

ICN # 00-032858

Model NGGC-312 PL-01

Series DynaCeptor™

**Advanced Technology**

**PEACH® product**

### APPLICATION

- CARTRIDGE FOR NATURAL GAS SERVICE USED TO COALESCE AEROSOL LIQUIDS. TYPICALLY USED IN REVERSE FLOW COALESCER STYLE VESSEL SUCH AS PECO 77V OR COMPETITORS.

### FEATURES / BENEFITS

- PEACH SATURATED DEPTH TECHNOLOGY COALESCER.
- INTERNAL CARTRIDGE DRAINAGE SLEEVE ON BOTTOM CAP TO PREVENT AERSOLS DRAINING FROM RE-ENTRAINING IN GAS STREAM
- ADVANCED TECHNOLOGY DEPTH FILTER THAT PROVIDES A RIGID STRUCTURE THAT MAINTAINS AN OPEN POROSITY AND PERMEABILITY FOR FLOW.
- ROBUST DESIGN LESS SUSCEPTIVE TO RUPTURE DURING SLUG FLOW CONDITIONS.
- HELICAL FLOW PATH FORCES THE GAS TO TAKE A LONGER PATH THROUGH THE ELEMENT THUS INCREASING THE CONTAMINANTS CHANCES OF IMPACTING FIBERS AND COALESCING.
- PEACH TECHNOLOGY GAS COALESCERS TYPICALLY OPERATE AT A LOWER DIFFERENTIAL PRESSURE THEN TRADITIONAL DEPTH MICROGLASS OR PLEATED MICROGLASS COALESCERS. THIS EQUATES TO LOWER OVERALL ENERGY COSTS.

### SPECIFICATIONS

- 4.50" OD X 2.9" ID X 12.00"L NOMINAL DIMS
- PEACH ADVANCED TECHNOLOGY DEPTH FILTER MADE USING POLYESTER PECO ENGINEERED MEDIA (PEM)
- POLYESTER OUTSIDE DRAINAGE LAYER
- EXPANDED METAL SUPPORT
- 304 STAINLESS STEEL TOP CAP CLOSED WITH SILICONE SEAL NUT
- POLYESTER BOTTOM CAP; OPEN W/ ELEMENT DRAINAGE SLEEVE AND VITON FLAT GASKET SEAL

### OPERATING PARAMETERS

- MAXIMUM OPERATING TEMPERATURE 240°F / 115.6°C
- RECOMMENDED CHANGE-OUT DIFFERENTIAL PRESSURE 10-15 psid / .69-1.0 bar
- MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE OF CARTRIDGE 25 psid / 1.7 bar
  - ❖ DO NOT EXCEED MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE OF THE VESSELS ELEMENT SUPPORT PLATE.
- STANDARD FLOW DIRECTION: INSIDE TO OUTSIDE

### PARTICLE RETENTION

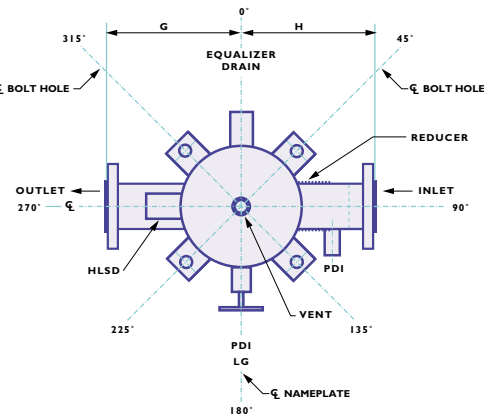
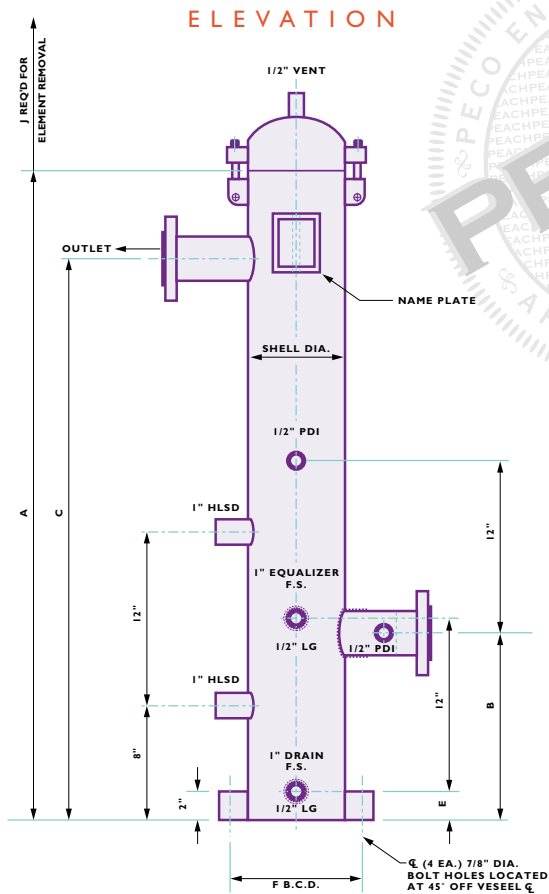
- 99.5% LIQUIDS AT 0.3 MICRON BASED ON CAGI ADF 400-1999
- 99.99% OF ALL SOLID PARTICLES 0.3 MICRON AND LARGER

### PACKAGING

4 / BOX



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TRUE ORIENTATION

Nominal Dimensions in Inches / (mm)

MODEL	SHELL DIA.	INLET OUTLET	A	B	C	E	F	G	H	J
89-1-312-6-275	6 5/8 (168) O.D.	2 (50)	45 (1143)	13 (330)	39 (991)	2 (50)	9 1/8 (232)	9 1/4 (235)	9 1/4 (235)	14 (356)
89-1-324-6-275	6 5/8 (168) O.D.	2 (50)	57 (1148)	13 (330)	51 (1295)	2 (50)	9 1/8 (232)	9 1/4 (235)	9 1/4 (235)	26 (660)
89-1-336-6-275	6 5/8 (168) O.D.	2 (50)	69 (1753)	13 (330)	63 (1600)	2 (50)	9 1/8 (232)	9 1/4 (235)	9 1/4 (235)	38 (965)
89-1-336-8-275	8 5/8 (219) O.D.	3 (76)	69 (1753)	13 (330)	63 (1600)	2 (50)	11 1/8 (283)	10 1/4 (260)	10 1/4 (260)	38 (965)

Vessels are designed and stamped in accordance with ASME pressure vessel code for 275 PSIG at 100° F without corrosion allowance.



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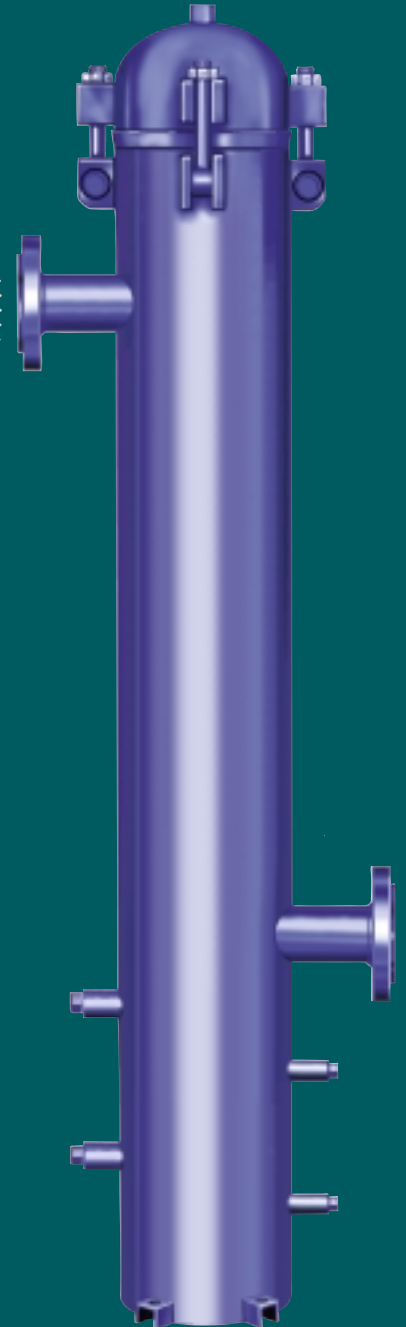


PERRY EQUIPMENT CORPORATION

Oil & Gas Vessels

ISO 9001

Series 89  
Coalescing  
Filter

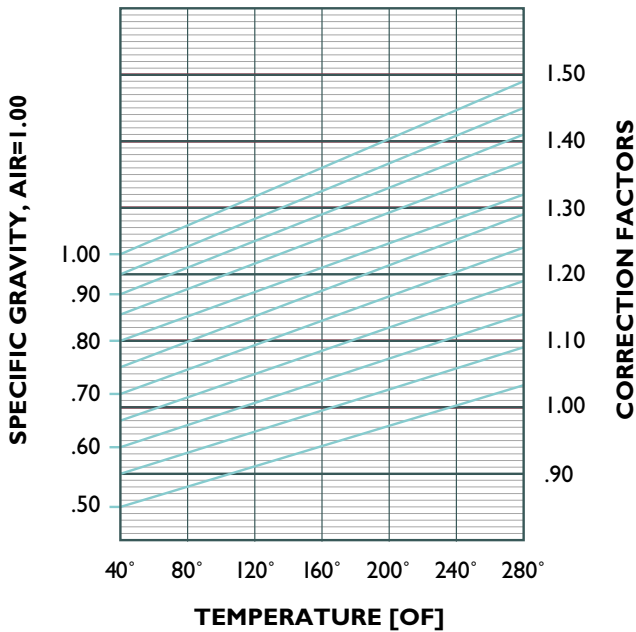


Coalescing  
Efficiency at  
Economic  
Prices  
Utilizing  
PEACH® Gas  
Coalescing  
Filter  
Elements

ENGINEERED FILTRATION TECHNOLOGIES



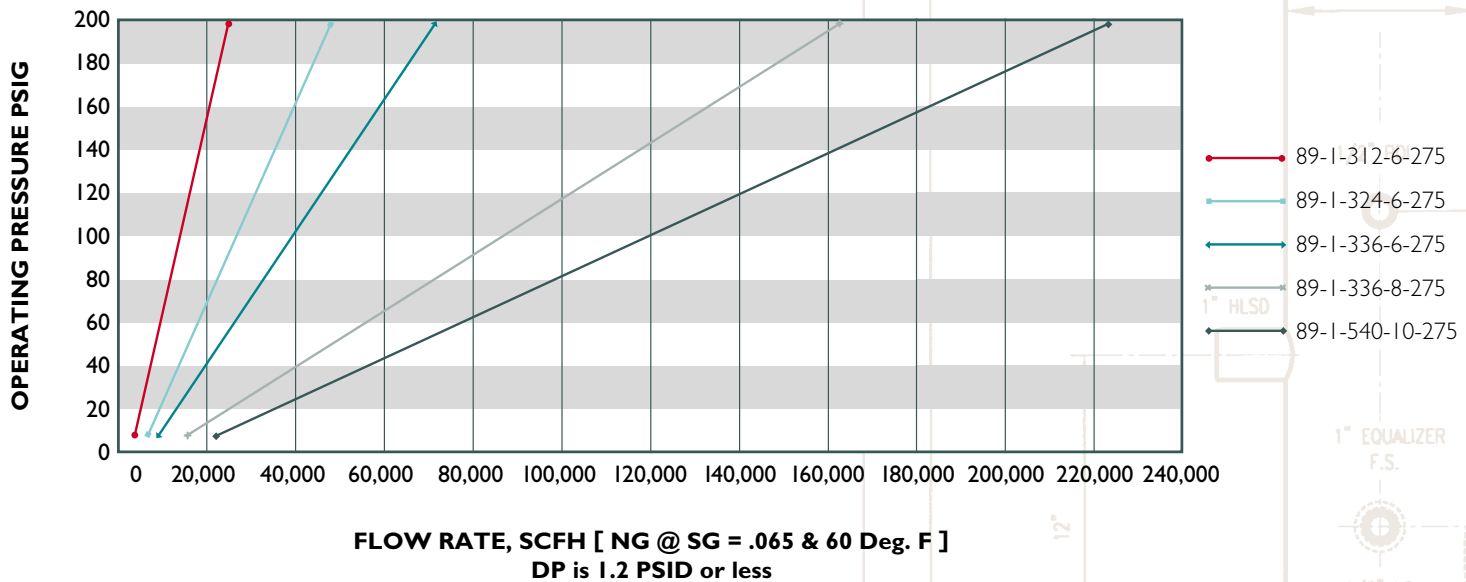
# SIZING INFORMATION



- (1) If vapor phase is other than natural gas of 0.65 specific gravity at 60°F and 14.7 PSIA, correct to these conditions using the PECO conversion chart to the left:

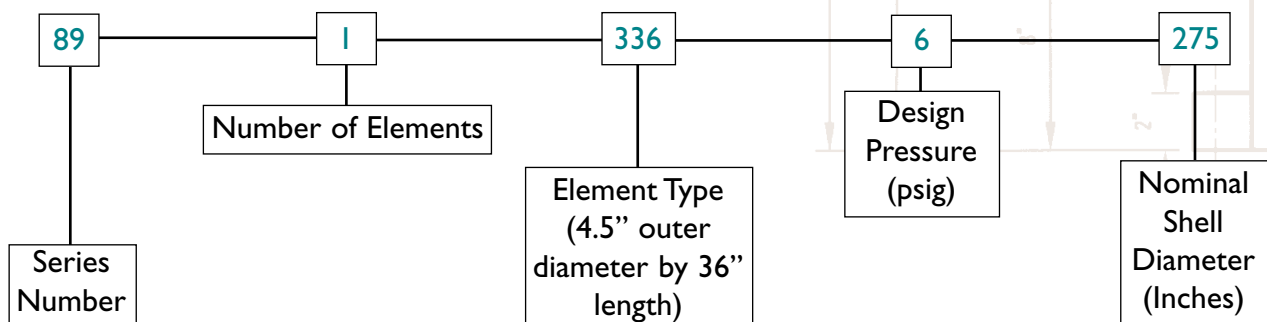
*Find the maximum operating temperature on the horizontal scale. Follow temperature on the horizontal scale. Follow temperature line vertically until it intersects with the specific gravity line. The correction factor is then found horizontally to the right of this intersection.*

- (2) Multiply the flow rate (SCFH) by the correction factor.
- (3) Determine the PECO Series 89 required by entering size chart (below) at minimum operating pressure. Move right to the intersection with the corrected maximum gas flow line. The PECO Series 89 required is indicated by the slanted line to the right of the intersection. Sizing is based on a maximum pressure drop of 60" in H<sub>2</sub>O across the entire unit.



# ORDERING

For information on replacement elements, please refer to brochure [EL-NGGC-TD-01](#).





# PERRY EQUIPMENT CORPORATION

**ISO 9001**

Series NGGC

## Liquid Aerosol Coalescing Elements

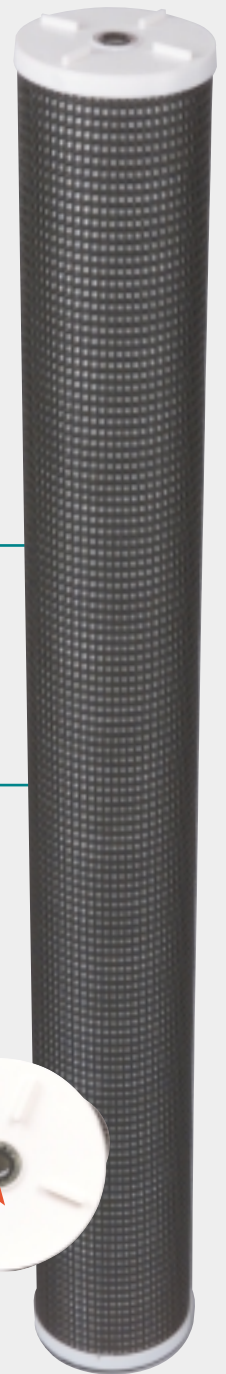
PECO introduces the next generation in PEACH® Gas Coalescer Technology. The **Next Generation Gas Coalescer** features an advanced proprietary media blend, an element support design, and a new proprietary end cap design. The result is a coalescer that can handle a wide variety of liquid loading conditions in air and gas applications.

### Construction

	<u>Standard</u>	<u>Optional</u>
• Media/Outer Cage/End Caps	Polyester	Polypropylene
• Gaskets	Viton	

### Operational Data

- Standard Flow Direction    Inside-to-outside of element
- Micron Ratings
  - Liquids: 0.3 micron and larger
  - Solids: 0.3 micron and larger
- Maximum Operating Temperature    180° F / 82° C
- Recommended Element Change Out Differential Pressure    10 - 15 psid



The NGGC features a user friendly Integral End Seal.

Elements are designed to fit PECO Vessel Series 77V. Competitive retrofits available.

## PRODUCT ADVANTAGES

- Proprietary media blend for excellent performance.
- Element support cage provides strong structural strength.
- Top end cap, with integral seal, provides better sealing around center bolt.
- Top end cap, with integral seal, eliminates use of dimple washer and provides ease of use during element change-out.
- Proprietary bottom end cap distributes gas flow throughout the element to better utilize the entire element matrix.
- Proprietary bottom end cap provides an area of low velocity to facilitate liquid drainage.

## DISPOSAL ADVANTAGES

- All synthetic construction\*
- Can be fully incinerated
- Light weight

\* PECO housing models only



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Please refer to  
www.perryequipment.com  
for most current  
literature edition.

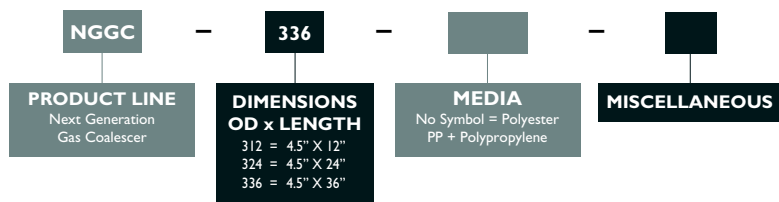
## The Conical Helix

The **NGGC** utilizes patented PEACH® technology. It consists of several lateral sections of varying sizes. Each lateral section consists of multiple helical wrapped layers. As the spiral layers are applied they conform to the previous layer forming a cone — thus developing a conical helix.

## Specification Data

Model	Length	OD	ID
NGGC - 312	12"	4.5"	2.95"
NGGC - 324	24"	4.5"	2.95"
NGGC - 336	36"	4.5"	2.95"

## Nomenclature



\*Consult factory for retrofit dimensions & part nomenclature.

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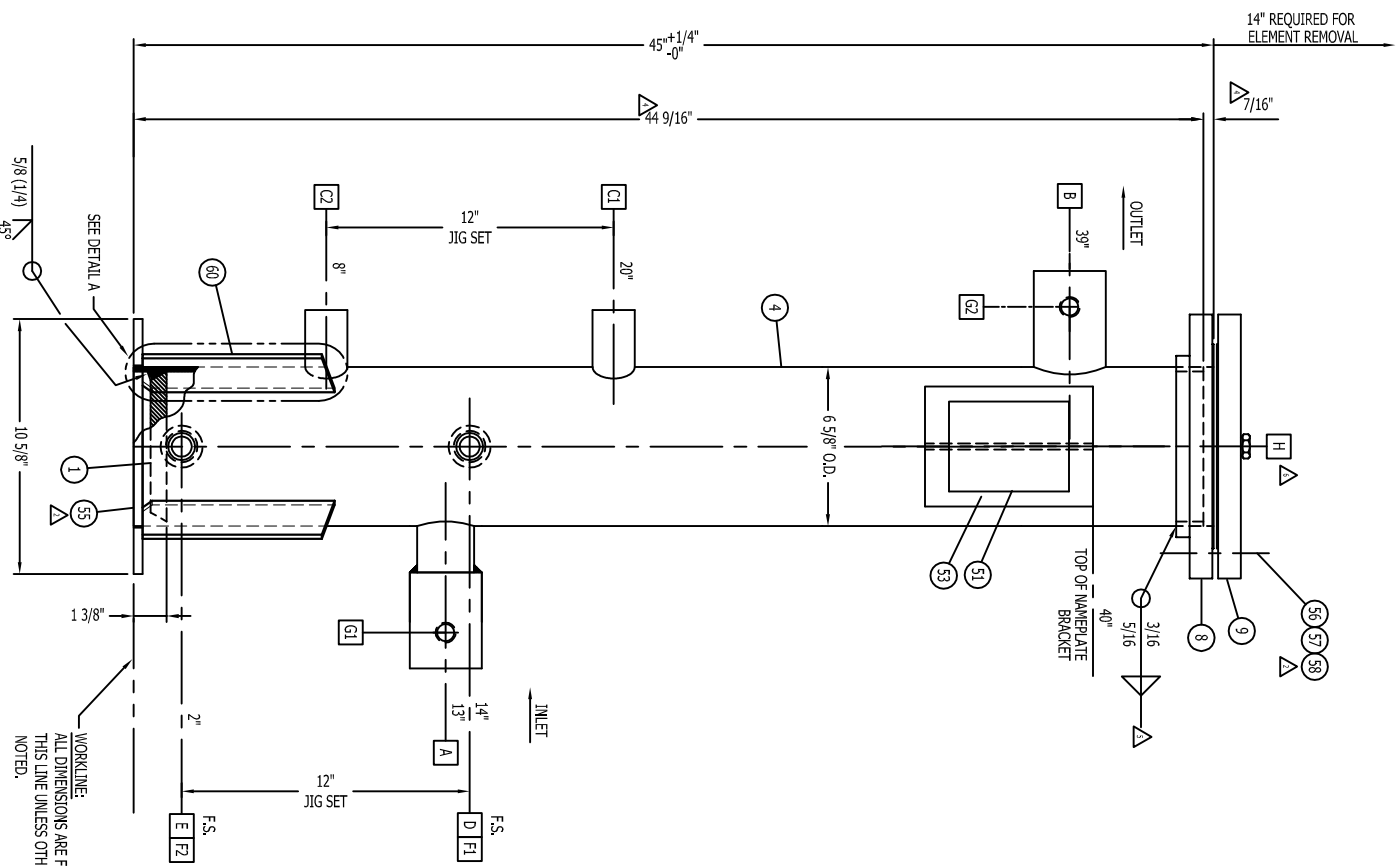
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WELD DETAIL



ELEVATION  
SCALE: 3" = 12"

ALL DIMENSIONS ARE ± 1/8" (3 MM) UNLESS OTHERWISE NOTED.

SCHEDULE OF OPENINGS

MARK NO.	SERVICE	SIZE	RATING	TYPE	BORE	WALL	LG.	SCHED.	I.S.	PROTECTION	WELD	DETAIL	A	B	C	PIPE	NOZZLE
A	INLET	2" X 1/2"	3000#	XL CRIG	1.687"	3/4"	5.116"	160	1.318"		SEE BELOW	1/4				30	29
B	OUTLET	2" X 1/2"	3000#	XL CRIG	1.687"	3/4"	5.116"	160	1.318"		SEE BELOW	1/4				30	29
C1-2	HEAD	1"	3000#	CRIG							OM-1	1/4					27
D	EQUALIZER	1"	3000#	CRIG							OM-1	1/4					27
E	DRAIN	1"	3000#	CRIG							OM-1	1/4					27
F1-2	LEVEL GAUGE	1/2"	3000#	CRIG							OM-1	1/4					28
G1-2	PROT.	1/2"	FWT	DR. & THP													
H	VENT	1/2"	FWT	DR. & THP													29

BILL OF MATERIAL

ITEM	QUAN	MULT	U/M	I.C.N.	DESCRIPTION	MATERIAL
1	1.00	EA		02-2400729	HEAD, BOTTOM PLATE 5/8" X 3.5 7/8" O.D.	SA-516-70
2	1.00	EA		02-2400729	HEAD, BOTTOM PLATE 5/8" X 3.5 7/8" O.D.	SA-516-70
3	1.00	EA		02-2400729	HEAD, BOTTOM PLATE 5/8" X 3.5 7/8" O.D.	SA-516-70
4	1	3/2	FT	13-006522	PIPE, SHELL, 6" X 1/8" WALL THK X 44 9/16" LG.	SA-516-B
5	1	1.00	EA	55-104982	FLANGE, 6-1/2" 65-20	SA-105
6	1	1.00	EA	1215	FLANGE, BLIND, 6-1/2" 65-20 W/ 1/2" TP	SA-105
7	1	1.00	EA	05-210515	CRIG, 1-3/8" X 1/8" THK	SA-105
8	2	1.00	EA	05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
9	1	1.00	EA	05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
10	1	0.35	FT	13-006522	PIPE, 2" SCH 160 X 43.18" LTB X SW OLE (SMPD OREX)	SA-105-B
11	1.00	EA		05-210515	CRIG, 1-3/8" X 1/8" THK	SA-105
12	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
13	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
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65	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
66	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
67	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
68	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
69	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
70	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
71	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
72	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
73	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
74	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
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76	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
77	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
78	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
79	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
80	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
81	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
82	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
83	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
84	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
85	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
86	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
87	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
88	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
89	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
90	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
91	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
92	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
93	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
94	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
95	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
96	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
97	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
98	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
99	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105
100	1.00	EA		05-210515	CRIG, 1/2" X 3/8" X 1/8" THK	SA-105

REV	ECO	DATE	BY	CHKD	ENGR	DESCRIPTION
0	---	12/15/05	TE	RIG	RIG	FIRST ISSUE (DWR# 29668)
1	R13140	02/28/05	TE	DMC	EDM	CHANGED NAMEPLATE TO "SES" (DWR# 29940)
2	R13242	02/08/05	TW	DMC	TAE	REV. WELD SYMBOL, REMOVED DOMESTIC REQUIREMENTS FROM BOM (DWR# 30059)
3	R13824	10/03/05	JS	DMC	TAE	REV. TO ADD MTR COLUMN (DWR# 30936)
4	---	05/04/10	CR	DMC	TAE	REV. DNG PER MARK-UP (DWR# 33344)
5	---	02/15/11	ATP	RIG	SMD	REV. DNG PER MARK-UP (DWR# 36053)
6	---	10/02/12	VZW	JO	JO	REV. TO REMOVE THEOULET CHANGE ITEM NO. 9. TO 17315 (DWR# 37323)

ESTIMATED WEIGHTS	LBS.	KG
EMPTY	120	264
FULL OF WATER	200	440

PROJECT NO.: **99-1-312-6-275-2NPT**

QTY. REQD.: **1**

OPERATING PRESSURE: **275 PSIG**

TEMPERATURE: **20 OF**

MAWP: **275 PSIG**

MDMT: **20 OF**

MAEWP: **275 PSIG**

SER. NO. **89-1-312-6-275-2NPT**

CA. **0.0625** INCH YR. BLT

MODEL **89-1-312-6-275-2NPT**

CLOSURE GASKET NO. **89-1-312-6-275-2NPT**

P.O. NO. **89-1-312-6-275-2NPT**

DATE: 12/15/05 DATE: 12/20/05 REV.: 6

**Facet** MINERAL WELLS, TEXAS  
WWW.PEORFACET.COM

**Facet** CERTIFIED BY PEORFACET (US), INC. MINERAL WELLS, TEXAS U.S.A.

MANVP 275 PSIG AT 140 OF

MDMT 20 OF AT 275 PSIG

MAEWP 275 PSIG AT 275 OF

SER. NO. 89-1-312-6-275-2NPT

CA. 0.0625 INCH YR. BLT

MODEL 89-1-312-6-275-2NPT

CLOSURE GASKET NO. 89-1-312-6-275-2NPT

P.O. NO. 89-1-312-6-275-2NPT

DATE: 12/15/05 DATE: 12/20/05 REV.: 6

**Facet** MIN





# 180 Series Free Floating Lever Drain Traps

All Stainless Steel for Horizontal Installation

For pressures to 400 psig (28 bar) . . . Capacities to 2,000 lb/hr (907 kg/hr)

Armstrong's stainless steel, free floating lever drain traps use the same bodies, caps, lever mechanisms, valves and seats as Armstrong inverted bucket steam traps that have been proven in years of service. Elliptical floats and high leverage make it possible to open large orifices to provide adequate capacity for drain trap size and weight.

The hemispherical valve, seat and leverage of the 180-LD and 181-LD stainless steel traps are identical in design, materials and workmanship to those for saturated steam service up to 570 psig (39 bar), except that the 180 Series traps have a guidepost to ensure a positive, leak-tight valve closing under all conditions. The 180 Series is designed for situations where mounting a drainer close to the floor is critical. A back vent connection is required.

For a fully detailed certified drawing, refer to list below:  
180-LD CD #1276

## List of Materials

Table LD-19.

Model No.	Valve & Seat	Leverage System	Float	Body & Cap
180-LD 181-LD		Stainless Steel		Sealed Stainless Steel 304L

## Physical Data

Table LD-20. Armstrong 180 Series Free Floating Lever Drain Traps

Model No.	180-LD		181-LD	
	in	mm	in	mm
Pipe Connections	1/2	15	3/4	20
"A" (Diameter)	2-11/16	68	2-11/16	68
"B" (Height)	6	152	7-1/4	184
"C" (Face to Face)	4-5/16	110	4-5/16	110
"D" (Bottom to C Inlet)	5-1/8	130	6-9/32	160
"P"	1/2	15	3/4	20
Weight, lb (kg)	1-3/4 (0.8)		2-3/8 (1.1)	
Max. Allowable Pressure (Vessel Design)	500 psig @ 100°F (35 bar @ 38°C) 440 psig @ 500°F (30 bar @ 260°C)			

Note: Vessel design pressure may exceed float collapse pressure in some cases. Pipe size of vent is same as that of inlet and outlet connections.

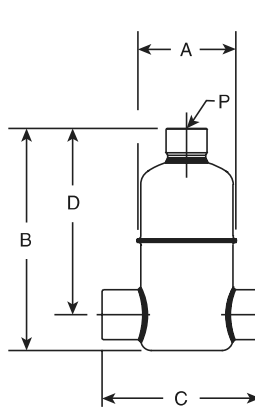


Figure LD-35.  
Model 180-LD

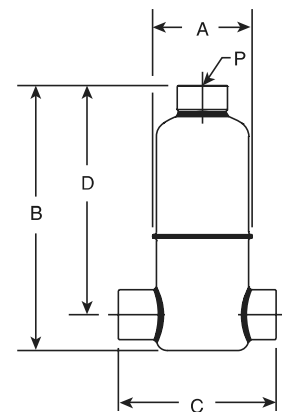


Figure LD-36.  
Model 181-LD

Chart LD-13. Model 180-LD Capacity

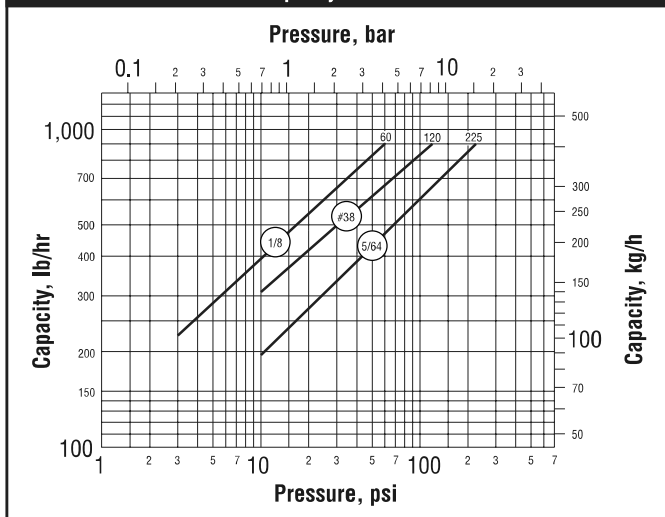
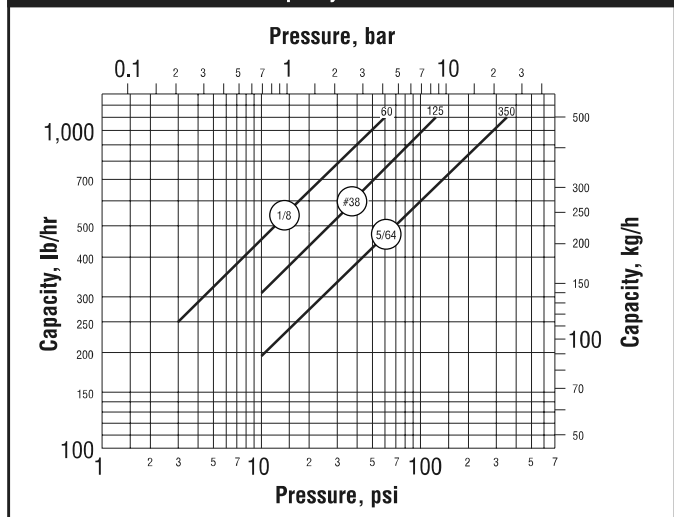


Chart LD-14. Model 181-LD Capacity



Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit [armstronginternational.com](http://armstronginternational.com) for up-to-date information.