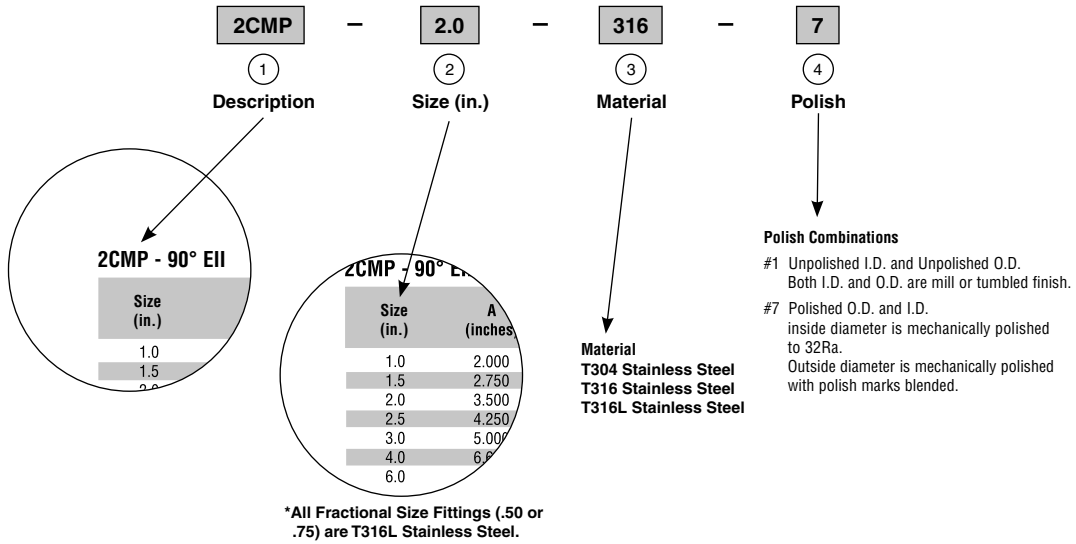


ORDERING INFORMATION

To specify the part completely, start with the description and select each of the additional options shown below. Be sure to denote the material and polish combination. See the example below.

PART NUMBER EXAMPLE



REFERENCE CHARTS

CLAMP SERVICE RATING CHART IN PSI

| Size Tube O.D. | 1/2" & 3/4" | 1" & 1-1/2" | 2" | 2-1/2" | 3" | 4" | 6" |
|--|-------------|-------------|------|--------|------|------|-----|
| 13MHHS - Screw tightened to maximum | | | | | | | |
| at 70°F | 2200 | 600 | 550 | 450 | 350 | 350 | - |
| at 250°F | 1200 | 300 | 275 | 225 | 175 | 175 | - |
| 13HHM - Wing nut tightened to 25 in. lb. of torque | | | | | | | |
| at 70°F | - | 500 | 450 | 400 | 350 | 350 | 150 |
| at 250°F | - | 300 | 300 | 200 | 195 | 195 | 75 |
| 13MHP - Bolts tightened to 20 ft. lb. of torque | | | | | | | |
| at 70°F | - | 1500 | 1000 | 1000 | 1000 | 1000 | 300 |
| at 250°F | - | 1200 | 800 | 800 | 800 | 800 | 200 |
| A13MHM - Wing nut tightened to 25 in. lb. of torque | | | | | | | |
| at 70°F | - | 500 | 450 | 400 | 350 | 350 | 150 |
| at 250°F | - | 300 | 250 | 200 | 175 | 175 | 75 |

*PSI ratings based on hydrostatic test using standard gaskets molded from Buna-N. Ratings assume proper installation of ferrules, joint assembly and the absence of any shock pressure. Please contact Parker Hannifin for ratings at higher temperatures or utilizing other materials. For temperatures above 250° F, only 13MHP clamps are recommended.

CLAMP GASKET MATERIALS REFERENCE CHART

| Original Physical Property Characteristics | BUNA-N (U) | EPDM (E) | Fluoroelastomer (SFY) | Silicone (X) | PTFE (G) |
|--|----------------|----------------|-----------------------|----------------|----------------|
| Temperature Range | -65 To 200°F | -60 To 300°F | -20 To 350°F | -40 To 450°F | -40 To 200°F |
| Tensile Strength, Psi | 1875 | 1650 | 1212 | 1340 | - |
| Elongation, % | 340 | 317 | 272 | 260 | - |
| Hardness, Shore A | 70 | 70 | 70 | 70 | - |
| Acid Resistance | Good | Good/Excellent | Good/Excellent | Poor/Good | Good/Excellent |
| Resistance To Fats/Oils | Good/Excellent | Poor | Good/Excellent | Poor/Good | Excellent |
| Alkali Resistance | Fair/Good | Good/Excellent | Poor/Good | Poor/Fair | Excellent |
| Abrasion Resistance | Excellent | Good | Good/Excellent | Poor | Fair |
| Compression Set Resistance | Good | Fair | Good/Excellent | Good/Excellent | Cold Flows |

REFERENCE CHARTS

SURFACE FINISH REFERENCE CHART

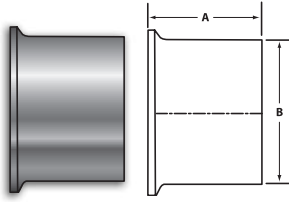
| Polishing Code | Maximum Surface Roughness (RA) | | ASME BPE Finish Code | Polish Method | OD / Product Noncontact Surface |
|----------------|--------------------------------|------------------|----------------------|---------------------------------------|---------------------------------|
| | Microinches (μ-in.) | Microinches (μm) | | | |
| 1 | - | - | - | Unpolished | Unpolished |
| 3 | 32 | 0.8 | - | Mechanical Polish | Unpolished |
| 7 | 32 | 0.8 | - | Mechanical Polish | Polished to Ra, 32 μ-in./0.8um |
| PC | 20 | 0.5 | SFF1 | Mechanical Polish | Unpolished |
| PL | 20 | 0.5 | SFF1 | Mechanical Polish | Polished to Ra, 32 μ-in./0.8um |
| | 25 | 0.625 | SFF2 | Mechanical Polish | 32 or MILL |
| | 30 | 0.75 | SFF3 | Mechanical Polish | 32 or MILL |
| PD | 15 | 0.4 | SFF4 | Mechanical Polish and Electropolished | Unpolished |
| PM | 15 | 0.4 | SFF4 | Mechanical Polish and Electropolished | Polished to Ra, 32 μ-in./0.8um |
| | 20 | 0.5 | SFF5 | Mechanical Polish and Electropolished | 32 or MILL |
| | 25 | 0.625 | SFF6 | Mechanical Polish and Electropolished | 32 or MILL |

DIMENSIONS OF CLAMP CONNECTIONS FOR OD-TUBING

| OD (in.) | ID (in.) | Wall Thickness (in./gauge) | A Ferrule Face (in.) |
|----------|----------|----------------------------|----------------------|
| 1/4 | 0.35 | - | - |
| 1/2 | 0.37 | 0.065/16ga. | 0.984 |
| 3/4 | 0.62 | 0.065/16ga. | 0.984 |
| 1 | 0.87 | 0.065/16ga. | 1.984 |
| 1-1/2 | 1.37 | 0.065/16ga. | 1.984 |
| 2 | 1.87 | 0.065/16ga. | 2.516 |
| 2-1/2 | 2.37 | 0.065/16ga. | 3.047 |
| 3 | 2.87 | 0.065/16ga. | 3.579 |
| 4 | 3.87 | 0.083/14ga. | 4.682 |
| 6 | - | .109 | - |

TANK WELDING FERRULE - HEAVY

SERIES 14MPW

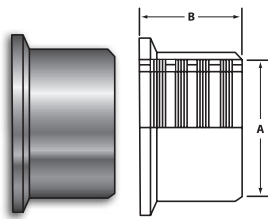


14MPW

| Size (in.) | A (in.) | B (in.) | Nominal Wall Thickness |
|------------|---------|---------|------------------------|
| .50 | 2.125 | 0.500 | .065 |
| .75 | 2.125 | 0.750 | .065 |
| 1.0 | 1.625 | 1.160 | .145 |
| 1.5 | 1.625 | 1.676 | .153 |
| 2.0 | 1.750 | 2.192 | .161 |
| 2.5 | 1.750 | 2.708 | .169 |
| 3.0 | 1.812 | 3.224 | .177 |
| 4.0 | 2.125 | 4.256 | .211 |
| 6.0 | 2.125 | 6.000 | .217 |
| 8.0 | 2.125 | 8.000 | .217 |

RECESSLESS FERRULE

SERIES 14RMP



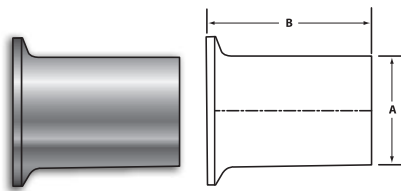
14RMP

| Size A (in.) | B (in.) |
|--------------|---------|
| 1.0 | 0.750 |
| 1.5 | 1.125 |
| 2.0 | 1.312 |
| 2.5 | 1.375 |
| 3.0 | 1.437 |
| 4.0 | 1.500 |

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TANK WELDING SPUD - LIGHT

SERIES 14WLMP



14WLMP

| Size A (in.) | B (in.) | Nominal Wall Thickness |
|--------------|---------|------------------------|
| 1.0 | 3.000 | .065 |
| 1.5 | 3.000 | .065 |
| 2.0 | 3.000 | .065 |
| 2.5 | 3.000 | .065 |
| 3.0 | 4.000 | .065 |
| 4.0 | 4.000 | .083 |
| 6.0 | 6.000 | .109 |
| 8.0 | 6.000 | .109 |
| 10.0 | 6.000 | .140 |
| 12.0 | 6.000 | .140 |