



Directory of Products & Services



AWWA & Engineered Products Project Management and Site Services

MARKETS

Water • Waste Water • Buried • In-Plant • Power • Industrial



www.ttrgroupinc.com Valve & Application Solutions for the Municipal, Industrial, Mining and Power Industries

Primary Market Applications

Products Crispin AWWA Butterfly Valve Crispin AWWA Check Valves Crispin AWWA Check Valves Crispin AWWA Air Valves Water & Sewage Ross Piston & Diaphragm Control Valves Ross Energy Dissipating Valves Ross Vaults Romac Couplings AWWA American RS Wedge Gate Valves	MINING	POWER	WASTEWATER	WATER TREATMENT	DISTRIBUTION	RESERVOIRS	ELEVATED STORAGE	SIZE (in)	SIZE (mm)
Crispin AWWA Butterfly Valves AWWA	•	•	•	•	•	•	•	3"-168"	75-4200mm
Crispin AWWA Check Valves		•		•		•		3"-72"	75-1800mm
Crispin AWWA Air Valves	•	•	•	•	•	•	•	1/2"-24"	12-600mm
Crispin AWWA Plug Valves	•		•					3"- 24"	75-600mm
Ross AWWA Control Valves	•	•	•	•	•	•	•	1"-48"	25-1200mm
Ross Sewage Relief Valves	•		•					3"-12"	75-300mm
Ross Energy Dissipating Valves		•		٠		٠		1"-78"	25-1950mm
Romac AWWA Couplings	•	•	•	•	٠	٠	•	4"-96"	100-2400mm
Romac AWWA Dismantling Joint	•	٠	•	•	•	•	•	3"-72"	75-1800mm
Jash Knife Gate Valves	•	٠	•	•				2"-48"	50-1200mm
TTR Rectangular Valves			•	•				4"-144"	100-3600mm
TTR Engineered Check Valves						•		8"-66"	200-1650mm
TTR Engineered Butterfly Valves			•					3"-102"	75-2550mm
TTR Mud Valves			•	•				3"-42"	75-1050mm
TTR Site Services	•	•	•	•	•	•	•	3"-30"	75-750mm
American Resilient Seated Wedge Gates -In Plant	•	•	•	•	•	•	•	2"-36"	50-900mm
American Resilient Seated Wedge Gates -Buried				•	•			2"-36"	50-900mm
Safe Operator	_		•	•	•			n/a	n/a
Jash Slide Gate Valves		•	•	•		•		2.5"-120"	65-3000mm
Valve Design Machining & Fabrication	•	•	•	•	•	•	•	n/a	n/a

TTR Group Inc. The Engineered Valve & Speciality Products Company









Directory of Products & Services

TTR Primary Market Applications	1
Services and Engineered Products	3
Crispin K-Flo Butterfly Valves	3
Crispin Valves	4
Ross Control Valves	6
Jash Valve Knife Gate Valves	7
American RW Gate Valves	7
TTR Engineered Products	7
Jash Flap and Slide Gate Valves	7-8
TTR Butterfly Valves	9
Praher PVC Valves	9
Romac Couplings	9
Proco Products	9
SafeOperator	9
TTR Corporate Municipal Capabilities	11

The Engineered Valve & Speciality Products Company



Our Services

Are backed with proven expertise and extensive experience, which include:

- · Design, Field Service and Site Commissioning support
- Specifications and Engineered Drawings for specialty engineered products
- Product Pre-Installation Training
- Unbiased Specification Assistance
- · Field Service on New Installations
- Full Design and Machining Capabilities
- Site Commissioning: Valve & Actuators
- Field Service Analysis of existing installations
- System Application Analysis and recommendations
- · Manufacturing of Engineered Valves & Specialty Items

Our Engineered Products

- Shaft Extensions
- Rod Extensions
- Free Standing Torque Tubes
- · Pipe Supports and Saddles
- Butterfly Valves & Automation
- Counterweighted Turbine Isolation Valves
- NSF Ball Valves
- AWWA Knife/Slide Gate Valves & AWWA large diameter rectangular valves
- Metal Seat Zero Leakage Butterfly Valves 100mm (4") 1950mm (78")
- Metal Seated Zero Leakage High Pressure Ball Valves 100mm (4") 3000mm (120")
- Design of Specialty Engineered Valves 75mm (3") to 3300mm (132")
- Rectangular Valves
- Specialty Check Valves

The Engineered Valve & Speciality Products Company

3

Crispin K-Flo Butterfly AWWA C504 Valves

K-FLO BUTTERFLY Valves are used to control the flow of water in water distribution systems, in water filtration systems and in sewage treatment systems.

With seat-in-body designs in sizes 75mm (3") through 4200mm (168"), K-Flo Butterfly Valves meet and exceed the latest AWWA C504 edition, and are backed by the experience of Crispin Valve, with over 100 years in the water-works industry.

Crispin Series 500 Butterfly Valve | AWWA C504

Size: 75mm (3") to 500mm (20") Body Material: Cast Iron, optional Ductile Iron End Connections: Flanged and Mechanical Joint Pressure Ratings: AWWA Class 150 & 250B Features: Bidirectional seating rated for 200 PSIG standard on 150 PSIG rated valves, One piece through stem, Full encapsulated vulcanized seat Coating: NSF Epoxy / Fusion Bonded

Crispin Series 47 Butterfly Valve | AWWA C504

Size: 600mm (24") to 2400mm (96") Body Material: Cast Iron, Ductile Iron Disc Material: Ductile Iron, Stainless Steel Edge End Connections: Flanged and Mechanical Joint Pressure Ratings: 150 and 250 PSIG Features: Adjustable & Retained Packing options Coating: NSF Epoxy / Fusion Bonded

Crispin L2 Butterfly Valve | AWWA C504

Size: 600mm (24") to 4200mm (168")
Body Material: Cast Iron
Disc Material: Cast Iron, optional Ductile Iron
End Connections: Flanged and Mechanical Joint
Pressure Ratings: AWWA Class 150 & 250B
Features: Recessed trunion incorporated packing retaining device,
Full encapsulated recessed seat mechanically retained, Bidirectonal adjustable,
Non-metallic journal bearings & dual thrust bearings, High capacity low pressure
drop flow through disc starting at 600mm (24")
Coating: NSF Epoxy / Fusion Bonded



Crispin Series 47











The Engineered Valve & Speciality Products Company



Crispin Tilting Disc Check Valve | TD Series

Size: 150mm (6") to 150mm (60") Body Material: Cast Iron, Ductile Iron Disc Material: Ductile Iron End Connections: 150# Flanges Pressure Ratings: ANSI 125, 250 and 300 Typical Applications: Pump Protection, Pump Discharge, Minimum Head Loss Coating: NSF Epoxy / Fusion Bonded



Crispin Tilting Disc Check Valve

Crispin Rubber Flapper Check Valves | RF Series

Size: 50mm (2") to 600mm (24") Body Material: Ductile Iron Flapper Material: Buna-N Rubber Steel Reinforced End Connections: 150# Flanges Pressure Ratings: ANSI 150 and ANSI 300 Typical Applications: Water Treatment Plants, Wastewater Treatment Plants, Sludge Options: Dashpot, Indicators, Limit Switches Coating: NSF Epoxy / Fusion Bonded



Crispin Rubber Flapper Check Valve

Crispin Globe Check Valves

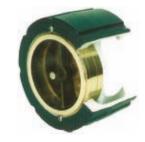
Size: 65mm (2 1/2") to 900mm (36")
Body Material: Cast Iron Body, Bronze Trim and Stainless Steel Spring
Temperature: 150°F (65°C)
Typical Applications: Mounted vertically or horizontally, these valves are designed to close before the pump stops completely, preventing flow reversal, and eliminating water hammer and system surges
Features: Fully Automatic, Spring-loaded, Double-guided
Coating: NSF Epoxy / Fusion Bonded



Crispin Globe Check Valve

Crispin Wafer Silent Check Valves

Size: 50mm (2") to 250mm (10")
Body Material: Cast Iron Body, Bronze Trim with Stainless Steel Spring, Buna-N Seal available
Pressure Ratings: ANSI Class 125 and Class 250
Temperature: 150°F (65°C)
Typical Applications: Same operating principle as the Globe Check Valve, but offered in a configuration that allows placement between two flanges
Features: Fully Automatic, Spring-loaded, Double-guided.
Resilient seats highly recommended for potable water or drip tight applications
Coating: NSF Epoxy / Fusion Bonded



Crispin Silent Check Valve

The Engineered Valve & Speciality Products Company

Crispin Foot Valves

Size: 50mm (2") to 900mm (36")
Body Material: Cast Iron, Ductile Iron
Disc Material: Bronze Disc, Stainless Steel Disc with Buna Seat
Valve Screen: Stainless Steel
Typical Applications: Pump Suction. These valves are silent and center guided; include a Buna-N seal for a drip tight seal.
Features: Maintains Pump Prime on Pump Outage, Full Flow Area, Resilient Seat for Positive Shut-off
Coating: NSF Epoxy / Fusion Bonded

Crispin Air Relief Vacuum Valves

Size: 12mm (1/2") to 400mm (16") Body Material: Cast Iron Float Material: Stainless Steel Seat Material: Buna-N End Connections: NPT, Flanged 125# Pressure Ratings: Up to 300 PSIG Typical Applications: Pressure Relief, Pump Protection Coating: NSF Epoxy / Fusion Bonded

Crispin Air and Vacuum Valves

Sewer Products

- Air and Vacuum Sewer Valve (S Series)
- Pressure Sewer Air Release Valve (SL Series)
- Combination Sewer Valve (S/SL Series)
- Universal Sewer Air Release Valve (US Series)
- Fabricated Universal Sewer Valve (FUSB Series)
- PVC Sewer Valve (PVC Series)
- Air Valve (X Series)
- Coating: NSF Epoxy / Fusion Bonded

Crispin Eccentric Plug Valves | AWWA C517

Size: 65mm (2 1/2") to 600mm (24")
Body Material: Cast Iron, optional Ductile Iron
Plug Material: Ductile Iron with Buna-N Coating, Round Port Design
Seat Material: Welded Nickel
End Connections: Flanged and MJ, Rubber Lined
Pressure Ratings: 125 and 150 per AWWA
Typical Applications: Water and Wastewater Treatment Plants



Crispin Foot Valve



Crispin Air Relief Vacuum Valves



Crispin Air and Vacuum Valves



Crispin Eccentric Plug Valves

The Engineered Valve & Speciality Products Company



Ross Control Valves Self-Piloted Pressure Reducing Valves Pressure Reducing / Sustaining / Relief Size: 12mm (1/2") to 900mm (36") Body Material: Cast Iron Trim Material: Bronze, 316 Stainless Steel End Connections: Union, NPT, Flanged Pressure Ratings: Maximum 300 PSI Typical Applications: Pressure Reducing, Surge Control Water and Wastewater, Wastewater Relief, Pump Control, Altitude	Image: Second
Ross Anti-Cavitation Valves	
Size: 75mm (3") to 600mm (24") Body Material: Cast Iron Sleeve Material: Stainless Steel End Connections: Flanged Pressure Ratings: Up to 600 PSI Typical Applications: Anti-Cavitation, Energy Dissipating, Pump Control, Chambers, Reservoir Inlet, Elimination of duplicate PRV's in series, Fail Open / Fail Close	Ross "Water Tamer"
Ross MOV Energy Dissipating Valve	
 Size: 100mm (4") to 2250mm (90") Body Material: Cast Iron, Ductile Iron, Carbon Steel, Stainless Steel End Connections: Wafer, Flanged Seat Material: AISI 420 Stainless Steel, RC 40-50 Pressure Ratings: ANSI 150 and 300, High Delta P Typical Applications: Environmental By-Pass Systems, Reservoir Inlet, Water Supply Systems, Industrial Flow Cooling, Tank or Free Flow Discharge Features: Reduced Face-to-Face, Minimum Leakage Capabilities, Capable Flow Reversal and assembled using Dielectric Components 	Ross MOV
Ross Pre-Packaged Vaults	
 Pre-fabricated and factory-tested valve vaults for municipal and industrial applications. Custom or standard build. Heavy duty construction and NSF epoxy coating throughout Designed for ease of use and ease of maintenance All valve assemblies are factory-tested prior to delivery for trouble-free start ups Pre-cast concrete is poured and cured in a controlled environment, ideal for installations where terrain, traffic, or weather prevent cast-inplace solutions 	

Ross Pre-Packaged Vaults

The Engineered Valve & Speciality Products Company



Jash Knife Gate Valves

Size: 50mm (2") to 2250mm (90") Body Material: 316 Stainless Steel Disc Material: 316 Stainless Steel End Connections: Flanged Seat Material: Metal, Resilient Seated, Bidirectional Pressure Ratings: 150 PSIG, Other pressure ratings available on request Typical Applications: Water, Wastewater, Mining, Slurries



Jash Knife Gate Valve

American Resilient Wedge Gate Valves | AWWA C515

Size: 50mm (2") to mm (66") Body Material: Ductile Iron Bonnet Material: Ductile Iron Stem: Stainless Steel Non-Rising Stem Pressure Ratings: 250lb non-shock cold working pressure Features: Fusion Bonded Epoxy Coating, Stainless Trim Available with op-nut or handwheel Coating: Fusion Bonded Standard In & Out



American RW Gate Valve

SE

TTR Engineered Products

- Shaft Extensions
- Rod Extensions
- Free Standing Torque Tubes
- Pipe Supports and Saddles
- Counterweighted Turbine Isolation Valves
- NSF Ball Valves



TTR Engineered Products

Jash Flap Gate

Size: 150mm (6") to 2400mm (96") Round | 300mm (12") x 300mm (12") to 3000mm (120") x 3000mm (120") Square and Rectangular
Gate Material: Cast Iron, Ductile Iron
Seat Material: Cast Iron, Rubber, Bronze, Monel
Typical Applications: Flood Control, Sewage Treatment Plants,
Water Treatment Plants, Waste Lines, Pump Discharge Control, Drainage System, Sewer Outfalls



Jash Flap Gate

The Engineered Valve & Speciality Products Company

8

Jash Heavy Duty Fabricated Slide Gate

Size: 150mm (6") x 150mm (6") to 1800mm (72") x 1800mm (72") Square or Rectangular Gate Material: Carbon Steel, Galvanized Carbon Steel, Stainless Steel Head Pressure: Seating 55', Unseating 20', Flush Bottom Seals Typical Applications: Water Treatment Plants, Wastewater Treatment Plants, Low Head Reservoir, Power Plants, Rising / Non-Rising

Jash Cast Iron Slide Gate

Size: 300mm (12") x 300mm (12") to 1800mm (72") x 1800mm (72") Square, 300mm (12") x 600mm (24") to 1800mm (72") x 70" Rectangular Gate Material: Carbon Steel, Galvanized Carbon Steel, Stainless Steel Head Pressure: Seating 55', Unseating 20' **Typical Applications:** Water Treatment Plants, Wastewater Treatment Plants, Flood Control, Fabrication, Drainage Systems, Low Head Reservoir, Power Plants, Rising / Non-Rising

TTR Engineered Check Valve

Size: 100mm (4") to 1800mm (72") Body Material: Carbon Steel, Stainless Steel End Connections: Wafer, Flanged Seat Material: Metal to Metal Pressure Ratings: 150 PSIG Leakage Rating: Class I through Class IV Typical Applications: Reservoir Recirculation, Replaces Tilting Disc or Standard Check Valves on Custom Applications, Patented Seal System

TTR Engineered Butterfly Valve: Round & Rectangular Applications

Size: 100mm (4") to 2250mm (90") Body Material: Carbon Steel, Aluminum, 316 Stainless Steel, Specialty Metals and Coatings End Connections: Wafer, Lug, Flanged. Various Face-to-Face Dimensions Pressure Ratings: 15 PSIG, Class I - VI, Leakage Rates, Bubble Tight Temperature Rating: -40°F (40°C) to 2300°F (1260°C) Typical Applications: Aeration, Air Handling, Blower, Bio-Gases. Rectangular Applications: Channels, Reservoirs and Filters Features: Five Seat Styles, Resilient / Teflon, Patented Packing Design, External Bearings, Custom Dimensions





Jash Fabricated Slide Gate







TTR Engineered Butterfly Valve

TTR Engineered Check Valve



The Engineered Valve & Speciality Products Company



Praher PVC Valves

Size: 8mm (3/8") to 300mm (12") Body Material: PVC, CPVC End Connections: Socket, Threaded Pressure Ratings: 150 PSIG Typical Applications: Chemical Feed, Raw Water Intake, Irrigation Valve Types: Ball, Butterfly, Relief, Check. Manual and Automated.



Praher PVC Valves

Romac Couplings | Dismantling Joints

Size: 12mm (1/2") to 2400mm (96")
Body Material: Cast Iron, Steel and Stainless Steel
End Connections: Various pipe materials
Seals: Elastomer NSF Buna / EPDM
Pressure Ratings: Up to 500 PSI
Typical Applications: Repair Clamps, Couplings, Dismantling Joints, Pipe End Connectors
Coating: Fusion Bonded Standard In & Out



Proco Rubber Check Valves

Size: 25mm (1") to 2400mm (96")
Body Material: All rubber construction resists abrasive slurries
End Connections: Flanged, Sleeved, or Jacketed
Typical Applications: Sewage Treatment Plants, Outfalls and Tidal Operations
Features: Very quiet operation with no water hammer, its unique design prevents backflow, Negligible maintenance and energy costs, Will not warp or freeze, Quick interchange with any flap type check valve, Available with special I.D. to suit concrete pipe.



Proco Rubber Check Valves

SafeOperator

Remote mechanical valve control. Flexible shaft system.

- Safe and convenient operation. A single flexible drive cable makes routing and fixing a simple operation. Manual or electric operation.
- Easy to install up to 75% quicker than a rigid rod system; easier than electric actuators
- · Fully enclosed system
- Little or no maintenance costs
- · Designed for rotary power transmission. Rotary to rotary system.



SafeOperator

The Engineered Valve & Speciality Products Company



TTR Municipal Corporate Products Manufactured or Distributed

Manufactured or Distributed Includes Manual / Electrical / Pneumatic and Hydraulic Actuation for Rotary and Linear Devices Site Installation Supervision and Commissioning by TTR



Valve & Application Solutions for the Municipal, Mining & Power Industries

Application	Manufacturer	Product Type	Product Description	*AWWA Standard	Specifications
Water-In-Plant				*Conforms to	
Water Filtration	Crispin	AWWA Butterfly Valve	Manual & Automated	AWWA C504	Yes
Water Filtration Backwash	Romac	Couplings	Color Coded 500	AWWA C219-11	Yes
Treated Water	Romac	Dismantling Joints	DJ400	AWWA C219-11	Yes
Raw Water Intake	TTR	Engineered Torque Tubes	Free Standing Extensions	Engineered	Yes
High & Low lift Pumps	TTR	Shaft Extensions & Pedestals	Shaft Extensions over 10 M	Engineered	Yes
Booster Pumps	TTR	Rod Extensions & Couplings	Vertical & Angled	Engineered	Yes
	Elliott Manufacturing	Safety Operator	Remote Operation	Confined Space	Yes
OEM Filter Equipment	TTR	Mud Valves	Custom Design & Sizes	Engineered	Yes
	TTR	Automated Resilient Seated BFV	Full Automation Packages	ISO & MSS-SP67	Yes
	Ross	Pump Control Valves	Electrically Operated Piston	AWWA C530-07	Yes
	American	Gate Valves RSWG	Resilient Seated Gate NRS	AWWA C515-09	Yes
	Jash	Knife Gate Valves	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	Yes
	Crispin	Swing Check	Outside Lever & Weight	AWWA C508	Yes
	Crispin	Tilting Disc Check	Flanged Check with Dashpot	AWWA C508	Yes
	Crispin	Flapper	Rubber Flapper Check Flanged	AWWA C508	Yes
Water - Distribution	onopin		The bot The por Criccit Hanged		
	Crianin	Vacuum Air Relief	NDT & Elanged	AMAMA CE12 07	Yes
Pipeline	Crispin		NPT & Flanged	AWWA C512-07	
Chambers & Vaults	Ross Valve	Pressure Reducing / Sustaining	Self Piloted Piston	AWWA C530-07	Yes
Direct Bury	Crispin Valve	AWWA Butterfly Isolation	Manual & Automated	AWWA C504	Yes
	TTR	ANSI Class 150/300 Metal Seated	Triple Offset HPBFV	ANSI Rated	Yes
	American	Gate Valves RSWG	Flanged & MJ NRS	AWWA C515-09	Yes
	Romac	Couplings	Color Coded 500	AWWA C219-11	Yes
	Romac	Dismantling Joints	DJ400	AWWA C219-11	Yes
	TTR	Rod Extensions & Couplings	Vertical & Angled	Engineered	Yes
	Crispin	AWWA Butterfly MJ Direct Bury	Flanged & MJ	AWWA C504	Yes
	American	Gate Valves RSWG MJ Direct Bury	Resilient Seated Gate NRS	AWWA C515-09	Yes
Water - Reservoirs	- 1	1	T	1	-
Reservoirs					
Elevated Storage Tanks	Praher	Automated PVC Valves	Ball, Check, Butterfly		Yes
Clearwells	Crispin	Vacuum Air Relief Valves	NPT & Flanged Combination	AWWA C512-07	Yes
Pressure Filters	Romac	Couplings	Color Coded 500	AWWA C219-11	Yes
Pump Priming	Romac	Dismantling Joints	DJ400	AWWA C219-11	Yes
Chemical Feed	Crispin	Swing Check	Outside Lever & Weight	AWWA C508	Yes
	Crispin	Silent Check	Wafer Style Body	AWWA C508	Yes
	Crispin	Tilting Disc Check	Flanged Check with Dashpot	AWWA C508	Yes
			Dubber Flermer Cheels Flermed	AWWA C508	Yes
	Crispin	Flapper	Rubber Flapper Check Flanged		
	Crispin Jash	Flapper Knife Gate Valves	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	Yes
					Yes Yes
	Jash	Knife Gate Valves	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	
	Jash TTR	Knife Gate Valves Deflector Valves	Flanged Standard & Bonneted Flanged Custom Check Valves	AWWA C520 -10 & MSS-SP81 Engineered	Yes
	Jash TTR Elliott Manufacturing	Knife Gate Valves Deflector Valves Safety Operator	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation	AWWA C520 -10 & MSS-SP81 Engineered Engineered	Yes Yes
Water - Pump Contr	Jash TTR Elliott Manufacturing Crispin TTR	Knife Gate Valves Deflector Valves Safety Operator Foot Valves	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened	AWWA C520 -10 & MSS-SP81 Engineered Engineered AWWA C512 & AWWA C508	Yes Yes Yes
	Jash TTR Elliott Manufacturing Crispin TTR	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves	AWWA C520 -10 & MSS-SP81 Engineered Engineered AWWA C512 & AWWA C508	Yes Yes Yes
Water - Pump Contr Pressure Reducing Valve	Jash TTR Elliott Manufacturing Crispin TTR Ol Ross	Knife Gate Valves Deflector Valves Safety Operator Foot Valves	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened	AWWA C520 -10 & MSS-SP81 Engineered Engineered AWWA C512 & AWWA C508 Engineered	Yes Yes Yes Yes
Pressure Reducing Valve Flow Control Valves	Jash TTR Elliott Manufacturing Crispin TTR Ol Ross Crispin	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves Surge Relief Valve Vacuum Air Relief	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves Self / Piloted Hydraulic Relief NPT & Flanged	AWWA C520 -10 & MSS-SP81 Engineered AWWA C512 & AWWA C508 Engineered AWWA C530-07 AWWA C512-07	Yes Yes Yes Yes Yes Yes
Pressure Reducing Valve Flow Control Valves Surge Anticipating Valve	Jash TTR Elliott Manufacturing Crispin TTR O Ross Crispin Ross	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves Surge Relief Valve Vacuum Air Relief Pressure Reducing Sustaining Valve	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves Self / Piloted Hydraulic Relief NPT & Flanged Self Piloted Piston	AWWA C520 -10 & MSS-SP81 Engineered AWWA C512 & AWWA C508 Engineered AWWA C530-07 AWWA C512-07 AWWA C530-07	Yes Yes Yes Yes Yes Yes Yes
Pressure Reducing Valve Flow Control Valves Surge Anticipating Valve Pump Check	Jash TTR Elliott Manufacturing Crispin TTR O Ross Ross Ross	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves Surge Relief Valve Vacuum Air Relief Pressure Reducing Sustaining Valve Pump Check Control	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves Self / Piloted Hydraulic Relief NPT & Flanged Self Piloted Piston Self Piloted Piston	AWWA C520 -10 & MSS-SP81 Engineered AWWA C512 & AWWA C508 Engineered AWWA C530-07 AWWA C530-07 AWWA C530-07 AWWA C530-07	Yes Yes Yes Yes Yes Yes Yes Yes
Pressure Reducing Valve Flow Control Valves Surge Anticipating Valve Pump Check Back Pressure Sustaining	Jash TTR Elliott Manufacturing Crispin TTR O Ross Ross Ross Ross	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves Surge Relief Valve Vacuum Air Relief Pressure Reducing Sustaining Valve Pump Check Control Altitude Valve	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves Self / Piloted Hydraulic Relief NPT & Flanged Self Piloted Piston Self Piloted Piston Self Piloted Piston	AWWA C520 -10 & MSS-SP81 Engineered AWWA C512 & AWWA C508 Engineered AWWA C530-07 AWWA C530-07 AWWA C530-07 AWWA C530-07 AWWA C530-07	Yes Yes Yes Yes Yes Yes Yes Yes Yes
	Jash TTR Elliott Manufacturing Crispin TTR O Ross Ross Ross	Knife Gate Valves Deflector Valves Safety Operator Foot Valves Rectangular Valves Surge Relief Valve Vacuum Air Relief Pressure Reducing Sustaining Valve Pump Check Control	Flanged Standard & Bonneted Flanged Custom Check Valves Confined Space Operation Flanged & Screened Custom Rect Butterfly Valves Self / Piloted Hydraulic Relief NPT & Flanged Self Piloted Piston Self Piloted Piston	AWWA C520 -10 & MSS-SP81 Engineered AWWA C512 & AWWA C508 Engineered AWWA C530-07 AWWA C530-07 AWWA C530-07 AWWA C530-07	Yes Yes Yes Yes Yes Yes Yes Yes

The Engineered Valve & Speciality Products Company



TTR Municipal Corporate Products

Manufactured or Distributed Includes Manual / Electrical / Pneumatic and Hydraulic Actuation for Rotary and Linear Devices Site Installation Supervision and Commissioning by TTR

Application	Manufacturer	Product Type	Product Description	*AWWA Standard	Specifications
Wastewater - Raw	Sewage	- -	.		<u> </u>
Raw Sewage	Crispin	Flapper Valve	Rubber Flapper Check Flanged	AWWA C508	Yes
Pump Discharge	Crispin	Plug Valve	Full Port Flanged	AWWA C517	Yes
Booster Pumps	Jash	Knife Gate Valve	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	Yes
booster r unips	Ross	Sewage Control Valve	Self \Piloted Hydraulic Relief	AWWA C530-07	Yes
	Crispin	Vacuum Air Release	NPT & Flanged	AWWA C512-07	Yes
	Ross	Sewage Relief Valves	Self \ Piloted Hydraulic Relief	AWWA C530-07	Yes
	Ross	Slide Gate Valve Cast Iron	Wall & Thimble Mounted	AWWA C560-07	Yes
	Ross / TTR	Slide Gate Fabricated	Wall & Thimble Mounted	AWWA C561-12	Yes
	Ross / TTR	Flap Valve	Fabricated / FRP	AWWA C561-12 / AWWA 563-12	Yes
	Romac	Dismantling Joints	DJ 400	AWWA C219-11	Yes
	American	Gate Valves RSWG	Resilient Seated Gate NRS	AWWA C515-09	Yes
Wastewater - Sewa	age Force Mains		<u>-</u>		
	Ross	Sewage Relief Valves	Self / Piloted Hydraulic Relief	AWWA C530-07	Yes
Force Mains	Ross	Sewage Control Valves	Self / Piloted Hydraulic Relief	AWWA C530-07	Yes
	Crispin	Sewage Combination Valves	X Series ST ST	AWWA C512-07	Yes
Wastewater - Pum	p Suction / Discha	arge			
Custion Cide of Dumps	Crispin	Plug Valves	Full Port Flanged	AWWA C517	Yes
Suction Side of Pumps	Jash	Knife Gate Valves	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	Yes
Wastewater - Air &	Bio Gas		L		
Agretion Systems	TTR	Engineered Butterfly Valves	Flanged Metal & Resilient Seated	ISO 5752	Yes
Aeration Systems	TTR	Resilient Seated Butterfly Valves	Resilient Seated Wafer & Lug	ISO 5752	Yes
Bio Gas Systems	TTR	High Performance Butterfly Valves	Soft Seated HPBFV Wafer & Flgd	ANSI / ASME	Yes
Discharge	Crispin	Check Valves	Silent Check	AWWA C508	Yes
Odor Control	Romac	Dismantling Joints	DJ400	AWWA C219-11	Yes
Blower Systems	Romac	Couplings	Color Coded 500	AWWA C219-11	Yes
	Crispin	Flapper Check	Rubber Flapper Check Flanged	AWWA C508	
	Crispin	AWWA Butterfly Valve	Manual & Automated	AWWA C504	
Wastewater - Influ		· · ·	<u>.</u>		
Inlet	Jash	Knife Gate Valve	Flanged Standard & Bonneted	AWWA C520 -10 & MSS-SP81	Yes
Digesters	Crispin	Plug Valve	Full Port Flanged	AWWA C517	Yes
Primary	Romac	Couplings	Color Coded 500	AWWA C219-11	Yes
Secondary	TTR / Ross	Fabricated Slide Gates	ST ST / FRP	AWWA C561-12 / AWWA 563-12	Yes
occontral y	TTR	Resilient Seated Butterfly Valves	Manual & Automated Wafer / Lug	ISO 5752	Yes





Over 100 Years of Product Experience

K-FLO DUTTERFLY VALVES	Crispin K-Flo Butterfly Valves Established 1979 Offers two AWWA designs
Critopin Valves	• Crispin Valves Established 1902 Originators of the Air Relief Valve
RÎ	• Ross Valve Established 1879 Originators of the Self-piloted Control Valve
0080	• Jash Founded in 1948 Over 50 years in water control systems
AMERICAN FLOW CONTROL FLOW CONTROL	• American Flow Control Founded in Birgmingham, Ala. in 1905. Offers AWWA Ductile Iron Gate Valves (Resilient Wedge)
PRAHER VALVES	• Praher Valves Incorporated in Canada in 1986. Suppliers to leading global corporations
	• Romac Industries, Inc. Established 1990
PROCO PRODUCTS, INC.	• Proco Products Operates worldwide. Offers most complete line of rubber and PTFE pressure piping joints and check valves.
EEF	• TTR Group Inc. Established 2009 Over 30 years of valve design and field service experience





Notes

COMMITMENT TO OUR CUSTOMERS & INDUSTRY

TTR has combined quality products manufactured in North America selecting originators of these products as early as 1879 that exist today as leaders and role models in the Markets and Industry today. TTR has combined these products as a package with our speciality Engineered Products Division to meet the requirements of many applications within the same project culminating the advantages of established proven quality engineered products with over 70 years of combined field service and site commissioning experience.

Products & Services - AWWA Compliant and NSF







Products

Valve and Full Electric / Pneumatic / Hydraulic and Electro Hydraulic Automation \ Packages for In-Plant and Submerged Service

Engineered Speciality Products

- Energy Dissipating Valves and Systems / AWWA Knife Gate Valves
- Counterweighted Turbine Isolation
- Torque Tubes / Shaft Extensions / Rod Extensions

AWWA Valves

Butterfly /Resilient Seated Wedge Gate /Knife Gate / Air and Sewage Relief Globe, Silent, Tilting Check Self Piloted Control / Slide / Plug / Ball

Services - 35 Years Experience

Speciality Engineered Products / Design and Manufacturing Capabilities / FEA and CFD modelling Support / Unbiased Specification Assistance / Field Service Analysis and Support / Site Commissioning / 3rd Party Inspection / Confined Space Certified

Continuing Education Courses

OWWCO - Director Approved Training Course TTR Training Course Name - AWWA C504 Butterfly Valves & Actuators Follow http://www.owwco.ca Course ID 8733. Page 228

CONTACT

TTR Group Inc.

2011 Markle Drive • Oakville • Ontario • L6H3N6 905.302.4488 • Fax 905.849.6893 • sales@ttrgroupinc.com • www.ttrgroupinc.com Established 2009

ASSOCIATIONS









Valve & Application Solutions for the Municipal, Industrial, Mining and Power Industries