

U-PRO

BONNET VALVES

**BN SERIES
2BN SERIES**



Variety of end connections:

- Male NPT to Female NPT
- Female NPT to Female NPT
- Butt-Weld to Butt-Weld
- Socket Weld to Socket Weld

Nonrotating stem tip

- Reduce to deformation of stem tip
- Provides repetitive, leak tight shut off

優普洛科技股份有限公司
U-PRO Fittings Inc.

Features

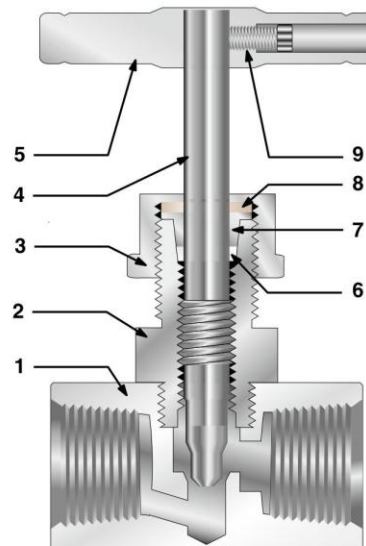
- Variety of Stem tips
- Choice of two Handle types :
T-bar (T type is Standard)
Round handle (N type optional)
- Valve size : 1/4" to 1"
- Connectors Type :
Male NPT to Female NPT
Female NPT to Female NPT
Butt-Weld to Butt-Weld
Socket Weld to Socket Weld
- 316 stainless steel and Brass construction
- Stem Packing Matrrial : *PTFE* and *PEEK*

Material of Construction

Parts No.		Material	
1	Body	ASTM A 479 TYPE 316	ASTM B1 Alloy 360
2	Bonnet	ASTM A 479 TYPE 316	ASTM B1 Alloy 360
3	Packing Nut	ASTM A 479 TYPE 316	Brass 16
4	Stem	Regulating Stem	ASTM A 276 TYPE 316
		Global Stem	ASTM A 276 TYPE 316
		Soft Seat Stem	ASTM A 276 TYPE 316 with <i>PTFE</i> Tip
5	Handle	T-Bars	316 Stainless Steel
6	Lower gland	ASTM A 276 TYPE 316	
7	Stem packing	<i>PTFE</i>	
		<i>PEEK</i>	
8	Upper gland	Brass 16	
9	Set Screw	Alloy B7	

Specifications

- Pressure Rating :
316 stainless steel of construction :
6000 psig at 100 °F (38 °C)
Brass of construction :
3000 psig at 100 °F (38 °C)
- Temperature Rating :
Valves are Standard with *PTFE* Stem Packing :
-65 °F (-45 °C) to 450 °F (232 °C)
Optional *PEEK* Stem Packing :
-65 °F (-45 °C) to 600 °F (315 °C)
- C_v Factor : 0.37 ~ 2.4
- Orifice : 0.177 in. ~ 0.437 in.
(4.5mm~11.1 mm)



inlet → outlet

Model Shown BNF-S3-80

Stem of Tip

U-PRO bonnet valves are offer with variety of Stem tips



non rotating
Regulating stem tip



non rotating
Global stem tip (S)

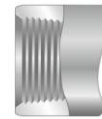


non rotating
Soft seat stem tip (K)

Variety of end connections



Male NPT (P.T.) pipe



Female NPT (P.T.) pipe



Butt-weld pipe



Socket Weld pipe

BONNET VALVES

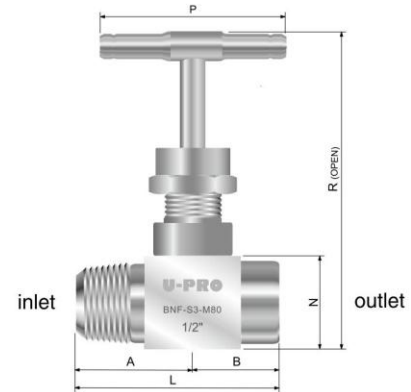
PIPE THREAD BONNET VALVES

(Male P.T. or NPT to Female P.T. or NPT)

Ordering Number Description

BNMF - S3 - 80 -

Valves Type	Bonnet Valves
Body Material	316 Stainless Steel (S3), Brass (B1)
Port	Inlet port is 1/2" Male NPT, outlet port is 1/2" Female
Option Code	T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering



Order No.	Office		Cv	Connection Size		Table of Dimension											
	mm	inch		Inlet	Outlet	A		B		L		N		P		R	
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
BNMF-S3-40	4.5	0.177	0.37	1/4	1/4	27	1.06	24	0.94	51	2.10	20	0.79	60	2.36	67	2.64
BNMF-B1-40																	
BNMF-S3-60	5.5	0.217	0.63	3/8	3/8	28	1.10	26	1.02	54	2.13	25	0.98	63	2.48	89	3.50
BNMF-B1-60																	
BNMF-S3-80	6.4	0.252	0.73	1/2	1/2	36	1.42	31	1.22	67	2.64	31	1.22	63	2.48	103	4.06
BNMF-B1-80																	
BNMF-S3-120	8.5	0.334	1.61	3/4	3/4	45	1.77	37	1.46	82	3.23	39	1.54	73	2.87	126	4.96
BNMF-B1-120																	
BNMF-S3-160	8.5	0.334	1.61	1	1	65	2.56	40	1.57	105	4.13	49	1.93	73	2.87	155	6.10
BNMF-B1-160																	

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

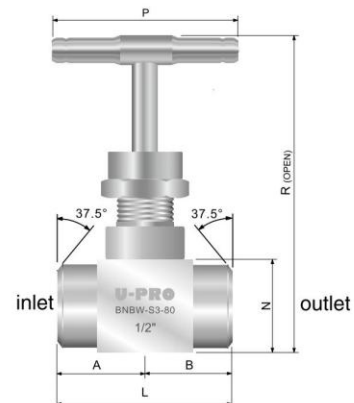
PIPE BUTT-WELD BONNET VALVES

(Pipe to Pipe)

Ordering Number Description

BNBW - S3 - 80 -

Valves Type	Bonnet Valves
Body Material	316 Stainless Steel (S3), Brass (B1)
Port	The inlet and outlet ports are the same. 1/2" pipe butt-weld
Option Code	T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering



Order No.	Orifice		Cv	Connection Size		Table of Dimension											
	mm	inch		Inlet	Outlet	A		B		L		N		P		R	
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
BNBW-S3-40	4.5	0.177	0.37	1/4	1/4	24	0.94	24	0.94	48	1.89	20	0.79	60	2.36	67	2.64
BNBW-B1-40																	
BNBW-S3-60	5.5	0.217	0.63	3/8	3/8	26	1.02	26	1.02	52	2.04	25	0.98	63	2.48	89	3.50
BNBW-B1-60																	
BNBW-S3-80	6.4	0.252	0.73	1/2	1/2	31	1.22	31	1.22	62	2.44	31	1.22	63	2.48	103	4.06
BNBW-B1-80																	
BNBW-S3-120	8.5	0.334	1.61	3/4	3/4	37	1.46	37	1.46	74	2.91	39	1.54	73	2.87	126	4.96
BNBW-B1-120																	
BNBW-S3-160	8.5	0.334	1.61	1	1	40	1.57	40	1.57	80	3.14	49	1.93	73	2.87	155	6.10
BNBW-B1-160																	

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

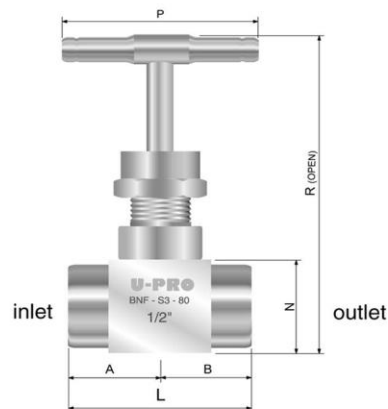
PIPE THREAD BONNET VALVES

(Female P.T. or NPT to Female P.T. or NPT)

Ordering Number

Description

BNF - S3 - 80 -			
Valves Type Bonnet Valves			
Body Material 316 Stainless Steel (S3), Brass (B1)			
Port The inlet and outlet ports are the same. 1/2" female NPT port.			
Option Code T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering number.			



Order No.	Orifice		Cv	Connection Size		Table of Dimension											
	mm	inch		Inlet	Outlet	A		B		L		N		P		R	
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
BNF-S3-40	4.5	0.177	0.37	1/4	1/4	24	0.94	24	0.94	48	1.89	20	0.79	60	2.36	67	2.64
BNF-B1-40																	
BNF-S3-60	5.5	0.217	0.63	3/8	3/8	26	1.02	26	1.02	52	2.05	25	0.98	63	2.48	89	3.50
BNF-B1-60																	
BNF-S3-80	6.4	0.252	0.73	1/2	1/2	31	1.22	31	1.22	62	2.44	31	1.22	63	2.48	103	4.06
BNF-B1-80																	
BNF-S3-120	8.5	0.334	1.61	3/4	3/4	37	1.46	37	1.46	74	2.92	39	1.54	73	2.87	126	4.96
BNF-B1-120																	
BNF-S3-160	8.5	0.334	1.61	1	1	40	1.57	40	1.57	80	3.15	49	1.93	73	2.87	155	6.10
BNF-B1-160																	

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

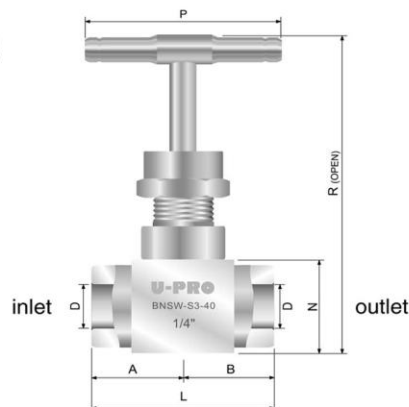
PIPE SOCKET WELD BONNET VALVES

(Female Pipe socket weld to Female Pipe socket weld Pipe)

Ordering Number

Description

BNSW - S3 - 80 -			
Valves Type Bonnet Valves			
Body Material 316 Stainless Steel (S3), Brass (B1)			
Port The inlet and outlet ports are the same. 1/2" pipe socket weld			
Option Code T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering			



Order No.	Orifice		Cv	Connection Size		Table of Dimension											
	mm	inch		D	D	A		B		L		N		P		R	
				Inlet	Outlet	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
BNSW-S3-40	4.5	0.177	0.37	1/4	1/4	24	0.94	24	0.94	48	1.89	20	0.79	60	2.36	67	2.64
BNSW-B1-40																	
BNSW-S3-60	5.5	0.217	0.63	3/8	3/8	26	1.02	26	1.02	52	2.05	25	0.98	63	2.48	89	3.50
BNSW-B1-60																	
BNSW-S3-80	6.4	0.252	0.73	1/2	1/2	31	1.22	31	1.22	62	2.48	31	1.22	63	2.48	103	4.06
BNSW-B1-80																	
BNSW-S3-120	8.5	0.334	1.61	3/4	3/4	37	1.46	37	1.46	74	2.91	39	1.54	73	2.87	126	4.96
BNSW-B1-120																	
BNSW-S3-160	8.5	0.334	1.61	1	1	40	1.57	40	1.57	80	3.15	49	1.93	73	2.87	155	6.10
BNSW-B1-160																	

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

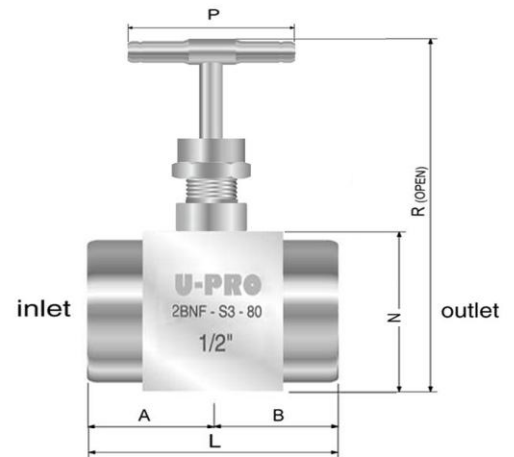
PIPE THREAD BONNET VALVES

(Female P.T. or NPT to Female P.T. or NPT)

Ordering Number Description

2BNF - S3 - 80 -

Valves Type	Bonnet Valves
Body Material	316 Stainless Steel (S3), Brass (B1)
Port	The inlet and outlet ports are the same. 1/2" female NPT port.
Option Code	T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering number.



Order No.	Orifice		Cv	Connection Size		Table of Dimension												
	mm	inch		Inlet	Outlet	A		B		L		N		P		R		
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	
2BNF-S3-40	6.4	0.25	0.86	1/4	1/4	29	1.14	29	1.14	58	2.28	30	1.81	64	2.52	100	3.94	
2BNF-B1-40																		
2BNF-S3-60																		
2BNF-B1-60																		
2BNF-S3-80	11.1	0.437	2.4	1/2	1/2	36.5	1.44	36.5	1.44	73	2.87	40	1.57	82	3.23	137	5.39	
2BNF-B1-80																		
2BNF-S3-120																		
2BNF-B1-120																		
2BNF-S3-160	11.1	0.437	2.4	1	1	40	1.57	40	1.57	80	3.15	50	1.97	82	3.23	142	5.59	
2BNF-B1-160																		

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

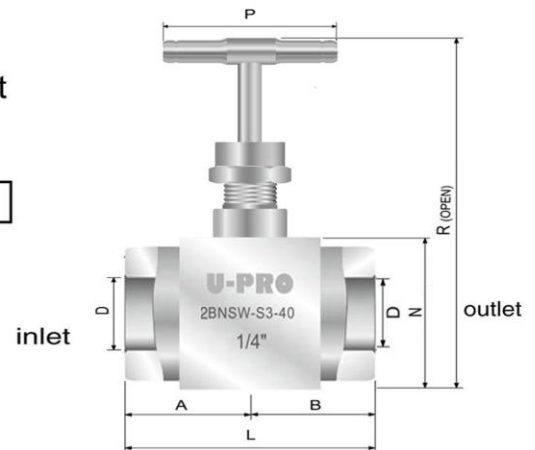
PIPE SOCKET WELD BONNET VALVES

(Female Pipe socket weld to Female Pipe socket weld Pipe)

Ordering Number Description

2BNSW - S3 - 80 -

Valves Type	Bonnet Valves
Body Material	316 Stainless Steel (S3), Brass (B1)
Port	The inlet and outlet ports are the same. 1/2" pipe socket weld
Option Code	T-bars and Regulating Stem tip is standard. If optional global stem tip add S to ordering number. Optional Soft Seat stem tip add K to ordering



Order No.	Orifice		Cv	Connection Size		Table of Dimension											
	mm	inch		D	D	A		B		L		N		P		R	
				Inlet	Outlet	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
2BNSW-S3-40	6.4	0.25	0.86	1/4	1/4	29	1.14	29	1.14	58	2.28	30	1.81	64	2.52	100	3.94
2BNSW-B1-40																	
2BNSW-S3-60																	
2BNSW-B1-60	6.4	0.25	0.86	3/8	3/8	29	1.14	29	1.14	58	2.28	30	1.81	64	2.52	100	3.94
2BNSW-S3-80																	
2BNSW-B1-80																	
2BNSW-S3-120	11.1	0.437	2.4	1/2	1/2	36.5	1.44	36.5	1.44	73	2.87	40	1.57	82	3.23	137	5.39
2BNSW-B1-120																	
2BNSW-S3-160																	
2BNSW-B1-160	11.1	0.437	2.4	1	1	40	1.57	40	1.57	80	3.15	50	1.97	82	3.23	142	5.59

Valve's dimensions are measured with regulating stems and T-bar. That are for reference only and are subject to change.

BONNET VALVES

U-PRO

BN Series

2BN Series

Technical Data

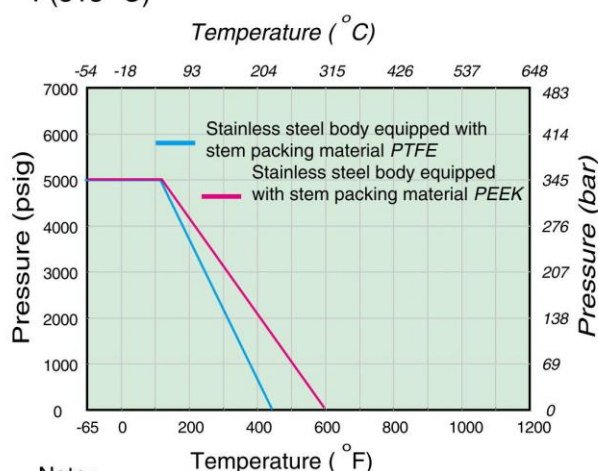
Pressure and Temperature Rating

The below chart is shown that valves with PTFE and PEEK stem packing. Valves body material are 316 stainless steel

The Body material is 316 SS that Pressure rating up to 6000psig(414bar) at 100 °F(38 °C).

PTFE stem packing : -65 °F(-45 °C) to 450 °F(232 °C)

PEEK stem packing : -65 °F(-45 °C) to 600 °F(315 °C)



Note :

When valves with end connection fittings are connected to tubes, the working pressure of tubes must be considered incalculationof total system working pressure.

Test

Standard Production Test - Each valve is 100% Test with pneumatic at 1000 psi (70.3kg/cm²) for leakage at th e seat and zpacking. Each test performed to a maximum allowable leak rate of 0.1 sec/min.

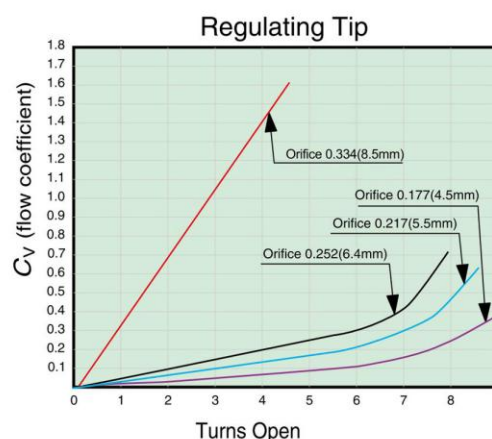
Optional Hydrostatic Test - This hydrostatic shell Test is performed with pure water at 11/2" times the working pressure.

Flow coefficient vs Number of handle turns

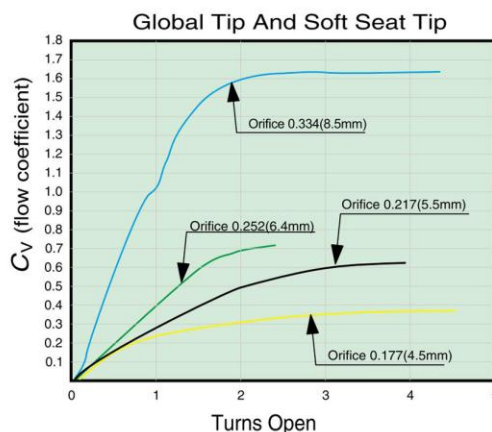
The flow depends on the inlet and out pressure , temperature, specific gravity and the Cv coefficient.

BN Series

Flow date at 60 °F (16 °C)

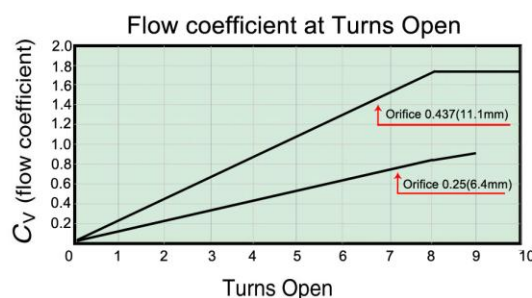


BN Series



2BN Series

Flow date at 100°F (37°C)



U-PRO

U PRO Fittings Inc.



YUNGHONG Fittings Inc.

Main Products :

Electrical Conduits Fittings, Tube Fitting, Tube Clamps, Needle Valves, Ball Valves, Gauge Valves, Check Valves And Manifolds.

U-PRO Fittings Inc.