



PMP PRECISION VALVE CO. LTD.

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Mono-A Bonneted KNIFE GATE Valve

**Bi-directional
3" - 24"**

AWWA C520-10, MSS-SP81



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Mono-A Bonneted Knife Gate Valve AWWA C520-10 3" - 24"

PMP-Weco bonneted Mono series are designed in compliance with the new AWWA C520-10 standard for knife gate valves. The Weco Armaturen design offers a unique O-ring stem seal design eliminating emissions and foul odours to the atmosphere.

Meeting the German standard TA-Luft VDI 2440 for stem sealing to atmosphere, the PMP-Weco series of bonneted knife gate valves offers low operating torques, and low maintenance even after thousands of operating cycles.

PMP-Weco Knife Gate Valves are manufactured to TAPPI MSS SP 81, TIS-405-8 & AWWA C520-10 standards. Flange dimensions conform to ANSI B16.5 class 150, 3" to 24", face to face dimensions conform to TAPPI MSS SP 81 standard.

Resilient O-rings and seat materials are NSF 61 certified. Standard ductile iron, one piece body, with Resicoat R4-ES Fusion Bonded Epoxy coating, offers corrosion protection of earth laid valves, meets the requirements of AWWA C-213, AWWA C-550 and NSF 61 standards. The coating is resistant against waste water and various chemicals.

Rising and non-rising stem designs are available.

Due to low operating torques, manual hand wheel operators are supplied as standard on valves to 24" sizes. Optional manual gear, AWWA square nut, pneumatic, hydraulic & electric operators with accessories are available.



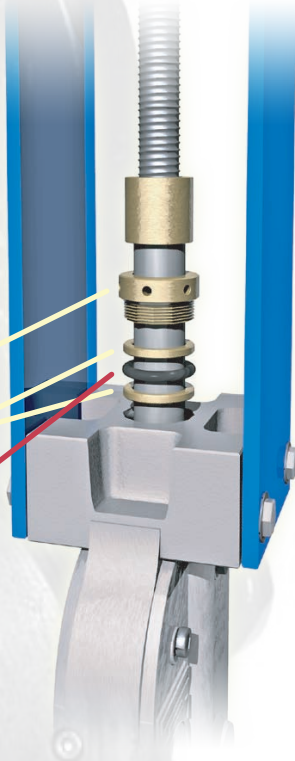


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Mono-A Bonneted Knife Gate Valve Features and Benefits AWWA C520-10

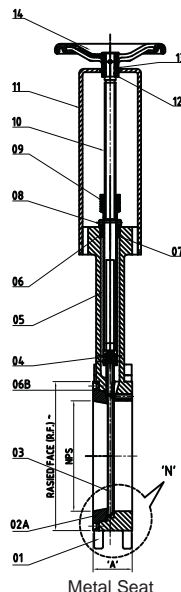
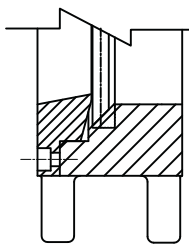
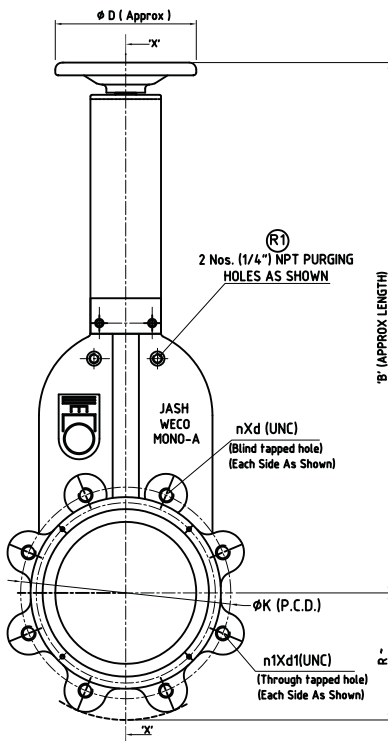
- One piece cast and ductile iron body eliminates potential leak paths. Valves can be installed in any position.
- Bonnet style one piece body eliminates leakage through the stem area at full design pressures and limits exposing the gate to atmosphere, odours are contained.
- Unique “O” ring stem seal assembly eliminates the need for a stuffing box, reduces operating torque and maintenance requirements with higher cycle life.
- In addition, it is compliant with TA-Luft emission leakage standards.
- Precision water jet cut beveled 360° gate edge, easily cuts through debris or build up.
- Full port design offers high flow rates for reduced pumping costs.
- Variety of seat materials offers flexibility for specific applications: Metal, EPDM, Viton.
- Retained seat will not pull out under full design pressure.
- Corrosion resistant stainless steel stem with large pitch thread offers quick opening and closing of the valve.
- Rising and non-rising stems are available.
- Purge ports offer flexibility to purge body chest cavity, or to monitor pressure.
- V-Port inserts are available for control applications with either electric or pneumatic actuation.
- Optional accessories: AWWA manual bevel gear operators, shaft extensions, floor stands, wall brackets, deflector cones for slurry and abrasive applications, actuation for on-off or modulating services, solenoid valves, limit switches, speed controls, actuators and chain wheel operators.



Unique stem seal assembly uses a thrust nut retainer
with two Stainless Steel scraper ring thrust washers
compressing a standard “O” ring certified to NSF 61 standards
eliminating historical leaking of the packing gland

Mono-A Bonneted Knife Gate Valve Manual Operated Non-Rising Stem

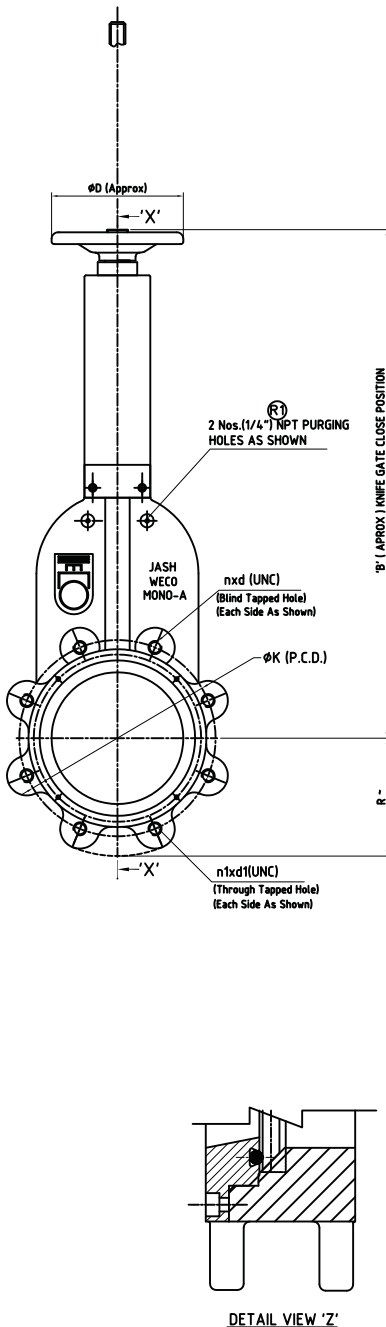
Resilient Seated & Metal Seated
Flange Standard ANSI B16.5 Class 150
Valve Design: B16.34, AWWA C520-10, MSS-SP81
CRN CSA-OC 15663.567890



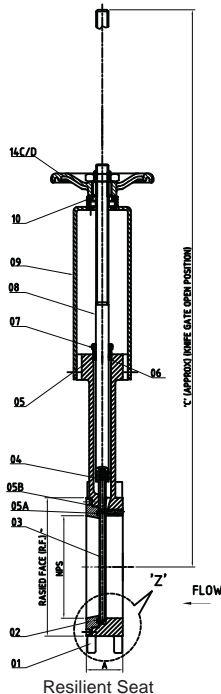
SR.No.	Description	Material
01	Body	Ductile Iron ASTM A 536 60-40-18
02	Seal Retainer Ring	Ductile Iron ASTM A 536 60-40-18 / SS304
02A	Seal Retainer Ring	Ductile Iron ASTM A 536 60-40-18 / SS304
03	Knife Gate	LDX 2101 (Size: 8" to 24") R1 ASTM A 240 Gr.: 304 (Size 3" to 6")
04	Slotted Head Grub Screw	Stainless Steel Gr. 304
05	Connecting Pipe	Stainless Steel Gr. 304
06	'O' Ring for Stuffing Box	EPDM / VITON (NSF Certified)
06A	'O' Ring for (S.R. Ring & Gate)	EPDM / VITON (NSF Certified)
06B	'O' Ring for (S.R. Ring & Housing)	EPDM / VITON (NSF Certified)
07	Spacer (Lower & Upper)	Stainless Steel Gr. 304 / Brass
08	Sealing Nut	ASTM A 276 Gr.: 304 / Brass
09	Stem Nut	H.T. Brass
10	Stem (Non-Rising)	ASTM A 276 Gr.: 304 / Stainless Steel
11	Supporting Bracket	Carbon Steel Painted / Stainless Steel
12	Spacer	Stainless Steel Gr. 304
13	Spacer	Brass
14	Hand Wheel	Ductile Iron / Carbon Steel

Mono-A Bonneted Knife Gate Valve Manual Operated Rising Stem

Resilient Seated & Metal Seated
 Flange Standard ANSI B16.5 Class 150
 Valve Design: B16.34, AWWA C520-10, MSS-SP81
 CRN CSA-OC 15663.567890



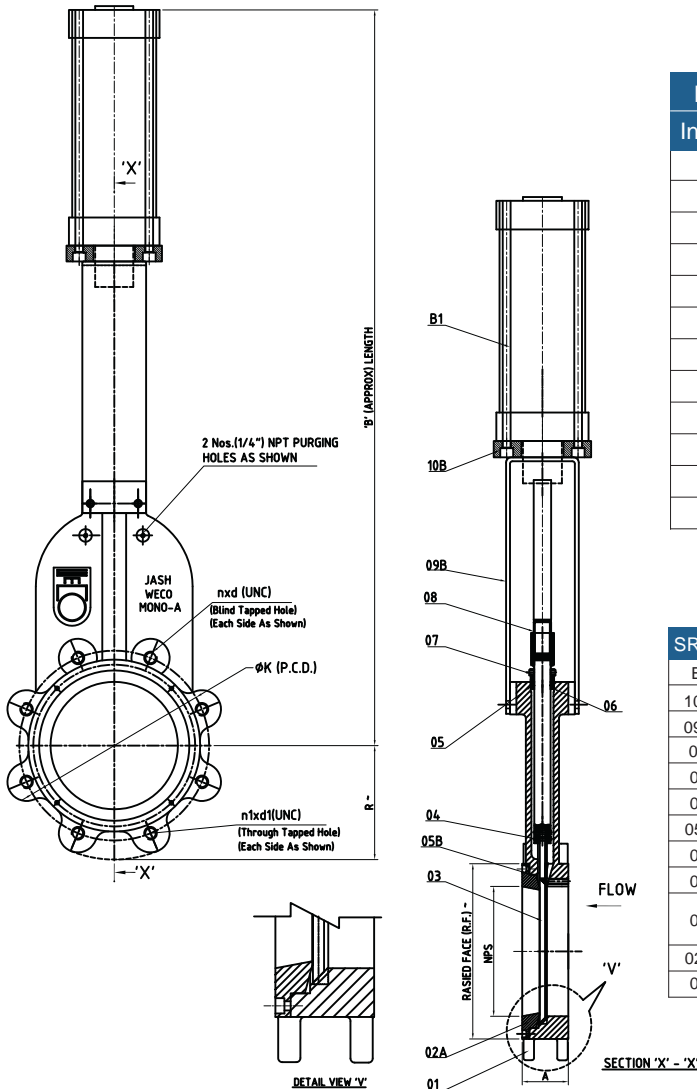
NPS	A	n x d x Deep (Min.)	n1 x d1	K	B	C	D	R	R.F
3	2.00	2Nos. x 5/8" x 0.5"	2Nos. x 5/8"	6.00	19.00	23.00	8.00	3.75	5.00
4	2.00	2Nos. x 5/8" x 0.5"	6Nos. x 5/8"	7.50	21.00	26.00	8.00	4.50	6.20
6	2.25	2Nos. x 3/4" x 0.6"	6Nos. x 3/4"	9.50	26.00	32.50	8.00	5.50	8.45
8	2.75	2Nos. x 3/4" x 0.6"	6Nos. x 3/4"	11.75	30.50	39.00	8.00	6.75	10.60
10	2.75	4Nos. x 7/8" x 0.6"	8Nos. x 7/8"	14.25	36.50	47.00	12.40	8.00	12.76
12	3.00	4Nos. x 7/8" x 0.6"	8Nos. x 7/8"	17.00	42.00	54.50	12.40	9.50	15.00
14	3.00	4Nos. x 1.0" x 0.78"	8Nos. x 1.0"	18.75	48.00	62.50	12.40	10.50	16.25
16	3.50	6Nos. x 1.0" x 0.78"	10Nos. x 1.0"	21.25	52.95	69.29	12.40	12.00	18.50
18	3.50	6Nos. x 1-1/8" x 0.86"	10Nos. x 1-1/8"	22.75	59.00	79.00	12.40	12.50	21.00
20	4.50	8Nos. x 1-1/8" x 0.86"	12Nos. x 1-1/8"	25.00	63.50	83.50	15.75	13.80	23.00
24	4.50	8Nos. x 1-1/4" x 1.0"	12Nos. x 1-1/4"	29.50	77.00	100.98	15.75	16.00	27.25



SR.No.	Description	Material
01	Body	Ductile Iron ASTM A 536 60-40-18
02	Seal Retainer Ring	Ductile Iron ASTM A 536 60-40-18 / SS304
02A	Seal Retainer Ring	Ductile Iron ASTM A 536 60-40-18 / SS304
03	Knife Gate	LDX 2101 (Size: 8" to 24") R1 ASTM A 240 Gr.: 304 (Size 3" to 6")
04	Slotted Head Grub Screw	Stainless Steel Gr. 304
05	'O' Ring for Stuffing Box	EPDM / VITON (NSF Certified)
05A	'O' Ring for (S.R. Ring & Gate)	EPDM / VITON (NSF Certified)
05B	'O' Ring for (S.R. Ring & Housing)	EPDM / VITON (NSF Certified)
06	Spacer (Lower & Upper)	Stainless Steel Gr. 304 / Brass
07	Sealing Nut	ASTM A 276 Gr.: 304 / Brass
08	Stem (Rising)	ASTM A 276 Gr.: 304
09	Supporting Bracket	Carbon Steel Painted / Stainless Steel
10	Adapter Plate	Carbon Steel Painted / Stainless Steel
14C/D	Hand Wheel	Carbon Steel Painted

Mono-A Bonneted Knife Gate Valve Pneumatic Operated

Flange Standard ANSI B16.5 Class 150
Valve Design: B16.34, AWWA C520-10, MSS-SP81
CRN CSA-OC 15663.567890



NPS				Tap Size	B.C.		Actuator
Inches	A	Bolt Hole	No.	UNC	K	B	O*
2	1.88	0.75	4	5/8"x11	4.75	21.25	2.00
3	2.00	0.75	4	5/8"x11	6.00	24.60	2.50
4	2.00	0.75	8	5/8"x11	7.50	28.00	3.00
6	2.25	0.88	8	3/4"x10	9.50	35.65	4.00
8	2.75	0.88	8	3/4"x10	11.75	47.10	5.00
10	2.75	1.00	12	7/8"x9	14.25	54.50	5.00
12	3.00	1.00	12	7/8"x9	17.00	63.80	6.00
14	3.00	1.12	12	1"x8	18.75	72.50	8.00
16	3.50	1.12	16	1"x8	21.25	80.50	8.00
18	3.50	1.25	16	1-1/8"x7	22.75		
20	4.50	1.25	20	1-1/8"x7	25.00		
24	4.50	1.38	20	1-1/4"x7	29.50		

SR.No.	Description	Material
B1	Pneumatic cylinder	"Schrader" / "EQUI" make
10B	Adapter plate	Carbon Steel Painted
09B	Supporting bracket	Carbon Steel Painted
08	Connecting rod	ASTM A 276 Gr. : 304
07	Sealing nut	ASTM A 276 Gr. : 304 / Brass
06	Spacer (lower & upper)	Stainless Steel Gr.: 304 / Brass
05B	'O' Ring for (S.R. Ring & Housing)	EPDM / Viton (NSF Certified)
05	'O' Ring for stuffing box	EPDM / Viton (NSF Certified)
04	Slotted head grub screw	Stainless Steel Gr.: 304
03	Knife gate	ASTM A 240 Gr.: 304 (Size 3" to 6") LDX 2101 (Size 8" to 12")
02A	Seal retainer ring	Ductile Iron ASTM A 536 60-40-18 / SS304
01	Housing / Body	Ductile Iron ASTM A 536 60-40-18

Mono Bonneted Knife Gate Valve Design and Maximum Working Pressures

Design Pressure: psig, CWP	VALVE SIZE		
	3" - 12"	14" - 18"	20" - 24"
Body & Bonnet / Shell	225	175	135
Packing	225	175	135
Seat (preferred direction)	150	120	90

Working Pressure: psig, CWP	VALVE SIZE		
	3" - 12"	14" - 18"	20" - 24"
Body & Bonnet / Shell	150	135	90
Packing	150	135	90
Seat (preferred direction)	150	80	60

Maximum admissible working pressure on seat in non preferred direction: In this case the pressure in the line is pushing the gate away from seat.

VALVE SIZE	ADMISSIBLE WORKING PRESSURE PSI / BAR
3" - 4" / 50-100 mm	150 / 10
5" - 6" / 125-150 mm	120 / 8
8" / 200 mm	90 / 6
10" / 250 mm	60 / 4
12" / 300 mm	45 / 3
14" - 18" / 350 - 450 mm	30 / 2
20" - 24" / 500 - 600 mm	22.5 / 1.5

Note: Pressures stated above are cold working pressure (CWP)

* For bi-directional full working pressure at 150 psi, see model MONO-BD



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