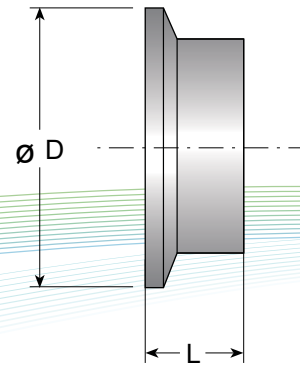


## Ferrules

### Ferrule DT - 22C

Nominal Size		Dimensions				Ordering Code
	Type	L in.	L mm.	D in.	D mm.	
1/4"	A	0.500	12.7	0.984	24.9	007000-110-P6*
3/8"	A	0.500	12.7	0.984	24.9	010000-110-P6*
1/2"	A	0.500	12.7	0.984	24.9	015000-110-P6*
3/4"	A	0.500	12.7	0.984	24.9	020000-110-P6*
1.0"	A	0.500	12.7	1.339	34.0	024000-110-P6*
1.0"	B	0.500	12.7	1.984	50.3	025000-110-P6*
1½"	B	0.500	12.7	1.984	50.3	038000-110-P6*
2.0"	B	0.500	12.7	2.516	63.9	051000-110-P6*
2½"	B	0.500	12.7	3.047	77.3	063000-110-P6*
3.0"	B	0.500	12.7	3.579	90.9	076000-110-P6*
4.0"	B	0.650	15.9	4.682	118.9	100000-110-P6*
6.0"	B	0.750	19.1	6.570	166.8	150000-110-P6*

\*The last digit refers to surface quality, according to Table 1

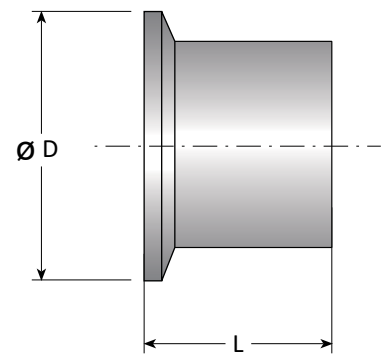


BPE TABLE # DT -4.1.4-1(C)

### Ferrule DT - 22B

Nominal Size	Dimensions					Ordering Code
	Type	L in.	L mm.	D in.	D mm.	
1/4"	A	1.130	28.7	0.984	24.9	007000-111-P6*
3/8"	A	1.130	28.7	0.984	24.9	010000-111-P6*
1/2"	A	1.130	28.7	0.984	24.9	015000-111-P6*
3/4"	A	1.130	28.7	0.984	24.9	020000-111-P6*
1.0"	A	1.130	28.7	1.339	34.0	024000-111-P6*
1.0"	B	1.130	28.7	1.984	50.3	025000-111-P6*
1½"	B	1.130	28.7	1.984	50.3	038000-111-P6*
2.0"	B	1.130	28.7	2.516	63.9	051000-111-P6*
2½"	B	1.130	28.7	3.047	77.3	063000-111-P6*
3.0"	B	1.130	28.7	3.579	90.9	076000-111-P6*
4.0"	B	1.130	28.7	4.682	118.9	100000-111-P6*
6.0"	B	1.500	38.1	6.570	166.8	150000-111-P6*

\*The last digit refers to surface quality, according to Table 1



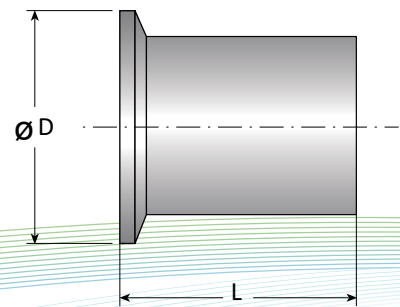
BPE TABLE # DT -4.1.4-1(B)

## Ferrules

### Ferrule DT - 22A

Nominal Size	Dimensions					Ordering Code
Type	L in.	L mm.	D in.	D mm.		
1/4"	A	1.750	44.5	0.984	24.9	007000-112-P6*
3/8"	A	1.750	44.5	0.984	24.9	010000-112-P6*
1/2"	A	1.750	44.5	0.984	24.9	015000-112-P6*
3/4"	A	1.750	44.5	0.984	24.9	020000-112-P6*
1.0"	A	1.750	44.5	1.339	34.0	024000-112-P6*
1.0"	B	1.750	44.5	1.984	50.3	025000-112-P6*
1 1/2"	B	1.750	44.5	1.984	50.3	038000-112-P6*
2.0"	B	2.250	57.2	2.516	63.9	051000-112-P6*
2 1/2"	B	2.250	57.2	3.047	77.3	063000-112-P6*
3.0"	B	2.250	57.2	3.579	90.9	076000-112-P6*
4.0"	B	2.250	57.2	4.682	118.9	100000-112-P6*
6.0"	B	3.000	76.2	6.570	166.8	150000-112-P6*

\*The last digit refers to surface quality, according to Table 1



BPE TABLE # DT -4.1.4-1(A)

TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
BPE Table	DT - 4.1.1-4(A)
Surface finish standard on stock	SF1

Table 1

Inside Surface		Outside Surface	
No finish requirement		No finish requirement	0
SF1 (MP* 20µ-in 0.51 µm)		Mechanically polished to 32RA µ-in	4
SF4 (MP** 15µ-in 0.38 µm)		Mechanically polished to 32RA µ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

Description	Nominal Size In.	Type	Ordering Code
Type 112	1.0"	A	025000-112-P64*

\*Material and Surface are including to the ordering code

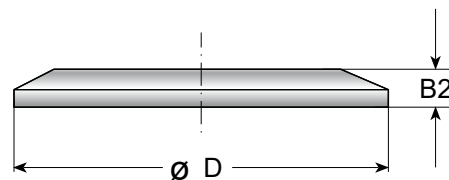
## End Caps

## Solid

### Ferrule DT - 22A

Nominal Size	Dimensions				Ordering Code
	B2in.	B2mm.	D in.	D mm.	
1/4"	0.187	4.7	0.984	24.9	007000-000-P6*
3/8"	0.187	4.7	0.984	24.9	010000-000-P6*
1/2"	0.187	4.7	0.984	24.9	015000-000-P6*
3/4"	0.187	4.7	0.984	24.9	020000-000-P6*
1.0" (Type A)	0.250	6.4	1.339	34.0	024000-000-P6*
1.0"	0.250	6.4	1.984	50.3	025000-000-P6*
1½"	0.250	6.4	1.984	50.3	038000-000-P6*
2.0"	0.250	6.4	2.516	63.9	051000-000-P6*
2½"	0.250	6.4	3.047	77.3	063000-000-P6*
3.0"	0.250	6.4	3.579	90.9	076000-000-P6*
4.0"	0.312	7.9	4.682	118.9	100000-000-P6*
6.0"	0.437	11.1	6.570	166.8	150000-000-P6*

\*The last digit refers to surface quality, according to Table 1



BPE TABLE # DT-4.1.5-2

TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
BPE Table	DT - 4.1.5-2
Surface finish standard on stock	SF1

Table 1

Inside Surface		Outside Surface	
No finish requirement	No finish requirement	0	
SF1 (MP* 20µ-in 0.51 µm)	Mechanically polished to 32RA µ-in	4	
SF4 (MP** 15µ-in 0.38 µm)	Mechanically polished to 32RA µ-in	M	

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

Description	Nominal Size In.	Ordering Code
Type 000	1/2"	015000-000-P64*

\*Material and Surface are including to the ordering code

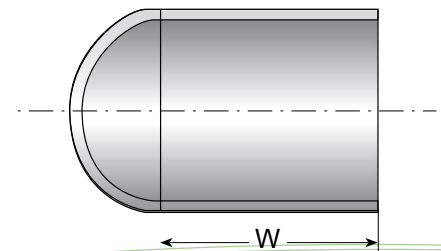
## End Caps

## Weld Caps

### Tube Weld End Cap DT -4.1.5-1

Nominal Size	Dimensions		Ordering Code
	W in.	W mm.	
1/2"	1.500	38.1	015000-001-P6*
3/4"	1.500	38.1	020000-001-P6*
1.0" (Type A)	1.500	38.1	024000-001-P6*
1.0"	1.500	38.1	025000-001-P6*
1½"	1.500	38.1	038000-001-P6*
2.0"	1.500	38.1	051000-001-P6*
2½"	1.500	38.1	063000-001-P6*
3.0"	1.750	44.5	076000-001-P6*
4.0"	2.000	50.8	100000-001-P6*
6.0"	2.500	63.5	150000-001-P6*

\*The last digit refers to surface quality, according to Table 1



BPE TABLE # DT -4.1.5-1

TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
BPE Table	DT - 4.1.5-1
Surface finish standard on stock	SF1

Table 1

Inside Surface		Outside Surface	
No finish requirement		No finish requirement	0
SF1 (MP* 20μ-in 0.51 μm)		Mechanically polished to 32RA μ-in	4
SF4 (MP** 15μ-in 0.38 μm)		Mechanically polished to 32RA μ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

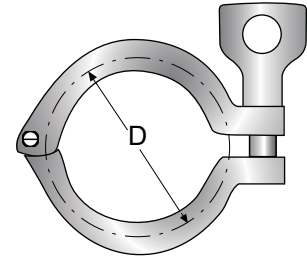
Description	Nominal Size In.	Ordering Code
Type 001	1/2"	015000-001-P64*

\*Material and Surface are including to the ordering code

## Clamps

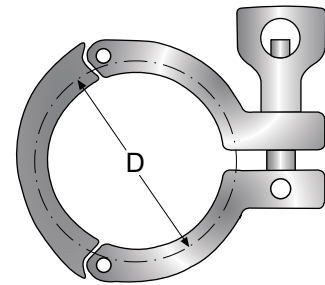
### 13-LAH

Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1/2" & 3/4"	1.125	28.5	13-LAH-034
1.0" & 1/2"	2.122	53.9	13-LAH-100/150
2.0"	2.654	64.5	13-LAH-200
2½"	3.185	80.8	13-LAH-250
3.0"	3.717	94.4	13-LAH-300
4.0"	4.820	122.42	13-LAH-400
6.0"	6.695	170.05	13-LAH-600



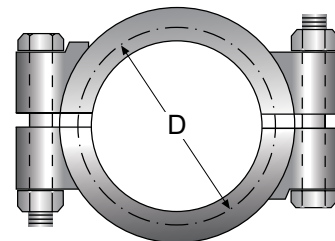
### 13-MHHS

Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1.0" & 1/2"	2.122	53.9	13-MHHS-100/150
2.0"	2.654	67.4	13-MHHS-200
2½"	3.185	80.8	13-MHHS-250
3.0"	3.717	94.4	13-MHHS-300
4.0"	4.820	108.7	13-MHHS-400



### 13-MHP

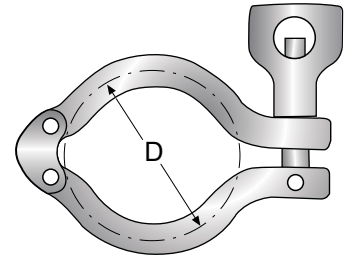
Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1/2" & 3/4"	1.062	26.97	13-MHP-034
1.0" & 1/2"	2.046	51.97	13-MHP-100/150
2.0"	2.578	65.48	13-MHP-200
2½"	3.110	78.99	13-MHP-250
3.0"	3.640	92.46	13-MHP-300
4.0"	4.744	120.50	13-MHP-400
6.0"	6.632	168.45	13-MHHS-600



## Clamps

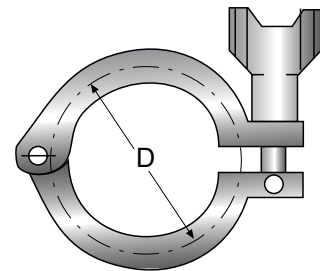
### 20-LAH

Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1½"	2.122	53.9	20-LAH-100/150
2.0"	2.654	67.4	20-LAH-200
2½"	3.185	80.8	20-LAH-250
3.0"	3.717	94.4	20-LAH-300
4.0"	4.820	108.7	20-LAH-400



### 21-LAH

Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1½" & 3/4"	2.125	28.5	21-LAH-034
1.0" & 1½"	2.122	53.9	21-LAH-100/150
2.0"	2.654	64.5	21-LAH-200
2½"	3.185	80.8	21-LAH-250
3.0"	3.717	94.4	21-LAH-300
4.0"	4.820	122.42	21-LAH-400
6.0"	6.695	170.05	21-LAH-600



### FSCL

Nominal Size	Dimensions		Ordering Code
	D in.	D mm.	
1½"	2.125	53.9	FSCL-100/150
2.0"	2.654	64.5	FSCL-200
2½"	3.185	80.8	FSCL-250
3.0"	3.717	94.4	FSCL-300
4.0"	4.820	108.7	FSCL-400

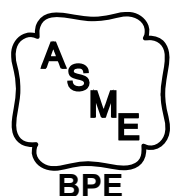


Material	304L
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#### Ordering Example

Description	Nominal Size In.	Ordering Code
Type 21-LAH	2.0"	21LAH-200

\*Material and Surface are including to the ordering code

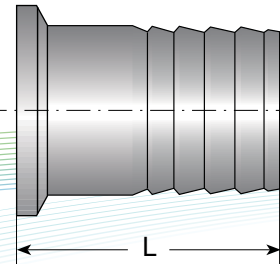


## Hose Barbs

### Nominal Size      Dimensions      Ordering Code

	L in.	L mm.	
1/2" x 1/4"	1.500	38.1	015007-B11-P6*
1/2" x 3/8"	1.500	38.1	015010-B11-P6*
1/2" x 1/2"	1.500	38.1	015015-B11-P6*
3/4" x 1/4"	1.500	38.1	020007-B11-P6*
3/4" x 3/8"	1.500	38.1	020010-B11-P6*
3/4" x 1/2"	1.500	38.1	020015-B11-P6*
1/2"	1.750	44.5	015000-B11-P6*
3/4"	1.750	44.5	020000-B11-P6*
1.0"	1.750	44.5	025000-B11-P6*
1 1/2"	1.750	44.5	038000-B11-P6*
2.0"	2.250	57.15	051000-B11-P6*
2 1/2"	2.250	57.15	063000-B11-P6*
3.0"	3.090	78.6	076000-B11-P6*
4.0"	3.410	86.5	100000-B11-P6*

\*The last digit refers to surface quality, according to Table 1



### TECHNICAL DATA

Material	316L
Norm	ASME - BPE
Surface finish standard on stock	SF1

Table 1

Inside Surface	Outside Surface	
No finish requirement	No finish requirement	0
SF1 (MP* 20μ-in 0.51 μm)	Mechanically polished to 32RA μ-in	4
SF4 (MP** 15μ-in 0.38 μm)	Mechanically polished to 32RA μ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

Description	Nominal Size In.	Ordering Code
Type B11	1.0"	025000-B11-P64*

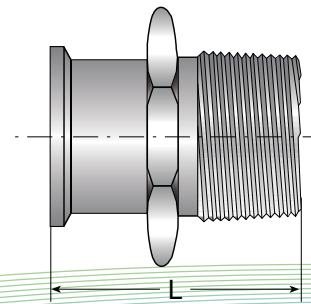
\*Material and Surface are including to the ordering code



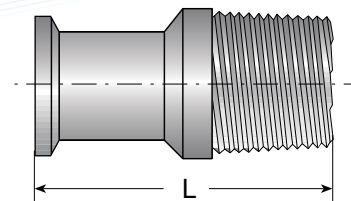
## Adapters

Nominal Size	Dimensions		Ordering Code
	L in.	L mm.	
1/2" x 1/8"	2.000	50.8	015003-A30-P6*
1/2" x 1/4"	2.000	50.8	015007-A30-P6*
1/2" x 3/8"	2.000	50.8	015010-A30-P6*
1/2" x 1/2"	2.000	50.8	015015-A30-P6*
1/2" x 3/4"	2.000	50.8	015020-A30-P6*
3/4" x 1/8"	2.000	50.8	020003-A30-P6*
3/4" x 1/4"	2.000	50.8	020007-A30-P6*
3/4" x 3/8"	2.000	50.8	020010-A30-P6*
3/4" x 1/2"	2.000	50.8	020015-A30-P6*
3/4" x 3/4"	2.000	50.8	020020-A30-P6*
1.0"	2.250	50.8	025000-A30-P6*
1 1/2"	2.440	61.9	038000-A30-P6*
2.0"	2.660	67.5	051000-A30-P6*
2 1/2"	3.280	83.3	063000-A30-P6*
3.0"	3.500	88.9	076000-A30-P6*
4.0"	3.810	96.7	100000-A30-P6*

\*The last digit refers to surface quality, according to Table 1



1" THROUGH 4"



1/2" & 3/4" SIZES

TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
Surface finish standard on stock	SF1

Table 1

Inside Surface		Outside Surface	
No finish requirement		No finish requirement	0
SF1 (MP* 20μ-in 0.51 μm)		Mechanically polished to 32RA μ-in	4
SF4 (MP** 15μ-in 0.38 μm)		Mechanically polished to 32RA μ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

Description	Nominal Size In.	Ordering Code
Type A30	1.0"	025000-A30-P64*

\*Material and Surface are including to the ordering code

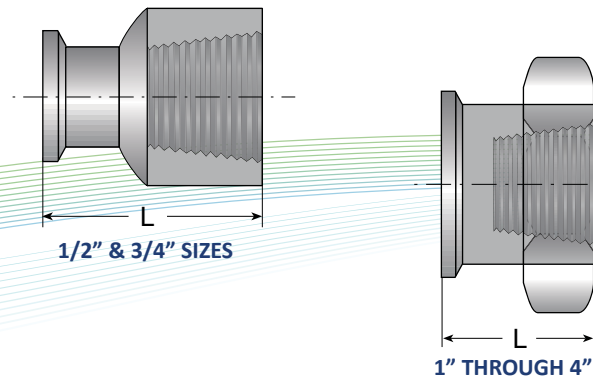


## Adapters

Nominal Size	Dimensions		Ordering Code
	L in.	L mm.	

1/2" x 1/8"	2.000	50.8	015003-A31-P6*
1/2" x 1/4"	2.000	50.8	015007-A31-P6*
1/2" x 3/8"	2.000	50.8	015010-A31-P6*
1/2" x 1/2"	2.000	50.8	015015-A31-P6*
1/2" x 3/4"	2.000	50.8	015020-A31-P6*
3/4" x 1/8"	2.000	50.8	020003-A31-P6*
3/4" x 1/4"	2.000	50.8	020007-A31-P6*
3/4" x 3/8"	2.000	50.8	020010-A31-P6*
3/4" x 1/2"	2.000	50.8	020015-A31-P6*
3/4" x 3/4"	2.000	50.8	020020-A31-P6*
1.0"	2.250	50.8	025000-A31-P6*
1 1/2"	2.440	61.9	038000-A31-P6*
2.0"	2.660	67.5	051000-A31-P6*
2 1/2"	3.280	83.3	063000-A31-P6*
3.0"	3.500	88.9	076000-A31-P6*
4.0"	3.810	96.7	100000-A31-P6*

\*The last digit refers to surface quality, according to Table 1



TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
Surface finish standard on stock	SF1

**Table 1**

Inside Surface		Outside Surface
No finish requirement	No finish requirement	0
SF1 (MP* 20μ-in 0.51 μm)	Mechanically polished to 32RA μ-in	4
SF4 (MP** 15μ-in 0.38 μm)	Mechanically polished to 32RA μ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

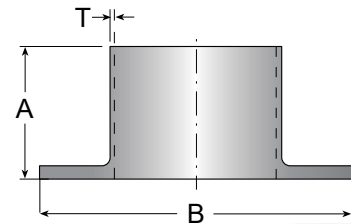
### Ordering Example

Description	Nominal Size In.	Ordering Code
Type A31	1.0"	025000-A31-P64*

\*Material and Surface are including to the ordering code

## Stub Ends & Slip on Flanges

Nominal Size	Dimensions						Ordering Code
	A in.	A mm.	B in.	B mm.	T in.	T mm.	
1/2"	2.000	50.80	1.650	41.3	0.065	1.65	015000-990-P6*
3/4"	2.000	50.80	1.687	42.9	0.065	1.65	020000-990-P6*
1.0"	2.000	50.80	2.000	50.8	0.065	1.65	025000-990-P6*
1½"	2.000	50.80	2.875	73.0	0.065	1.65	038000-990-P6*
2.0"	2.500	63.50	3.265	92.1	0.065	1.65	051000-990-P6*
2½"	2.500	63.50	4.125	104.8	0.065	1.65	063000-990-P6*
3.0"	2.500	63.50	5.000	127.0	0.065	1.65	076000-990-P6*
4.0"	2.500	63.50	6.187	157.2	0.083	2.11	100000-990-P6*
6.0"	3.000	76.20	8.500	215.9	0.109	2.77	150000-990-P6*



\*The last digit refers to surface quality, according to Table 1

TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
Surface finish standard on stock	SF1

**Table 1**

Inside Surface		Outside Surface	
No finish requirement		No finish requirement	0
SF1 (MP* 20µ-in 0.51 µm)		Mechanically polished to 32RA µ-in	4
SF4 (MP** 15µ-in 0.38 µm)		Mechanically polished to 32RA µ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

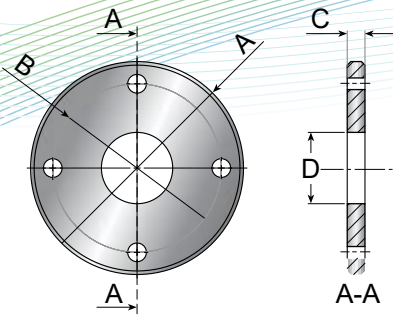
Description	Nominal Size In.	Ordering Code
Type 990	1.0"	025000-990-P64*

\*Material and Surface are including to the ordering code

## Stub Ends & Slip on Flanges

Nominal Size	Dimensions								Ordering Code
	A in.	A mm.	B in.	B mm.	C in.	C mm.	D in.	D mm.	
1.0"	4.250	108.0	3.125	79.4	0.375	9.5	1.010	25.7	025000-991-P6*
1½"	5.000	127.0	3.875	98.4	0.437	11.1	1.510	38.4	015000-991-P6*
2.0"	6.000	152.4	4.750	120.7	0.500	12.7	2.010	51.1	051000-991-P6*
2½"	7.000	177.8	5.500	139.7	0.562	14.3	2.510	63.8	063000-991-P6*
3.0"	7.750	190.5	6.000	152.4	0.625	15.9	3.010	76.5	076000-991-P6*
4.0"	9.000	228.6	7.500	190.5	0.689	17.5	4.010	101.9	100000-991-P6*
6.0"	11.000	297.4	9.500	241.3	0.811	20.6	6.010	152.9	150000-991-P6*

\*The last digit refers to surface quality, according to Table 1



TECHNICAL DATA	
Material	316L
Norm	ASME - BPE
Surface finish standard on stock	SF1

**Table 1**

Inside Surface		Outside Surface	
No finish requirement		No finish requirement	0
SF1 (MP* 20μ-in 0.51 μm)		Mechanically polished to 32RA μ-in	4
SF4 (MP** 15μ-in 0.38 μm)		Mechanically polished to 32RA μ-in	M

\*MP: Mechanically Polished

\*\*MPE: Mechanically Polished & Electropolished

### Ordering Example

Description	Nominal Size In.	Ordering Code
Type 991	1.0"	025000-991-P64*

\*Material and Surface are including to the ordering code