

FEBCO

860/ LF860/ 860U

880/ 880U/ 880V/ LF880V

SIZE

1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10"

DESCRIPTION

This is a reduced pressure assembly. The 1/2"-2" sizes began production in 1997. The body is made of bronze and utilizes an in-line modular check design. In 2010 a LF860 model was introduced in sizes 1/2"-2" which was constructed of lead free bronze. The checks are accessed from a single cover on the top. The check modules are made of glass filled noryl. The relief valve utilizes an internal relief valve sensing line. The model 860U incorporates a union end ball valve on the 860. The 880 in sizes 1/2"-2" utilizes an N shape piping on the end of the model 860. The 880U incorporates a union end ball valve on the end of a model 880. Production on sizes 2 1/2"-10" began in 1993. The check body is made of ductile iron which is fused epoxy coated. Check springs are contained when the cover is removed.

Check seats are replaceable. The internal check mechanism is a swing check design with the internal parts made mostly of bronze. The check disc utilizes a vulcanized clapper plate design of elastomer seal. The relief valve is attached to the check body by a flange. The RV body is made of bronze. The RV spring is contained when the RV cover is removed but spring tension must be released for proper repair. The three different models (860, 880, 880V) utilize similar repair parts for the components of the assembly. The 860 model is a straight horizontal configuration. The 880 is known as the N shape. The piping comes up from the bottom on the inlet and goes down out of the outlet to give it a compact installation feature. The 880V is a vertically oriented assembly where the piping comes up into the inlet and then goes horizontally through the check mechanisms. The outlet continues to go up out of the outlet check to give it a vertical orientation. In 2011 the LF 860 and LF880V were introduced. The body is made of a fused epoxy coated ductile iron. The internal check mechanism was changed to a lead free design made of stainless steel or other lead free materials. The internal check utilizes a silicone disc instead of the vulcanized clapper plate as in the 860 and 880 design. The relief valve body was changed from bronze to epoxy coated ductile iron.

BASIC REPAIR KIT

The kit contains clapper plates or discs, rolling diaphragm and O-rings

<u>SIZE</u>	<u>860 KIT NO</u>	<u>880/880V KIT NO</u>	<u>LF860 KIT NO</u>	<u>LF880 KIT NO</u>	<u>AIR GAP DRAIN</u>
1/2"-3/4"	905355		-	-	905358
1"	905356		-	-	905358
1 1/4"-2"	905357		-	-	905359
2 1/2"-3"	905187	905227	905535	905535	905213
4"	905188	905228	905566	905566	905213
6"	905189	905229	905579	905579	905213
8"	905190	905190	905580	905580	905213
10"	905190	905191	905580	-	905213

IMPORTANT FEATURES

- ~Variable installation configuration
- ~Ductile iron body
- ~Fused epoxy coated
- ~Contained check spring
- ~Replaceable seats
- ~External RV sensing line
- ~Factory repair information enclosed



SPECIFICATION SHEET MODEL 860 (1/2" - 2")



Characteristics

Physical Properties

Size ————— 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"

Max. Working Pressure-175 PSI (1200 KPa)

Hydrostatic Test Press. 350 PSI (2400 KPa)

Temperature Range ————— 32°F to 140°F
(0°C to 60°C)

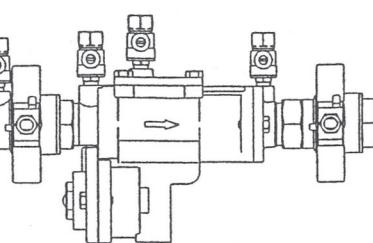
End Connections ————— Threaded ANSI B2.1

Materials LF860

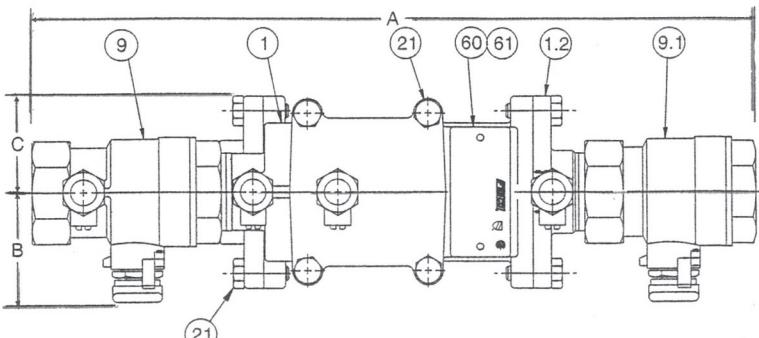
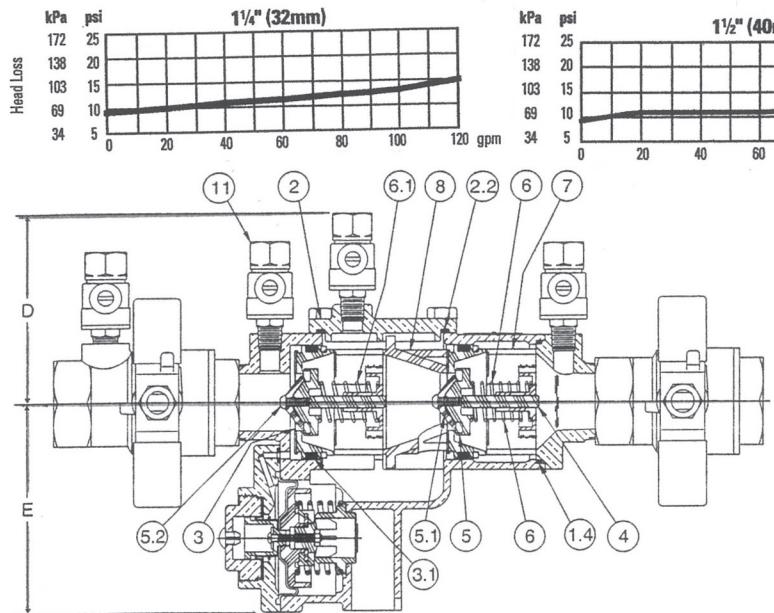
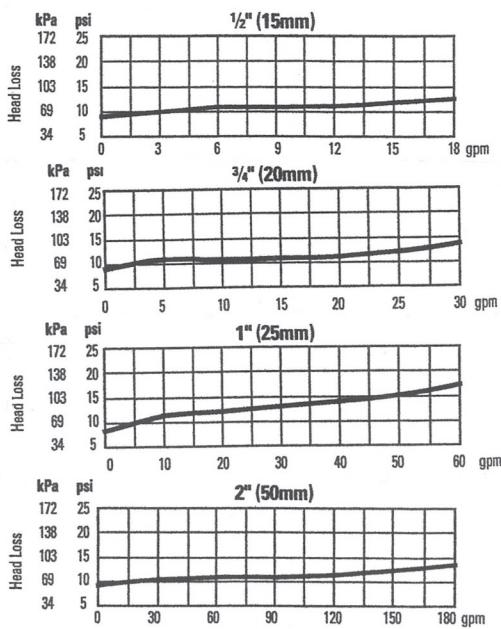
Valve Body ————— Bronze

Elastomers ————— Silicone

Springs ————— Stainless Steel



Model 860 (1/2" - 2") Flow Curves



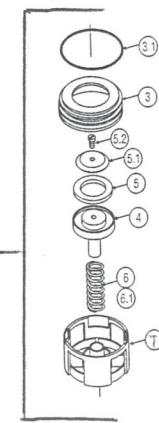
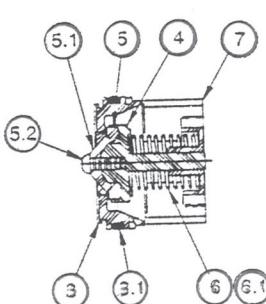
Dimensions and Weights

SIZE	U.S. - Inches					NET WT. (Lbs.)
	A	B	C	D	E	
1/2"	10	1-1/2	1-1/2	3-1/8	3-1/2	5.6
3/4"	10-3/4	1-1/2	1-1/2	3-1/8	3-1/2	5.8
1"	12-1/2	1-7/8	1-5/8	3-3/8	3-5/8	9.2
1-1/4"	15-7/8	3	2-1/2	4-1/4	5-5/8	20.2
1-1/2"	16-3/8	3	2-1/2	4-1/4	5-5/8	20.6
2"	17-5/8	3-1/2	2-1/2	4-1/4	5-5/8	24.8

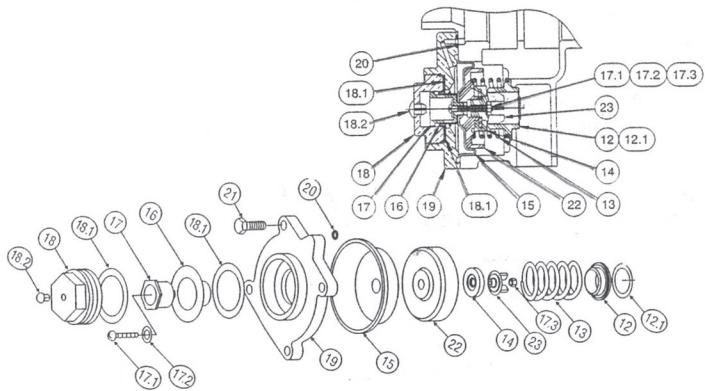
Note: Dimensions are nominal. Allowances must be made for normal manufacturing tolerance.

REDUCED PRESSURE ASSEMBLY

Check Assembly



Relief Valve Assembly

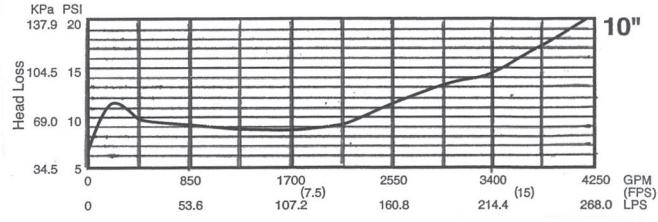
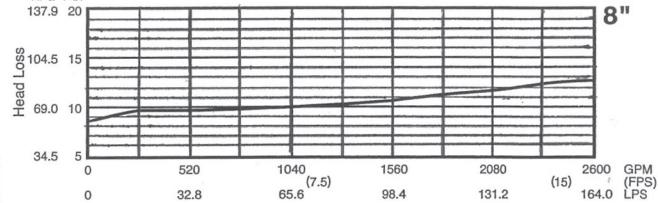
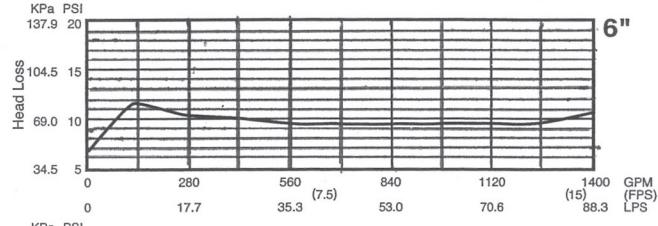
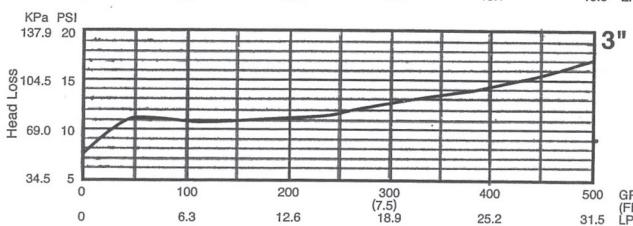
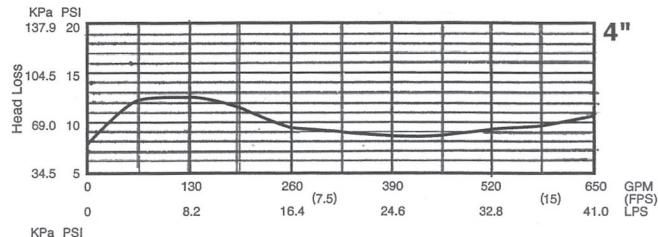
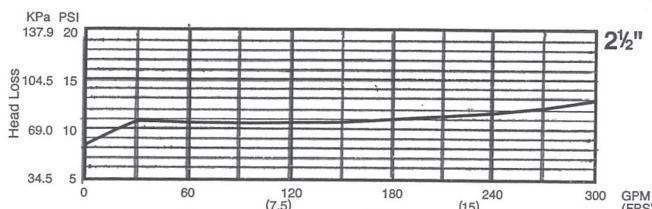
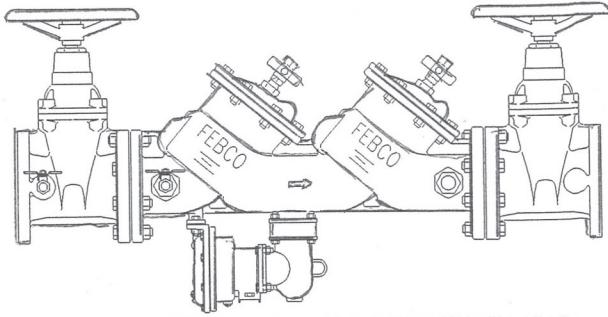


Characteristics**Physical Properties:**

Size of Mainline —— 2 1/2", 3", 4", 6", 8", & 10"
 Max. Working Pressure —— 175 PSI
 Hydrostatic Test Press. —— 350 PSI
 Temperature Range —— 32°F to 140°F
 (0°C to 60°C)
 End Connections —— Flanged ANSI B16.1
 Class 125

Materials:

Main Valve Body —— Ductile iron ASTM A536 Grade 65-45-12
 Coating —— Fusion epoxy coated internal and external AWWA C550-90
 Shut Off Valves —— NRS resilient wedge AWWA C509 gate valves
 Relief Valve —— Bronze ASTM B584 Alloy C83600
 Trim —— Bronze ASTM B584 Alloy C83600
 Elastomers —— EPDM
 Spring —— Stainless steel

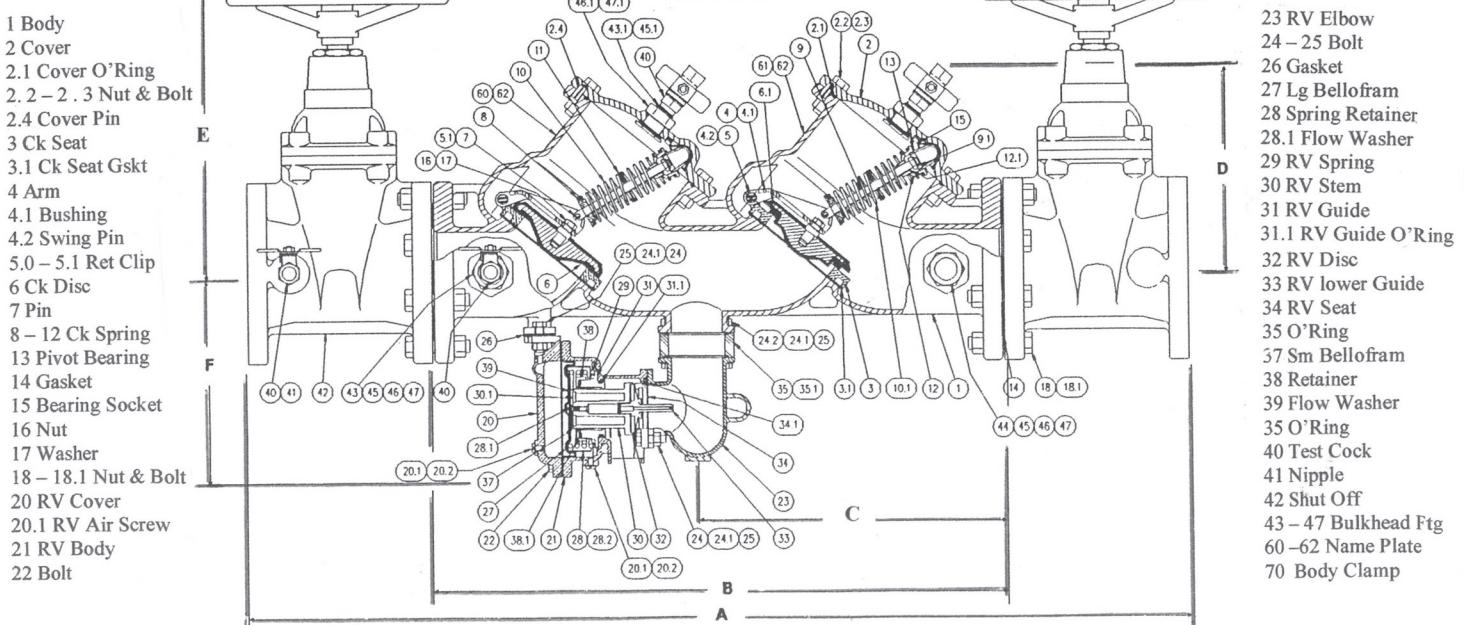


U.S. - INCHES										Weight		
Size	A	B	C	D	E NRS	E1 OS&Y	F	G	H	J	NRS (lbs.)	OS&Y (lbs.)
2 1/2"	.40 1/8	25 1/2	12 7/8	10	12 5/8	16 3/8	10	4 1/2	7 1/8	3 1/2	219	223
3"	41 1/8	25 5/8	13	10	12 7/8	22 1/4	10	4 1/2	7 3/8	3 1/4	231	233
4"	46 1/4	28	15 1/8	10 1/8	14 3/8	23 1/4	10 1/8	5 1/2	8 1/8	4 1/2	317	334
6"	56	32 3/4	20 3/4	12 1/4	18 7/8	30 1/8	11 1/8	6 1/2	9 7/8	5 1/2	481	516
8"	65	41 1/4	26 7/8	15 5/8	23 1/2	37 3/4	12 1/4	7	11 1/8	6 3/4	734	796
10"	72 5/8	46 7/8	28 1/4	15 5/8	27 1/2	48	12 3/8	9	12 3/8	8	946	1008

Weights are approximate.

Dimensions shown are nominal, allowances must be made for normal manufacturing tolerances.

Model 860



LEAD FREE*

MasterSeries® LF860

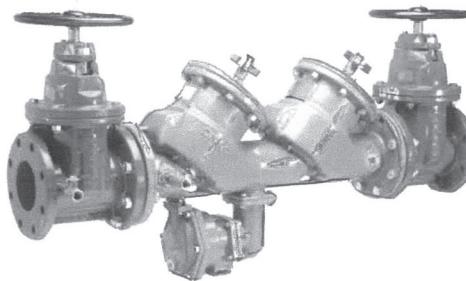
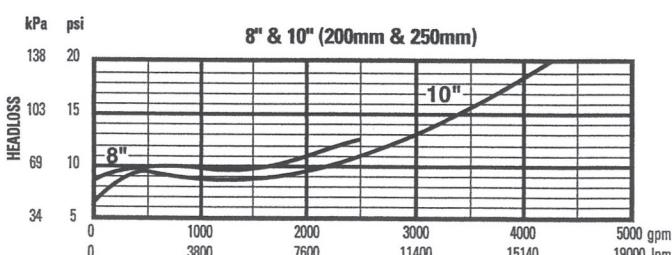
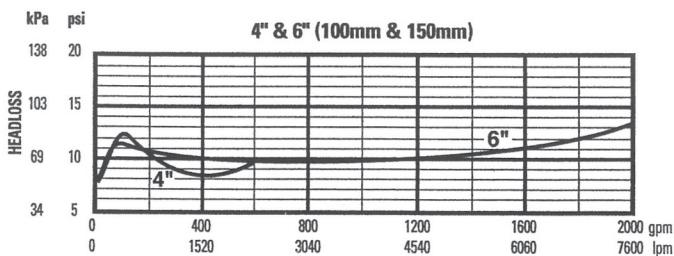
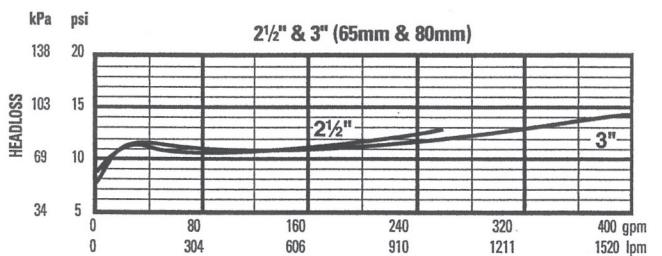
Reduced Pressure Zone Backflow Prevention Assemblies

Size: 2½" - 10" (65mm - 250mm)

Materials

Below is a general materials list of the Series LF860. All assemblies size 2-1/2" through 10" is similar in materials and construction. Please contact your local FEBCO Representative if you require further information.

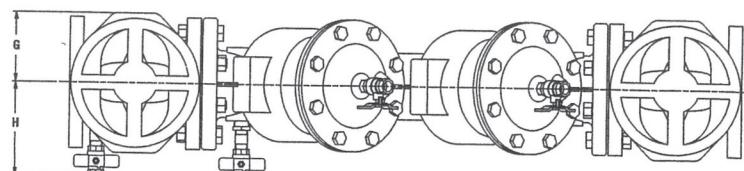
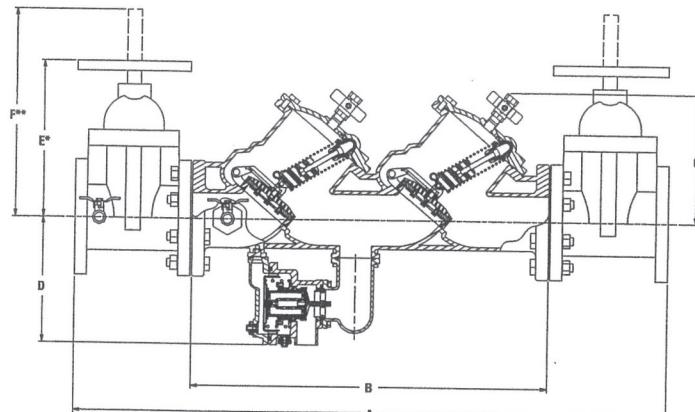
Main Valve Body:	Ductile iron Grade 65-45-12
Relief Valve Body:	Ductile iron Grade 65-45-12
Coating:	Fusion epoxy coated internal and external AWWA C550
Shutoff Valves:	NRS resilient wedge gate valve AWWA C509 (Standard) OSY resilient wedge gate valve AWWA C515 (UL/FM)
Check Seats:	Stainless Steel
Disc Holder:	Stainless Steel
Elastomer Disc:	Silicone
Spring:	Stainless Steel
Clamp:	AWWA C606 (10" Only)

**Pressure - Temperature**

Max. Working Pressure:	175 psi (12.1 bar)
Min. Working Pressure:	20 psi (1.4 bar)
Hydrostatic Test Pressure:	350 psi (24.1 bar)
Hydrostatic Safety Pressure:	700 psi (48.3 bar)
Temperature Range:	33°F - 140°F (0.5°C - 60°C) Continuous

Dimensions & Weights

Below are the nominal dimensions and physical weights for the Series LF860 size 2-1/2" through 10". Allowances must be made for normal manufacturing tolerances. Please visit our website to download a copy of this product's installation instructions, or contact your local FEBCO Representative for more information.



SIZE (DN)	DIMENSIONS										WEIGHT***										
	A	B	C	D	E*	F**	G	H	NRS	OSY	lbs.	kg.	lbs.	kg.							
2½	65	40%	1035	25½	648	10	254	10	254	12%	321	16%	416	4½	114	7½	181	250	113	254	115
3	80	41%	1064	25%	651	10	254	10	254	12%	327	22½	565	4½	114	7¾	187	276	125	280	127
4	100	46%	1175	28	711	10½	257	10½	257	14%	365	23½	591	5½	140	8¼	206	335	152	347	157
6	150	56	1422	34%	883	12½	324	11½	283	18½	479	30%	765	6½	165	9¾	251	503	228	523	237
8	200	65	1651	41%	1061	15%	397	12%	311	23½	597	37%	959	7	178	11½	283	807	366	835	379
10	250	72%	1845	46%	1178	15%	397	12%	314	27½	694	48	1219	9	229	12¾	314	1205	547	1243	564

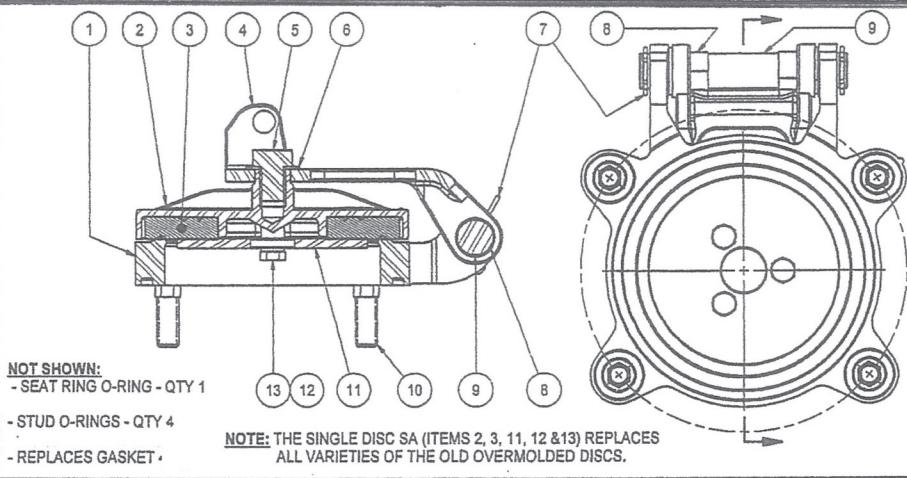
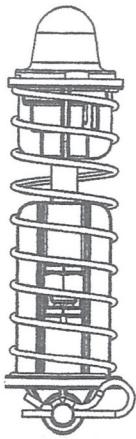
* Indicates nominal dimensions with NRS Gate Valves

** Indicates nominal dimensions with OSY Gate Valves (Full Open Position)

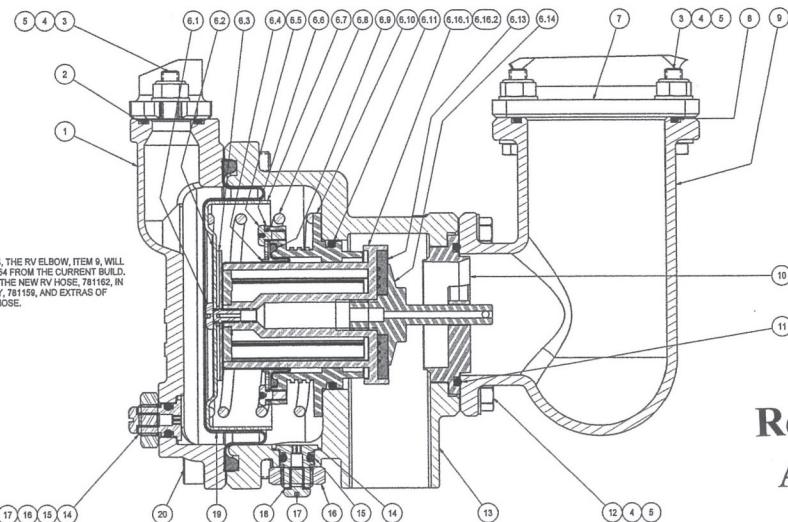
*** Indicates weight of complete Backflow Assemblies with specified Gate Valves

The gap drain is not designed to catch the maximum discharge possible from the relief valve. The installation of the FEBCO air gap with the drain line terminating above a floor drain will handle any normal discharge or nuisance spitting through the relief valve. However, floor drain size may need to be designed to prevent water damage caused by a catastrophic failure condition. Do not reduce the size of the drain line from the air gap fitting.

LF860 Check Mechanism

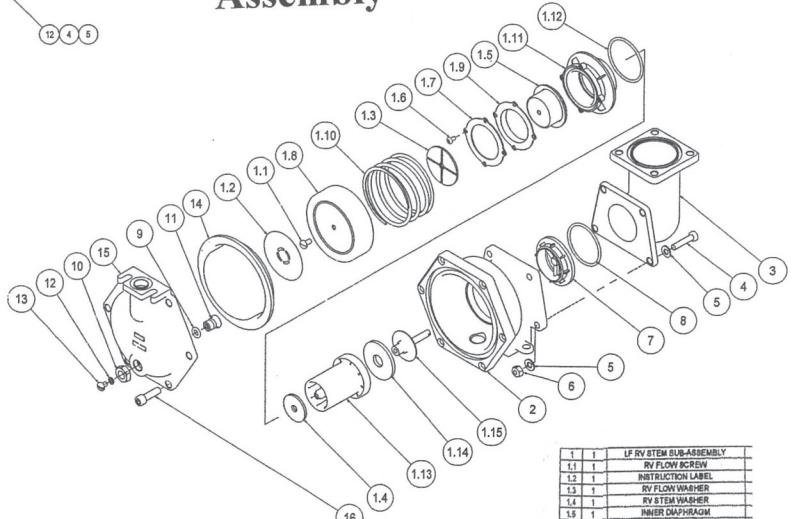


PARTS LIST	
ITEM	DESCRIPTION
1	SEAT RING 2-1/2" & 3"
2	DISC HOLDER 2-1/2" & 3"
3	DISC 2-1/2" & 3"
4	ARM 2-1/2" & 3"
5	HHCS 3/8-16UNC-2Bx.50
6	WASHER, .375 ID X .75 OD X .041
7	HAIRPIN CLIP
8	BUSHING-SWING PIN
9	SWING PIN
10	HEX STUD 5/16-18 x 1-1/4
11	DISC RETAINER 2-1/2" & 3"
12	#10 SPLIT LOCK WASHER
13	HH MACH SCREW #10-24UNCx3/8



**Relief Valve
Assembly**

ITEM	QT	DESCRIPTION	ITEM	QT	DESCRIPTION
1	1	RV COVER	6.14	1	RV LOWER GUIDE
2	1	SIZE 212 O-RING (EDP 2101013)	6.16	1	RV MAINSTEM SUB-ASSEMBLY
3	6	5/16-18 UNC x 1.38 HHCS	6.16.1	1	RV MAINSTEM
4	10	5/16-18 UNC ELASTIC STOP NUT	6.16.2	1	RV STEM WASHER
5	20	5/16 FLAT WASHER TYPE A	7	1	IN-LINE BODY - 2-1/2" TO 10"
6	1	RV STEM SUB-ASSEMBLY	8	1	SIZE 232 O-RING (EDP 2101017)
6.1	1	RV FLOW SCREW	9	1	RV ELBOW 860
6.2	1	INSTRUCTION LABEL	10	1	RV SEAT RING
6.3	1	RV FLOW WASHER	11	1	SIZE 229 O-RING (EDP 2101014)
6.4	1	INNER DIAPHRAGM PLATE	12	4	5/16-18 X 1-1/2 HHB
6.5	4	PAN HEAD PHILLIPS SCREW	13	1	RV BODY MACHINING
6.6	1	DIAPHRAGM RETAINER	14	2	RV DRAIN PLUG SLEEVE
6.7	1	RV PISTON	15	2	SIZE 204 O-RING (EDP 2101038)
6.8	1	RV SPRING	16	2	HEX NUT
6.9	1	INNER DIAPHRAGM	17	2	PAN HD SCREW
8.10	1	RV UPPER GUIDE	18	2	GASKET
8.11	1	SIZE 230 O-RING (EDP 2101015)	19	1	OUTER DIAPHRAGM
8.13	1	RV SEAT DISC	20	6	SHCS 3/8-16 X 1.25



AIR GAP DRAIN
SPECIFICATION SHEET MODEL 601

Model 601 Air Gap Drain Kit 2 1/2" - 10"

Part **Material**

- Nozzle — ASTM B26 Alloy 358
- Funnel — ASTM B26 Alloy 356
- Rods — ASTM B241 Alloy 6063
- Coating — Pratt & Lambert, Inc. Vitralon polyurethane coating black #88-1204 or equivalent

The nozzle is required for 860 installations. It is not required on 860 installations.

Dimensions

A	13 1/8"
B	6 3/8"
C	5 3/8"
D	3 1/2"
E	3 13/16"
F	2 7/32"
G	4 3/8"
H	9 7/8"
Weight lbs.	2.2

Airgap Drain Front View Model 860

Model 601 Air Gap Drain Kit Date 09/93 Drawing SS 601-1

1	1	LF RV STEM SUB-ASSEMBLY
1.1	1	RV FLOW IC-BEH
1.2	1	INSTRUCTION LABEL
1.3	1	RV FLOW WASHER
1.4	1	RV STEM WASHER
1.5	1	INNER DIAPHRAGM
1.6	4	PAN HEAD Phillips 10-24 x .375 L.O.D.
1.7	1	DIAPHRAGM RETAINER
1.8	1	RV PISTON
1.9	1	INNER DIAPHRAGM PLATE
1.10	1	RV SPRING
1.11	1	RV UPPER GUIDE
1.12	1	RV LOWER GUIDE
1.13	1	RV MAINSTEM
1.14	1	RV BEAT DISC
1.15	1	RV BODY
2	1	RV ELBOW 860
3	1	5/16-18 X 1-1/2 HHB
4	4	5/16 FLAT WASHER TYPE A
5	8	5/16-18 UNC ELASTIC STOP NUT
6	1	RV BEAT RING
7	1	O-RING-228
8	1	O-RING-204
9	2	HEX NUT
10	2	PAN HD SCREW
11	2	GASKET
12	2	PAN HD SCREW
13	1	OUTER DIAPHRAGM
14	1	RV COVER
15	1	SHCS 3/8-16 X 1.25
16	8	ITEM QTY DESCRIPTION

SPECIFICATION SHEET MODEL 880



REDUCED PRESSURE ASSEMBLY

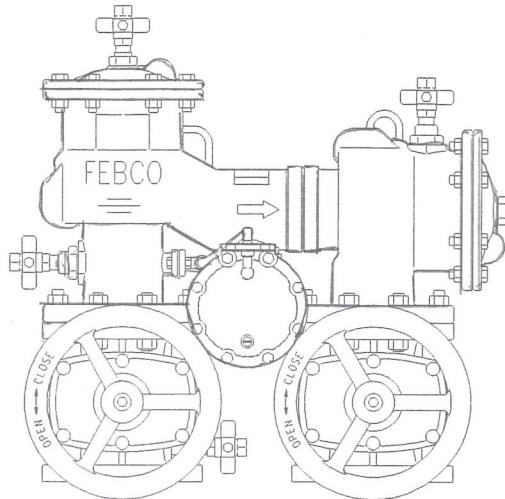
Physical Properties

Size of Mainline —— 2 1/2", 3, 4", 6", 8", & 10"
 Max. Working Pressure 175 PSI (1200 KPa)
 Hydrostatic Test Press. 350 PSI (2400 KPa)
 Temperature Range — 32°F to 140°F
 (0°C to 60°C)
 End Connections — Flanged ANSI B16.1
 Class 125

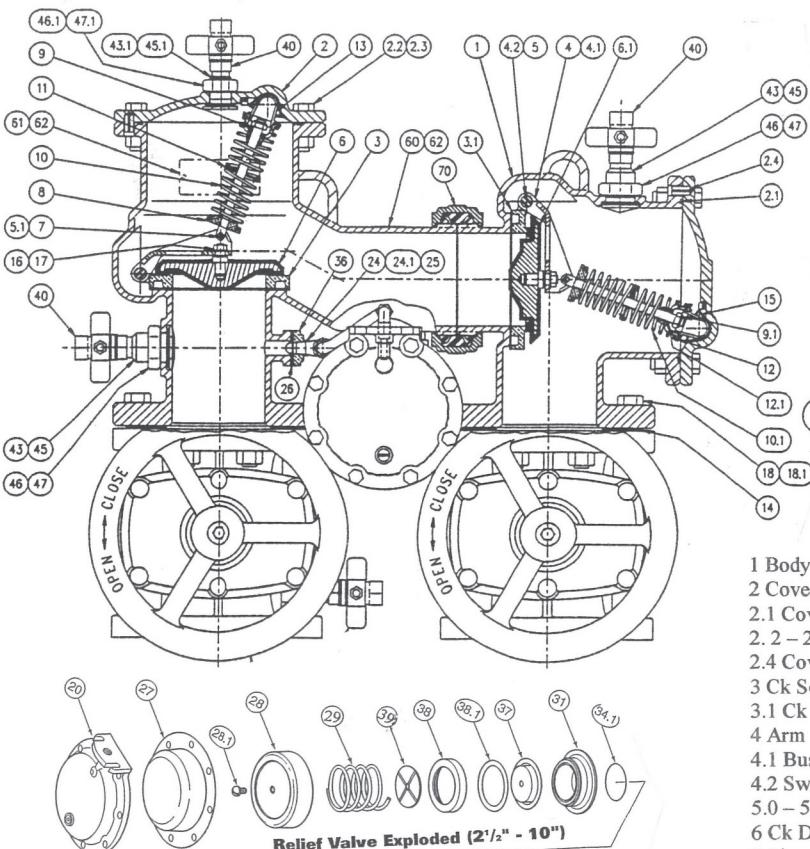
Materials

Main Valve Body — Ductile iron ASTM A536
 Grade 65-45-12
 Coating — Fusion epoxy coated
 internal and external
 AWWA C550-90
 Shut Off Valves — NRS and OS&Y resilient
 wedge AWWA C509
 gate valves
 Trim — Bronze ASTM B584
 Alloy C83600
 Elastomers — EPDM
 Spring — Stainless steel

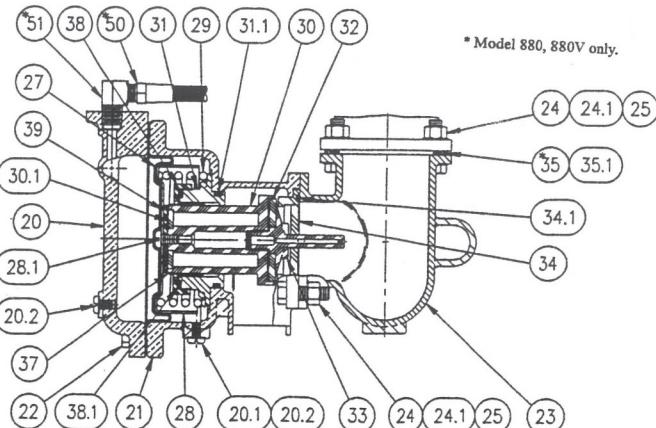
U.S. Patent No. 4,989,635
 U.S. Patent No. 5,107,888



MODEL 880 REDUCED PRESSURE ASSEMBLY

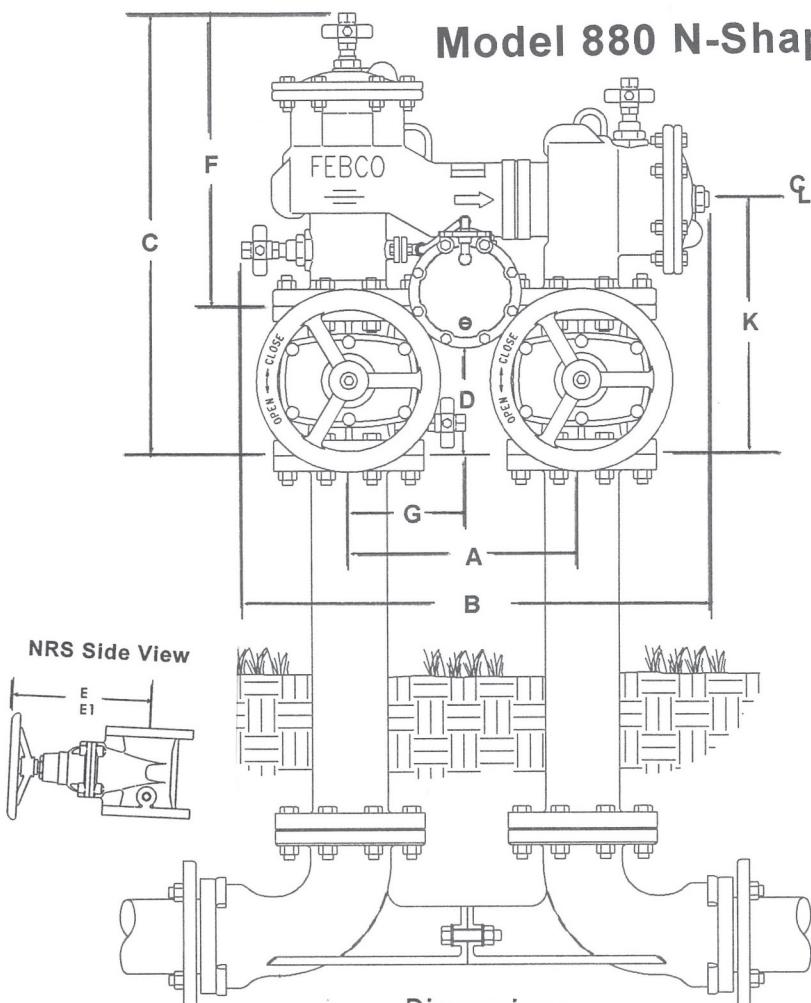


RELIEF VALVE CUT-A-WAY
SIDE VIEW (2-1/2" - 10")
FIGURE NO. 16



1 Body	16 Nut	32 RV Disc
2 Cover	17 Washer	33 RV lower Guide
2.1 Cover O'Ring	18 – 18.1 Nut & Bolt	34 RV Seat
2.2 – 2 .3 Nut & Bolt	20 RV Cover	35 O'Ring
2.4 Cover Pin	20.1 RV Air Screw	36 RV Flg Adapter
3 Ck Seat	21 RV Body	37 Sm Bellofram
3.1 Ck Seat Gskt	22 Bolt	38 Retainer
4 Arm	23 RV Elbow	39 Flow Washer
4.1 Bushing	24 – 25 Bolt	35 O'Ring
4.2 Swing Pin	26 Gasket	40 Test Cock
5.0 – 5.1 Ret Clip	27 Lg Bellofram	41 Nipple
6 Ck Disc	28 Spring Retainer	42 Shut Off
7 Pin	28.1 Flow Washer	43 – 47 Bulkhead Ftg
8 – 12 Ck Spring	29 RV Spring	50 RV Sensing Line
13 Pivot Bearing	30 RV Stem	51 RV Elbow
14 Gasket	31 RV Guide	60 – 62 Name Plate
15 Bearing Socket	31.1 RV Guide O'Ring	70 Body Clamp

Model 880 N-Shape



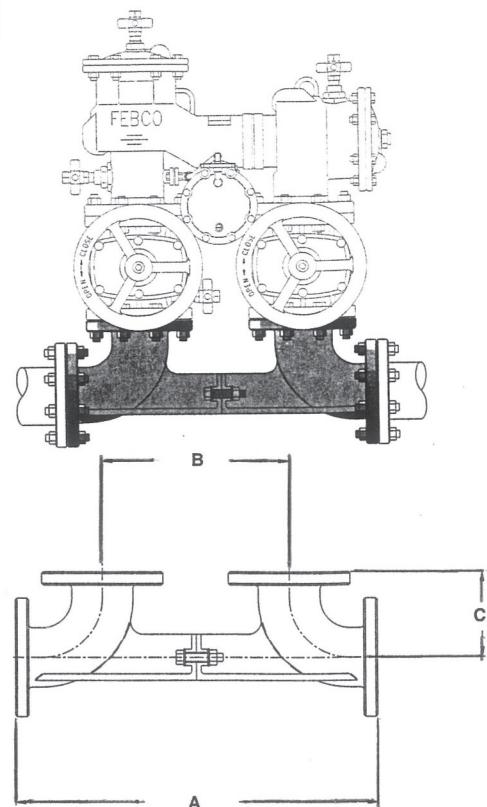
Size	A	B	C	D	E NRS	E1 OS&Y Full Open	F	G	K	*LL	NET WT NRS	NET WT OS&Y Approximate
2 1/2"	12 1/2	25 3/4	24 1/4	4 15/16	12 1/4	15 3/4	16 5/8	6 1/4	13 5/8	N/A	210	220
3"	12 1/2	25 3/4	24 3/4	5 7/16	12 1/2	22 1/4	16 5/8	6 1/4	14 1/8	21 1/2	280	290
4"	14	27 7/8	26 3/4	6 9/16	13 3/4	23 1/4	17 11/16	7	15 1/2	24	310	330
6"	16	32 3/16	32 1/4	8 9/16	17 3/4	30	21 9/16	8	18 5/8	29	470	510
8"	18 1/2	33 11/16	36 5/16	9 9/16	21 1/2	37 3/4	21 5/8	9 1/4	20 3/4	33 1/2	790	850
10"	21	41 1/2	40 7/16	11 1/2	27 1/2	48	28 7/16	10 1/2	23 3/4	40	1320	1450

Weights do not include risers or optional valve setter.

* Lay length with optional MJ x FL valve setter.

Refer to Specification Sheet SS VS for details on valve setter.

Valve Setter Flange by Flange

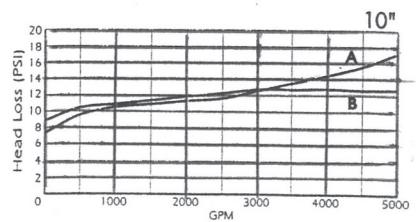
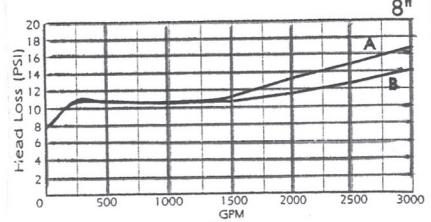
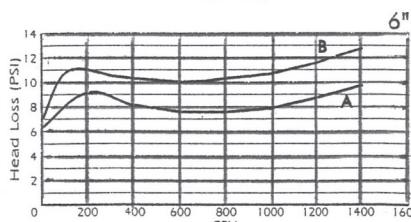
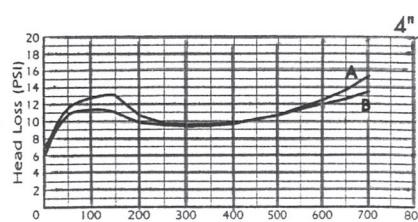
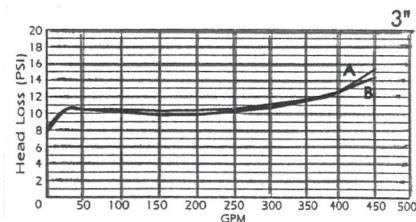
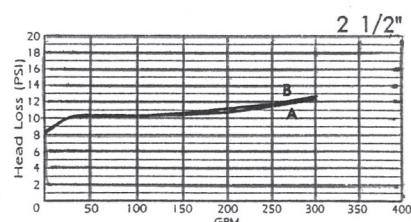


Dimensions	2 1/2"	3"	4"	6"	8"	10"
A	23 1/2"	23 1/2"	27"	32"	36 1/2"	43"
B	12 1/2"	12 1/2"	14"	16"	18 1/2"	21"
C	5 1/2"	5 1/2"	6 1/2"	8"	9"	11"

The 6" and 10" flow curves (both A and B) include the FEBCO valve setter model 611.

A - Vertical orientation (model 880V only)
B - Standard orientation (model 880 and 880V)

Flow Curves Model 880



MasterSeries® 880V

Reduced Pressure Zone Assemblies

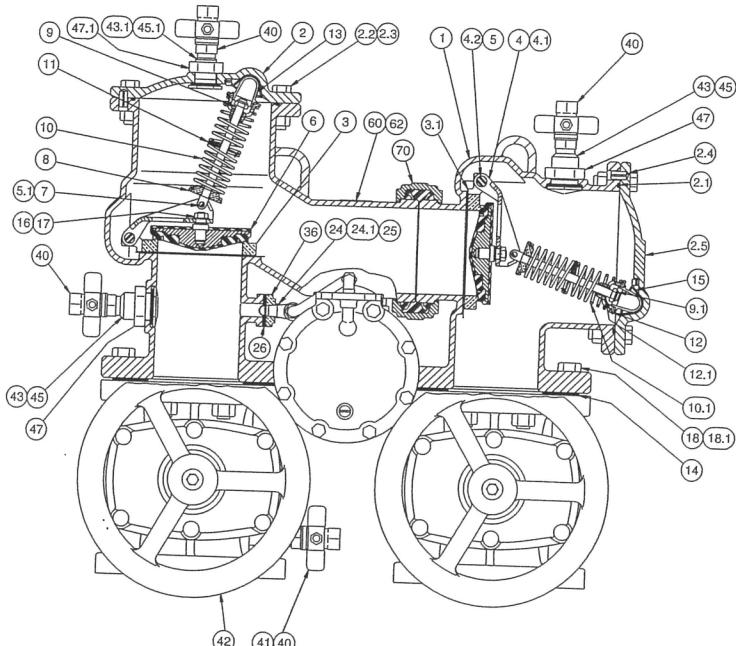
Size: 2½" - 10" (65mm - 250mm)

Pressure – Temperature

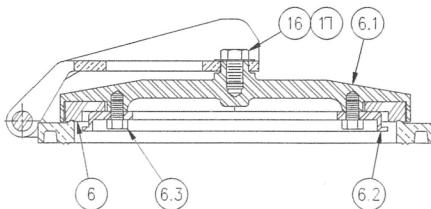
Temperature Range: 32°F to 140°F (0°C to 60°C)
 Max. Working Pressure: 175psi (12.1 bar)
 Hydrostatic Test Press: 350psi (24.1 bar)

Materials

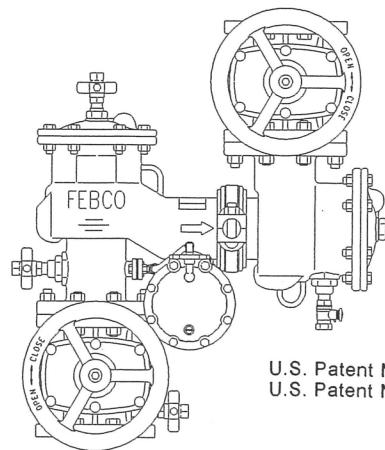
Main Valve Body: Ductile iron Grade 65-45-12
 Coating: Fusion epoxy coated internal and external AWWA C550-90
 Shutoff Valves: NRS and OS&Y resilient wedge gate valves AWWA C509
 Trim: Bronze
 Elastomer Discs: EPDM
 Spring: Stainless steel



10" (250mm) Disc Assembly



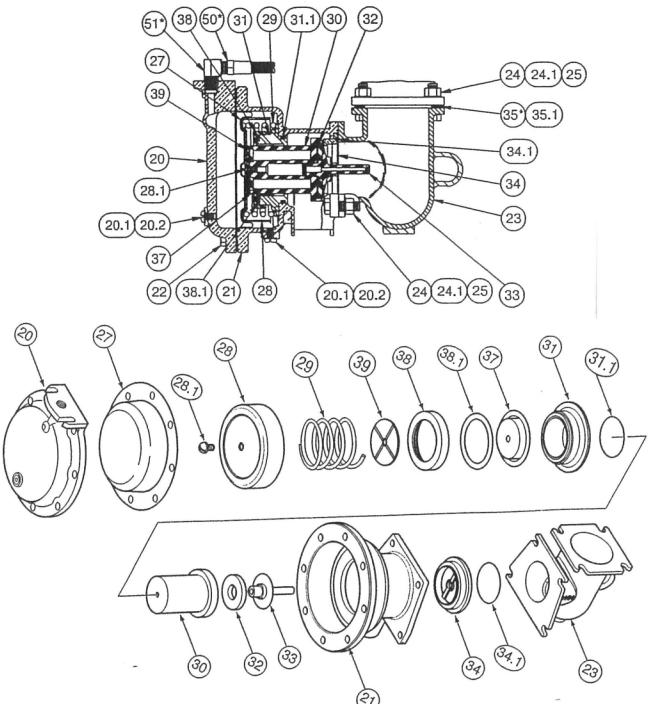
#	DESCRIPTION	MATERIAL	#	DESCRIPTION	MATERIAL	#	DESCRIPTION	MATERIAL
1	Body	A536 GR 65-45-12	14	Flange Gasket	Rubber/Fabric	36	Adaptor Plate	Alloy
2	Cover 1st Check	A536 GR 65-45-12	15	Bearing Socket	Acetal Resin	37	Sm. Diaphragm	Nitrile ASTM D2000
2.1	O-Ring	EPDM ASTM D2000	16	Hex Jam Nut	SS	38	Retainer	Alloy
2.2	Capcrew	Plated Steel	17	Washer	SS	38.1	Slip Ring	Acetal Resin
2.3	Hex Nut	Plated Steel	18	Flange Bolt	Plated Steel	39	Flow Washer	Acetal Resin
2.4	Expansion Pin	SS	18.1	Flange Nut	Plated Steel	40	Ball Valve	Acetal Resin
2.5	Cover 2nd Check	A536 GR 65-45-12	20	R.V. Cover	Alloy	41	Nipple	Brass
3	Seat Ring	B584 Alloy C83600	20.1	Bleed Screw	SS	42	Gate Valve	AWWA C509
3.1	Gasket	EPDM ASTM D2000	20.2	Gasket	HDPE	43	Bulkhead Fitting	Alloy
4	Arm	B584 Alloy C83600	21	R.V. Body	Alloy	43.1	Bulkhead Fitting	Alloy
4.1	Bushing-Sw Pin	Acetal Resin	22	Cover Bolt	SS	45	Gasket	EPDM ASTM D2000
4.2	Swing Pin	SS	23	Elbow	A536 GR 65-45-12	45.1	Gasket	EPDM ASTM D2000
5	Retaining Clip	SS	24	RV Mtg Bolt	Plated Steel	47	Nut	Alloy
5.1	Hairpin Cotter	SS	27	Lrg. Diaphragm	Nitrile ASTM D2000	50	Sensing Line	SAE Hydraulic Hose
6	Check Disk	EPDM Coated GR, 45	28	Button	A240 304 SS	51	Street Elbow	Alloy
6.1	Seat Disk	Ductile Iron w/ SS Stem	28.1	Flow Screw	Acetal Resin	60	Identification Plate	Alloy
6.1	Disk Holder (10")		29	RV Spring	SS	62	Drive Screw	SS
6.2	Disk Retainer (10")		30	Stem - RV	Acetal Resin	70	Clamp (880V)	AWWA C606
6.3	Capscrew (10")		31	Main Guide - RV	Alloy			
7	Load Pin	SS	31.1	O-Ring - RV	FDA EPDM			
9	Spring Stem	SS	32	Seat Disc - RV	EPDM ASTM D2000			
9.1	Elastic Stop Jam Nut	SS	33	Lower Guide	Acetal Resin			
10	Spring 1st Check	SS	34	Seat Disc	Alloy			
10.1	Spring 2nd Check	SS	34.1	O-Ring	FDA EPDM			
11	Spring Guide	SS	35	O-Ring	Acetal Resin			
12	Up Spring Retrn	Alloy	35.1	Back-Up Ring	EPDM ASTM D2000			
12.1	Bushing-Spr. Stem	Acetal Resin						
13	Pivot Bearing	Alloy						



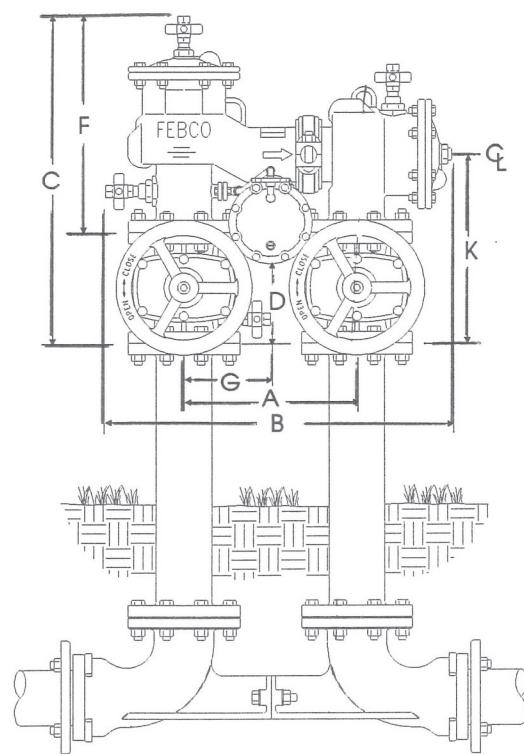
U.S. Patent No. 4,989,635
 U.S. Patent No. 5,107,888

MODEL 880V
 REDUCED PRESSURE ASSEMBLY
 (Shown in vertical position.)

Relief Valve Detail



NOTE: The Model 880V is shipped in the N-shape position as shown below.



NRS Side View Dimensions

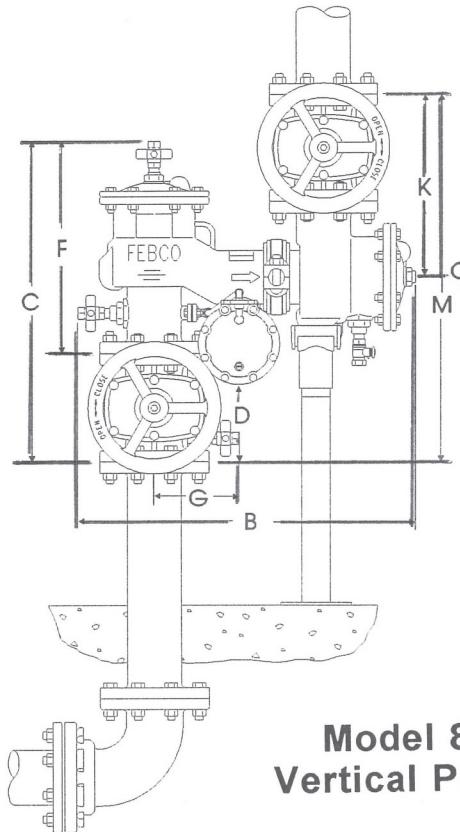
Size	A	B	C	D	E NRS	E1 OS&Y Full Open	F	G	K	*LL	M	NET **WT Approximate
2 1/2"	12 1/2	25 3/4	24 1/4	4 15/16	12 1/4	15 3/4	16 5/8	6 1/4	13 5/8	N/A	27 1/4	210
3"	12 1/2	25 3/4	24 3/4	5 7/16	12 1/2	22 1/4	16 5/8	6 1/4	14 1/8	21 1/2	28 1/4	280
4"	14	27 7/8	26 3/4	6 9/16	13 3/4	23 1/4	17 11/16	7	15 1/2	24	31	320
6"	16	32 3/16	32 1/4	8 9/16	17 3/4	30	21 9/16	8	18 5/8	29	37 1/4	480
8"	18 1/2	33 11/16	38 5/16	9 9/16	21 1/2	37 3/4	21 5/8	9 1/4	20 3/4	33 1/2	41 1/2	810
10"	21	43	40 3/4	10	27	47	27 1/2	10	24	45	48	1350

Weights do not include risers or optional valve setter.

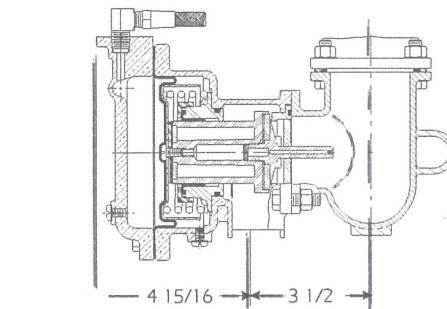
* Lay length with optional MJ x FL valve setter.

** With NRS Gate Valves

Refer to Specification Sheet SS VS for details on valve setter.



**Model 880V
Vertical Position**



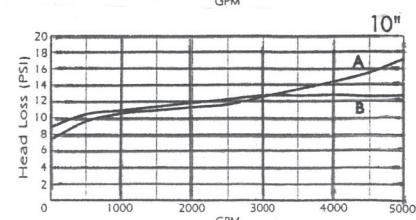
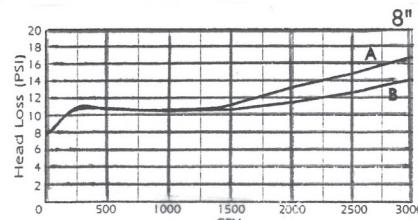
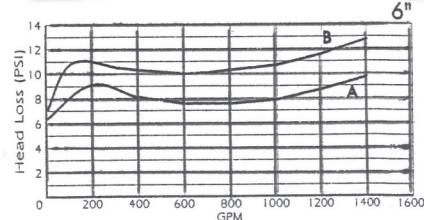
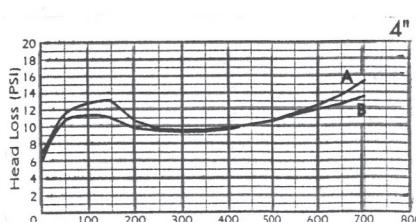
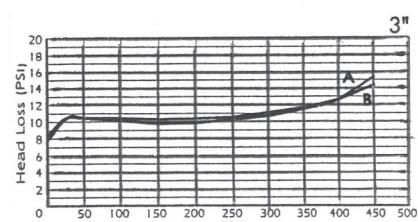
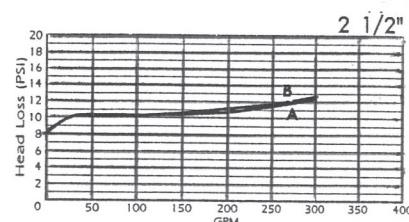
Relief Valve Detail

Flow Curves Model 880V

A - Vertical orientation (model 880V only)

B - Standard orientation (model 880 and 880V)

The 6" and 10" flow curves (both A and B) include the FEBCO valve setter model 611.



LEAD FREE*

MasterSeries® LF880V

Reduced Pressure Zone Prevention Assemblies

Materials

Below is a general materials list of the Model LF880V. All assemblies size 2½" through 10" is similar in materials and construction. Please contact your local FEBCO Representative if you require further information.

Main Valve Body: Ductile iron Grade 65-45-12

Relief Valve Body: Ductile iron Grade 65-45-12

Coating: Fusion epoxy coated internal and external AWWA C550-90

Shutoff Valves: NRS resilient wedge gate valve AWWA C509 (Standard)
OSY resilient wedge gate valve AWWA C515 (UL/FM)

Check Seats: Stainless Steel

Disc Holder: Stainless Steel

Elastomer Disc: Silicone

Spring: Stainless Steel

Clamp: AWWA C606

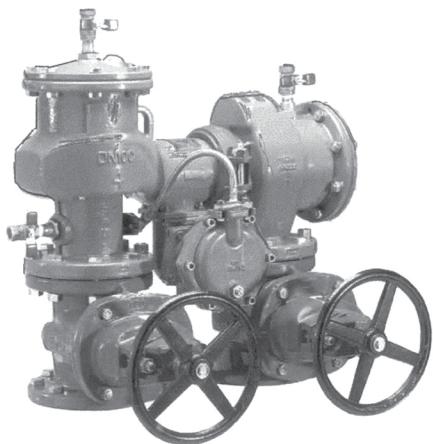
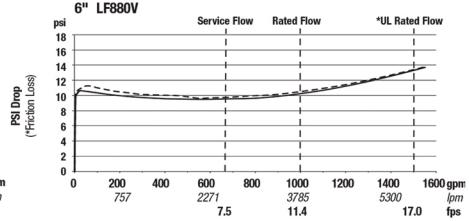
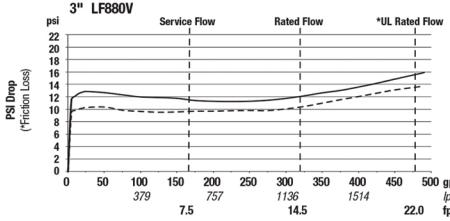
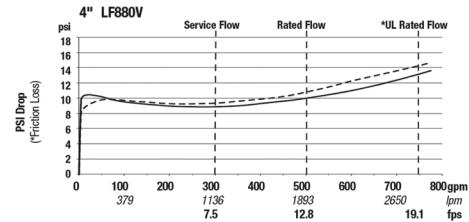
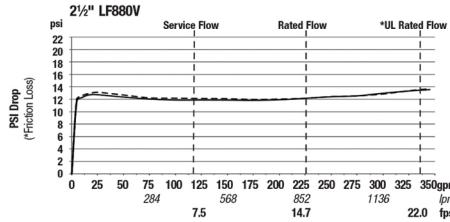
Pressure - Temperature

Max. Working Pressure: 175psi (12.1 bar)

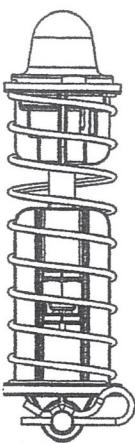
Min. Working Pressure: 20psi (1.4 bar)

Hydrostatic Test Pressure: 350psi (24.1 bar)

Hydrostatic Safety Pressure: 700psi (48.3 bar)

Temperature Range: 33°F - 140°F (0.5°C - 60°C)
Continuous**Capacity**N-PatternZ-Pattern

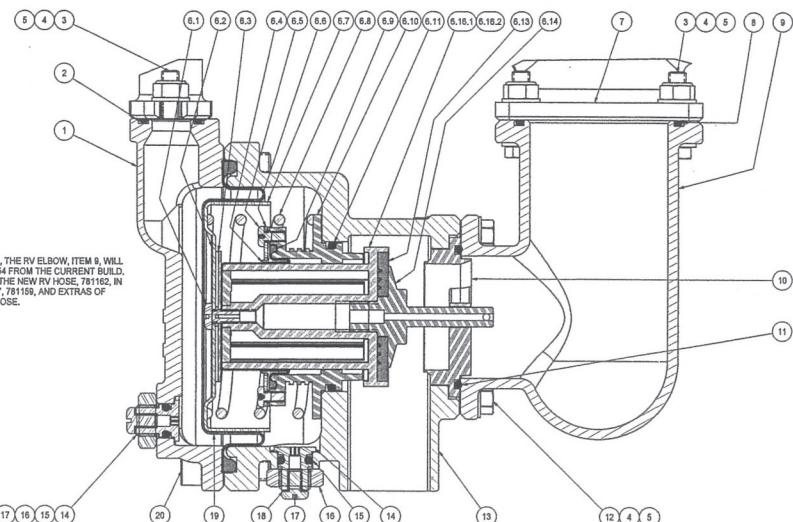
LF880V Check Mechanism



NOT SHOWN:
 - SEAT RING O-RING - QTY 1
 - STUD O-RINGS - QTY 4
 - REPLACES GASKET

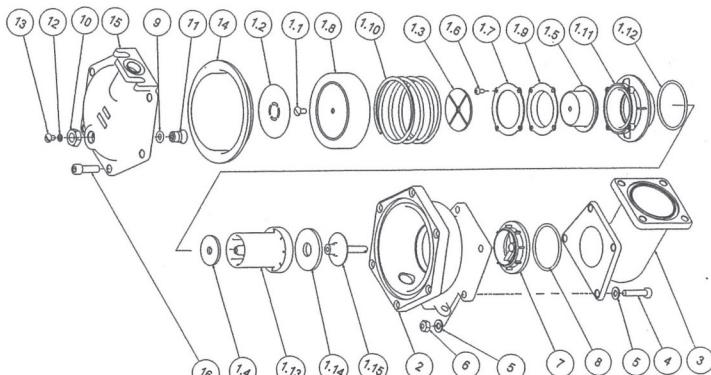
NOTE: THE SINGLE DISC SA (ITEMS 2, 3, 11, 12 & 13) REPLACES ALL VARIETIES OF THE OLD OVERMOLDED DISCS.

PARTS LIST	
ITEM	DESCRIPTION
1	SEAT RING 2-1/2" & 3"
2	DISC HOLDER 2-1/2" & 3"
3	DISC 2-1/2" & 3"
4	ARM 2-1/2" & 3"
5	HHCS 3/8-16UNC-2Bx.50
6	WASHER, .375 ID X .75 OD X .041
7	HAIRPIN CLIP
8	BUSHING-SWING PIN
9	SWING PIN
10	HEX STUD 5/16-18 x 1-1/4
11	DISC RETAINER 2-1/2" & 3"
12	#10 SPLIT LOCK WASHER
13	HH MACH SCREW #10-24UNCx3/8

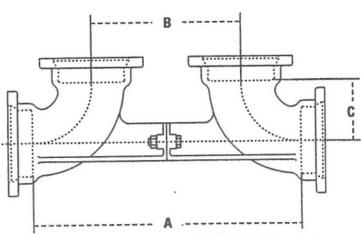


ITEM	QT	DESCRIPTION	ITEM	QT	DESCRIPTION
1	1	SIZE 210 O-RING (EDP 2101013)	6.14	1	RV LOWER GUIDE
2	1	5/16-18 UNC x .138 HHCS	6.16	1	RV MAINSTEM SUB-ASSEMBLY
3	6	5/16-18 UNC ELASTIC STOP NUT	6.16.1	1	RV MANSTEM
4	10	.016 FLAT WASHER TYPE A	6.16.2	1	RV STEM WASHER
5	20	5/16-18 UNC DIAPHRAGM PLATE	7	1	IN-LINE BODY - 2-1/2" TO 10"
6	1	RV STEM SUB-ASSEMBLY	8	1	SIZE 232 O-RING (EDP 2101017)
6.1	1	RV FLOW SCREW	9	1	SIZE 230 O-RING (EDP 2101014)
6.2	1	INSTRUCTION LABEL	10	1	RV ELBOW 860
6.3	1	RV FLOW WASHER	11	1	RV SEAT RING
6.4	1	INNER DIAPHRAGM PLATE	12	4	SIZE 220 O-RING (EDP 2101014)
6.5	4	PAN HEAD PHILLIPS SCREW	13	1	5/16-18 X 1-1/2 HHH
6.6	1	DIAPHRAGM RETAINER	14	2	RV BODY MACHINING
6.7	1	RV PISTON	15	2	RV DRAIN PLUG SLEEVE
6.8	1	RV SPRING	16	2	SIZE 204 O-RING (EDP 2101038)
6.9	1	INNER DIAPHRAGM	17	2	HEX NUT
6.10	1	RV UPPER GUIDE	18	2	PAN HD SCREW
6.11	1	SIZE 230 O-RING (EDP 2101015)	19	1	GASKET
6.13	1	RV SEAT DISC	20	6	OUTER DIAPHRAGM

Relief Valve Assembly



ITEM	QT	DESCRIPTION
1	1	LF RV STEM SUB-ASSEMBLY
1.1	1	RV FLOW SCREW
1.2	1	INSTRUCTION LABEL
1.3	1	RV FLOW WASHER
1.4	1	RV STEM WASHER
1.5	1	INNER DIAPHRAGM
1.6	1	PAN HEAD PHILLIPS 10-24 x .375 LD.
1.7	1	DIAPHRAGM RETAINER
1.8	1	RV PISTON
1.9	1	INNER DIAPHRAGM PLATE
1.10	1	RV SPRING
1.11	1	RV UPPER GUIDE
1.12	1	CAP-SURF
1.13	1	RV MANSTEM
1.14	1	RV SEAT DISC
1.15	1	RV LOWER GUIDE
2	1	RV BODY
3	1	RV ELBOW 860
4	4	SHIM AT WASHER TYPE A
5	8	5/16-18 UNC 1/2" PLASTIC ATOP NUT
6	1	RV SEAT RING
7	1	O-RING-228
8	1	O-RING-204
9	1	HEX NUT
10	2	RV DRAIN PLUG KLEEEVE
11	2	GASKET
12	2	PAN HO 8CRBW
13	1	OUTER DIAPHRAGM
14	1	RV COVER
15	6	BHCB 3/8-16 X 1.25
ITEM	QTY	DESCRIPTION



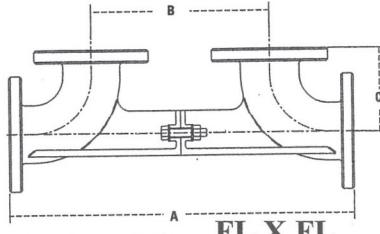
Dimensions – Weights

Size: 3" - 10" (80 - 250mm)

SIZE (DN)	DIMENSIONS			WEIGHTS					
	A	B	C	lbs.	kgs.				
in.	mm	in.	mm	in.	kg.				
3	80	21 1/2	546	12 1/2	318	4 1/2	114	69	31
4	100	24	610	14	356	5	127	96	44
6	150	29	737	16	406	6 1/2	165	152	69
8	200	33 1/2	851	18 1/2	470	7 1/2	191	216	98
10	250	40	1016	21	533	9 1/2	241	288	131

NOTICE

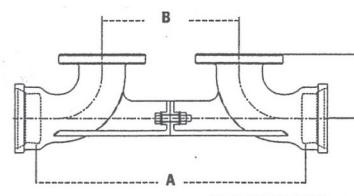
Dimensions shown are nominal. Allowances must be made for normal manufacturing tolerances.



Dimensions – Weights

Size: 2 1/2" - 10" (65 - 250mm)

SIZE (DN)	DIMENSIONS			WEIGHTS					
	A	B	C	lbs.	kgs.				
in.	mm	in.	mm	in.	kg.				
2 1/2	65	23 1/2	597	12 1/2	318	5 1/2	140	73	33.1
3	80	23 1/2	597	12 1/2	318	5 1/2	140	73	33.1
4	100	27	686	14	356	6 1/2	165	100	45.4
6	150	32	813	16	406	8	203	144	65.3
8	200	36 1/2	927	18 1/2	470	9	229	228	103.4
10	250	43	1092	21	533	11	279	310	140.6



Dimensions – Weights

Size: 3" - 10" (80 - 250mm)

SIZE (DN)	DIMENSIONS			WEIGHTS					
	A	B	C	lbs.	kgs.				
in.	mm	in.	mm	lbs.	kgs.				
3	80	21 1/2	546	12 1/2	318	5 1/2	140	69	31.3
4	100	24	610	14	356	6 1/2	165	96	43.5
6	150	29	737	16	406	8	203	152	68.9
8	200	33 1/2	851	18 1/2	470	9	229	216	98.0
10	250	40	1016	21	533	11	279	288	130.6