Flow Switches & Waterflow Indicators







WATTS FS10-C Series FLOW SWITCH

Accurate monitoring of liquid flow in pipelines servicing water systems, heating systems, air conditioning and processing installations for industrial and commercial applications is often required. The FS10-C Flow Switch is primarily designed to be used as an automatic control or safety device. The single-pole, double-throw switch can be wired to start or stop a motor when a *flow* or *no* **flow** condition exists or actuate an alarm when flow is inadequate. Turns off alarm when adequate flow is restored.

TYPICAL USES

Signal devices – for flow or no flow

Control of motors – for pumps, compressors, etc.

Alarms – warn of trouble where flow failure is critical

Heating Units – to start or stop a heat source *Metering Devices* – to control equipment that supplies additives for blending

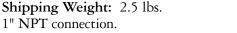
TYPICAL APPLICATIONS

- Air Conditioning
- Pumping Systems
- Water Treatment
- Hot Water Supply Systems
- •Liquid Transfer Systems
- Hot Water Space Heating
- Additive/Blending Systems Processing Systems
- Water Cooled Equipment

SPECIFICATIONS

Canadian Standards Assoc. Listed No. LR-5827 Underwriter's Laboratories Listed U.S.A. No. 11S1

Maximum Pressure: 175psi Maximum Temperature: 300°F



MODELS

FS10-C Standard Unit.

FS10-CL with Indicator Light.

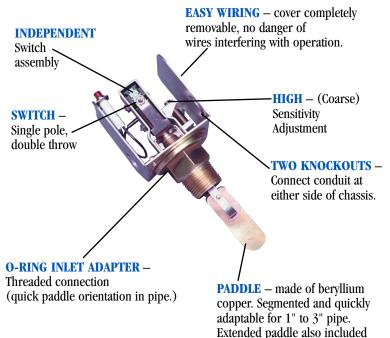
PADDLES

3 in 1 Paddle – A segmented beryllium copper paddle is quickly adaptable for 1" through 3" pipe. The extended beryllium copper paddle, also included, is for larger pipe sizes up to 6".

Paddle length conforms to ASTM tee standards.



Replacement Kit Number Description 3-in-1 Paddle RK FS10-3-1 6" Paddle RK FS10-6 RK PRP-218-3957 O-Ring



FEATURES

- Parts in contact with liquid in pipe are of brass and beryllium copper. Flow switch installs in tee in horizontal or vertical piping.
- Single cover retaining screw mounted on top of the flow switch for easy access.

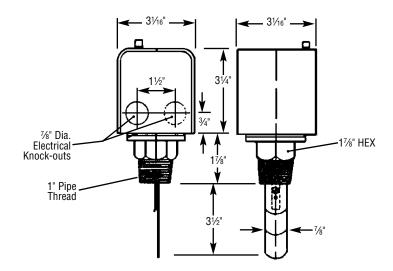
for larger pipe size.

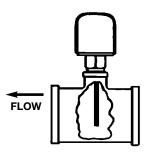
- Coarse and fine sensitivity adjustment
- Two electrical conduit knockouts for ease of wiring.
- Easy accessibility to switch terminals where wiring will not interfere with operating mechanism.
- Furnished with 1" NPT connection.
- Switch assembly independent and removable from mounting adaptor. Allows proper paddle measurement, avoiding improper operation.
- Optional flow indicator light integral with switch cover (FS10-CL). Indicates flow or no flow conditions.
- Canadian Standards Association Listed.
- Underwriter's Laboratories Listed



DIMENSIONS

LOCATION*



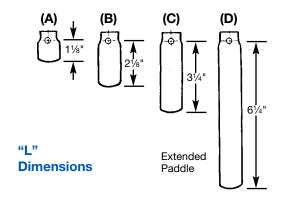


Paddle must be free to move. Flow switch can be installed in a reducing tee, standard tee or welded fitting. It should be installed in horizontal or vertical section of a pipe where there is a straight run of at least 5 pipe diameters on each side.

PADDLE LENGTH

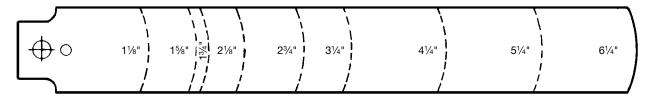
Included with each flow switch are four paddles. Shortest paddle (A) can be used for 1" pipe size only. Second shortest paddle (B) can be used as is for 2" pipe size; but can be trimmed for $1\frac{1}{4}$ " and $1\frac{1}{2}$ " pipe size. Third shortest paddle (C) can be used as is for 3" pipe size, but must be trimmed for $2\frac{1}{2}$ " pipe size. Longest paddle (D) can be used as is for 6" pipe size, but must be trimmed for 4" and 5" pipe size.

The "L" dimensions below refer to the untrimmed paddle lengths.



See Paddle Length Selection Table on page 6.

ACTUAL SIZE PADDLE TEMPLATE For Trimming



*IMPORTANT:

Mount flow switch in position so that the paddle assembly is at a right angle to the flow. The stamped arrow on bottom plate mounting and top cover gum label arrow must both point in direction of flow. (See page 6 for "Installation" and page 7 for "Flow rates and wiring information.")

WATTS FS20 Nema 4X Type FLOW SWITCH

• Corrosion-resistant • Epoxy coated

• Zinc die-cast enclosure

Provides accurate monitoring of flow in pipelines servicing water systems. Recommended for use in areas of high humidity for indoor or outdoor installations requiring Nema 4X water-tight, dust-tight and corrosion-resistant enclosures. The FS20 flow switch is primarily designed to be used as an automatic control or safety device. The single pole, double-throw switch can be wired to start or stop a motor when a **flow** or **no flow** condition exists or actuate an alarm when flow is inadequate. Turns off alarm when adequate flow is restored.



TYPICAL USES

Signal devices – for flow or no flow

Control of motors – for pumps, compressors, etc.

Alarms – warn of trouble where flow failure is critical

Heating Units – to start or stop a heat source **Metering Devices** – to control equipment that supplies additives for blending

TYPICAL APPLICATIONS

- Air Conditioning
- Pumping Systems
- Water Treatment
- Hot Water Supply Systems
- •Liquid Transfer Systems
- Hot Water Space Heating
- Additive/Blending Systems Processing Systems
- Water Cooled Equipment

SPECIFICATIONS

Canadian Standards Assoc. Listed No. LR-5827 Underwriter's Laboratories Listed U.S.A. No. 11S1

Maximum Pressure: 150psi Maximum Temperature: 300°F

Shipping Weight: 3 lbs. 1" NPT connection.





PADDLES

3 in 1 Paddle – A segmented beryllium copper paddle is quickly adaptable for 1" through 3" pipe. The extended beryllium copper paddle, also included, is for larger pipe sizes up to 6".

Paddle length conforms to ASTM tee standards.



Replacement Kit Number Description RK FS10-3-1 3-in-1 Paddle 6" Paddle RK FS10-6 RK PRP-218-3957 O-Ring RK PRP-124 O-Ring **RK PRP-152** O-Ring

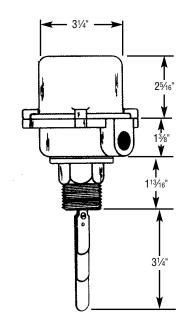
TYPICAL CONDITIONS

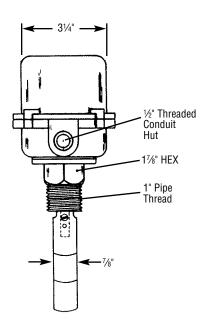
- Equipment splashing water
- Seepage of water
- Leakage of hose directed water
- Severe general condensation
- Windblown dust and water
- Sleet or icv conditions

FEATURES

- Parts in contact with liquid in pipe are of brass and beryllium copper.
- Brass alloy bellows seals switch assembly from the line.
- Two adjusting screws (fine and course) provides easy way to adjust sensitivity to flow.
- ½" threaded conduit hub to accept standard vapor-proof connectors
- Removable cover for easy access to switch terminals where wiring will not interfere with operation mechanism.
- Cover construction of zinc die-cast with epoxy coated finish.
- Furnished with 1" NPT connection.
- Switch assembly independent and removable from mounting adaptor, allows proper paddle orientation, avoiding improper operation.
- Canadian Standards Association listed.
- Underwriter's Laboratories Inc. listed.

DIMENSIONS

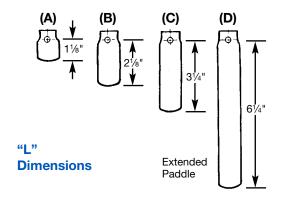




PADDLE LENGTH

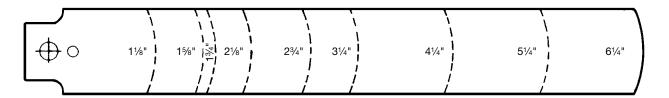
Included with each flow switch are four paddles. Shortest paddle (A) can be used for 1" pipe size only. Second shortest paddle (B) can be used as is for 2" pipe size; but can be trimmed for $1\frac{1}{4}$ " and $1\frac{1}{2}$ " pipe size. Third shortest paddle (C) can be used as is for 3" pipe size, but must be trimmed for $2\frac{1}{2}$ " pipe size. Longest paddle (D) can be used as is for 6" pipe size, but must be trimmed for 4" and 5" pipe size.

The "L" dimensions below refer to the untrimmed paddle lengths.



See Paddle Length Selection Table on page 6.

ACTUAL SIZE PADDLE TEMPLATE For Trimming



*IMPORTANT:

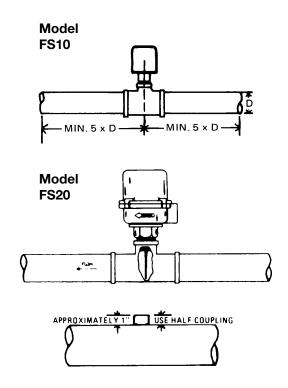
Mount flow switch in position so that the paddle assembly is at a right angle to the flow. The stamped arrow on bottom plate mounting and top cover gum label arrow must both point in direction of flow. (See page 6 for "Installation" and page 7 for "Flow rates and wiring information.")

PADDLE LENGTH SELECTION

Included with each flow switch are four paddles; a 3 in 1 paddle and an extended paddle. Refer to the paddle length selection table below for correct paddle length in relation to the pipe size being used.

PADDLE LENGTH SELECTION TABLE

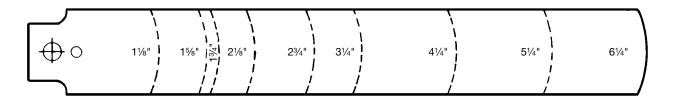
	Installation Us	ing ASTM Tee	Installation Using	Trim	
Pipe Size	Tee Size	Paddle	Welding Fitting Paddle	Dimension "L"	
1"	1" x 1" x 1"	1" A Segment			
11/4"	11/4" x 11/4" x 1"	1" A Segment & Trimmed 2" B Segment		1 5⁄8"	
11/2"	1 ¹ / ₂ " x 1 ¹ / ₂ " x 1"	1" A Segment & Trimmed 2" B Segment		13/4"	
2"	2" x 1" x 1"	1" A Segment & 2" B Segment	1" A Segment & 2" B Segment		
21/2"	2 ¹ / ₂ " x 2 ¹ / ₂ " x 2"	1" A & 2" B Segments & Trimmed 3" Segments	1" A & 2" B Segments & Trimmed 3" C Segments	23/4"	
3"	3" x 3" x 1"	1" A, 2" B, 3" C Segments	1" A, 2" B & 3" C Segments		
4"			1" A, 2" B, 3" C & Trimmed 4" D Segments	41/4"	
5"			1" A, 2" B, 3" C & Trimmed 4" D Segments	51/4"	
6"			1" A, 2" B, 3" C & Trimmed 4" D Segments		



If a reducing tee is not available and a standard tee is used, install a face bushing in top opening to keep waterflow indicator as close to tee as possible.

If a welding fitting is to be used, use only a half coupling. (Make sure hole in main is $1\frac{5}{32}$ " diameter before welding coupling.)

ACTUAL SIZE PADDLE TEMPLATE For FS10C or FS20.



FLOW RATES Required to Actuate the No. FS10C or FS20 Flow Switch in Horizontal Pipe

Flow rates in U.S. gallons per minute (GPM). Velocity in feet per second (FPS).

*Equipped with extended paddle trimmed to pipe size.

	Pipe Size in Which Flow Switch Installed		1"	11/4"	11/2"	2"	2 ½"	3"	*4"	*5"	*6"
	ACTIVATION	GPM	5.2	7.9	10.0	13.2	20.9	30.0	39.0	58.0	79.0
Factory or Minimum		FPS	2.01	1.74	1.62	1.29	.92	1.30	1.0	.94	.88
Flow Setting	DEACTIVATION NO FLOW	GPM	2.0	3.2	5.3	8.1	9.9	12.0	19.0	29.0	39.6
		FPS	.77	.71	.86	.79	.44	.52	.50	.47	.44
	ACTIVATION	GPM	11.5	18.0	18.0	34.1	53.9	52.0	73.5	115.0	166.0
Maximum	FLOW	FPS	4.44	3.98	2.91	3.33	2.38	2.26	1.86	1.85	1.84
Flow Setting	DEACTIVATION	GPM	8.5	14.6	15.1	29.2	44.4	46.1	64.0	92.0	123.0
	NO FLOW	FPS	3.28	3.23	2.44	2.85	1.96	2.00	1.67	1.48	1.37

^{*}Flow rates for these sizes are calculated.

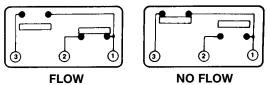
WIRING -

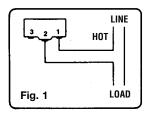
IMPORTANT: Electrical installation must be performed by a qualified person and in accordance with local codes.

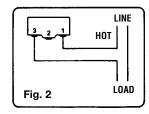
Electrical Rating

Motor Duty Full Load Locked Rotor	120 V.A.C. 7.4 A.F.L. 44.4 A.F.L.	240 V.A.C. 3.7 A.F.L. 22.2 A.F.L.			
	120 V.D.C. 0.3 Amps	240 V.D.C. 0.15 Amps			
PILOT DUTY: A.C. 125 V.A., 120-240 V					

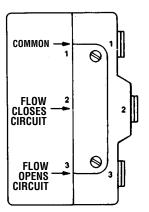
Schematics of No. FS10C or FS20 Operation







- Flow switch used to sound alarm, light signal, actuate relays or starter switches for motors, pumps, etc., when flow occurs.
- Flow Switch used to sound alarm, light signal, actuate relays or starter switches for motors, pumps, etc., when no flow occurs.



WATTS FS10-F Series WATERFLOW INDICATORS

For automatic sprinklers fire protection service and signaling systems for branch lines

Watts waterflow indicators provide a positive way of detecting the flow of water in any distribution, branch or mainline piping of a sprinkler system. They are designed to be used in pipe size 1", 1½" or 1½" standard ASTM tees. When wired to alarms or signaling systems, it immediately indicates the location of an open head(s).

Quick detection and signaling of an open head(s) can assist in pinpointing:

- the exact fire location
- increase supplementary firefighting activities
- speeds up the fire extinguishing process
- provides effective building evacuation
- minimizes water damage

The supplied paddle is made of beryllium copper and superior to stainless steel in the area of flex memory, tensil strength and corrosion resistance. The indicator light is integral with switch cover and standardly furnished. Factory set and sealed for a minimum alarm flow rate of 4 to 10 GPM.

EASY WIRING – cover completely INDEPENDENT removable, no danger of Switch wires interfering with operation. assembly TWO KNOCKOUTS -SWITCH -Connect conduit at either side of chassis. Single pole, double throw O-RING INLET ADAPTER -Threaded connection **PADDLE** – made of beryllium (quick paddle orientation in pipe.) copper. Quickly adaptable for 1" to 1½" pipe.

TYPICAL APPLICATIONS

- Can be wired to make one circuit break a circuit, when flow starts or stops.
- Actuates an alarm when flow is inadequate, deactivates alarm when sufficient flow is restored.

SPECIFICATIONS

Canadian Standards Assoc. Listed No. LR-5827 Underwriter's Laboratories Listed Canada No. CS-515 Underwriter's Laboratories Listed U.S.A. No. 11S2

Maximum Pressure: 175psi Maximum Temperature: 300°F Shipping Weight: 2.5 lbs.

1" NPT connection.

PADDLES (See Page 10)

3 in 1 Paddle – Beryllium copper paddle quickly adaptable for 1", $1\frac{1}{4}$ " or $1\frac{1}{2}$ ".

Paddle length conforms to ASTM tee standards.



Replacement
Kit Number
Description
RK FS10-3-1
3-in-1 Paddle
RK PRP-218-3957
O-Ring

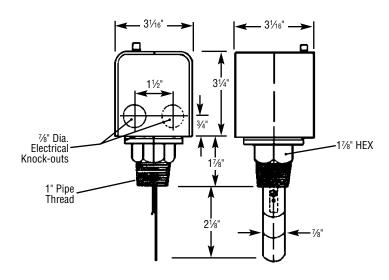
FEATURES

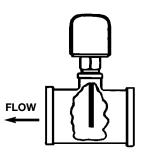
- Parts in contact with liquid in pipe are of *brass* and *beryllium* copper.
 Waterflow indicator installs in tee in horizontal or vertical piping.
- Single *cover retaining screw* mounted *on top* of the indicator for easy access.
- *Two* electrical conduit knockouts for ease of wiring.
- Easy accessibility to switch terminals where wiring will not interfere with operating mechanism.
- Furnished with 1" NPT connection.
- Switch assembly independent and removable from mounting adaptor.
 Allows proper paddle measurement, avoiding improper operation.
- Flow indicator light integral with switch cover.
 Indicates flow or no flow conditions.
- Canadian Standards Association Listed.
- Underwriter's Laboratories Listed: 175psi.



DIMENSIONS

LOCATION





Paddle must be free to move. Waterflow indicator can be installed in a reducing tee, standard tee or welded fitting. It should be installed in horizontal or vertical section of a pipe where there is a straight run of at least 5 pipe diameters on each side.

FLOW RATES -

FLOW RATES REQUIRED TO ACTUATE No. FS10-F IN HORIZONTAL PIPE

Flow rates in U.S. gallons per minute (GPM). Velocity in feet per second (FPS). Equipped with extended paddle trimmed to pipe size.

To be in compliance with Inc. the units are standardly set and sealed at the factory to operate between 4 and 10 GPM – FPS .648 and 1.62.

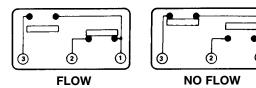
WIRING

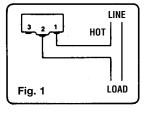
IMPORTANT: Electrical installation must be performed by a qualified person and in accordance with local codes.

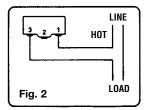
Electrical Rating

Motor Duty	120 V.A.C.	240 V.A.C.		
Full Load	7.4 A.F.L.	3.7 A.F.L.		
Locked Rotor	44.4 A.F.L.	22.2 A.F.L.		
120 V.D.C. 240 V.D.C.				
	0.3 Amps	0.15 Amps		
PILOT DUTY: A.C. 125 V.A., 120-240 V				

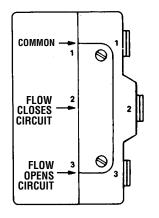
Schematics of No. FS10-F Operation







- Waterflow indicator used to sound alarm, light signal, actuate relays or starter switches for motors, pumps, etc., when flow occurs.
- Waterflow indicator used to sound alarm, light signal, actuate relays or starter switches for motors, pumps, etc., when no flow occurs.



INSTALLATION

WATERFLOW INDICATOR FS10-F SERIES

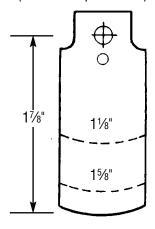
SPECIAL PURPOSE – FIRE PROTECTIVE SIGNALING:

Underwriter's Laboratories Listed for automatic sprinklers fire protection service and signaling systems.

Watts waterflow indicator provides a positive way of detecting the flow of water in any distribution, branch or mainline piping of a sprinkler system, in pipe sizes from 1" to $1\frac{1}{2}$ " only. Wired to alarms or signaling systems, it immediately indicates the location of an open sprinkler head(s).

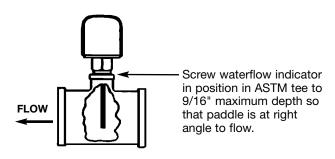
ACTUAL SIZE OF SUPPLIED PADDLE

(Trim to Required Size)



NOTE:

- When trimming to required size, use template.
- Paddle length conforms to ASTM tee standard.



ALWAYS CHECK OPERATION OF WATERFLOW INDICATOR FOLLOWING INSTALLATION.

PIPE SIZE	PADDLE LENGTH	ASTM TEE SIZE
1" NPT	Length 1½" Trim Paddle to 1½"	1" x 1" x 1" NPT Tee
11/4" NPT	Length 15%" Trim Paddle to 15%"	11/4" x 11/4" x 1" NPT Tee
1½" NPT	Length 17/8"	1½" x 1½" x 1" NPT Tee

SCHEMATICS OF OPERATION:

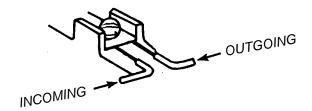
The word "flow" means that the switch will open or close the circuit(s) between the terminals as marked, when flow rate is increased to the required GPM.

"No flow" means switch position will be reversed (opening or closing) the circuit(s) between terminals as marked, when flow rate is decreased below the required GPM.

NOTE: Supplied leads attached to waterflow indicator are to be used in connection with electrical supervision for incoming and outgoing alarm-initiating-circuit system.

INSTRUCTIONS FOR FIRE PROTECTIVE SIGNALING:

Switch terminal connections clamping plate terminal



WARNING; An uninsulated section of a signal conductor is not permitted to be looped around the terminal and serve as two separate connections. The wire must be severed to serve as two separate connections, thereby providing supervision of the connection in the event that the wire becomes dislodged from under terminal.

NOTES

	Technical Assistance Call Your Authorized Watts Agent.		Telephone #	Fax #	
	HEADQUARTERS: Watts Regulator Company	815 Chestnut St., North Andover, MA 01845-6098 U.S.A.	978 688-1811	978 794-184	
East	Edwards, Platt & Deely, Inc.	271 Royal Ave., Hawthorne, NJ 07506	973 427-2898	973 427-424	
ä.č	Edwards, Platt & Deely, Inc.	368 Wyandanch Ave., North Babylon, NY 11703	631 253-0600	631 253-030	
<u> </u>	W. P. Haney Co., Inc.	51 Norfolk Ave., South Easton, MA 02375	508 238-2030	508 238-835	
Atlantic	J. B. O'Connor Company, Inc.	P.O. Box 12927, Pittsburgh, PA 15241	724 745-5300	724 745-742	
2 =	RMI The Joyce Agency, Inc.	Glenfield Bus. Ctr., 2535 Mechanicsville Tpk., Richmond, VA 23223	804 643-7355 703 866-3111	804 643-73 703 866-23	
<u>=</u>	Vernon Bitzer Associates, Inc.	8442 Alban Rd., Springfield, VA 22150 980 Thomas Drive, Warminster, PA 18974	215 443-7500	215 443-75	
¥	WMS Sales, Inc. (Main office)	9580 County Rd., Clarence Center, NY 14032	716 741-9575	716 741-48	
	Billingsley & Associates, Inc.	2728 Crestview Ave., Kenner, LA 70062-4829	504 602-8100	504 602-81	
	Billingsley & Associates, Inc.	478 Cheyenne Lane, Madison, MS 39110	601 856-7565	601 856-83	
	Francisco J. Ortiz & Co., Inc.	Charlyn Industrial Pk., Road 190 KM1.9 - Lot #8, Carolina, Puerto Rico 00983	787 769-0085	787 750-51	
St	Mid-America Marketing, Inc. Mid-America Marketing, Inc.	203 Industrial Drive, Birmingham, AL 35211 1364 Foster Avenue, Nashville, TN 37210	205 879-3469 615 259-9944	205 870-50 615 259-51	
East	Mid-America Marketing, Inc.	5466 Old Hwy. 78, Memphis, TN 38118	901 795-0045	901 795-03	
,	Smith & Stevenson Co., Inc.	4935 Chastain Ave., Charlotte, NC 28217	704 525-3388	704 525-67	
	Harry Warren, Inc.	1400 North Orange Blossom Trail, Orlando, FL 32804	407 841-9237	407 841-92	
	Watts Georgia	2861-B Bankers Industrial Drive, Atlanta, GA 30360	770 209-3310	770 447-45	
	Aspinall Associates, Inc.	6840 Hillsdale Court, Indianapolis, IN 46250	317 849-5757	317 845-79	
<u>a</u>	Dave Watson Associates Disney McLane & Associates	1325 West Beecher, Adrian, MI 49221	517 263-8988	517 263-23	
Ė	BWA Company	428 McGregor Ave., Cincinnati, OH 45206 17610 S. Waterloo Rd., Cleveland, OH 44119	800 542-1682 216 486-1010	877 476-16 216 486-28	
Central	Mid-Continent Marketing Services Ltd.	1724 Armitage Ct., Addison, IL 60101	630 953-1211	630 953-10	
-0	Soderholm & Associates, Inc.	7150 143rd Ave. N.W., Anoka, MN 55303	763 427-9635	763 427-56	
	Stickler & Associates	333 North 121 St., Milwaukee, WI 53226	414 771-0400	414 771-360	
	Hugh M. Cunningham, Inc.	13755 Benchmark, Dallas, TX 75234	972 888-3808	972 888-38	
Central	Mack McClain & Associates	4407 Meramec Bottom, Suite G, St. Louis, MO 63129	314 894-8188	314 894-83	
Ę	Mack McClain & Associates, Inc. Mack McClain & Associates, Inc.	1450 NE 69th Place, Ste. 56 Ankeny, IA 50021 15090 West 116th St., Olathe, KS 66062	515 288-0184 913 339-6677	515 288-50 913 339-95	
58	OK! Sales, Inc.	214-A NE 12th., Moore, OK 73160	405 794-5200	405 794-52	
	Phoenix Marketing, Ltd.	2416 Candelaria N.E., Albuquerque, NM 87107	505 883-7100	505 883-71	
	Delco Sales, Inc.	1930 Raymer Ave., Fullerton, CA 92833	714 888-2444	714 888-24	
_	Delco Sales, Inc.	111 Sand Island Access Rd., Unit I-10, Honolulu, HI 96819	808 842-7900	808 842-96	
<u>ር</u> ወ	Fanning & Associates, Inc. Hollabaugh Brothers & Associates	6765 Franklin St., Denver, CO 80229-7111	303 289-4191 253 867-5040	303 286-90	
ţ	Hollabaugh Brothers & Associates	6915 South 194th St., Kent, WA 98032 3028 S.E. 17th Ave., Portland, OR 97202	503 238-0313	253 867-50 503 235-28	
Western	P I R Sales, Inc.	3050 North San Marcos Place, Chandler, AZ 85225	480 892-6000	480 892-60	
>	Preferred Sales	31177 Wiegman Road, Hayward, CA 94544	510 487-9755	510 476-15	
	R. E. Fitzpatrick Sales, Inc.	4109 West Nike Dr. (8250 South), West Jordan, UT 84088	801 282-0700	801 282-06	
	Watts Industries (Canada) Inc.		005 000 105	005 000 55	
	(Watts Regulator Co. Division) Con-Cur West Marketing, Inc.	5435 North Service Road, Burlington, Ontario L7L 5H7 71B Clipper Street, Coquitlam, British Columbia V3K 6X2	905 332-4090 604 540-5088	905 332-70 604 540-50	
	D.C. Sales Corporation Inc.	#10-6130 4th St. S.E., Calgary, Alberta T2H 2B6	403 253-6808	403 259-83	
	D.C. Sales Corporation Inc.	11420 142 Street, Edmonton, Alberta T5M 1V1	780 496-9495	780 496-96	
	GTA Sales Team.	Greater Toronto Area	888 208-8927	888 479-28	
	Hydro-Mechanical Sales, Ltd.	3700 Joseph Howe Drive, Suite 1, Halifax, Nova Scotia B3L 4H7	902 443-2274	902 443-22	
O	Hydro-Mechanical Sales, Ltd.	P.O. Box 1445 (Mailing), 297 Collishaw St., Suite 7 (shipping) Moncton, New Brunswick E1C 9R2	506 859-1107	506 859-24	
<u> </u>	J.D.S. Sales Ltd.	4 Lancaster Street, St. John's, Newfoundland A1A 5P7	709 579-5771	709 579-15	
Canada	Le Groupe B.G.T., Inc.	23 du Buisson, Pont Rouge, Quebec G3H 1X9	418 873-2500	418 873-25	
9	Le Groupe B.G.T., Inc.	86 des Enterprises #208, Boisbriand, Quebec J7G 2T3	450 434-9010	450 434-98	
	Mar-Win Agencies, Ltd. Northern Mechanical Sales	1333 Clifton St., Winnipeg, Manitoba R3E 2V1 P.O. Box 280 (mailing) 163 Pine St. (shipping), Garson, Ontario P3L 1S6	204 775-8194	204 786-80	
	Palser Enterprises, Ltd.	P.O. Box 28136 (mailing), 1885 Blue Heron Dr., #4,	705 693-2715	705 693-43	
	DAM Manhaniani Markati	London, Ontario N6H 5L9	519 471-9382	519 471-10	
	RAM Mechanical Marketing Inc. RAM Mechanical Marketing Inc.	1401 St. John Street, Regina, Saskatchewan S4R 1S5 510 Ave M South, Saskatoon, Saskatchewan S7M 2K9	306 525-1986 306 244-6622	306 525-08 306 244-08	
	Walmar Mechanical Sales	24 Gurdwara Rd., Nepean, Ontario K2E 8B5	613 225-9774	613 225-06	



