU | Du | 100°c (Operating) | (-) 46 °C |
| T-WP-004-(DN)-6Mo | 6Mo | 120°c (Operating) | -196°c (-105°c) (Refer Note) |
| T-WP-004-(DN)-Ti** | Ti | 350°c | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|-------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-004-0080 | DN 80 | 3" | 88.9 | 90 | 6 ** | 1.27 | 1.30 |
| T-WP-004-0100 | DN 100 | 4" | 114.3 | 120 | 6 ** | 1.70 | 1.73 |
| T-WP-004-0125 | DN 125 | 5" | 141.3 | 148 | 6 | 2.09 | 2.13 |
| T-WP-004-0150 | DN 150 | 6" | 168.3 | 175 | 6 | 2.47 | 2.52 |
| T-WP-004-0200 | DN 200 | 8" | 219.1 | 230 | 6 | 3.25 | 3.31 |
| T-WP-004-0250 | DN 250 | 10" | 273.0 | 285 | 6 | 4.03 | 4.10 |
| T-WP-004-0300 | DN 300 | 12" | 323.8 | 340 | 6 | 4.80 | 4.90 |
| T-WP-004-0350 | DN 350 | 14" | 355.6 | 370 | 6 | 5.23 | 5.33 |
| T-WP-004-0400 | DN 400 | 16" | 406.4 | 425 | 6 | 6.01 | 6.12 |
| T-WP-004-0450 | DN 450 | 18" | 457.2 | 480 | 6 | 6.78 | 6.91 |
| T-WP-004-0500 | DN 500 | 20" | 508 | 530 | 6 | 7.49 | 7.63 |
| T-WP-004-0550 | DN 550 | 22" | 558.8 | 585 | 6 | 8.27 | 8.42 |
| T-WP-004-0600 | DN 600 | 24" | 609.6 | 640 | 6 | 9.04 | 9.22 |
| T-WP-004-0650 | DN 650 | 26" | 660.4 | 691 | 6 | 9.76 | 9.95 |
| T-WP-004-0700 | DN 700 | 28" | 711.2 | 770 | 6 | 10.88 | 11.09 |
| T-WP-004-0750 | DN 750 | 30" | 762 | 780 | 6 | 11.02 | 11.23 |
| T-WP-004-0800 | DN 800 | 32" | 812.8 | 872 | 6 | 12.32 | 12.56 |
| T-WP-004-0850 | DN 850 | 34" | 863.6 | 905 | 6 | 12.79 | 13.03 |
| T-WP-004-0900 | DN 900 | 36" | 914.4 | 960 | 6 | 13.56 | 13.82 |
| T-WP-004-0950 | DN 950 | 38" | 965.2 | 1010 | 10 | 23.79 | 24.24 |
| T-WP-004-1000 | DN 1000 | 40" | 1016 | 1064 | 10 | 25.06 | 25.54 |
| T-WP-004-1050 | DN 1050 | 42" | 1066.8 | 1117 | 10 | 26.31 | 26.81 |
| T-WP-004-1100 | DN 1100 | 44" | 1117.6 | 1171 | 10 | 27.58 | 28.10 |
| T-WP-004-1150 | DN 1150 | 46" | 1168.4 | 1224 | 10 | 28.83 | 29.38 |
| T-WP-004-1200 | DN 1200 | 48" | 1219.2 | 1277 | 10 | 30.07 | 30.65 |

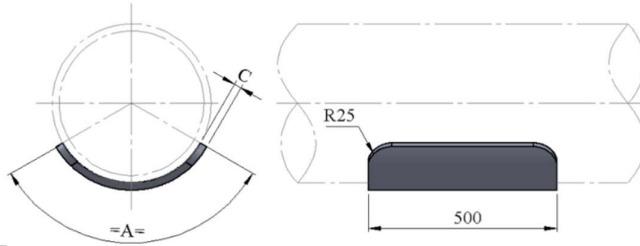
** Titanium (Ti) wear plates for DN80 and DN 100 are 4mm thick.
 All welds to be a=0.7 x W.T , but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Req'd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.5 WEAR PLATE FOR CS , SS & ALLOY LINES , 400mm LONG
WP-005


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-005-(DN)-SS | SS | 350°C | -196°C (-105°C) (Refer Note) |
| T-WP-005-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-005-(DN)-LCS | LCS | 350°C | (-) 46 °C |
| T-WP-005-(DN)-DU | Du | 100°C (Operating) | (-) 46 °C |
| T-WP-005-(DN)-6Mo | 6Mo | 120°C (Operating) | -196°C (-105°C) (Refer Note) |
| T-WP-005-(DN)-Ti** | Ti | 350°C | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-005-0080 | DN 80 | 3" | 88.9 | 90 | 6 ** | 1.7 | 1.7 |
| T-WP-005-0100 | DN 100 | 4" | 114.3 | 120 | 6 ** | 2.3 | 2.3 |
| T-WP-005-0125 | DN 125 | 5" | 141.3 | 148 | 6 | 2.8 | 2.8 |
| T-WP-005-0150 | DN 150 | 6" | 168.3 | 175 | 6 | 3.3 | 3.4 |
| T-WP-005-0200 | DN 200 | 8" | 219.1 | 230 | 6 | 4.3 | 4.4 |
| T-WP-005-0250 | DN 250 | 10" | 273.0 | 285 | 6 | 5.4 | 5.5 |
| T-WP-005-0300 | DN 300 | 12" | 323.8 | 340 | 6 | 6.4 | 6.5 |
| T-WP-005-0350 | DN 350 | 14" | 355.6 | 370 | 6 | 7.0 | 7.1 |
| T-WP-005-0400 | DN 400 | 16" | 406.4 | 425 | 6 | 8.0 | 8.2 |
| T-WP-005-0450 | DN 450 | 18" | 457.2 | 480 | 6 | 9.0 | 9.2 |
| T-WP-005-0500 | DN 500 | 20" | 508 | 530 | 6 | 10.0 | 10.2 |
| T-WP-005-0550 | DN 550 | 22" | 558.8 | 585 | 6 | 11.0 | 11.2 |
| T-WP-005-0600 | DN 600 | 24" | 609.6 | 640 | 6 | 12.1 | 12.3 |
| T-WP-005-0650 | DN 650 | 26" | 660.4 | 691 | 6 | 13.0 | 13.3 |
| T-WP-005-0700 | DN 700 | 28" | 711.2 | 770 | 6 | 14.5 | 14.8 |
| T-WP-005-0750 | DN 750 | 30" | 762 | 780 | 6 | 14.7 | 15.0 |
| T-WP-005-0800 | DN 800 | 32" | 812.8 | 872 | 6 | 16.4 | 16.7 |
| T-WP-005-0850 | DN 850 | 34" | 863.6 | 905 | 6 | 17.1 | 17.4 |
| T-WP-005-0900 | DN 900 | 36" | 914.4 | 960 | 6 | 18.1 | 18.4 |
| T-WP-005-0950 | DN 950 | 38" | 965.2 | 1010 | 10 | 31.7 | 32.3 |
| T-WP-005-1000 | DN 1000 | 40" | 1016 | 1064 | 10 | 33.4 | 34.0 |
| T-WP-005-1050 | DN 1050 | 42" | 1066.8 | 1117 | 10 | 35.1 | 35.7 |
| T-WP-005-1100 | DN 1100 | 44" | 1117.6 | 1171 | 10 | 36.8 | 37.5 |
| T-WP-005-1150 | DN 1150 | 46" | 1168.4 | 1224 | 10 | 38.4 | 39.2 |
| T-WP-005-1200 | DN 1200 | 48" | 1219.2 | 1277 | 10 | 40.1 | 40.9 |

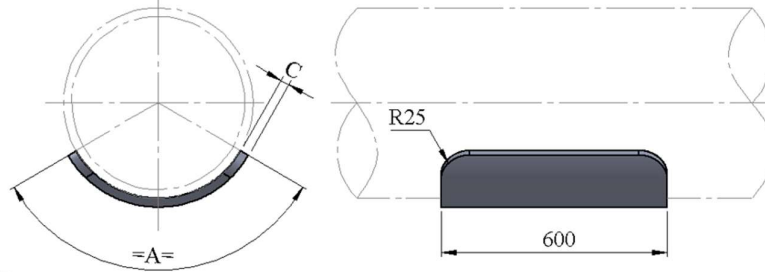
** Titanium (TI) wear Plates for DN80 and DN 100 are 4mm thick
 All welds to be a=0.7 x W.T, but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Reqd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.6 WEAR PLATE FOR CS , SS & ALLOY LINES , 500mm LONG
WP-006


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-006-(DN)-SS | SS | 350°C | -196°C (-105°C) (Refer Note) |
| T-WP-006-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-006-(DN)-LCS | LCS | 350°C | (-) 46 °C |
| T-WP-006-(DN)-DU | Du | 100°C (Operating) | (-) 46 °C |
| T-WP-006-(DN)-6Mo | 6Mo | 120°C (Operating) | -196°C (-105°C) (Refer Note) |
| T-WP-006-(DN)-Ti** | Ti | 350°C | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-006-0080 | DN 80 | 3" | 88.9 | 90 | 6 ** | 2.1 | 2.2 |
| T-WP-006-0100 | DN 100 | 4" | 114.3 | 120 | 6 ** | 2.8 | 2.9 |
| T-WP-006-0125 | DN 125 | 5" | 141.3 | 148 | 6 | 3.5 | 3.6 |
| T-WP-006-0150 | DN 150 | 6" | 168.3 | 175 | 6 | 4.1 | 4.2 |
| T-WP-006-0200 | DN 200 | 8" | 219.1 | 230 | 6 | 5.4 | 5.5 |
| T-WP-006-0250 | DN 250 | 10" | 273.0 | 285 | 6 | 6.7 | 6.8 |
| T-WP-006-0300 | DN 300 | 12" | 323.8 | 340 | 6 | 8.0 | 8.2 |
| T-WP-006-0350 | DN 350 | 14" | 355.6 | 370 | 6 | 8.7 | 8.9 |
| T-WP-006-0400 | DN 400 | 16" | 406.4 | 425 | 6 | 10.0 | 10.2 |
| T-WP-006-0450 | DN 450 | 18" | 457.2 | 480 | 6 | 11.3 | 11.5 |
| T-WP-006-0500 | DN 500 | 20" | 508 | 530 | 6 | 12.5 | 12.7 |
| T-WP-006-0550 | DN 550 | 22" | 558.8 | 585 | 6 | 13.8 | 14.0 |
| T-WP-006-0600 | DN 600 | 24" | 609.6 | 640 | 6 | 15.1 | 15.4 |
| T-WP-006-0650 | DN 650 | 26" | 660.4 | 691 | 6 | 16.3 | 16.6 |
| T-WP-006-0700 | DN 700 | 28" | 711.2 | 770 | 6 | 18.1 | 18.5 |
| T-WP-006-0750 | DN 750 | 30" | 762 | 780 | 6 | 18.4 | 18.7 |
| T-WP-006-0800 | DN 800 | 32" | 812.8 | 872 | 6 | 20.5 | 20.9 |
| T-WP-006-0850 | DN 850 | 34" | 863.6 | 905 | 6 | 21.3 | 21.7 |
| T-WP-006-0900 | DN 900 | 36" | 914.4 | 960 | 6 | 22.6 | 23.0 |
| T-WP-006-0950 | DN 950 | 38" | 965.2 | 1010 | 10 | 39.6 | 40.4 |
| T-WP-006-1000 | DN 1000 | 40" | 1016 | 1064 | 10 | 41.8 | 42.6 |
| T-WP-006-1050 | DN 1050 | 42" | 1066.8 | 1117 | 10 | 43.8 | 44.7 |
| T-WP-006-1100 | DN 1100 | 44" | 1117.6 | 1171 | 10 | 46.0 | 46.8 |
| T-WP-006-1150 | DN 1150 | 46" | 1168.4 | 1224 | 10 | 48.0 | 49.0 |
| T-WP-006-1200 | DN 1200 | 48" | 1219.2 | 1277 | 10 | 50.1 | 51.1 |

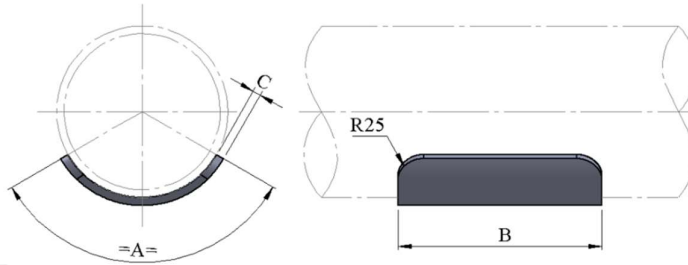
** Titanium (TI) wear Plates for DN80 and DN 100 are 4mm thick
 All welds to be a=0.7 x W.T , but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Reqd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.7 WEAR PLATE FOR CS, SS & ALLOY LINES, 600mm LONG
WP-007


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. OPERATING TEMP | MIN. DESIGN TEMP |
| T-WP-007-(DN)-SS | SS | 350°C | -196°C (-105°C) (Refer Note) |
| T-WP-007-(DN)-CS | CS | 350 °C | (-) 20 °C |
| T-WP-007-(DN)-LCS | LCS | 350°C | (-) 46 °C |
| T-WP-007-(DN)-DU | Du | 100°C (Operating) | (-) 46 °C |
| T-WP-007-(DN)-6Mo | 6Mo | 120°C (Operating) | -196°C (-105°C) (Refer Note) |
| T-WP-007-(DN)-Ti** | Ti | 350°C | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | C | WEIGHTS in kg | |
|---------------|------------|------------------|----------------|-----------------------|------|------------------|------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | | | CS | SS |
| T-WP-007-0080 | DN 80 | 3" | 88.9 | 90 | 6 ** | 2.5 | 2.6 |
| T-WP-007-0100 | DN 100 | 4" | 114.3 | 120 | 6 ** | 3.4 | 3.5 |
| T-WP-007-0125 | DN 125 | 5" | 141.3 | 148 | 6 | 4.2 | 4.3 |
| T-WP-007-0150 | DN 150 | 6" | 168.3 | 175 | 6 | 4.9 | 5.0 |
| T-WP-007-0200 | DN 200 | 8" | 219.1 | 230 | 6 | 6.5 | 6.6 |
| T-WP-007-0250 | DN 250 | 10" | 273.0 | 285 | 6 | 8.1 | 8.2 |
| T-WP-007-0300 | DN 300 | 12" | 323.8 | 340 | 6 | 9.6 | 9.8 |
| T-WP-007-0350 | DN 350 | 14" | 355.6 | 370 | 6 | 10.5 | 10.7 |
| T-WP-007-0400 | DN 400 | 16" | 406.4 | 425 | 6 | 12.0 | 12.2 |
| T-WP-007-0450 | DN 450 | 18" | 457.2 | 480 | 6 | 13.6 | 13.8 |
| T-WP-007-0500 | DN 500 | 20" | 508 | 530 | 6 | 15.0 | 15.3 |
| T-WP-007-0550 | DN 550 | 22" | 558.8 | 585 | 6 | 16.5 | 16.8 |
| T-WP-007-0600 | DN 600 | 24" | 609.6 | 640 | 6 | 18.1 | 18.4 |
| T-WP-007-0650 | DN 650 | 26" | 660.4 | 691 | 6 | 19.5 | 19.9 |
| T-WP-007-0700 | DN 700 | 28" | 711.2 | 770 | 6 | 21.8 | 22.2 |
| T-WP-007-0750 | DN 750 | 30" | 762 | 780 | 6 | 22.0 | 22.5 |
| T-WP-007-0800 | DN 800 | 32" | 812.8 | 872 | 6 | 24.6 | 25.1 |
| T-WP-007-0850 | DN 850 | 34" | 863.6 | 905 | 6 | 25.6 | 26.1 |
| T-WP-007-0900 | DN 900 | 36" | 914.4 | 960 | 6 | 27.1 | 27.6 |
| T-WP-007-0950 | DN 950 | 38" | 965.2 | 1010 | 10 | 47.6 | 48.5 |
| T-WP-007-1000 | DN 1000 | 40" | 1016 | 1064 | 10 | 50.1 | 51.1 |
| T-WP-007-1050 | DN 1050 | 42" | 1066.8 | 1117 | 10 | 52.6 | 53.6 |
| T-WP-007-1100 | DN 1100 | 44" | 1117.6 | 1171 | 10 | 55.2 | 56.2 |
| T-WP-007-1150 | DN 1150 | 46" | 1168.4 | 1224 | 10 | 57.7 | 58.8 |
| T-WP-007-1200 | DN 1200 | 48" | 1219.2 | 1277 | 10 | 60.1 | 61.3 |

** Titanium (Ti) wear plates for DN80 and DN 100 are 4mm thick
 All welds to be $a=0.7 \times W.T$, but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Impact Test Req'd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.

24.8 SPECIAL WEAR PLATES FOR CS, SS & ALLOY LINES
WP-900


| TYPICAL PART NUMBER | AVAILABLE MATERIAL SHORT CODE | STD DETAIL TEMPERATURE LIMITATION | |
|---------------------|-------------------------------|-----------------------------------|------------------------------|
| | | MAX. DESIGN TEMP | MIN. DESIGN TEMP. |
| T-WP-900-(DN)-SS | SS | 350°C | -196°C (-105°C) (Refer Note) |
| T-WP-900-(DN)-CS | CS | 350°C | (-) 20 °C |
| T-WP-900-(DN)-LCS | LCS | 350°C | (-) 46 °C |
| T-WP-900-(DN)-DU | Du | 100°C (Operating) | (-) 46 °C |
| T-WP-900-(DN)-6Mo | 6Mo | 120°C (Operating) | -196°C (-105°C) (Refer Note) |
| T-WP-900-(DN)-Ti** | Ti | 350°C | (-) 196 °C |

| TYPE | LINE SIZE | | | DEVELOPED LENGTH A | | | C | WEIGHTS in kg |
|---------------|-----------|---------------|-------------|--------------------|----------|----------|------|---------------|
| | DN (mm) | NPS in (inch) | NPS in (mm) | NOTE A-1 | NOTE A-2 | NOTE A-3 | | |
| T-WP-900-0080 | DN 80 | 3" | 89.9 | 100 | 110 | 90 | 6 ** | TBA |
| T-WP-900-0100 | DN 100 | 4" | 114.3 | 100 | 130 | 120 | 6 ** | TBA |
| T-WP-900-0125 | DN 125 | 5" | 141.3 | 100 | 150 | 148 | 6 | TBA |
| T-WP-900-0150 | DN 150 | 6" | 168.3 | 100 | 150 | 175 | 6 | TBA |
| T-WP-900-0200 | DN 200 | 8" | 219.1 | 100 | 150 | 230 | 6 | TBA |
| T-WP-900-0250 | DN 250 | 10" | 273.0 | 100 | 150 | 285 | 6 | TBA |
| T-WP-900-0300 | DN 300 | 12" | 323.8 | 100 | 150 | 340 | 6 | TBA |
| T-WP-900-0350 | DN 350 | 14" | 355.6 | 100 | 150 | 370 | 6 | TBA |
| T-WP-900-0400 | DN 400 | 16" | 406.4 | 100 | 150 | 425 | 6 | TBA |
| T-WP-900-0450 | DN 450 | 18" | 457.2 | 100 | 150 | 480 | 6 | TBA |
| T-WP-900-0500 | DN 500 | 20" | 508 | 100 | 150 | 530 | 6 | TBA |
| T-WP-900-0550 | DN 550 | 22" | 558.8 | 100 | 150 | 585 | 6 | TBA |
| T-WP-900-0600 | DN 600 | 24" | 609.6 | 100 | 150 | 640 | 6 | TBA |
| T-WP-900-0650 | DN 650 | 26" | 660.4 | 100 | 150 | 691 | 6 | TBA |
| T-WP-900-0700 | DN 700 | 28" | 711.2 | 100 | 150 | 770 | 6 | TBA |
| T-WP-900-0750 | DN 750 | 30" | 762 | 100 | 150 | 780 | 6 | TBA |
| T-WP-900-0800 | DN 800 | 32" | 812.8 | 100 | 150 | 872 | 6 | TBA |
| T-WP-900-0850 | DN 850 | 34" | 863.6 | 100 | 150 | 905 | 6 | TBA |
| T-WP-900-0900 | DN 900 | 36" | 914.4 | 100 | 150 | 960 | 6 | TBA |
| T-WP-900-0950 | DN 950 | 38" | 965.2 | 100 | 150 | 1010 | 10 | TBA |
| T-WP-900-1000 | DN 1000 | 40" | 1016 | 100 | 150 | 1064 | 10 | TBA |
| T-WP-900-1050 | DN 1050 | 42" | 1066.8 | 100 | 150 | 1117 | 10 | TBA |
| T-WP-900-1100 | DN 1100 | 44" | 1117.6 | 100 | 150 | 1171 | 10 | TBA |
| T-WP-900-1150 | DN 1150 | 46" | 1168.4 | 100 | 150 | 1224 | 10 | TBA |
| T-WP-900-1200 | DN 1200 | 48" | 1219.2 | 100 | 150 | 1277 | 10 | TBA |

** Titanium (Ti) wear plates for DN80 and DN 100 are 4mm thick.
 All welds to be $a=0.7 \times W.T$, but maximum 4mm CFW.
 All welded attachment welded direct to PWHT pipe need to be welded before PWHT.
 Not to be used for lines with acoustic fatigue.
 Developed Length Notes :
 A-1 : Use when DIM B is below 100
 A-2 : Use when DIM B is below 100 and below 300
 A-3 : Use when DIM B is above 300
 Impact Test Reqd. for the below min design temperature
 For Matl. Code SS & 6Mo (-)196° c, for Matl. Code LCS & Du (-)46°c.