610.275.4453

Plumbing & Heating
Pumps
Water Conditioning
Multifamily Housing Supplies



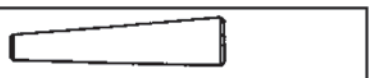
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CATALOG

HEATING

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When you need it now... or don't know how

DUFFCO.COM

DUFF OFFERS A COMPLETE LINE OF CUSTOM AND REPLACEMENT TUBE BUNDLES AND COILS FOR ALL YOUR REPLACEMENT AND NEW WORK NEEDS.

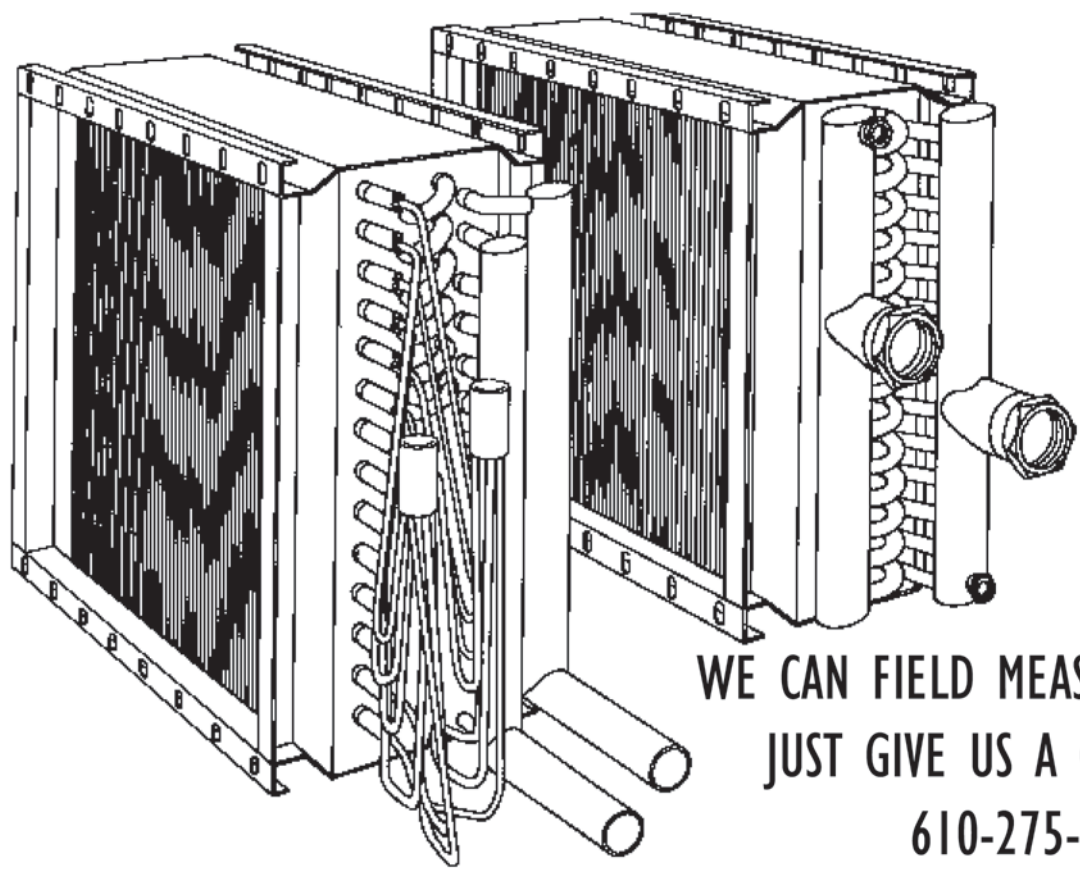


TAPERED TUBE PLUGS FOR REPAIRING HEAT EXCHANGERS & BOILERS. 1/4" THROUGH 1 1/4" READILY AVAILABLE. SOLD IN PACKS OF 24.

EMERGENCY DELIVERIES AVAILABLE WITH BUILD TIMES AS FAST AS 48 HOURS!

B&G
ARMSTRONG
TACO
AMTROL
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...AND MANY MORE!



WE CAN FIELD MEASURE!
JUST GIVE US A CALL!
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For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

WATER HEATERS
ELECTRIC



A.O. Smith
Innovation has a name.

- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials avail.)
- 240V (other voltages available)
- T&P Relief Valve Installed
- 6-Year Warranty
- 10-year warranties available



BRADFORD WHITE®
WATER HEATERS

Call or Email the DUFF Experts for any Water Heater Questions. We've got The Solutions



TALL MODELS								
Gallon Capacity	pre-NAECA (manufactured before 4/2015)				NAECA (current models)			
	A.O. Smith		Bradford White		A.O. Smith		Bradford White	
	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)
30	ECT-30	46-1/2 x 18	M-2-30R6DS	46-7/8 x 18	ENT-30	46-1/2 x 19	RE330S6	47 x 20
40	ECT-40	59-1/2 x 18	M-2-40T6DS	59-3/4 x 18	ENT-40	60-1/4 x 20	RE340T6	60-5/8 x 20
50	ECT-52	54 x 20	M-2-50T6DS	57-1/2 x 20	ENT-50	60-1/2 x 22	RE350T6	58 5/8 x 22
50					ENTB-50*	60-1/4 x 21		
55	ECT-55	60-1/4 x 20	M-2-50T6DS	57-1/2 x 20	Disc. - See ENT-50			
55					ENT-55	56-1/2 x 24		
66	ECT-66	60-1/4 x 20-1/2	M-2-65R6DS	59-1/4 x 22	Disc. - See Heat Pump			
80	ECT-80	60-1/2 x 22-1/2	M-2-80R6DS	59-1/4 x 24	Disc. - See Heat Pump			
119	ECT-120	64-1/4 x 28	M-2-120R6DS	63-3/4 x 28	Disc - See Heat Pump			

* Ships with insulation blanket

SHORT MODELS												
Gallon Capacity	Pre-2015 A.O. Smith	Pre-2015 Bradford Model	Current Height (Inches)	Current Diameter (Inches)	PRE-15 BW Height (Inches)	PRE-15 BW Diameter (Inches	AOS NAECA-III Model	Bradford NAECA-III Model	AOS Height (Inches)	AOS Diameter (Inches)	after 2015 BW Height (Inches)	after 2015 BW Diam (Inches)
30	ECS-30	* Alternate - M-2-30R6DS	36-1/2	20-1/2	46 7/8	18	ENS-30	RE330S6	39-3/4	22	47	20
30							ENSB-30		39	20		
40	ECS-40	M-2-40S6DS	44	20-1/2	46 7/8	20	ENS-40	RE340S6	50	22	47 7/8	22
50	ECS-50	M-2-50S6DS	48	22	46 1/2	22	ENS-50	RE350S6	49-3/4	24	47	24

WATER HEATERS

LOWBOY TOP CONNECT



A.O. Smith — Innovation has a name.

- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials avail.)

BRADFORD WHITE WATER HEATERS

- 240V (other voltages available)
- T&P Relief Valve Installed
- 6-Year Warranty
- 10-year warranties available



LOWBOY TOP CONNECT (under counter)

Gallon Capacity	Pre-2015 A.O. Smith	Pre-2015 Bradford Model	Current Height (Inches)	Current Diameter (Inches)	PRE-15 BW Height (Inches)	PRE-15 BW Diameter (Inches)	A.O. Smith NAECA-III Model	Bradford NAECA-III Model	AOS Height (Inches)	AOS Diameter (Inches)	after 2015 BW Height (Inches)	after 2015 BW Diam (Inches)
30	ECL-30	M-2-30L6DS	30	22	30	22	ENL-30	RE230L6*	31-1/4	24	29 7/8	22
30	ECLB-30*		30	20			ENLB-30		30	22		
38	ECLN-40	M-2-40L6DS	31-1/4	23	32 1/8	24	ENLB-40*	RE240L6*	31-3/4	24	24	33 1/2
38	ECLB-40*	M-1-40L6DS	32-1/4	24	31 1/4	22	ENLB-40*	RE240L6*	31-3/4	24	24	33 1/2
50	ECL-50	M-2-50L6DS	34	26-1/2	32 1/8	26	Discontinued	RE250L6*				

* ships with insulation blanket

LOWBOY SIDE CONNECT (UTILITY)

A.O. Smith — Innovation has a name.



- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials avail.)
- 120V (other voltages available)
- T&P Relief Valve Installed
- 6-Year Warranty

BRADFORD WHITE WATER HEATERS



LOWBOY SIDE CONNECT (utility)

Gallon Capacity	Pre-2015 A.O. Smith	Pre-2015 Bradford Model	Current Height (Inches)	Current Diameter (Inches)	PRE-15 BW Height (Inches	PRE-15 BW Diameter (Inches)	A.O. Smith NAECA-III Model	Bradford NAECA-III Model	AOS Height (Inches)	AOS Diameter (Inches)	after 2015 BW Height (Inches)	after 2015 BW Diam (Inches)
6		M-1-6U6SS	**	**	16 1/2	14	EJC-6	RE16U6	15 1/4	14 1/4	16 1/2	14
10		M-1-10U6SS	**		17 1/2	16	EJC-10	RE110U6	18 1/4	16	17 1/2	16
12		M-1-12U6SS	**		16 7/8	18		RE112U6			16 7/8	18
20		M-1-20U6SS	**	**	24 3/4	18	EJCS-20	RE120U6	24 3/4	18	24 3/4	18
30	ECJ-30	M-2-30U6SS	30	22	30	22	ENJ-30		31-1/4	24		
30								ENJB-30*	30	22		
38	ECJN-40	NONE	30-1/2	23			ENJ-40		31-3/4	26		
38							ENJB-40*		31-3/4	24		

* ships with insulation blanket ** No Change

COMPACT/POINT-OF-USE



A.O. Smith — Innovation has a name.

- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials available)

- 120V (other voltages available)
- T&P Relief Valve Installed
- 6-Year Warranty

BRADFORD WHITE WATER HEATERS



COMPACT

Gallon Capacity	PRE-15 Bradford Model	PRE-15 BW HEIGHT	PRE-15 BW DIAM	AOS NAECA-III Model	Bradford NAECA-III Model	AOS Height (Inches)	AOS Diameter (Inches)	after 2015 BW Height (Inches)	after 2015 BW Diam (Inches)
2	M1-2U6SS	12-1/4	9-7/8	EJC-2	RE1-2U	13.75	13.75	12-1/4	9-7/8

WATER HEATERS



A.O. Smith — Innovation has a name.

BRADFORD WHITE WATER HEATERS

ELECTRIC - HEAT PUMP

- ENERGY STAR Qualified
- Multiple Operating Modes:
  - Efficiency Mode
  - Hybrid Mode
  - Electric Only Mode
  - Vacation Mode
- Non-CFC Foam Insulation
- Protective Anode Rod
- T&P Valve Installed
- 3/4" MPT
  (A.O. Smith: side; Bradford: top)
- Electronic User Interface

Gallon Capacity	NAECA (current models)			
	A.O. Smith		Bradford White	
	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)
50	FHPT-50	63 x 22	RE2H50R10B	59-1/8 X 21-3/4
66	FHPT-66	61 x 27		
80	HHPT-80	81-1/2 x 24-1/2	RE2H80R10B	71-1/8 X 25





NATURAL GAS

- Glass-Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials available)
- Intelligent Gas Control Systems
- T&P Relief Valve Installed
- 6-Year Warranty
- LP available in all models
- 10-year warranties available



A.O. Smith — Innovation has a name.

BRADFORD WHITE WATER HEATERS

TALL MODELS

Gallon Capacity	pre-2015 AOS Model	pre-2015 Bradford Model	pre-2015 AOS Height (Inches)	pre-2015 AOS Diameter (Inches)	pre-2015 BW height (Inches)	PRE-15 BW Diam (Inches)	post-2015 AOS NAECA-III Model	post-2015 Bradford NAECA-III Model	post-2015 AOS Height (Inches)	post- 2015 AOS Diameter (Inches)	post- 2015 BW Height (Inches)	post-2015 BW Diam (Inches)
30	GCV-30	M-I-303T6FBN	61 1/2	16	58	16	GCR-30	RG230T6N	61 3/4	18	59 3/4	18
							GCB-30*		61 3/4	16		
30	GVR-30	* Alternate - M-4-30T6FBN	61 1/2	18	59 1/8	18	GCR-30	RG230T6N	61 3/4	18	59 3/4	18
							GCRH-40		62	20		
40	GCV-40	M-I-40T6FBN	61 3/4	18	59 3/8	18	GCR-40	RG240T6N	62	20	60 1/8	20
40							GCB-40*		62	18		
40	GVR-40	M-4-40T6FBN	61 3/4	20	59 3/8	20	GCR-40	RG240T6N	62	20	60 1/8	20
50	GCV-50	M-I-5036FBN	60 3/4	20	59 5/8	20	GCG-50	RG250T6N	60 3/4	21	60 1/2	22
50	GVR-50	M-4-5036FBN	61	22	59 5/8	22	GCR-50	RG250T6N	60 3/4	22	60 1/2	22
75	FCG-75	M-I-75S6BN	61	26 1/2	62 3/8	24	FCG-75	RG275H6N	61	26 1/2	60 1/2	26

SHORT MODELS

Gallon Capacity	Current Model	pre-2015 Bradford Model	pre-2015 AOS Height (Inches)	pre-2015 AOS Diameter (Inches)	PRE-15 BW Diameter (Inches)	PRE-15 BW Height (Inches)	After 2015 AOS NAECA-III Model	after 2015 Bradford NAECA-III Model	after 2015 AOS Height (Inches)	after 2015 AOS Diameter (Inches)	after 2015 BW Height (Inches)	after 2015 BW Diam (Inches)
30	GCVL-30	* Alternate M-I-30S6FBN	50	18	48 3/8	18	GCRL-30	RG230S6N	50	20	49 1/4	20
30							GCBL-30*		50	18		
40	GCVL-40	M-I-403S6FBN	51 1/2	20	50	20	GCRL-40	RG240S6N	51 1/2	22	51 1/2	22
							GCBL-40*		51 1/2	20		
40	GVRL-40	M-4-403S6FBN	51 1/2	22	50	22	GCRL-40	RG240S6N	51 1/2	22	51 1/2	22
50	GCVL-50	* Alternate - M-I-50L6FBN	53 1/4	24	49 3/4	22	GCRL-50	RG250L6N	53	24	51 5/8	24

COMMERCIAL GAS WATER HEATERS



A.O. Smith — Innovation has a name.

BRADFORD WHITE WATER HEATERS

- Glass Coated Lining
- Non-CFC Foam Insulation
- 1-1/2" Dielectric Fittings
- Electronic Ignition
- Magnesium Anode Rod (other materials available)
- 120 volt required for blower
- T&P Relief Valve Installed
- 3-Year Warranty
- LP available in all models
- Other BTU ratings, and ASME-coded versions, available

	Bradford White		A.O. Smith	
Gallons	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)
80	D-80T-199-3N	71-7/8 x 28-1/4	BTR-199	67-1/2 x 27-3/4
80*	D-80T-725-3NA	79-5/8 x 28-1/4		
100	D-100L-199-3N	75 x 30-1/4	BTR-197	75 x 27-3/4
100	D-100T-199-3N	83-3/8 x 28-1/4		
* ASME rated tank with 8" vent				



CONSERVATIONIST BURKAY® COPPER COIL GAS HEATERS



A.O. Smith — Innovation has a name.

Conservationist® Burkay® high efficiency gas boilers are designed for indoor use in installations requiring higher inputs (up to 670,000 Btu). They're rust-proof because water comes in contact with nothing but copper, brass or bronze. And the Burkay burner features a patented design that maximizes combustion efficiency.

* LP available

Consult Duff today for sizing assistance & options!

Specifications	
GPM:	23 - 54
Input BTU/HR *Natural Gas	120,000 - 670,000
Dimensions	
Width (Inches)	26 11/16 - 36 1/2
Depth (Inches)	20 3/4 - 38 1/4
Approximate Shipping Weight (lbs.)	240 - 361
Height (Inches)	49 3/8 - 68 5/1

COMMERCIAL ELECTRIC WATER HEATERS

A.O. Smith — Innovation has a name.



- Goldenrod® 24-Karat gold-plated elements resist corrosion, resulting in long-term efficiency and damage protection
- Power-circuit fusing for system protection
- Glass-lined tank provides long-lasting protection against corrosion
- Sizing available from 50 gallons to 119 gallons
- Gallon Capacity: 50 - 120
- KW Input: 6-54
- Number of Elements: 3-9
- Recovery Cap. 100°F Rise: 25 - 221

Call Duff for sizing, capacity, voltage and other options

Rush and emergency delivery is always available on all commercial heaters!

BRADFORD WHITE WATER HEATERS

- Fully Automatic Controls
- Single or Three Phase
- 208V, 240V, 277V, 380V, 415V, 480V or 600V
- Hydrojet® Sediment Reduction System
- Vitraglas® Lining
- ASME or Non-ASME with Surface (SF) or Immersion (CF) Thermostats
- 6-54 kW Input
- Incoloy Elements
- Hand Hole Cleanout
- Max Temp - 180°F
- NSF Construction Available
- 1 ½" NPT Dielectric Waterway Fittings
- Low Restriction Brass Drain Valve
- T&P Relief Valve Installed
- Two Protective Magnesium Anode Rods
- Non-CFC Foam Insulation
- 3–Year Limited Tank Warranty– can be upgraded to 5–Year at additional cost





WATER HEATERS POWER VENT

A.O. Smith — Innovation has a name.

BRADFORD WHITE WATER HEATERS

- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials available)
- 120 volt required for blower
- T&P Relief Valve Installed
- 6-Year Warranty
- LP available in all models
- 10-year warranties available on Bradford White models



Gallons	NAECA (current models)			
	Bradford White		A.O. Smith	
	Model No.	Dimensions (HXW)^	Model No.	Dimensions (HXW)^
40	RG1PV40S6N	57 5/16 x 27-1/8	GPVL-40	59 x 29-1/8
50	RG1PV50S6N	58-1/4 x 26-3/4	GPVL-50	60-1/8 x 31-1/8
75	RG2PV75H6N	69-7/16 x 30-1/4	GPVX-75L	70-5/8 x 33-1/8
^ Width dimension includes gas valve				

Valve Install Kit for All Tankless Water Heaters



- Relief Valve
- Union Connections
- Bypass Valves for easy cleaning of heater

FIG. NO.	214696

Infiniti Tankless™ High Efficiency Residential (Condensing) Gas Water Heater

The Infiniti Tankless™ Condensing Water Heater Model features:

- Featuring the SRT™ Scale Reduction Technology—Significantly reduces the incidence of scale build-up known to result in poor performance, additional maintenance, and pre-mature component or product failure.
  - Vertical Modulating Burner Design —Ultra low NOx burner disperses heat evenly across the entire surface area, eliminating hot spots ehich are known to reduce product efficiency and longevity.
  - Dual Fan Configuration — Assists with the even distribution of heat throughout the heat exchanger, increasing efficiency and reducing scale accumulation.
  - Internal Turbulators — Create water turbulence reducing the occurrence of scale buildup.
  - Dual Heat Exchanger — Copper primary heat exchanger and aluminum secondary condensing heat exchanger. Both heat exchangers have all copper waterways to insure a high thermal conductivity.
- Built-In Digital Control — Adjustable emperature (100-140°F). Multiple indicators for ease of monitoring.
- High Temperature Kit — Optional high temperature kit allows fora maximum setpoint up to 184°F.
- Active Bypass—Achieves superior temperature stability.
- Cascading Kit (Optional) — Up to 24 units can be connected together with ease.
- Venting Flexibility — Common venting, concentric "up & out", twin pipe and concentric termination approved. PP, PVC, CPVC and ABS approved venting material. Altitude tested up to 8000 ft.
- Gas Connection Flexibility—1/2", 3/4", or 1" connections permitted (refer to I&O manual for details).
- Inlet Water Filter—External access for easy maintenance.
- Space Saving Installation — Compact size for tight installations.
- Built In Freeze Protection — Automatically protects water from freezing inside the appliance copper pipes.
- Interior or Exterior Installation — Outdoor installation requires optional kit. Recess box and pipe enclosure available.
- Complies with the latest Ultra-Low NOx requirement (10 ng/J NOx limit).



Say goodbye to old technology; say hello to high efficiency, continuous hot water!

A.O. Smith — Innovation has a name.

ELECTRIC - LIGHT-DUTY COMMERCIAL

BRADFORD WHITE WATER HEATERS



- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials available)
- Various Voltages & Wattages Available (please specify)
- Can be Wired for Simultaneous Operation
- T&P Relief Valve Installed
- 3-Year Warranty
- 5-Year Warranties Available for Bradford White Models

	Bradford White		A.O. Smith	
Gallons	Model No.	Dimensions (HXW)	Model No.	Dimensions (HXW)
30	LE130L3-3	29-3/4 x 20	DEL-30	30-7/8 x 21-3/4
40	LE140L3-3	31-1/4 x 22	DEL-40	32-1/4 x 24
50	LE150L3-3	31-3/4 x 24	DEL-50	32-1/4 x 26-1/2



Specify wattage and voltage when ordering, and whether operation is simultaneous or non-simultaneous. Available in 120V, 208V, 240V, 277V, 480V; 1500W-6000W

BRADFORD WHITE WATER HEATERS

- Glass Coated Lining
- Non-CFC Foam Insulation
- 3/4 MPT Dielectric Fittings
- Factory-installed Heat Trap
- Magnesium Anode Rod (other materials available)
- Various Voltages & Wattages Available (please specify)
- Can be Wired for Simultaneous Operation
- T&P Relief Valve Installed
- 3-Year Warranty
- 5-Year Warranties Available for Bradford White Models

	Bradford White		A.O. Smith	
Gallons	Bradford Model No.	Dimensions (HXW)	A.O. Smith Model No.	Dimensions (HXW)
30	LE230S3-3	46-7/8 x 18	DEN-30	34-1/2 x 20-1/2
40	LE240S3-3	46-7/8 x 20	DEN-40	45-1/8 x 20-1/2
50	LE250S3-3	46-1/2 x 22	DEN-52	54-7/8 x 20-1/2
65	LE265T3-3	59-1/4 x 22	DEN-66	60-3/4 x 21-3/4
80	LE280T3-3	59-1/4 x 24	DEN-80	59-3/8 x 24
120	LE2120T3-3	62-3/4 x 28	DEN-120	62-7/16 x 29-3/8

A.O. Smith — Innovation has a name.



Specify wattage and voltage when ordering, and whether operation is simultaneous or non-simultaneous. Available in 120V, 208V, 240V, 277V, 480V; 1500W-6000W

TTW COMMERCIAL

A.O. Smith
Innovation has a name.



- Power Direct Vent Design
- Ultra High Efficient: Up to 99%!
- Glass Coated Lining
- Non-CFC Foam Insulation
- Low Nox
- Digital Display
- Magnesium Anode Rod (other materials avail.)
- 120 volt required for blower
- 3-Year Warranty

LP available in all models
ASME coded versions available

120,000 - 500,000 BTU
60 - 120 gallon capacity

BRADFORD WHITE
WATER HEATERS

- Power Direct Vent Design
- Ultra High Efficient: Up to 99%!
- Glass Coated Lining
- Non-CFC Foam Insulation
- Low Nox
- Digital Display
- Magnesium Anode Rod (other materials avail.)
- 120 volt required for blower
- 3-Year Warranty

LP available in all models
ASME coded versions available

125,000 - 400,000 BTU
60 - 100 gallon capacity



STORAGE TANKS



Storage tanks available from these brands:

Lochinvar®
High Efficiency Water Heaters, Boilers and Pool Heaters

A.O. Smith
Innovation has a name.

BRADFORD WHITE
WATER HEATERS

NST

John Wood®
Hot Water for Life™

These hot water storage tanks are ideal for use with gas-fired copper heat exchanger equipment and other hot water systems for storage of any potable water at temperatures of 180ºF or lower. Sizes range from 80 to 12,500 gallons and custom models are available with special linings, heating coils (single-or double-wall), and accessories.

- Horizontal or vertical mounting
- Insulated and non-insulated models available
- ASME rated version available

EXPANSION TANKS

Expansion tanks available from these brands:

AMTROL

Taco

SINCE 1908 wessels company



Bell & Gossett®

elbi

John Wood®
Hot Water for Life™

Expansion tanks are required in a closed loop heating or chilled water HVAC system to absorb the expanding fluid and limit the pressure within a heating or cooling system. A properly sized tank will accommodate the expansion of the system fluid during the heating or cooling cycle without allowing the system to exceed critical pressure limits. The expansion tank uses compressed air to maintain system pressures by accepting and expelling the changing volume of water as it heats and cools.

Some tank designs incorporate a diaphragm or bladder to isolate the expanded water from the pressure controlling air cushion. As water is expanded, it is contained in the bladder to prevent tank corrosion and water logging potentials. The pressure controlling air cushion is pre-charged at the factory and can be adjusted in the field to meet critical system requirements. This design and operation of this style of expansion tank allows the designer or specifying engineer to reduce tank sizes up to 80%.
Each tank style has models that are either ASME or Non-ASME coded. Tanks range in size from 2 to 10,000 gallons
Custom tanksare produced to customer specifications, for high pressures and/or special materials for severe duty applications.

EEMAX DIRECT (TANKLESS) HEATING

Eemax™
Hot Water Solutions Made Easy

Direct Heating Elements transfer heat directly to the water, heating it faster, and giving you hot water, quicker. The lower thermal mass means it adjusts faster, giving you consistent temperature. It instantly shuts down when you're done and cools faster, causing minimal overshoot, and no energy being wasted.

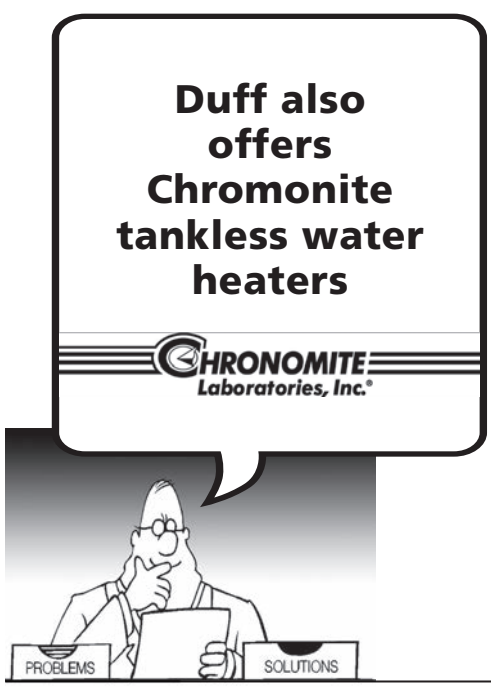
Applications
- Hand washing (0.35-2.0 GPM)
- Kitchen/bar/utility sinks
- Manufacturing facilities
- Hand set shower (0.7-2.0 GPM)
- Dual handwash sinks (DL option)
- Modular buildings and tenant spaces

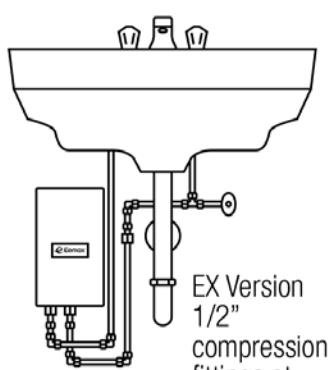
Product Specifications
Dimensions: 10.75" x 5.25" x 2.78"
Weight: 4 lbs.
Cover: ABS UL rated 94V0.
Color: White
Element: Replaceable cartridge insert
Fittings: SP – 3/8" compression fitting at top of unit
EX – 1/2" (5/8" OD) compression fitting at bottom of unit
Operating Pressure: Min. 25 PSI, max. 150 PSI

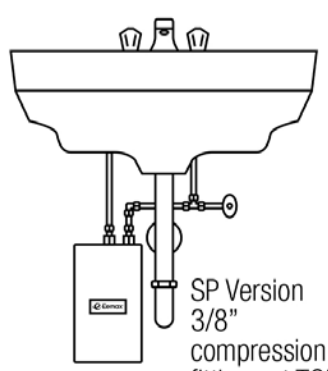
Fig. No.	Description
102649	EX3512 3.5kW, 120 volt, 10AWG
199786	EX4208 4.1kW, 208 volt, 12AWG
--	EX2412 2.4kW, 120 volt, 12AWG
229573	EX4277, 4.1kW, 277 volt, 14AWG
Other voltages and capacities available	



Pictured, EX: Bottom Water Connections
U.S. Patent #'s: 4,762,980 and 4,960,976







COMPACT ELECTRIC BOOSTER WATER HEATERS

Models C-4, -5, -6, -7, -9, -12, -13, -15, -17, -18, -24, -27, -30, -36, -39, -45, -54, -57



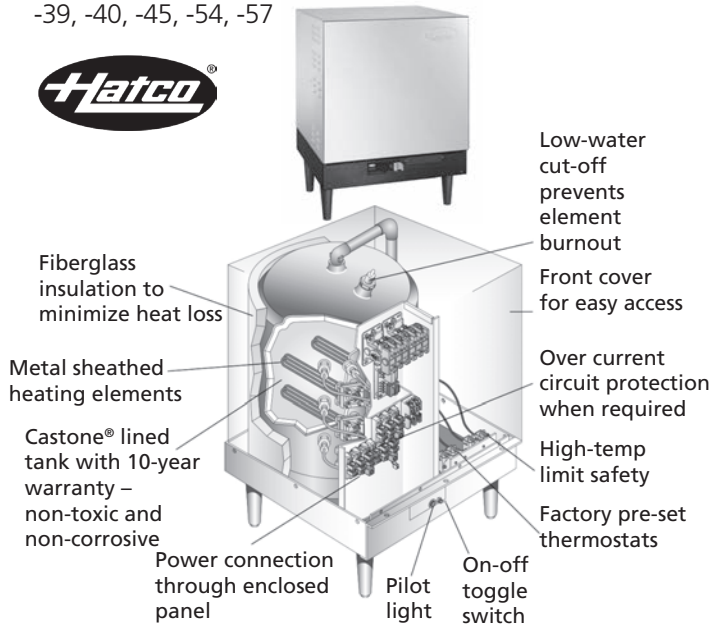
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Water Temperature Recovery Table

Compact Model	40°F (22°C) Rise	70°F (39°C) Rise
C-4	40 gph (151 lph)	23 gph (87 lph)
C-5	50 gph (189 lph)	29 gph (110 lph)
C-6	60 gph (227 lph)	34 gph (129 lph)
C-7	70 gph (265 lph)	40 gph (151 lph)
C-9	90 gph (341 lph)	52 gph (197 lph)
C-12	120 gph (454 lph)	69 gph (261 lph)
C-13	135 gph (511 lph)	77 gph (292 lph)
C-15	151 gph (572 lph)	86 gph (326 lph)
C-17	173 gph (655 lph)	99 gph (375 lph)
C-18	181 gph (685 lph)	103 gph (390 lph)
C-24	241 gph (912 lph)	138 gph (522 lph)
C-27	271 gph (1026 lph)	155 gph (587 lph)
C-30	301 gph (1139 lph)	172 gph (651 lph)
C-36	361 gph (1367 lph)	206 gph (780 lph)
C-39	391 gph (1480 lph)	224 gph (848 lph)
C-45	452 gph (1711 lph)	258 gph (977 lph)
C-54	542 gph (2052 lph)	310 gph (1174 lph)
C-57	573 gph (2169 lph)	326 gph (1234 lph)

IMPERIAL ELECTRIC BOOSTER WATER HEATERS

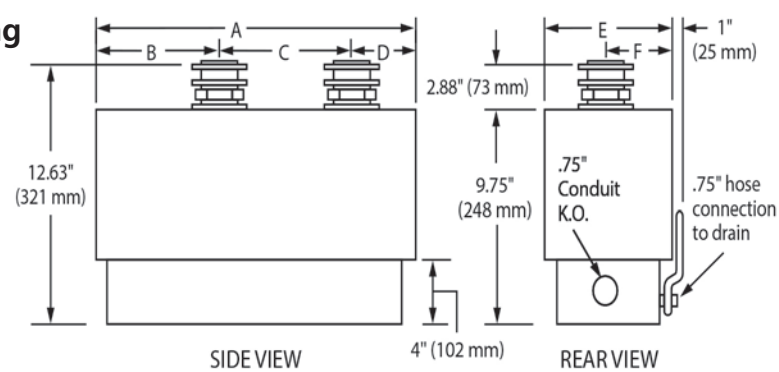
Models S-6, -7, -9, -12, -13, -15, -17, -18, -24, -27, -30, -36, -39, -40, -45, -54, -57



Water Temperature Recovery Table

Imperial Model	40° F (22° C) Rise	70° F (39° C) Rise
S-6	60 gph (227 lph)	34 gph (129 lph)
S-7	70 gph (265 lph)	40 gph (151 lph)
S-9	90 gph (341 lph)	52 gph (197 lph)
S-12	120 gph (454 lph)	69 gph (261 lph)
S-13	135 gph (511 lph)	77 gph (292 lph)
S-15	151 gph (572 lph)	86 gph (326 lph)
S-17	173 gph (655 lph)	99 gph (375 lph)
S-18	181 gph (685 lph)	103 gph (390 lph)
S-24	241 gph (912 lph)	138 gph (522 lph)
S-27	271 gph (1026 lph)	155 gph (587 lph)
S-30	301 gph (1139 lph)	172 gph (651 lph)
S-36	361 gph (1367 lph)	206 gph (780 lph)
S-39	391 gph (1480 lph)	224 gph (848 lph)
S-40	407 gph (1541 lph)	232 gph (878 lph)
S-45	452 gph (1711 lph)	258 gph (977 lph)
S-54	542 gph (2052 lph)	310 gph (1174 lph)
S-57	573 gph (2169 lph)	326 gph (1234 lph)

3CS Sanitizing Sink Heaters



WATER QUALITY REQUIREMENTS

Incoming water in excess of 3.0 grains of hardness per gallon (GPG) (.75 grains of hardness per liter) must be treated and softened before being supplied to booster heater(s). Water containing over 3.0 GPG (.75 GPL) will decrease the efficiency and reduce the operating life of the unit. Note: Product failure caused by liming or sediment buildup is not covered under warranty.

Dimensions

Model	A	B	C	D	E	F
3CS-3, -4, -6, -9 (1- or 3-Phase)	16.88" (429 mm)	5.5" (140 mm)	8.5" (216 mm)	2.88" (73 mm)	6.75" (171 mm)	3.38" (86 mm)
3CS-9 480V (1- or 3-Phase)	17.13" (435 mm)	4.63" (117 mm)	8.5" (216 mm)	4" (102 mm)	8" (203 mm)	4" (102 mm)
3CS-3B, -4B, -6B, -9B (Bal. 3-Phase)	17.13" (435 mm)	4.63" (117 mm)	8.5" (216 mm)	4" (102 mm)	8" (203 mm)	4" (102 mm)

BELL & GOSSETT ECOCIRC E3 DOMESTIC CIRCULATOR FOR INSTANT HOT WATER

ecocirc circulators are energy efficient circulators using permanent magnet ECM (electronically commutated motor) technology. Designed specifically for potable water applications, these circulators are lead free and available with a variety of options (temperature sensor, various body styles, assembled with electrical cord and plug, timer and more). ½" FIP, 115 volts

Designed to handle pipe loop runs to 1000 ft.



Features:
Easy installation
- Models with a programmable timer and built-in thermostat are available to further reduce energy consumption
- Available with integrated check and ball valves for quick isolation during service
- Instant availability of hot water, even at the tap furthest from the hot water heater
- Conserves natural resources - reduced power consumption, CO2 emissions and wasted water
- Highly efficient ECM technology
- Long lasting, silent operation
- Resistant to scale build up
- No shaft, no seal
- Single bearing design
- Maintenance free without blockage

Bell & Gossett®

Optional ecocirc High Efficiency Low Lead Brass ECM Circulator Timer

Maximizes savings by turning the pump on or off in 30 minute increments to match the homeowner's schedule. Avoid heating additional water and pumping at unwanted time with an installation that requires only one screwdriver and less than 5 minutes.



BELL & GOSSETT AUTOCIRC INSTANT HOT WATER SYSTEM

- Highly efficient ECM technology
- Long lasting, silent operation
- Saves thousands of gallons of water
- Resistant to scale build up
- No shaft, no seal
- Maintenance free without blockage
- Single bearing design

Bell & Gossett®



How autocirc Works
The autocirc is the most effi cient system, turning on only when the system needs to be replenished with hot water. The pump is installed under the sink farthest from the water heater where hot water takes the longest to arrive. No recirculation line is required.

WATER HEATER PARTS

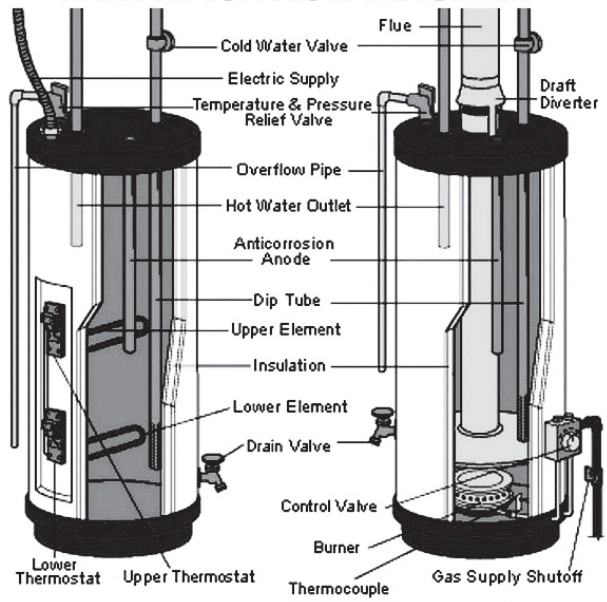
Electric Heater Parts	
Fig. No.	Description
Screw-in Elements*	
8727	1500w 120v
8731	1500w 240v
8728	2000w 120v
8732	2000w 240v
50230	2500w 120v
8733	2500w 240v
8735	3500w 240v
8729	1000w 240v
205599	4500w 277v
8736	4500w 240v
51749	5500w 240v
38011	6000w 480v
8738	6000w 240v
17675	45000w 240v Extended Life
Flanged Elements	
8749	1000w 240v
8763	6000w 240v
8742	1500w 120v
8751	1500w 240v
8748	2000w 120v
8754	2000w 240v
8756	2500w 240v
55848	3000w 240v
8758	3500w 240v
8761	4500w 240v
33185	5500w 240v
17674	4500w 240v Extended Life
Element Gaskets	
8706	Thin (standard)
8707	Thick
Tools	
8718	Element Wrench
Thermostats	
8715	SINGLE-ELEMENT THERMOSTAT
8712	LOWER THERMOSTAT
8713	UPPER THERMOSTAT

* 240 volt elements can be energized at 208 volts. The reduced voltage will reduce the wattage by 25%. (Energizing a 208 volt rated element (max) at 240 volts will burn out the elements.)

DUFFNOTE:

For flexible water heater supply lines -- including SharkBite kits -- see page 212

WATER HEATER PARTS IDENTIFICATION DIAGRAM



ELECTRIC WATER HEATER **GAS WATER HEATER**

Gas Heater Parts	
Fig. No.	Description
202875	18" length
202874	24" length
202872	30" length
202873	36" length
25690	48" length
Gas Valves	
243215	Bradford White Icon Natural Gas
--	Bradford White Icon LP
8716	Bradford White Natural Gas (Old Style)
--	Bradford White LP Gas (Old Style)
51750	Bradford White TTW Natural Gas
246074	A.O. Smith FVIR Natural Gas
--	A.O. Smith FVIR LP

Common Heater Parts

Fig. No.	Description
44553	42" Anode (Aluminum) with Outlet Heat Trap (not pictured above)
48891	42" Anode (Aluminum), Plug Style
51131	47" Anode (Magnesium), Plug Style
8719	48" Threaded Dip Tube
8722	Drain Valve
3756	Temperature & Pressure Relief Valve (3/4" x 150#)
82567	PVC Overflow Pipe

WATER HEATER DRIP PANS



Fig. No.	Material - I.D. (O.D.)
238528	Plastic - 19" (21-1/2")
51156	Aluminum - 20" (21-1/4")
51157	Aluminum - 24" (25-1/4")
155126	Plastic - 26" (27-1/2")
73938	Plastic - 24" (25-1/2")
8721	Plastic - 30" (31-1/2")

TANK BOOSTER PRO

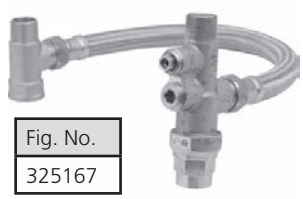




Fig. No.
325167

The Tank Booster PRO combines a Thermostatic Mixing Valve (TMV), a Flexible Connector and a Water Heater Tee in one package, and effectively doubles a household's water heater capacity while delivering hot water at safe temperatures in residential/commercial applications. Factory set at 120°F (adjustable 95-130°F).

WATER HEATER FLOOD-STOP WITH 3/4" VALVE



Fig. No.	Type
245955	Water Heater Flood-Stop (3/4")
--	Automatic Phone Dialer (calls up to 4 phone numbers)

The FloodStop for water heaters automatically shuts off the water supply to the water heater and sounds an alarm, leaving all other household fixtures and appliances operational.

- Easily installed in fifteen minutes.
- One Year Manufacturer's Warranty.

Components: Motorized Full-Port Ball Valve (3/4" NPT), Control Unit with Battery Backup (4 AA), Water/Leak Sensor (1.25" X 7.5"), AC Power Adaptor.

FloodStops are also made for:

- Washing Machines
- Dish Washers
- Ice Makers
- Sinks
- Whole House!

RESIDENTIAL BOILER QUICK REFERENCE CHART





Mega-Stor Stainless Steel Indirect Water Heater
Can be used with any of these listed products.

DUFF NOTE:

This quick reference chart does not include all boilers and products manufactured by Crown Boiler Co.
Call your DUFF Rep at 610-275-4453 for other models!

	PHANTOM	ARUBA 4	CAYMAN	BALI	CABO 2
					
Fuel	Natural/ Propane	Natural/ Propane	Natural/ Propane	Natural/ Propane	Natural/ Propane
Efficiency	93.0%-95.0% Energy Star	82.8%-83.3%	81.0%-83.5%	82.0%-83.3%	85.1%-85.3% Energy Star
Input	80-500 MBH	38-280 MBH	103-379 MBH	61-229 MBH	60-245 MBH
Ignition	Direct Spark	Electronic	Electronic	Electronic	Direct Spark
Venting	Direct Vent	Atmospheric	Atmospheric	Power Vent	Direct Vent
Trim	Water	Water	Water	Water	Water
Steam (Sq. Ft.)	N/A	N/A	N/A	N/A	N/A
Coil	No	No	Optional	No	No
Heat Exchanger	Stainless Steel	Cast Iron	Cast Iron	Cast Iron	Wet Leg Cast Iron
Condensing	Yes	No	No	No	No

	BERMUDA	TOBAGO	KINGSTON	FREEPORT 2 FWZ	FREEPORT 2 FSZ
					
Fuel	Natural/ Propane	Oil	Oil	Oil	Oil
Efficiency	80.0%-82.2%	84.0%-86.1% Energy Star	82.9%-85.4% Energy Star	86.0%-87.1% Energy Star	85.7%-86.0% Energy Star
Input	69-379 MBH	0.65-2.00 GPH	0.65-2.00 GPH	0.60-1.60 GPH	0.80-1.6 GPH
Ignition	Electronic	Retention Burner	Retention Burner	Retention Burner	Retention Burner
Venting	Atmospheric	Atmospheric	Atmospheric	Atmospheric	Atmospheric
Trim	Steam	Water	Steam	Water	Steam
Steam (Sq. Ft.)	179-979	N/A	246-733	N/A	303-610
Coil	No	Optional	Optional	No	Optional
Heat Exchanger	Cast Iron	Cast Iron	Cast Iron	3-Pass Cast Iron	3-Pass Cast Iron
Condensing	No	No	No	No	No

ENERGY STAR

ADDITIONAL BOILER PRODUCT INFORMATION

FOR COMPLETE DATA, REFER TO CURRENT PRODUCT LITERATURE AND MANUALS

Aruba 4 - Gas, Cast Iron, Water

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
AWR038	38	82.8	28
AWR070	70	82.9	50
AWR105	105	82.9	76
AWR140	140	83.0	102
AWR175	175	83.1	127
AWR210	210	83.1	152
AWR245	245	83.2	178
AWR280	280	83.3	203

Phantom - Gas, S S, Condensing, Water

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
PHNTM080	80	93.2	64
PHNTM100	100	93.3	80
PHNTM120	120	93.0	97
PHNTM150	150	94.0	123
PHNTM180	180	93.2	145
PHNTM210	210	95.0	169
PHNTM285	285	95.0	228
PHNTM399	399	94.0*	328
PHNTM500	500	95.0*	413

*Combustion Efficiency

Cayman - Gas, Cast Iron, Water

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
CWI103	103	83.1	75
CWI138	138	83.1	100
CWI172	172	83.2	125
CWI207	207	83.2	150
CWI241	241	83.2	175
CWI276	276	83.2	200
CWI311	310	81.4*	219
CWI346	345	81.4*	244
CWI380	379	81.4*	269

*Combustion Efficiency

Bermuda - Gas, Cast Iron, Steam

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
BSI069	69	81.9	49
BSI103	103	82.0	73
BSI138	138	82.1	98
BSI172	172	82.2	123
BSI207	207	82.3	149
BSI241	241	82.4	174
BSI276	276	82.5	199
BSI311	310	77.5*	190
BSI346	345	77.5*	211
BSI380	379	77.5*	232

*Combustion Efficiency

Cabo 2 - Gas, Wet-Leg Cast Iron, Water

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
CWD060	60	85.1	44
CWD083	82.5	85.1	62
CWD110	110	85.2	82
CWD138	137.5	85.2	103
CWD165	165	85.2	123
CWD193	192.5	85.2	143
CWD220	220	85.2	164
CWD245	245	85.3	183

Bali - Gas, Cast Iron, Water

Model Number	Input (MBH)	AFUE %	AHRI NET RATING (MBH)
BWF061	61	83.3	44
BWF095	95	83.1	68
BWF128	128	82.8	92
BWF162	162	82.5	117
BWF195	195	82.3	140
BWF229	229	82.0	164

CROWN BOILER

Freeport FWZ - Oil, 3-Pass Cast Iron, Water

Model Number	Burner Capacity (GPH)	AFUE %	AHRI NET RATING (MBH)
FWZ060	0.60	86.0	63
FWZ080	0.80	86.3	84
FWZ100	1.00	87.0	107
FWZ130	1.30	87.1	139
FWZ160	1.60	87.1	171

Freeport ODV - Oil, 3-Pass Cast Iron, Water

Model Number	Burner Capacity (GPH)	AFUE %	AHRI NET RATING (MBH)
ODV-75	0.75	85.0	79
ODV-100	1.00	83.1	103
ODV-125	1.25	83.5	130

Freeport FSZ - Oil, 3-Pass Cast Iron, Steam

Model Number	Burner Capacity (GPH)	AFUE %	AHRI NET RATING (MBH)
FSZ080	0.80	85.7	73
FSZ100	1.00	86.0	92
FSZ130	1.30	86.0	119
FSZ160	1.60	85.9	146

Tobago - Oil, Cast Iron, Water

Model Number	Burner Capacity (GPH)	AFUE %	AHRI NET RATING (MBH)
TWZ065	0.65	86.1	70
TWZ075	0.75	85.8	79
TWZ090	0.90	86.0	97
TWZ100	1.00	84.3	104
TWZ120	1.20	86.0	128
TWZ125	1.25	85.1	132
TWZ150	1.50	84.0	156
TWZ175	1.75	85.1	184
TWZ200	2.00	84.7	210

Kingston - Oil, Cast Iron, Steam

Model Number	Burner Capacity (GPH)	AFUE %	AHRI NET RATING	
			MBH	Sq. Ft.
KSZ065	0.65	85.1	59	246
KSZ075	0.75	84.5	68	283
KSZ090	0.90	85.0	83	346
KSZ100	1.00	83.5	89	370
KSZ120	1.20	85.4	110	458
KSZ125	1.25	84.2	112	467
KSZ150	1.50	83.1	133	554
KSZ175	1.75	83.1	155	646
KSZ200	2.00	82.9	176	733

Mega-Stor - High Performance Indirect Water Heater

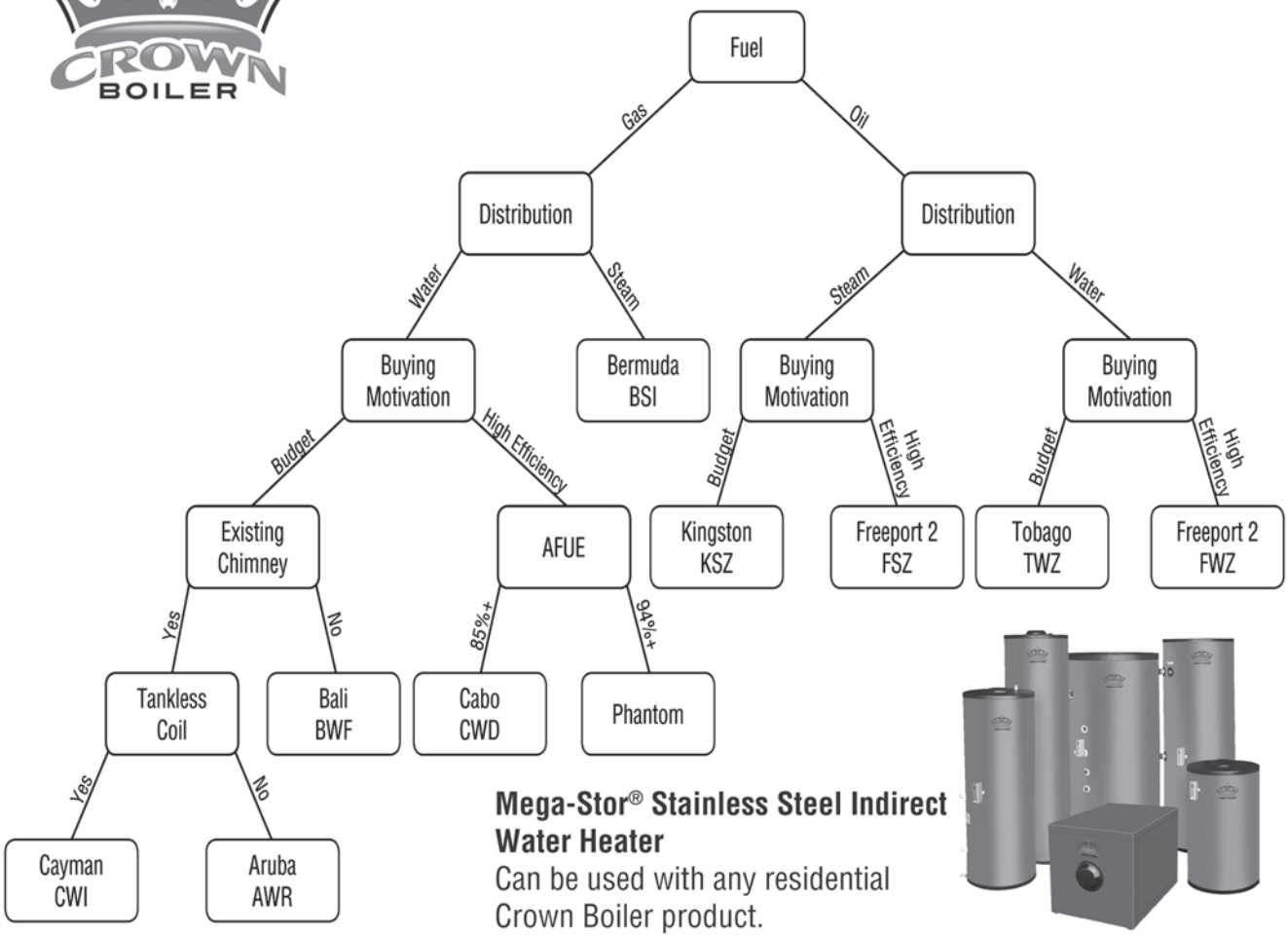
Model Number	Volume (Gal.)	First Hour Rating (Gal/Hr)	Continuous Draw Rating (Gal/Hr)	Standby Heat Loss (°F/Hr)
MS-26	26	143.9	121.3	1.7
MS-40	39	195.4	157.2	1.4
MS-53	51	225.6	179.1	0.9
MS-79	80	286.8	217.5	0.9
MS-119	112	472.1	383.8	1.0
MSH-40H*	38	151.4	115.8	1.4
MSH-53H*	51	202.9	158.3	1.3

*Horizontal Tank

For additional information call: 610-275-4453 or Fax: 610-279-6299.

Please call for current prices.

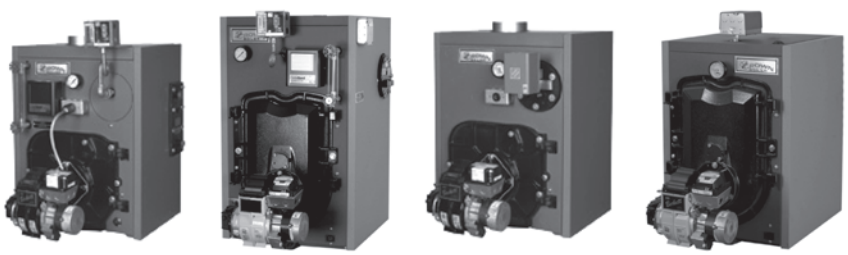
RESIDENTIAL BOILER PRODUCT FLOW CHART



Mega-Stor® Stainless Steel Indirect Water Heater
Can be used with any residential Crown Boiler product.



Cayman CWI | **Aruba AWR** | **Bali BWF** | **Cabo CWD** | **Bermuda BSI** | **Phantom**



Kingston KSZ | **Freeport 2 FSZ** | **Tobago TWZ** | **Freeport 2 FWZ**

MEGA-STOR INDIRECT WATER HEATERS

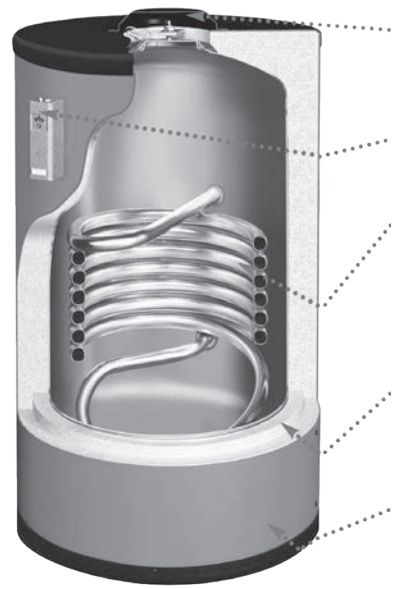
Abundant domestic hot water powered by the same efficient boiler that heats your home or commercial building

Busy lifestyles demand lots of hot water - for showering the whole family, starting the dishwasher, putting a load of clothes in the washing machine and getting everybody out of the door on time.

Compare the performance of a Mega-Stor® to water heaters fueled by gas, electric or oil, and you'll see the advantage that comes with choosing hydronic products from Crown Boiler Co.

Mega-Stor® is indirectly heated for efficiency. The boiler that heats your home or building provides more energy, while consuming fuel more efficiently, than direct-fired domestic water heaters. So Mega-Stor saves on fuel costs by using hot water from your boiler to heat water for your showers.

Crown Mega-Stor® water heaters come in a variety of sizes from 26 to 119 gallons to meet every residential and commercial need. Mega-Sto©r is engineered for performance, constructed of high quality materials inside and out, and finished attractively.



Superior features and comfort come standard

Mega-Stor® has a removable inspection cap for easy access to the coil and tank. Plus, there's a drain at the bottom to flush out the tank if necessary.

Mega-Stor® has a highly responsive Honeywell adjustable aquastat so that the water can be adjusted for your desired temperature.

Mega-Stor® heats water fast. With a smooth surfaced stainless steel coil that transfers heat throughout the tank, the recovery rate is up to three times more rapid than typical gas, electric or oil heaters.

Mega-Stor® keeps water hot. The two inch thick layer of polystyrene foam insulation keeps the water in your Mega-Stor® hot for hours during standby periods.

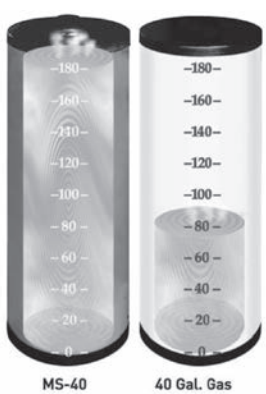
Mega-Stor's® tank is ruggedly made of stainless steel, TIG welded and passivated for superior durability.

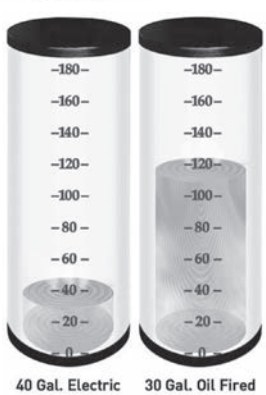
Space saving, horizontal 40- and 53-gallon Mega-Stors® can fit into crawl spaces, and stacked with most Crown boilers for a smaller footprint using the optional mounting kit.



Mega-Stor® has a limited lifetime warranty.
Crown Boiler Co. warrants the Mega-Stor's® stainless steel tank and coil against leakage for as long as the original purchaser owns the home in which it is installed. Consult warranty for important terms and conditions.

Mega-Stor© indirect water heaters provide more gallons of water after an hour of heating than gas, electric or oil-fired water heaters. The heating coil throughout the tank, powered by the heating capacity of boiler, provides this superior performance as shown on the right.





How much hot water your Mega-Stor™ will provide depends both on its size and on the heating capacity (the BTU per hour rating) of your boiler.

Volume of Hot Water Available During One Hour Starting with A Fully Recovered Tank (First Hour Rating) At 90ºF Rise

Model	60,000 BTU/hr Boiler	80,000 BTU/hr Boiler	100,000 BTU/hr Boiler	125,000 BTU/hr Boiler	150,000 BTU/hr Boiler	175,000 BTU/hr Boiler	200,000 BTU/hr Boiler	250,000 BTU/hr Boiler	300,000 BTU/hr Boiler
MS-26	103	126*	126*	126*	126*	126*	126*	126*	126*
MS-40	115	142	169	172*	172*	172*	172*	172*	172*
MS-53	127	154	181	200*	200*	200*	200*	200*	200*
MS-79	146	172	198	230	255*	255*	255*	255*	255*
MS-119	169	196	222	256	289	323	356	417*	417*
MSH-40-H	115	135*	135*	135*	135*	135*	135*	135*	135*
MSH-53H	125	152	179	180*	180*	180*	180*	180*	180*

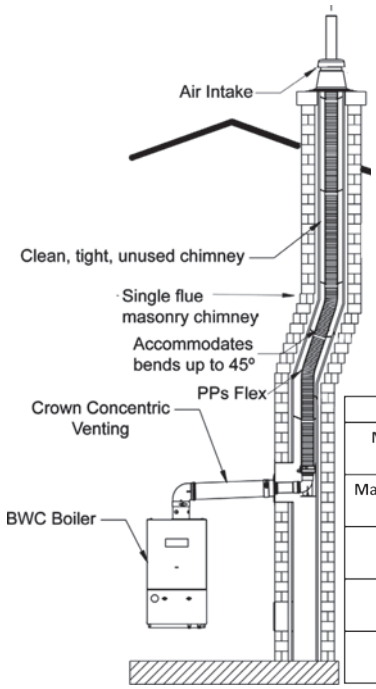
*Maximum Transfer Rates

If you need a lot of hot water quickly, for example a high flow rate to fill a hot tub, a larger size Mega-Stor® may be required to maintain an uninterrupted flow of hot water.

Approximate Mixed Flow at 115ºF

Model	Boiler Output [BTU/HR]	5.0 Gallons per Minute		7.0 Gallons per Minute	
		Minutes of Hot Water	Gallons Provided	Minutes of Hot Water	Gallons Provided
MS-26	77,000	4.5	22.8	2.5	18.7
MS-40	102,000	10.0	50.1	4.6	34.4
MS-53	114,000	12.5	62.3	7.6	57.2
MS-79	145,000	12.6	63.0	8.0	60.0
MS-119	225,000	Unlimited	Unlimited	15.1	113.8
MSH-40-H	75,000	9.3	46.1	4.6	34.4
MSH-53H	101,000	10.9	54.6	5.8	43.3

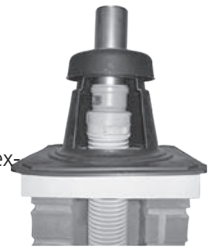
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.



PPs FLEX VENT

- Designed for use in single flue masonry chimney
- Allows air to flow down a chimney, while pushing exhaust gas out through a corrugated, flexible polypropylene chimney liner
- Ideal for when side wall venting is not practical
- Cost effective, simple, quick installation
- Eliminates the need for unsightly PVC pipe

Crown Concentric Vent Cap



Summary of PPs Flex Venting Options

Boiler Model	BWC070	BWC090	BWC120	BWC151	BWC150	BWC225	BWC300
Max Chase Height (Feet)	32	32	32	32	32	32	32
Max Total Vent Length (Feet)	51	51	51	51	47	45	68
PPs Liner Size (Millimeters)	80	80	80	80	80	100	100
Min Chase ID (Round)	6" Dia	6" Dia	6" Dia	6" Dia	6" Dia	7" Dia	7" Dia
Min Chase ID (Rectangular)	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	7" x 7"	7" x 7"

*Please consult the installation manual for specific chimney and PPs vent system requirements.
*Certified to ULc S636

BRAZED PLATE HEAT EXCHANGERS

- Hydronic heating
- Industrial process
- Domestic water
- Snow melt
- Steam to fluid
- Radiant floors
- Swimming pool applications



Call DUFF today for sizing & Pricing!

BIMINI BUDDY

MODEL	MAX. OPERATING PRESSURE	MAX. OPERATING TEMP.	CONNECTIONS					DIMENSIONS			WEIGHT	MAX EXPANSION TANK DIA.
			BOILER SUPPLY	BOILER RETURN	SYSTEM	EXPANSION TANK	AIR VENT	WIDTH	HEIGHT	DEPTH		
BB100H	50 PSI	200°F	1" COPPER	1" MPT	1" COPPER	1/2" FPT	1/2" FPT	12"	19-3/4"	12-1/2"	24 LBS	11"
BB100I								12"	19-3/4"	12-1/2"	27 LBS	11"
BB100C								12"	19-3/4"	12-1/2"	30 LBS	11"

Bimini Model	Continuous Draw (GPM)	
	77°F Rise	90°F Rise
BWC070	1.5	1.3
BWC090	2.1	1.8
BWC120	2.7	1.8
BWC151	2.9	1.9

Standard Equipment on BB100H and All Bimini Buddy Models

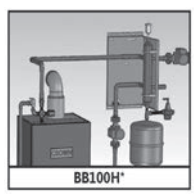
- Factory assembled
- Deluxe painted cover with slots for wall mounting
- Hydraulic separator

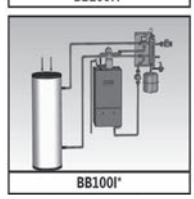
BB100C includes standard equipment as well as:

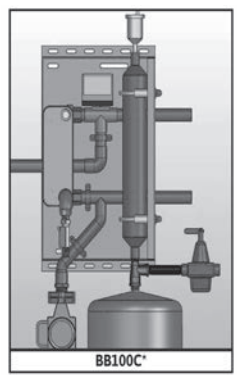
- Brazed plate heat exchanger for domestic hot water
- 120 Volt three way zone valve
- Flow switch
- 1/2" MPT inlet, 3/4" MPT outlet connections

BB100I includes standard equipment as well as:

- 120 Volt three way zone valve for domestic hot water priority
- Indirect water heater connections (1" copper)

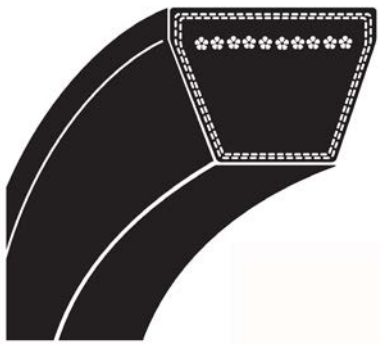

BB100H*


BB100I*


BB100C*

Hide-A-Vector Compact models for horizontal or vertical installation

		Flow Rate	Pressure	Entering Water Temperature (in degrees F) - BTU/hrs.								
Fig. No.	OEM No.	GPM	Drop (ft)	130	140	150	160	170	180	190	200	210
		1	0.06	2095	2410	2700	3000	3350	3650	3860	4000	4105
44574	KS 2004	3	0.422	2240	2650	3000	3350	3765	4350	4350	4530	4635
		5	1.026	2350	2755	3140	3530	3940	4590	4590	4810	4935
		1	0.12	3410	4050	4655	5265	5860	6700	6700	7110	7270
44575	KS 2006	3	1.19	3735	4395	5060	5735	6330	7120	7120	7530	7790
		5	2.6	3860	4540	5225	5910	6560	7415	7415	7800	8010
		1	0.12	4300	5000	5765	6500	7370	8400	8400	8735	8920
72258	KS 2008	3	1.19	4580	5380	6195	7050	7930	9010	9010	9445	9740
		5	2.6	4760	5625	6450	7290	8200	9360	9360	9785	10020
		1	0.41	5530	6350	7150	7975	8780	9975	9975	10330	10520
76377	KS 2010	3	2.78	5880	6710	7740	8710	9625	11060	11060	11530	11740
		5	3.92	6070	7030	8000	9030	10025	11525	11525	11995	12180



V-BELTS

Call or email DUFF for double-V, cogged, and many other belt styles!

info@duffco.com
610-275-4453





Common V-Belts

Top Width: 21/32" (5/8"), Thickness: 13/32"	
OEM No.	Inside Length
B23 (5L 260)	23 in
B24 (5L 270)	24 in
B26 (5L 290)	26 in
B27 (5L 300)	27 in
B28 (5L 310)	28 in
B29 (5L 320)	29 in
B30 (5L 330)	30 in
B31 (5L 340)	31 in
B32 (5L 350)	32 in
B33 (5L 360)	33 in
B34 (5L 370)	34 in
B35 (5L 380)	35 in
B36 (5L 390)	36 in
B37 (5L 400)	37 in
B38 (5L 410)	38 in
B39 (5L 420)	39 in
B40 (5L 430)	40 in
B41 (5L 440)	41 in
B42 (5L 450)	42 in
B43 (5L 460)	43 in
B44 (5L 470)	44 in
B45 (5L 480)	45 in
B46 (5L 490)	46 in
B47 (5L 500)	47 in
B48 (5L 510)	48 in
B49 (5L 520)	49 in
B50 (5L 530)	50 in
B51 (5L 540)	51 in
B52 (5L 550)	52 in
B53 (5L 560)	53 in
B54 (5L 570)	54 in
B55 (5L 580)	55 in
B56 (5L 590)	56 in
B57 (5L 600)	57 in
B58 (5L 610)	58 in
B59 (5L 620)	59 in

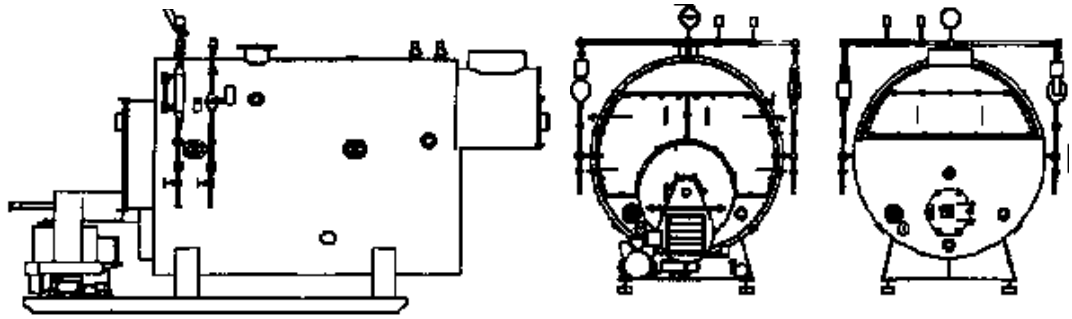
OEM No.	Inside Length
B60 (5L 630)	60 in
B61 (5L 640)	61 in
B62 (5L 650)	62 in
B63 (5L 660)	63 in
B64 (5L 670)	64 in
B65 (5L 680)	65 in
B66 (5L 690)	66 in
B67 (5L 700)	67 in
B68 (5L 710)	68 in
B69 (5L 720)	69 in
B70 (5L 730)	70 in
B71 (5L 740)	71 in
B72 (5L 750)	72 in
B73 (5L 760)	73 in
B74 (5L 770)	74 in
B75 (5L 780)	75 in
B76 (5L 790)	76 in
B77 (5L 800)	77 in
B78 (5L 810)	78 in
B79 (5L 820)	79 in
B80 (5L 830)	80 in
B81 (5L 840)	81 in
B82 (5L 850)	82 in
B83 (5L 860)	83 in
B84 (5L 870)	84 in
B85 (5L 880)	85 in
B86 (5L 890)	86 in
B87 (5L 900)	87 in
B88 (5L 910)	88 in
B89 (5L 920)	89 in
B90 (5L 930)	90 in
B91 (5L 940)	91 in
B92 (5L 950)	92 in
B93 (5L 960)	93 in
B94 (5L 970)	94 in
B95 (5L 980)	95 in
B96 (5L 990)	96 in
B97 (5L 1000)	97 in

Top Width: 1/2", Thickness 11/32"	
OEM No.	Inside Length
A26 (4L 280)	26 in
A27 (4L 290)	27 in
A28 (4L 300)	28 in
A29 (4L 310)	29 in
A30 (4L 320)	30 in
A31 (4L 330)	31 in
A32 (4L 340)	32 in
A33 (4L 350)	33 in
A34 (4L 360)	34 in
A35 (4L 370)	35 in
A36 (4L 380)	36 in
A37 (4L 390)	37 in
A38 (4L 400)	38 in
A39 (4L 410)	39 in
A40 (4L 420)	40 in
A41 (4L 430)	41 in
A42 (4L 440)	42 in
A43 (4L 450)	43 in
A44 (4L 460)	44 in
A45 (4L 470)	45 in
A46 (4L 480)	46 in
A47 (4L 490)	47 in
A48 (4L 500)	48 in
A49 (4L 510)	49 in
A50 (4L 520)	50 in
A51 (4L 530)	51 in
A52 (4L 540)	52 in
A53 (4L 550)	53 in
A54 (4L 560)	54 in
A55 (4L 570)	55 in
A56 (4L 580)	56 in
A57 (4L 590)	57 in
A58 (4L 600)	58 in
A59 (4L 610)	59 in
A60 (4L 620)	60 in

OEM No.	Inside Length
A61 (4L 630)	61 in
A62 (4L 640)	62 in
A63 (4L 650)	63 in
A64 (4L 660)	64 in
A65 (4L 670)	65 in
A66 (4L 680)	66 in
A67 (4L 690)	67 in
A68 (4L 700)	68 in
A69 (4L 710)	69 in
A70 (4L 720)	70 in
A71 (4L 730)	71 in
A72 (4L 740)	72 in
A73 (4L 750)	73 in
A74 (4L 760)	74 in
A75 (4L 770)	75 in
A76 (4L 780)	76 in
A77 (4L 790)	77 in
A78 (4L 800)	78 in
A79 (4L 810)	79 in
A80 (4L 820)	80 in
A81 (4L 830)	81 in
A82 (4L 840)	82 in
A83 (4L 850)	83 in
A84 (4L 860)	84 in
A85 (4L 870)	85 in
A86 (4L 880)	86 in
A87 (4L 890)	87 in
A88 (4L 900)	88 in
A89 (4L 910)	89 in
A90 (4L 920)	90 in
A91 (4L 930)	91 in
A92 (4L 940)	92 in
A93 (4L 950)	93 in
A94 (4L 960)	94 in
A95 (4L 970)	95 in
A96 (4L 980)	96 in
A97 (4L 990)	97 in
A98 (4L 1000)	98 in

BOILERS

SCOTCH MARINE BOILERS



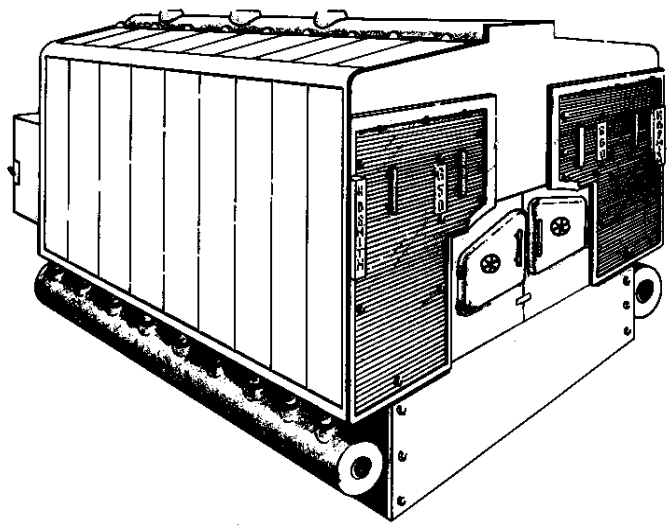
BURNHAM - EASCO - CROWN - CLEAVER BROOKS

Call our heating department for sizing and quotation!

DID YOUKNOW?

THAT 1 BOILER HORSEPOWER IS EQUAL TO 33,479 BTU/HR OR 34.5 LBS OF STEAM PER HOUR!

SMITH MILLS CAST IRON OIL OR GAS BOILERS

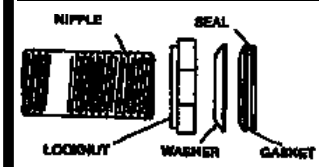


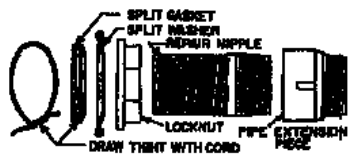
Call for parts and information!

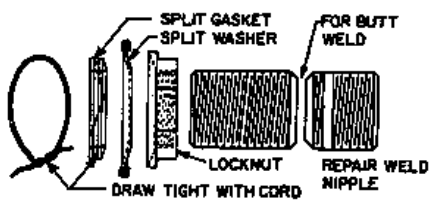
SMITH MILLS CAST IRON BOILER PARTS

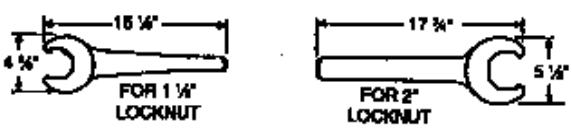
Call for pricing and availability!

610-275-4453









BOILER HANDHOLE AND MANHOLE GASKETS

All boiler gaskets are made of 1/4" EPDM rubber



ELLIPTICAL - "E"

SIZE	FIG. NO.	PRICE
11X15X1-1/4	16218	
12X16X1-1/4	16223	



OB ROUND "OB"

SIZE	FIG. NO.	PRICE
3X4X1/2	16134	
4X6X3/4	16180	
4-1/2X3-1/2X1/2	52528	

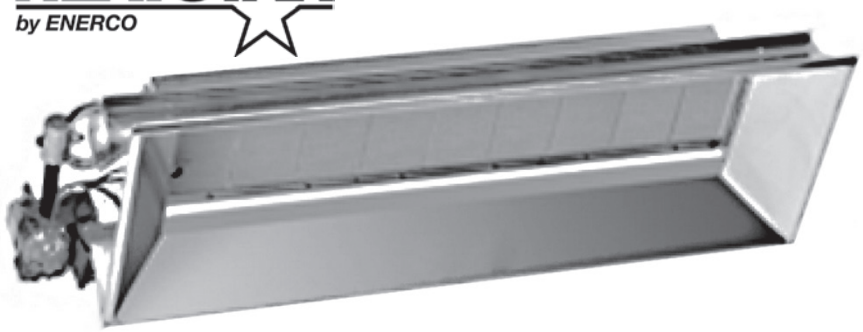
EPDM has excellent resistance to steam and high temperature while other types of rubber may not.

HUNDREDS OF OTHER SIZES AND MANY SHAPES AVAILABLE!



GAS-FIRED INFRA-RED GARAGE/SHOP HEATERS

HEATSTAR by ENERCO



- Pole Barns
- Factories & Warehouses
- Service Garages
- Golf Driving Ranges
- Farm Buildings
- Welding/Fabrication Shops
- Body Shops
- Outdoor Smoking Areas
- Large High Bay Manufacturing Plants
- Loading Docks
- Public Entrance Ways

Model No: 4040 NPP 4040 LPP

- High intensity heaters have multiple outputs per model series
- Additional burner orfices are included that enables the installer to increase or decrease the output of the heater
- Spark ignition heaters ship with 40VA transformer
- Milivolt control heaters shipped with thermostat
- Non-corrosive materials are used throughout heater construction
- Available in propane (30,000-120,000 BTU/Hr.) or natural gas (30,000-140,000 BTU/Hr.)

Call or email DUFF for sizing and accessories

info@duffco.com 610-275-4453

HEATSTAR by ENERCO

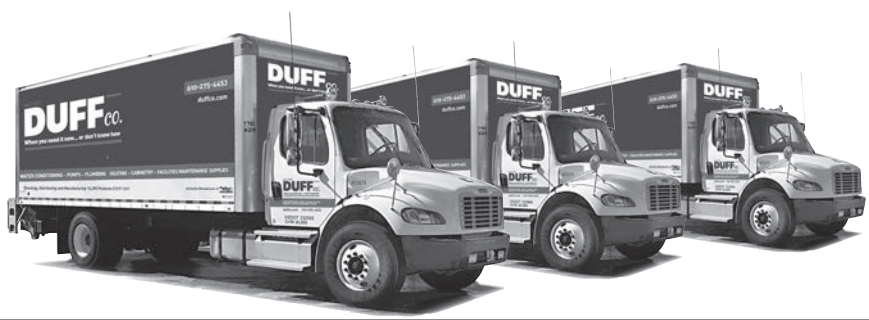


- Shops
- Garages
- Utility buildings
- Loading docks
- Doorways/Ramps for snow prevention
- Storage sheds
- Patios
- Barns
- Outdoor smoking areas

Model No: HS25LP HS25NG

- Heats up to 500-600 sq. ft. (2-1/2 car garage)
- For use in low profile buildings with 7-8 ft. ceilings
- No electricity required – heats during power outages
- Includes thermostat
- CSA certified
- All necessary brackets and hardware included
- Available in propane (22,000 BTU/Hr.) or natural gas (25,000 BTU/Hr.)

DUFF DELIVERS



STEAM/HOT WATER UNIT HEATERS

The Hot Dawg H2O is the first of its kind in North America - a low profile hot water unit heater with no external moving parts. Its low-profile design makes it ideal for residential garages, basements and vestibules, as well as commercial, industrial and institutional installations. With side access piping and all moving parts enclosed, the Hot Dawg H2O has the versatility to be mounted vertically or horizontally, and is designed to work wherever you need it.

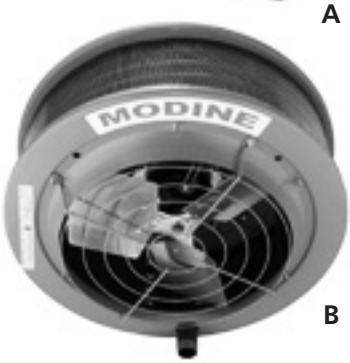


The Hot Dawg H2O offers many benefits including:

- Two model sizes available:
  - HHD 30 - standard unit with one blower speed
  - HHD 45 - includes solid state motor speed control
- No external moving parts - twin centrifugal blowers keep all moving parts inside the cabinet
- Easy, versatile installation
- Horizontal or vertical air delivery
- Electrical and piping connections can easily be reversed in the field
- Low profile design
- Constructed of heavy gauge steel for clean appearance and maximum headroom
- Includes two mounting brackets with vibration isolators to reduce noise and vibration
- Side-panel inlet air openings are finger-proof
- Available in hammertone beige
- Internal coil is suitable for water pressures up to 150PSI and temperature up to 200°F
- MADE IN THE USA



A



B



C

MODINE

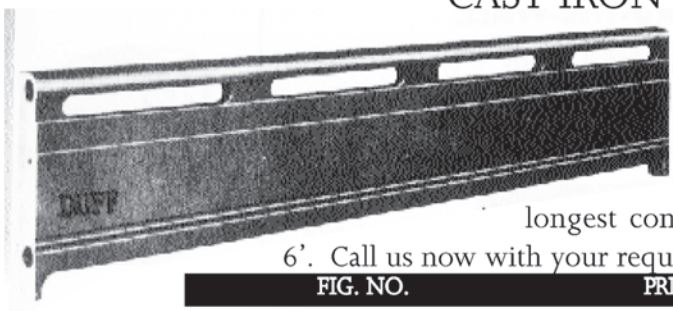
Available with top/bottom (HS) or side (HC) inlet/outlet piping, these heaters install quickly, easily and at low cost because they are lightweight. Yet they are ruggedly constructed to resist rigorous handling and on-the-job abuse.

A) Horizontal Unit Heaters (HS/HC) - The horizontal steam/hot water unit heater is ideal for general commercial and industrial applications. Available with top/bottom (HS) or side (HC) inlet/outlet piping. Learn more about the Horizontal Hydronic Unit Heater (HS/HC)

B) Vertical Unit Heaters (V/VN) - Recommended for a wide range of heating requirements, vertical steam/hot water unit heaters provide downward air delivery. These units may be suspended from up to 54 feet above the floor, depending upon the heater specifications. Learn more about the Vertical Hydronic Unit Heater (V/VN)

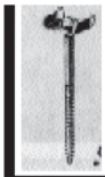
C) Power Throw Heaters (PT) - Carrying a powerful, high-velocity air delivery system ranging from 1,860 to 2,520 cubic feet per minute, these heaters are recommended to warm areas around frequently-opened doors or wherever long horizontontal heat throws are required. Learn more about the Power Throw Hydronic Unit Heater (PT)

CAST IRON BASEBOARD



CAST IRON HI BASEBOARD. 9 7/8" high, 3.4 Sq. Ft./Lin. Ft. Sold per foot, longest continuous length = 6'. Call us now with your requirements!

FIG. NO.	PRICE PER FOOT
15192	



Center Leg

FIG. NO.	PRICE
15198	



Holding Lug

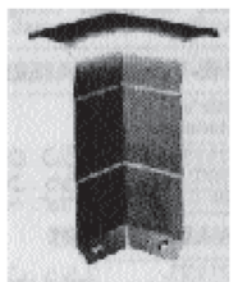
FIG. NO.	PRICE
15197	



Left Hand Valve Enclosure 5"



Right Hand Valve Enclosure 5"



4 4/8" Inside Corner

FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
15194		15193		15195	

ALSO AVAILABLE!

Push Nipple	Tie Bolt & Nut	Assembly Tool
15199	15201	41967

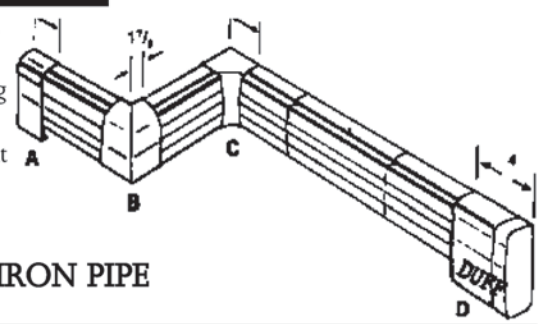
FIN TUBE BASEBOARD

EMBASSY fin tube baseboard heat. 3/4" copper fin tube. 8' lengths only. How to order:

COMPLETE PACKAGE: Includes assembled baseboard, damper vane, heating element with expansion cradles and 2" splice plate set.

COVER ASSEMBLY: Includes everything in complete package EXCEPT element or expansion cradles.

HEATING ELEMENT: Includes heating element only - NO enclosure.



AVAILABLE: 1 1/4" COPPER AND 1 1/4" IRON PIPE

DESCR	2 FIG NO.	2 PRICE	3 FIG NO.	3 PRICE	4 FIG NO.	4 PRICE	5 FIG NO.	5 PRICE	6 FIG NO.	6 PRICE	7 FIG NO.	7 PRICE	8 FIG NO.	8 PRICE	10 FIG NO.	10 PRICE
Complete	43251		9092		9094		9102		9104		9107		9110		9112	
Cover Ass	43252		9114		9116		9118		9119		9370		9421		9422	
Element	43253		9423		9424		9425		9426		9427		9428		9429	

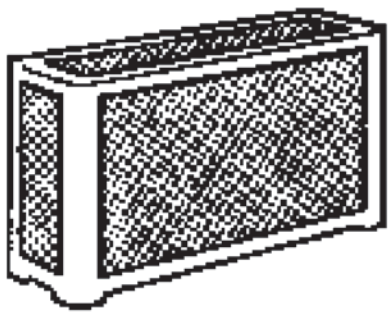
DESCRIPTION	FIG. NO.	PRICE
3 RH end cap	9430	
3 LH end cap	9431	
Hinged RH end cap	9432	
Hinged LH end cap	9433	
Inside 90 corner	9434	
Inside 45/135 corner	9435	
Outside corner	9436	

DESCRIPTION	FIG. NO.	PRICE
3" wall trim	49370	
5" wall trim	9438	
Damper joiner	9439	
Splicer set	9441	
Hanger bracket	9442	
Copper return bend	9443	

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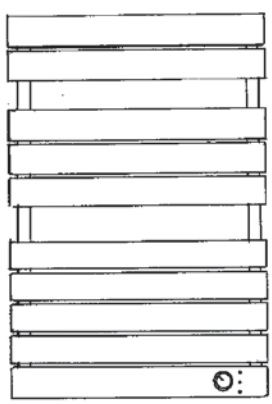
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- Easy to replace damaged or dirty fins
- Use existing pipe — No soldering, no water mess
- No technical skills required

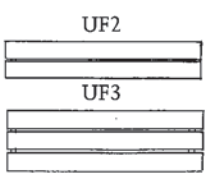




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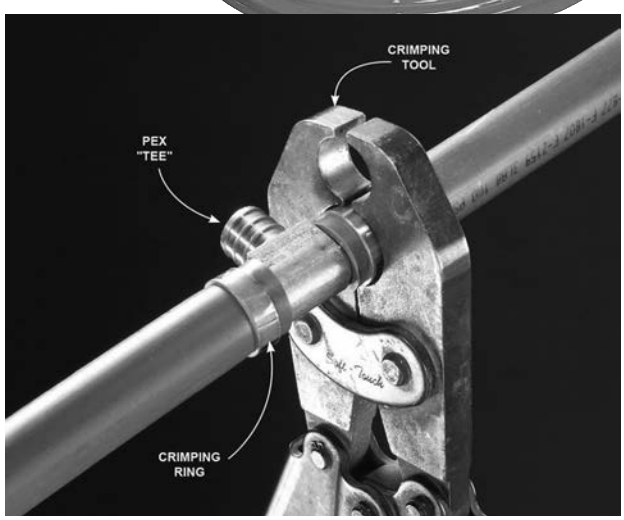
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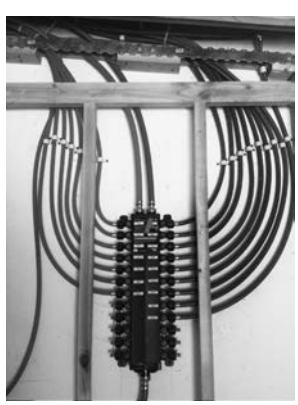
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Please call for current prices.











PEX

What is PEX?

PEX is an acronym for crosslinked polyethylene. It is a flexible, durable, proven piping product that has been used in plumbing systems in the United States for more than 20 years. Moreover, professionals have been installing PEX radiant floor heating and multipurpose fire sprinkler systems in homes around the globe for more than 40 years. In radiant heat and hydronic heating systems, hot water passes through the PEX and warms the room. An oxygen barrier is typically required on closed-loop systems.

Why PEX?

PEX is easier to install than copper; it's like running a garden hose. PEX won't corrode like copper in acidic environments. Even if you install PEX in a conventional main line and branch system, the connections
are quicker to make than soldering copper. PEX tubing won't pit, scale or corrode and, because of its flexibility, it also offers potential freeze-damage protection.

PEX Size

In radiant heating systems, 1/2" is by far the most common size of tubing used--5/8", 3/8", and 3/4" follow behind. The size of PEX tubing used does not change the amount of heat that is produced, but it does change the maximum loop length that can be run.

Spacing

The spacing of PEX tubing in a radiant heat system determines how much heat a given area will produce. This spacing or distance between two PEX lines is also referred to as the on-center distance. The closer that tubing is spaced, the higher the BTU output will be, given that water temperature is held constant. When laying out your tubing you must keep this in mind. For basements and shops, 12" spacing will work. For living areas, tubing can be spaced roughly 9" apart. For a bathroom, tubing can be 6-7" apart. This spacing assumes a moderate climate; if you are located in a warm climate tubing can be spaced farther apart and if you are located in an extremely cold climate tubing should be spaced closer together. Along exposed walls, tubing should be spaced 6" apart for the first 2-3' to combat the heat loss

Fittings

PEX fittings are available in many different connection methods which vary from manufacturer to manufacturer. Each connection method may require a specific tool dedicated to completing a successful connection. PEX fittings are used to connect PEX Tubing to manifolds, copper, PEX, faucets, fixtures, and many other products. There are several different styles of PEX Fittings and all of them have different requirements for tubing, tools, and rings. To make it easy, it is best to choose one system for all connections and use that system for fittings, tool, and rings throughout your entire home.

Benefits of PEX Tubing over Copper and CPVC

- Flexible for fewer fittings, reduced leak-point liability
- Resists corrosion, pitting and scaling
- Retains more heat in hot-water lines
- Resists condensation on cold-water lines
- Expands up to 3X its diameter to help resist freeze damage
- Connections do not require the use of dangerous chemicals or solvents
- Offers a complete lead-free system from inlet to faucet
- NSF International certification for water purity

THERMOSTATS



HONEYWELL T87K1007/U
- Round, white (3-11/16")
- Heat only
- 20-30 Vac
- 40F to 90F

Fig. No.
10263



HONEYWELL T8775A1009/U
- Round, white (3-11/16")
- Heat only
- 18-30 Vac
- 40F to 90F

Fig. No.
203114



LUXPRO PSM30SA
- White (3" x 3-1/2")
- Heat only
- 24 Vac
- 50F to 90F

Fig. No.
263379



BRAEBURN 3020
- White (3-7/8" x 5-1/8")
- Heat & Cool
- 18-30 Vac
- 45F to 90F
- Non-programable
- Batteries (2 AA) included

Fig. No.
214323



HONEYWELL TH4110D1007/U
- White (3-13/16" x 5-3/8")
- Heat & Cool, or Heat Pump w/o Aux Heat
- 20-30 Vac
- 40F to 90F

Fig. No.
226589



HONEYWELL TH5110D1022/U
- White (3-7/16" x 4-1/2"
- RedLINK™ (wifi)
- Heat & Cool
- Non-programable
- 20-30 Vac
- Dual powered (AA battery or hardwire)
- 40F to 90F

Fig. No.
242938



HONEYWELL T834N1002/U
- White (4-3/4" x 2-7/8")
- Heat & Cool, or Heat Pump w/o Aux Heat
- 20-30 Vac
- 45F to 90F

Fig. No.
50586



HONEYWELL T822K1000/U
- White (4-3/4" x 2-7/8")
- Heat only
- 20-30 Vac
- 45F to 95F

Fig. No.
10250

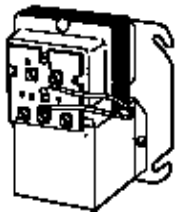


HONEYWELL T651A3018/U
- Tan (4-1/2" x 2-15/16")
- Heat & Cool
- 120-277 Vac (line voltage); 9.8 FLA @ 120 V, 4.9 FLA @ 240 V, 5.6 FLA @ 208 V
- Great for unit and infrared heaters!

Fig. No.
226589

HONEYWELL

F A N R E L A Y S



F A N C E N T E R S

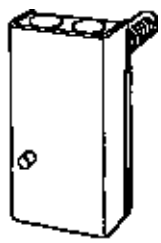
Used for low voltage control of line voltage fan motors in heating and cooling equipment. Enclosed relay with 38 VA transformer. Mounts on 4x4" electrical box. Contact: 1 normally open, 1 normally closed.

SPDT switching for single or 2-speed fan operation. electrical rating: 13.8 amps @ 120v, 6.9 amps @ 240v.

Fig. No.	Mfg. No.	Primary Voltage	Secondary Voltage	Switch Action	Price
10063	R8239A1052	120	27	SPDT	

DPDT switching to control fan with electronic air cleaner or humidifier.

Fig. No.	Mfg. No.	Primary Voltage	Secondary Voltage	Switch Action	Price
10181	R8239B1043	120	27	DPDT	



FAN AND LIMIT CONTROLS

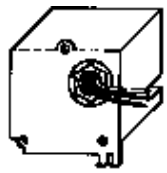
Provides fan operation control and high limit protection on all types of forced air heating systems. Used in line voltage, low voltage or powerpile applications. Standard replacement type. Helical bimetal sensing element; manual/automatic fan switch, metal cover.

LIMIT RANGE: 100 to 250°
LIMIT DIFFERENTIAL: 25°
FAN ON SETTING RANGE: 65 to 215°
FAN OFF SETTING RANGE: 50 to 200°
FAN ADJUSTABLE DIFFERENTIAL: 22° min.

Fig. No.	Mfg. No.	Element Insertion	Mounting	Price
9517	L4064B1469	5"	Rigid Bracket	
9534	L4064B2236	8"	Surface	
9513	L406B1451	11-1/2"	Rigid Bracket	



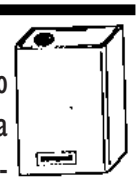
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F A N R E L A Y

For 24 volt circuit control of line voltage fan motors and auxiliary circuits in heating, cooling and heat/cool systems. Has 1 normally open contact; one normally-closed contact; built-in spud for junction box mounting. ELECTRICAL RATING: N.O. contacts - 14 amps @ 120v, 8 amps @ 240v. N.C. contacts - 14 amps @ 120v, 7 amps @ 240v.

Fig. No.	Mfg. No.	Coil Voltage	Switching Action	Price
10059	R8225A1017	24	SPDT	



S W I T C H I N G R E L A Y

These relays provide intermediate switching to allow a low-voltage controller to control a line-voltage device. Built-in transformers supply the low-voltage current for the thermostat circuit.

9976-Low voltage control of one line voltage load. Electrical rating: 10.2 amps @ 120 v, 5.1 amps @ 240 v.

9740 - Low voltage control of two line voltage loads having a common power source Electrical rating: 87.4 amps @ 120v, 3.7 amps @ 240v.

Fig. No.	Mfg. No.	Supply Voltage	Control Circuit	Switch Acation	Price
9976	RA89A1074	120	24V,2wire	SPST	
9740	RA832A1066	120	24V,2wire	DPST	



S W I T C H I N G R E L A Y

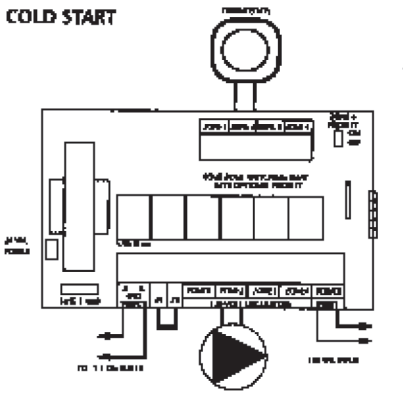
Provides DPST switching for hydronic zone-control systems or SPST switching of two separate loads. One load must be line voltage, the second load may be either line or low voltage.

ELECTRICAL RATING: 7.4 amps @ 120v, 3.7 amps @ 240v.

Fig. No.	Mfg. No.	Supply Voltage	Control Circuit	Switch Acation	Price
10195	R845A1030	24	SPDT		

TACO AND ARGO HYDRONIC CONTROLS

SWITCHING RELAYS



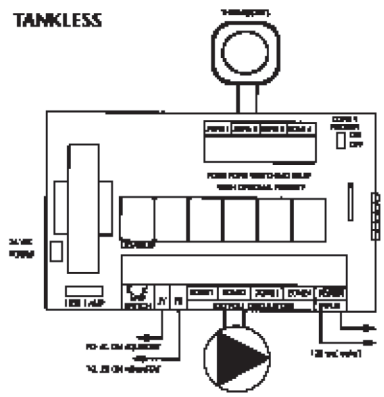


FIG. NO.	# OF ZONES	MAX OUTPUT AT 24 VAC	TRANSFORMER VOLTAGE	DIMENSIONS OF ENCLOSURE WIDTH	HEIGHT	DEPTH
72754	1 zone	7.2 amps	120 VAC input	4 1/4"	5 1/4"	2 3/4"
72747	2 with priority	15 amps	20 VAC input	10 1/4"	6 3/4"	2 3/4"
82487	3 with priority	15 amps	20 VAC input	10 1/4"	6 3/4"	2 3/4"
72748	4 with priority	20 amps	20 VAC input	10 1/4"	6 3/4"	2 3/4"
75957	6 with priority	20 amps	20 VAC input	11 3/4"	7 1/2"	3"

ZONE VALVE CONTROLS

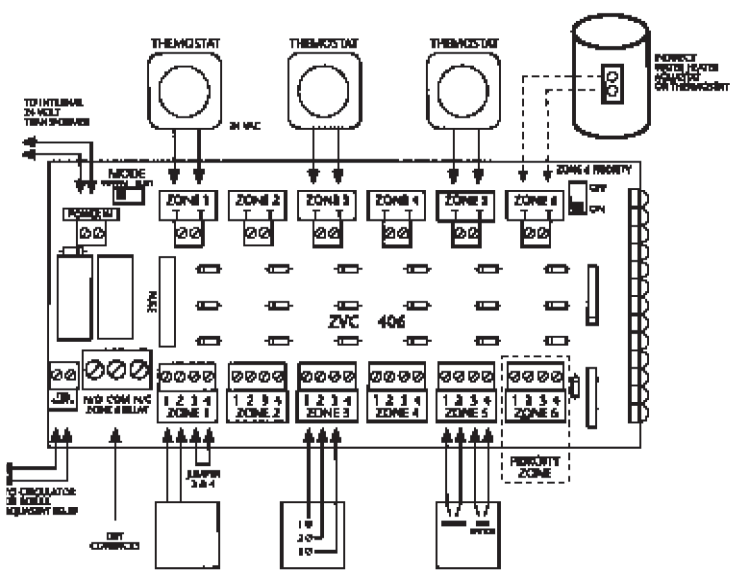
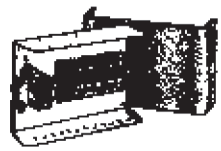


FIG. NO.	# OF ZONES	MAX OUTPUT AT 24 VAC	TRANSFORMER VOLTAGE	DIMENSIONS OF ENCLOSURE WIDTH	HEIGHT	DEPTH
72750	3 zone	40 VA	120VACinput	10 1/4"	6 3/4"	2 3/4"
72749	4 with priority	40 VA	120VACinput	10 1/4"	6 3/4"	2 3/4"
72751	5 zone	75 VA	120VACinput	10 1/4"	6 3/4"	2 3/4"
82488	6 with priority	75 VA	120VACinput	11 3/4"	7 1/2"	3"

ZONE VALVE CONTROLLERS



Makes a fast, simple job of wiring multiple 3 or 4 wire 24 volt zone valves. Solid state controls includes transformer, internal isolated end switch and terminal board wiring for thermostats and zone valves. Operates Honeywell, Taco and most other popular zone valves.

FIG. NO.	MFG. NO.	# OF ZONES	TRANSFORMER	PRICE
49329	AZV-243	3	40 VA	
44644	AZV-245	5	75 VA	

MULTI-ZONE CIRCULATOR SWITCHING RELAYS



Intermediate switching for up to six circulators. For large zoning jobs such as apartment buildings and other commrecial applications. The AR series relays are controlled by 24 volt thermostats or other 24 volt controllers, and will handle motor loads up to 1/3 HP @ 120v AC. Can be used with either cold-start or tankless heater boiler applications.

FIG. NO.	MFG. NO.	# OF ZONES	TRANSFORMER	PRICE
49328	AR861-2	2	15VA	
44645	AR861-3	3	15VA	
45166	AR842	4	15VA	
44646	AR866	6	15VA	

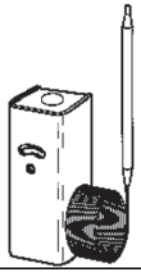
GENERAL PURPOSE SWITCHING RELAYS



For controlling line voltage loads with a low voltage circuit in applications such as circulators, fan motors and pumps up to 1/3 HP @ 120v AC. Full 10 amp load rating, replacealbe plug-in relay, 15 VA transformer, quick connect wiring terminals.

FIG. NO.	MFG. NO.	ACTION	TRANSFORMER	PRICE
53055	AR822	DPDT	15VA	

AQUASTAT



REMOTE BULB CONTROLLERS

For limiting or regulating temperature of liquids in boilers or tanks. Can also sense duct or outside air temperature.

* Remote temperature sensing element detects and responds rapidly to temperature changes.
* Totally enclosed Micro Switch snap-acting switch
* Visible control point scale and external adjustment screw permit easy setting.
* Horizontal or vertical mounting of the remote element into boiler, tank or other container. Case mounts to vertical surface.

FIG. NO.	DESCRIPTION
28075	L4008A1015

Honeywell L8148A,E,J Triple Function

The L8148 Aquastat® Relays are immersion type hydronic controllers that combine high limit protection with switching relay control of burner and circulator motors.

FEATURES

• All models are used with a 24 Vac thermostat.
• Models include special terminals for adding remote, low limit temperature control.
• L8148E,J have terminals for adding zone valve system wiring.
• L8148E models are available with plug for connecting Aquastat¨ Relay directly to D892/M892 Vent Dampers.
• All devices include transformer to provide power for the low voltage control circuit. Different models provide switching of line, low, or millivoltage burner circuit.
• Case available for horizontal or vertical mounting.
• Combinations of two insulation and two insertion well lengths are available.

Honeywell L8124A,B,C,E,G,L,M Triple Function

These immersion type controllers are for use with forced hydronic heating systems that include domestic hot water service.

FEATURES

• L8124 AquastatÆ Relays provide high limit, low limit, and circulator control for maintaining boiler temperatures.
• L8124 Aquastat Relays can provide multizone control by using a separate circulator and R845 Relay for each zone.
• All L8124 Aquastat Relays mount directly on the boiler.
• L8124E,G and L have large transformers and extra terminals for supplying power to low voltage zone valves.



• L8124M is for use in a wood-coal/gas-oil multifuel heating system. Circulator is independently controlled by the thermostat.

Honeywell L4006, 4007

These immersion type devices are for limiting or regulating the temperature of liquids in boilers, storage tanks, and other applications where temperature control is equired.

FEATURES

• L4006, 7, and 8 provide Spst switching for high or low limit or circulator control.
• L4006G includes two Spst switches that provide high limit and circulator control.
• L4006,7; L6006,7 models are available for insertion in: vertical or horizontal immersion well, vertical or horizontal direct immersion, and surface mounting.
• L4008, L6008 include remote bulb for mounting controller at a location away from the sensing element.
• Totally enclosed Micro Switch snap-acting switches operate on temperature rise to set point.
• Models calibrated for high limit use are also suitable for low limit control if a separate high limit controller is used.
• Visible control point scale and external adjustment screw, permit easy setting.
• Remote bulb models may be used to sense air temperature in ducts and in outside air sensing applications.

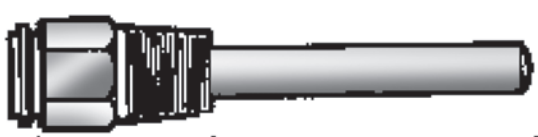
FIG. No.	DEDSCRIPTION
9698	HONEYWELL L8148J1009 AQUASTAT
89232	HONEYWELL L8148E1265 AQUASTAT
9694	HONEYWELL L8148A1017 AQUASTAT

FIG. No.	DEDSCRIPTION
68868	HONEYWELL L8124C1003 AQUASTAT
9664	HONEYWELL L8124A1007 AQUASTAT

FIG. No.	DEDSCRIPTION
161436	HONEYWELL L4006H1004 AQUASTAT
145389	HONEYWELL L4006A2148 AQUASTAT

IMMERSION WELLS FOR TEMPERATURE CONTROL

A



B



FIG. NO.	DESCRIPTION	MFG #		NPT SIZE	SPUD INSUL DEPTH	INSERT LENGTH	BULB DIA	BULB LNGTH	PRICE
10326	L4006, L4007, L4008, L4062, L4043, L6006, L6008, L6018	121371A	A	1/2	1 1/2	3 3/8	3/8	3	
10328	Same as 121371A	121371B	A	3/4	1 1/2	3 3/8	3/8	3	
10335	L6021, L6062, L8024, L8048, L8049, L8051, L8052, R4166	121371L	A	1/2	3	3 3/8	3/8	3	
10337	Same as 121371M	121371M	A	3/4	3	3 3/8	3/8	3	
40711	L456, T414, T415, T614, T675, T678, T991	112622AA	B	1/2	1	1/2	1/2	4	
18238	Same as 112622AA	112630AA	B	3/4	1	1/2	1/2	4	
34755	Heat conductive compound	107408	-	-	-	-	-	-	

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HONEYWELL

OIL BURNER PROTECTOR RELAY



Provides automatic, nonrecycling control of intermittent ignition oil burner systems. Used in conjunction with Fig. No.'s 9486 or 1058 and a 24v thermostat to switch line voltage to burner motor and ignition transformer. External push button reset after safety shutdown. Includes solid state flame sensing circuit and 24v transformer to power heating control circuit; mounts on standard 4x4" junction box.

Electrical ratings; 45 second models - 7.4 amps @ 120v; 15 & 30 second models - 10.0 amps @ 120 v.

Fig. No.	Mfg. No.	Safety Timing	Thermostat Circuit	Price
10041	R8184G4009	45 seconds	24v	
10042	R8184G4066	15 seconds	24v	
10044	R8184G4074	30 seconds	24v	

SOLENOID SAFETY (DELAYED OIL) VALVES



Designed to prevent noisy and smoky oil burner startup and shutdown, and minimize service problems caused by clogged nozzles and sooted firing components. Provides instantaneous shutoff of fuel flow when the thermostat breaks the burner circuit. Provides 5 to 9 second delay at startup to allow burner fan to reach full operating speed and pump to attain full pressure, assuring complete atomization and adequate combustion air volume.

Designed for use with #2 and lighter fuel oil. Oil flow capacity: 35 pgh; maximum pressure; 300 psi.

Fig. No.	Mfg. No.	Size	Delay	Voltage	Price
10305	V4046A1074	1/8"FPT	5-9 sec.	120	

OIL BURNER PROTECTOR RELAY



For built-in-transformer for cooling controls.

Same functions and specifications as standard models, but includes integral 40VA, 24 volt transformer to provide power for a low voltage cooling control system. "Y" and "G" terminals for compressor and fan relay operation.

Fig. No.	Mfg. No.	Safety Timing	Thermostat Circuit	Price
66926	R8184M1051	45 seconds	24v	

CAD CELL FLAME DETECTOR



Light sensitive cadmium sulfide cell device. Will cause the primary control to shut down the oil burner upon flame failure.

Mounts on burner blast tube or ignition transformer plate. Use with 10041, 10042, 10044 or 66926.

Fig. No.	Mfg. No.	Description	Price
9486	C554A1463	Bulb&holder Ass'y w/ 60" leads, 3 mtg. brackets, oil line adapter	
10358	120320	Replacement cad cell bulb	

If the burner is properly adjusted, cad cell resistance will be in the range of 300 to 1000 ohms when the burner is operating. To ensure continued reliable burner operation, the resistance of the cell should never be above 1600 ohms during the burner run cycle. If cell resistnace is greater than 1600 ohms, the cad cell may need cleaning or adjusting, or the burner flame may need to be adjusted.

COMBINATION CONTROLS

Combination Protector Relay and Hydronic Heating Controller





Immersion type aquastat controller for oil-fired hydronic heating systems with intermittent ignition. Used in combination with a 9486 cad cell flame detector and 24 volt thermostat; provides high limit and low limit/circulator control.

71137/72262 - Direct mount onto 3/4" NPT well, including 1-1/2" jacket insulation thickness. Use for zone valve control or utilize "ZC"/"ZR" terminals for circulator control. Includes well adapter and heat conductive compound.

68867 - Mounts to 4x4" junction box, with remote sensing bulb on 5' armored capillary. Use of zone valve control or utilize "ZC"/"ZR" terminals for circulator zone control. Includes well adapter and heat conductive compound. Electrical rating: 4.4 amps @ 120v.

		SWICHING		ADJUSTABLE RANGE		DIFFERENTIAL			
FIG. NO.	MFG. NO.	HIGH LIMIT	LOW LIMIT	HIGH LIMIT	LOW LIMIT	HIGH LIMIT	LOW LIMIT	MOUNTING	PRICE
71137	R8182D1111	SPST	SPDT	130 to 240°	110 to 220°	10° fixed	10 to 25° adj	direct, horiz	
72262	R8182D1079	SPST	SPDT	130 to 240°	110 to 220°	10° fixed	10 to 25° adj	direct, vertical	
68867	R8182H10170	SPST	SPDT	130 to 240°	110 to 220°	10° fixed	10 to 25° adj	4x4" j-hook	



GOLDLINE

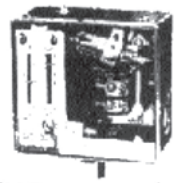
UNIVERSAL TEMPERATURE CONTROL

Single stage electronic temperature control designed to be a direct replacement for outdated and unreliable electromechanical controls. Provides on/off temperature control with single-pole, double-throw relay output. Controlling temperature is the most important part of any HVAC/R system and it provides tight temperature control of +/-1oF from the setpoint temperature. This cotnrol can be mounted up to 1000' from the sensor which allows the installer to position the control in a more accessible and secure area. Take the error out of temperature controlling and give yourself the accuracy you deserve!

APPLICATIONS INCLUDE

Walk-in coolers and freezers
Greenhouses
Radiant floor heating systems
Aquariums
Domestic hot water
Refrigerated and frozen display cases
environmental rooms

Dwyer ALSO AVAILABLE! Mercoid®



HONEYWELL PRESSURE CONTROLS L604A1169

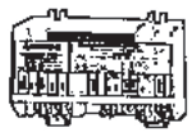
Used as an operating cotnrol or automatic limit for pressure systems such as steam, air, non-combustible gases or non-corrosive fluids. SPDT mercury switch; stainless steel sensing element Connection is 1/4" FPT with syphon loop furnished. Replaces L404A, -B models range 2-15 psig - other ranges available.

Fig. No.	76837



HONEYWELL ZONEVALVES

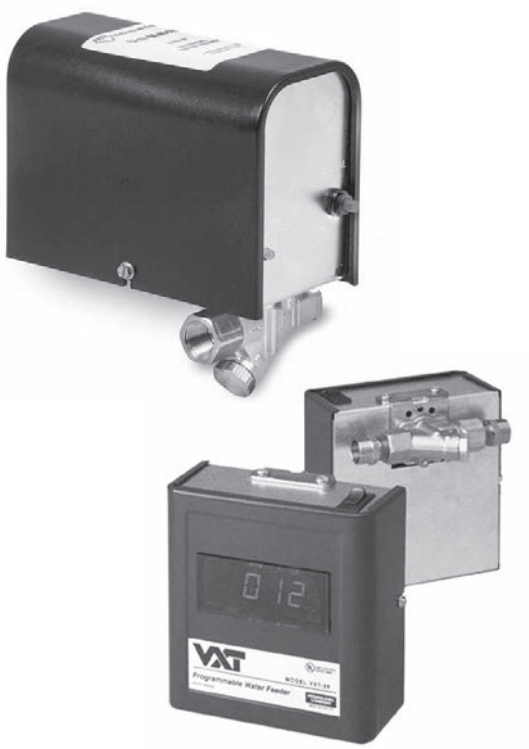
DESCRIPTION	Fig. No.
V8043F 1028 1/2" motorized zone valve	10317
V8043F 1036 3/4" motorized zone valve	10318
V8043F 1051 1" motorized zone valve	10320



PILOT MODULE

Universal intermittent pilot module. S86A00A003 Replaces Honeywell S86, S90, S8600, S8610, Robert Shaw SP715, SP715A, SP735, SP735A, SP735L, Johnson GSA, G60, G65, G67, G600, G770 Gas valves, continuous pilot or intermittent pilot 1/2, 3/4 1" and up. LP gas or natural gas...too many to list!

Fig. No.	50218



WATER FEEDERS FOR STEAM BOILERS

- Universal Compatibility
- Digital Feed Counter (Hydrolevel only)
- Programmable Feed Delay Settings (30 Sec. to 10 Min)
- Programmable Feed Amount Settings (LWCO and 1-5 Gal)
- Manual Feed Button
- 3/8" NPT Connection
- Integral Strainer

FIG. NO.	TYPE
Hydrolevel VXT	
247833	24 Volt
247834	120 Volt
McDonnell Miller Uni-Match	
44478	24 Volt
BBFP, 1/2" CxC Backflow Preventer	
44477	120 Volt

HONEYWELL GAS VALVES

VR8304



DUAL VALVE COMBINATION GAS CONTROL for electronic intermittent pilot ignition systems. Used with S86F, -H; S8600F, -H; S8610 and S90A, -B ignition modules. Replaces Honeywell VR8440, -8402; White-Rodgers 36E36, -38; Robertshaw 7100DER. Solenoid operated valve operates on an off with thermostat call, diaphragm operated valve opens under regulatr control, closes if gas or power supply is interrupted.
MFG. NO.: VR8304M4507
SIZE IPT (inletxoutlet): 3/4 x 3/4"
BTUH CAPACITY RANGE: 30,000 to 415,000
GAS: Natural

Fig. No.	Price
66877	

VR8305



DUAL VALVE COMBINATION GAS CONTROL for electronic hot surface (HSI) and direct spark (DSI) ignition systems. Used with S89C, -E, -F and S87 ignition modules. Replaces Honeywell VR8450, -8405; White-Roodgers 36E36, -38, 36C68; Robertshaw 7200DER. Same valve action and features as VR8304 but without pilot control.
MFG. NO.: VR8305M3506
SIZE IPT (inletxoutlet): 1/2x3/4"
BTUH CAPACITY RANGE: 30,000 to 415,000
GAS: Natural

Fig. No.	Price
82494	

VR8300



COMPACT DUAL VALVE COMBINAITON GAS CONTROL for standing pilot systems. A compact, universal valave withwiede range capacity for use in standing pilot furnaces, boilers, space heating applicances, wall heaters, etc. Meets ANSI safety standars requireing dual-seated (or single-seated with ECO) shutoff. Servo type regulator with screw adjustment; LP conversionkit included.
MFG. NO.: VR8300A4508
SIZE IPT (inletxoutlet): 3/4 x 3/4"
BTUH CAPACITY RANGE: 30,000 to 300,000
GAS: Natural

Fig. No.	Price
50790	

VR8345



UNIVERSAL COMBINATION GAS CONTROL for electronic ignition. This compact, high capacity valve can be used to replace hundres of gas valves used in intermittent pilot, hot surface and direct spark ignition systems. Ideal for service inventory, the VR8345 valve fits even limited space applications such as mobile home and wall furnaces with only a 4" swing radius. Adapter bushings, LP gas covnersion kit and terminal block jumper included.
MFG. NO.: VR8345M4302
SIZE IPT (inletxoutlet): 3/4 x 3/4"
BTUH CAPACITY RANGE: 30,000 to 300,000
GAS: Natural

Fig. No.	Price
82492	

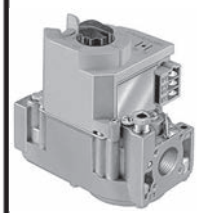
VR8205



DUAL VALVE COMBINATION GAS CONTROL for electronic direct spark (DSI ignition systems. Used with S86d, -C and S89E, -F control modules. Replaces Honeywell VR8450; White-Rodgers 36E36, -38. Solenoid operated vavle opens under regulator control, closes if gas or power supply is interrupted. Meets codes reuquiring dual safety shutoff.
MFG. NO.: VR8205A2024
SIZE IPT (inletxoutlet): 1/2x1/2"
BTUH CAPACITY RANGE: 150,000
GAS: Natural or LP

Fig. No.	Price
82493	

VR8204



DUAL VAVLE COMBINATION GAS CONTROL for intermittent pilot systems. A compact combination control which combines manual valve, two automatic single-stage operators, servo type regulator and pilot fitler, and meets code requirements for dual-seated safety shutoff. Fur use with S86 and S8600 modules, this valve can be used as a direct replacement fo rHoneywell R8440, White-Rodgers 36E36, -38, Robertshaw 7100DER, 700-070 models in spark-to-pilot systems. Compact size and reduced swing radius make the VR8204 an ideal "universal" valve for service truck and parts room inventories. Eletrical rating: 24v AC. Swing radus: 3-5/8"
MFG. NO.: VR8204A2076
SIZE IPT (inletxoutlet): 1/2X1/2"
BTUH CAPACITY RANGE: 150,000
GAS: Natural & LP

Fig. No.	Price
44800	

VR8200



DUAL VALVE COMBINATION GAS CONTROL for standing pilot systems. For use in 24 volt continuous standing pilot equipment. replaces most Honeywell and competitive brand valves up to 130,000 BTUH; widely used by equipment manufacturers as OEM valve. Functions as combination manual valve, dual seated automatic operators, and servo type regulator. Solenoid operated first automatic valve opns on thermostat call for heat, closed when call is satisfied. Diaphragm-operated second automatic valve opens under control of pressure regulator, closes upon interruption of gas or power supply. Features straight-thru design and lite-rite (off -pilot-on) lighting sequence. Electrical rating: 24v AC. Swing radius: 3-5/8"
MFG. NO.: VR8200A2132
SIZE IPT (inletxoutlet): 1/2X1/2"
BTUH CAPACITY: 130,000
GAS: Natural

Fig. No.	Price
49278	

Q314 PILOT BURNER



Non primary, aerated insert orifice type pilot burner. Provides main burner ignition. Use with Z340 thermocouple or, for millivolt appliatons, with Q313 geneerators. Suitable for natural or LP gas (shipped with .018 orifice for naatural gas; and .010" orifice for LP applications).

MFG. NO.	Fig. No.	Price
Q314A6102	44699	
Q314A4586	41437	
Q314A6094	38588	



REPLACEMENT GENERATOR CARTRIDGES for CS 82 powerpile pilot burners.

Fig. No.	Price
35012	

ACCUSTAT LOW VOLTAGE SINGLE STAGE CONTROL



DESCRIPTION:

High efficiency solid state thermotats for low voltage single stage systems. No bimetallic elements are used. Advantages include choice of either pre-set or adjustable mercury sensors, high accuracy, no temperature drift, and tamper-proof design. Built-in locking cover requires a special key.

APPLICATIONS

Ideal for commercial and industrial installations where accurate, tamper-proof control is required. Examples are fast-food stores, restaurants, churches, schools, retail stores, etc.

ACCUTEMP SENSORS:

This ACCUSTAT series uses preset or adjustable snap-in sensors. When temp. reaches the sensor setting, a circuit is completed, activating the solid state circuit within the case. This circuit turns heating and/or cooling system relays ON and OFF as required.

MODEL	# OF SENSORS REQ'D	TEMP SETTINGS	VOLTAGE /LOAD	SWITCHES	FIG. NO. PRICE
LH1	1	1	24-30	Syst Off/On	8723
LH2	2	2	24-30	Syst Lo/Off/Hi	8724

ACCUTEMP SENSORS

The ACCUSTAT series uses preset or adjustable snap-in sensors. When temperature reaches the sensor setting, a circuit is completed, activating the solid state circuit within the case. This circuit turn heating and/or cooling system relays ON and OFFas required.

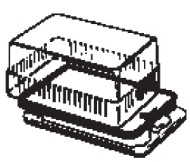
DEGREE	FIG. NO.
64	8752
65	8759
66	8810
68	8817
70	8825
72	8827
74	8831
75	51408
76	43716
78	38811
ADJ	38833

DUFF DIFFERS

WE'LL SHOW YOU HOW ...



THERMOSTAT LOCK BOXES



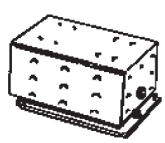
UNIVERSAL series (plastic) thermostat guard. Fits most wall thermometers. Packaged with solid base and ring base. 8.13 x 4.63 x 3.25.

CLEAR PLASTIC

FIG. NO.	PRICE
8999	

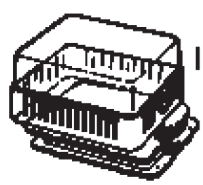
OPAQUE PLASTIC

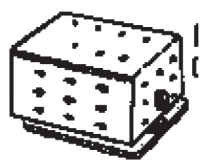
FIG. NO.	PRICE
9001	



UNIVERSAL series (metal) thermostat guard. Inside dimensions : H-7 1/4 x W-5 3/8"x D-3 1/2" Solid base.

FIG. NO.	PRICE
9005	





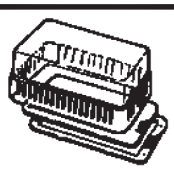
CLASSIC series (plastic) thermostat guard. Packaged with solid base and ring base. Inside dimensions :H-5 1/4 x W-4 5/8" x D-3"

METAL

FIG. NO.	PRICE
8992	

CLEAR PLASTIC

FIG. NO.	PRICE
8964	

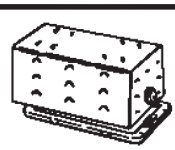


REGAL series (plastic) thermostat guard. Fits most wall thermometers. Packaged with solid base and ring base.

Solid Base: H-6 3/8"xW-3 1/2"xD-3"
Ring Base: H-6 3/8 x W-3 1/2"x D-3 1/4"

Opaque plastic.

FIG. NO.	PRICE
8896	



REGAL series (metal) thermostat guard. Rugged maximum protection. 6.38 x 3.5 x 3

FIG. NO.	PRICE
8904	

HONEYWELL OEM ALSO AVAILABLE!

THERMOSTATIC RADIATOR VALVES



DANFOSS 013G8250
- Operator with valve-mounted sensor and dial built in.

Fig. No.
54078



DANFOSS 013G8252
- Operator with valve-mounted dial and remote sensor. Remote 6' capacity tube

Fig. No.
54025



DANFOSS 013G8562
Operator with combined remote-mounted sensor and dial. Wall mount with 6' capacity tube.

Fig. No.
54088



DANFOSS 013G8564
- Operator with separate remote-mounted sensor and dial. 2x6' capacity tubes

Fig. No.
54089



DANFOSS 013G8240
- Operator with valve-mounted sensor and dial. Built-in tamper-proof.

Fig. No.
54090



DANFOSS 013G8042
- Straight valve body.
- For hot water only.

Fig. No.	Type
54110	1/2" SOLDER
54111	3/4" SOLDER

DANFOSS 013G8013



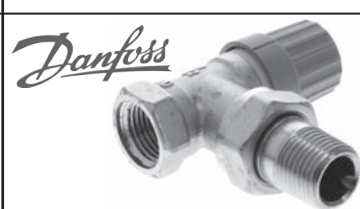
- Side mount angle valve body.
- Hot water and 2 pipe, low pressure steam systems. capacity tubes

Fig. No.	Size
54091	1/2"
54026	3/4"
54075	1"
54092	1-1/4"



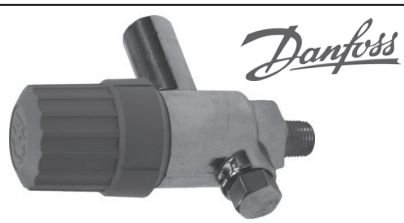
DANFOSS 013G8015
- Straight valve body.
- Hot water and 2 pipe, low pressure steam systems.

Fig. No.	Size
54077	1/2"
50976	3/4"
50975	1"
54094	1-1/4"



DANFOSS 013G8014
- Angle valve body.
- Hot water and 2 pipe low pressure steam systems.

Fig. No.	Size
54096	1/2"
54097	3/4"
54107	1"
54108	1-1/4"



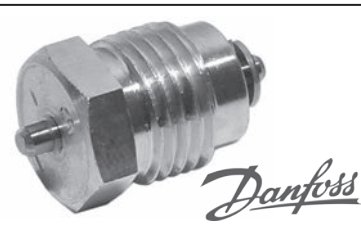
DANFOSS 013G0140
- 1/8" NPT-1-PS with vacuum-breaker.
- For 1" pipe, low pressure steam

Fig. No.
54112

ALSO AVAILABLE: HONEYWELL, TACO AND B&G

DON'T SEE WHAT YOU'RE LOOKING FOR?
CALL OUR HEATING EXPERTS!





DANFOSS 013G0290
- Packing gland

FIG. NO.

Fig. No.
66500

IN-LINE CIRCULATOR PUMPS

THREE-PIECE BOOSTER PUMPS DESIGNED FOR HYDRONIC SYSTEMS

Taco GRUNDFOS Bell & Gossett®



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
7803	B&G	100	1/12	6-3/8"
9540	Taco	110	1/12	6-3/8"
Open Systems, Domestic Water (S/S or Bronze)				
7833	B&G	100B	1/12	6-3/8"
9545	Taco	110B	1/12	6-3/8"
10862	Woods 8S Flange 3/4-2 3/8 (EA)			
10864	Woods 9S Flange 7/8-2 7/8 (EA)			
10866	Woods 10S Flange 1 1/8-3 3/8			



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
7827	B&G	HV	1/6	8-3/4"
44781	Taco	111	1/8	8-3/4"
Open Systems, Domestic Water (S/S or Bronze)				
25249	B&G	HVBNFI	1/6	8-3/4"
—	Taco	111B	1/8	8-3/4"
10864	Woods 9S Flange 7/8-2 7/8 (EA)			
10866	Woods 10S Flange 1 1/8-3 3/8			



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
27390	Taco	112	1/3	6-3/8"
Open Systems, Domestic Water (S/S or Bronze)				
196368	Taco	112B	1/3	6-3/8"



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
33212	B&G	PR	1/6	8-1/2"
47206	Taco	113	1/8	8-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
33213	B&G	PRB	1/6	8-1/2"
241915	Taco	113B	1/8	8-1/2"



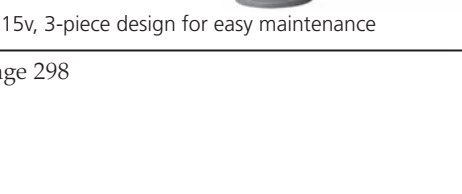
115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
29744	B&G	2"	1/6	8-1/2"
22475	Taco	120	1/6	11"
Open Systems, Domestic Water (S/S or Bronze)				
7834	B&G	2"B	1/6	8-1/2"
107070	Taco	120B	1/6	11"



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
119351	B&G	2-1/2"	1/4	10"
—	Taco	121	1/4	11-1/8"
Open Systems, Domestic Water (S/S or Bronze)				
39107	B&G	2-1/2"B	1/4	10"
—	Taco	121B	1/4	11-1/8"



115v, 3-piece design for easy maintenance

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
227536	B&G	LD3	1/4	10"
—	Taco	122	1/4	11-1/8"
Open Systems, Domestic Water (S/S or Bronze)				
—	B&G	LD3AB	1/4	10"
—	Taco	122B	1/4	11-1/8"

IN-LINE CIRCULATOR PUMPS

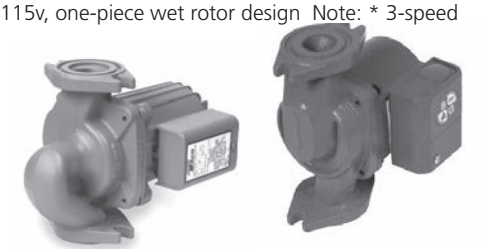
WET ROTOR BOOSTER PUMPS DESIGNED FOR HYDRONIC SYTEMS

GRUNDFOS® Taco Bell & Gossett®



115v, one-piece wet rotor design Note: * 3-speed

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
9536	Taco	007-F5	1/25	6-3/8"
115242	B&G	NRF-22	1/25	6-3/8"
91931	Grundfos	UP15-42FR	1/25	6-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
45458	Taco	007-BF5	1/25	6-3/8"
115330	B&G	NBF-22	1/25	6-3/8"
49124	Grundfos	UPS15-55SFC*	1/12	6-1/2"



115v, one-piece wet rotor design

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
45451	Taco	0010-F3	1/8	6-3/8"
115323	B&G	NRF-33	1/15	6-3/8"
Open Systems, Domestic Water (S/S or Bronze)				
45455	Taco	0010-SF3	1/8	6-3/8"
115333	B&G	NBF-33	1/15	6-3/8"



115v, one-piece wet rotor design

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
48858	Taco	0011-F4	1/8	6-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
48861	Taco	0011-BF4	1/8	6-1/2"



115v, one-piece wet rotor design

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
48859	Taco	0012-F4	1/8	8-1/2"
48860	Taco	0012-F4-1*	1/8	8-1/2"
140424	Grundfos	UP43-44F	1/6	8-1/2"
—	Grundfos	UP50-44F	1/6	8-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
48862	Taco	0012-SF4	1/8	8-1/2"
48863	Taco	0012-SF4-1*	1/8	8-1/2"
262384	Grundfos	UP43-44BF	1/6	8-1/2"

* INDICATES 2" PUMP



115v, one-piece wet rotor design

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
72742	Taco	0013-F3	1/6	6-1/2"
46989	Grundfos	UP26-99F	1/6	6-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
83327	Taco	0010-SF3	1/6	6-1/2"
89886	Grundfos	UP26-99BF	1/6	6-1/2"

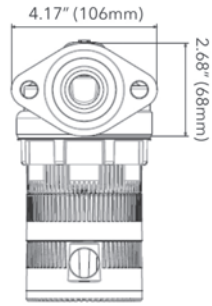


115v, one-piece wet rotor design

Fig.	Brand	Model	HP	F-F dim
Closed Systems (Cast Iron)				
72743	Taco	0014-F1	1/8	6-1/2"
41913	Grundfos	UP26-64F	1/12	6-1/2"
Open Systems, Domestic Water (S/S or Bronze)				
—	Taco	0014-SF1	1/8	6-1/2"

B&G ECOCIRC HEATING AUTO

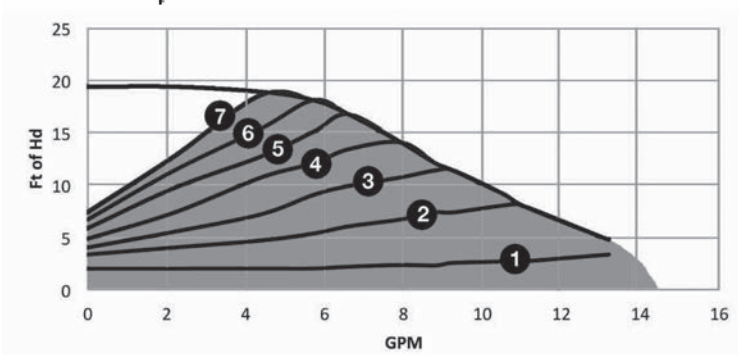
Dimensional Drawings



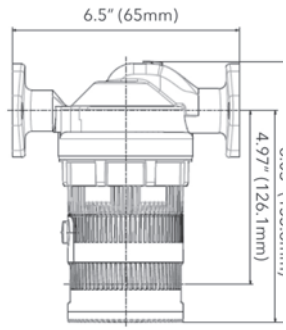
Bell & Gossett®

Available in cast iron only

Pump Curves

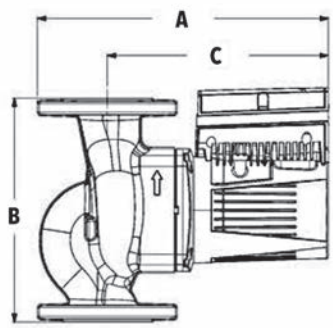


❶ Setting 1
❷ Setting 2
❸ Setting 3
❹ Setting 4
❺ Setting 5
❻ Setting 6
❼ Setting 7



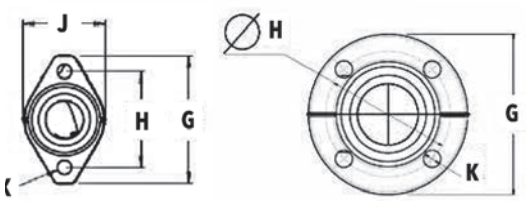
Part Number	Model	Control Mode
6050B2000	ecocirc 19-14 auto	auto – Proportional Pressure

B&G ECOCIRC XL



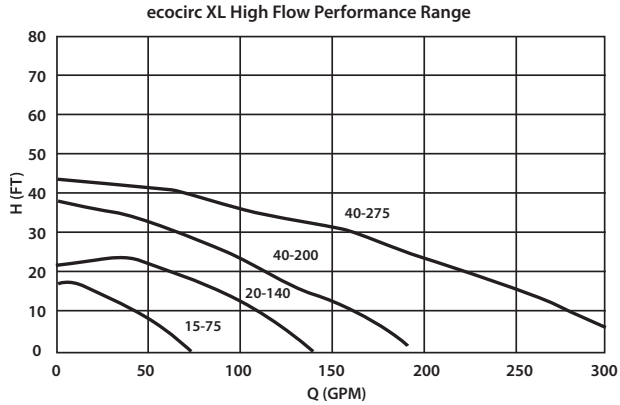
Available in cast iron or Bbronze

Bell & Gossett®

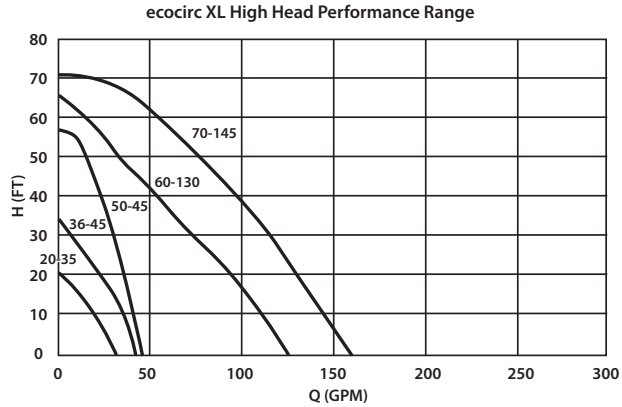


MODEL NO.	MOTOR HP	FLANGE SIZE (NPT)	# OF BOLTS
ecocirc XL 20-35	1/12	3/4, 1, 1-1/4, 1-1/2	2
ecocirc XL 36-45	1/6	3/4, 1, 1-1/4, 1-1/2	2
ecocirc XL 15-75	1/6	2	4
ecocirc XL 55-45	1/2	3/4, 1, 1-1/4, 1-1/2	2
ecocirc XL 20-140	1/2	2	4
ecocirc XL 65-130	1	1, 1-1/4, 1-1/2	2
ecocirc XL 40-200	1	2	4
ecocirc XL 70-145	2	1, 1-1/4, 1-1/2	2
ecocirc XL 40-275	2	3	4

ecocirc XL High Flow Performance Range



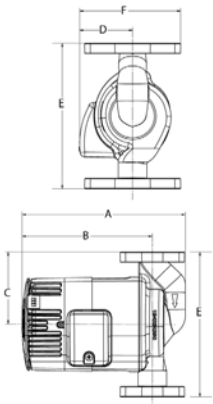
ecocirc XL High Head Performance Range



TACO HEATING BUMBLE BEE

Taco Bumble Bee® High-Efficiency Variable Speed Circulator

The Taco Bumble Bee® (model HEC-2) is a multi-function, variable speed, wet rotor circulator with an ECM, permanent magnet motor. Its high efficiency DC motor reduces power consumption by up to 85% compared to AC permanent split capacitor circulators.



- Max. Operating Pressure: 125 psi
- Max. Flow: 15 gpm
- Max. Shutoff Head: 15 feet
- Electrical Specifications:
  - Voltage: 115-230, 50/60 Hz, single phase
  - Operating power range: 9W - 42W
  - Max. Amp rating: 0.67 / 0.39
- HEC-2 is provided with a cast iron casing and should be used in closed-loop systems only.
- Acceptable for use with water or maximum of 50% water/glycol solution



Available in cast iron only

Model	A	B	C	D	E	F
HEC-2	7-1/8	5-3/4	3-1/4	2-5/16	6-5/16	4-7/16

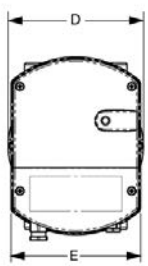
TACO VIRIDIAN

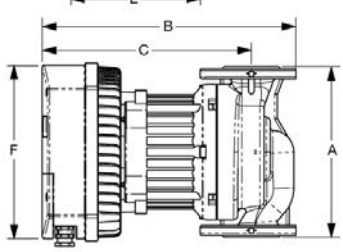
Taco Do your best work. Viridian HIGH EFFICIENCY CIRCULATORS by Taco

The Viridian is versatile. Dial in a flow rate or choose from 6 pressure presets to fit your job. Depending on your selection, the VR1816 is ideal for zoning with circulators and valves, or for use with panel radiators with TRVs.

Unique Features, Too

An LED displays the operating mode and error code diagnostics. The unique Sure Start feature performs automatic unblocking and air purging while the BIO Barrier® protects the pump from system contaminants.





Minimum static inlet pressure at pump suction port (PSI / bar) to avoid cavitation at fluid temperatures

Fluid Temperatures	VR15 & VR20 (PSI / bar)	VR25 & VR30 (PSI / bar)
112°F (50°C)	7.3 / 0.5	4.35 / 0.3
176°F (80°C)	11.6 / 0.8	14.5 / 1.0
230°F (110°C)	20.3 / 1.4	23.2 / 1.6



Model Number	Flange Size (ANSI)	HP	GPM	A	B	C	D	E	F
VR15-1	1-1/2"	0.027 - 0.680	124	9-13/16	15-3/16	12-5/8	7-13/16	7-7/16	10-1/16
VR20-1	2"	0.035 - 1.088	235	11	16-3/4	13-1/4	7-15/16	7-7/16	10-1/16
VR25-1	2-1/2"	0.054 - 1.496	315	13-3/8	17-11/16	14-1/2	8-11/16	7-7/16	10-1/16
VR30-1	3"	0.054 - 2.175	380	14-3/16	19-13/16	14-1/2	9-1/4	7-7/16	10-1/16

CIRCULATOR PUMPS

GRUNDFOS ALPHA

With the Grundfos ALPHA, you can stop worrying about complicated pump settings. Simply install the pump and leave it on the factory setting AUTOADAPT. The ALPHA will automatical ly analyze the heating system, find the optimum setting and continue to adjust its operation to changes in demand. With its permanent magnet motor design, this energy efficient circulator will reduce power consumption up to 80 %. Ensuring lowest possible energy consumption without sacrificing comfort.



The Grundfos ALPHA is suitable for

- Systems with constant head requirements
- Systems with variable head and or flow requirements
- Fixed speed requirements

Features and benefits

- Compact permanent magnet maintenance-free wet rotor technology
- Nut capture flanges
- Available with integrated terminal box or line cord option
- Simple one button hydraulic selection
- Seven hydraulic selections available
  - ◆ Three fixed speeds options
  - ◆ Three constant pressure options
  - ◆ AUTOADAPT
- Real time LED display:
  - ◆ Watts indicator
  - ◆ GPM flow estimation indicator
  - ◆ Hydraulic mode selection
- Integrated check valve

GRUNDFOS

GRUNDFOS MAGNA3



GRUNDFOS

RELIABLE INNOVATION

The MAGNA3 is a circulator pump based on the tried and tested MAGNA technology and Grundfos industry-leading experience with electronic pumps. The permanent magnet motor, AUTO*ADAPT* function and integrated frequency converter is still part of the MAGNA package, but adds some additional, groundbreaking new technologies. The result is a cutting-edge piece of intelligent technology that retains the unrivalled Grundfos reliability.

FULL RANGE MEANS PERFECT FIT

The extended MAGNA3 range with maximum heads of 60ft and maximum flows of 550 GPM features more than 25 single and twin pumps in cast iron or stainless steel. This means that it is much easier to right-size the MAGNA3 for any duty point and cut both purchase and energy costs in the process.

MAGNA IS ALWAYS IMPROVING

Grundfos continues to set the pace for circulator pumps and is the obvious choice if you are looking for the most energy-efficient solution and fastest return on investment. To achieve the groundbreaking MAGNA3 energy efficiency, Grundfos further optimized pump hydraulics and incorporated Grundfos patented differential pressure sensor, while switching to a composite rotor can and a compact stator that minimizes losses in the motor. The result is a highly efficient and future-proof circulator exceeding even future energy standards.

BUILT FOR BUILDING MANAGEMENT

Optional CIM modules support all common fieldbus standards, making MAGNA3 the perfect addition to any BMS system.

HEAT ENERGY METER

The MAGNA 3 features a built-in heat energy meter that can monitor system heat energy distribution and consumption in order to avoid excessive energy bills caused by system imbalances. The heat energy meter has an accuracy of +/-1% to +/-10%, depending on the duty point, and will save you the cost of installing a separate energy metering device within your system.

NO PUMP THROTTLING VALVES

The new FLOW LIMIT function and FLOW ADAPT control mode allow you to set a maximum flow limit for your MAGNA3 pump. The pump continuously monitors the flow rate to ensure the desired maximum flow is not exceeded. This eliminates the need for pump throttling valves and hereby improves the system's overall energy-efficiency. To meet system flow limitations, the pump will adjust its performance to a given setpoint, which dramatically cuts energy consumption.

WIRELESS COMMUNICATION BETWEEN TWO SINGLE PUMPS

MAGNA3 is supplied with wireless technology which enables it to connect to another MAGNA 3 pump. Using the built-in wizard, connection to a parallel coupled pump is quick and easily obtained. The two pumps are now controlled jointly in either cascade mode, alternating mode or pump back-up mode.

ACCESSORIES



Grundfos GO
Grundfos GO gives you intuitive handheld pump control and full access to the Grundfos online tools on the go.



CIM modules
For connection to BMS, CIM modules ith the following field-bus standards can be added: LON , Profibus, Modbus, SMS/GS M/GPRS and BACnet. In addition, the GEN IBus is also available.



Insulation shells
for cooling applications Insulation shells that prevent condensation and corrosion in air conditioning and ground source heat pump systems.

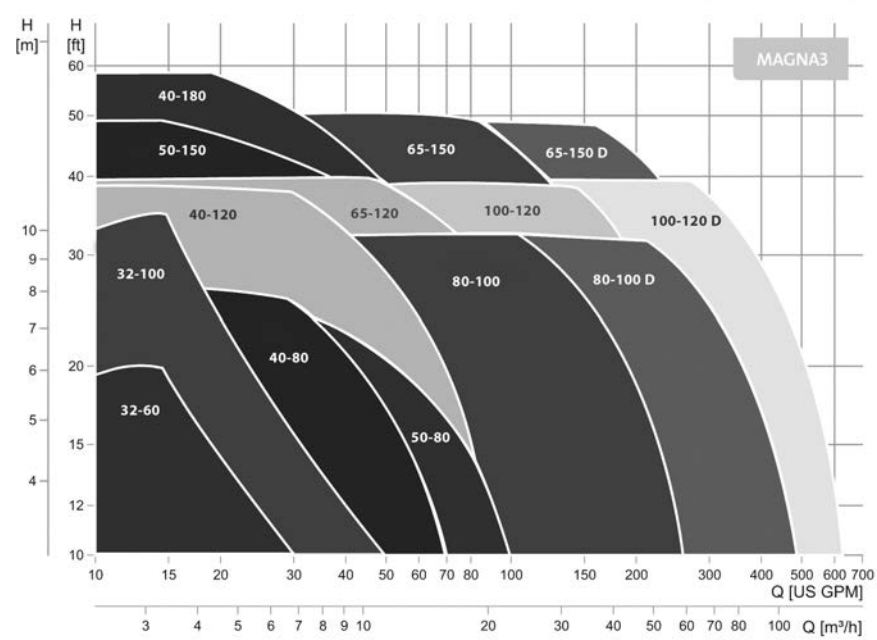
GRUNDFOS MAGNA3



Pump type	Port-to-port length (in)	Single pump, cast iron 115V	Single pump, cast iron 208-230V	Single pump, stainless 115V	Single pump, stainless 208-230V	Twin pump, cast iron 208-230V
MAGN A3 32-60 F	6-1/2″	98126820	98126820	98126822	98126822	—
MAGNA332-100F	6-1/2″	98126824	98126824	98126826	98126826	—
MAGNA340-80F	8-1/2″	98126800	98126828	98126802	98126830	—
MAGNA340-120F	8-1/2″	98126804	98126832	98126806	98126834	—
MAGNA340-180F	8-1/2″	98126808	98126836	98126810	98126838	—
MAGNA350-80F	9-1/2″	98126812	98126840	98126814	98126842	—
MAGNA350-150F	11″	981268016	98126844	98126818	98126846	—
MAGNA365-120F	13-1/2″	98124696	98126848	98124702	98126850	—
MAGNA365-150F	13-1/2″	—	98126852	—	98126854	98126863
MAGNA380-100F	14-1/4″	—	98126856	—	98126858	98126864
MAGNA3100-120F	17-3/4″	—	98126860	—	98126862	98126864

Available in cast iron only

PERFORMANCE RANGE



GRUNDFOS®

CIRCULATOR PUMP REPLACEMENT PARTS

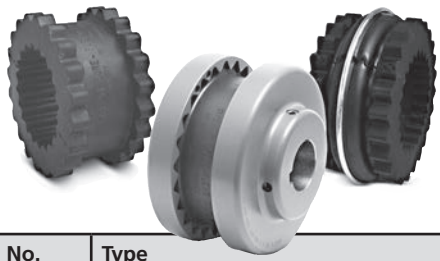


Fig. No.	Type
10821	Woods 3J Flange 3/8-7/8 (EA)
10823	Woods 4J Flange 1/2-1 (EA)
10828	Woods 5J Flange 1/2-1 1/8 (EA)
10830	Woods 5S Flange 1/2-1 1/4 (EA)
10834	Woods 6J Flange 5/8-1 3/8 (EA)
10836	Woods 6S Flange 5/8-1 7/8 (EA)
10860	Woods 7S Flange 5/8-1 7/8 (EA)
10862	Woods 8S Flange 3/4-2 3/8 (EA)
10864	Woods 9S Flange 7/8-2 7/8 (EA)
10866	Woods 10S Flange 1 1/8-3 3/8

Woods/Lovejoy Sure-Flex Couplers & Sleeves

Fits all major manufacturers' pumps, including Taco, B&G, Thrush, Paco, Armstrong & Aurora

Fig. No.	Type
41440	Woods 3JE Sure-Flex Sleeve
41441	Woods 4JE Sure-Flex Sleeve
41442	Woods 4E Sure-Flex Sleeve
41443	Woods 5JE Sure-Flex Sleeve
41444	Woods 5E Sure-Flex Sleeve
41445	Woods 6JE Sure-Flex Sleeve
260688	Woods 6JES Sure-Flex Sleeve
41446	Woods 6E Sure-Flex Sleeve
41447	Woods 7JE Sure-Flex Sleeve
41448	Woods 7E Sure-Flex Sleeve
41449	Woods 8JE Sure-Flex Sleeve
41450	Woods 8E Sure-Flex Sleeve
41451	Woods 9JE Sure-Flex Sleeve
41452	Woods 9E Sure-Flex Sleeve
41453	Woods 10JE Sure-Flex Sleeve
41454	Woods 10E Sure-Flex Sleeve

Coupler for Taco 110

Fig. No.
40081



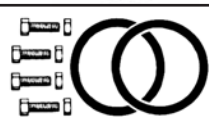
Zoom-Spout

Fig. No.
8148



Bolts and Gaskets

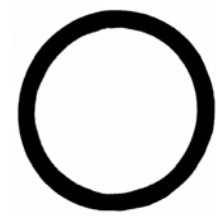
Fig. No.
502671



Circulator Gaskets



SMOOTH RED RUBBER

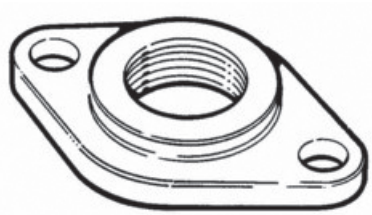


BLACK RING STYLE

Fig. No.	Description	
19142 8170	Smooth red rubber Black ring style	B&G 100, NRF22, PR, 60 1AA, 60 1-1/4AA; Taco 007, 110; Grundfos UP15; Armstrong S-25, H-41
8174	Black ring style	B&G 1 AB, 1-1/4 AB, 1-1/2 IB, 1-1/2 AB, HV, 60 1-1/2 AA, 60 1-1/2A; Taco 0012; Armstrong S-34, H-32; Grundfos UP43-44
8183	Black ring style	B&G 2", 60-14, 60-18, 60-21; Taco 0012 2"; Armstrong H-54, H-66, H-68
8141	Black ring style	B&G 2-1/2"", LD3, HD3, PD35, PD37, PD39; Taco 121; Armstrong H-32, S-45, H-55, S-57, S-69

Circulator Flanges

Size	B&G* Fig. No.	Taco Fig. No.	Grundfos Fig. No.
Cast iron			
3/4"	7839	9546	41247
1"	40103	9547	41248
1-1/4"	40104	9548	41920
1-1/2"	40105	9549	41249
S/S or Bronze			
3/4"	7846	9550	52669
1"	40108	9551	41251
1-1/4"	40109	9552	--
1-1/2"	40110	9553	41250
* B&G flanges do not include bolts (Fig. No. 50627)			



DUFF TIP:

Each manufacturers' flanges & bolts are interchangeable with each other

B&G HV Flanges (fits other mfrs.)

Fig. No.	Type
48528	1" Cast Iron pair
40106	1-1/4" Cast Iron pair
40107	1-1/2" Cast Iron pair
40111	1" Bronze pair
40112	1-1/4" Bronze pair
40113	1-1/2" Bronze pair

B&G 2" Flanges (fits other mfrs.)

Fig. No.	Type
122897	2" Bronze pair

HEATING ACCESSORIES



Taco Zone Sentry Zone (ESP) Valve

- Uses up to 93% less energy than other commonly installed zone valves
- Up to 12 valves on (1) 40VA transformer
- Multi function LED assists with troubleshooting
- Bidirectional flow (you can't install the valve backwards)
- The actuator mounts on the valve in either direction
- 125 PSI shut-off pressure with industry leading Cv's
- Quick release actuator mounting clip
- Manual override button
- Positional indicator shows the ball valve's actual position

Fig. No.	Type
132940	1/2" complete valve
132939	3/4" complete valve
—	1" complete valve
—	3/4" Press Connection complete valve
Three-way valve models also available 196613 Replacement head only	



Taco Heat Motor (Gold / 570 Series) Zone Valve

- Proven Performance – Millions in Use. Taco Zone Valves are the Industry's Top Choice for Consistent Performance.
- Rugged Dependability
- Silent Operation
- Twist Off Head
- Bellows or Globe Valve Construction Ensures Positive Shut-off and Leak Proof Operation
- Manual Open (Bypass) Lever
- 24 VAC Powered with Isolated End Switch all valve's actual position

Fig. No.	Type
44780	1/2" complete valve
9554	3/4" complete valve
9555	1" complete valve
15384	1-1/4" complete valve
54280	3/4" complete valve (three-way)
Three-way valve models in other sizes also available	
9568	Replacement head only
38921	Valve & seat repair kit

WE ALSO CARRY ZONE VALVES MADE BY THESE MANUFACTURERS:

GRUNDFOS · Erie · Honeywell · Bell & Gossett







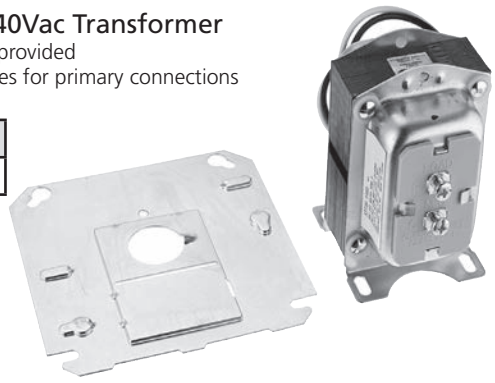
Fig. No.	Type
10318	3/4" complete valve
10320	1" complete valve
51047	Replacement head only



Honeywell 24V 40Vac Transformer

- Override protection provided
- Color-coded leadwires for primary connections

Fig. No.
73515



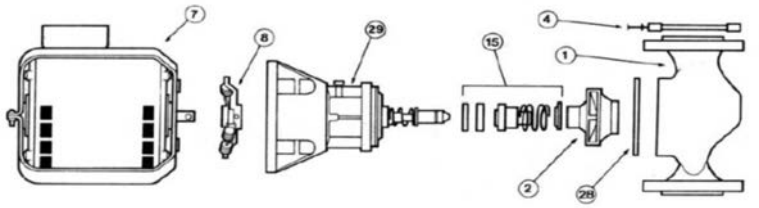
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OVER 65 YEARS OF SERVICE



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THREE-PIECE CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

MODEL NUMBER			
B&G 75-100-150		ARMSTRONG 5-25 STD/BF/AB	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/12 hp Motor	111034	805316-010
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	HEAT 118844	810119-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	DOMESTIC 189034	810119-001
2	Bronze Impeller	118431	812961-041
2	Steel Impeller	118840	812961-011
2	Noryl Impeller	189132	812961-011
8	Coupler	189110/118705	806026-001
28	Body Gasket	P04080	104442-000
4	Flange Gasket	118368	805176-000*
4	Flange Gasket Kit	ARMSTRONG ONLY	816653-000
15	Seal Kit	118681	816706-021
1	Bronze Body	118413	805482-041
1	Cast Iron Body	118339	805482-011

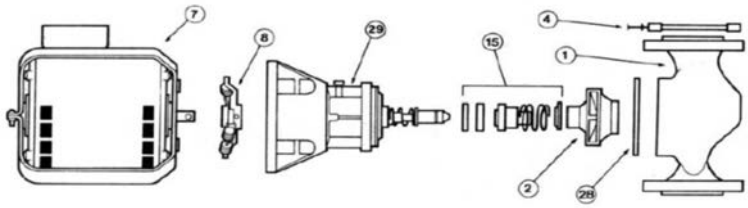
Note: *Gasket kit contains 2 – 116653-000 Gaskets and 2 – 105176-000 Gaskets.
For Flanges: See Flanges cross reference sheet.

MODEL NUMBER			
B&G 1 1/2" (Discontinued 12/76)		ARMSTRONG 5-34 STD/BF/AB	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/6 hp Motor	111036, 111031	817025-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189101	810119-003
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189103	810119-003
2	Bronze Impeller	N/A	816322-042
2	Steel Impeller	N/A	816322-012
2	Noryl Impeller	118435/118666	806331-111
8	Coupler	118705/189110	806026-001
28	Body Gasket	P04890	106049-000
4	Flange Gasket Prior 1967	118373	804034-000
15	Seal Kit	118681	816706-021
1	Bronze Body	N/A	816402-041
1	Cast Iron Body	N/A	816402-011

MODEL NUMBER			
B&G 2" (Mftd. Prior to 7/76, Date Code GT)		ARMSTRONG 5-35 BF/AB	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/6 hp Motor	111036/111031	817025-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189100	810119-003
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189103	810119-003
2	Bronze Impeller	118436	816556-041
2	Steel Impeller	118668	816556-011
8	Coupler	118705/189110	806026-001
28	Body Gasket	P04890	106049-000
4	Flange Gasket Prior 1967	118065	805209-000
15	Seal Kit	118681	816706-021
1	Bronze Body	N/A	816327-041
1	Cast Iron Body	N/A	816327-011

For Flanges: See Flanges cross reference sheet

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

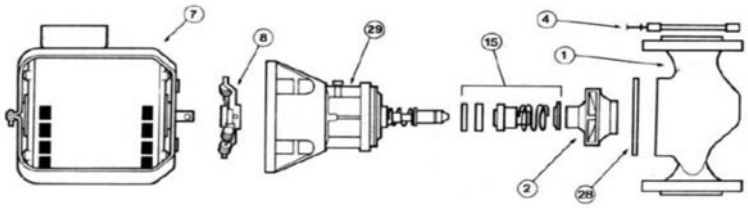
MODEL NUMBER				
B&G HV		ARMSTRONG H-32 BF/AB		
ITEM NO	PART DESCRIPTION	PART NUMBER B&G BEFORE 4/76	PART NUMBER B&G AFTER 4/76	ARMSTRONG
7	1/6 hp Motor	111036/111031	111061*	817025-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189101/189102	189120/189121/189122/ 189129/189131/189165*	810119-003
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189103	189120/189121/189122/ 189129/189131/189165*	810119-003
2	Bronze Impeller	118436	118436	816322-041
2	Steel Impeller	118668	118668	816322-111
2	Noryl Impeller	N/A	189128LF*	816322-111
8	Coupler	118705/189110	118705/189110	806026-001
28	Body Gasket	P04890	P04890	106049-000
4	Flange Gasket Prior 1967	118373	118373	804034-000
15	Seal Kit	118681	118681	816706-021
1	Bronze Body	118642	N/A	816402-041
1	Cast Iron Body	118641	N/A	816402-011

Note: * is not interchangeable with Armstrong parts for this chart

MODEL NUMBER			
B&G 2" (MFTD. PRIOR TO 7/76, DATE CODE DT)		ARMSTRONG (5-35) FOR B&G PUMPS ONLY	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/6 hp Motor	111061	817025-005
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189120, 21, 22, 29	816023-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189131	816023-001
2	Bronze Impeller	189128	N/A
2	Steel Impeller	P07792	N/A
2	Noryl Impeller	N/A	N/A
8	Coupler	118705/189110	806026-001
28	Body Gasket	P04890	106049-000
4	Flange Gasket Prior 1967	118065	805209-000
15	Seal Kit	118681	816706-021
1	Bronze Body	189127	N/A
1	Cast Iron Body	189126	N/A

MODEL NUMBER			
B&G 2 1/2"		ARMSTRONG H-32 BF/AB 2 1/2" FLANGE	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/4 hp Motor	111040	817025-007
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189105	816027-002
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	118447/189106	816027-002
2	Bronze Impeller	118440	816305-058
2	Steel Impeller	118676	816305-028
2	Noryl Impeller	N/A	816305-328
8	Coupler	118723	806168-001
28	Body Gasket	P05800	106050-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P07610	805484-041
1	Cast Iron Body	118644	805484-011

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

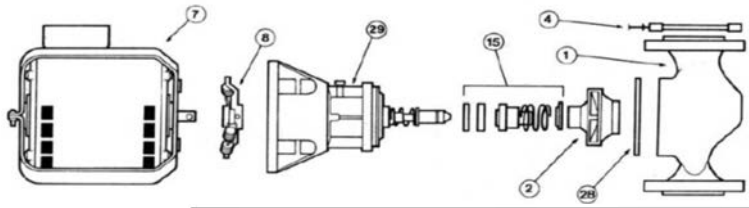
Bell & Gossett®

MODEL NUMBER			
	B&G LD3	**ARMSTRONG S-45** 3" FLANGE	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/4 hp Motor	111040	817025-007
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189105	816027-002
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	118447/189106	816027-002
2	Bronze Impeller	118440	816305-058
2	Steel Impeller	118676	816305-028
2	Noryl Impeller	N/A	816305-328
8	Coupler	118723	806168-001
28	Body Gasket	P05800	106050-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P07610	805484-041
1	Cast Iron Body	118644	805484-011

MODEL NUMBER			
	B&G HD3	**ARMSTRONG S-46**	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/3 hp Motor	111042	817025-013
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189105	816027-002
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	118447/189106	816027-002
2	Bronze Impeller	118439	816305-055
2	Steel Impeller	118675	816305-025
2	Noryl Impeller	N/A	816305-328
8	Coupler	118723	806168-001
28	Body Gasket	P05800	106050-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P07610	805484-041
1	Cast Iron Body	118644	805484-011

MODEL NUMBER			
	B&G 1 PR	**ARMSTRONG H-41 BF/AB**	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/6 hp Motor	111036-111031	817025-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	189105	816027-002
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	118447/189106	816027-002
2	Bronze Impeller	118612	816301-055
2	Steel Impeller	118830	816301-025
2	Noryl Impeller	N/A	816301-325
8	Coupler	118705-189110	806026-001
28	Body Gasket	P05800	106050-000
4	Flange Gasket	118368	805176-000
15	Seal Kit	118681	816704-021
1	Bronze Body	P07570	811240-041
1	Cast Iron Body	118637	811240-011

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

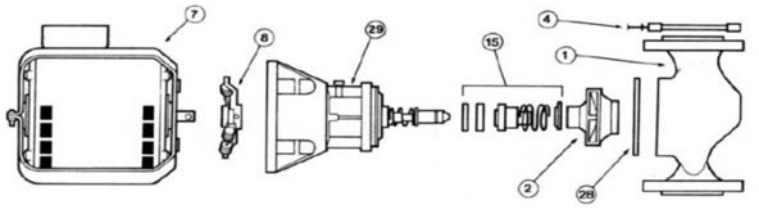
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MODEL NUMBER			
B&G PD-35		**ARMSTRONG S-55** (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/2 hp Motor 1PH/60/115/230	111044	811757-001
7	1/2 hp Motor 3PH/60/208/230/460	111046	811757-020
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	118627	816304-051
2	Steel Impeller	118630	816304-021
2	Noryl Impeller	N/A	816304-321
8	Coupler 1/2" X 5/8"	118709	806137-000
8	Coupler 1/2" X 3/4"	118708	806140-000
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P09290	804133-041
1	Cast Iron Body	118449	804133-011

MODEL NUMBER			
B&G PD-37		**ARMSTRONG S-57** (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/2 hp Motor 1PH/60/115/230	111047	811757-002
7	1/2 hp Motor 3PH/60/208/230/460	111049	811757-024
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	118626	816304-047
2	Steel Impeller	118629	816304-027
2	Noryl Impeller	N/A	816304-317
8	Coupler 1/2" X 5/8"	118709	806137-000
8	Coupler 1/2" X 3/4"	118708	806140-000
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P09290	804133-041
1	Cast Iron Body	118449	804133-011

MODEL NUMBER			
B&G 601-(old), 60-11 (new)		**ARMSTRONG H-51** (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/4 hp Motor 1PH/60/115/230	111040	816141-001
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	186359/186360	816304-049
2	Steel Impeller	186441	816302-019
2	Noryl Impeller	N/A	816302-319
8	Coupler	118473	807436-000
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118368	805176-000
15	Seal Kit	118681	816706-021
1	Bronze Body	186385	816337-041
1	Cast Iron Body	186384	816337-011

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

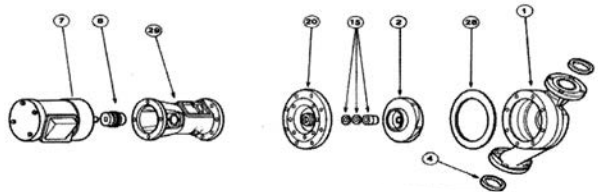
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MODEL NUMBER			
B&G 60-2 (old)		ARMSTRONG H-52 BF Single Phase (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/3 hp Motor 1PH/60/115/230	169038	816141-002
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	186359	816302-047
2	Steel Impeller	186441	816302-017
2	Noryl Impeller	N/A	816302-317
8	Coupler	118473	807436-000
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118368	805176-000
15	Seal Kit	118681	816706-021
1	Bronze Body	N/A	816337-041
1	Cast Iron Body	186386	816337-011

MODEL NUMBER			
B&G 60-3 (old), 60-13 (new)		ARMSTRONG H-52 BF Single Phase (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/2 hp Motor 1PH/60/115/230	111044	811757-001
7	1/2 hp Motor 3PH/60/208/230/460	111046	831011-083* or 811757-024
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	186368	816303-047
2	Steel Impeller	P61010	816303-017
2	Noryl Impeller	N/A	816303-317
8	Coupler	118709	806137-000
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118368	805176-000
15	Seal Kit	118681	816706-021
1	Bronze Body	N/A	816337-041
1	Cast Iron Body	186386	816337-011

MODEL NUMBER			
B&G 601 (old), 60-11 (new)		ARMSTRONG H-54 BF & AB (STANDARD CONSTRUCTION IS BRONZED FITTED)	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	3/4 hp Motor 1PH/60/115/230	111047	811757-002
7	3/4 hp Motor 1PH/60/115/230	111049	831011-083* or 811757-024
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186863	816032-000
29	Universal Seal Bearing Assembly (w/Noryl Impeller)	186864	816032-000
2	Bronze Impeller	118626	816304-047
2	Steel Impeller	118629	816304-017
2	Noryl Impeller	N/A	816304-317
8	Coupler	118709	806137-00
28	Body Gasket	P57410	106158-000
4	Flange Gasket	118378	816117-000
15	Seal Kit	118681	816706-021
1	Bronze Body	P57200	816338-041
1	Cast Iron Body	186392	816338-011

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

MODEL NUMBER			
B&G PD-39 (Mftd prior to 10/77, date coded KU)		ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 hp Motor 1PH/60/115/230	111050	811757-007
7	1 hp Motor 3PH/60/208/230/460	111051	811757-028
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	118453	816311-041
8	Coupler 5/8" x 1/2"	186410	821734-000
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	186449	810120-009

MODEL NUMBER			
B&G PD-39 (Mftd prior to 10/77 or after, date coded KU)		ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 hp Motor 1PH/60/115/230	111050	811757-007
7	1 hp Motor 3PH/60/208/230/460	111051	811757-028
29	Seal Bearing Assembly (Std./B.F.)	185260	816133-000**
29	Seal Bearing Assembly (A, B)	185262	816134-000**
2	Bronze Impeller	118453	816311-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118129	805201-000
15	Seal Kit	186449	810120-009

MODEL NUMBER			
B&G 60-5 (old), 60-15 (new) (Mftd prior to 10/77 or after, date coded KU)		ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1/2 hp Motor 1PH/60/115/230	111044	811757-001
7	1/2 hp Motor 3PH/60/208/230/460	111046	811757-020
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	P57445	816309-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

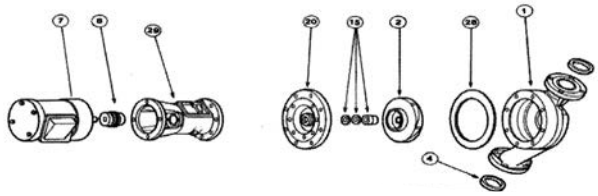
**NOTES: Use the B&G Impeller (with presure balance holes) with these bearing assemblies.

These Bearing Assemblies include the following Cover Plates and are suplied with Part 817607-001

Seal Kit and Body Gasket: #20 for STD. & B.F. 816347-011

#20 for A. B. 816347-041

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

MODEL NUMBER			
B&G 60-6 (old), 60-16 (new) (Mftd prior to 10/77 date coded KU)		**ARMSTRONG** No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	3/4 hp Motor 1PH/60/115/230	111047	811757-002
7	3/4 hp Motor 3PH/60/208/230/460	111049	811757-024
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	P57445	816309-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

MODEL NUMBER			
B&G 60-7 (old), 60-17 (new) (Mftd prior to 10/77 date coded KU)		**ARMSTRONG** No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 hp Motor 1PH/60/115/230	111050	811757-007
7	1 hp Motor 3PH/60/208/230/460	111051	811757-028
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	P57445	816309-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

MODEL NUMBER			
B&G 60-9 (old), 60-19 (new) (Mftd prior to 10/77 date coded KU)		**ARMSTRONG** No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 hp Motor 1PH/60/115/230	111050	811757-007
7	1 hp Motor 3PH/60/208/230/460	111051	811757-028
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	P57450	816310-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	816117-000
15	Seal Kit	186499	810120-009

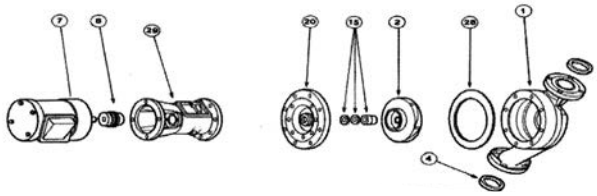
**NOTES: Use the B&G Impeller (with presure balance holes) with these bearing assemblies.

These Bearing Assemblies include the following Cover Plates and are suplied with Part 817607-001

Seal Kit and Body Gasket: #20 for STD. & B.F. 816347-011

#20 for A. B. 816347-041

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

MODEL NUMBER			
B&G 60-10 (old), 60-20 (new) (Mftd prior to 10/77 date coded KU)		ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1-1/2 hp Motor 1PH/60/115/230	169005	816678-062
7	1-1/2 hp Motor 3PH/60/208/230/460	169091/169092	816678-069
29	Seal Bearing Assembly (Std./B.F.)	185232	816133-000**
29	Seal Bearing Assembly (A, B)	185234	816134-000**
2	Bronze Impeller	P57450	816310-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-00
15	Seal Kit	186499	810120-009

MODEL NUMBER			
B&G 60-6 (old), 60-16 (new) (Mftd prior to 10/77 or after date coded KU)		ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	3/4 hp Motor 1PH/60/115/230	111047	811757-002
7	3/4 hp Motor 3PH/60/208/230/460	111049	811757-024
29	Seal Bearing Assembly (Std./B.F.)	185260	816133-000**
29	Seal Bearing Assembly (A, B)	185262	816134-000**
2	Bronze Impeller	P57445	816309-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

MODEL NUMBER			
B&G 60-7 (old), 60-17 (new) (Mftd prior to 10/77 or after date coded KU)		ARMSTRONG ARMSTRONG No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 hp Motor 1PH/60/115/230	111050	811757-007
7	1 hp Motor 3PH/60/208/230/460	111051	811757-028
29	Seal Bearing Assembly (Std./B.F.)	185260	816133-000**
29	Seal Bearing Assembly (A, B)	185262	816134-000**
2	Bronze Impeller	P57445	816309-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

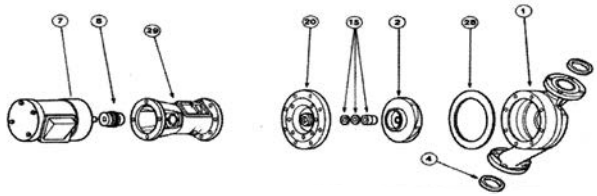
**NOTES: Use the B&G Impeller (with presure balance holes) with these bearing assemblies.

These Bearing Assemblies include the following Cover Plates and are suplied with Part 817607-001

Seal Kit and Body Gasket: #20 for STD. & B.F. 816347-011

#20 for A. B. 816347-041

CIRCULATOR PARTS — Cross Reference



ARMSTRONG

Bell & Gossett®

MODEL NUMBER			
	B&G 60-10 (old), 60-10 (new) (Mftd prior to 10/77 or after date coded KU)	**ARMSTRONG** No Equivalent	
ITEM NO	PART DESCRIPTION	PART NUMBER B&G	ARMSTRONG
7	1 1/2 hp Motor 1PH/60/115/230	169005	816678-062
7	1-1/2 hp Motor 3PH/60/208/230/460	169091/169092 111052	816678-069
29	Seal Bearing Assembly (Std./B.F.)	185260	816133-000**
29	Seal Bearing Assembly (A, B)	185262	816134-000**
2	Bronze Impeller	P57450	816310-041
8	Coupler 5/8" x 1/2"	186410	810120-008
8	Coupler 5/8" x 1/2"	118476/P77265	816665-000
28	Body Gasket	P57700	106592-000
4	Flange Gasket	118373	804034-000
15	Seal Kit	186499	810120-009

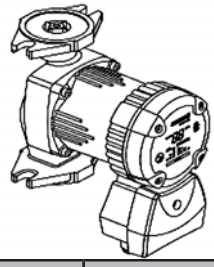
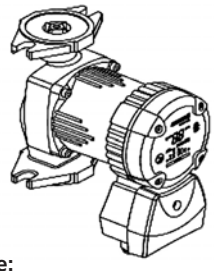
**NOTES: Use the B&G Impeller (with presure balance holes) with these bearing assemblies.

These Bearing Assemblies include the following Cover Plates and are suplied with Part 817607-001

Seal Kit and Body Gasket: #20 for STD. & B.F. 816347-011

#20 for A. B. 816347-041

WET ROTOR CIRCULATORS CROSS REFERENCE CHART

MODELS	ARMSTRONG	SPEED	B&G	GRUNDFOS	TACO
		VS3	Ecocirc Auto/Vario	ALPHA 15-55F/F-LC ALPHA 15-55FR/FR-LC2	Bumble Bee (HEC-2)
CAST IRON	Compass* 180203-606	1	—	UPS 15-42F S1 UPS15-58FC S1	—
		2	NRF-25 S11 NRF-9F/LW2	UPS 15-42F S1 UPS15-58FC S1	005-F2-3-IFC2 006-F4/-F7-IFC 007-F5-5/-8-IFC2 00R/0015-F6I IFC/- MSF2-1 IFC S1
		3	NRF-222 NRF-25 S21	UP 14-42F UPS15-42F S3 UPS 15-58FC S3 UPS 26-99FC S1 UPS 43-44FC S1	008-F6-I-IFC 00R-F6-I-IFC 00R/0015-MSF2-1 IFC S2 & S3
		VS3	—	ALPHA 15-55SF/SF-LC	—
STAINLESS STEEL	Compass* 180203-607	1	—	—	003-SC4-1/FC
		2	NBF/SSF-9U/LW1 NBR/SSF-12U/LW1 NBR/SSF-12F/LW2 NBF-25 S1	UP 15-118BUC 5/71 UP15-29SU1 UP 15-35SUC UPS 15-35SUC S21 UPS 15-35SFC S1 & S2 UP 15-18SF UPS 15-55SFC S12	005-BF2/-I-IFC2 005-SF2/-IFC2 006-BC4-1 006-B7-IFC 006–SC4-1 006–SC7–1FC 007-BF5/-I-IFC2 007-SF5/-IFC2
		3	NBF/SSF-222 NBF-25 S21	UPS 15-35SFCS3 UPS 15-55SFC S2 & S32 UP 15-42SF UP 25-64SF UPS 26-99BFC S1 UPS 43-44BFC S1	008-BC6 008-BC6-IFC 008-SF6/-IFC2 00R/0015–SF6–IFC 00R/0015–SF6–1–IFC2

***Note:**
1 Dim. & conn. may vary
2 Flg. orientation may vary
3 Variable spd op mde



SPIRALINK PERMANENT REPLACEMENT COUPLING

for B&G, Theo and Armstrong pumps.

- Single Retrofit elminates future coupling replacement
- Easy Installation reduces labor hours and down-time
- Superior Flexibility extends pump life by absorbing torque load on bearings and seals
- Model Versatility reduces coupler inventory up tp 70%

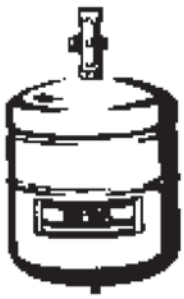
Spiralink™

B&G	Armstng	HP	Rot	SHAFT	B&G	Armstrong	FIG. NO.	PRICE
75 100 125 150	5-25	1 1/2			118705 OR 189110	806026		
1-1/2"	5-34							
2"	5-35	1/6						
2 1/2"			CCW	1/2 X 1/2	118473 OR			
LD3	5-45	1/4			118723	806168	46960	
HD3	S-46	1/3						
HV 1"					118705 OR			
HV 1-1/4"					189110	806026		
HV 1-1/2"	H-32	1/6						
1'PR	H-41				118473,			
PD-35	5-55	2/3		1/2 X 1/2	118708 or	807436 OR		
PD-37	5-57	3/4		OR 1/2X5/8	118709	806137	46961	
PD-38				1/2 X 5/8	118476 or	812734	48658	
PD-39	5-60	1		OR 5/8X5/8	P77271	816665		
Old # New								
60-1 60-11	H-51	1/4		B&G 1/2 X	118473	807436	46961	
60-2	H-52	1/3		1/2				
60-3 60-13	H-53	1/2		Armstrong	118709 or	806137		
60-4 60-14	H-54	3/4		1/2 x 5/8	P77234			
60-5 60-15	H-63	1/2	CW					
60-6 60-16	H-64			1/2 x 5/8	186410 or	812734	48658	
60-8	H-66	3/4			P77234			
60-17	H-65				118476 or	816665		
60-19	H-67	1		5/8 x 5/8	P77271			
				1/2 x 1/2 or	118473 or		46961	
				1/2 x 5/8	118709			
Taco Model		**HP**	**ROT**	**SHAFT**	**OEMPARTNO.**		**FIG. NO.**	
121		1/4	CCW	1/2X1/2	1624-053RP			
122		1/4		OR				
131		1/3		1/2 X 5/8				
132		1/2		OR	(Woods 3J or		48659	
133		3/4		5/8 X 5/8	4J0			
136		1						

For additional information call: 610-275-4453 or Fax: 610-279-6299.

Please call for current prices.

EXPANSION TANKS



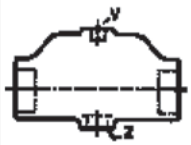
FILLTROL provides added filling control to the benefits of the EXTROL system. Includes a built-in valve and check valve for reducing supply water pressure and maintaining minimum system. Maximum working pressure: 100PSIG Maximum operating temperature 240°F. 1/2"FPT.

FIG. NO.	MODEL #	TOTAL VOL.(GALS)	ACCEPT. VOL .(GALS)	DIAMETER (INS)	LENGTH	PRICE
8525	109		1	8	14 3/4	
8530	110	4.4	2.5	11	17 3/4	
8771	111	7.6	2.5	11	24 5/16	
8772	112	14	11.5	15 3/8	23	

DUFF DIFFERS



FILLTROL VALVE KIT - FIG. NO. 17797



AIR PURGER - 4" purger flanged available. Also available with 1/2"tap.

TAPPINGS

FIG. NO.	SIZE	V	Z	PRICE
8463	1	1/8	1/2	
8467	1 1/4	1/8	1/2	
8470	1 1/2	1/8	1/2	
8472	2	1/2	1/2	
8474	2 1/2	3/4	1/2	
8477	3	3/4	1/2	



EXTROL EXPANSION TANK - For use with closed hyrdonic heating and cooling systems. Max working pressure: 100 PSIG. Max operating temp 240°F. Shipped with standard 12 PSIG air charge which may be changed onthe job to suit installation conditions. 1/2"FPT.

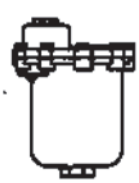
FIG. NO.	TOTAL VOL. (GALS)	DIAMETER (INCHES)	LENGTH OR HEIGHT (INS)	PRICE
8507	2	8	12 5/8	
8512	4.4	11	15 1/2	
8513	7.6	11	23	
8515	14	15 3/8	21	





AMERICAN AIR VENTS

FIG. NO.	PIPE SIZE	TYPE	PRICE
51068	1/8 MPS	Float Vent: up to 150 PSI	
60736	1/4"MPS	Float Vent: up to 150 PSI	
AM706	3/4"MPS	Float Vent: up to 150 PSI	



AIR ELIMINATOR - Cast iron, Max working pressure = 150 PSIG/Max working temp= 240°F.

FIG. NO.	HEIGHT	WIDTH	SYSTEM TAPPING	PRICE
36549	7 5/8	6	3/4"NPT	



AIR SEPARATOR/ELIMINATOR - Cast iron, Max working pressure = 150 PSIG/Max working temp= 240°F.

FIG. NO.	HEIGHT	WIDTH	SYSTEM TAPPING	PRICE
3AM721	15 7/8	4 1/2	1"NPT	

Expansion Couplers

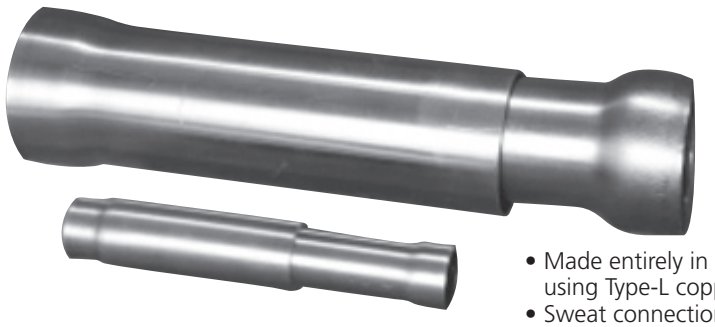


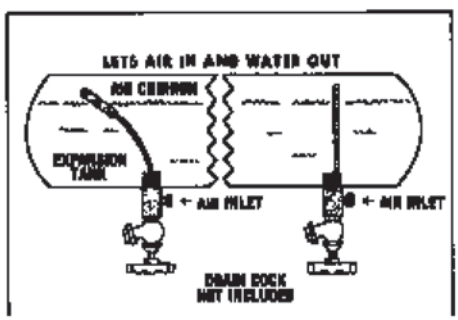
Fig No.	CxC Size	Compressed	Open
150789	¾"	5-3/4"	7-3/4"
150792	1"	6"	8"
150793	1-1/4"	7-1/2"	10"

- Made entirely in the USA, using Type-L copper
- Sweat connections (NPT male or female available)
- Buna / silicone O-rings
- Available up to 3" nominal size
- Max Pressure: 175 psi
- Max Temp: 225F

DUFF DELIVERS

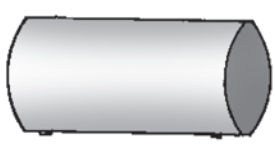


EXPANSION TANK DRAINER



Flexible type may be used for tanks with side or bottom outlets. Rigid type is for bottom outlet only. All brass bodies.

DESCR	FIG. NO.	PRICE
FLEXIBLE	38585	
RIGID	38674	



HEATING EXPANSION TANK

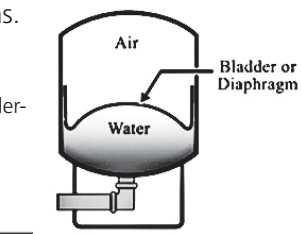
HEAVY GAUGE WELDED STEEL, TANK, PRIMER PAINT, REINFORCED ENDS

TWO 1/2"FPT TAPPINGS

GALLON	SIZE	FIG. NO.	PRICE
12	12X24	14450	
15	12X30	14451	
18	12X36	14452	
24	12X48	14453	
30	12X60	14454	

DUFF TIP:

Water expands when it's heated. The expansion tank allows water to expand as it heats up without dramatically increasing the system pressure. Without an expansion tank in the system, water pressure would increase dramatically when the boiler came on. This can cause stress on components, make the water more difficult to circulate, and may lead to superheated water and steam explosions.



Diaphragm or bladder-type pressure tank.

PURGE & BALANCE VALVES

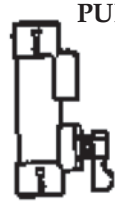
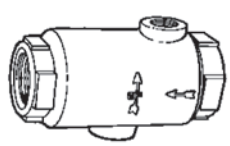


FIG. NO.	SIZE	PRICE
8816	1/2	
8820	3/4	
8822	1	
8824	1 1/4	

IN-LINE AIRTROL FITTINGS



B&G inline air separator fittings are designed for systems when the boiler will not accept a dip tube (Airtrol boiler fittings).

B&G Airtrol tank fittings must be used with the inline air separators to complete the air control system.

Airtrol tank fittings are not required when using the IAS inline air separator with diaphragm and bladder expansions tanks. To prevent accumulation of air in heating and cooling units and prevent noises caused by entrapped air. Specifically designed to efficiently separate air from circulating water in hydronic heating and cooling systems to assure quiet operation. NO MOVING PARTS! 175 PSI, 300°F.

SIZE	FIG. NO.
1	41552
1 1/4	41553
1 1/2	41554
2	41555
2 1/2	41556
3	41557

DIELECTRIC FITTINGS



DIELECTRIC UNION
Copper X Female
SWT X FIP

SIZE	FIG. NO.	PRICE
1/2	5723	
3/4	5725	
1	5726	
1 1/4	5728	
1 1/2	5729	
2	5731	



DIELECTRIC UNION
Female IP

SIZE	FIG. NO.	PRICE
1/2	49244	
3/4	44816	
1	49354	
1 1/4	49355	
1 1/2	49356	
2	49357	



DIELECTRIC UNION
Copper x Male IP

SIZE	FIG. NO.	PRICE
3/4	53571	



DIELECTRIC UNION
FLANGED
Copper X Female

SIZE	FIG. NO.	PRICE
2	84156	
2 1/2	36514	
3	50056	
4	62005	

B&G FB 38

Low pressure reducing valves equipped with a low inlet pressure check valve and removable strainer.

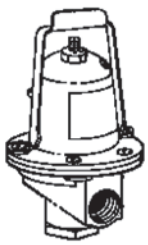
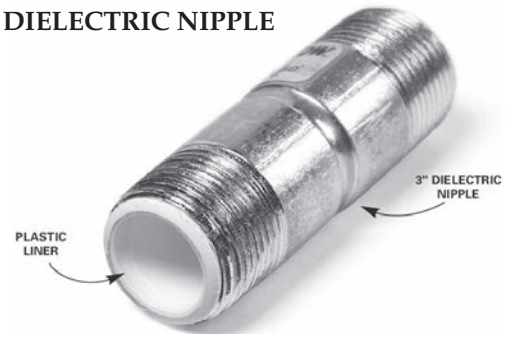


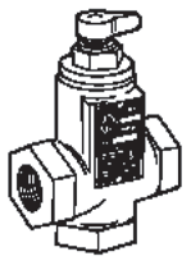
FIG. NO.	PRICE
41043	

DIELECTRIC NIPPLE



SIZE	FIG. NO.
½" x 3"	–
¾" x 3"	132008
1" x 3"	216250
1-1/4" x 4"	–
1-1/2 x 4"	–
2" x 4"	–
2-1/2" x 6"	–
3" x 6"	–

FLO VALVES



CAST IRON STRAIGHT-ANGLE PATTERN

SIZE	FIG. NO.	PRICE
3/4	7880	
1	7881	
1 1/4	7882	
1 1/2	7883	
2	7886	
2 1/2	73303	
3	73304	

COPPER STRAIGHT PATTERN

SIZE	FIG. NO.	PRICE
3/4	62008	

REDUCING VALVE

Low pressure reducing valve is equipped with a low inlet pressure check valve and removable strainer. It is suitable for use in building with a maximum of three floors. 3/4"

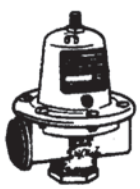


FIG. NO.	PRICE
41044	

NO. 6&7 HIGH PRESSURE REDUCING VALVES



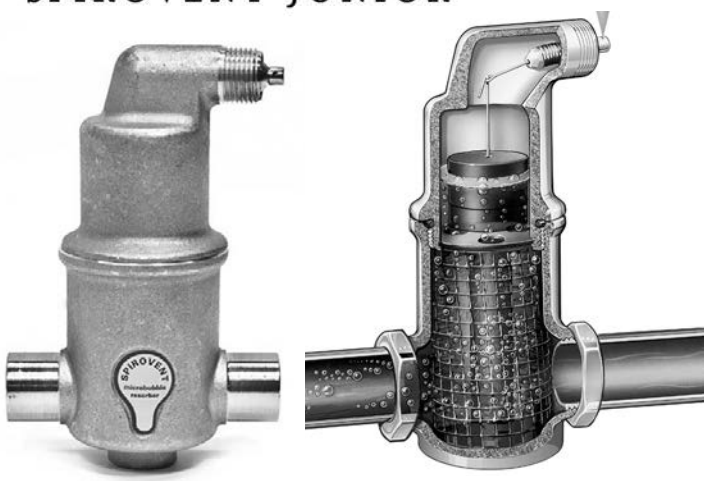
Protects plumbing fixtures against excessive line pressures. All wetted part are brass. These valves are fitted with a removable strainer, low inlet pressure check valve and extra large diaphragm. They are factory adjusted to deliver 45 psi with 125 psi to the valve.

DESCR	FIG. NO.	PRICE
#6 1/2"	39100	
#7 3/4"	33959	

DUFF DIFFERS

WE'LL SHOW YOU HOW ...

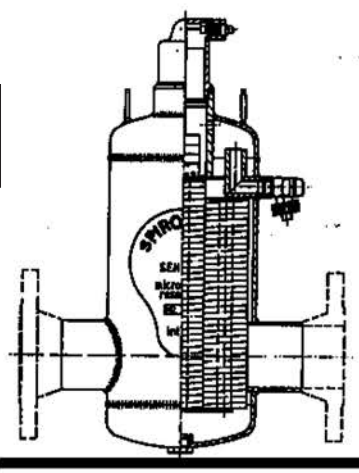
SPIROVENT JUNIOR



Use the "junior" for residential and light commercial jobs. It comes in 3/4", 1", 1 1/4" and 1 1/2" female-threaded sizes and is made of solid brass for long life. All models except for the 3/4" model are tapped 1/2" at the bottom to accommodate a bladder-type compression tank.

SIZE	FIG. NO.	PRICE
3/4"	76637	
1"	76638	
1 1/4"	76639	
1 1/2"	84168	

SPIROVENT SENIOR



Use this mild-steel unit in larger commercial and industrial applications. With pipe sizes from 2" to 36" (male NPT, flanged, or weld connections), its operation is identical to and just as effective as the "juniors". The "senior" uses multiple Spirotube screens for maximum air separation. Its venting mechanism is mounted in a chamber inside the tank to protect it from system debris. You can also use the "senior" to remove floating dirt or liquids (oil, for instance) from the surface through a manually operated side valve. You can also use this valve during system start-up to quickly rid the system of large quantities of air.

ENHANCED AIR SEPARATOR



SIZE	FIG. NO.	PRICE
1"	56324	
1 1/4"	60013	

ITT Bell & Gossett
Morton Grove, IL, U.S.A.

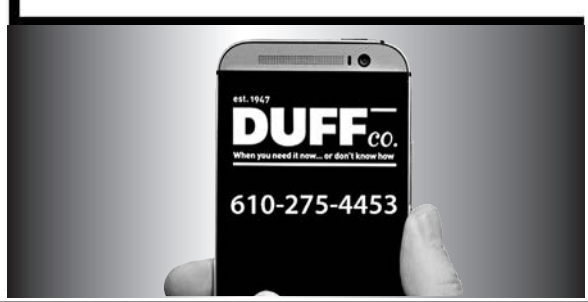
The Bell & Gossett Model EAS Enhanced Air Separator is a highly efficient device for removing entrained air bubbles in hydronic systems. The combination diffuser and coalescing medium design makes possible the removal of very small air bubbles from the fluid stream by coalescence at substantial fluid velocity. The diffuser forces the system fluid to cover the entire inlet portion of the coalescing medium. The coalescing medium will collect air bubbles on its stainless steel filaments. As the bubbles coalesce together, they will rise to the top of the separator where they can be released to the atmosphere through the automatic air vent.



SPIROTOP

This unit provides reliable automatic air release in the top of a hyrdronic system, allowing rapid filling and draining. When used with a Spirovent, no other air bleeders are needed.

FIG. NO.	PRICE
80231	



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

WATTS WATER PRESSURE REGULATORS



WATTS 1156F - Iron Feed Water Pressure Regulator. Features highest capacity performance (twice that of contemporary popular competitive makes) as well as unique simplified servicing accessibility for complete unitized maintenance. Max. Temp. 212°F Max Pressure 100 psi.

All 1/2" models furnished with a purge lever. Because of the exceptional high capacity feature of these Watts designs the lever is only necessary for purging of the system. When the lever is raised to a vertical position it manually forces the valve wide open. Returning the lever to its normal position permits the valve to maintain normal pressure in the system .

FIG. NO.	MODEL	SIZE	INLET CONN UNION	HEIGHT	LENGTH	WEIGHT	PRICE
3784	S1156F	1/2"	Sweat	5 5/16"	4 1/8"	2 1/4	
3782	T1156F	1/2"	Thread	5 5/16"	4 1/4"	2 1/4	



WATTS 1450F - Iron body dual control. Combines construction features of Watts 1156F and rugged iron body diaphragm relief valve. Set 30 lbs. Size 1/2" Max temp. 212°F.

FIG. NO.	PRICE
3792	

WATTS T1450F - Identical to above except furnished with union threaded inlet connection.

FIG. NO.	PRICE
3796	

WATTS S1450F - Identical to above except furnished with union sweat inlet connection.

FIG. NO.	PRICE
3799	





WATTS N256 Bronze Body Feed water Pressure Regulator. Tight seating check valve with integral strainer and unitized design for simplified servicing. Set at 15 psi. Max Temp 212°F. Max pressure 100 PSI.

FIG. NO.	PRICE
3788	



OTHER MANUFACTURERS AVAILABLE: AMTROL, B&G, HONEYWELL, CASH ACME, TACO... AND MORE!

CALL US! 610-275-4453

WATTS RELIEF VALVES



WATTS 374A
Special pressure hot water boiler relief valve. 3/4" only. 550,000 BTU.

FIG. NO.	PRICE
3842	



WATTS 530 - Calibrated pressure relief valve. Calibrated adjustment feature for setting valve to relief pressure. Adjustable range 50-175 lbs. All brass construction and stainless steel spring, Ideally suited as by-pass thermal expansion relief valve. 3/4".

FIG. NO.	PRICE
3774	



WATTS 100XL - ASME rated, self-closing T&P relief valve for water heaters up to 100,000 BTU/hr.
A thermostat with thermo-bonded (non-metallic) protective coating and a highly protective dielectric carrier to protect thermostat from accumulations of mineral deposits and galvanic corrosive action. Extends the effective life of the valve of overcoming problems created by adverse water conditions. Has test lever and 4" extension thermostat. Male inlet and female outlet. Pressure range 75-150 lbs. Standard setting - 150 lbs. Temperature relief 210oF. Thermostats with special protective coating, all bronze body, stainless steel spring, thermostat is accurate and proven exclusively designed and manufactured by Watts. AGA BTU 100,000.

DON'T LET THIS HAPPEN TO YOU!



MODEL #	FIG. NO.	SIZE	HEIGHT (less thermostat)	WIDTH	WEIGHT (lbs)	AGA/CGA TEMP. STEAM BTU/hr	PRICE
100XL-4	3756	3 1/2"	1 7/8"	3/4	100,000		

WATTS SERIES 40,140, 240, 340

A.S.M.E. rated, ANSI Z21.22 "Relief valves and automatic gas shut-off devices"design certified by AGA and CA listed. Meets Military Spec. MIL-V-136-12D, Type I.

Temperature relief 210°F. Standard pressure settings 75, 100, 125 and 150 lbs.
For gas, electric or oil-fired storage water heaters between 180,000 and 200,000 BTU/hr. Rating: Use 3/4"No. 40, 140 series tested under ANSI Z21.22 with ratings as certified and listed by AGA and CGA.

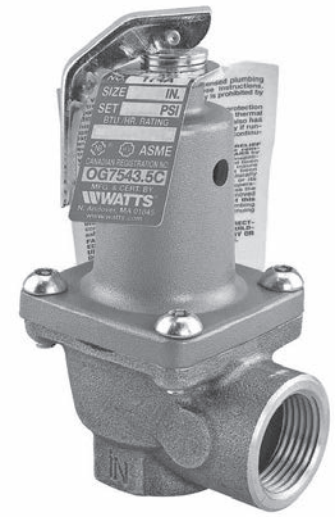
For gas or oil-fired storage water heaters between 200,000 and 730,000 BTU/hr. output heating domestic water and for steam coil storage water heaters: Use No. 340, 342 series listed under ANSI Z21.22 with ratings as certified and listed by AGA and CGA.

Bronze body construction, Back=up emergency safety fuse plug, Vacuum relief valve vent in drain, Tamper-resistant bonnet screws, Thermostat is accurate and proven.



MODEL	FIG. NO.	INLET	OUTLET	AGA-CGA TEMP. STEAM RATING BTU/hr	ASME PRESSURE STEAM RATING BTU/hr	PRICE
40XL-5	3725	3/4'M	3/4'F	200,000	777,600	
40XL-8	27885	3/4'M	3/4'F	200,000	777,600	
40XL-4	3734	1'M	1'F	500,000	1,155,000	
40XL-7	40706	1'M	1'F	500,000	1,155,000	
140S-3	44342	1'F	1'F	570,000	1,670,000	
140X-5	33251	1'F	1'F	670,000	1,670,000	
N240X-6	3738	1'F	1'F	730,000	2,195,000	
340-3	3744	1 1/2'F	1 1/2'F	1,150,000	3,450,000	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.



WATTS RELIEF VALVES

WATTS 174A - A.S.M.E. Water Pressure Safety Relief Valve - Bronze body safety relief valves for pressure protection only of all types of hot water heating boiler equipment. Pressure range 30 to 150 lbs. with corresponding high BTU/HR. Female inlet and outlet connections. Sizes 3/4"to 2". Meets Military Spec MIL-V-136-12D, Type III.

SETTING AND RELIEVING CAPACITIES

(National Board Certified Ratings) BTU Stemam Discharge Capacities

SIZE	30 LBS	100 LBS	125 LBS	150 LBS
3/4"	650,000	1,695,000	2,070,000	2,445,000
1"	1,005,000	2,635,000	3,215,000	3,795,000
1 1/4"	1,682,000	4,399,000	5,370,000	6,340,000
1 1/2"	2,020,000	5,290,000	6,460,000	7,630,000
2"	3,815,000	9,970,000	12,170,000	14,370,000

	30 # PSI		50 # PSI		75 # PSI		100 # PSI		125 # PSI		150 # PSI	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
3/4	37414		42487		42488		42489		37415		37416	
1"	37417		42490		42491		42492		37418		37419	
1 1/4"	37420		42493		42494		42495		37421		37422	
1 1/2"	37423		42496		42497		42498		37424		37425	
2"	37426		42499		42500		42501		37427		37428	

WATTS 740 - Iron body safety relief valves with expanded outlets for hot water space heating boilers. Pressure range 3-75 lbs. with corresponding high ratings from 925,000 to 10,700,000 BTU/hr. A wide range of relieving capacities. Lower BTUper thousand costs because this series provides a much higher BTU rating, size for size, than other valves on the market. Female inlet and outlet connections. 3/4"to 2".



SETTING AND RELIEVING CAPACITIES

Setting and Relieving capacity National Board Certified Rating BTU discharge capacity

SIZE	30 LBS	50 LBS	75 LBS
3/4"x1"	925,000	1,352,000	1,886,000
1"x1 1/4"	1,300,000	1,899,000	2,649,000
11/4"x11/2"	2,105,000	3,075,000	4,285,000
1 1/2 x 2"	2,900,000	4,237,000	5,909,000
2 x 2 1/2"	5,250,000	7,672,000	10,700,000

	30 # PSI		50 # PSI		75 # PSI	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
3/4	37398		37399		37401	
1"	37402		37403		37404	
1 1/4"	37405		37406		37407	
1 1/2"	37408		37409		37410	
2"	37411		37412		37413	

For additional information call: 610-275-4453 or Fax: 610-279-6299
Please call for current prices.

KUNKLE MODELS 6252/6254 SAFETY VALVES



GENERAL APPLICATION

Suitable for use on steam boilers and generators. pressure reducing stations. reciprocating or rotary air/gas compressors and for pressure vessels including tanks. receivers. intercoolers. oiVgas separators and lines.

FEATURES

- Heavy duty high qual ity cast iron construction with stainless steel semi-nozzle, tr im and disc.
- Bolted bonnet design for easy maintenance.
- Seats lapped to optical flatness.
- Dual control rings offer easy adjustability for precision opening with minimum pre-open or simmer and exact blowdown control.
- Heavy duty lift lever assembly.
- All adjustments factory sealed to prevent tampering or disassembly.
- Each valve tested and inspected for pressure setting and leakage.
- Valves available National Board cert ified to ASME sections I, VIII and IV, and PED certified for non-hazardous gas.

MODELS OVERVIEW

Model 6252: Cast iron. enclosed spring, SS trim.
Codes: ASME I, VIII and PED
Model 6254: As model 6252 except certified for ASME code sect ion IV - low pressure steam
heating boilers. Set pressure 15 psig [1.0 bargl only.
J through P orifice only.
Codes: ASME IV and PED

TECHNICAL DATA	
Connections	FNPT or flanged
Temperature range	-20° to 406°F [-29° to 208°C]
Pressure range	10 to 250 psig [0.7 to17.2 barg]
Code	ASME I, IV, VIII and PED

KUNKLE SERIES 6000 SAFETY VALVES

GENERAL APPLICATION

These valves are suitable for use on steam boilers and generators. reciprocating or rota ry. portable or stationary air/gas compressors, intercoolers and aftercoolers. Also for pressure vessels containing steam, air or non-hazardous gas and on pressure reducing stations.



FEATURES

- 0-ring seats available for exceptional leakfree performance. reduced maintenance cost, multiple cycles with tight shutoff and improved seating integrity.
- Heavy duty casting.
- Wide hex on valve nozzle provides clearance for easy installation.
- Seats lapped to optical flatness.
- Dual control rings offer easy adjustability for precise opening with minimum pre-open or simmer and exact blowdown control.
- Pivot between disc and spring corrects misalignment and compensates for spring side thrust.
- Grooved piston type disc reduces sliding area and friction.
- Heavy duty lift lever assembly.
- Each valve tested and inspected for pressure setting and leakage.

MODELS OVERVIEW

Model 6010: Side outlet. Full nozzle design with bronze/brass trim. Available with 0- ring seats.
Model 6021: As model 6010 with Teflon© (PFA) disc insert [use on steam only].
Model 6030: As model 6010 except stainless steel (SSI trim (nozzle and disc). Available with 0- ring seats.
Model 6182: Top outlet. Full nozzle design with bronze/brass t rim. 0- ring seat available.
Model 6121: As model 6182 with Teflon© [PFA) disc insert [use on steam only]
Model 6130: As model 6182 except SS trim [nozzle and disc]. Available with 0-ring seats.
Model 6186: Top outlet. Full nozzle design with bronze/brass trim. 150 psig [10.3 barg] maximum
set pressure. Replaces Model 86 (original equipment only). For air service only.
Model 6283: Over-sized side outlet. Full nozzle design bronze/brass trim.
Model 6221 :As model 6283 with Teflon© (PFA) disc insert [use on steam only].
Model 6230: As model 6283 except SS trim [nozzle and disc].
Model 6933: As model 6010 except certified for ASME code Sect ion IV. Low pressure steam
heating boilers set at 15 psig [1.0 bargl only.
Model 6934: As model 6021 except certified for ASME code Sect ion IV. Low pressure steam
heating boilers set at 15 psig [1.0 bargl only.
Model 6935: As model 6030 except certified for ASME code Sect ion IV. Low pressure steam
heating boilers set at 15 psig [1.0 bargl only.

PRESSURE AND TEMPERATURE LIMITS

Models 6010, 6021, 6182, 6121, 6283, 6221: Steam service: 3 to 250 psig [02 to 17.2 barg] -60° to 406°F [-51° to 208°C] Air/ gas service: 3 to 300 psig [O 2 to 20.7 barg] -60° to 406°F [-51° to 208°C]
Models 6030, 6130, 6230: Steam and air/gas service: 3 to 300 psig (O 2 to 20.7 barg) -60° to 425°F

SPECIFICATIONS	
SERVICE RECOMMENDATIONS FOR SERIES 6000 RESILIENT SEAT/ SEAL MATERIALS	
Seat/seal materials	Service recommendation
Viton© A (FKM) 1-15 to 406°F [-26 to 208°C]	Air and gas
Ethylene propylene [-70 to 425°F] [-57 to 218°C]	Steam
Teflon© (PFA)	Steam

TECHNICAL DATA	
Connections	Threaded NPT
Temperature range	-60° to 425°F [-51° to 219°C]
Pressure range	3 to 300 psig [0.2 to 20.7 barg]
Code	ASME I, IV, VIII and PED

KUNKLE® Valve Division



AQUA-MIX

GREAT REPLACEMENT FOR WATTS 70A!

AQUAMIX anti-scald proportional thermostatic mixing and diverting valve. Aquamix offers anti-scald, anti-chill protection and meets the new plumbing codes. Aquamix accurately adjusts, maintains and limits the hot water temperature to a desired setting selected by the user. In domestic applications it makes the use of hot water safe and saves money.

APPLICATIONS Domestic water, space heating, radiant floor heating, hydro heat, combo systems, heat pump systems, solar hot water, nursing homes, greenhouses, public facilities, industrial applications, photo processing.

FIG. NO.	CONNECTION SIZE	FLOW AT 22PSI PRESSURE DROP	TEMP RANGE	PRICE
45160	1/2"NPT	8 GPM	110-145°F (43-63°C)	
45162	3/4"NPT	10 GPM		
48923	1"NPT	12 GPM		
48921	1/2"NPT	8 GPM	90-120°F (32-49°C)	
48922	3/4"NPT	10 GPM		
48925	1"NPT	12 GPM		
59768	1/2"NPT	8 GPM	70-100°F (21-37°C)	
59769	3/4"NPT	10 GPM		
59770	1"NPT	12 GPM		

Holby Tempering Valve

HOLBY VALVE CO.



Great for schools, nursing homes, healthcare facilities, hospitals, and many other applications!

Use as replacement for Sarco and Heat-Timer units



Holby Mixing Valve — Low Temp			Holby Mixing Valve — Standard		
Fig. No.	Type	(60° to 120°)	Fig. No.	Type	(120° to 180°)
--	1/2"		--	1/2"	
--	3/4"		--	3/4"	
--	1"		--	1"	
--	1-1/4"		--	1-1/4"	
266496	1-1/2"		319796	1-1/2"	
266901	2"		--	2"	

Holby Repair Kit--Low Temp			Holby Repair Kit--Standard		
Fig. No.	**Type**	**(60° to 120°)**	**Fig. No.**	**Type**	**(120° to 180°)**
--	1/2"		--	1/2"	
--	3/4"		--	3/4"	
248981	1"		--	1"	
271873	1-1/4"		--	1-1/4"	
244487	1-1/2"		261539	1-1/2"	
--	2"		219697	2"	

STEAM VENTS



NO 1A VARI-VENT - Adjustable to balance steam distribution. 1/8" angle connection for radiators. Chrome plated.

FIG. NO.	PRICE
8875	



NO 1933 ANGLE VALVE - For radiators, 1/8" connection. Nickel plated.

FIG. NO.	PRICE
8884	



NO 1933-1/8" &1/4" STRAIGHT SHANK AIR VALVES. For convectors, pipe coils, etc. Nickel plated.

SIZE	FIG. NO.	PRICE
1/8	8887	
1/4	30968	



NO. 1933 STRAIGHT SHANK AIR VALVE For convectors, pipe coils, etc. 3/4"male x 1/2" female. Nickel plated.

FIG. NO.	PRICE
7628	



NO. 4 QUICK VENT - For mains, does not close against water. 3/4" male x 1/2" female connection. Chrome plated.

FIG. NO.	PRICE
7627	





ECONOMY STEAM AIR VALVE -Good quality, low price.

	FIG. NO.	PRICE
Adjustable	51106	
Nonadjustable	41238	

WATER VENTS



NO. 14 KEY AIR VALVE ASSEMBLY. Tubing length 20". 1/8" NPT connection

FIG. NO.	PRICE
30967	



LOOSE KEY

One piece brass body, precision milled insert, full port, perfect threads.

FIG. NO.	PRICE
17683	



Coin function, key function.

FIG. NO.	PRICE
17684	



HOFFMAN AIR VALVE



NO. 1-A AIR VALVE - A float-type vent with adjustable port for true proportional venting. Port settings from (#1) slow to (#6) fast venting. Operating pressure up to 1 1/2 PSI. Max pressure: 10 PSI

FIG. NO.	PRICE
7619	



NO 76 AIR VENT FOR VACUUM STEAM SYSTEM - Float-type vents, each with single non-adjustable port for relieving air from the mains of medium and large size one-pipe vacuum systems. 1/2" female x 3/4" male straight shank. Operating pressure up to 3 PSI

FIG. NO.	PRICE
38697	



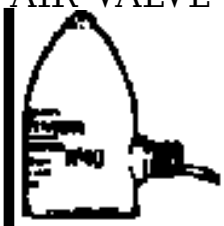
NO. 78 WATER MAIN VENT VALVE - Designed for use on high pressure hot or cold water mains and process applications. Cast brass body. Safety drain connection for discharging moisture entrained in the vented air. Tapped at top for 1/8" IPS built-in check valve. 3/4". 150 PSI will withstand hydrostatic pressures of 450 PSI

FIG. NO.	PRICE
7624	



NO. 75MAIN STEAM VENT - Float type vents, each with single non-adjustable port for relieving air from the mains of medium and large size systems.

FIG. NO.	PRICE
7623	



NO. 40 STEAM-AIR VALVE - A float-type vent with a single non-adjustable port. For use on ordinary one-pipe system not requiring proportional venting. 1/8"angle.

FIG. NO.	PRICE
7620	



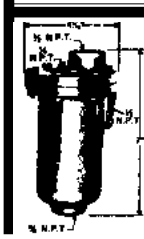
NO. 74 STEAM UNIT HEATER AIR VALVE - Float-type vent with single non-adjustable port especially designed for use with steam unit heaters. Vents air, when present, with rising, dropping or steady pressure. Operating pressure up to 35 PSI. 3/4"

FIG. NO.	PRICE
7628	



NO. 79 WATER MAIN VENT VALVE - Designed for use on hot or cold water mains and process applications. Tapped at top for 1/8" IPS safety drain connection for discharging moisture entrained in the vented air. Built in check valve. 1/2"F x 3/4" M. Max Oper pressure: 75 PSI will withstand hydrostatic pressures of 200 PSI

FIG. NO.	PRICE
7625	



NO. 792 HIGH PRESSURE WATER VENT - Designed for releasing air from hot or cold water mains, hydronic heating and chilling systems storage and processing tanks filters, centrifugal pumps. Cast iron body and cover, stainless steel interior.

FIG. NO.	PRICE
7630	



NO. 500 STEAM OR WATER AIR VALVE - For convectors and radiators, a disc-type vent, with built-in check valve, for automatic venting. Can be taken apart for cleaning without removing from lime.1/8" straight shank. Max steam pressure 15 PSI.

FIG. NO.	PRICE
41940	



NO. 4 QUICK STEAM VALVE - Thermostatic air vent for steam systems and process equipment. Operates on temperature changes only: does not close against water. Quick vent must be installed on a nipple 6"to 10"above horizontal return, which must be at least 18"above the boiler water. 1/2"Fx 3/4"M. Max Opera. Press: 25 PSI

FIG. NO.	PRICE
7627	



NO. 62 STEAM VACUUM BREAKER - Designed for use on closed vessels and piping systems to control induced vacuum within safe limits. Factory set to open at 2"(mercury) vacuum. Adjustable from 1/4"to 20"(mercury) vacuum. 3/4" IPS straight shank. 150 PSI.

FIG. NO.	PRICE
7629	

AIR VENTS



No. 7

for vertical mounting 4 3/8" x 2 1/4" with 1/8" IP female connection. ***For water.***

FIG. NO.	PRICE
17687	



AUTO VENT #67

for vertical mounting 3 3/16" x 1 1/2", with 1/4 IPT male connection. ***For water.***

MODEL	FIG. NO.	PRICE
67	17686	
68	49276	

SHORT STOP

with a short stop valve installed in a Maid-O-Mist (#67) air vent, ***water*** *can flow around the extended valve mechanism into the vent. When the air vent is removed from the line, the mechanism automatically retracts to shut off the flow of water.*

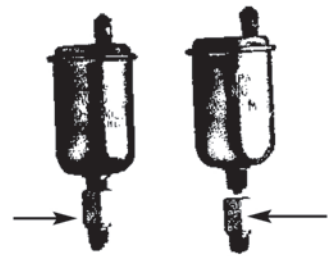


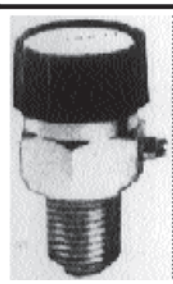
FIG. NO.	PRICE
49275	

INDUSTRIAL AIR VENT



Built-in shutoff. Includes vent cap and leakage guard. 3/4" male x 1/2"female. For **hydronic** heating and cooling applications.

FIG. NO.	PRICE
48875	



HYDROVENT

Automatic air vent for hot water and steam systems. Install in baseboards, radiators, convectors and high points in piping systems to remove air. The nickel plated valve has a quick venting design and a positive shut-off ball check. The hydrovent features a replaceable cartridge with hygroscopic discs. The cartridges can be replaced without shutting off the system.

FIG. NO.	PRICE
41940	

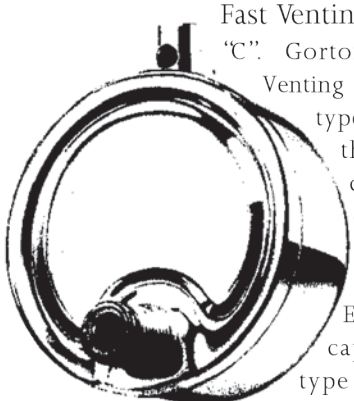


AUTO VENT

Built-in shutoff. 1/8" NPT male. EPDM seat disc and O-ring. For hydronic heating/cooling applications. ***DO NOT use in systems with oil or petroleum based additives.***

FIG. NO.	PRICE
34297	



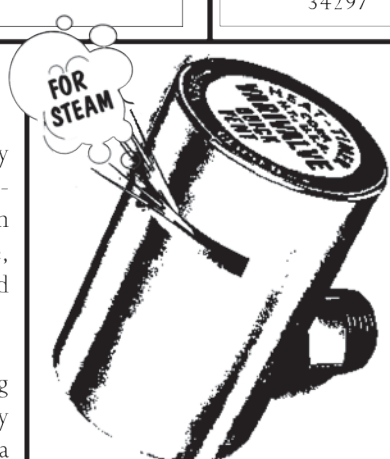


Fast Venting Air Valve for Steam.

"C". Gorton Vapor Equalizing Valve. Venting capacity equal to 15 ordinary type air valves on radiators farthest from the boiler and in coldest rooms; For example, on third-floor radiators and above.

"D". Gorton Vapor Equalizing Valve. Venting capacity equal to 27 ordinary type air valves in cases where a large amount of air must be vented; for example, on radiators having particularly long branches and on very large radiators. Not to be used on hand-fired systems unless radiator supply valves are left "on"all the time.

DESCR	FIG. NO.	PRICE
C	45443	
D	45444	



VARIVALVE - Adjustable at each location; Each radiator vented as required...

With just ounces of pressure VariValves can be adjusted to make radiators heat up faster.

*Exclusive fingertip adjustment. The venting orifice can be adjusted by a simple sliding lever to provide fastest venting in hard-to heat areas, or reduced venting in overheated areas.

*Give each radiator its own venting speed. No longer is there any need to build pressure to reach remote areas - meanwhile overheating the rest of the space.

*Cost competitive with ordinary air valves. Considering the extra value, the VariValve is quite inexpensive only slightly more than ordinary non-adjustable valves.

DESCRIPTION	FIG. NO.	PRICE
Angle	38919	
Straight	38918	

GAUGES & THERMOMETERS

TRERICE TEMPERATURE • PRESSURE • CONTROL

WATTS®

Fig. No.	Type/Mount	Face/Shank/Insert	Range/Description	Representative Picture
		Tridicator		
H25	1/4" CBM	2-5/8", 1-3/4", 1"	70-320F, 0-75 PSI, 0-170 Ft H20	
H25-1	1/4" CBM	2-5/8", 2", 1"		
16921	1/2" CBM	3-1/4", 1-1/4", 1"		
16925	1/2" LM	3-1/4", 1-3/4", 3/4"		
		Temperature & Pressure Only		
16903	1/4" CBM	2-1/2", 2", 1-5/8"	70-320F, 75 PSI	
H25-16	1/4" CBM	2-1/2", 3/4", 1-5/8"	60-320F, 75 PSI	
H25-17	1/2" LBM	4", 1-3/4", 2"	60-260F, 50 PSI	
H25-18	1/2" LM	4", 1", 2"	60-260F, 75 PSI	
H25-19	1/2" LM	4", 1-1/8", 2-1/8"	80-320F, 200 PSI	
H25-20	1/2" LBM	4", 1-3/4", 2"	80-320F, 200 PSI	
		Hot Water Thermometer Only		
H25-54	1/2" LM	3-1/4", 1", 2"	60-260F	



Adjustable Industrial Thermometer
30-240F, 3/4"

FIG. NO.
16491



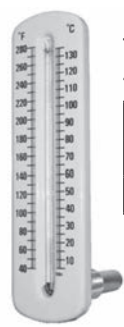
Solar Digital Thermometer
30-240F, 3/4"

FIG. NO.
85098

Brass Thermometer Well
(3/4" MPT)

FIG. NO.
16501





Econ Angle Hot Water Thermometer
40-280F, 1/2"

FIG. NO.	TYPE
16470	with iron well
16473	with brass well



Econ Straight Hot Water Thermometer
40-280F, 1/2"

FIG. NO.	TYPE
16471	with iron well
16483	with brass well



Dial Thermometer
Center Back Mount,
32-248F, 1/2" MPT

FIG. NO.
44471



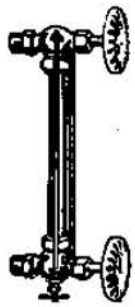
Strap-On Thermometer
0-250F (retaining spring for mounting included)

FIG. NO.
47352

DUFFNOTE: ⇨For POCKET THERMOMETERS, see page [XXX]
⇨For MORE PRESSURE GAUGES, see page 320

WATER GAUGE SETS

WATER GAUGE SET



1/2 MIP X 5/8 OD Glass

FIG. NO.	PRICE
16938	

HEAVY DUTY INDUSTRIAL WATER GAUGE SET

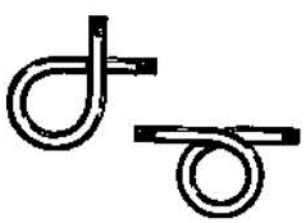


For Industrial and Commercial use

DESCR	FIG. NO.	PRICE
1/2 MIP X 5/8 OD	34342	
3/4 MIP X 34 OD	37546	

ALL WATER GAUGE SETS ARE AVAILABLE IN STAIN-LESS STEEL!

PIG TAIL SYPHONS



1/4" BLACK	
Angle	17048
Straight	17044

1/4" BRASS	
Angle	17060
Straight	17056

REGULAR GAUGE GLASS



SIZE	FIG. NO.	PRICE
5/8 OD X 12	16941	
5/8 OD X 18	49663	
5/8 OD X 24	16949	
5/8 OD X 36	16952	
58 OD X 48	45178	
3/4 OD X 12	16989	
3/4 OD X 24	16995	
3/4 OD X 36	16999	

RED LINE GLASS



Extra hard for shock
Corrosive resistant
Heat resisting to temperature change
boiler water gauges and other liquid level gauges

DESCR	FIG. NO.	PRICE
5/8 OD X 12	16956	
5/8 OD X 24	16958	
5/8 OD X 36	16973	
5/8 OD X 48	50593	
3/4 OD X 12	17000	
3/4 OD X 24	17002	
3/4 OD X 36	17006	
1/2 OD X 12	17014	
1/2 OD X 24	17017	
1/2 OD X 36	17023	

GAUGE GLASS BRUSH



FOR 5/8 OD GAUGE GLASS

LENGTH	FIG. NO.	PRICE
8"	220865	
30"	45184	

GAUGE GLASS WASHERS



DESCR	FIG. NO.	PRICE
1/2 OD	17034	
5/8 OD	17040	
5/8 OD Teflon	50848	
3/4 OD	17028	

GAUGE GLASS NUTS



Brass gauge glass coupling nuts 5/8 OD

SIZE	FIG. NO.	PRICE
5/8"	48884	
3/4"	48885	

FRICTION RING



Gauge glass friction ring 5/8 OD

FIG. NO.	PRICE
48882	

TRI-COCK



SIZE	FIG. NO.	PRICE
3/8	8446	
1/2	8448	

OBSERVATION PORTS & Replacement Boiler-Site Glass Circles & Gaskets Available!



3/8"NPT TO 2-1/2" NPT AVAILABLE. CALL FOR PRICING!

WATER GAUGE SETS

AUTOMATIC DUCTILE IRON OR STAINLESS STEEL GAUGE



For steam 250 pounds at 450o F.
Liquid level up to 500 pounds

Sugject to limitations of gauge glass

Material used conforms with or exceeds requirements of AISA, ASTM and/or API-ASME for maximum recommended pressures and temperatures.

Specify for steam or liquid level as automatic balls must be removed for steam.

Ruber washer for:
5/8" glass 9/126x13/16x3/8
3/4" glass 11/16x15/16x3/8
Rods 1-1/4" shorther than centers.
Glass 2" shorter than centers.

MODEL NO,.	TYPE OF GAUGE	CONN. SIZE	GLASS O.D.
DEEP70A316	Stainless Steel	1/2"	5/8"
DEEP71A316	Stainless Steel	3/4"	3/4"
DEEP70A	Iron	1/2"	5/8"
DEEP71A	Iron	3/4"	3/4"

PVC GAUGE POLYVINYL CHLORIDE



NON-AUTOMATIC OR AUTOMATIC

HAND WHEEL SHUT OFF FOR PRESSURE UP TO 125 POUNDS AT 75oF

All parts coming in contact wiht liquid made of Polyvinyl Chloride (PVC) has greater resistance to corrosive environments and solutions than many othermaterials. This gauge can be used in place of stainless steel and monel. Suppled with Teflon packings.

To determine length of glass: Rods 1-3/8"
Glass 2" shorter than centers: shorther than centers

MODEL NO.	CONN. SIZE	GLASS O.D.
DEEP-PVC	1/2"	3/4"
DEEP-PVC	3/4"	3/4"

BRONZE GAUGE CHAIN LEVER SQUARE BODY automatic

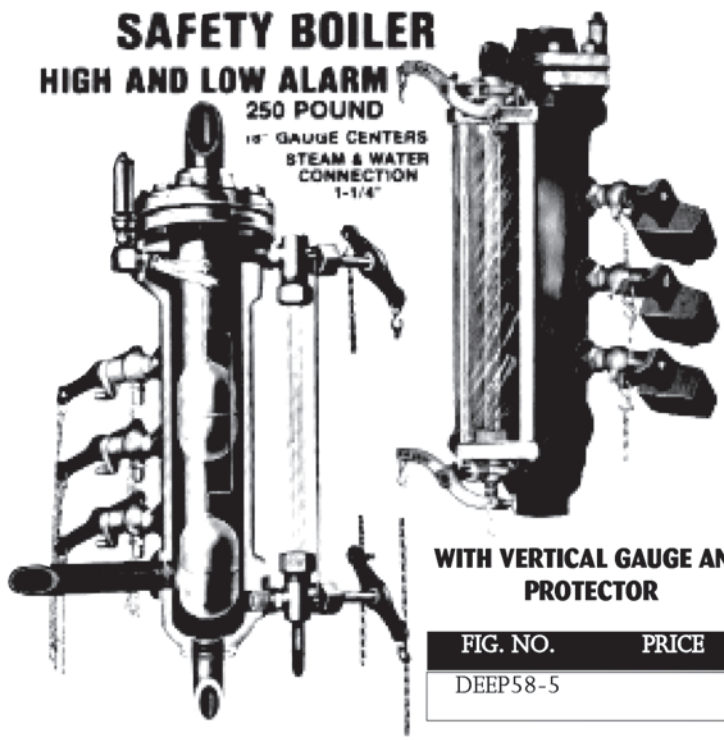
For steam pressures up to 300 PSI



Ruber washer for:
5/8"glass 9/16"x13/16"x3/8"
3/4"glass 11/16"x15/16"x3/8"
Rods 1-1/4"shorther than centers.
Glass 2"shorter than centers.
3/8"drain cock.

FIG. NO.	NPT CONN	GLASS OD	STYLE	PRICE
DEEP31AL	1/2"	5/8"	5-35	
DEEP34AL	3/4"	3/4"	5-35	

SAFETY BOILER HIGH AND LOW ALARM



WITH VERTICAL GAUGE

FIG. NO.	PRICE
DEEP58-5-2	

WITH VERTICAL GAUGE AND PROTECTOR

FIG. NO.	PRICE
DEEP58-5	

WATER GAUGE SETS

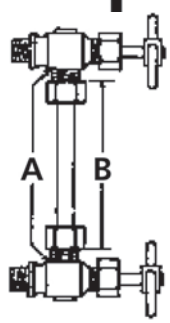
V-SHAPE SAFETY EYE GAUGE GLASS PROTECTOR
PLEXIGLASS OR WIRE GLASS



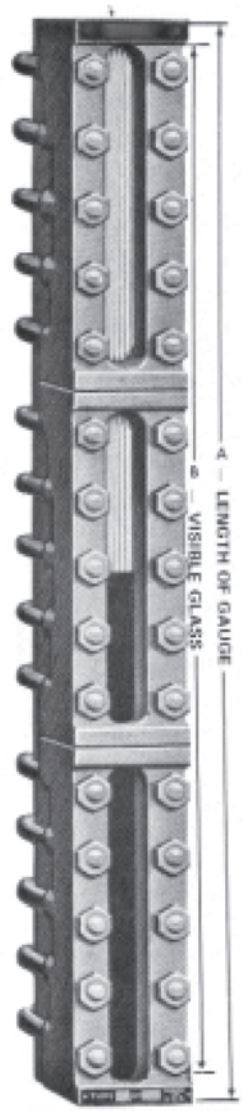
- Don't wait for accidents to happen.
- Made to fit all water gauges and liquid level gauges in any length specified.

To ensure the best fit, be sure to specify these dimensions:

A) Distance between thread ends
B) Distance (outside) nuts made up on your gauges

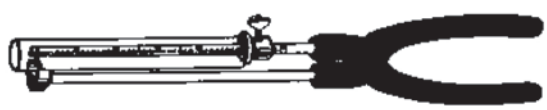


Model No.	Type
EEP 31-508	Plexiglass
EEP 9-508	Wire Glass



STEEL GAUGE VALVES CALL FOR PRICE AND AVAILABILITY

GAUGE GLASS CUTTER



Standard Gauge Glass Cutter with Carbide Wheel for Round Tubular Gauge Glasses.

FIG. NO.	PRICE
17470	

SQUEEZE & POP GLASS CUTTER



Cuts glass tubing in seconds. Also cuts cast iron and cement pipe. Just Squeeze and pop! Up to 3/4" OD

FIG. NO.	PRICE
17473	

PINCH AND CUT GLASS CUTTER



Forged Bronze. For cutting by the rotation of a hardened steelwheel about the outside of a tube of any size not larger than 1-1/8". It employs two V guides to align the tubing at a position normal to the cut. The wheel is held normally open by a coil spirng.

FIG. NO.	PRICE
49662	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GAUGES



1 1/2" FACE

LOWER MOUNT				BACK MOUNT			
RANGE	MOUNT	FIG.NO.	PRICE	RANGE	MOUNT	FIG.NO.	PRICE
0-15	1/4	36522		0-15	1/8	—	
0-60	1/8	16503		0-60	1/8	—	
0-100	1/8	16507		0-100	1/8	—	
0-160	1/8	16512		0-160	1/8	—	
0-300	1/8	—		0-300	1/8	—	

2" FACE

0-15	1/4	16519		0-15	1/4	16582	
0-30	1/8	36523		0-30	1/8	—	
0-30	1/4	16532		0-30	1/4	16583	
0-60	1/4	16533		0-60	1/8	—	
0-60	1/8	16566		0-60	1/4	16586	
0-100	1/4	16537		0-100	1/8	16574	
0-160	1/4	16541		0-100	1/4	—	
0-160	1/8	—		0-160	1/8	16578	
0-200	1/4	16544		0-160	1/4	18369	
0-300	1/4	16550		0-200	1/4	47156	
0-300	1/8	—		0-300	1/4	—	
0-400	1/4	—		0-400	1/4	—	
0-600	1/4	—		0-600	1/4	—	
0-1000	1/4	—		0-1000	1/4	—	
0-4000	1/4	—		0-4000	1/4	—	

2 1/2" FACE

0-5	1/4	48434		0-5	1/4	—	
0-15	1/4	16592		0-15	1/4	—	
0-30	1/4	16594		0-30	1/4	47158	
0-30	1/8	—		0-30	1/4	—	
0-60	1/4	16596		0-60	1/4	16641	
0-60	1/8	—		0-60	1/4	—	
0-100	1/4	16604		0-100	1/4	16646	
0-100	1/8	36527		0-100	1/4	—	
0-160	1/4	16607		0-160	1/4	16649	
0-200	1/4	16610		0-200	1/4	47157	
0-300	1/4	16613		0-300	1/4	52380	
0-400	1/4	16617		0-400	1/4	47155	
0-600	1/4	16621		0-600	1/4	—	
0-1000	1/4	—		0-1000	1/4	—	
0-2000	1/4	—		0-2000	1/4	—	
0-3000	1/4	—		0-3000	1/4	—	
0-5000	1/4	—		0-5000	1/4	—	

GAUGE GUARD



Protects gauges and other instruments from corroding. They also prevent gauges from contaminating sensitive fluids. The viton membrane isolates the gauge from the process medium, while still maintaining a highly accurate instrumental reading. Ideal for use in instrumentation systems, or with valves requiring a pressure or vacuum gauge.

1/4"

FIG. NO.	PRICE
42449	

3 1/2" FACE

LOWER MOUNT

RANGE	MOUNT	FIG.NO.	PRICE
0-15	1/4	—	
0-30	1/4	—	
0-60	1/4	—	
0-100	1/4	—	
0-160	1/4	—	
0-200	1/4	—	
0-300	1/4	—	
0-400	1/4	—	
0-600	1/4	—	
0-1000	1/4	—	
0-2000	1/4	—	
0-5000	1/4	—	

4 1/2" FACE

0-15	1/4	16740	
0-30	1/4	16757	
0-60	1/4	16763	
0-100	1/4	16769	
0-160	1/4	16774	
0-200	1/4	16782	
0-300	1/4	16786	
0-400	1/4	16795	
0-600	1/4	16802	
0-1000	1/4	—	

6" FACE

0-15	1/4	16816	
0-30	1/4	16821	
0-60	1/4	16828	
0-100	1/4	16841	
0-160	1/4	—	
0-200	1/4	323142	

PANEL MOUNT GAUGES



FIG. NO.

BRASS PRESSURE SNUBBER

Add life to your gauges. Use a snubber.



1/4" NPT porous core.

FIG. NO.
16935

STAINLESS PRESSURE GAUGE



1/4" LOWER MOUNT
2 1/12" FACE

FIG.NO.	PRICE
100 LB 36529	
160 LB 36530	
100 LB 45439	
Liquid fill	

LIQUID FILL PRESSURE GAUGE



1/4" LOWER MOUNT
2 1/12" FACE

100 LB 51680	
160 LB 47551	

COMPOUND GAUGE VACUUM AND PRESSURE 30/30



1/4" LOWER MOUNT

FACE	FIG. NO.	PRICE
2	16880	
2 1/2	16891	
3 1/2	16897	

VACUUM GAUGE



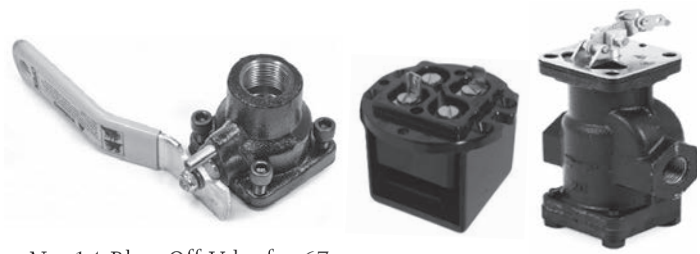
1/4" LOWER MOUNT

FACE	FIG. NO.	PRICE
2	16854	
2 1/2	16862	
3 1/2	16868	

DUFFNOTE • For MINI BALL VALVES and • PET COCKS, see page XXX

MCDONNELL MILLER REPLACEMENT PARTS

REPLACEMENT PARTS



No. 14 Blow Off Valve for 67 series and No's 47, 47-2, 467B, 767. Shipping wt. 2 lbs.

FIG. NO.	PRICE
8950	

No. 11 Switch for 67, 69 and 70 series, No's 61, 467 and 767. For 110V or 230V service. Shipping Wt. 1 lb.

FIG. NO.	PRICE
8949	

No. SA 47-101-102 Valve and strainer assembly for No's 47 and 247. Shipping Wt. 4 lbs.

FIG. NO.	PRICE
8988	

No. SA 51-101-102 Same as above, but for No. 51.

FIG. NO.	PRICE
8995	



No. 2 CUT-OFF AND ALARM SWITCH (model #2)

Used to add electrical low water cut-off to mechanical boiler water feeder. Supplied as part of the feeder cut-off combinations or can be purchased separately and added in brief time. Has high voltage terminals for low water cut-off, and for low water alarm.

ELECTRICAL RATINGS
(underwriters Listed)
Ampere Rating: 115V. DC .5 Amps

	115 VAC	230 VAC
Motor duty		
Full load	10.2	5.1
Locked Rotor	61.2	30.6

FIG. NO.	PRICE
8858	

BRASS COMPRESSION NUT



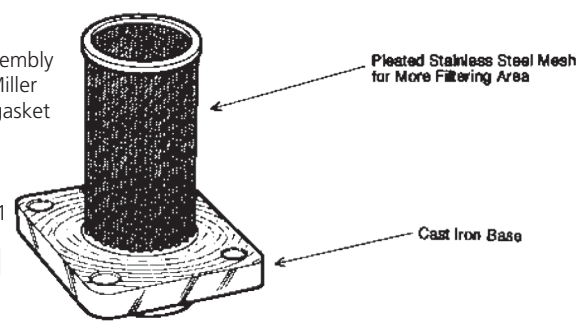
MP-296
Brass Compression Nut
Catalog #66-133
Part #318700
Used in 67

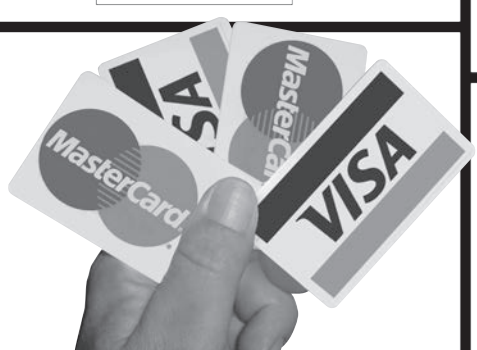
FIG. NO.	PRICE
41424	

STRAINER BASKET ASSEMBLY

MP-290
Strainer Basket Assembly
For McDonnell & Miller
Boxed with M-38 gasket and 4 bolts
Catalog #101-38
Part #8997
Used in 37, 51, 101

FIG. NO.	PRICE
8997	





DUFF ACCEPTS VISA & MASTERCARD!

BRASS TUBE



FIG. NO.	PRICE
41423	

MP-297
Brass Tube
Catalog #66-35
Part #41423
Used in 67

MCDONNELL MILLER REPLACEMENT PARTS

DUFF HAS A VERY LARGE INVENTORY OF ORIGINAL EQUIPMENT PARTS IN STOCK AND READY FOR IMMEDIATE SHIPMENT!

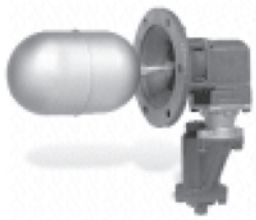
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

MCDONNEL & MILLER



Feeder cut-off combination for closed heating system steam boilers up to 5000 sf. **Model 47-2.**

FIG. NO.	PRICE
8840	



Make-up water feeder, for boiler receiver tanks, direct mounting eliminates need for equalizing connections. **Model 21.**

FIG. NO.	PRICE
20050	



Feeder cut-off combination - larger feeding capacity than #8840. For steam and hot water boilers. **Model 51-2.**

FIG. NO.	PRICE
8850	



Make-up water feeder, for low pressure steam boilers, float operated, integral strainer monel seat, maximum water supply pressure 100psig maximum boiler pressure 25 psig. **Model 25A.**

FIG. NO.	PRICE
8856	



Feeder cut-off combination for higher pressure service, up to 75 lbs. for steam and hot water. **Model 53-2.**

FIG. NO.	PRICE
25697	



Low water fuel cut-off for low pressure steam boilers. For "quick Hook-up" in gauge glass tappings. **Model 67.**

FIG. NO.	PRICE
8872	



Low water fuel cut-off for 1" equalizing pipe installation on low pressure steam boilers. **Model 61.**

FIG. NO.	PRICE
8878	



Test-N-Check valves for hot water boilers simplifies ASME, CSD 1-a codes mandated testing of low water cut offs by eliminating the need to drain boiler. **Model TC-4.**

FIG. NO.	PRICE
8930	



Low water fuel cut-off for hot water space heating boilers up to 50 lbs. pressure. **Model 63.**

FIG. NO.	PRICE
8918	



Low water fuel cut-off for installation in 2 1/2" tapping provided on some hot water boilers. **Model 764.**

FIG. NO.	PRICE
22176	



Pump control, cut-off and alarm for boilers of any size up to 150 psi. **Model 150-S.**

FIG. NO.	PRICE
63833	



Pump control, cut-off and alarm - like #8909 but with integral water column type body. **Model 157-S.**

FIG. NO.	PRICE
63835	



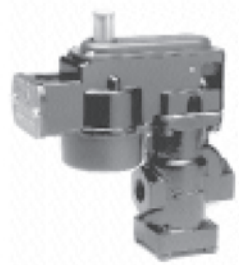
Probe type low water cut off. Modern electronic circuitry to sense the level of a conductive liquid within a vessel. **Mode PS-801-U-120V.**

FIG. NO.	PRICE
44767	



Uni-match electronic flow controlled fueler. **Model WF-2U-120V.**

FIG. NO.	PRICE
44477	



Electronic water feeder for systems up to 5000 sq ft cap. **Model 101A-120V.**

FIG. NO.	PRICE
8852	

FLOW SWITCHES



NEMA 4X rated flow switch for general purpose applications with environmental exposure, or those requiring a water tight, dust tight enclosure. **Model FS8W.**

FIG. NO.	PRICE
19553	



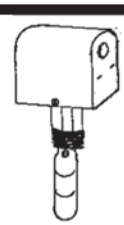
Flow switch for heavy duty service. Brass or stainless steel construction. Explosion proof and vandal-proof models. Pressure to 1000 psi. **Model FS7-4.**

FIG. NO.	PRICE
35671	



Flow switch combines low-flow responses with large flow-thru capacity. Max pressure, 100 psi. **Model F-S-1.**

FIG. NO.	PRICE
8931	



Liquid Flow Switch. **Model FS4-3.**

FIG. NO.	PRICE
8932	



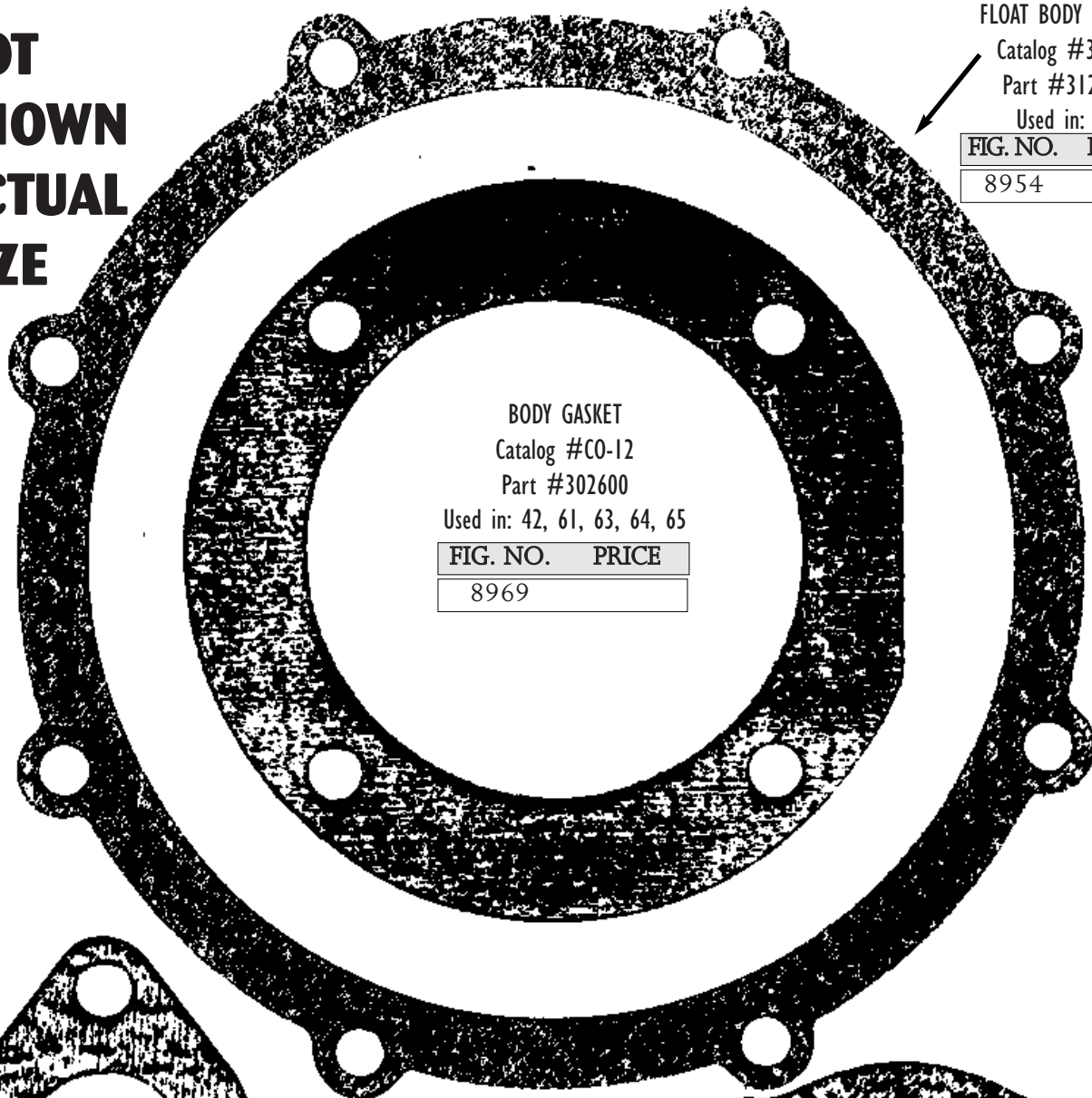
Low Water Cut-Off (Water Boilers) Model RB-122E

FIG. NO.	PRICE
8925	

CALL DUFF FIRST FOR ALL YOUR MCDONNEL MILLER REQUIREMENTS!

MCDONNELL MILLER REPLACEMENT GASKETS

NOT SHOWN ACTUAL SIZE



FLOAT BODY GASKET
Catalog #37-26
Part #312700
Used in: 47

FIG. NO.	PRICE
8954	

BODY GASKET
Catalog #CO-12
Part #302600
Used in: 42, 61, 63, 64, 65

FIG. NO.	PRICE
8969	

GASKET
Cat #37-28
Part #312900
Used In:53, 3155, 21, 25a, 51

FIG. NO.	PRICE
8957	

GASKET
Cat #CO-11
Part #302500
Used In: 63

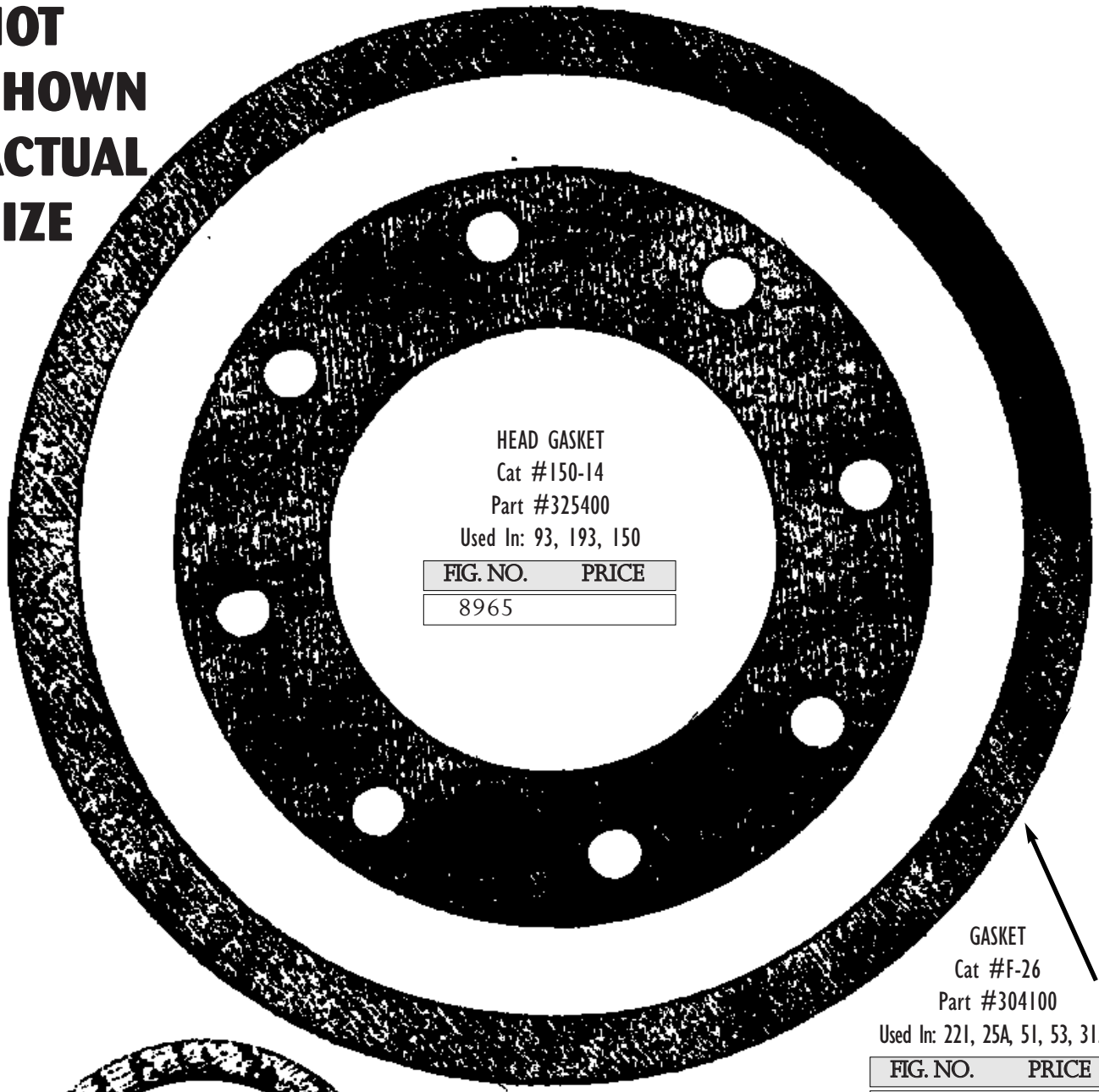
FIG. NO.	PRICE
8968	

GASKET
Cat #21-12
Part #310800
Used In: 21

FIG. NO.	PRICE
8951	

MCDONNELL MILLER REPLACEMENT GASKETS

NOT SHOWN ACTUAL SIZE



HEAD GASKET
Cat #150-14
Part #325400
Used In: 93, 193, 150

FIG. NO.	PRICE
8965	

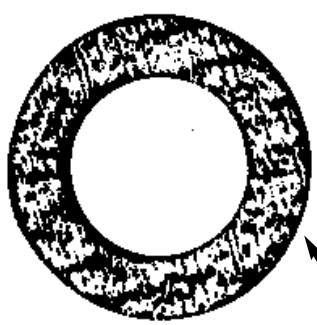
GASKET
Cat #F-26
Part #304100
Used In: 221, 25A, 51, 53, 3155

FIG. NO.	PRICE
8971	



VALVE BRACKET GASKET
Cat #37-27
Part #312800
Used In: 47, 51, 53, 3155

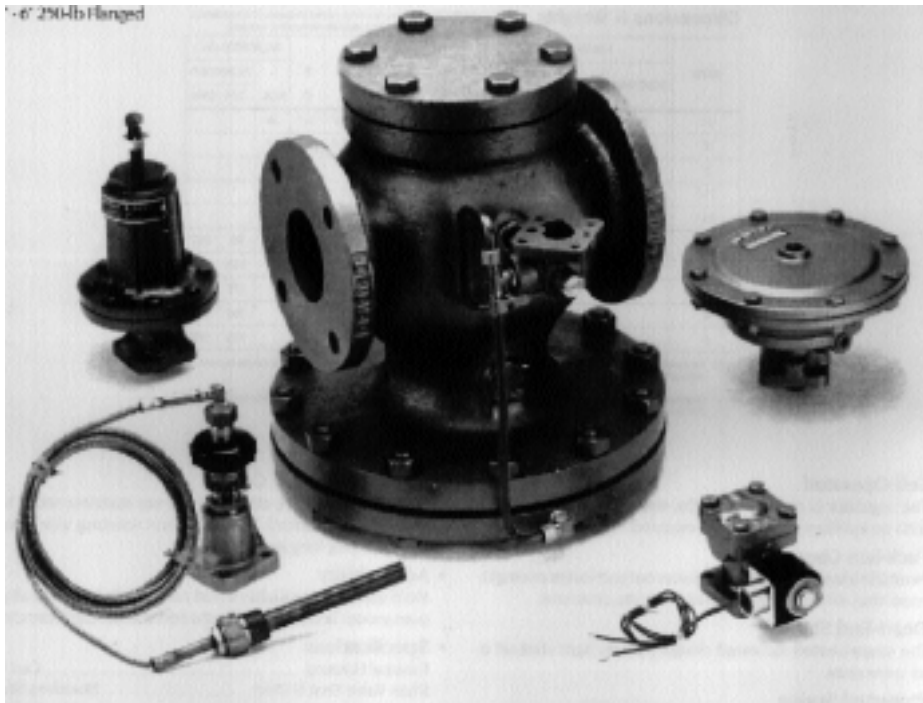
FIG. NO.	PRICE
8955	



BELLOW BASE GASKET
Cat #150-9
Part #325300
Used In: 42, 150

FIG. NO.	PRICE
8962	

STEAM REGULATORS



WATSON McDANIEL PILOT OPERATED REGULATORS

PILOTS

- Pressure
- Temperature
- Solenoid
- Air
- Back pressure
- Pneumatic temperature controller
- Electronic timing
- Any 3 combinations above per main valve

MAIN VALVES

- 1/2"-2" screwed
- 2"-6" 125-lb flanged
- 2"-6" 250-lb flanged

One main valve plus pilot or combination of pilots will perform pressure regulation, temperature regulation, solenoid regulation, back pressure regulation, pressure and temperature regulation, pressure, temperature, solenoid regulation, pressure/solenoid regulator, temperature/solenoid regulator, pneumotor temperature controller, air pilot, electronic timing control.

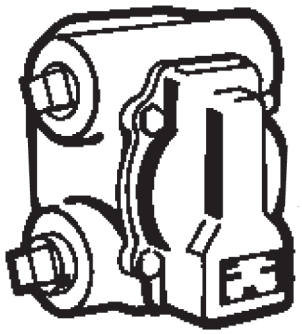
PRESSURE	TEMPERATURE		BACK PRESSURE
3-25 psig yellow spring	60-120^{O}F	100-160^{O}F	10-25 psig
20-100 psig blue spring	120-180^{O}F	160-220^{O}F	20-100 psig
80-200 psig red spring	160-220^{O}F		80-200 psig

AIR PILOT		PNEUMATIC TEMP CONTROLLER	SOLENOID	
3-35 lb	1:1	PTL-E7 50-350oF	0-180 psig	120 volt
3-100 lb	4:1	PTR-E8 0-300oF	180-250 psig	120 volt
20-200 lb	6:1		Special 24 volt available	

Main valves available 1/2"thru 2"threaded 250 psig @ 450 ^{O}F
2"thru 6"125 lb flanged 250 lb flanged

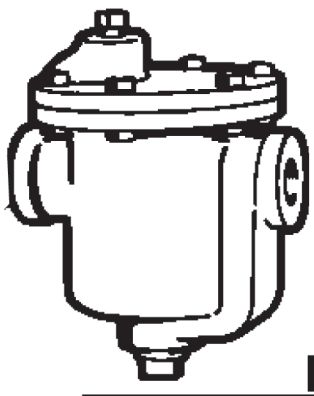
CALL OUR HEATING EXPERTS FOR PRICING AND AVAILABILITY!

STEAM TRAPS



FLOAT & THERMOSTATIC STEAM TRAP - Designed to freely remove large quantities of condensate. For use on: Unit & space heaters, water heaters, converters, pressing machines, steam process equipment, draining mains & risers - low pressure, heat exchangers, coils. Features noiseless operation, in-line servicing, two side inlets & outlets - easy installation, valve\, seat, float & air vent - stainless steel.

	RANGE							
	15LB.		30 LB.		75 LB.		125 LB.	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
3/4	8924		35680		42541		8947	
1	8929		35681		42542		—	
1 1/4	8941		44772		42543		—	
1 1/2	8945		47233		42544		—	
2	8946		47234		47235		—	



INVERTED BUCKET STEAM TRAPS - Recommended for all services where the most important requirements are overall operating efficiency, freedom from maintenance, and long, trouble-free service life. Designed for pressing machines, tire molds, cookers, unit heaters, high-pressure drips, dryers, laundry equipment. Features only 2 moving parts, heat-treated stainless steel valve & seats, free-floating & frictionless valve lever assembly. All working part are attached to cover for in-line service.

	RANGE													
	15LB.		30 LB.		75 LB.		125 LB.		150 LB.		200 LB.		250 LB.	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
1/2	8983		47243		47244		47245		47246		—		—	
3/4	47247		47248		47249		47250		47251		—		—	
1	47245		47257		47259		47260		—		—		—	
1 1/4	—		8987		47261		47262		47263		47264		47265	
1 1/2	—		47266		47267		47268		47269		47270		47271	

TURBO DISC TRAP - Designed to remove condensate and air automatically from steam lines. Freeze-proof design can be easily achieved. Typical uses are: Sterilizers, pressing machines, tanks, tracer steam heating lines, industrial processing equipment, small dryers, high-pressure drips. Features: Stainless steel, excellent capability for handling light to medium loads, works efficiently in any position, snap-opening provides purging action in unit being drained, compact for easy installation. The disc trap uses the higher kinetic energy of flash steam over water to close the trap with static pressure.



SIZE	FIG. NO.	PRICE
3/8	47880	
1/2	48539	
3/4	49272	
1	49273	

STEAM RADIATOR TRAPS



NO. 17C Low pressure traps. Max operating pressure 25 PSI. 1/2"x 1/2"Angle.

FIG. NO.	SIZE
7632	1/2"
262591	3/4"



NO. 17C Swivel pattern. 1/2"X 1/2". Max 25 PSI

FIG. NO.	PRICE
7634	



NO. 17C VERTICAL PATTERN. 1/2"x 1/2" vertical. Max 25 LB PSI.

FIG. NO.	PRICE
7633	



NO. 8 TRAP-1/2"x1/2" angle pattern. All bronze body, brass cap and unions. The thermostat is of a non-corrosive alloy to give long life under actual service conditions. The thermostat and seat are renewable. Seat and pin are stainless steel. Max 50 lbs.

FIG. NO.	PRICE
7638	



NO. 9 TRAP-3/4"x3/4" or 1"x1" angle pattern only. All bronze body, brass cap and unions. The thermostat is of a non-corrosive alloy to give long life under actual service conditions. The thermostats and seats are renewable. Seat and pins are stainless steel. Max 50 lbs.

SIZE	FIG. NO.	PRICE
3/4	—	
1	7637	



NO. 8C ANGLE STEAM TRAP 1/2"-3/4" pipe connections. Body, cap nut and tailpiece are of high quality brass. Seat and thermostat are renewable. The thermostat, pin and seat are constructed of a non-corrosive alloy to give long life under actual service conditions. Stainless steel pin and seat available. Max 25 PSI.

FIG. NO.	SIZE
7638	1/2"
7635	3/4"



NO 8C STRAIGHTWAY STEAM TRAP. 3/4" pipe connection. For radiator or convector locations which will not permit the use of an angle trap. Body, cap, nut and tailpiece are of high quality brass. Thermostat, pin and set are constructed of a non-corrosive alloy for maximum life under actual service conditions. Seat and thermostat renewable. Stainless steel pin and seat available. Max 25 LBS.

FIG. NO.	PRICE
7636	



NO. 9C ANGLE STEAM TRAP - 1" pipe connections. Body, cap, nut and tailpiece are of high quality brass. Seat and thermostat are renewable. The thermostat, pin and seat are constructed of a non-corrosive alloy to give long life under actual service conditions. Stainless steel pin and seat available. Max 25 LBS.

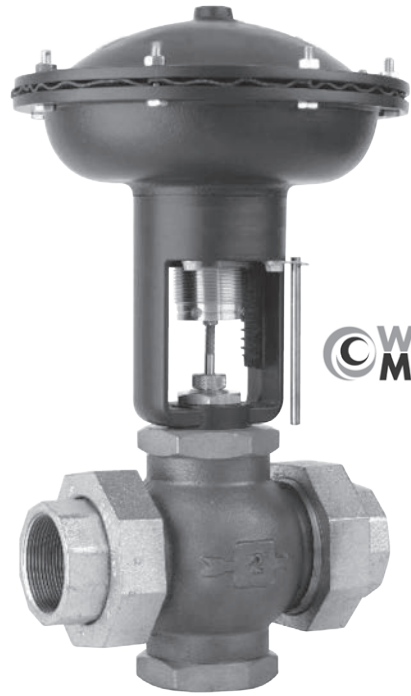
FIG. NO.	PRICE
7637	

Hoffman REPAIR KITS

MODEL	FIG. NO.	PRICE
17C	7647	

REGULATORS

Watson McDaniel W910 Series Compact Control Valve



Pneumatic/Diaphragm Actuated - Watson McDaniel Pneumatic Actuators are direct acting and utilize an air signal from an external control device to create a modulating control action. The force of the air signal is received into the actuator through a top port and distributed across the full area of the actuator's diaphragm. The diaphragm presses down on the diaphragm plate and spring return assembly, which then moves the valve stem and plug assembly downward to stroke the valve. This actuator will move to a stem-out position in the event of air signal failure. The choice of valve action (stem-In-To-Close or stem-In-To-Open) will determine its signal failure position. Available ½" through 4", with either union or flanged connections, as a 2-way or 3-way valve.



Watson McDaniel (Style O) Pressure Reducing Valve

Good for Steam



Watson McDaniel

The "O" Series Self-Contained Pressure Regulating Valves are used for reducing pressure in steam, air, and water systems. Commonly used in heating and other process applications. For sizes 1-1/4" through 2", call Duff.

SIZE	RANGE	FIG. NO.	PRICE
1/2	0-10	55610	
1/2	10-50	55612	
1/2	40-100	55613	
1/2	100-200	55620	
3/4	0-10	55615	
3/4	10-50	55617	
3/4	40-100	55618	
3/4	100-200	55619	
1	0-10	74792	
1	10-30	74793	
1	30-130	73875	

CALL FOR WATER AND AIR APPLICATIONS, OTHER SIZES AND RANGES READILY AVAILABLE!



SUCTION TEE

Cast iron, bronze or stainless steel construction.

APPLICATIONS

The suction tee is a specialized type of pipe fitting that is used for: Blending, Agitation, Recirculation, Mixing, Aeration, Heating. Sizes 1/2" to 3".

The operation medium, under pressure, enters the suction thee through a convergent nozzle into the suction chamber. This action increases the velocity of the operating medium as it leaves the nozzle and lowers the pressure in the suction chamber. This causes the medium in the suction system to flow through the suction tee.

TEMPERATURE REGULATORS

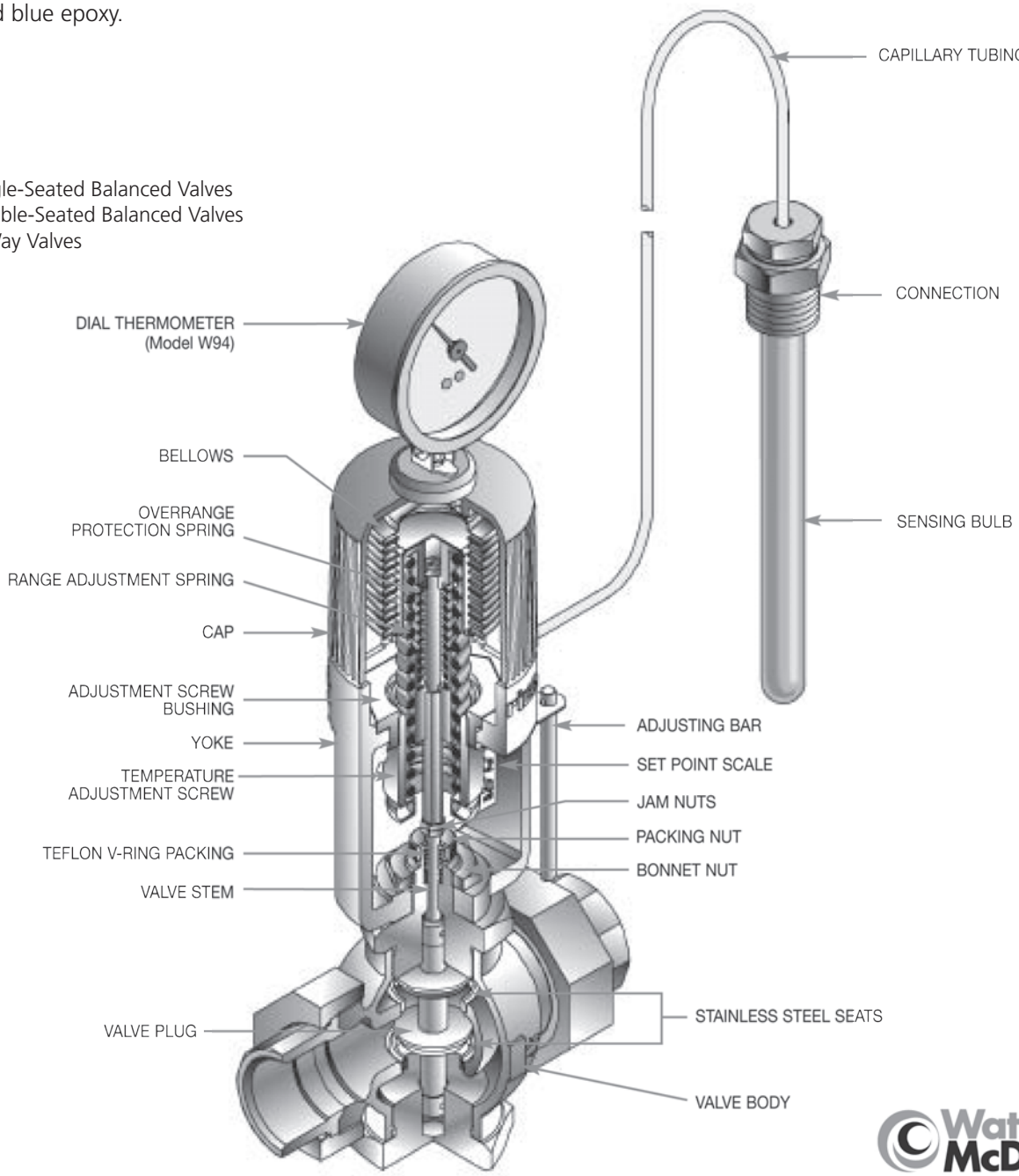
W91/W94 Series
Self-Operated Temperature Regulators

Housing Assembly
The housing consists of a cap and yoke constructed from precision die cast aluminum. This assembly ensures permanent alignment with the valve body, while protecting the bellows assembly. The yoke includes a set point scale used to reference the setting of the temperature adjustment screw. The entire housing is finished in a corrosion resistant, baked blue epoxy.

Direct-Acting – HEATING
Direct-Acting actuators are designed to move the valve stem closed (in-to-close) as the control signal (temperature) increases.

Reverse-Acting – COOLING
Reverse-Acting actuators are designed to move the valve stem open (in-to-open) as the control signal (temperature) increases.

- Single-Seated Balanced Valves
- Double-Seated Balanced Valves
- 3-Way Valves



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

RELIEF VALVES



TYPE R ADJUSTABLE RELIEF VALVE. Recommended for unloading operatings on oil, chemical, non-corrosive substances and water lines. Used for pump bypass relief, back pressure relief, open tank discharging and pump closing relief. Adjustment is done by removing the cap and adjusting the regulating screw. Installed in an upright, vertical position. **CAUTION: SHOULD NOT BE USED AS EMERGENCY OR SAFETY RELIEF VALVE.**

Found in the following applications:

Water pump bypass
- Irrigation
- Sprinkler system on golf courses
- Fountains
- Fire protection systems

Fuel Oil Pump
- Bypass on commercial systems or large residential systems.

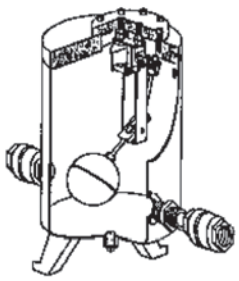
	5-35 RANGE		25-100 RANGE		75-300 RANGE	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
1/2	9066		47308		47309	
3/4	9069		47310		47311	
1	9073		47312		47313	
1 1/4	9076		47314		47315	
1 1/2	9078		47316		47317	
2	9081		47318		47319	
3	9087		47322		47323	



STYLE B PRESSURE REGULATING VALVE. Tight closing for dead end service for **water or air**. Single seated, balanced. For processing lines or wherever low-pressure equipment is subject to high-pressure damage. Recommended for industrial plant, apartment houses, office buildings, schools, underground water distribution systems. Screwed bronze body for 1/2" to 2 1/2". Flanged cast iron body for 3" to 8". Balanced pressure regulator insuring accurate control even when incoming pressure fluctuates.

	5-35 RANGE		20-70 RANGE		40-125 RANGE	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
1 1/4	9017		47278		47279	
1 1/2	9018		47280		47281	
2	9019		47282		47283	
2 1/2	9020		47284		47285	
3	9022		47286		47287	
4	9024		47288		47289	

PRESSURE MOTIVE PUMPS



APPLICATIONS

The pressure motive pump (PMP) is recommended when liquids must be moved to a higher elevation, higher pressure or great distances. Typical applications are:
Condensate from vacuum or low pressure system, Condensate systems with high back pressure, Any steam condensing equipment (ie, heat exchangers, condensers, turbines), Remote installation (ie. tanks farms) where electricity is not available, Where electricity is prohibited (ie some underground steam distribution systems, tank farms, etc.), Submersible, hard-to-get-at areas with fluids such as acids.

The series PUMP uses a spring-loaded float mechanism inside a pump, body to control liquid removal. When the pump body is filled with liquid, which enters through a check valve, the vent valve at the top is open and the motive gas (steam or air) supply valve is closed.
When the spring loaded mechanism reaches the trip point and snaps over the center, the vent valve closes and the gas supply valve opens simultaneously. As the liquid in the body is pumped out through the outlet check valve, the float starts to drop. When the float reaches the critical point, the mechanism snaps over the center, the gas supply valve closes, and the vent valve opens, allowing the filling process to repeat.

SIZES: 1x1, 1 1/2 x 1, 2 x 1, 2 x 2, 3 x 2

Series WFTC, WFTK

Float & Thermostatic Steam Trap Cover Assemblies & Repair Kits

Sizes: 3/4" – 2" (20 – 50mm)

Series WFTC, WFTK Float & Thermostatic Steam Trap Cover Assemblies & Repair Kits are designed for use on Watts and select Spirax-Sarco F&T steam traps.



WFTC



WFTK

Features

- Quick, easy and economical trap maintenance
- Simplifies and standardizes inventory
- All stainless steel corrosion resistant internal parts

Models

WFTC Cover assembly consists of a complete factory assembled unit which simply bolts on for ease of repair. No pipe connections need to be broken. There will be no reduction in the original trap's capacity.

WFTK Designed for large traps that have piping connections into the cover plate. To avoid the "breaking" of piping connections, these kits are installed by removing the trap body. Each complete kit contains the thermostatic air vent, float, linkage, valve, seat and body gasket. These kits were designed to assure ease of installation.

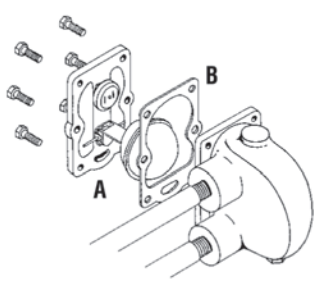
Dimensions – Weights

MODEL	MANUFACTURERS		LINE SIZE		WEIGHT	
	Model	*Trap*	*in.*	*mm*	*lbs.*	*kgs.*
3/4-WFTC-15	Spirax-Sarco	FT-15	3/4	20	3.0	6.6
3/4-WFTC-30	Spirax-Sarco	FT-30	3/4	20	3.0	6.6
1-WFTC-15	Spirax-Sarco	FT-15	1	25	3.0	6.6
1-WFTC-30	Spirax-Sarco	FT-30	1	25	3.0	6.6
1 1/4-WFTC-15	Spirax-Sarco	FT-15	1 1/4	32	3.0	6.6
1 1/4-WFTC-30	Spirax-Sarco	FT-30	1 1/4	32	3.0	6.6
1 1/2-WFTK-15	Spirax-Sarco	FT-15	1 1/2	40	1.5	3.3
1 1/2-WFTK-30	Spirax-Sarco	FT-30	1 1/2	40	1.5	3.3
2-WFTK-15	Spirax-Sarco	FT-15	2	50	1.5	3.3
2-WFTK-30	Spirax-Sarco	FT-30	2	50	1.5	3.3

For models of 75 or 125psi, please contact your DUFF Representative for ordering information.

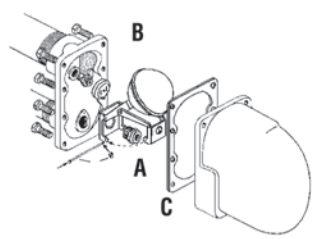
WFTC

Series WFTC cover assemblies include the cast iron cover, condensate valve assembly, float and linkage, thermostatic vent in one factory assembled unit (A) and cover gasket (B).



WFTK

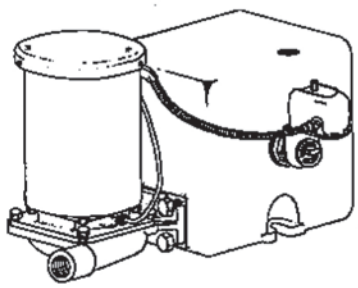
Series WFTK repair kits include condensate valve assembly - float and linkage (A), thermostatic vent and seat (B), and cover gasket (C).



spirax sarco Hoffman WATTS® REGULATOR

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

STEAM CONDENSATE PUMP



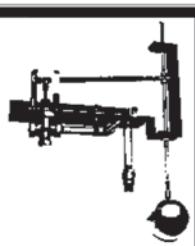
DESCRIPTION	FIG. NO.	PRICE
Pump Motor Assembly	7655	
Seal Kit	7656	
Float Switch	7657	

HOFFMAN WATCHMAN SERIES WC CAST IRON RECEIVER CONDENSATE UNITS - 3500 RPM, 1 phase, 115V Mechanical seal, Cast Iron Receiver warranted against failure due to corrosion for 20 years from date of shipment.

OEM#	FIG.NO.	SYSTEM SQ FT EDR	NUMBER OF PUMPS	DISCH'J PRES (psig)	PUMP CAPACITY (GPM)	RECEIVER CAPACITY (GAL)	DIM	ACC	PRICE
WC-6-20-B	47004	6000	Single	22	9	6	24x20	Float switch	
WC-8-20-B	7659	8000	Single	21	12	9	24x20	Float switch	
WC-12-20-B	119782	12000	Single	20	18	14	26x31	Float switch	
WCD-12-20-B MA	90798	12000	Duplex	20	18	14	26x31	Mechanical Alternator	

AUTOMATIC SUMP DRAINER

Designed to pump liquids from sumps automatically (when a predetermined level is reached), without an outside power source. Most common applications are: Rain & ground water removal in manhole sumps, Draining of sumps in underground steam distribution systems.



HOW IT WORKS

The key piece of equipment in the automatic sump drainer is an ejector (or syphon) pump, which will pump liquid using steam as the operating medium.

3/4", 1", 1 1/4", 1 1/2" available!

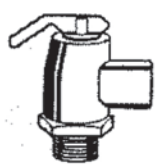
Call today for pricing and availability!



DUFF ACCEPTS VISA & MASTERCARD!



LOW PRESSURE STEAM SAFETY RELIEF VALVE



ASME rated steam safety relief valves up to 450 lbs/hr. for low pressure steam heating equipment up to 15 lbs. Also available with lower setting such as 8 lbs. for pressure cooker requirements, but are not ASME, call us for rating and quotation.
Set at 15#.

SIZE	FIG. NO.	PRICE
3/4	8419	
1	8427	
1 1/4	8430	
1 1/2	8432	
2	8439	
2 1/2	8441	
3	8444	

CONDENSATE REMOVAL PUMPS

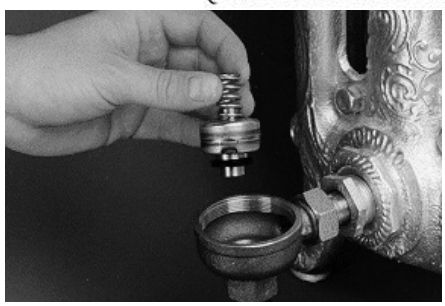


Steam condensate. 2 Gallon cast reservoir. 115/230 volt.

Cap. Sq Ft EDR	Max Steam BTU	Pump Discharge	Pump Cap. GPM	Fig. No.
2000	480000	20	2	9120
SWITCH ASSEMBLY				9122

QUIK-FIX

QUIK-FIX RADIATOR STEAM TRAP REPLACEMENT KITS



Designed so that it could be easily used to rebuild almost any of the popular radiator traps currently in use. Many of the original manufacturers models and parts for steam radiator traps are no longer available. Additionally, as existing heating systems expanded different traps were used creating a spare parts inventory problem. Quik Fix replacement kits address both these situations by offering a kit which induces a thermostatic capsule that is the same for all traps and a simple, easy to install adapter. Once installed, the steam trap operates like new. The Quik Fix kit uses no springs or gaskets, never needs a different cover or uses inaccurate bi-metal wafers.

PRESSURE RATINGS:

For pressures from 25"Hg vacuum to 65 psig
Meets or exceeds capacities according to recommended SHEMA standards for 1/2"and 3/4"size low pressure radiator traps.

FEATURES:

Quick, easy, economical
Simplifies/reduces inventory
Uses existing cover
Stainless steel capsule
Stainless steel adapters
3 year warranty

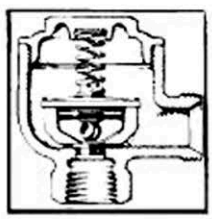


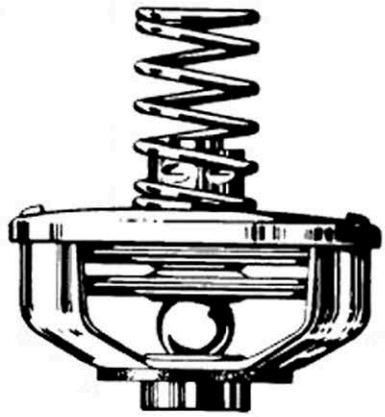
MODEL #	MANUF	1/2" TRAPS	3/4" TRAPS	FIG. NO.
TRAPS WITH REPLACEABLE SETS				
QF-1	Warren Webster	O2H, 02V, 502, 502V-1, 702, 702V-1, 712, 902V	503,703,713	58984
QF-2	Warren Webster	512, 512H-1, 512G-1, 522, 522H,522HB, 712HB, 722HB	513,533,5231,523H-1, 5236-1 713HB, 733, 733HB, 723A	58986
QF-3	Warren Webster	902H		58988
QF-4	Warren Webster		913A, 913H	58989
QF-5	Sarco	E, H, S65, TB25, TS25, T65	E, H, S65, TB25, TS25, T65	58990
	Erwel	R30		
	Illinois	1G	3GH	
	Trane	B1		
	Marsh Monash-Younker	1 30		
QF-6	Hoffman	17C	8C	58133
QF-14	Marsh		2-4, 2-7	59005
QF-15	Sterling	7-50A		59006
QF-16	Trane Dunham-Bush		B3 TH2A	59007
TRAPS WITH INTEGRAL SEATS				
QF-7	Dunham-Bush	1B, 1C, 1E, V1B		58997
	Trane	B2		
	Sarco		T25	
QF-8	Sarco Hoffman	T25 8		58998
QF-9	Illinois	1T,2T		59000
QF-10	Barnes & Jones	122A,122S,3045		59001
QF-11	Barnes & Jones		134A, 134S	59002
QF-12	Trane	B1		59003
QF-13	Trane		B3	59004
REPLACEMENT AIR VENTS FOR F&T TRAPS (15 AND 30 PSI)				
QF-25	Sarco		Series FT 3/4"-2"	59008
QF-26	Trane		686/55AL 3/4"-1"	59009

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

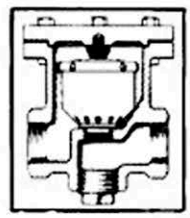
STEAM TRAP REPAIRS

Barnes & Jones INC.





Barnes & Jones INC.



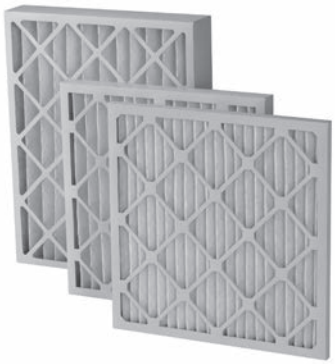
BARNES & JONES REPLACEMENT INTERIORS (TYPE "A" CAGE UNITS) FOR VARIOUS OEM RADIATOR STEAM TRAPS

Renew worn-out thermostatic steam traps the easy and efficient way by installing Barnes & Jones cage units in your PRESENT TRAP BODIES. The cage unit contains all working parts, plug, element & seat in one compact unit, correctly and permanently calibrated before leaving the factory. Barnes & Jones cage units are made for practically any make of thermostatic trap. Easy to install: ready to drop into your trap with no tapping or machining necessary.

MFG NO.	SIZE	INTERIOR REPLACEMENTS FOR:
FOR MANUFACTURER: BARNES & JONES		
1721	1/2"	122A, 122S, 12, 3045
1929	3/4"	134A, 134S
FOR MANUFACTURER: DUNHAM		
1950/1950C	1/2"	1(1A, 1B, 1C, 1D, 1E)
1990	1/2"	2 (SMALL BODY), 2E, 2A, 2B, 3A & #20 F&T
FOR MANUFACTURER: HOFFMAN		
3500	1/2"	17C, 17D
3507	3/4"	8C
FOR MANUFACTURER: ILLINOIS		
2818	1/2"	6G, 7G, 8G, 9G
2818/2818C	1"-2"	6G, 7G, 8G, 9G
FOR MANUFACTURER: SARCO		
4117	1/2"	H (INTEGRAL OR REMOV SEAT)
FOR MANUFACTURER: TRANE		
4320/4320C	1/2"	B-1 (INTEGRAL BELLOWS)
4221	1/2"	B-1 (VERTICAL)
1965	1/2"	B-2 (REMOV BELLOWS)
4270	1/2"	B-1 (INTEGRAL BELLOWS REMOVABLE SEAT)
4270/4270C	1/2"	B-1 (INTEGRAL BELLOWS REMOVABLE SEAT)
FOR MANUFACTURER: WARREN WEBSTER		
1672	1/2"	02H
1764	1/2"	712

AIR FILTERS

PLEATED AIR FILTERS



PLEATED AIR FILTERS offer the following advantages over conventional filters;

*Diagonal supports are designed for maximum open area while providing excellent structural stability in heavy dirt loading and high humidity.

*V-Shaped pleat design that provides the same open area on the air intake and air exiting sides for low airflow resistance.

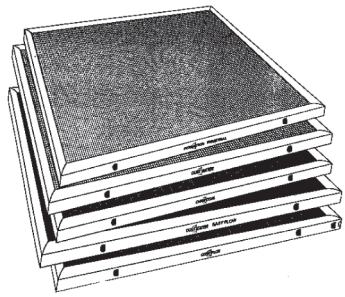
*Heavy gauge beverage board that prevents moisture breakdown.

*Adhesives that are designed to maintain stability in normal temperature and humidity applications. Media-to-frame bond prevents air by-pass and maintains filter integrity over the life of the filter.

*The media is a blend of synthetic and natural fibers offering high dust-holding capacity and high efficiency.

ALL SIZES AVAILABLE!
SOLD IN CASE QUANTITY ONLY
PLEASE CALL FOR PRICING AND AVAILABILITY!

HIGH EFFICIENCY ELECTROSTATIC AIR FILTERS



One filter can't do every job, so DUFF offers a wide variety of filters for specific applications.

Industrial - for commercial/industrial applications.
HFA - for areas with the toughest air filtration requirements.
Charcoal - for odor and fume removal.
Dust Eater - allergy filter for homes and special air filtering needs.
Filter for wall and window A/C units
Arrestance efficiencies form 50-96%
*Permanent, washable. Low resistance to air flow. Requires no electrical connections or modifications of HVAC system.
*Standard sizes available immediately:
special sizes shipped within a few days.
Call today for your pricing and availability!

ALL SIZES AVAILABLE!
SOLD IN CASE QUANTITY ONLY
PLEASE CALL FOR PRICING AND AVAILABILITY!

ELECTRONIC AIR CLEANERS

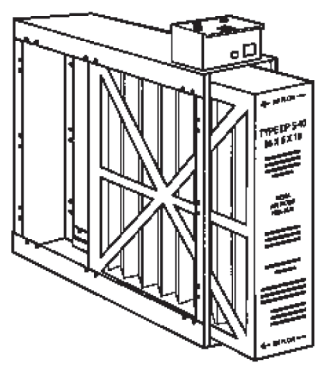
Many Styles-Designs to fit your needs

~

Whole house, offices, schools, restaraunts & bars, duct mounted, ceiling mounted.



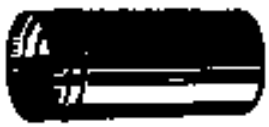
MEDIA FILTERS AND REPLACEMENT ELEMENTS



DESCRIPTION	FIG. NO.	PRICE
Research Products	—	
April Aire	48844	
General AC-I	—	
Trion Air Bear	—	
Trion Air Bear TM	—	

SMOKE PIPE

ALSO AVAILABLE IN 5' OR 10' LENGTHS!



Galvanized Smoke Pipe.
2 Foot Sections.

SIZE	FIG. NO.	PRICE
3"	3901	
4"	3902	
5"	3903	
6"	3904	
7"	3905	
8"	3906	
9"	3907	
10"	3908	
12"	3909	
14"	3910	



Smoke Pipe Reducers

SIZE	FIG. NO.	PRICE	SIZE	FIG. NO.	PRICE
4X3	14791		8X7	14805	
5X3	14792		9X6	14808	
5X4	14793		9X7	14809	
6X3	14794		9X8	14811	
6X4	14795		10X6	14812	
6X5	14796		10X7	14813	
7X3	14797		10X8	14814	
7X4	14798		10X9	14815	
7X5	14799		12X8	40023	
7X6	14800		12X9	14816	
8X4	14802		12X10	14817	
8X5	14803		14X10	14818	
8X6	14804		14X12	52341	



CASING COLLARS
Flat collars with crimp

SIZE	FIG. NO.	PRICE
5"	45265	
6"	45266	
7"	45267	
8"	45268	



Smoke pipe - adjustable elbow.

SIZE	FIG. NO.	PRICE
3"	3891	
4"	3892	
5"	3893	
6"	3894	
7"	3895	
8"	3896	
9"	3897	
10"	3898	
12"	3899	
14"	3900	
18"	37996	



Shanty Cap

SIZE	FIG. NO.	PRICE
3"	3911	
4"	3912	
5"	3913	
6"	3914	
7"	3915	
8"	3916	
9"	3917	
10"	3918	
12"	3919	

ZIP-IN SCREWS





Smoke Pipe Tee

SIZE	FIG. NO.	PRICE
3"	3881	
4"	3882	
5"	3883	
6"	3884	
7"	3885	
8"	3886	
9"	3887	
10"	3888	
12"	3889	
14"	3890	



Smoke Pipe CO Cap

SIZE	FIG. NO.	PRICE
3"	3920	
4"	3921	
5"	3922	
6"	3923	
7"	3924	
8"	3925	
9"	3926	
10"	3927	
12"	3928	
16"	36244	



Smoke Pipe Y

SIZE	FIG. NO.	PRICE
3"	10837	
4"	10839	
5"	14155	
6"	10846	
7"	10851	
8"	14819	
9"	10858	
10"	10859	



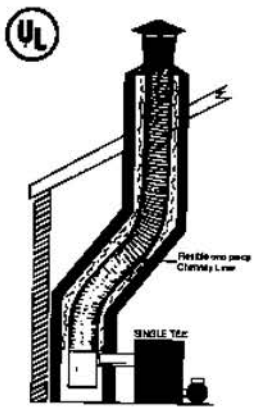
Smoke Pipe Damper

SIZE	FIG. NO.	PRICE
4"	14456	
5"	14457	
6"	14458	
7"	14459	
8"	14460	
9"	14461	
10"	14462	
12"	14463	

SIZE	CTN QTY	FIG. NO.	PRICE EA
6X3/8	100	16176	
7X1/2	100	16178	
8X1/2	100	16179	
8X3/4	100	16181	
8X1	100	16182	
8X1 1/2	100	16183	
10X12	100	16186	

HEATING ACCESSORIES

ALL FUEL STAINLESS STEEL AND ALUMINUM CHIMNEY LINER KIT



READY FOR IMMEDIATE DELIVERY

CALL WITH YOUR SPECIFICATIONS!

ALL FUEL CHIMNEY



For use with low-heat appliances. Sized 6" to 12"

Call now for specs!

TYPE B GAS VENT

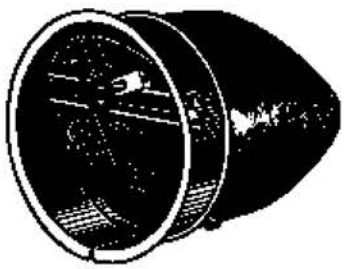


For venting all listed gas appliances having draft hoods. Sized 3" to 8". Oval and round.

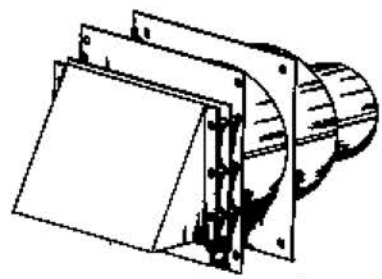
Call now for specs!

DRAFT REGULATOR

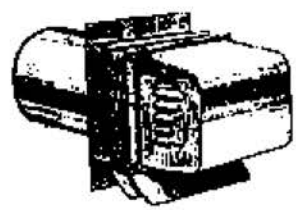
For oil and solid fuel



SIZE	FIG. NO.	PRICE
5"	9602	
6"	3942	
7"	3943	
8"	3944	
9"	3945	
10"	3946	
12"	3947	

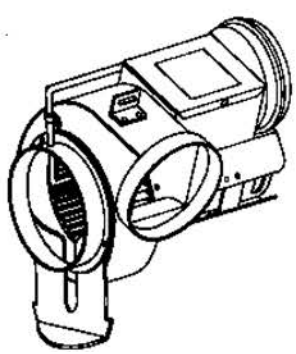


FIELD TYPE SWH SIDE WALL VENT HOOD Designed for standard vent pipe and Class B type double wall connection to be used inside wall venting of oil or gas fired heating systems. Provides proper clearances between flue-gas stream and wall combustibles. Available for immediate delivery in 3", 4", 5" 6" and 8" sizes.



FIELD POWER VENTERS MODEL SWG Our new, patented power venter design is a giant step forward in the evolution of sidewall venting. It's the safe, economical, easy to install answer to power venting.

The SWG series from field controls combines the fan, motor and vent hood into one complete and compact unit that's easily installed outside the building, so noise and vibration are virtually eliminated from the occupied areas. Venting with negative pressure, the SWG prevents possible flue gas leakage from the venting system. Plus, the unique design allows for easy use of outside air for direct vent appliances. Available for immediate delivery in 3", 4", 5", 6", 7", and 8" sizes.



FIELD POWER VENTERS MODELS PVAE-1, PVAE-2, PVAE-3

For side wall venting of natural gas, LP gas or No. 2 fuel oil furnaces, boilers, water heaters, and unit heaters. Produces constant flow for higher combustion efficiency and safe flue gas removal. This significant fuel and installation savings device has qualified for listing by ETL Testing Laboratories and provides a positive venting capacity of up to 610,000 BTU/HR.

DUCT



VINYL COVERED FLEXDUCT FLEXIBLE HOSE

Vinyl covered high-tensile steel wire covered with vinyl impregnated fiberglass cloth. Temp range = 0-250oF. Gray canvas with wire. Simple to connect and install.

*Flexible duct connectors
*General purpose venting
*Fume and dust removal
*Drying and cooling
*Plating tank vents
*Oil vapor vents
*25' Coils

LIGHT WEIGHT

SIZE	FIG. NO.	PRICE
3"	14529	
4"	14535	
5"	14537	
6"	14539	
7"	14541	
8"	14543	
9"	14544	
10"	14545	
12"	14548	
14"	14550	

HEAVY DUTY

SIZE	FIG. NO.	PRICE
2"	14464	
2 1/2"	14465	
3"	14466	
4"	14467	
5"	14468	
6"	14469	
7"	14470	
8"	14471	
10"	14473	
12"	14475	
14"	14476	



INSULATED DUCT 25' SECTIONS

Smooth inner core - Air tight
Low to medium operating air pressure
Double thick fiberglass
Silver jacket
Compliance to UL, BOCA, HUD

SIZE	FIG. NO.	PRICE
5"	45269	
6"	45270	
7"	45271	
8"	45272	



FLEXIBLE METAL DUCT

Fits standard sheet metal fittings
Self-supporting
Eliminates Fittings
Excellent air flo
Lightweight aluminum
8' compressed to 30"

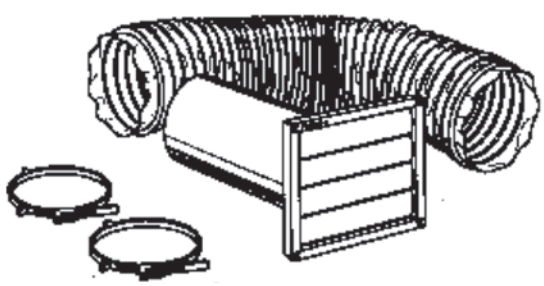
SIZE	FIG. NO.	PRICE
3x8	14551	
4x8	14553	
5x8	14556	
6x8	14558	
7x8	14560	
8x8	14561	
10x8	14563	
12x8	14564	
14x8	14567	
16x8	14568	
18x8	14570	

DUFFNOTE:

For DUCT TAPE, see page 342



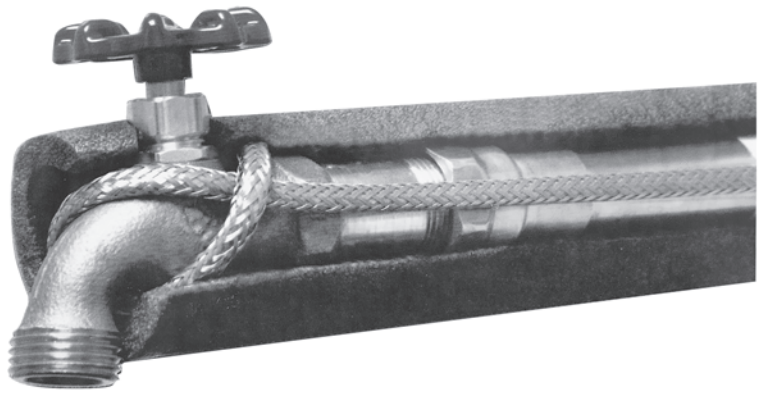
4 IN 1 DRYER VENT KIT



DESCR	FIG. NO.
KIT	3949
3" Hood Only	20765
4" Hood Only	14477
4" Hood with Cage	279940
4" Clamps	14519

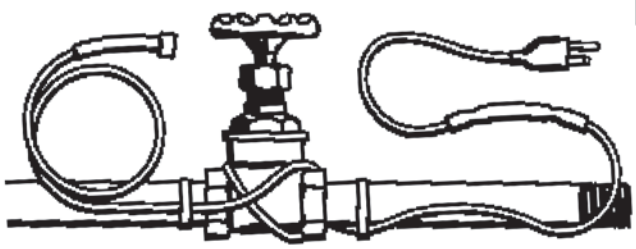
OVER 65 YEARS OF SERVICE

HEAT BY THE FOOT! Unlike conventional "series heaters", FROSTEX is constructed with parallel electrical circuitry. This allows it to be cut to any length without changing its heat output per foot. Specially designed power plug and end cap complete the heater assembly quickly and easily. The heating element in FROSTEX is a continuous core of semi-conductive polymer plastic that varies its electrical resistance with temperature change. Safer, longer lasting and more reliable! Won't overheat, needs NO thermostat, OK for steel, copper and plastic pipe. CUT TO ANY LENGTH.
TRUCK PACK includes; 50' Frostex, 2 Plug kits, 1 applications tape.



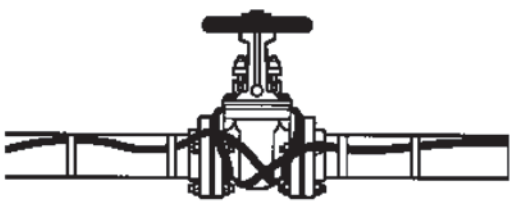
DESCRIPTION	FIG. NO.	PRICE
100' Roll Frostex	9141	
250' Roll Frostex	67758	
Truck Pack	68404	
Plug Kit w/ end seal	64129	
Application Tape	46873	

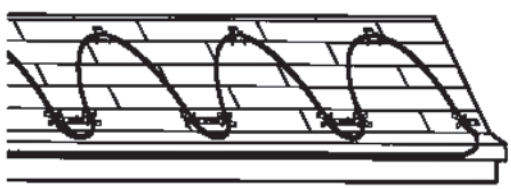
HEAT TAPES Self-regulating heat tape withplug 120 Volt. Packaged ready to use!



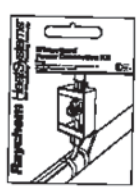
LENGTH	FIG. NO.	PRICE
6'	86077	
12'	51365	
18'	51366	
24'	86082	
50'	51367	

WINTERGUARD WET PIPE HEATING CABLE









For marine, farm, industrial & commercial pipe, ice formations or roofs and to keep drain running free. 120 V. (220 available).
Won't burnout, won't over heat, No thermostat required, OK to overlap, OK for plastic-steel-brass-etc. UL & LSA approved.
TRUCK PACK includes 100 Ft, 2 power ends, 1 splice kit and tee, 1 application tape.

DESCRIPTION	FIG. NO.	PRICE
Per foot	9148	
250' roll	9149	
Truck pack	9150	
Power connection	9151	
Plug in cord	51162	
Splice tee kit	9152	
Tape	9154	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

RUBATEX

ARMAFLEX/RUBATEX - Closed Cell Pipe Insulation.





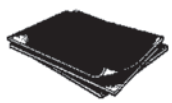
IRON PIPE (SIX FOOT LENGTHS)

DIAMETER	3/8" WALL THICKNESS			1/2" WALL THICKNESS			3/4" WALL THICKNESS			1" WALL THICKNESS	
	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	PRICE PER FOOT
1/4"IPS	13945	480		13956	360		-	-		-	
3/8"IPS	13946	420		13957	306		28593	168		-	
1/2"IPS	13948	306		13959	252		28595	144		-	
3/4"IPS	13949	252		13960	168		28596	120		28627	
1"IPS	13950	168		13961	144		28597	96		56753	
1 1/4"IPS	13951	144		13962	120		28598	96		28609	
1 1/2"IPS	17775	120		17785	120		28619	72		62023	
2"IPS	17776	96		17786	72		28620	54		28631	
2 1/2"IPS	-	-		17787	54		28621	36		28632	
3"IPS	-	-		17788	48		28622	30		62028	
4"IPS	-	-		17790	24		28624	24		62027	

NOMINAL COPPER TUBE (SIX FOOT LENGTHS)

COPPER TUBE SIZE		3/8" WALL THICKNESS			1/2" WALL THICKNESS			3/4" WALL THICKNESS		
OD	NOMINAL	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT
3/8	1/4"CTS	13944	600		-	-		-	-	
1/2	3/8"CTS	13945	480		13956	360		-	-	
5/8	1/2"CTS	13946	420		13957	306		28593	168	
3/4	5/8"CTS	13947	336		13958	252			180	
7/8	3/4"CTS	13948	306		13959	252		28595	144	
1 1/8	1"CTS	13949	252		13960	168		28596	120	
1 3/8	1 1/4"CTS	13950	168		13961	144		28597	96	
1 5/8	1 1/2"CTS	13951	144		13962	120		28598	96	
2 1/8	2"CTS	13952	108		13963	96		28599	72	
2 5/8	2 1/2"CTS	13953	72		13964	72		28600	54	
3 1/8	3"CTS	13954	54		13965	48		28601	36	
3 5/8	3 1/2"CTS	-	-		17788	48			30	
4 1/8	4"CTS	-	-		13966	30		28603	24	

RUBATEX SHEETS



SIZE	FIG. NO.	PRICE
1/4X36X48	28634	
1/2X36X48	23980	
3/4X36X48	23981	
1X36X48	28637	



RUBATEX CEMENT

For closed cell insulation

	FIG. NO.	PRICE
PINT	13992	
QUART	14138	

FIBERGLASS PIPE INSULATION



- Peel-off, self-sealing lap means quick & easy installation.
- Clam Shell "split" down center - Easily goes over piping.
- Insulates to 1000° F.
- Order fiberglass pipe insulation tape and tacks to connect and secure the ends of the pipe insulation.
- Outside cover is white Kraft paper, bonded to aluminum foil with fiberglass yarn.
- Sold in 3 foot sections.

Childers White Mastic Weather Barrier Coating



Model No.	Type
69828	CP-10 (2 gal., trowel-on application)
—	CP-11 (2 gal., brush-on application
316294	2" application brush

IRON PIPE (3 Foot Lengths)

IPS DIAMETER	1/2" WALL THICKNESS			1" WALL THICKNESS			1 1/2" WALL THICKNESS			2" WALL THICKNESS		
	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT
3/8"	13887	270		13900	126		-	-		-	-	
1/2"	13888	270		13936	126		61994	84		28564	72	
3/4"	13889	180		13902	126		13915	84		28565	72	
1"	13890	180		13903	90		13916	87		28566	57	
1 1/4"	13930	126		13939	90		13917	72		28567	57	
1 1/2"	13892	126		13905	108		13914	72		28568	57	
2"	13893	90		13906	87		13919	57		28569	36	
2 1/2"	13894	108		13907	72		13920	57		28570	36	
3"	269658	-		13908	57		13921	36		28571	27	
4"	13897	57		13910	36		13923	27		28573	21	
5"	13898	-		13911	27		13924	21		28574	12	
6"	13899	-		13912	21		13925	18		28575	12	
8"	28579	18		20167	12		28586	12		28576	12	
10"	28580	12		28583	12		28587	12		28577	10	
12"	28581	-		28585	12		28588	6		28578	6	

COPPER TUBE (3 Foot Lengths)

COPPER TUBE SIZE		1/2" WALL THICKNESS			1" WALL THICKNESS			1 1/2" WALL THICKNESS			2" WALL THICKNESS		
OD	NOM	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT	FIG. NO.	BOX QTY	PRICE PER FOOT
5/8	1/2"	13887	270		13900	126		-	-		-	-	
7/8	3/4"	13888	270		13936	126		61994	84		28564	72	
1 1/8	1"	13889	180		13902	126		13915	84		28565	72	
1 3/8	1 1/4"	13929	180		13938	90		13916	87				
1 5/8	1 1/2"	13930	126		13939	90		13917	72		-	-	
2 1/8	2"	13931	90		13940	87		38053	57		-	-	
2 5/8	2 1/2"	13932	108		13941	72					-	-	
3 1/8	3"	269656	87		13942	57		-	-		-	-	
4 1/8	4"	13934	72		13943	36		-	-		-	-	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

ZESTON FITTINGS
SIZING CHART FOR PVC FITTING COVERS

BASED ON O.D. PIPE INSULATION CONFORMING TO ASTM STD C-585-76
COMBINATION SHORT & LONG RADIUS FITTING COVERS IN COMPLIANCE WITH ASTM STANDARDS

INSULATION THICKNESS

Iron Pipe Size	1/2"	OCF	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	5 1/2"	6"
3/8" 1/2"	#2 3		#7 7	#9 10	# 12	# 15	#17	#18	#19	WHERE # FITTINGS ARE NOT SHOWN ON THESE CHARTS, GO TO CHART IN THE MAIN CATALOG AND SELECT # FITTING FROM MAX O.D.		
3/4" 1"	4 5	#5	7 9	10 11	12 13	15 15	17 17	18 18	19 19			
1 1/4" 1 1/2"	6 7	7	9 10	12 12	13 15	15 17	17 18	18 19	19 20			
2" 2 1/2"	9 10		11 12	13 15	15 17	17 18	18 19	19 20	20 21	#22 22	#23 23	#23 24
3" 3 1/2"	11 12		13 15	15 17	17 18	18 19	19 20	20 21	21 22	23 23	24 24	25 25
4" 5"	13 15		15 17	17 18	18 19	19 20	20 21	21 22	22 23	24 25	25 26	26 27
6" 8"	17 19		18 20	19 21	20 22	21 23	22 24	23 25	24 26	26 28	27 29	28 30
10" 12"			22 24	23 25	24 26	25 27	26 28	27 29	28 30	30 32	31 34	32 34
14" 16"			25 27	26 28	27 29	28 30	29 31	30 32	31 33	33 35	34 36	35 37
18" 20"			29 31	30 32	31 33	32 34	33 35	34 36	35 37	37 39	38 40	39 41
22" 24"			33 35	34 36	35 37	36 38	37 39	38 40	39 41	41 43	42 44	43 45

INSULATION THICKNESS

Copper Tubing Size	ACTUAL O.D.	1/2"	OCF	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	5 1/2"	6"
3/8" 1/2"	1/2" 5/8"	# 2	#3	#5 7	#9 9	#11 11	#13 13	# 15 15	FOR CARVED PIPE INSULATION CHECK MAX O.D. AGAINST FITTING # SHOWN IN MAIN CATALOG				
3/4" 1"	7/8" 1 1/28"	3 4	3 5	7 7	10 10	12 12	15 15	17 17	# 18 18	#19 19			
1 1/4" 1 1/2"	1 3/8" 1 5/8"	5 6	5 7	9 9	11 12	13 13	15 15	17 17	18 18	19 19			
2" 2 1/2"	2 1/8" 2 5/8"	8 9	9 10	10 11	12 13	15 15	17 17	18 18	19 19	20 20	#22 22	#23 23	#23 24
3" 3 1/2"	3 1/8" 3 5/8"	10 11	11 11	12 13	15 15	17 17	18 18	19 19	20 20	21 21	23 23	24 24	25 25
4" 5"	41/8" 5 1/8"	12 14	13 15	15 17	17 18	18 19	19 20	20 21	21 22	22 23	24 25	25 26	26 27
6"	6 1/8"	16	17	18	19	20	21	22	23	24	26	27	28

On the left are combination sizes that fit short and long radius screwed and welded elbows, long radius weld ells, and screwed and welded tees. Fitting sizes below the dark line will not fit most long radius 90 degree Elbows properly; order fitting covers for these long radius 90 degree sizes by specific pipe size and insulation thickness. The above combination sizes will fit all 45 degree elbows. To find exact number fitting required for your max O.D., go to chart in the main catalog and choose fitting number in column next to Max Fitting O.D. column

	90		45		TEE	
ZESTON #	FIG. NO.	PRICE	FIG. NO.	PRICE	FIG. NO.	PRICE
3	13969		13987		14120	
4	13970		13988		14121	
5	13971		13989		14122	
6	13972		13990		14123	
7	13973		13991		14124	
8	13974		14107		14125	
9	13975		14108		14126	
10	13976		14109		14127	
11	13977		14110		14128	
12	13978		14111		14129	
13	13979		14112		14130	
14	13980		14113		14131	
15	13981		14114		14132	
16	13982		14115		14133	
17	13983		14116		14134	
18	13984		14117		14135	
19	13985		14118		14136	
20	13986		14119		14137	
22	38442		38441		38443	
25	38562		38563		-	







INSULATION ACCESSORIES

RUBATEX FOAM TAPE 2"X 30



For thermal insulation of hot or cold pipe, fittings and valves. Stops condensation, reduces heat loss on heated pipes and fittings, seals out air, sound and dirt, convenient and easy to apply - self adhering rolls, will not dry out, decay or crack.

FIG. NO.	PRICE
28638	

CORK INSULATION TAPE

2"x 30'



Especially for use on cold pipe associated with air-conditioning systems, commercial refrigeration, wherever the problem of condensation needs to be controlled.

FIG. NO.	PRICE
21472	

FIBER INSULATION TAPE



3"X 150'

To seal fiberglass insulation White craft back tape.

FIG. NO.	PRICE
45395	



FIBER GLASS ROLL

FIG. NO.	PRICE
14142	

AEROSOL BOND ADHESIVE



Fast easy way to bond materials such as fibrous glass, paper foil, cork, polystyrene foam plastic sheeting, foam rubber, cardboard felt, cloth, etc. to themselves or to metal, glass and wood.

FIG. NO.	PRICE
233133	

ALUMINUM FOIL TAPE



3"X 50'
Self Adhering
Great for duct board!

FIG. NO.	PRICE
43259	

PVC FITTING TAPE



1-1/2"x 100'
WHITE

TO SEAL ZESTON FITTINGS!

FIG. NO.	PRICE
14139	

DUCT TAPE



High quality cloth tape with adhesive back

FIG NO.	SIZE
16837	2 X 60
197367 (black)	2 X 60
16848	4 X 60

PROTECTIVE COATING



White preflex protective coating gives an attractive high gloss, flexible protective coating to tubing installations. Open cell for both indoor and outdoor applications, Can be applied by spray, dip, brush, mitten or roller.

FIG. NO.	PRICE
GAL 65585	

NON ASBESTOS INSULATING CEMENT FOR BOILERS, FITTINGS, TANKS



SIZE	FIG. NO.	PRICE
5 LB	14140	
50 LB	14141	

We sell solutions.



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GAS RANGE CONNECTORS AND ADAPTERS

RESIDENTIAL



Gas Appliance Connection - Stainless Steel, IAPMO - ANSI. Meets requirements for inside or outdoor use.

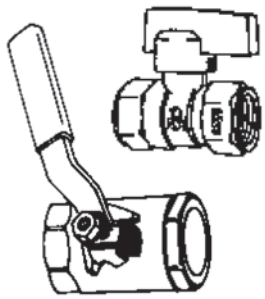
LENGTH	3/4 FEMALE	PRICE
24"	16738	
36'	16743	
48"	16750	
60"	16761	
72"	16765	

FITTINGS FOR GAS RANGE CONNECTORS



SIZE	FIG. NO.	PRICE
1/2 Fem	16770	
3/4 Fem	16778	
1/2 Male x 3/8 Fem	16779	
3/4 Male x 1/2 Fem	53304	

GAS COCKS



AGA - UL

SIZE	FIG. NO.	PRICE
1/2	50802	
3/4	50803	
1	47873	
1 1/4	6349	
1 1/2	6352	
2	49737	

GAS QUICK DISCONNECTS



Allows gas appliances to be disconnected quickly and easily automatically shuts off.

Size	Fig. No.	Price
1/2"	53298	
3/4"	53299	
1"	—	
1 1/4"	—	

COMMERCIAL



Commercial Gas Connectors - AGA, ANSI, corrugated stainless steel hose covered by stainless braid with smooth plastic covering for easy cleaning. Also ideal for equipment on casters.

SIZE	FIG. NO.
1/2"X 24"	53281
1/2"X 36"	53283
1/2"X 48"	53284
1/2"X 60"	53285
3/4"X 24"	53286
3/4"X 36"	53287
3/4"X 48"	53288
3/4"X 60"	53289
1"X 24"	53290
1"X 36"	53291
1"X 48"	53292
1"X 60"	53293
1 1/4"X 24"	53294
1 1/4"X 36"	53295
1 1/4"X 48"	53296
1 1/4"X 60"	53297

GAS REGULATORS



Inlet pressures to 10 PSIG
Outlet pressures to 2"WC to 2 PSIG
Please specify your inlet pressure and desired outlet pressure and BTU requirement when ordering.

OTHER SIZES AND APPLICATIONS AVAILABLE!

SIZE	FIG. NO.	PRICE
1/2	39340	
3/4	35991	
1	39341	

GAS LINE TEFLON TAPE



Yellow gas line teflon thread seal tape. MADE IN USA. 1/2"x 260". Full Density. UL Listed.
For use on threaded joints of metal pipe (not exceeding 1-1/2" pipe size) in assemblies handling gasoline, petroleum oils,propane, butane, naptha, benzene, kerosene and natural gas (pressure no over 100 PSIG). A minimum of two full wraps is required.

FIG. NO.	PRICE
61358	

HEATING ACCESSORIES

FIT ALL THERMOCOUPLE KIT



SIZE	FIG. NO.
18″	202875
24″	202874
30″	20872
36″	202873

FLOOR AND CEILING PLATES



COPPER			IRON PIPE		
SIZE	FIG. NO.	PRICE	SIZE	FIG. NO.	PRICE
1/2	16879		1/2	16908	
3/4	16884		3/4	16909	
1	16886		1	16914	
1 1/4	16894		1 1/4	16915	
1 1/2	16899		1 1/2	16917	
2	21354		2	16922	
			2 1/2	16924	
			3	16926	
			4	16931	

4-IN-1 RADIATOR HANDLE

Works with Hot Water or Steam



FIG. NO.	PRICE
16794	

SELF TAPPING BOILER PLUGS



SIZE	FIG. NO.	PRICE
1/4	16799	
5/16	16804	
3/8	16812	
7/16	—	

ACE BOILER PLUG



SIZE	FIG. NO.	PRICE
STD	16829	
JUMBO	—	

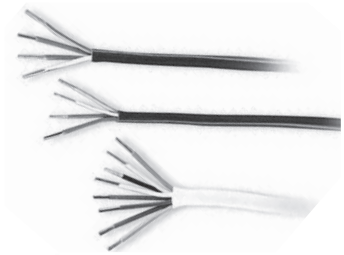
TANK STICKS

SEE PAGE 732 FOR WATER FINDING PASTE



SIZE	FIG. NO.	PRICE
9 FT	25678	
14 FT	29220	

THERMOSTAT CABLE *WITH PLASTIC JACKET*



SIZE	FIG. NO.	PRICE
18-2	8838	
18-3	8845	
18-4	8864	
18-5	8865	
18-6	8867	

ELECTRICAL TAPE



SIZE	FIG. NO.	PRICE
3/4 X 60	15332	

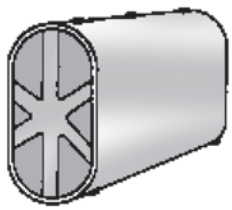
POCKET THERMOMETER

- Easy to read, 1-3/4″ dial
- Bi-metal
- Hex nut calibration

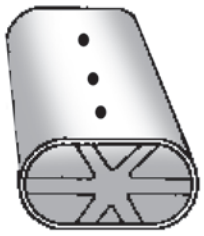


FIG. NO.
8868

TOUGH TANK



TOUGHTANK for indoor or outdoor use! Exclusive design provides greater structural integrity and weld protection. Withstands internal pressures over 100 psi in actual test without rupture. WARNING: Permanent distortion will occur if tanks are operated in excess of normal operating pressure (2 1.2 psi). Tanks bear a UL 80 Label. UL 142 available on request. Designed and fabricated for storage of home heating oil. Tanks are painted with red primer and are available in other colors on request. LEGS SOLD SEPARATELY.



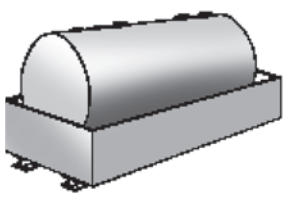
HORIZONTAL

CAP (GAL)	WIDTH	HGHT	LNGTH	GAUGE	FIG. NO.	PRICE
275	44 1/4	27	60	12	47152	
330	44 1/4	27	72	12	47153	
275	44 1/4	27	60	14	74708	

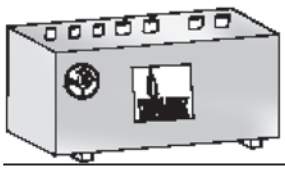
VERTICAL

CAP (GAL)	WIDTH	HGHT	LNGTH	GAUGE	FIG. NO.	PRICE
275	27	44 1/4	60	12	47150	
330	27	44 1/4	72	12	47151	
275	27	44 1/4	60	14	—	
230*	22*	44 1/4*	60*	14*	18465*	

*SPECIAL NARROW FOR THOSE TIGHT STAIR WAYS!



DIKE TANKS
240-30,000 gallon



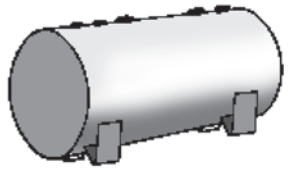
FIREGUARD TANKS
500-12,000 gallon
30 year warranty



OIL TANKS

14 Gauge steel, finished red primer, UL Listed.

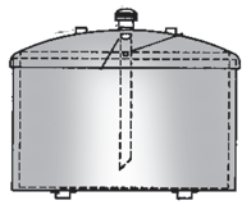
Vertical Heating Fuel Tanks designed to be used in a finished part of the house.



Horizontal Heating Fuel Tanks designed to be used outdoors along side or under mobile homes or in crawl spaces.

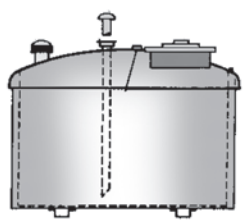
NOM CAP (GAL)	DESCR.	FIG. NO.	DIA	LGTH	PRICE
192	Vertical	50629	28"	76"	
160	Vertical	48892	28"	64"	
240	Horiz.	—	28"	7'6"	

FUEL HOPPER



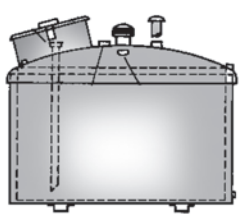
State of the art technology for low profile, above-ground storage. They are suitable for the containment of all types of liquid fuels, new and used oils, waste solvents and anti-freeze.

HAZ HOPPER



Designed and built to the rigid UL 142 specifications. Consists of an inner tank, placed in the he second tub-like steel container, providing a minimum of 110% secondary containment.

PETRO-HOPPER



Unique, extended-dome top design, prevents rain, snow and debris from collecting in the secondary containment.

CALL NOW FOR PRICING AND AVAILABILITY

CALL FOR MANY OTHER APPLICATIONS! 610-275-4553

SCULLY SYSTEMS



VENTALARM GAUGE

The original whistle alarm.

SIZE	FIG. NO.	PRICE
2"x1 1/4", 26"-27"	9610	
2"x1 1/4", 42"-44"	9609	
2"x1 1/2", 26"-27"	47592	
2"x1 1/2",42"-44"	47591	



ECONO GAUGE

Inexpensive and accurate. Fits 1 1/2"or 2".

TANK SIZE	FIG. NO.	PRICE
26" - 27"	9608	
37"	49281	
42"	9607	
48"	49281	



SNORKEL GAUGE

Level indicator with floating burner feed line. Fits 1 1/2"or 2". *Ideal for mobile homes!*

SIZE	FIG. NO.	PRICE
42"-44"	51480	



VENTALARM SIGNAL

SIZE	FIG. NO.	PRICE
1 1/2"x1 1/4"	51482	
2"x 1 1/4"	9606	
2"x 1/12"	9605	
2"x 2"	40118	
2"compression	47590	

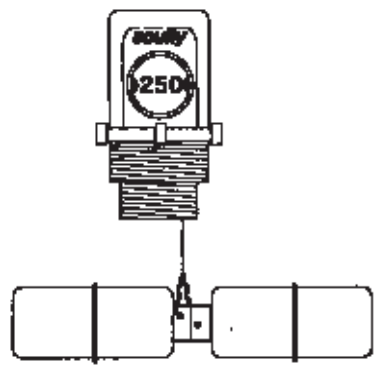


ALL WEATHER LOCKING CAP

This cap fits the top of all Scully straight and 45^{O} adapters and features a new heavy weight design. Operates with magnetic key.

FIG. NO.	PRICE
58987	

GOLDEN GALLON GAUGES

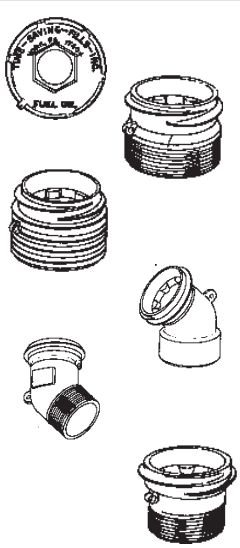


Double float gauge for indoor, outdoor or buried tank. Fits 1 1/2" or 2". ***Reads in inches.***

SIZE	FIG. NO.	PRICE
48"	16452	
64"	50613	
72"	49280	



UNIFILL FITTINGS



DESCRIPTION	FIG. NO.	PRICE
Cap to fit all Unifill adapters	44563	
1 1/2"male straight adapter	52393	
2"male straight adapter	52394	
1 1/2"female straight adapter	44564	
2"female straight adapter	44565	
1 1/2"Female 45 ^{O} adapter	52332	
2"Female 45 ^{O} adapter	52333	
1 1/2"Male 45 ^{O} adapter	52334	
2"Male 45 ^{O} adapter	44566	

FUSIBLE VALVES



ANGLE VALVE
3/8 OD Flare X 1/4 M

FIG. NO.	PRICE
51171	



FEM IP CHECK VALVE
SPRING LOADED
3/8 FIP X 3/4 FIP

FIG. NO.	PRICE
32328	

1/2 FIP X 1/2 FIP

FIG. NO.	PRICE
32330	



STRAIGHT FLARE
3/8 OD FL X 3/8 OD FL

FIG. NO.	PRICE
32326	

1/2 OD FL X 1/2 OD FL

FIG. NO.	PRICE
32327	



FLARE CHECK VALVE
SPRING LOADED
3/8 ID FL X 3/8 OD FL

FIG. NO.	PRICE
32329	

1/2 OD FL X 1/2 OD FL

FIG. NO.	PRICE
32331	



STRAIGHT FEMALE PIPE

3/8"FIP

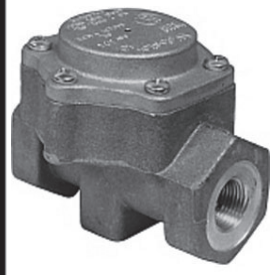
FIG. NO.	PRICE
32324	

1/2"FIP

FIG. NO.	PRICE
32325	

3/4"FIP

FIG. NO.	PRICE
51437	



OIL SAFETY VALVE

Not Fusible

3/8"FIP

- Relieves pressure strain on fuel pump inlets
- Prevents syphonage of fuel tanks
- Prevents spilling due to accidental line breakage

The OSV is ideal for use in oil supply stems which have from 0 to 60 PSI supply line pressure on the inlet side of the valve, but requires a sustained vacuum on the outlet side of he valve for the fuel to flow to the burner pump.

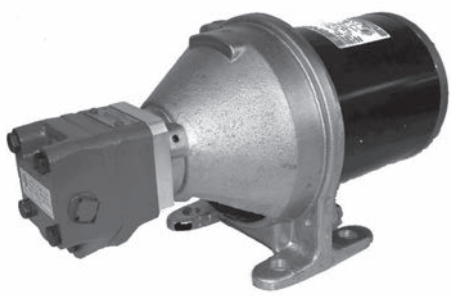
3/8"FIP

FIG. NO.	PRICE
48474	

1/2"FIP

FIG. NO.	PRICE
48475	

FUEL OIL MOTOR/PUMP SUPPLY UNITS



Webster Supply Pump/Motor Units have been developed to supply fuel oil to one or more overhead furnaces, daytanks or for underground central distribution in trailer courts and housing developments.

Four Pump/Motor sizes are available with capacities of 15, 30, 65 and 135 GPH. the units are capable of lifting oil 15 feet from a storage tank and supplying it to furnaces located 200' plus above the pump. A complete unit consists of a pump direct coupled to the motor, a check valve and combination vacuum/pressure gauge. Duplex units are also available completely piped and wired.

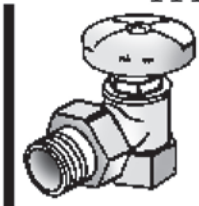
CALL NOW FOR YOUR SPECIAL PRICING!

HYDRONIC SPECIALTIES



COPPER HOT WATER RADIATOR VALVE

SIZE	FIG. NO.	PRICE
1/2	16635	
3/4	16639	



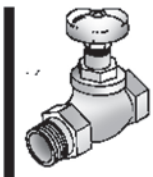
IRON PIPE HOT WATER RADIATOR VALVE

SIZE	FIG. NO.	PRICE
1/2	16615	
3/4	16618	
1	16620	



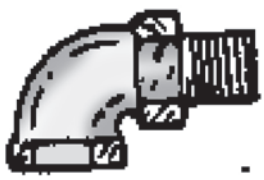
STEAM RADIATOR VALVE

SIZE	FIG. NO.	PRICE
1/2	16643	
3/4	16647	
1	16652	
1 1/4	16655	
1 1/2	16656	
2	16658	



STRAIGHT RADIATOR VALVE

SIZE	FIG. NO.	PRICE
1/2	16660	
3/4	16666	
1	16671	
1 14	16677	
1 1/2	16690	



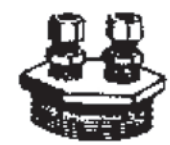
RADIATOR ELBOW

SIZE	FIG. NO.	PRICE
1/2"IP	16711	
3/4"IP	16716	
1/2"COP	16729	
3/4"COP	16730	



MUSHROOM VENT CAP

SIZE	FIG. NO.	PRICE
3/4	16427	
1	16428	
1 1/4	9613	
1 1/2	9614	
2	9615	
3	16432	
4	16453	



DOUBLE TAPPED TANK BUSHING

SIZE	FIG. NO.	PRICE
2X3/8X3/8	9611	
2X1/2X1/2	9612	
2X5/8X5/8	9734	



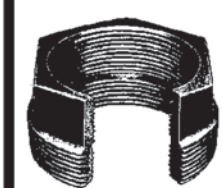
FILL BOX

SIZE	FIG. NO.	PRICE
1 1/2	41375	
2	9618	
3	—	
4	9622	



HINGED VENTED FILL CAP

SIZE	FIG. NO.	PRICE
1 1/2	—	
2	16445	
3	16450	
4	44813	



DOUBLE TAPPED TANK BUSHING

SIZE	FIG. NO.	PRICE
1X1/2	9619	
1 1/4X1/2	9623	
1 1/4X1	9625	
1 1/2X1	9628	
1 1/2X11/4	9629	
2X1/2	9630	
2X3/4	9631	
2X1	9632	
2 X1 1/4	9633	
2X1 1/2	9634	
2 1/2X1 1/4	9637	
2 1/2X1 1/2	9638	
2 1/2 X 2	9639	
3X1	9640	
3X1 1/2	9642	
3X2	9643	
4X2	42444	
4X3	38915	



MONOFLO TEE

SIZE	FIG. NO.	PRICE
3/4X1/2	7848	
1X3/4	7852	
1X1/2	7850	
1 1/4X3/4	7862	
1 1/2X3/4	—	
1 1/2X1	—	
2X3/4	—	
2X1	26911	

16598



16602



OIL TANK FILTER VALVE BOTTOM OUTLET

SIZE	FIG. NO.	PRICE
1/2MX3/8M OD FL	16602	
1/2MX3/8	16598	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

FUEL AND AIR FILTERS



GENERAL FUEL OIL FILTER

Industry standard for domestic and commercial fuel oil systems. All models feature cast iron filter base with sturdy steel case. Filters are held within the case with a knife-edge seal at top and bottom to insure that nothing bypasses the filter. Cover has air vent port on outlet side.

16454 - For most domestic and light commercial burner systems, maximum firing rate of 10 gph on #2 oil. Uses wool-felt type cartridge.

38831 - For large capacity burner systems, or domestic systems with multiple burners; maximum firing rate of 25 gph on #2 oil. Uses wool-felt type filter cartridge.

33568 - For commercial burner systems; maximum firing rate of 24 gph on #2 fuel oil, 22 gph on #4, #5, #6 oil. Furnished with cleanable 60 mesh monel wire screen element.

FIG. NO.	PRICE
16454	
38831	
33568	



REPLACEMENT CARTRIDGES FOR GENERAL FUEL FILTERS

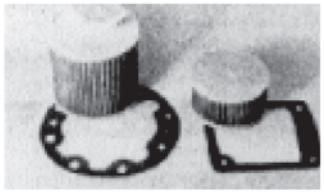
"Step Design" wool-felt element furnished as original equipment in 16454 filter. Also, fits Unifilter 77, Autoflo F-300, Sid Harvey XF-25, Eddington S-254 and Federal A77 filters.

FIG. NO.	PRICE
16456	
32848	

REPLACEMENT GASKETS FOR GENERAL FUEL FILTERS

FIG. NO.	PRICE
38832	

PUMP STRAINER



FOR MODEL 'A' PUMP	
FIG. NO.	PRICE
34304	
FOR MODELS J, H & S	
FIG. NO.	PRICE
34303	



REPLACEMENT CARTRIDGES FOR FULFLO FUEL FILTERS

Honeycomb filter tubes specially engineered for heating oils give precision, control filtration.

FIG. NO.	PRICE
34306	



GAR-BER FUEL FILTER CARTRIDGE

Inline filter with 7 to 10 micron filtering capacity and convenient spin-on cartridge replacement. Superior filtering capability makes this an ideal solution for systems with recurring nozzle clogging problems. Cast aluminum adapter head, resin treated paper filter element.

FIG. NO.	PRICE
82496	

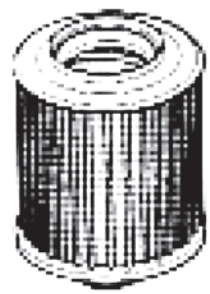
REPLACEMENT CARTRIDGE for GAR-BER fuel filter

FIG. NO.	PRICE
42530	

REPLACEMENT CARTRIDGE

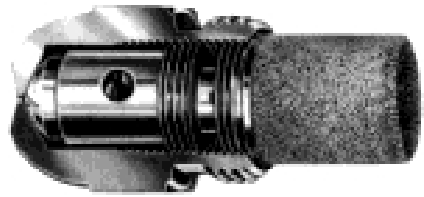
For general 2A-700 Filter. 100 mesh cleanable. Other sizes and mesh available!

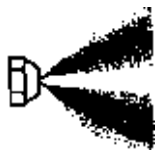
FIG. NO.
82771

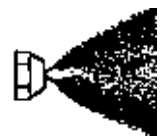




OIL BURNER NOZZLES





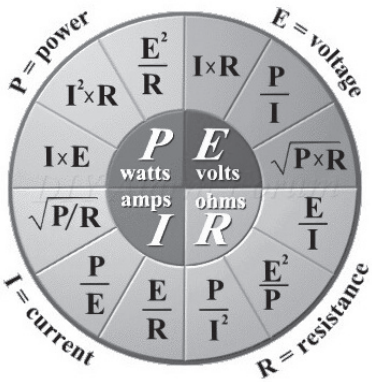


HOLLOW				SOLID			
GPH	ANGLE	FIG. NO.	PRICE	GPH	ANGLE	FIG. NO.	PRICE
.65	80	16457		.65	60	35878	
.65	90	16465		.65	70	44076	
.75	60	16466		.65	80	16526	
.75	70	16468		.75	60	16528	
.75	80	16475		.75	70	35879	
.85	60	16477		.75	80	16530	
.85	70	16481		.85	60	16531	
.85	80	16482		.85	70	35880	
1.00	60	16485		.85	80	16534	
1.00	70	16488		1.00	60	16536	
1.00	80	16489		1.00	70	35881	
1.10	60	35874		1.00	80	16539	
1.10	70	35875		1.10	60	35882	
1.10	80	35876		1.10	70	35883	
1.20	60	16490		1.10	80	35884	
1.20	70	16493		1.20	60	16540	
1.20	80	16496		1.20	70	44077	
1.25	60	16498		1.20	80	16543	
1.25	70	16500		1.25	60	16546	
1.25	80	16502		1.25	80	16548	
1.35	60	16504		1.35	60	16551	
1.35	80	16506		1.35	80	16554	
1.50	60	16509		1.50	60	16555	
1.50	70	44075		1.50	80	16558	
1.50	80	16511		1.65	60	16560	
1.65	60	16514		1.65	80	16563	
1.65	80	16517		1.75	60	16564	
1.75	60	35877		1.75	80	16565	
1.75	80	16520		2.00	60	16567	
2.00	60	16522		2.00	80	16569	
2.00	80	16523		3.00	80	16571	
				3.50	60	53805	

CONVERSION FACTORS

MULTIPLY....	BY....	TO OBTAIN:
Column1	Column2	Column3
Atmosphere	29.92	Inches of mercury
Atmosphere	33.92	Feet of water
Atmosphere	14.7	Pounds per sqare inch
Atmosphere	1.058	Tons per square foot
Barrels (oil)	42	Gallons
Boiler Horsepower	33,474	Btu per hour
Boiler Horsepower	34.5	Pounds water evaporated from and at 212F
BTU	778	Foot-Pounds
BTU	0.000393	Hoursepower-hours
BTU	0.000293	Kilowatts-hours
BTU	0.0010307	Pounds water evaporated from and at 212F
BTU per 24 hr	0.00000347	Tons of referigeration
BTU per hour	0.00002986	Boiler horsepower
BTU per hour	0.000393	Horsepower
BTU per hour	0.000293	Kilowatts
BTU per inch per sq. ft. per hour per F	0.0833	Btu per foot per sq. ft. per hour per F
Cubic feet	1,728	Cubic Inches
Cubic feet	7.48052	Gallons
Cubic feet of water	62.37	Pounds at (at 60F)
Cubic feet per minute	0.1247	Gallons per second
Feet of water	0.881	Inches of mercury (at 32F)
Feet of water	62.37	Pounds per square foot
Feet of water	0.4335	Pounds per square inch
Feet of water	0.0295	Atmospheres
Feet per minute	0.01136	Miles per hour
Feet per minute	0.01667	Feet per second
Foot-pounds	0.001286	Btu
Gallons (U.S.)	0.1337	Cubic feet
Gallons (U.S.)	231	Cubic inches
Gallons of water	8.3453	Pounds of water (at 60F)
Horsepower	550	Foot pounds per sec
Horsepower	33,000	Foot-pounds per min
Horsepower	2,546	BTU per hour
Horsepower	42.42	BTU per minute
Horsepower	0.7457	Kilowatts
Horsepower (boiler)	33,475	BTU per hour
Inches of mercury (at 62F)	13.57	In. of water (at 62F)
Inches of mercury (at 62F)	1.131	Ft. of water (at 62F)
Inches of mercury (at 62F)	0.4912	Pounds per sq in.
Inches of mercury (at 62F)	70.73	Pounds per sq ft.
Inches of water (at 62F)	0.07355	Inches of mercury
Inches of water (at 62F)	0.03613	Pounds per sq in.
Inches of water (at 62F)	5.202	Pounds per sq ft.
Inches of water (at 62F)	0.002458	Atmospheres
Kilowatts	56.92	BTU per minute
Kilowatts	1.341	Horsepower
Kilowatts-hours	3,415	BTU

MULTIPLY....	BY....	TO OBTAIN:
Latent heat of ice	143.33	BTU per pound
PoundsZ	7,000	Grains
Pounds of water at 60F	0.01602	Cubic Feet
Pounds of water at 60F	27.68	Cubic Inches
Pounds of water at 60F	0.1198	Gallons
Pounds of water evapo-rated from and at 212F	0.284	Kilowatt-hours
Pounds of water evapo-rated from and at 212F	0.381	Horsepower-hours
Pounds of water evapo-rated from and at 212F	970.4	BTU
Pounds per square inch	2.309	Ft. of water (at 62F)
Pounds per square inch	2.0416	In. of mercury (at 62F)
Tons of refrigeration	12,000	BTU per hour
Tons of refrigeration	200	BTU per minute
Tons (Long)	2,240	Pounds
Tons (Short)	2,000	Pounds
Watts	44.26	Ft. pounds per min
Watts	0.7378	Ft. pounds per sec
Watts	0.05692	BTU per minute
Watt-hours	3.415	BTU
Watt-hours	2,656	Ft. pounds



EDR to Pounds of condensate per hour (Divide EDR by 4) • EDR to GPM (Multiply EDR by 0.0005)

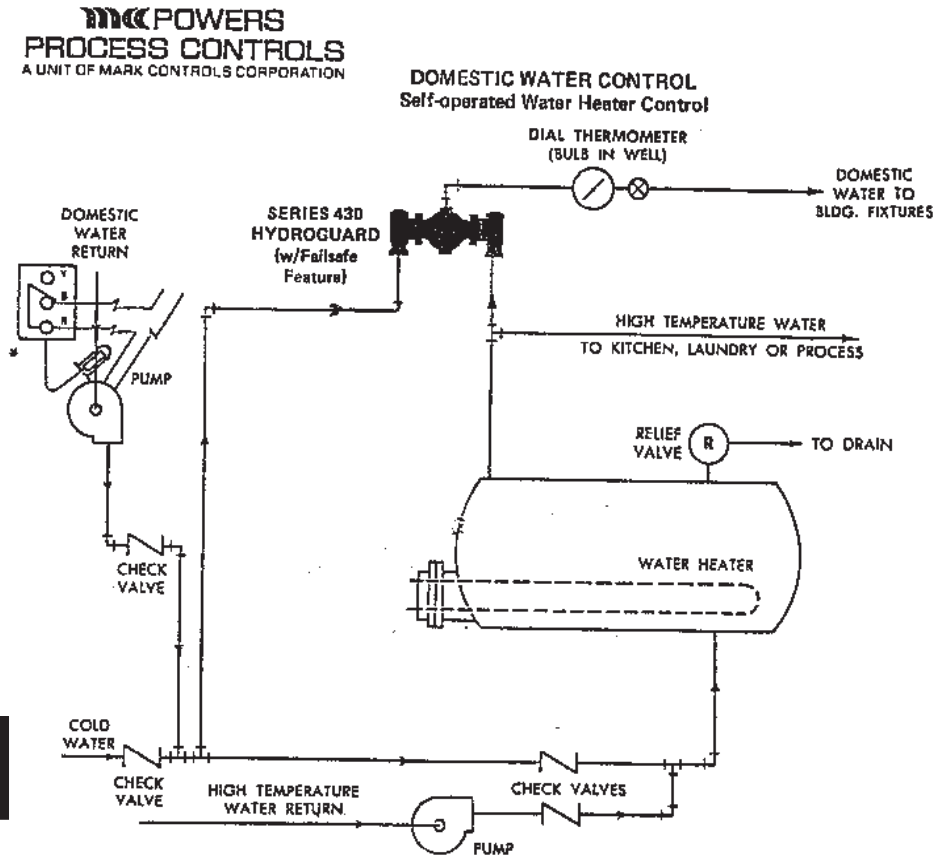
EDR to BTUH at 1 psig steam pressure (Mulitply EDR by 240) • EDR to boiler horse-power (Divide EDR by 140)

EDR to Grate Area in Square Feet (Divide EDR by 196) • BTUH to EDR (Divide BTUH by 240)

BTUH to Boiler Horsepower (Divide BTUH by 33,475) • PSIG to Feet of Water (Multiply PSIG by 2.31)

Boiler Horsepower to Pounds of Condensate per hour (Multiply BHP by 34.5) • Boiler steaming rate (regardless of type or manufacturer) = 1/2 GPM per 1,000 sq. ft. EDR

Column1	Column2
Fuel Values:	Maximum copper tubbing flow rates and BTUH loads (at 20° Δ T)
No. 1 fuel oil = 135,000 BTU per gallon	1/2" = 1-1/2 GPM = 15,000 BTUH
No. 2 fuel oil = 140,000 BTU per gallon	3/4" = 4 GPM = 40,000 BTUH
No. 4 fuel oil = 155,000 BTU per gallon	1" = 8 GPM = 80,000 BTUH
No. 5 fuel oil = 150,000 BTU per gallon	1-1/4" 14 GPM = 140,000 BTUH
No. 6 fuel oil = 153,000 BTU per gallon	1-1/2" = 22 GPM = 220,000 BTUH
Natural gas = 1,000 BTU per cubic foot	2" = 45 GPM = 450,000 BTUH
Natural gas = 100,000 BTU per Therm	
Manufactured gas = 550 BTU per cubic foot	
Propane = 2,250 BTU per cubic foot	Fahrenheit to Celsius = (°F - 32°) / 1.8
Propane = 92,000 BTU per gallon	Celsius to Fahrenheit = °C x 1.8 + 32°
Electricity = 3,415 BTU per kWh	
Anthracite coal = 13,700 BTU per pound	Stream Fan Coil loads in Pounds of Steam per hour =
Bituminous coal = 12,500 BTU per pound	CFM X ΔT of air (in °F) / 800
Wood = 14,000,000 BTU per mixed cord	



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POWERS EQUIPMENT

MV430 Hydroguard

*Note: On intermittent (flow) domestic water systems, add electric thermostat to stop pump when return water temperature exceeds Hydroguard set point. Locate pump and thermostat after last tap point. Pump should be sized for following capacities:

431 Hydroguard - 5 GPM
432 Hydroguard - 8 GPM
433 Hydroguard - 10 GPM
434 Hydroguard - 12 GPM





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