

# CARREMM CONTROLS



BUTTERFLY VALVES, 2 PIECE, 3 PIECE AND FLANGED BALL VALVES

ELECTRIC ACTUATORS, POSITION SWITCHES, PNEUMATIC ACTUATORS

(DOUBLE ACTING & SPRING RETURN) AND PNEUMATIC SOLENOIDS

JULY 2009

**BUTTERFLY VALVES**



**FEATURES**

- AVAILABLE IN WAFER OR LUG BODY
- DISC MATERIALS – ELECTRO PLATED DUCTILE IRON OR 316 STAINLESS STEEL
- SEAT MATERIALS – BUNA, EPDM, PTFE LINED EPDM OR VITON
- STEM MATERIALS— 304 OR 17- 4 STAINLESS STEEL
- SIZES – 2” THROUGH 12” (14”+ AVAILABLE UPON REQUEST)
- MAX OPERATING PRESSURE 2-12” 285 PSI, 14”+250 PSI @ 100°F (EXCEPT PTFE LINED EPDM SEAT, 125 PSI @ 100°F)
- APPLICABLE STANDARDS – API 609, MSS-SP67, TESTED PER API-598 AND CANADIAN REGISTRATION NUMBER
- ACTUATION AVAILABLE TO SUIT REQUIREMENTS

**2-PIECE BALL VALVES**

**STANDARD FEATURES (B01, B02, AND B03 SERIES)**

- PRESSURE RATINGS: B01 – 1000 PSI WOG 1/4”-2”, B02–2000 PSI WOG 1/4”-1 1/4” 1500 PSI WOG 1 1/2”-2” 1300 PSI WOG 2 1/2”-4”, B03–1000 PSI WOG 1/4” -2”
- INVESTMENT CAST BODY AND CAP, BLOW-OUT PROOF STEM/FULL PORT
- FEMALE NPT THREADED ON BOTH ENDS, LOCKING HANDLE
- MATERIAL—ASTM A351-CF8M (316SS)
- CRN NUMBERED VALVES ARE ALSO AVAILABLE



**DIRECT MOUNT FEATURES (B03 SERIES)**

- HIGH CYCLE, LIVE LOADED, TRIPLE STEM SEAL CONSISTING OF CARBON FILLED PTFE THRUST WASHER, VITON O-RING, 15%RTFE CHEVRON PACKING, LIVE LOADED BELLEVILLE WASHERS, PACKING NUT MECHANICALLY LOCKED TO STEM
- DIRECT MOUNTING PAD FOR ISO STD 5211

**3-PIECE BALL VALVES**

**STANDARD FEATURES (B04, B04S, B05, AND B05S SERIES)**

- PRESSURE RATINGS: 1000 PSI WOG FOR 1/4” THROUGH 4”
- INVESTMENT CAST BODY AND CAP, BLOW-OUT PROOF STEM/FULL PORT
- FEMALE NPT ENDS (B04/B05), SOCKET WELD ENDS (B04S/B05S)
- MATERIAL – ASTM A351-CF8M (316SS) AND 316LSS CAPS ON SOCKET WELD
- LOCKING HANDLE
- CRN NUMBERED VALVES ARE ALSO AVAILABLE



**DIRECT MOUNT FEATURES (B05 & B05S SERIES)**

- HIGH CYCLE, LIVE LOADED, TRIPLE STEM SEAL CONSISTING OF CARBON FILLED PTFE THRUST WASHER, VITON O-RING, 15% RTFE CHEVRON PACKING, LIVE LOADED BELLEVILLE WASHERS, PACKING NUT MECHANICALLY LOCKED TO STEM
- DIRECT MOUNTING PAD FOR ISO STD 5211

**3-WAY BALL VALVES**

**STANDARD FEATURES (B07L AND B07T SERIES)**

- PRESSURE RATING: 1000 PSI WOG FOR 1/4” THROUGH 2”
- HIGH CYCLE, LIVE LOADED, TRIPLE STEM SEAL CONSISTING OF CARBON FILLED PTFE THRUST WASHER, VITON O-RING, 15% RTFE CHEVRON PACKING, LIVE LOADED BELLEVILLE WASHERS, PACKING NUT MECHANICALLY LOCKED TO STEM
- DIRECT MOUNTING PAD FOR ISO STD 5211
- ANTI-STATIC DEVICE, BLOW-OUT PROOF STEM AND LOCKING HANDLE
- FEMALE NPT END CONNECTIONS
- MATERIAL – ASTM A351-CF8M (316SS)
- DIRECT MOUNTING PAD FOR ISO STD 5211
- CRN NUMBERED VALVES ARE ALSO AVAILABLE



POSITION TYPE	1	2	3	4
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ELECTRIC ACTUATORS

**LOW TORQUE SPECIFICATIONS:**

- **OUTPUT TORQUE:** 100 IN-LB, **CYCLE TIME:** 2.5 SEC/90° ROTATION, **DUTY CYCLE:** 25%
- **MOTOR:** 115 VAC-50/60HZ-1PH STANDARD
- **OPTIONAL VOLTAGES:** 12 VDC, 24 VDC, 24 VAC (24 VDC RECTIFIED) & 230VAC- 50/60HZ-1PH WITH THERMAL OVERLOAD PROTECTION AND SPRING FRICTION BRAKE.
- **LOCK ROTOR CURRENT:** 115VAC=.55AMPS, 230VAC=.38AMPS, 12VDC=2.89AMPS, 24VDC=2.44AMPS
- **ENCLOSURE:** NEMA 4 STANDARD, DIE-CAST ALUMINUM WITH 300 SERIES STAINLESS STEEL CAPTURED SCREW AND THERMALLY BONDED POLYESTER POWDER COATING.
- **OPTIONAL ENCLOSURES:** NEMA 4X & MANUAL OVERRIDE SHAFT, NEMA 7 (OMIT MANUAL VERRIDE AND INDICATOR)
- **OUTPUT DRIVE:** ISO 5211 F03 (9MM FEMALE STAR) ISO 5211 F04 (11MM FEMALE STAR) 300 SERIES STAINLESS STEEL
- **MOUNTING:** UNIVERSAL, ISO 5211 F03 OR F04 MOUNTING PAD
- **MANUAL OVERRIDE:** STANDARD EXCEPT ON 12VDC, 24VDC, 24VAC AND NEMA 7
- **LUBRICATION:** PERMANENT
- **TEMPERATURE:** -40°F TO +140°F (HEATER REQUIRED AT 0°F AND BELOW)
- **SWITCHES:** 16A 125/250VAC
- **CERTIFICATION:** CSA NEMA 4 ONLY



**MEDIUM TORQUE SPECIFICATIONS:**

ALL SPECIFICATIONS ARE SAME AS ABOVE, EXCEPT THOSE NOTED BELOW.



- **OUTPUT TORQUE:** 200 IN-LB (SD) AND 300 IN-LB (SDX), **CYCLE TIME:** 5 SEC/90° ROTATION, **DUTY CYCLE:** 25%
- **OPTIONAL VOLTAGES:** 24 VAC (24 VDC RECTIFIED) WITH MANUAL RESET (TURN OFF THEN BACK ON) OVERLOAD PROTECTION
- **LOCK ROTOR CURRENT:** 115VAC=.75AMPS, SDX-1.0AMPS, 230VAC=.38AMPS, 12VDC=4.0AMPS, 24VDC=3.2AMPS
- **OPTIONAL ENCLOSURES:** NEMA 7 NOT AVAILABLE
- **OUTPUT DRIVE:** ISO 5211 F05 (14MM FEMALE STAR) 300 SERIES STAINLESS STEEL
- **MOUNTING:** UNIVERSAL, ISO 5211 F05 MOUNTING PAD
- **AVAILABLE OPTIONS:** EXTENDED DUTY (75%) MOTOR (CYCLE TIME= 10SEC/90°), MAXIMUM OF 4 AUXILIARY SWITCHES, POWER OFF BRAKE, DECLUTCHING MANUAL OVERRIDE WITH HAND WHEEL, FEEDBACK POTENTIOMETER, 4-20MA POSITIONER (EQUIPPED WITH 24VDC POWER SUPPLY FOR TRANSMITTER), 4-20MA POSITION TRANSMITTER (REQUIRES 24VDC POWER SUPPLY), COMPARTMENT HEATER, HEATER AND THERMOSTAT, BREATHER, THREE POSITION CONTROL, LIGHT INDICATION, TWO WIRE CONTROL, TIMER, SPEED CONTROL, REMOTE/OFF/LOCAL CONTROL PANEL, ELECTRONIC TORQUE SENSOR AND ONE ADDITIONAL 1/2" NPT CONDUIT ENTRY.

**HIGH TORQUE SPECIFICATIONS:**

ALL SPECIFICATIONS ARE SAME AS ABOVE, EXCEPT THOSE NOTED BELOW.

- **OUTPUT TORQUE:** 400 IN-LB (MS), 675IN-LB (MR), 100IN-LB (ML) AND 1500 IN-LB (MH), **CYCLE TIME:** 10SEC/90° ROTATION (MS), 15SEC/90° ROTATION (MR & ML), 30SEC/90° ROTATION (MH), **DUTY CYCLE:** 25%
- **OPTIONAL VOLTAGES:** 24 VAC (24 VDC RECTIFIED) WITH MANUAL RESET (TURN OFF THEN BACK ON) OVERLOAD PROTECTION
- **LOCK ROTOR CURRENT:** 115VAC = 0.75AMPS (MS & MR), -1.1AMPS (ML & MH), 230VAC= 0.38AMPS, 12VDC = 4.0AMPS, 24VDC = 3.2AMPS, 24VAC = 3.2AMPS
- **OPTIONAL ENCLOSURES:** NEMA 4X & NEMA7 MANUAL OVERRIDE OPTIONAL ON NEMA 7
- **OUTPUT DRIVE:** ISO 5211 F07 (17MM FEMALE STAR) 300 SERIES STAINLESS STEEL
- **MANUAL OVERRIDE:** STANDARD, DECLUTCHING WITH HAND WHEEL ON NEMA 4 & 4X
- **CERTIFICATION:** CSA NEMA 4 AND NEMA 7





## BOILER BLOW DOWN VALVES & CONTROL SYSTEMS

### FEATURES

- CSA APPROVED MOTOR, CRN REGISTERED VALVES
- CARBON STEEL VALVE WITH RAISED MOTOR MOUNT FOR HEAT DISSIPATION
- SYSTEM CAN INCLUDE A PANEL WITH SYMMETRICAL TIMER FOR ACCURATE AND RELIABLE BOILER BLOW DOWN

### STEAM RATED VALVE FEATURES

- NOVA SEATS-MADE OF A PTFE BASE FILLED WITH GLASS FIBERS, AMORPHOUS CARBON POWDER AND GRAPHITE. NOVA HAS BETTER THERMAL PROPERTIES THAN PTFE MAKING IT A BETTER CHOICE FOR STEAM OR THERMAL FLUID APPLICATIONS UP TO 500 °F.
- FULL PORT DESIGN FOR FULL FLOW AND MINIMAL PRESSURE DROP
- PRESSURE RATED 2000 PSIG (CWP)

### CONDUCTIVITY ANALYZER/CONTROLLER APPLICATIONS

- PROCESS CONTROL & COOLING TOWER CONTROL, WATER QUALITY MONITORING, INDUSTRIAL & MUNICIPAL WATER TREATMENT, INCLUDING REVERSE OSMOSIS, DE-IONIZATION, DESALINATION AND HIGH PURITY WATER PROCESSING
- SUITABLE FOR THE PLATING, COMPUTER CHIP FABRICATION, CIRCUIT CHIP FABRICATION, CIRCUIT BOARD MANUFACTURING, FOOD & BEVERAGE, CHEMICAL PROCESSING, MINING, NUCLEAR ENERGY AND PHARMACEUTICAL INDUSTRIES

## FLANGED BALL VALVES

### FEATURES

- AVAILABLE IN FULL BORE OR REDUCED BORE, 1 & 2 PIECE BODY
- BODY MATERIALS – A216 WCB, A352-LCC, A351 CF8M
- 316 STAINLESS STEEL BALL AND BLOW-OUT PROOF STEM, CAVITY RELIEVING SEATS, ANTI-STATIC DEVICE, LEVER OPERATED
- SIZES 2" THROUGH 8", ISO DIRECT MOUNTING PAD
- API 607 4TH ED. FIRESAFE DESIGN, NACE MRO175, MARKING PER MSS-SP25
- DESIGN TO ASME/ANSI CLASSES – 150-B16.34, 300-B16.34 600-B16.34
- PRESSURE TEST AS PER API 598
- ACTUATION AVAILABLE TO SUIT REQUIREMENTS



## PNEUMATIC ACTUATORS + OPTIONS

### FEATURES

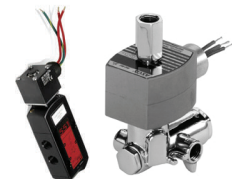
- 2 AND 4 PISTON RACK AND PINION DESIGN
- SPRING RETURN AND DOUBLE ACTING
- BASE DRILLING, FOR VALVE MOUNTING AND CENTERING, ISO 5211/DIN 3337
- NAMUR MOUNT FOR SOLENOIDS
- WORKING PRESSURE – 40 PSI THROUGH 120 PSI
- TORQUE – FROM 38IN-LB THROUGH 36,907IN-LB
- STANDARD APPLICATIONS FOR TEMPERATURES RANGES FROM BUNA -4 °F TO 176 °F. ALSO AVAILABLE: VITON -4 °F TO 250 °F, EPDM -40 °F TO 176 °F
- INDEPENDENT BI-DIRECTIONAL TRAVEL STOP ADJUSTMENT +/- 5 DEGREES



## PNEUMATIC SOLENOIDS

### FEATURES

- GENERAL SERVICE SOLENOIDS FOR OPERATION OF PNEUMATIC VALVE AUTOMATION ASSEMBLIES
- NAMUR DIRECT MOUNT, NIPPLE MOUNT AND LINE MOUNT ARE AVAILABLE
- VOLTAGES: 24, 120, 240, 480 VAC/60HZ (OR 110, 220 VAC/50HZ), 6, 12, 24, 120, 240 VDC
- AVAILABLE ON MOST SOLENOIDS



### VALVE REPAIR IS ALSO AVAILABLE FOR MOST MODELS

# CARREMM CONTROLS

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