

**For Residential, Commercial and Industrial Applications**

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

Contractor \_\_\_\_\_  
 Approval \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Representative \_\_\_\_\_

# Series BRV

## Combination Ball Valve and Relief Valve

**Sizes: 3/4" – 1" (20 – 25mm)**

Series BRV, Combination Ball Valve and Relief Valve is an easy to install two-in-one device. Designed to be used as water heater shutoff valves to provide both a means to shut off the water supply to the water heater and to provide protection against excess water pressure caused by thermal expansion.

These valves use a bronze body full port valve design\* which includes PTFE seats and a blow out proof stem design. The relief valve section includes a Viton® ball and stainless steel spring. It is provided with a compression, BARB or PEX end fitting to provide a secure method of connecting a discharge line.

### Features

- Easy Installation - Installs in any position
- Low profile design
- Full port ball valve with virgin PTFE seats
- Blowout proof stem
- Stainless steel spring/Viton® ball relief valve components
- Secure drain tube connection available with PEX, BARB or compression fitting models

### Specifications

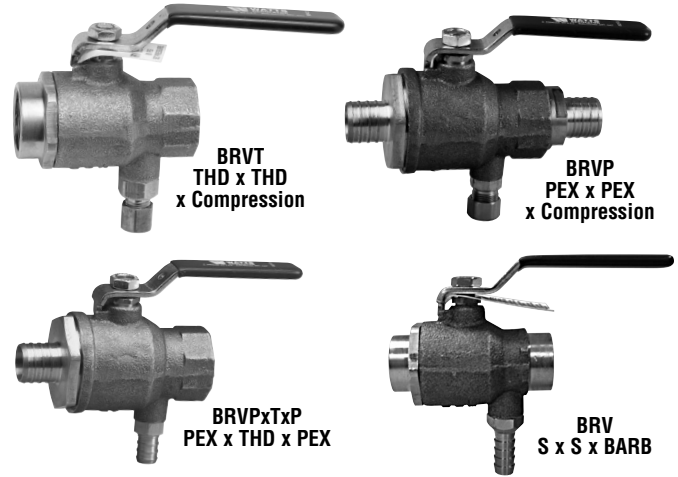
Valve shall include built-in relief protection from water pressure in excess of 75, 80, 100, or 125psi. Each valve shall be full port construction\*, bronze ASTM B-584 body, electroless nickel plated ASTM B-16 or B-124 brass ball, blowout proof ASTM B-16 brass stem, virgin PTFE seats, PTFE stem packing and stem thrust bearing, Viton® relief ball and 302 stainless steel relief spring. Valves shall include brass compression nut and ferrule or PEX end connection for a drain line. Valve shall be IAPMO listed. Valve shall be a Watts Regulator Company Series BRV.

\* PEX end connections reduce full port to reduced port dimensions.

Viton® is a registered trademark of DuPont Dow Elastomers.

#### Note For Sweat Connections Only:

This valve is designed to be soft soldered into lines without disassembly, using a low temperature solder 420°F (216°C). Other solders such as 95/5 tin antimony 460°F (238°C) or 96/4 tin silver 430°F (221°C) can be used. However, extreme



### Available Models

INLET	OUTLET	RELIEF OUTLET
Sweat	Sweat	PEX
Sweat	Sweat	Compression
Thread	Thread	Compression
PEX	PEX	Compression
PEX	Thread	Compression
PEX	Thread	PEX
PEX	Sweat	Compression
PEX	Sweat	PEX
Thread	PEX	Compression
Sweat	PEX	Compression
PEX	PEX	PEX
Sweat	Sweat	Barb
Thread	Thread	Barb
PEX	PEX	Barb
PEX	Sweat	Barb
PEX	Thread	Barb
Sweat	PEX	Barb
Thread	PEX	Barb

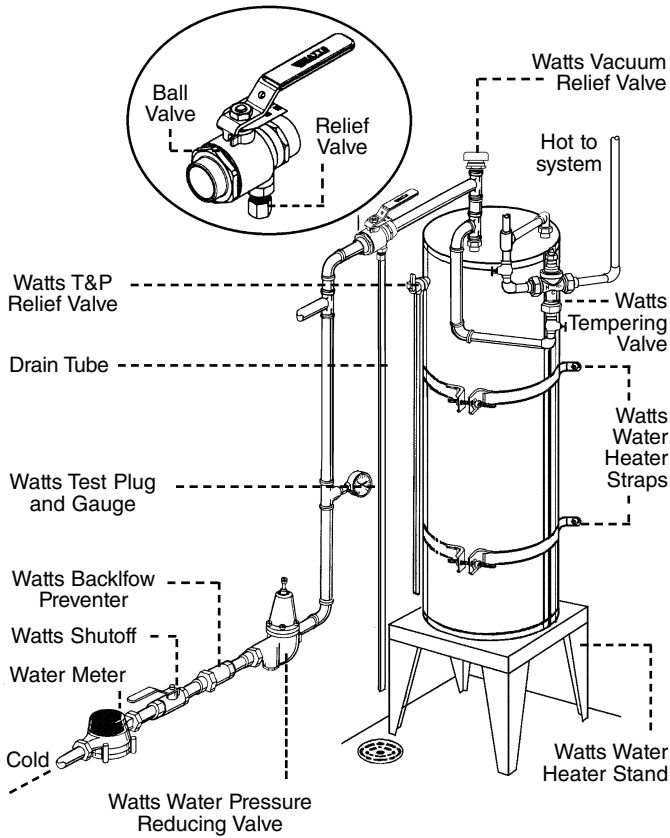
caution must be used to prevent seat damage. Higher temperature solders will damage the seat material. ANSI B16.18 states that the maximum operating pressure of 50-50 solder connections is 200psi (14 bar) at 100°F (38°C) and decreases with higher temperatures.

Apply heat with the flame directed AWAY from the center of the valve body. Excessive heat can harm the seats. After soldering, the packing nut may have to be tightened.

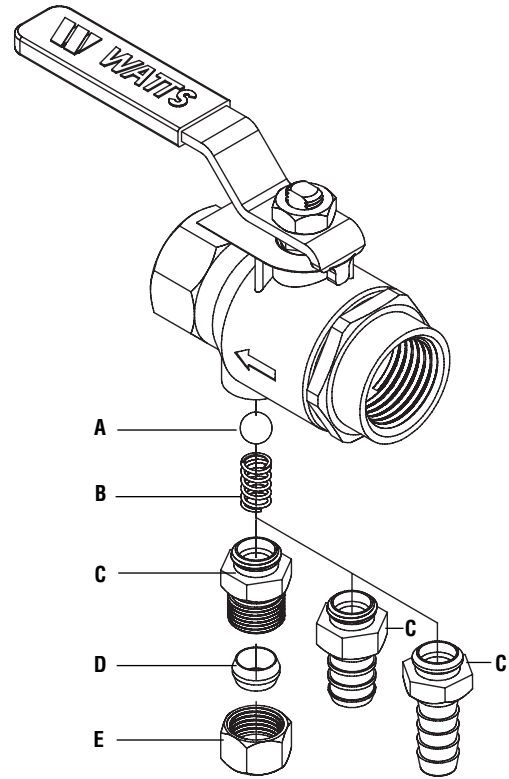


Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

## Typical Installation



## Relief Valve



## Temperature – Pressure Rating

Maximum Temperature: 210°F (99°C)

Maximum Pressure: Valve body rated to 400psi (28 bar)

## Standards

Listed by IAPMO



## Material of Construction

Handle Nut - Zinc plated carbon steel

Handle - Zinc plated carbon steel with vinyl insulator

Packing Nut - ASTM B-16 brass

Stem Packing - PTFE

Thrust Washer - PTFE

Stem - Brass ASTM B-16 UNS No. C36000

Body - Bronze ASTM B-584 UNS No. C84400

Seats - Virgin PTFE

Ball - Electroless nickel free cutting brass rod ASTM B-16  
UNS No. C36000, or forging brass ASTM B-124

Adapter - Brass ASTM B-16

Ball - Viton®

Spring - 302 stainless steel

Spring Cage - Brass ASTM B-16 UNS No. 36000

Ferrule - Brass

Nut - Brass

### COMPRESSION:

- A. Ball
- B. Spring
- C. Spring Cage
- D. Ferrule
- E. Nut

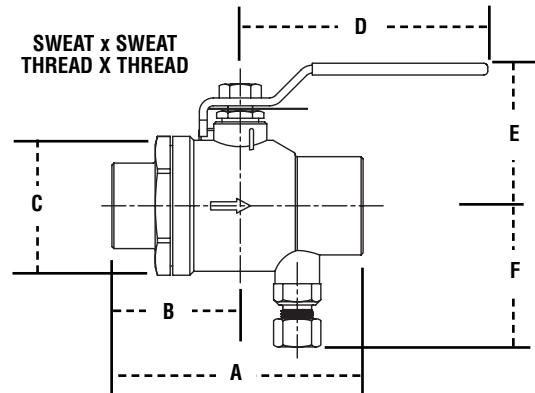
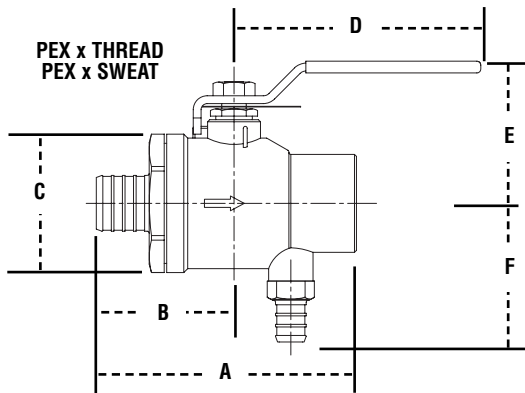
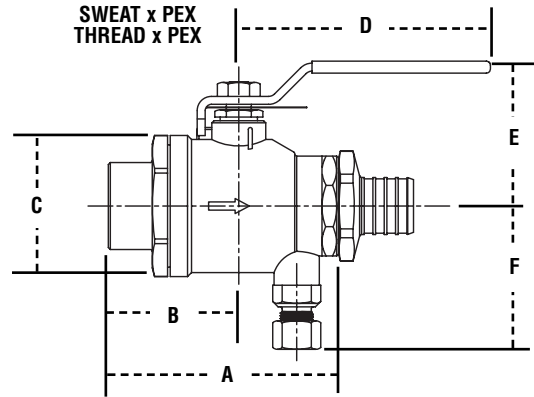
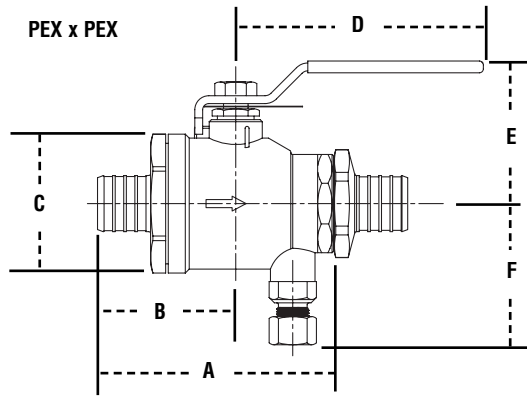
### PEX:

- A. Ball
- B. Spring
- C. Spring Cage

### BARB

- A. Ball
- B. Spring
- C. Spring Cage

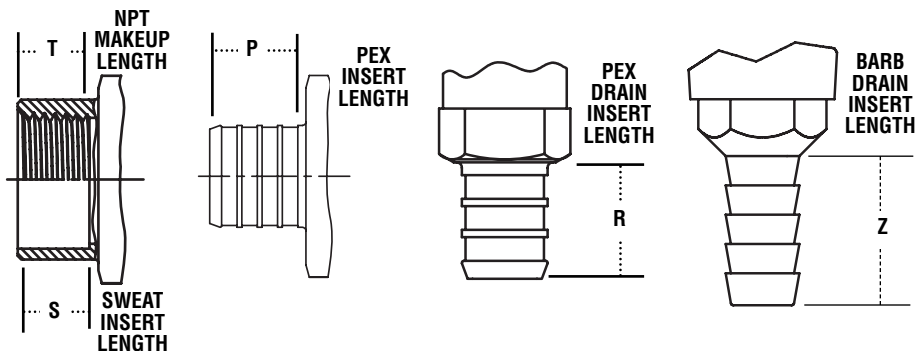
## Dimensions — Weights



MODEL	INLET/OUTLET	SIZE (DN)		DIMENSIONS										WEIGHT			
		in.	mm	A		B		C		D		E		F		lbs.	kgs.
BRVT	THD x THD	3/4	20	2 <sup>15</sup> / <sub>16</sub>	75	1 <sup>3</sup> / <sub>8</sub>	36	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.00	.45
BRVT	THD x THD	1	25	3 <sup>9</sup> / <sub>16</sub>	90	1 <sup>11</sup> / <sub>16</sub>	43	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	1.80	.82
BRVS	SWT x SWT	3/4	20	2 <sup>15</sup> / <sub>16</sub>	75	1 <sup>3</sup> / <sub>8</sub>	36	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.00	.45
BRVS	SWT x SWT	1	25	3 <sup>7</sup> / <sub>8</sub>	99	1 <sup>15</sup> / <sub>16</sub>	49	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	1.80	.82
BRVP	PEX x PEX	3/4	20	3 <sup>5</sup> / <sub>8</sub>	93	1 <sup>11</sup> / <sub>16</sub>	43	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.20	.54
BRVP	PEX x PEX	1	25	4 <sup>3</sup> / <sub>4</sub>	121	2 <sup>1</sup> / <sub>8</sub>	54	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	2.10	.95
BRVPxT	PEX x THD	3/4	20	3 <sup>3</sup> / <sub>16</sub>	81	1 <sup>11</sup> / <sub>16</sub>	43	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.00	.45
BRVPxT	PEX x THD	1	25	4	101	2 <sup>1</sup> / <sub>8</sub>	54	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	1.80	.82
BRVPxS	PEX x SWT	3/4	20	3 <sup>3</sup> / <sub>16</sub>	81	1 <sup>11</sup> / <sub>16</sub>	43	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.00	.45
BRVPxS	PEX x SWT	1	25	4 <sup>1</sup> / <sub>16</sub>	103	2 <sup>1</sup> / <sub>8</sub>	54	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	1.80	.82
BRVTxP	THD x PEX	3/4	20	3 <sup>5</sup> / <sub>8</sub>	86	1 <sup>3</sup> / <sub>8</sub>	36	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.20	.54
BRVTxP	THD x PEX	1	25	4 <sup>5</sup> / <sub>16</sub>	109	1 <sup>11</sup> / <sub>16</sub>	43	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	2.10	.95
BRVSxP	SWT x PEX	3/4	20	3 <sup>3</sup> / <sub>8</sub>	86	1 <sup>3</sup> / <sub>8</sub>	36	1 <sup>9</sup> / <sub>16</sub>	40	3 <sup>3</sup> / <sub>4</sub>	95	1 <sup>15</sup> / <sub>16</sub>	49	1 <sup>15</sup> / <sub>16</sub>	49	1.20	.54
BRVSxP	SWT x PEX	1	25	4 <sup>9</sup> / <sub>16</sub>	116	1 <sup>15</sup> / <sub>16</sub>	49	2 <sup>1</sup> / <sub>8</sub>	54	3 <sup>3</sup> / <sub>4</sub>	95	2 <sup>3</sup> / <sub>16</sub>	56	2 <sup>1</sup> / <sub>8</sub>	55	2.10	.95

Standard relief drain connection is a 3/8" Compression Fitting, add P for 1/2" PEX

## Outlet Options



SIZE	DIMENSIONS				
	P	R	S	T	Z
in. mm	in. mm	in. mm	in. mm	in. mm	in. mm
3/4 20	13/16 21	5/8 16	3/4 19	9/16 14	27/32 21
1 25	13/16 21	5/8 16	7/8 23	11/16 17	27/32 21

# For Technical Assistance Call Your Authorized Watts Agent.

			Telephone #	Fax #
	<b>HEADQUARTERS:</b> Watts Regulator Company	815 Chestnut St., North Andover, MA 01845-6098 U.S.A.	978 688-1811	978 794-1848
<b>North East</b>	Edwards, Platt & Deely, Inc.	271 Royal Ave., Hawthorne, NJ 07506	973 427-2898	973 427-4246
	Edwards, Platt & Deely, Inc.	368 Wyandanch Ave., North Babylon, NY 11703	631 253-0600	631 253-0303
	W. P. Haney Co., Inc.	51 Norfolk Ave., South Easton, MA 02375	508 238-2030	508 238-8353
<b>Mid Atlantic</b>	J. B. O'Connor Company, Inc.	P.O. Box 12927, Pittsburgh, PA 15241	724 745-5300	724 745-7420
	RMI	Glenfield Bus. Ctr., 2535 Mechanicsville Tpk., Richmond, VA 23223	804 643-7355	804 643-7380
	The Joyce Agency, Inc.	8442 Alban Rd., Springfield, VA 22150	703 866-3111	703 866-2332
	Vernon Bitzer Associates, Inc. WMS Sales, Inc. (Main office)	980 Thomas Drive, Warminster, PA 18974 9580 County Rd., Clarence Center, NY 14032	215 443-7500 716 741-9575	215 443-7573 716 741-4810
<b>South East</b>	Billingsley & Associates, Inc.	2728 Crestview Ave., Kenner, LA 70062-4829	504 602-8100	504 602-8106
	Billingsley & Associates, Inc.	478 Cheyenne Lane, Madison, MS 39110	601 856-7565	601 856-8390
	Francisco J. Ortiz & Co., Inc.	Charlyn Industrial Pk., Road 190 KM1.9 - Lot #8, Carolina, Puerto Rico 00983	787 769-0085	787 750-5120
	Mid-America Marketing, Inc.	203 Industrial Drive, Birmingham, AL 35211	205 879-3469	205 870-5027
	Mid-America Marketing, Inc.	1364 Foster Avenue, Nashville, TN 37210	615 259-9944	615 259-5111
	Mid-America Marketing, Inc.	5466 Old Hwy. 78, Memphis, TN 38118	901 795-0045	901 795-0394
	Smith & Stevenson Co., Inc.	4935 Chastain Ave., Charlotte, NC 28217	704 525-3388	704 525-6749
	Harry Warren, Inc. Watts Georgia	1400 North Orange Blossom Trail, Orlando, FL 32804 2861-B Bankers Industrial Drive, Atlanta, GA 30360	407 841-9237 770 209-3310	407 841-9246 770 447-4583
<b>North Central</b>	Aspinall Associates, Inc.	6840 Hillsdale Court, Indianapolis, IN 46250	317 849-5757	317 845-7967
	Dave Watson Associates	1325 West Beecher, Adrian, MI 49221	517 263-8988	517 263-2328
	Disney McLane & Associates	428 McGregor Ave., Cincinnati, OH 45206	800 542-1682	877 476-1682
	BWA Company	17610 S. Waterloo Rd., Cleveland, OH 44119	216 486-1010	216 486-2860
	Mid-Continent Marketing Services Ltd.	1724 Armitage Ct., Addison, IL 60101	630 953-1211	630 953-1067
	Soderholm & Associates, Inc. Stickler & Associates	7150 143rd Ave. N.W., Anoka, MN 55303 333 North 121 St., Milwaukee, WI 53226	763 427-9635 414 771-0400	763 427-5665 414 771-3607
<b>South Central</b>	Hugh M. Cunningham, Inc.	13755 Benchmark, Dallas, TX 75234	972 888-3808	972 888-3838
	Mack McClain & Associates	4407 Meramec Bottom, Suite G, St. Louis, MO 63129	314 894-8188	314 894-8388
	Mack McClain & Associates, Inc.	1450 NE 69th Place, Ste. 56 Ankeny, IA 50021	515 288-0184	515 288-5049
	Mack McClain & Associates, Inc.	15090 West 116th St., Olathe, KS 66062	913 339-6677	913 339-9518
	OK! Sales, Inc. Phoenix Marketing, Ltd.	214-A NE 12th., Moore, OK 73160 2416 Candelaria N.E., Albuquerque, NM 87107	405 794-5200 505 883-7100	405 794-5250 505 883-7101
<b>Western</b>	Delco Sales, Inc.	1930 Raymer Ave., Fullerton, CA 92833	714 888-2444	714 888-2448
	Delco Sales, Inc.	111 Sand Island Access Rd., Unit I-10, Honolulu, HI 96819	808 842-7900	808 842-9625
	Fanning & Associates, Inc.	6765 Franklin St., Denver, CO 80229-7111	303 289-4191	303 286-9069
	Hollabaugh Brothers & Associates	6915 South 194th St., Kent, WA 98032	253 867-5040	253 867-5055
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	Con-Cur West Marketing, Inc.	71B Clipper Street, Coquitlam, British Columbia V3K 6X2	604 540-5088	604 540-5084
	D.C. Sales Corporation Inc.	#10-6130 4th St. S.E., Calgary, Alberta T2H 2B6	403 253-6808	403 259-8331
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	GTA Sales Team.	Greater Toronto Area	888 208-8927	888 479-2887
	Hydro-Mechanical Sales, Ltd.	3700 Joseph Howe Drive, Suite 1, Halifax, Nova Scotia B3L 4H7	902 443-2274	902 443-2275
	Hydro-Mechanical Sales, Ltd.	P.O. Box 1445 (Mailing), 297 Collishaw St., Suite 7 (shipping) Moncton, New Brunswick E1C 9R2	506 859-1107	506 859-2424
	J.D.S. Sales Ltd.	4 Lancaster Street, St. John's, Newfoundland A1A 5P7	709 579-5771	709 579-1558
	Le Groupe B.G.T., Inc.	23 du Buisson, Pont Rouge, Quebec G3H 1X9	418 873-2500	418 873-2505
	Le Groupe B.G.T., Inc.	86 des Entreprises #208, Boisbriand, Quebec J7G 2T3	450 434-9010	450 434-9848
	Mar-Win Agencies, Ltd.	1333 Clifton St., Winnipeg, Manitoba R3E 2V1	204 775-8194	204 786-8016
	Northern Mechanical Sales Palsler Enterprises, Ltd.	P.O. Box 280 (mailing) 163 Pine St. (shipping), Garson, Ontario P3L 1S6 P.O. Box 28136 (mailing), 1885 Blue Heron Dr., #4, London, Ontario N6H 5L9	705 693-2715	705 693-4394
	RAM Mechanical Marketing Inc.	1401 St. John Street, Regina, Saskatchewan S4R 1S5	306 525-1986	306 525-0809
RAM Mechanical Marketing Inc.	510 Ave M South, Saskatoon, Saskatchewan S7M 2K9	306 244-6622	306 244-0807	
Walmar Mechanical Sales	24 Gurdwara Rd., Nepean, Ontario K2E 8B5	613 225-9774	613 225-0673	
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Water Safety & Flow Control Products

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