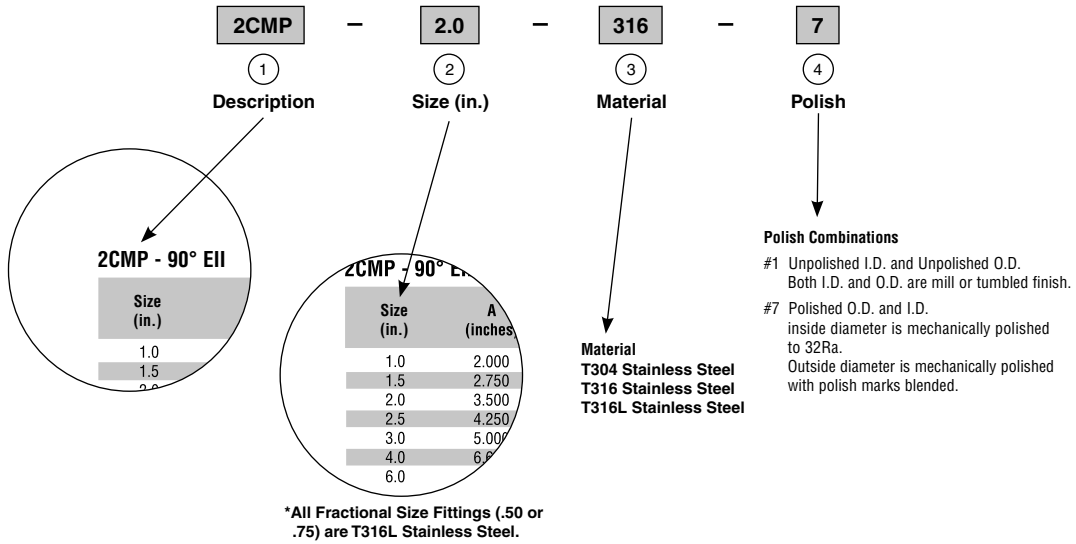


**ORDERING INFORMATION**

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"
<b>13MHHS - Screw tightened to maximum</b>							
at 70°F	2200	600	550	450	350	350	-
at 250°F	1200	300	275	225	175	175	-
<b>13HHM - Wing nut tightened to 25 in. lb. of torque</b>							
at 70°F	-	500	450	400	350	350	150
at 250°F	-	300	300	200	195	195	75
<b>13MHP - Bolts tightened to 20 ft. lb. of torque</b>							
at 70°F	-	1500	1000	1000	1000	1000	300
at 250°F	-	1200	800	800	800	800	200
<b>A13MHM - Wing nut tightened to 25 in. lb. of torque</b>							
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**

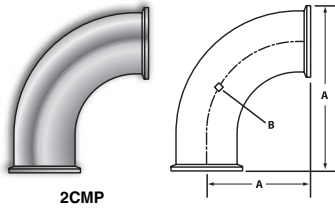
Polishing Code	Maximum Surface Roughness (RA)		ASME BPE Finish Code	Polish Method	OD / Product Noncontact Surface
	Microinches (μ-in.)	Microinches (μm)			
1	-	-	-	Unpolished	Unpolished
3	32	0.8	-	Mechanical Polish	Unpolished
7	32	0.8	-	Mechanical Polish	Polished to Ra, 32 μ-in./0.8um
PC	20	0.5	SFF1	Mechanical 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	-

**90° ELL**

**SERIES 2CMP**



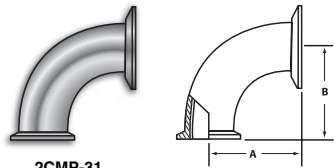
2CMP

Size (in.)	A (in.)	B (in.)
1.0	2.000	1.500
1.5	2.750	2.250
2.0	3.500	3.000
2.5	4.250	3.750
3.0	5.000	4.500
4.0	6.625	6.000
6.0	9.750	9.000

**BPE** SIZE ONLY

**90° CONCENTRIC REDUCING ELBOW**

**SERIES 2CMP-31**

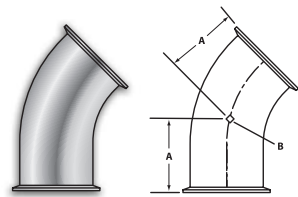


2CMP-31

Size (in.)	A (in.)	B (in.)
2.0 x 1.0	2.00	2.00
2.0 x 1.0	2.75	2.75
2.5 x 1.0	2.75	2.75
2.5 x 2.0	3.50	3.50
3.0 x 1.5	2.75	2.75
3.0 x 2.0	3.50	3.50
3.0 x 2.5	4.25	4.25
4.0 x 2.5	4.25	4.25
4.0 x 3.0	5.00	5.00

**45° ELL**

**SERIES 2KMP**



2KMP

Size (in.)	A (in.)	B (in.)
1.0	1.125	1.500
1.5	1.437	2.250
2.0	1.750	3.000
2.5	2.062	3.750
3.0	2.375	4.500
4.0	3.125	6.000
6.0	4.500	9.000

**BPE** SIZE ONLY