

# Frank Series Regulators



Pressure Regulators, Back Pressure Regulators, Pressure Relief Valves  
PVC, PP, PPn, PVDF, E-CTFE

The  
Wet  
Process  
People™



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# Frank Series

## Pressure Regulating Valves

- Process fluid is isolated from mechanical parts
- Adjustable under working pressure
- Adjustment range of 7psi (0.5 bar) to 135psi (9.5 bar) outlet with an inlet of 145psi (10 bar)
- Gauge guard incorporated into design (V82/182)
- Low hysteresis (V782): 1.5psi (0.1 bar) to 6.0psi (0.4 bar)



### Description

Pressure regulators keep downstream pressure steady at a set value. Our most popular model, the V82/182 features an integrated gauge guard with pressure gauge. This makes adjustment simple and provides a cost savings package.

For further accuracy and stability, the V782 pressure regulator is engineered with a parabolic piston shape. The parabolic piston is balanced more precisely with the diaphragm, which creates linear flow pattern throughout the entire range.

### Product Offering

Size		PP	PPn	PVDF	Halar	PVC
in	mm					
1/2"	20	V82, V782	V82	V82, V782	V82	V182
3/4"	25	V82, V782	V82	V82, V782	V82	V182
1"	32	V82, V782	V82	V82, V782	V82	V182
1-1/4"	40	V82, V782	-	V82, V782	-	V182
1-1/2"	50	V82, V782	V82	V82, V782	V82	V182
2"	63	V82	V82	V82	V82	V82
2-1/2"	75	V82	-	V82	-	V82
3"	90	V82	-	-	-	V82
4"	110	V82	-	-	-	V82

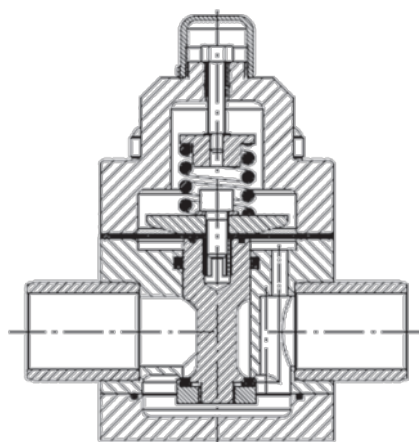
### Specifications

- Size Range:** 1/2" (20mm) to 4" (110mm)
- Diaphragm/Seals:** EPDM/EPDM or PTFE/FKM
- Connections:** IR/Butt, Socket<sup>1</sup>, NPT<sup>1</sup>, Flange<sup>2</sup>
- Operation:** 14psi (1 bar) pressure differential min.  
7psi (0.5 bar) to 135psi (9 bar) outlet with 145psi (10 bar) inlet
- 1) PVC only, 2) Optional

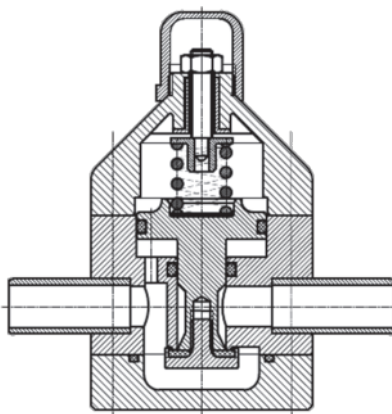
Material	Temperature Range
PVC	32°F (0°C) to 140°F (60°C)
PP	- 4°F (-20°C) to 176°F (80°C)
PP-natural*	- 4°F (-20°C) to 176°F (80°C)
PVDF	- 4°F (-20°C) to 248°F (120°C)
E-CTFE*	-234°F (-145°C) to 340°F (170°C)

\* PPn & E-CTFE are machined Style V82 in all sizes

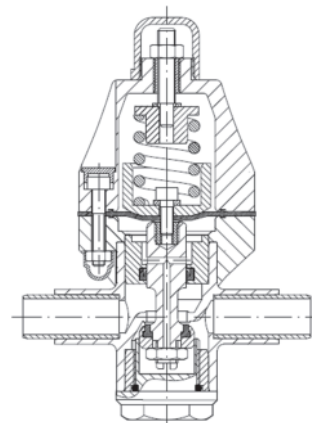
Valve Size	Pressure Range
1/2" (20mm) to 1-1/2" (50mm)	7-150psi (0.5-10 bar)
2" (63mm) to 3" (90mm)	14-90psi (1-6 bar)
4" (110mm)	13-60psi (1-4 bar)



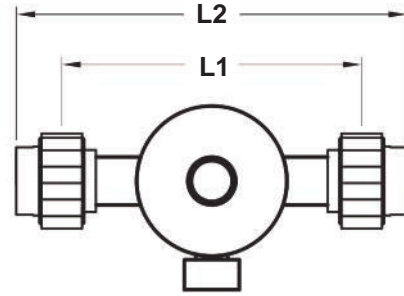
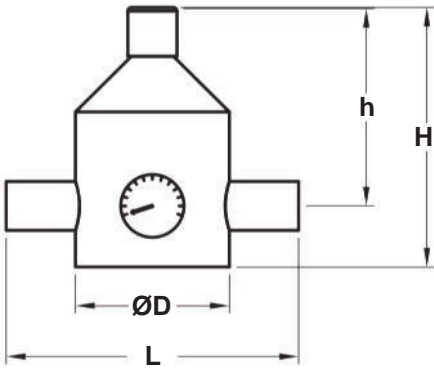
V82



V182



V782



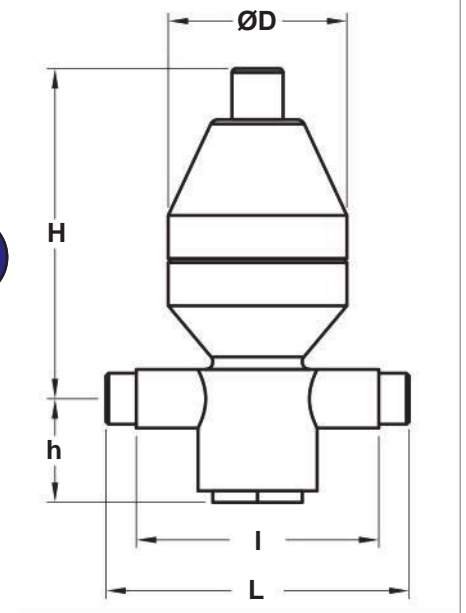
### V82/182 Dimensions

Size		DN	Ø D	H	h	L	L1*	L2*	Weight (lbs)		
in	mm								PP	PVDF	PVC
1/2"	20	15	2 3/4	5 1/8	3 7/8	5 7/8	6 1/4	7 3/4	1.2	1.8	1.7
3/4"	25	20	3 7/8	7 1/8	5 1/8	7 1/2	7 7/8	9 1/2	2.3	3.5	3.3
1"	32	25	3 7/8	7 1/8	5 1/8	7 1/2	8	9 3/4	2.3	3.5	3.5
1-1/4"	40	32	5 1/8	9	6 7/8	9 1/2	10	12	5.0	12	7.4
1-1/2"	50	40	5 1/8	9	6 7/8	9 1/2	9 3/4	12 1/2	5.0	12	7.5
2"	63	50	5 7/8	11 1/4	8 1/4	10 1/4	10 3/4	13 1/4	8.8	20	13
2-1/2"	75	65	7 7/8	13 3/4	9 7/8	11 3/4	-	-	18	30	-
3"	90	75	9 7/8	16 3/4	12	14 1/8	15 1/4	18	29		44
4"	110	100	11 3/4	19 1/2	13 5/8	16 1/2	17 7/8	21	52		70

\*PVC only. Union with FNPT or IPS socket

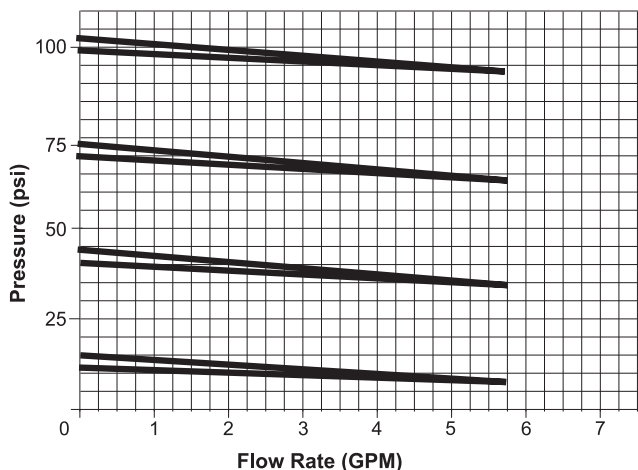
### V782 Dimensions

Size		DN	Ø D	H	h	L	l	Weight (lbs)	
in	mm							PP	PVDF
1/2"	20	15	3 1/4	5 3/8	4	5 1/4	1 7/8	1.2	1.8
3/4"	25	20	4 3/8	8 1/8	4 3/8	6 1/8	2 1/2	2.3	3.5
1"	32	25	4 3/8	8 1/8	4 3/8	6 1/8	2 1/2	2.3	3.5
1-1/4"	40	32	6 1/2	9 3/4	6 3/8	8 7/8	3 3/4	5.0	12
1-1/2"	50	40	6 1/2	9 3/4	6 3/8	8 7/8	3 3/4	5.0	12

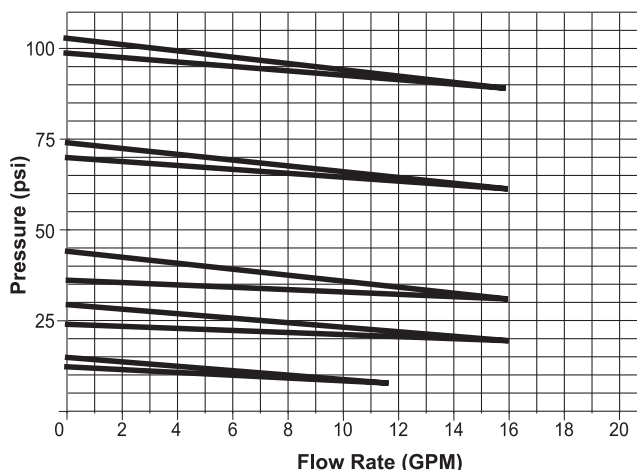


Flow Characteristics

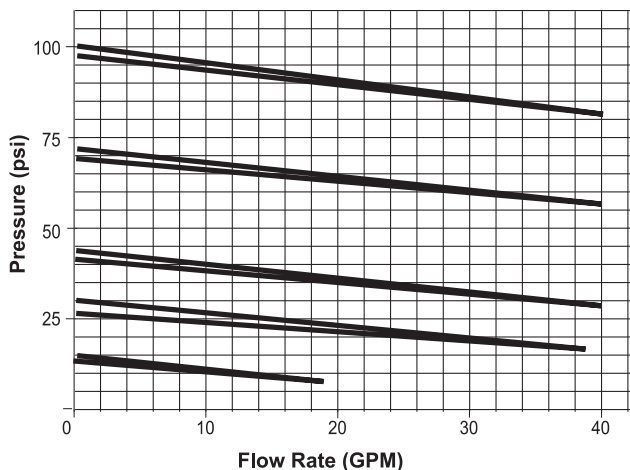
20mm V82/V182



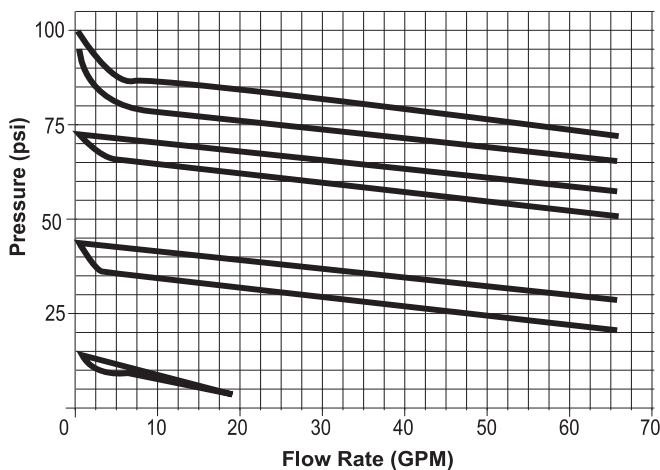
25mm & 32mm V82/V182



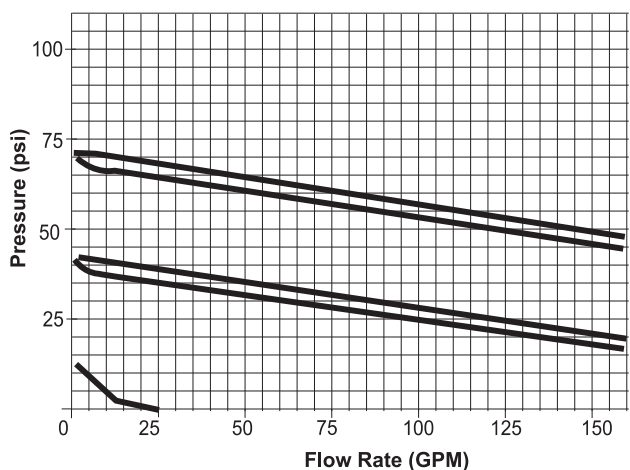
40mm & 50mm V82/V182



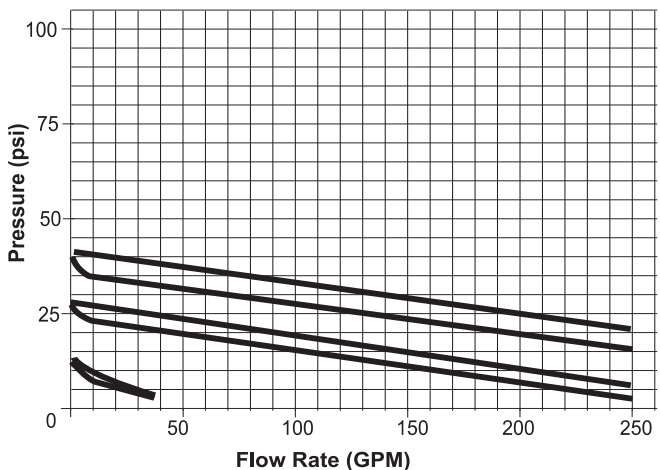
63mm V82



90mm V82

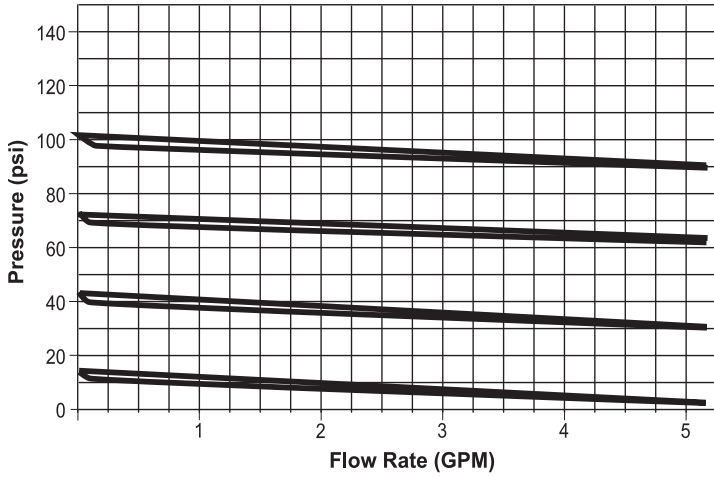


110mm V82

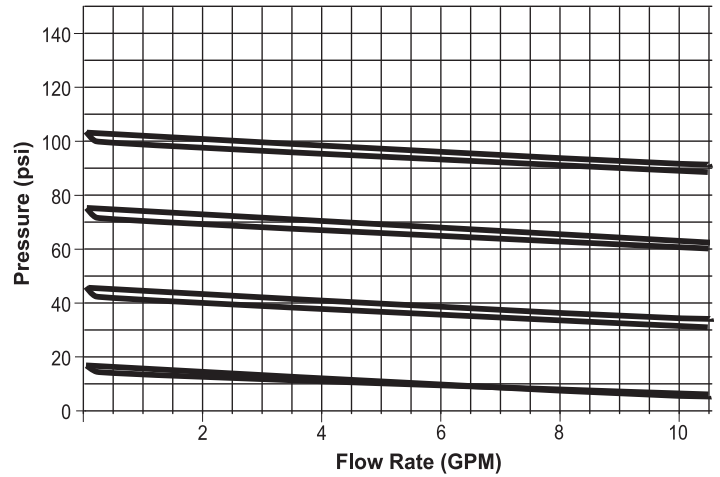


Flow characteristics shown are not a guarantee of performance.

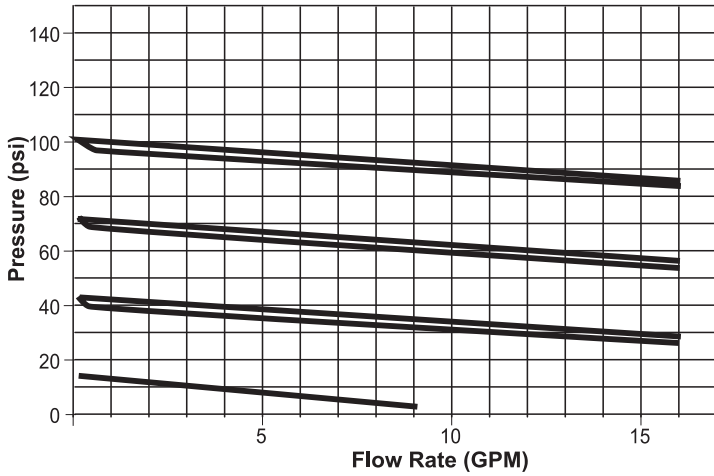
20mm V782



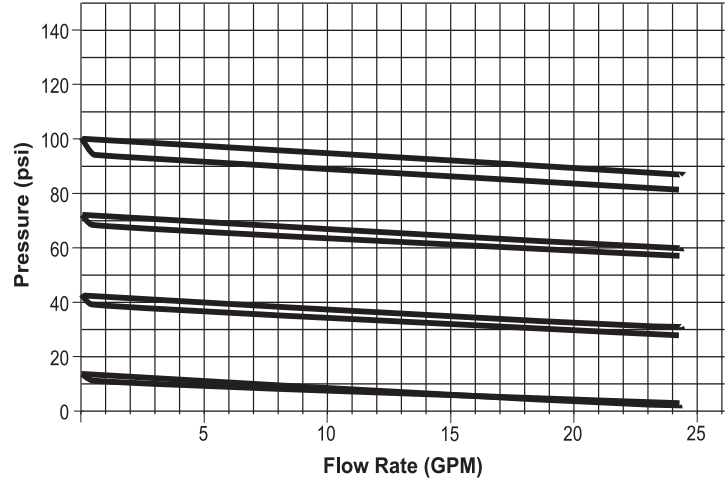
25mm V782



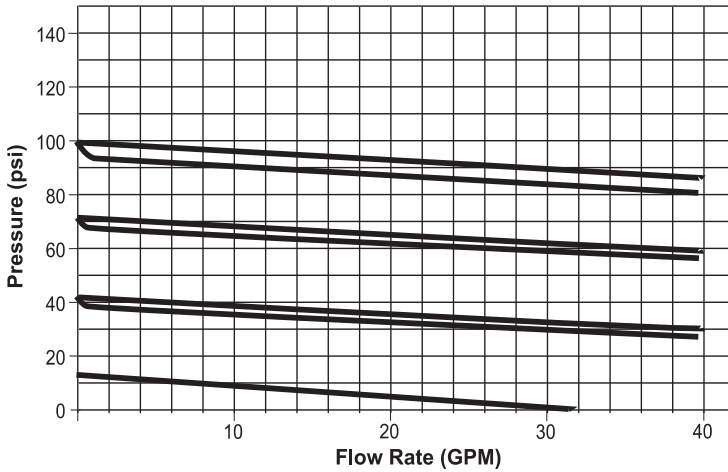
32mm V782



40mm V782



50mm V782



Flow characteristics shown are not a guarantee of performance.

Size		DN	Type	PVC/EPDM		PVC/PTFE	
Inch	mm			IPS Socket	FNPT	IPS Socket	FNPT
1/2"	20	16	V182	160241005	160241105	160241205	160241305
3/4"	25	20	V182	160241007	160241107	160241207	160241307
1"	32	25	V182	160241010	160241110	160241210	160241310
1-1/4"	40	32	V182	160241012	160241112	160241212	160241312
1-1/2"	50	40	V182	160241015	160241115	160241215	160241315
2"	63	50	V82	160241020	160241120	160241220	160241320
2-1/2"	75	65	V82	160241025	160241125	160241225	160241325
3"	90	80	V82	160241030	160241130	160241230	160241330
4"	110	100	V82	160241040	160241140	160241240	160241340

Size		DN	Type	Proline PP, Butt		PP-Pure, IR Butt		PolyPure PPn, IR Butt	
Inch	mm			EPDM	PTFE	EPDM	PTFE	EPDM	PTFE
1/2"	20	16	V82	500241005	500241105	910251005	910241005	630251105	630241105
3/4"	25	20	V82	500241007	500241107	910251007	910241007	630251107	630241107
1"	32	25	V82	500241010	500241110	910251010	910241010	630251110	630241110
1-1/4"	40	32	V82	500241012	500241112	910251012	910241012	-	-
1-1/2"	50	40	V82	500241015	500241115	910251015	910241015	630251115	630241115
2"	63	50	V82	500241020	500241120	910251020	910241020	630251120	630241120
2-1/2"	75	65	V82	500241025	500241125	910251025	910241025	-	-
3"	90	80	V82	500241030	500241130	910251030	910241030	-	-
4"	110	100	V82	500241040	500241140	910251040	910241040	-	-

Size		DN	Type	Chem Grade PVDF, Butt		Purac HP PVDF, IR Butt		Halar E-CTFE, Butt	
Inch	mm			PTFE	PTFE	PTFE	PTFE		
1/2"	20	16	V82	590241005	540241005	550241005			
3/4"	25	20	V82	590241007	540241007	550241007			
1"	32	25	V82	590241010	540241010	550241010			
1-1/4"	40	32	V82	590241012	540241012	-			
1-1/2"	50	40	V82	590241015	540241015	-			
2"	63	50	V82	590241020	540241020	-			
2-1/2"	75	65	V82	590241025	540241025	-			

Size		DN	Type	Proline PP, Butt		PP-Pure, IR Butt		PVDF, Butt, PTFE	
Inch	mm			EPDM	PTFE	EPDM	PTFE	Chem Grade	High Purity
1/2"	20	16	V782	500243005	500243105	910253005	910243005	590243005	540243005
3/4"	25	20	V782	500243007	500243107	910253007	910243007	590243007	540243007
1"	32	25	V782	500243010	500243110	910253010	910243010	590243010	540243010
1-1/4"	40	32	V782	500243012	500243112	910253012	910243012	590243012	540243012
1-1/2"	50	40	V782	500243015	500243115	910253015	910243015	590243015	540243015

## Installation and operating instructions

- The valves must be installed without tension, and if possible with a detachable connection.
- Any desired installation position is possible, and has no influence on the function.
- Pay attention to the flow direction. This identified on the valve by an arrow.
- Install a dirt trap for dirty media and media carrying particles.
- Before start-up, we recommend tightening the housing screws (see table below).

## Setting the operating pressure

- Unscrew the grey protective cap from the upper body
- Loosen the lock nut
- Turn the adjustment screw with a screwdriver/spanner wrench as follows:
  - Clockwise = Increases the output pressure
  - Counter clockwise = Reduces the output pressure

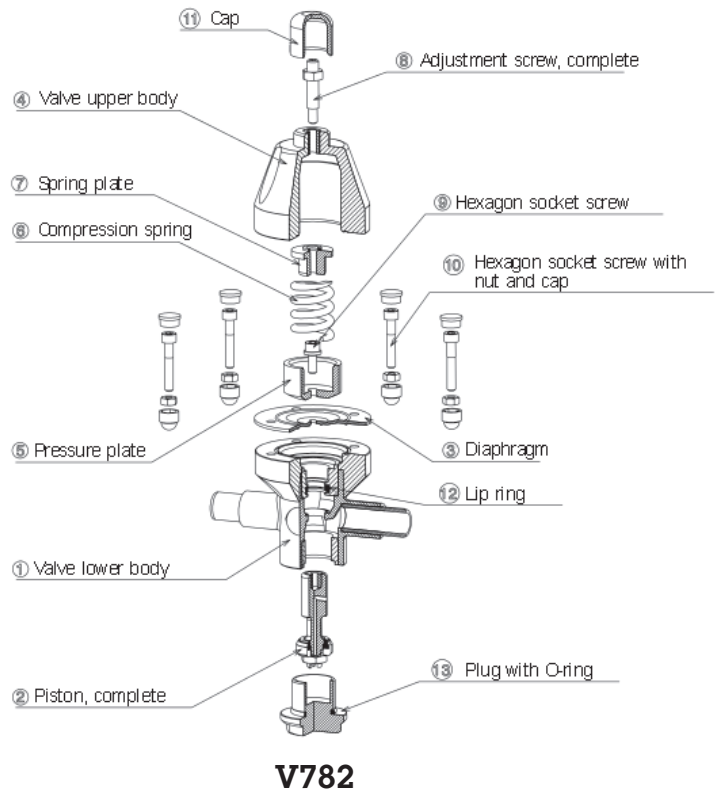
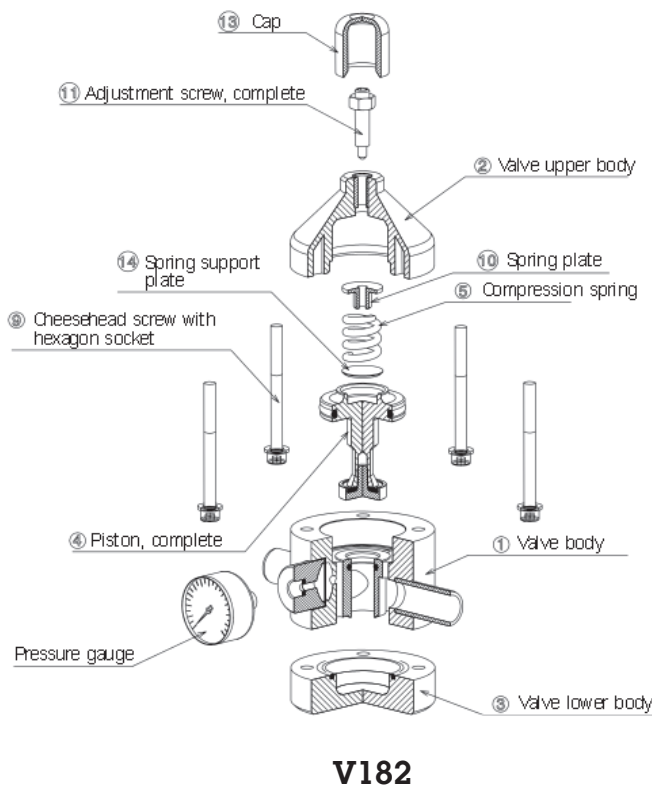
## Torque Setting

Type		1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
V182	Housing	80	105	105	130	130	-	-	-	-
V82	Housing	80	105	105	130	130	250	250	250	250
	Piston	55	90	90	130	130	130	220	220	220
V782	Housing	??	??	??	??	??	-	-	-	-

\*Torque in in-lbs

## Troubleshooting

Problem	Cause	Solution
Leakage at the adjustment screw	Defective diaphragm	Replace the diaphragm or valve
Leakage between upper and lower body	Housing screws are loose	Retighten housing screws
Valve does not close perfectly	Seal seat is dirty or damaged	Backwash or otherwise clean the seal



# Frank Series

## Back Pressure Regulator

- Process fluid is isolated from mechanical parts
- Adjustable under working pressure
- Adjustment range of 7psi (0.5 bar) to 135psi (9.5 bar) outlet with an inlet of 145psi (10 bar)
- Low hysteresis: 1.5psi (0.1 bar) to 8.7psi (0.6 bar)
- Highly accurate and stable control



### Description

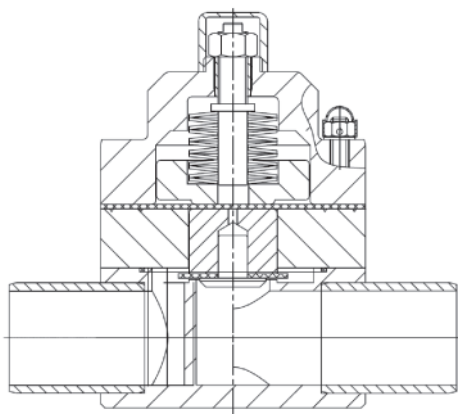
Maintain upstream pressure. Non-wetted spring closes the diaphragm to keep pressure constant upstream. When the set pressure is overcome, the valve will open and continue to flow.

Typically installed at the end of a pressurized line, if your pump fails to produce pressure, this valve will close to keep the pressure from escaping.

This valve can also be installed on a tee branch to relieve your system from over

### Product Offering

Size	in		PP	PPn	PVDF	Halar	PVC
	mm						
1/2"	20		V186	V86	V186	V86	V186
3/4"	25		V186	V86	V186	V86	V186
1"	32		V186	V86	V186	V86	V186
1-1/4"	40		V186	-	V186	-	V186
1-1/2"	50		V186	V86	V186	-	V186
2"	63		V186	V86	V186	-	V186
2-1/2"	75		V86	-	V86	-	V86
3"	90		V86	-	V86	-	V86
4"	110		V86	-	V86	-	V86



V86

### Specifications

- Size Range:** 1/2" (20mm) to 4" (110mm)
- Diaphragm/Seals:** EPDM/EPDM or PTFE/FKM
- Connections:** IR/Butt, Socket<sup>1</sup>, NPT<sup>1</sup>, Flange<sup>2</sup>
- Operation:** 14psi (1 bar) pressure differential min.  
7psi (0.5 bar) to 135psi (9 bar) outlet with 145psi (10 bar) inlet

1) PVC only, 2) Optional

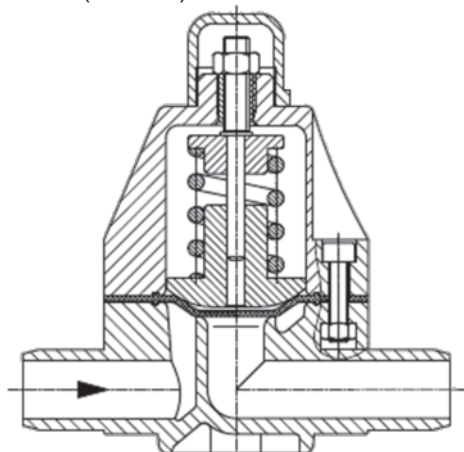
### Material Temperature Range

PVC	32°F (0°C) to 140°F (60°C)
PP	- 4°F (-20°C) to 176°F (80°C)
PP-natural*	- 4°F (-20°C) to 176°F (80°C)
PVDF	- 4°F (-20°C) to 248°F (120°C)
E-CTFE (Halar®)*	-234°F (-145°C) to 340°F (170°C)

\* PPn & E-CTFE are machined Style V82 in all sizes

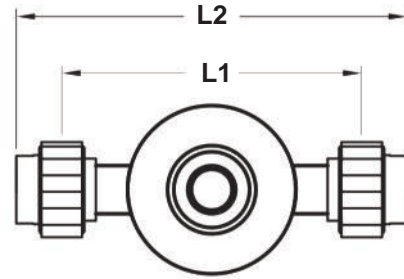
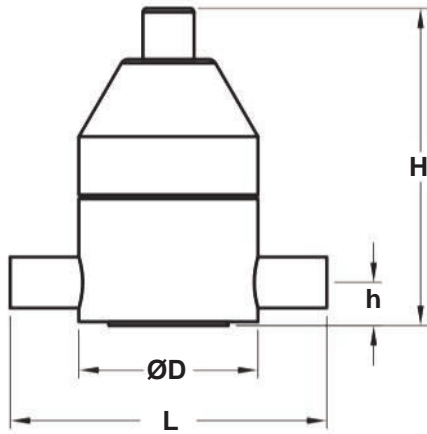
### Valve Size Pressure Range

1/2" (20mm) to 2" (63mm)	7-150psi (0.5-10 bar)
2-1/2" (75mm) to 3" (90mm)	14-90psi (1-6 bar)
4" (110mm)	13-60psi (1-4 bar)



V186





### V86/186 Dimensions

Size		DN	Ø D	H	h	L	L1*	L2*	Weight (lbs)		
in	mm								PP	PVDF	PVC
1/2"	20	15	3 1/4	5 3/8	3/4	5 1/4	5 5/8	7	.66	1.3	.66
3/4"	25	20	3 1/4	5 3/8	3/4	5 1/4	5 5/8	7 2/8	.66	1.3	.66
1"	32	25	4 3/8	7 7/8	1 1/8	6 7/8	7 1/4	9	2	3.5	2
1-1/4"	40	32	6 1/2	7 7/8	1 3/4	6 7/8	7 1/4	9 3/8	2	3.5	2
1-1/2"	50	40	6 1/2	11 3/8	1 3/4	8 7/8	9 1/4	11 1/2	9.7	17.5	9.7
2"	63	50	6 1/2	11 3/8	1 3/4	9 5/8	10 1/4	12 3/4	10	18	10
2-1/2"	75	65	7 1/8	10 7/8	9	11 1/8	-	-	13	19	13
3"	90	75	9 7/8	16 1/8	12 5/8	14 1/8	15 3/8	18	28.5	49	28.5
4"	110	100	9 7/8	19 1/8	16 3/8	15	16 3/8	19 1/2	32	54	32

\*PVC only. Union with FNPT or IPS socket

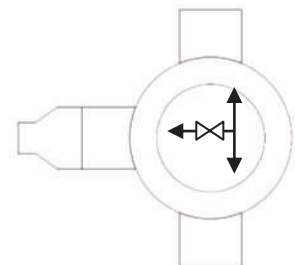
### V86/186 Pressure Relief

It is often desirable to use a V86/186 back pressure regulator on the branch of a tee to act as a pressure relief valve. The benefits of this configuration are that you can install a higher pressure rated, smaller diameter, less expensive, more readily available valve that will perform in the same manner as a V85/185 pressure relief valve.

V85/185 pressure relief valves are popular for tight installations, or high purity projects where dead volume can affect the quality of the water.



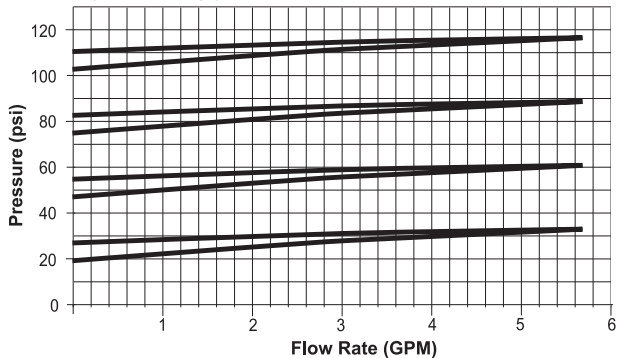
**V86/186**  
2x1 Tee & 1" Valve



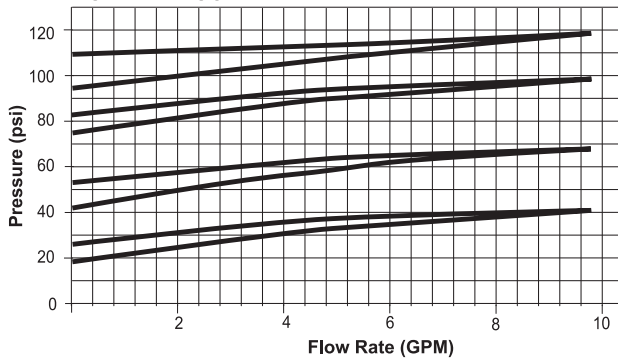
**V85/185**  
2" Valve & 2x1 Reducer

Flow Characteristics

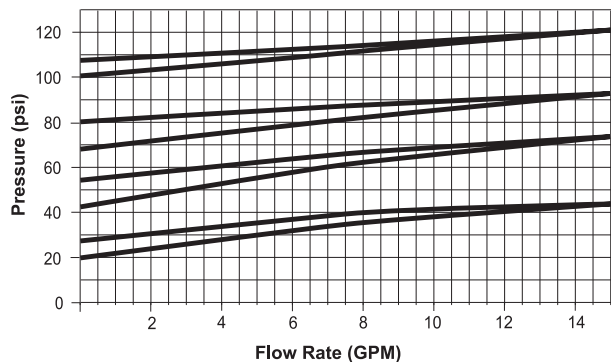
20mm V186



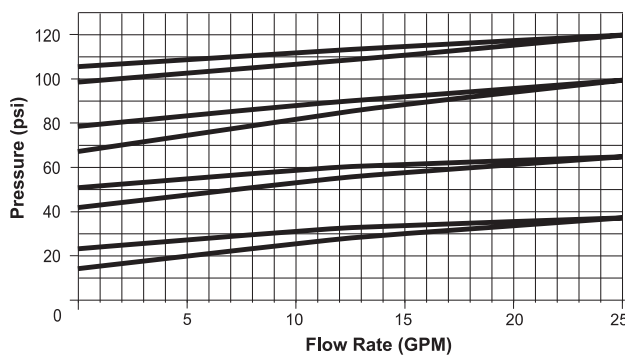
25mm V186



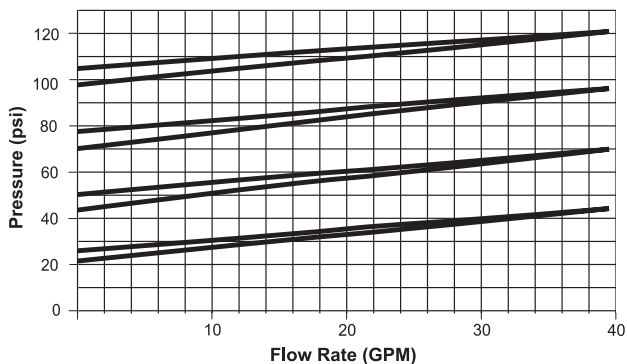
32mm V186



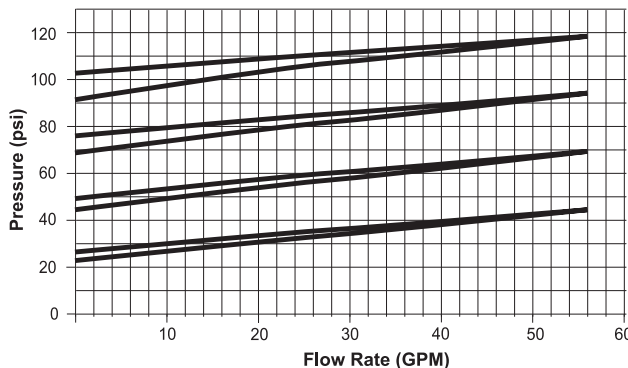
40mm V186



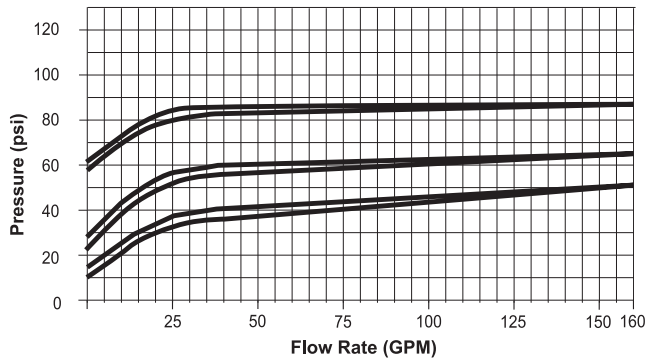
50mm V186



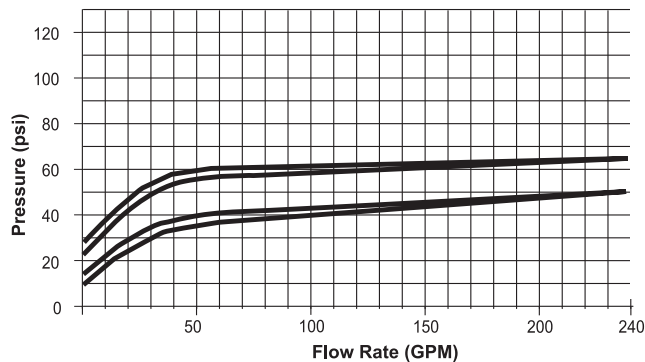
63mm V186



90mm V86



110mm V86



Flow characteristics shown are not a guarantee of performance.

Size		DN	Type	PVC/EPDM		PVC/PTFE	
Inch	mm			IPS Socket	FNPT	IPS Socket	FNPT
1/2"	20	16	V186	160244005	160244105	160244205	160244305
3/4"	25	20	V186	160244007	160244107	160244207	160244307
1"	32	25	V186	160244010	160244110	160244210	160244310
1-1/4"	40	32	V186	160244012	160244112	160244212	160244312
1-1/2"	50	40	V186	160244015	160244115	160244215	160244315
2"	63	50	V186	160244020	160244120	160244220	160244320
2-1/2"	75	65	V86	160244025	160244125	160244225	160244325
3"	90	80	V86	160244030	160244130	160244230	160244330
4"	110	100	V86	160244040	160244140	160244240	160244340

Size		DN	Type	Proline PP, Butt		PP-Pure, IR Butt	
Inch	mm			EPDM	PTFE	EPDM	PTFE
1/2"	20	16	V186	500244005	500244105	910254005	910244005
3/4"	25	20	V186	500244007	500244107	910254007	910244007
1"	32	25	V186	500244010	500244110	910254010	910244010
1-1/4"	40	32	V186	500244012	500244112	910254012	910244012
1-1/2"	50	40	V186	500244015	500244115	910254015	910244015
2"	63	50	V186	500244020	500244120	910254020	910244020
2-1/2"	75	65	V86	500244025	500244125	910254025	910244025
3"	90	80	V86	500244030	500244130	910254030	910244030
4"	110	100	V86	500244040	500244140	910254040	910244040

Size		DN	Type	Chem Grade PVDF, Butt		Purac HP PVDF, IR Butt	
Inch	mm			PTFE	PTFE		
1/2"	20	16	V186	590244005	540244005		
3/4"	25	20	V186	590244007	540244007		
1"	32	25	V186	590244010	540244010		
1-1/4"	40	32	V186	590244012	540244012		
1-1/2"	50	40	V186	590244015	540244015		
2"	63	50	V186	590244020	540244020		
2-1/2"	75	65	V86	590244025	540244025		

Size		DN	Type	PolyPure PPn, IR Butt		Halar E-CTFE, Butt	
Inch	mm			EPDM	PTFE	PTFE	PTFE
1/2"	20	16	V86	630254105	630244105	550244005	
3/4"	25	20	V86	630254107	630244107	550244007	
1"	32	25	V86	630254110	630244110	550244010	
1-1/4"	40	32	V86	-	-	-	
1-1/2"	50	40	V86	630254115	630244115	-	
2"	63	50	V86	630254120	630244120	-	

## Installation and operating instructions

- The valves must be installed without tension, and if possible with a detachable connection.
- Any desired installation position is possible, and has no influence on the function.
- Pay attention to the flow direction. This identified on the valve by an arrow.
- Install a dirt trap for dirty media and media carrying particles.
- Before start-up, we recommend tightening the housing screws (see table below).

## Setting the operating pressure

- Unscrew the grey protective cap from the upper body
- Loosen the lock nut
- Turn the adjustment screw with a screwdriver/spanner wrench as follows:
- Clockwise = Increases the output pressure
- Counter clockwise = Reduces the output pressure

## Torque Setting

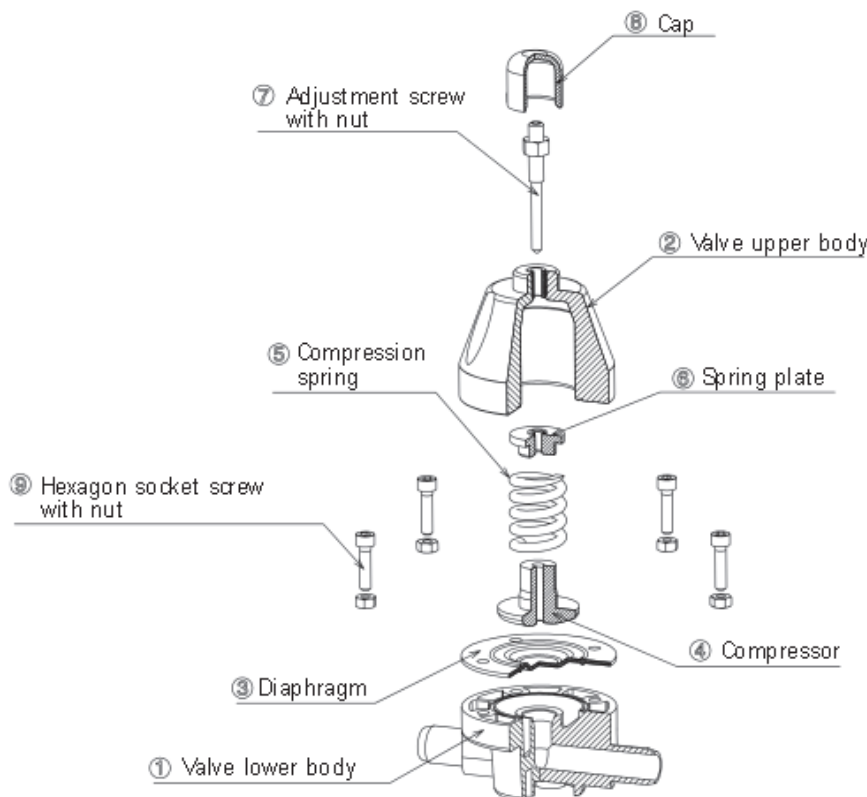
Type	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
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V86/186 Housing

\*Torque in in-lbs

## Troubleshooting

Problem	Cause	Solution
Leakage at the adjustment screw	Defective diaphragm	Replace the diaphragm or valve
Leakage between upper and lower body	Housing screws are loose	Retighten housing screws
Valve does not close perfectly	Seal seat is dirty or damaged	Backwash or otherwise clean the seal
Pressure rises above the set value	Piston or diaphragm is leaky	Replace valve or repair at Asahi



V186

Size		Flow rate	Purad	PolyPure	PP-Pure
Inch	mm		PVDF Butt	PPn Butt	PP Butt
1/2"	20	0.44 - 4.4 GPM (100 - 1000 LPH)	540247010	630247010	910247010
3/4"	25		540247011	630247011	910247011
3/4"	25	0.88 - 8.8 GPM (200 - 2000 LPH)	540247012	630247012	910247012
1"	32		540247013	630247013	910247013
3/4"	25	1.1 - 11 GPM (250 - 2500 LPH)	540247014	630247014	910247014
1"	32		540247015	630247015	910247015
1"	32	1.32 - 13.2 GPM (300 - 3000 LPH)	540247016	630247016	910247016
1-1/4"	40		540247017	630247017	910247017
1-1/4"	40	2.64 - 26.4 GPM (600 - 6000 LPH)	540247018	630247018	910247018
1-1/2"	50		540247019	630247019	910247019
2"	63		540247020	630247020	910247020
1-1/2"	50	4.4 - 44 GPM (1000 - 10000 LPH)	540247021	630247021	910247021
2"	63		540247022	630247022	910247022
2-1/2"	75		540247023	630247023	910247023
2"	63	6.6 - 66 GPM (1500 - 15000 LPH)	540247024	630247024	910247024
2-1/2"	75		540247025	630247025	910247025
3"	90		540247026	630247026	910247026
2"	63		540247027	630247027	910247027
2-1/2"	75	8.8 - 88 GPM (2000 - 20000 LPH)	540247028	630247028	910247028
3"	90		540247029	630247029	910247029
4"	110		540247030	630247030	910247030
2-1/2"	75		540247031	630247031	910247031
3"	90	13.2 - 132 GPM (3000 - 30000 LPH)	540247032	630247032	910247032
4"	110		540247033	630247033	910247033



### Product Offering

#### Specifications

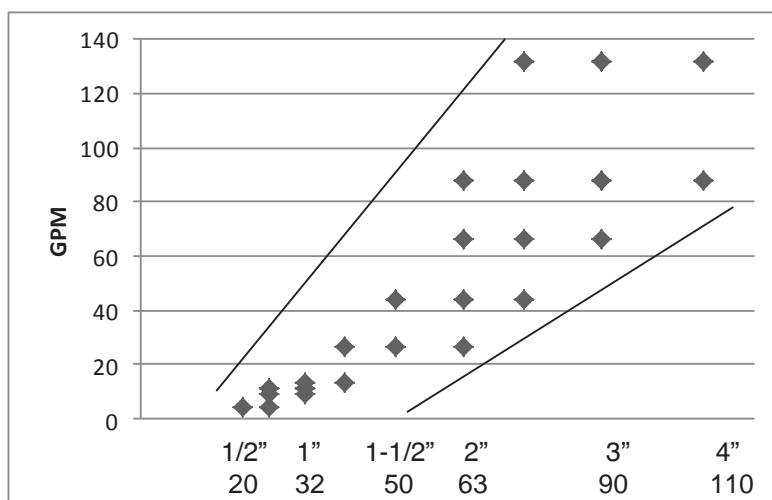
**Size Range:** 1/2" (20mm) to 4" (110mm)

**Tube:** Polyamide

**Float:** PVDF

**Seals:** FKM

**Connections:** IR/Butt



# Frank Series

## Pressure Relief Valve

- Process fluid is isolated from mechanical parts
- Adjustable under working pressure
- Install in any orientation
- Adjustment range of 7psi (0.5 bar) to 135psi (9.5 bar) outlet with an inlet of 145psi (10 bar)
- Highly accurate and stable control

### Description

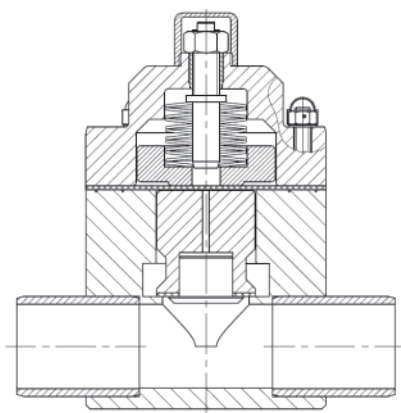
Protect your piping system. Non-wetted spring keeps the valve closed until over pressurized. The integrated third spigot provides zero dead volume and minimal pressure loss.

Installed inline, this valve can maintain your systems pressure by reducing peaks. Balance out fluctuations in pressure caused by shutting points of use on or off.

When the system pressure returns to the preset value, the valve closes to maintain the pressure.

### Product Offering

Size		PP	PVDF	PVC
in	mm			
1/2"	20	V185	V185	V185
3/4"	25	V185	V185	V185
1"	32	V185	V185	V185
1-1/4"	40	V185	V185	V185
1-1/2"	50	V185	V185	V185
2"	63	V185	V185	V185
2-1/2"	75	V85	V85	V85
3"	90	V85	V85	V85
4"	110	V85	V85	V85



V85



### Specifications

- Size Range:** 1/2" (20mm) to 4" (110mm)
- Diaphragm/Seals:** EPDM/EPDM or PTFE/FKM
- Connections:** IR/Butt, Socket<sup>1</sup>, NPT<sup>1</sup>, Flange<sup>2</sup>
- Operation:** 14psi (1 bar) pressure differential min.  
7psi (0.5 bar) to 135psi (9 bar) outlet with 145psi (10 bar) inlet

1) PVC only, 2) Optional

### Material

- PVC
- PP
- PVDF

### Temperature Range

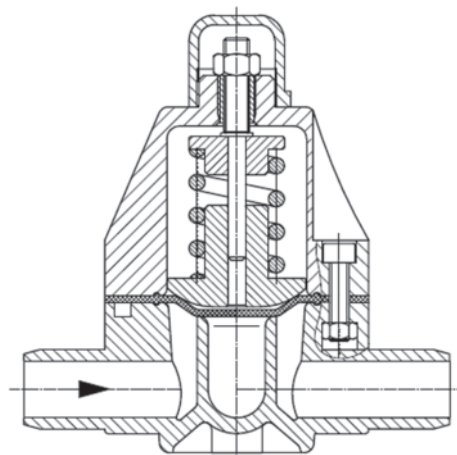
- 32°F (0°C) to 140°F (60°C)
- 4°F (-20°C) to 176°F (80°C)
- 4°F (-20°C) to 248°F (120°C)

### Valve Size

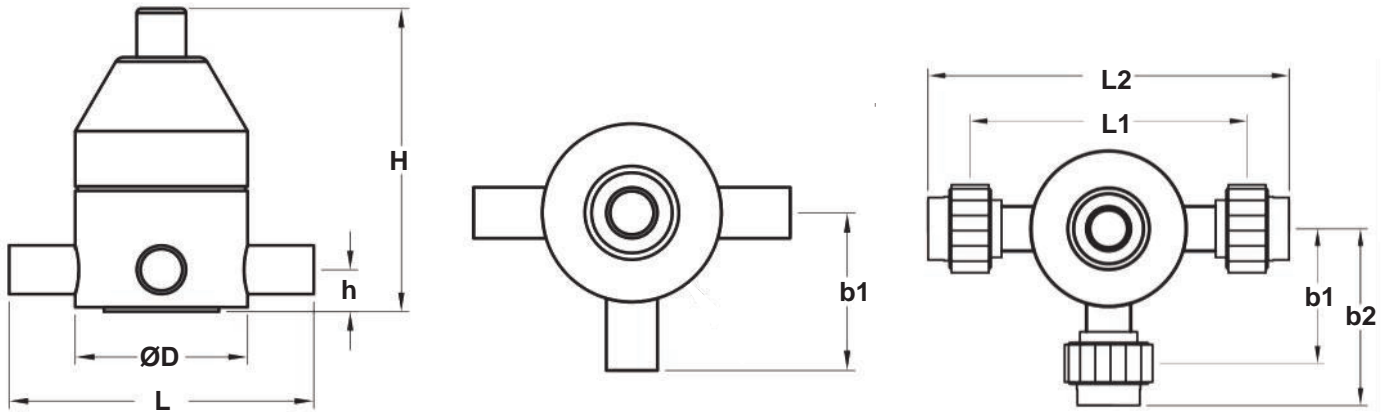
- 1/2" (20mm) to 2" (63mm)
- 2-1/2" (75mm) to 3" (90mm)
- 4" (110mm)

### Pressure Range

- 7-150psi (0.5-10 bar)
- 14-90psi (1-6 bar)
- 13-60psi (1-4 bar)



V185



**V85/185 Dimensions**

Size in	mm	DN	Ø D	H	h	L	b1	b2	L1*	L2*	Weight (lbs)		
											PP	PVDF	PVC
1/2"	20	15	3 1/4	5 3/8	3/4	5 1/4	3 1/8	4	5 2/4	7	1.0	1.5	1.1
3/4"	25	20	3 1/4	5 3/8	3/4	5 1/4	3 1/8	4 1/8	5 5/8	7 1/2	1.0	1.5	1.1
1"	32	25	4 3/8	7 7/8	1 1/8	6 7/8	3 7/8	5	7 1/4	9	2.0	3.8	2.9
1-1/4"	40	32	6 1/2	7 7/8	1 3/4	6 7/8	3 7/8	5 1/8	7 1/4	9 3/8	2.0	3.8	2.9
1-1/2"	50	40	6 1/2	11 3/8	1 3/4	8 7/8	5 1/8	6 5/8	9 1/4	11 1/2	10.0	18.0	14.5
2"	63	50	6 1/2	11 3/8	1 3/4	9 5/8	5 1/8	6 3/4	10 1/4	12 3/4	10.0	18.0	14.5
2-1/2"	75	65	7 1/8	10 7/8	9	11 1/8	5 5/8	-	-	-	14.0	32.5	-
3"	90	75	9 7/8	16 1/8	12 5/8	14 1/8	7 1/4	-	15 1/4	18	21.0	35.5	28
4"	110	100	9 7/8	19 1/8	16 3/8	15	7 3/4	-	16 3/8	19 1/2	44.0	74.5	50

\*PVC only. Union with FNPT or IPS socket

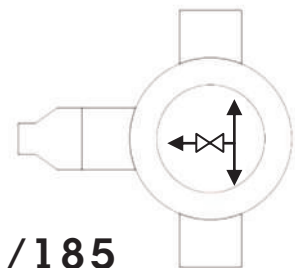
**V86/186 Pressure Relief**

It is often desirable to use a V86/186 back pressure regulator on the branch of a tee to act as a pressure relief valve. The benefits of this configuration are that you can install a higher pressure rated, smaller diameter, less expensive, more readily available valve that will perform in the same manner as a V85/185 pressure relief valve.

V85/185 pressure relief valves are popular for tight installations, or high purity projects where dead volume can affect the quality of the water.

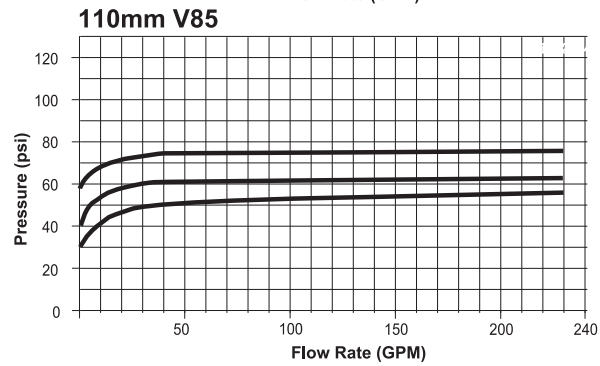
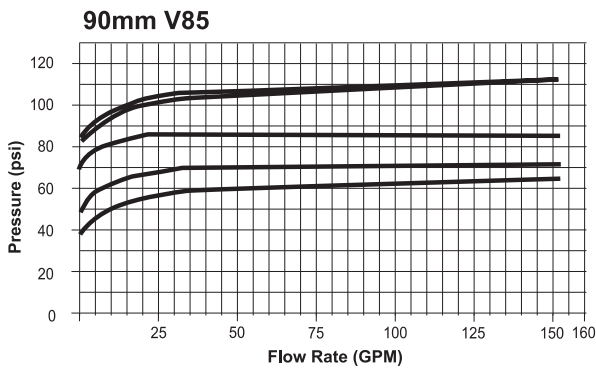
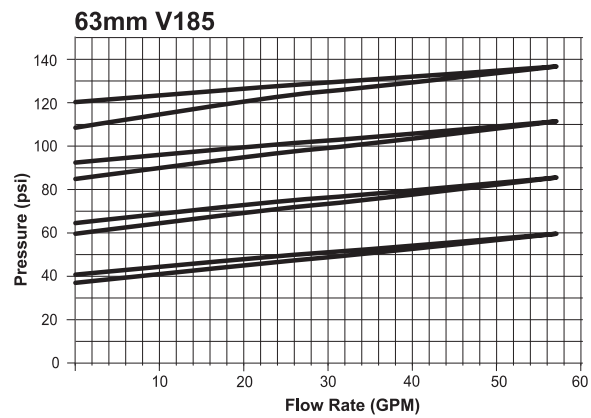
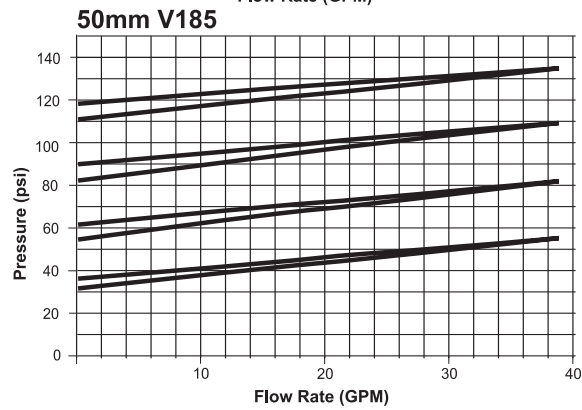
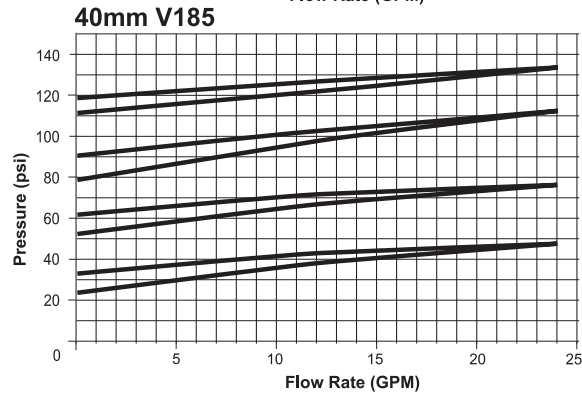
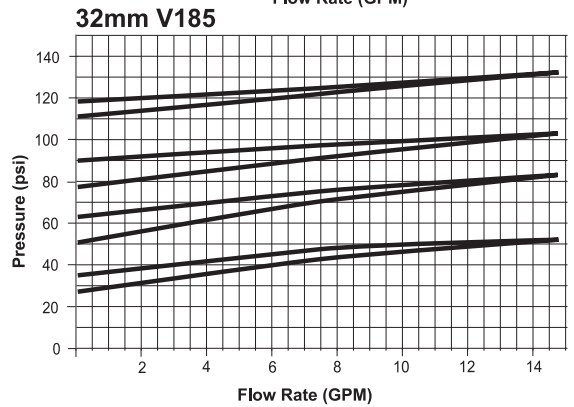
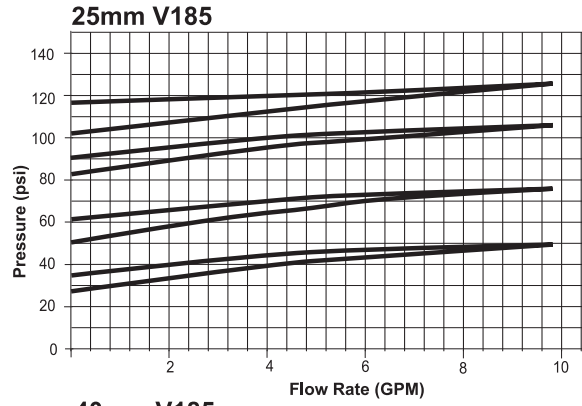
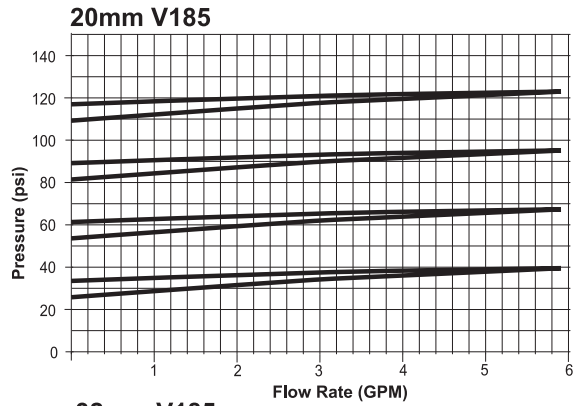


**V86/186**  
2x1 Tee & 1" Valve



**V85/185**  
2" Valve & 2x1 Reducer

Flow Characteristics



Flow characteristics shown are not a guarantee of performance.



Size		DN	Type	PVC/EPDM		PVC/PTFE	
Inch	mm			IPS Socket	FNPT	IPS Socket	FNPT
1/2"	20	16	V185	160245005	160245105	160245205	160245305
3/4"	25	20	V185	160245007	160245107	160245207	160245307
1"	32	25	V185	160245010	160245110	160245210	160245310
1-1/4"	40	32	V185	160245012	160245112	160245212	160245312
1-1/2"	50	40	V185	160245015	160245115	160245215	160245315
2"	63	50	V185	160245020	160245120	160245220	160245320
2-1/2"	75	65	V85	160245025	160245125	160245225	160245325
3"	90	80	V85	160245030	160245130	160245230	160245330
4"	110	100	V85	160245040	160245140	160245240	160245340

Size		DN	Type	Proline PP, Butt		PP-Pure, IR Butt	
Inch	mm			EPDM	PTFE	EPDM	PTFE
1/2"	20	16	V185	500245005	500245105	910255005	910245005
3/4"	25	20	V185	500245007	500245107	910255007	910245007
1"	32	25	V185	500245010	500245110	910255010	910245010
1-1/4"	40	32	V185	500245012	500245112	910255012	910245012
1-1/2"	50	40	V185	500245015	500245115	910255015	910245015
2"	63	50	V185	500245020	500245120	910255020	910245020
2-1/2"	75	65	V85	500245025	500245125	910255025	910245025
3"	90	80	V85	500245030	500245130	910255030	910245030
4"	110	100	V85	500245040	500245140	910255040	910245040

Size		DN	Type	Chem Grade PVDF, Butt	Purad HP PVDF, IR Butt
Inch	mm			PTFE	PTFE
1/2"	20	16	V185	590245005	540245005
3/4"	25	20	V185	590245007	540245007
1"	32	25	V185	590245010	540245010
1-1/4"	40	32	V185	590245012	540245012
1-1/2"	50	40	V185	590245015	540245015
2"	63	50	V185	590245020	540245020
2-1/2"	75	65	V185	590245025	540245025

**Installation and operating instructions**

- The valves must be installed without tension, and if possible with a detachable connection.
- Any desired installation position is possible, and has no influence on the function.
- Pay attention to the flow direction. This identified on the valve by an arrow.
- Install a dirt trap for dirty media and media carrying particles.
- Before start-up, we recommend tightening the housing screws (see table below).

**Setting the operating pressure**

- Unscrew the grey protective cap from the upper body
- Loosen the lock nut
- Turn the adjustment screw with a screwdriver/spanner wrench as follows:
- Clockwise = Increases the output pressure
- Counter clockwise = Reduces the output pressure

**Torque Setting**

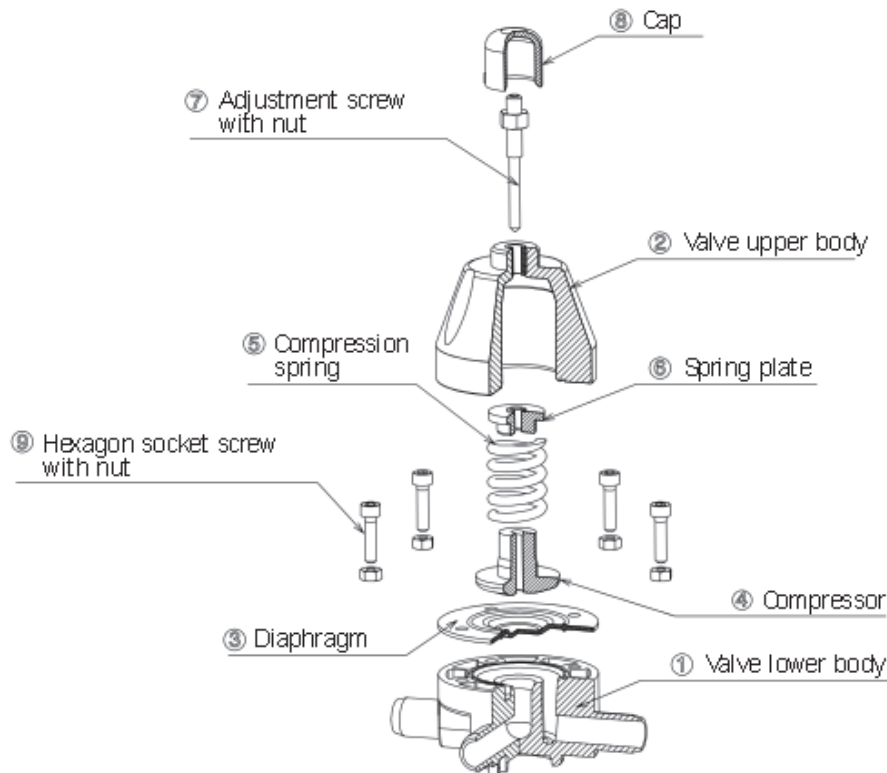
Type	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
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V85/185 Housing

\*Torque in in-lbs

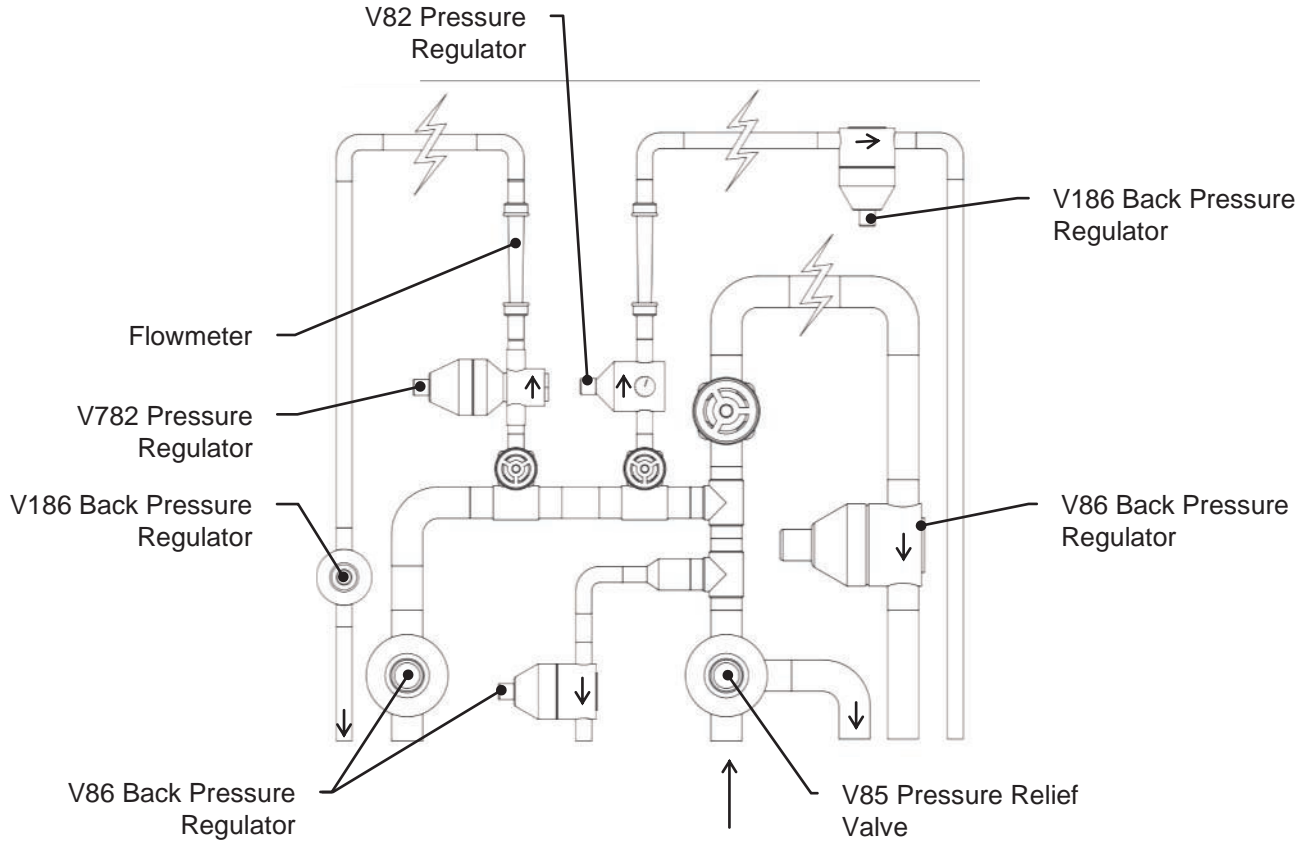
**Troubleshooting**

Problem	Cause	Solution
Leakage at the adjustment screw	Defective diaphragm	Replace the diaphragm or valve
Leakage between upper and lower body	Housing screws are loose	Retighten housing screws
Valve does not close perfectly	Seal seat is dirty or damaged	Backwash or otherwise clean the seal



**V185**

Typical Installation



Asahi Standard Products

	Pigmented PP							Natural PP					PVDF					Halar®					PVC					
	V82	V182	V782	V86	V186	V85	V185	V82	V182	V782	V86	V186	V85	V185	V82	V182	V782	V86	V186	V85	V185	V82	V182	V782	V86	V186	V85	V185
1/2"	X		X		X		X	X		X		X		X	X		X		X		X	X		X		X		X
3/4"	X		X		X		X	X		X		X		X	X		X		X		X	X		X		X		X
1"	X		X		X		X	X		X		X		X	X		X		X		X	X		X		X		X
1-1/4"	X		X		X		X							X	X						X	X		X		X		X
1-1/2"	X		X		X		X	X		X		X		X	X		X		X		X	X		X		X		X
2"	X				X		X	X						X	X		X		X		X	X		X		X		X
2-1/2"	X			X	X									X	X						X	X		X		X		X
3"	X			X	X									X	X						X	X		X		X		X
4"	X			X	X									X	X						X	X		X		X		X

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**[www.asahi-america.com](http://www.asahi-america.com)**

**[asahi@asahi-america.com](mailto:asahi@asahi-america.com)**