Tubing Size 1/8" - 1/4" 1/8" Flow Chrome Brass

## **20CB Series Couplings**

Produced in food grade chrome plated brass, these 1/8" flow size couplings are more durable and withstand higher pressures. They are available with internal shut-off valves or straight through. All 20CB couplings interconnect with all other 20AC and 20PP couplings as well as other similar industry thumb-latch type couplings.

#### **Performance Ratings:**

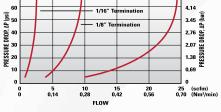
- Operating Pressure: Vacuum to 250psi; (17.3bar)
- Temperature: -40°F to 180°F; (-40°C to 82°C)
- Flow Capacity: 1/8" Size

#### Materials & Construction:

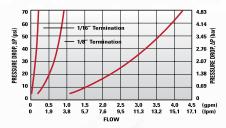
- Bodies & Terminations: Food Grade Chrome/Brass
- Internal Valves: Acetal (POM)
- Internal Valve Springs: 316 Stainless Steel
- O-rings: FDA & NSF Grade Buna-N (others available)
- Thumb-latch: Stainless Steel
- External Springs & Pins: Stainless Steel







#### **20CB Series Water Flow**



Specific coupling combination

flow rates can be determined

by using this formula:

#### **FLOW RATES**

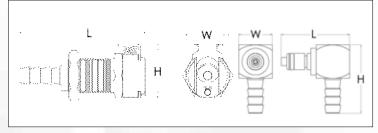
The data below shows liquid flow rates for LinkTech couplings. Each coupling combination was tested at 70°F (21°C).

#### C<sub>v</sub> Values for 20CB Series Couplings

	20CBV-	20CB-												
SOCKETS	PB2-02	PB2-02	PB2-03	PB2-03	PB2-04	PB2-04	PB9-04	PB9-04	PB1-02	PB1-02	PB1-04	PB1-04	PB4-04	PB4-04
20CBV-SB2-04	0.16	0.22	0.16	0.22	0.21	0.26	0.17	0.23	0.19	0.25	0.21	0.25	0.24	0.27
20CB-S2-04	0.18	0.24	0.19	0.26	0.23	0.45	0.24	0.33	0.2	0.45	0.24	0.38	0.27	0.45
20CBV-SB3-02	0.14	0.17	0.14	0.18	0.15	0.19	0.15	0.19	0.18	0.18	0.15	0.18	0.15	0.19
20CB-S3-02	0.14	0.19	0.14	0.2	0.15	0.27	0.15	0.24	0.15	0.27	0.18	0.28	0.16	0.27
20CBV-SB3-04	0.16	0.22	0.16	0.22	0.21	0.26	0.17	0.23	0.19	0.26	0.21	0.26	0.16	0.25
20CB-S3-04	0.18	0.25	0.19	0.27	0.23	0.45	0.23	0.34	0.2	0.45	0.25	0.45	0.26	0.45
20CBV-SB8-04	0.16	0.2	0.16	0.21	0.17	0.22	0.17	0.21	0.17	0.21	0.17	0.21	0.18	0.22
20CB-S8-04	0.16	0.25	0.17	0.3	0.18	0.4	0.18	0.4	0.16	0.4	0.18	0.36	0.21	0.4
20CBV-SB1-02	0.16	0.24	0.17	0.25	0.2	0.28	0.18	0.27	0.2	0.26	0.2	0.29	0.24	0.26
20CB-S1-02	0.16	0.25	0.17	0.3	0.19	0.5	0.18	0.4	0.2	0.5	0.2	0.5	0.24	0.5
20CBV-SB1-04	0.17	0.25	0.18	0.25	0.23	0.3	0.19	0.3	0.21	0.27	0.23	0.28	0.24	0.29
20CB-S1-04	0.18	0.26	0.19	0.3	0.24	0.5	0.21	0.4	0.2	0.5	0.25	0.51	0.26	0.5

#### **Panel Mount Dimensions**

	PANEL OPENING	MAX PANEL THICKESS	MIN PANEL THICKNESS
SOCKETS	0.5″	0.5″	0.05″
PLUGS	0.5″	0.3″	0.05″
PANEL	NUT HEX SIZE	PANEL NUT THREAD	
	5/8"	1/2" - 24 UNS	$1 \neq 2$



Reference Dimensions: L = Length, W = Width, H = Height

#### $Q = C_v \sqrt{\frac{\Delta P}{S}}$

 $\begin{aligned} &\mathsf{Q} = \mathsf{Flow rate in gallons per minute} \\ &\mathsf{C}_v = \mathsf{Average flow rates (see chart)} \\ &\Delta\mathsf{P} = \mathsf{Pressure drop across coupling (psi)} \\ &\mathsf{S} = \mathsf{Specific gravity of liquid.} \end{aligned}$ 

## **20CB Series Sockets**

Tubing Size 1/8"- 1/4" 1/8" Flow Chrome Brass

MALE THREAD SOCKET						
Non-Valved	Valved	Thread Size	Length	Width	Height	
20CB-S1-02	20CBV-SB1-02	1/8" NPT	1.00″	.62″	.80″	
20CB-S1-02BSPT	20CBV-SB1-02BSPT	1/8" BSPT	1.00″	.62″	.80″	
20CB-S1-04	20CBV-SB1-04	1/4" NPT	1.00″	.62″	.80″	
20CB-S1-04BSPT	20CBV-SB1-04BSPT	1/4" BSPT	1.00″	.62″	.80″	



PANEL MOUNT HOSE BARB SOCKET

Valved

20CBV-SB3-02

20CBV-SB3-03

20CBV-SB3-04

Non-Valved

20CB-S3-02

20CB-S3-03

20CB-S3-04

Non-Valved	Valved	Tube Size	Metric Tube	Length	Width	Height
20CB-S2-02	20CBV-SB2-02	1/8" ID	3.2mm ID	1.65″	.62″	.80″
20CB-S2-03	20CBV-SB2-03	3/16" ID	4.8mm ID	1.85″	.62″	.80″
20CB-S2-04	20CBV-SB2-04	1/4″ ID	6.4mm ID	1.85″	.62″	.80″



<b>IN-LINE PTF</b>	IN-LINE PTF SOCKET								
Non-Valved	Valved	Tube Size	Metric Tube	Length	Width	Height			
20CB-S9-025	20CBV-SB9-025	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	1.68″	.63″	.80″			
20CB-S9-04	20CBV-SB9-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.78″	.63″	.80″			

**Metric Tube** 

3.2mm ID

4.8mm ID

6.4mm ID

Length

1.68″

1.89"

1.89"

Width

.62″

.62″

.62″

Height

.80″

.80″

.80″

Tube Size

1/8" ID

3/16" ID

1/4" ID





PANEL MOUNT PTF SOCKET								
Non-Valved	Valved	Tube Size	Metric Tube	Length	Width	Height		
20CB-S8-025	20CBV-SB8-025	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	1.68″	.62″	.80″		
20CB-S8-04	20CBV-SB8-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.78″	.62″	.80″		

PANEL MOUNT MALE THREAD SOCKET						
Non-Valved	Valved	Thread Size	Length	Width	Height	
20CB-S12-02	20CBV-SB12-02	1/8″ NPT	.62″	.80″	.80″	

PANEL MOUNT FEMALE THREAD SOCKET							
Non-Valved	Valved	Thread Size	Length	Width	Height		
20CB-S19-1032	20CBV-SB19-1032	10/32 UNF	.62″	.80″	.80″		

## 20CB Series Plugs

Tubing Size 1/8" - 1/4" 1/8" Flow Chrome Brass

MALE THREAD PLUG								
Non-Valved	Valved	Thread Size	L(nv/v)	Width	Height			
20CB-PB1-02	20CBV-PB1-02	1/8" NPT	1.05"/1.45"	.50″	.50″			
20CB-PB1-02BSPT	20CBV-PB1-02BSPT	1/8" BSPT	1.05"/1.45"	.50″	.50″			
20CB-PB1-04	20CBV-PB1-04	1/4" NPT	1.05"/1.45"	.75″	.75″			
20CB-PB1-04BSPT	20CBV-PB1-04BSPT	1/4" BSPT	1.05"/1.45"	.75″	.75″			

FEMALE THREAD PI	FEMALE THREAD PLUG							
Non-Valved	Valved	Thread Size	L(nv/v)	Width	Height			
20CB-PB13-1032	20CBV-PB13-1032	10/32 UNF	.63"/1.35"	.56″	.56″			
20CB-PB13-02	N/A	1/8" NPT	.95″/n/a	.56″	.56″			
20CB-PB13-02BSPT	N/A	1/8" BSPT	.95″/n/a	.56″	.56″			
20CB-PB13-04	N/A	1/4" NPT	1.15"/n/a	.63″	.63″			

Tubing Size 1/8"- 1/4" 1/8" Flow Chrome Brass

## **20CB Series Plugs**



IN-LINE HUSE	BARB PLUG					
Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB2-02	20CBV-PB2-02	1/8" ID	3.2mm ID	.98″/1.65″	.63″	.63″
20CB-PB2-03	20CBV-PB2-03	3/16" ID	4.8mm ID	1.13"/1.80"	.63″	.63″
20CB-PB2-04	20CBV-PB2-04	1/4" ID	6.4mm ID	1.13"/1.85"	.63″	.63″

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IN-LINE PTF PL	UG					
Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB9-025	20CBV-PB9-025	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	1.15"/1.55"	.63″	.63″
20CB-PB9-04	20CBV-PB9-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.15"/1.55"	.63″	.63″
20CB-PB9-06	20CBV-PB9-06	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	1.28"/1.70"	.55″	.55″



#### PANEL MOUNT HOSE BARB PLUG

Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB3-02	20CBV-PB3-02	1/8" ID	3.2mm ID	1.65"/1.75"	.62″	.62″
20CB-PB3-03	20CBV-PB3-03	3/16" ID	4.8mm ID	1.82"/1.92"	.62″	.62″
20CB-PB3-04	20CBV-PB3-04	1/4" ID	6.4mm ID	1.82"/1.92"	.62″	.62″

#### PANEL MOUNT PTF PLUG

Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB8-025	20CBV-PB8-025	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	1.67"/1.77"	.62″	.62″
20CB-PB8-04	20CBV-PB8-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.69"/1.79"	.62″	.62″

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#### ELBOW HOSE BARB PLUG

Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB4-02	20CBV-PB4-02	1/8" ID	3.2mm ID	1.20"/1.30"	.63″	.63″
20CB-PB4-04	20CBV-PB4-04	1/4" ID	6.4mm ID	1.20"/1.30"	.63″	.63″



#### ELBOW PTF PLUG

Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB10-04	20CBV-PB10-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.20"/1.30"	.63″	1.15″



#### PANEL MOUNT HOSE BARB PLUG, NON ROTATIONAL

Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB20-02	20CBV-PB20-02	1/8" ID	3.2mm ID	1.65"/1.75"	.62″	.62″
20CB-PB20-03	20CBV-PB20-03	3/16" ID	4.8mm ID	1.82"/1.92"	.62″	.62″
20CB-PB20-04	20CBV-PB20-04	1/4" ID	6.4mm ID	1.82"/1.92"	.62″	.62″



PANEL MOUNT	PTF PLUG, NON R	OTATIONAL				
Non-Valved	Valved	Tube Size	Metric Tube	L(nv/v)	Width	Height
20CB-PB21-04	20CBV-PB21-04	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	1.69"/1.79"	.62″	.62″

\*Patent Pending

## Accessories

#### **EXTERNAL PLUG O-RINGS**

Coupling Series	Buna-N Part No.	EPDM Part No.	Viton Part No.
20 SERIES	C115	1-00823711	1-0089746
40 SERIES	C116	1-01123711	1-0119746
50 SERIES	C116	1-01123711	1-0119746

#### PANEL MOUNT SEALING GASKET

Coupling Series	Buna-N Part No.	EPDM Part No.
20 SERIES	C11040	C11105
40 SERIES	C11027	C11073
50 SERIES	C11027	C11073
50PP SERIES	N/A	C11376
60 SERIES	N/A	C11416

#### PLASTIC PANEL MOUNT NUTS

Coupling Series	Material	Part No.
40/50 SERIES	Acetal	C11252
60PP SERIES	Polypropylene	C11372
60PS SERIES	Polysulfone	C11398

#### PANEL MOUNT NUTS

Coupling Series	Plated Brass Part No.	316 Stainless Steel Part No.
20 SERIES	C377	C11085
40 SERIES	C131	C11044
50 SERIES	C131	C11044

#### PLATED BRASS PTF NUTS (FERRULELESS POLYTUBE FITTING)

Tube Size	Metric Tube Size	Part No.
5/32" OD	4.0mm OD	C11031
1/4" OD	6.4mm OD	C176
3/8" OD	9.5mm OD	C187



#### **PUSH-IN COLLET CLIP**

Coupling Series	Description	Part No.				
40AC & 50AC SERIES	Red Collet Clip	PIL250R				

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#### **PUSH-IN COLLET COVERS**

PUSH-IN GULLET GUVERS							
Coupling Series	Description	Part No.					
40AC & 50AC SERIES	Red Collet Cover	PIC250R					
40AC & 50AC SERIES	Black Collet Cover	PIC250BL					
40AC & 50AC SERIES	Yellow Collet Cover	PIC250Y					
40AC & 50AC SERIES	Blue Collet Cover	PIC250B					
40AC & 50AC SERIES	Grey Collet Cover	PIC250GRY					
40AC & 50AC SERIES	Green Collet Cover	PIC250GN					

## **Custom Solutions**

LinkTech is committed to our customers and helps them by offering custom designed and manufactured couplings. LinkTech has developed hundreds of custom connection solutions for challenging applications. Our engineering staff is ready to work with your designers to solve application problems beyond the scope of our standard product offering. Whether it is a simple o-ring, color change, or a completely new and unique design, LinkTech offers its customers the best possible solution at the lowest possible cost.



#### LinkTech Custom Designs Include:

- · Non-standard coupling materials
- Multi-port couplings
- Custom end terminations
- Application specific O-rings
- Molded color couplings
- Unique packaging

## **Technical**

#### PART NUMBER GUIDE

Flow Size / Latch Type	Material	Valve	Config.	<b>O-ring</b> (std Buna-N)	Туре	<b>Connection Size</b>	Part Options
10 = 1/16" Flow (Twist Lock) $20 = 1/8" Flow$ (Metal Latch) $40 = 1/4" Flow$ (Metal Latch) $42 = 3/32" Flow$ (Dual Tube Metal Latch) $50 = 1/4" Flow$ (Plastic Latch) $50B = 1/4" Flow$ (Breakaway Latch) $60 = 3/8" Flow$ (Plastic Latch) $65 = 1/2" Free Flow$ (Plastic Latch)	AC = Acetal AL = Aluminum CB = Chrome Plated Brass NB = Nickel Plated Brass RB = Raw Brass GP = Glass Filled Polypro. PP = Polypropylene AB = ABS PS = Polysulfone RD = Radel	V = Valved (default is non-valved) X = No Valve (in Valved Body)	S = Socket P = Plug	B = Buna-N (NSF/Food Grade) V = Viton E = Peroxide Cured EPDM F = Food Grade EPDM S = Silicone K = Kalrez	<ol> <li>1 = In Line MNPT</li> <li>2 = In Line Hose Barb</li> <li>3 = Panel Mount H.B.</li> <li>4 = Elbow H.B.</li> <li>5 = Single Barb H.B.</li> <li>6 = End Stop</li> <li>7 = Elbow, Single H.B.</li> <li>8 = Panel Mount PTF</li> <li>9 = In Line PTF</li> <li>10 = Elbow PTF</li> <li>12 = Panel Mount Male Thread</li> <li>13 = In Line Female Thread</li> <li>16 = Elbow MNPT</li> <li>17 = Push In Term In-line</li> <li>18 = Push In Term Panel Mt.</li> <li>19 = Panel Mount Female Thread</li> <li>20 = Anti Rotate PM Plug H.B.</li> <li>21 = Anti Rotate PM Plug PTF</li> <li>22 = Panel Mount H.B. Elbow</li> </ol>	01 = 1/16" 02 = 1/8" 03 = 3/16" 04 = 1/4" 05 = 5/16" 06 = 3/8" 08 = 1/2" 10 = 5/8" 12 = 3/4" 16 = 1"	NL = No Latch NN = No Nuts NLN = No Latch/Nuts XL = No O-ring Lube XX = No End Termination

#### **STERILIZATION & DISINFECTANT COMPATIBILITY**

Material	Formalin	Isopropyl Alcohol	Ethvl Alcohol	Ethylene Oxide	Autoclave	E-Beam (50 Kilograys)	Gamma 5 (50 Kilograys)	Dry Heat (250°F)
Acetal	Y	Y	Y	Y	Y	N	N	N
ABS	N	N/A	Y	Y	N	Y	Y	N
Polypropylene	Y	Y	Y	Y	N	Y	Y	N
Polysulfone	Y	Y	Υ	Y	Y	Y	Y	Y
Glass Filled Polypro.	Y	Y	Y	Y	N	N	Ν	N
Chrome/Brass	N	Y	Y	Y	Y	Υ	Y	Y
Buna-N/Nitrile	Y	Y	Y	N	N	Υ	Y	Y
EPR/EPDM	Y	Y	Y	Y	Y	Υ	Y	Y
Viton/FKM	Y	Y	Y	N	N	N	N	Y
Silicon	Y	Y	Y	Y	Y	Υ	Y	Y
Kalrez	Y	Y	Y	Y	Y	N	Ν	Y

Key: Y = Excellent, recommended, N = Not recommened, N/A = Not applicable

#### **Sterilization Methods:**

- **Disinfectants:** Sterilized coupled or uncoupled at 70°F (20°C)
- Ethylene Oxide, EtO: Sterilized coupled or uncoupled, up to 5 repetitions, four hours max, 100% EtO at 110°F (43°C)
- Autoclave: Sterilize uncoupled only, 30 min. max, 10 repetitions max, 250°F (121°C) max.
- Electron Beam (E-Beam): Sterilize coupled or uncoupled, 50 kilograys max cumulative exposure.
- **GAMMA:** Sterilize coupled or uncoupled, 50 kilograys max cumulative exposure.
- **Dry Heat:** Sterilize uncoupled only, 250°F (121°C) 12 hours max.

#### **Regulatory Approvals**

The F.D.A. publishes, through the Code of Federal Regulations, standardized criteria which govern the acceptability of materials used in food contact. The U.S. Department of Agriculture publishes similar standards that mirror F.D.A. criteria. Neither agency approves or disapproves products.

With the exception of the 50GP and 65GP Series products, most LinkTech couplings comply with applicable F.D.A and U.S.D.A.

#### **NSF Compliance**

NSF International develops and publishes consensual criteria that govern the acceptability of materials and equipment used in food and beverage processing.

With the exception of the 50GP and 65GP Series products, most LinkTech couplings are produced from materials that comply with most NSF standards for potable water and food contact applications.

#### **Questions?**

If you have any questions at all concerning our products, compliance and specs, please feel free to call us at 805-339-0055 or visit our website.





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## **Technical**

#### CHEMICAL COMPATIBILITY

Chemical Polymers				Metals	Elastomers						
	Acetal	ABS	Polypropylene	Polysulfone	<b>Chrome Plated Brass</b>	Aluminum	Buna-N (Nitril)	EPR/EPDM	Fluorocarbon (Viton)	Silicon	KALREZ
Acetic Acid	D	С	В	Α	D	В	D	А	D	В	А
Acetone	А	D	А	Α	А	А	D	А	D	С	А
Air	Α	А	А	Α	А	А	А	А	А	А	Α
Ammonia Anhydrous	D	В	А	С	А	А	В	А	D	С	А
Benzene	А	D	D	D	N/A	В	D	D	А	D	А
Carbon Dioxide	А	В	А	N/A	А	В	А	В	В	В	А
Chlorine Water	D	А	D	D	D	D	D	С	А	D	N/A
Ethanol (Ethyl Alcohol)	А	А	А	А	А	В	А	А	А	А	Α
Ethylene Glycol	В	А	А	А	А	А	А	А	А	А	А
Gasoline, Unleaded	А	D	С	А	А	А	В	D	А	D	Α
Hydrochloric Acid	C	C	В	Α	D	D	D	С	А	D	Α
Hydrofluric Acid	D	C	С	А	D	D	D	D	В	D	А
Isopropyl Alcohol	Α	А	А	А	В	В	В	В	В	А	А
Methyl Ethyl Ketone (MEK)	C	D	В	D	А	В	D	А	D	D	Α
Methanol	Α	D	А	А	А	А	А	А	D	А	Α
Oxygen	А	В	А	А	А	А	В	А	А	А	Α
Ozone	C	В	В	А	N/A	В	D	А	А	А	А
Sodium Hypochlorite	D	N/A	В	А	D	D	С	В	А	В	А
Steam	C	N/A	N/A	N/A	А	В				С	Α
Sulfuric Acid, Air Free	N/A	В	С	В	C	D	D	D	А	D	А
Toluene	C	D	С	C	А	А	D	D	C	D	А
Trichloroethylene	D	D	С	С	В	D	D	D	А	D	В
Water, Fresh	А	А	Α	A	С	В	A	A	В	А	Α

Key: A = Excellent - no effect, B = Good - little or no effect, C = Fair - some effect, D = Not recommended, N/A = Not available.

**Chemical Compatibility** Chemicals can affect the strength, appearance, color, dimensions, and weight of plastics. Because many factors affect the chemical resistance of a given material it is the customer's responsibility to test LinkTech's couplings in their own application conditions. Please Contact LinkTech for further assistance with your application needs.

COUPLING PERFORMANC	E RATINGS			
Series	Coupling Material	O-ring Material	Pressure Rating	Temp. Rating
10AC 1/16" Flow	Acetal	Buna-N	Vacuum to 100psi	-40°F to 180°F
10PP 1/16" Flow	Polypropylene	EPDM	Vacuum to 100psi	32°F to 180°F
20AC 1/8" Flow	Acetal	Buna-N	Vacuum to 120psi	-40°F to 180F
20PP 1/8" Flow	Polypropylene	EPDM	Vacuum to 120psi	32°F to 160°F
20CB 1/8" Flow	Chrome/Brass	Buna-N	Vacuum to 250psi	-40°F to 180°F
40AC 1/4" Flow	Acetal	Buna-N	Vacuum to 120psi	-40°F to 180°F
40PP 1/4" Flow	Polypropylene	EPDM	Vacuum to 120psi	32°F to 160°F
40CB 1/4" Flow	Chrome/Brass	Buna-N	Vacuum to 250psi	-40°F to 180°F
42AB 3/32" Flow	ABS	Buna-N	Vacuum to 120psi	-40°F to 180°F
50AC 1/4" Flow	Acetal	Buna-N	Vacuum to 120psi	-40°F to 180°F
50PP 1/4" Flow	Polypropylene	EPDM	Vacuum to 100psi	32°F to 160°F
50BAC 1/4" Flow	Acetal	Buna-N	Opsi to 20psi	-40°F to 180°F
50GP 1/4" Flow	Glass Filled Polypropylene	EPDM	Vacuum to 120psi	32°F to 180°F
60PP 3/8" Flow	Polypropylene	EPDM	Vacuum to 60psi	32°F to 160°F
60PS 3/8" Flow	Polysulfone	EPDM	Vacuum to 125psi	-40°F to 280°F
65GP 1/2" Flow	Glass Filled Polypropylene	EPDM	Vacuum to 120psi	32°F to 180°F