

ADDENDUM No. 5

Project Name: L'Anse Creuse Public Schools
2024 Bond Projects – BP25-04 – High School Pool Equipment Improvements Addendum No.: Five (5)

Issue Date: March 3, 2025

PIA Project Number: 24-158

Project Location: L'Anse Creuse High School, L'Anse Creuse High School – North

To the Contract Documents for the High School Pool Equipment Improvements project.

This Addendum forms a part of the above-described Contract Documents and supersedes supplements or clarifies parts thereof to the extent defined by the terms set forth in this Addendum.

This document consists of (1) typed pages and the following Specification and Drawing attachments:

Drawings: None
Specifications: None
Substitution Requests: Attached

SUBSTITUTION REQUESTS:

ITEM 1 See Substitution request attached.

SPECIFICATION REVISIONS:

ITEM 1 Specification Section 131100.13, SWIMMING POOL EQUIPMENT (revised this addendum)
a. Add the following to the "Pre-approved Pool Contractor List", Section 1.3,A,1:
"d. Baruzzini Aquatics (810) 229-8996 (Tony Baruzzini)"

DRAWING REVISIONS:

NA

RFI RESPONSES:

NA

*** End of Addendum ***



SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: Lanse Creuse Schools Substitution Request Number: 1

To: Matt Showalter From: Jason Cavicchioli - Baruzzini Contracting

Re: Manufacturer Substitution List Date: February 28th, 2025

Contract For: Baruzzini Contracting

Specification Title: Enter the title of the spec book Description: Enter the section title from spec book here

Section: Enter Spec section Page: Enter Spec page# Article/Paragraph: Enter the spec paragraph# here

Proposed Substitution: Paddock Regenerative Filtration, Prominent Dulcodes UVA / medium pressure UV / DCM512 chemical controller / Concept B chemical pump / Pro-Cal SV

Manufacturer: multiple Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Jason Cavicchioli

Signed by: _____

Firm: Baruzzini Contracting

Address: 1281 South Old US 23, Brighton, MI 48114

Telephone: 810-229-8996

A/E's REVIEW AND ACTION

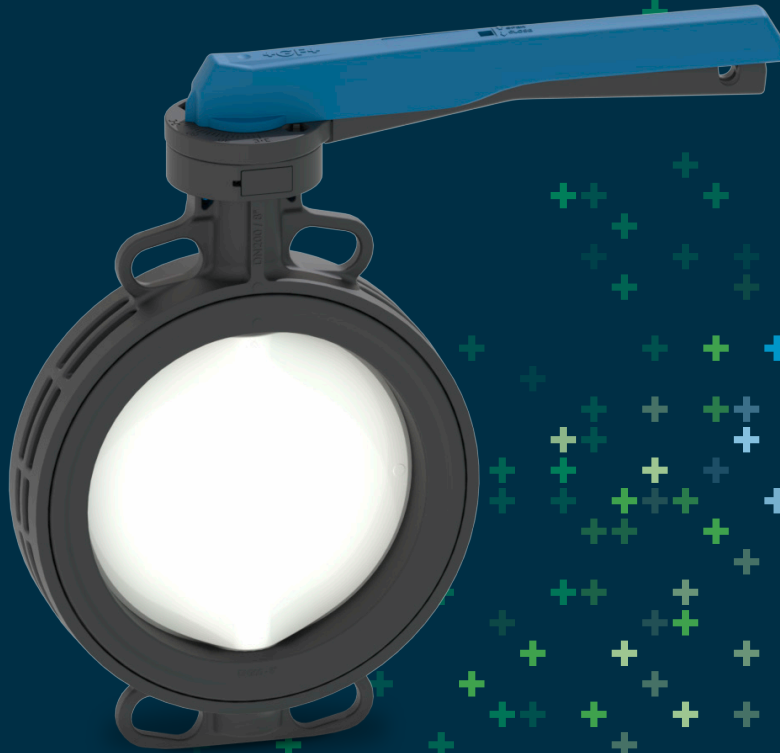
- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: Victoria Lichocki-Smith

Date: 3/3/2025

Supporting Data Attached: Drawings Product Data Samples Tests Reports _____

Wafer Style Butterfly Valve Type 565



General

- **Size:** 2"–12"
- **Outer Body:** Polyamide PA6-60
- **Material:** Disc (core/wetted): Polyamide PA6-60/PVDF
- **Seals:** EPDM, FKM
- **Stem:** 316 stainless steel
- **Operation:** Bare shaft, lever, gear
- **Connection:** Both ANSI 150 and DIN 2501
- **Actuator Interface:** EN ISO 5211

Key Certifications

- **NSF 61**
- **ISO 9393-2**
- **EN 12266 (leak rate A)**
- **ISO 5208 (Rate A)**
- **Installation length:** EN558 row 20, ISO 5752 row 20, API 609 table 2
- **FDA x 21 177.2600:** EPDM and FKM
- **USP Class VI (physiological non-toxic):** EPDM and FKM

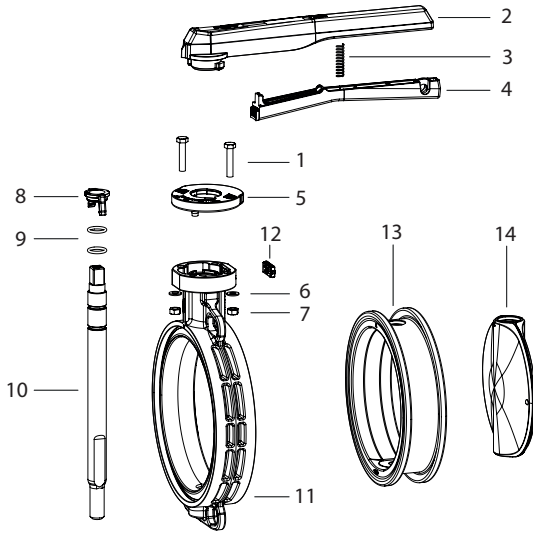
Sample Specification

The Type 565 Butterfly Valve is wafer style compatible with both ANSI 16.5 150lb and DIN 2501 flange patterns. The disc operation utilizes centric, resilient seated design principles. The valve is rated for bidirectional use. The stem is non-wetted, utilizing an interference fit of a molded seat and the disc hub. The seal liner fully isolates the valve body from process fluid. The handle is lockable with standard adjustment increments of 5 degrees. All valves are tested in accordance to ISO9393 and designed to ISO9001 for Quality and ISO14001 for Environmental Management. The operator mounting flange is compliant with ISO standards. Following assembly, every valve is tested and certified bubble tight exceeding Class VI standards.

Material Specification

PVDF valves shall be type 1, grade 2 according to ASTM D3222 standards. Valves of all materials shall be RoHS compliant.

Components



Optional Features

- Actuation: Electric, pneumatic
- Limit Switches: Mechanical, inductive
- Handle: Find adjustment lever (1°)
- Operation: Chain operator, square operating nut
- Hardware: Alternatives available upon request

Valve Components

Part	Description	Material
1	Screw	304 Stainless Steel
2	Lever	Durethan®
3	Spring	Spring Steel coated with MOLYKOTE 3400A
4	Grid lever	Durethan®
5	Index plate	Durethan®
6	Washer	304 Stainless Steel
7	Nut	301 Stainless Steel
8	Shaft lock	Durethan®
9	O-ring	EPDM or FKM
10	Shaft	430F Stainless Steel
11	Housing	Durethan®
12	Cap	EPDM
13	Seat liner	EPDM or FKM
14	Disc (core)	Durethan®
14	Disc (wetted)	PVDF

Key Design Features

Reinforced Disc

The Type 565 Butterfly Valve is designed with a reinforced PVDF disc for improved strength. This rugged design is impact resistant, but does not compromise easy operation. The wetted PVDF disc material features superior surface finish and lubricity, while its Durethan® reinforcement provides lightweight toughness.



Double Redundant Seals

The Type 565 Butterfly Valve features a truly non-wetted shaft design. The shaft is isolated from the flow media by utilizing a disc-hub seal and double redundant o-rings. This industry tested design ensures a reliable seal for a variety of applications.

Inductive Feedback Sensor

The Type 565 Butterfly Valve is offered with inductive sensors that signal the CLOSED or OPEN position of the valve via an electric signal to a controller supplied by the customer. This feedback system can be added with the valve in-line and a new sensor swapped without removing the operator.

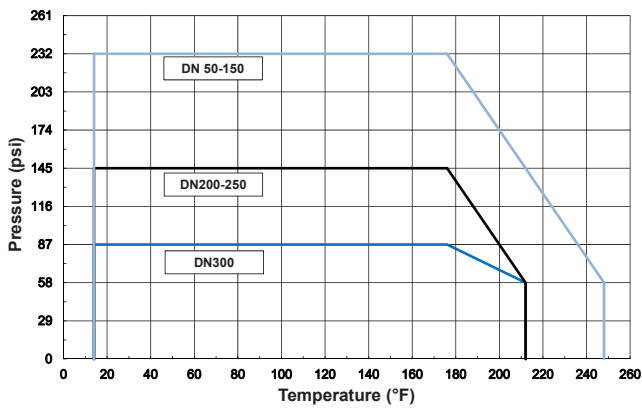


Technical Data

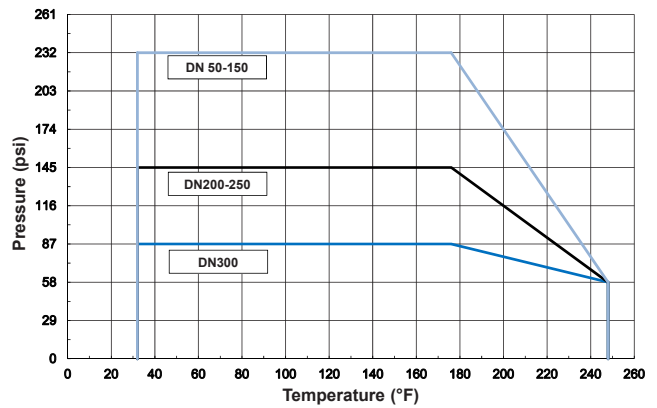
Pressure-Temperature Curves

The following graphs are based on a lifetime of 25 years of water or similar media applications

EPDM



FKM



CV Value

Size (inch)	d (mm)	CV (gal/min)
2	63	101
2½	75	177
3	90	281
4	110	400
5	140	832
6	160	1262
8	225	3052
10	280	4357
12	315	6606

Operating Torques

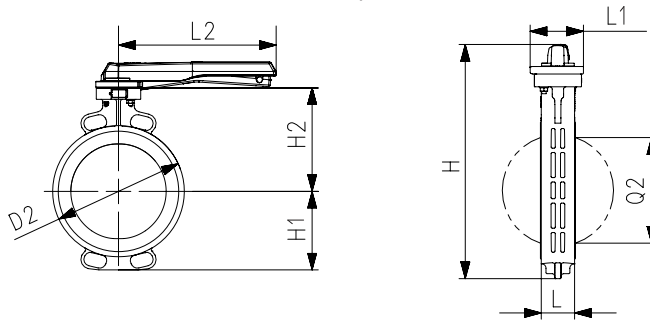
Size (inch)	d (mm)	Operating Torque (ft-lb) @ maximum pressure rating
2	63	11
2½	75	15
3	90	18
4	110	30
5	140	37
6	160	44
8	225	118
10	280	184
12	315	221

Weight (lbs)

Size (inch)	d (mm)	Lever	Gear
2	63	3.1	10.8
2½	75	3.5	11.2
3	90	4.0	11.7
4	110	6.0	13.4
5	140	7.3	15.0
6	160	9.5	16.8
8	225	12.6	19.8
10	280	-	37.9
12	315	-	47.2

Dimensions

The following tables are shown in millimeters unless otherwise specified

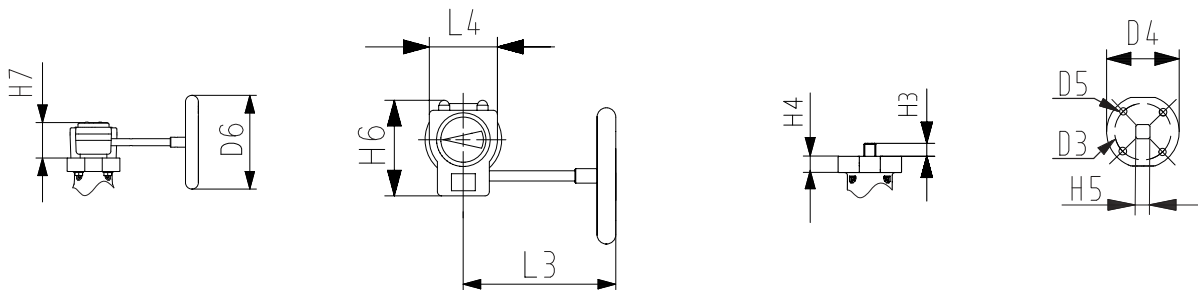


All Operators

Size (inch)	d (mm)	D2	H1	H2	L	L1	Q2
2	63	100	63	134	43	86	29
2½	75	121	82	140	46	86	44
3	90	138	89	146	46	86	64
4	110	159	104	167	52	86	84
5	140	187	118	180	56	86	111
6	160	213	131	189	56	86	138
8	225	267	159	210	60	86	191
10	280	326	196	263	68	125	239
12	315	380	231	285	78	125	286

Lever (2"-8")

Size (inch)	H	L2
2	250	205
2½	276	205
3	288	205
4	324	255
5	351	255
6	373	320
8	422	323



Gear (G-CI)

Size (inch)	d (mm)	D6	H6	H7	L3	L4
2	63	152	115	58	180	92
2½	75	152	115	58	180	92
3	90	152	115	58	180	92
4	110	152	115	58	180	92
5	140	152	115	58	180	92
6	160	152	115	58	180	92
8	225	152	115	58	180	92
10	280	254	151	64	214	118
12	315	254	151	64	214	118

Bare Shaft

Size (inch)	d (mm)	D3	D4	D4	H3	H4	H5
2	63	70	90	8	27	27	11
2½	75	70	90	8	27	27	11
3	90	70	90	8	27	27	11
4	110	70	90	8	16	16	14
5	140	70	90	8	16	16	14
6	160	70	90	8	19	19	17
8	225	70	90	8	19	19	17
10	280	102	125	10	41	41	22
12	315	102	125	10	41	41	22

Acid Fume Scrubber

A fume-free work environment!



The **Acid Fume Separator (AFS)** is a proprietary device that allows for direct venting of an acid tank located inside a mechanical room. The **AFS** eliminates the need for costly venting via fans to outside areas or secondary water tank type fume traps. The result is a fume-free workplace with added protection of metal and electrical components. The proprietary reagent will change from white to purple when reagent is no longer effective.

Features & Benefits

- Designed for muriatic/ hydrochloric acid tanks
- Eliminates fume attack on electrical components
- For use on sealed tanks and carboys
- Standard with 3/4 inch male NPT connection which allows direct installation or removal on to carboy's
- AFS can be tank mounted or wall mounted
- Equipped with proprietary reagents
- Reagent needs changed when white turns to purple
- Refill reagent sold separately

Ordering Information

- Acid fume scrubber P/N 7747090
- Wall mounting kit P/N 7747091
- Refill reagent kit P/N 7747102
- O-ring replacement kit P/N 7747088
- Suction lances with tubing connections available
Tubing size determined by selection of feed pump



CO₂ Controller

Effective pH control in pool water



ProMinent®

The **ProMinent® CO₂ Feeder** is designed to utilize Carbon Dioxide (CO₂) in the control of pH levels in pools and spas.

There are a number of advantages when using CO₂ for pH control compared to acid. Adding CO₂ will not contribute to a TDS increase in water, thus reducing the amount of make-up water required to maintain the water quality. It is much safer, as there is no mineral acid solution or fumes present on-site, which solves the problems associated with handling acid and corrosive fumes. It is also simple to install and operate.

The **ProMinent® CO₂ Feeder** is equipped with all the necessary components for easy installation, reliable performance and safe operation. The design incorporates an electronic solenoid valve and a manually adjustable flow-meter.

Specifications

Overall Feeder Dimensions.....	8.2"H x 7.4"W x 7.5"D (w/ Mtg. Ft)
Overall Weight of Feeder	< 5 lbs.
Power Requirements.....	120VAC, 60Hz, 1 Phase, 0.15 Amp
Maximum Volume.....	5-50 SCFH or 20-200 SCFH
Maximum Pressure	100 PSIG
Normal Operating Pressure.....	40 PSIG
Recommended Running Temperature.....	+40°F to 100°F
Inlet Connection Size.....	3/8" OD Tube
Outlet Connection Size.....	3/8" OD Tube

Order Information

Description	Part No.
CO ₂ -50 Feed Unit, 2-50 SCFH	7746991
CO ₂ -200 Feed Unit, 20-200 SCFH	7746928
CO ₂ -50E Feed Unit, 2-50 SCFH w/ Educator	7746992
CO ₂ -50D Feed Unit, 2-50 SCFH w/ Diffuser	7746993
CO ₂ -200E Feed Unit, 20-200 SCFH w/ Educator	7746931
2 Cylinder Automatic CO ₂ Switchover System (CO ₂ Feed Unit NOT included)	7747037
4 Cylinder Automatic CO ₂ Switchover System (CO ₂ Feed Unit NOT included)	7747038
6 Cylinder Automatic CO ₂ Switchover System (CO ₂ Feed Unit NOT included)	7747039
8 Cylinder Automatic CO ₂ Switchover System (CO ₂ Feed Unit NOT included)	7747040

| Metering Pumps | Process Instrumentation | Engineered Metering Systems |

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PN: 7750507

CO2_Controller.indd rev2 03/10/2018



Concept b Series

Economical metering pump solutions!



ProMinent®

NSF®

NSF 61/50
Approved

The **ProMinent® Concept b** series covers a capacity range of **0.19 to 4.33 GPH (0.7 to 16.4 L/h)** at pressures up to **232 psi (16 bar)**.

Its compact construction and features make it ideal for use in flow proportional or on/off control applications. The Concept b mounts easily onto a tank or wall bracket.

Adjustment of the pump capacity is via the stroke length in the range of 10-100 % or can be set at 1 of the 4 stroke frequency settings. This gives an adjustment ratio of 40:1.

Features & Benefits

- NSF 61/50 approved
- Low cost opens up opportunities in the most basic applications
- PVDF wetted ends eliminate compatibility concerns
- Integral bleed valve prevents “loss of prime”
- Lowest maintenance costs in its class
- External control via dry contact pulse (1:1)
- Wetted end materials: PP, Acrylic/PVC or PVDF

Applications

- Swimming pools
- Spas, fountains and spray pads
- Cooling towers
- Boiler feed applications
- General Chlorination
- Municipal and industrial wastewater
- Water disinfection
- Biocide feed
- “Pump on a drum” applications

Concept b Series

Technical data

Capacity Data

Pump Version	Capacity at Maximum Back Pressure		mL/stroke		Max. Stroking Rate	Pre-Primed Suction Lift		Tubing Connectors O.D. x I.D.	Shipping Weight (approx.)		
	psig	(bar)	GPH	(L/h)		spm	ft.		(m)	lbs.	(kg)
CNPb											
1000	145	(10)	0.19	(0.7)	0.07	180	20	(6)	1/4 x 3/16	3.97	(1.8)
1601	232	(16)	0.29	(1.1)	0.10	180	20	(6)	1/4 x 3/16	3.97	(1.8)
1002	145	(10)	0.63	(2.4)	0.19	180	16	(5)	1/4 x 3/16	3.97	(1.8)
1003	145	(10)	0.79	(3.0)	0.21	240	16	(5)	1/4 x 3/16	3.97	(1.8)
0704	102	(7)	1.03	(4.0)	0.41	180	13	(4)	1/4 x 3/16	3.97	(1.8)
0705	102	(7)	1.37	(5.2)	0.36	240	13	(4)	1/4 x 3/16	3.97	(1.8)
0309	44	(3)	2.38	(9.0)	0.83	180	20	(6)	3/8 x 1/4	3.97	(1.8)
0215	22	(1.5)	4.33	(16.4)	1.45	180	5	(1.5)	3/8 x 1/4	3.97	(1.8)

External pulse contact retrofit available as an option (P/N 1022000)

NSF 50 certification only applies to NPB0 & NPB2 liquid ends

Identity code pump configuration

CNPb		Concept PLUS									
Version	Capacity	Version	Capacity								
1000	0.19 gph (0.7 l/h), 145 psi (10 bar)	0704	1.03 gph (4.0 l/h), 102 psi (7 bar)								
1601	0.29 gph (1.1 l/h), 232 psi (16 bar)	0705	1.37 gph (5.2 l/h), 102 psi (7 bar)								
1002	0.63 gph (2.4 l/h), 145 psi (10 bar)	0309	2.38 gph (9.0 l/h), 44 psi (3 bar)								
1003	0.79 gph (3.0 l/h), 145 psi (10 bar)	0215	4.33 gph (16.4 l/h), 22 psi (1.5 bar)								
Liquid end material:											
PP	Polypropylene										
NP	Acrylic/PVC										
PV	PVDF										
O-rings:											
B	Viton® seals										
E	EPDM seals										
T	PTFE seals										
Liquid end version:											
0	Non-bleed version, no valve spring										
1	Non-bleed version, with valve spring										
2	With bleed valve, no valve spring (except 0704 models)										
3	With bleed valve, with valve spring										
7	Auto-degassing										
Connection:											
M	1/4" x 3/16"										
N	3/8" x 1/4"										
Logo:											
0	With ProMinent logo										
Power Supply:											
A	1 ph 230 V 50/60 Hz (Euro plug)										
D	1 ph 115 V 50/60 Hz (US plug)										
4	1 ph 230 V 50/60 Hz (US plug) (consult factory for pricing)										
Control Option:											
0	Standard (w/o external control)										
B	With external and level input retrofit kit, fitted, without level switch										
Accessories:											
1	With accessories (foot valve, injection valve, tubing)										
Control Variant:											
0	Standard										
Approval:											
01	CE										
07	MET										
11	MET + NSF 61										
CNPb	1000	PP	B	0	M	0	A	0	1	0	01

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DCM 5 Series Controller

An Ultimate Water Chemistry Solution for Aquatics Applications



The ProMinent DCM 5 Series controller is the perfect partner for remote monitoring and controlling water parameters and processes.

Features and Benefits

Stay Connected

- Receive email and text alarms
- Make changes from your smartphone, tablet or computer
- No apps required to connect and control
- Automatic emailing of data logs
- WiFi, RS485, Modbus, BACnet and 4G capable

Stay in Control

- Monitor and control
 1. Combined chlorine
 2. UV systems
 3. VFDs
- Precision chemical feed
 1. Proportional and PID control strategies
 2. Control output of ProMinent pumps

Stay Safe

- Configurable digital interlocking to flowmeter and circ pump
- 29 discrete assignable passwords at three access tiers
- Simultaneous monitoring and control of ORP and PPM

World-Class Accuracy

- pH sensor accurate to 0.04 SU per NSF
- PPM sensor compliant to USEPA 334.0



DCM 5 Series Controller

An Ultimate Water Chemistry Solution for Aquatics Applications

Operator Interface

Remote Fully interactive Ethernet TCP/IP graphical interface with security access codes

Local 4 line - 20 character OLED display, 12 buttons, multicolor status LED: Steady BLUE = "OK", Flashing RED = "ALARM", Steady RED = (Stopped), Multicolor output LEDs indicate relay output status as feeding/ off/ alarmed/ or stopped. Ethernet and WiFi status LEDs

Sensors

Included Sensors pH, ORP, Temperature

Optional Sensors Free chlorine, total chlorine, calculated combined chlorine, salt generated free chlorine, stabilized chlorine, conductivity, bromine, feed verification, corrosion, flow rate, water level, UV Intensity, calculated LSI/Ryznar water totalizer

Field Upgrades Sensor input modules are available for field upgrades

Inputs

Digital Inputs 8, (7 fully configurable)

Analog Inputs 7 standard (configurable options) + 4 Optional (additional Temp, 4-20 mA and 2 Corrosion) Examples: 1 Cond, 1 Temp, 1 pH, 1 ORP, 1 FAC, 1 TRC, 1 4-20 mA and 2 Corrosion

Outputs

Control Relays 5 (fully assignable)

1. Acid
2. Oxidant
3. Chlorine boost / Caustic feed
4. Probe Wash / Alarm
5. Filter Aid / Flow switch test & verify
6. Auto fill
7. Heater control
8. UV control

(Interlocked with sample and recirc flow when used for chemical feed)

Digital Outputs 4 (fully assignable as dry contact sets or variable frequency pump)

1. UV
2. Pump / VFD control
3. Chlorine / Ozone generator
4. Alarm/ Eco! mode for recirc pump

Base feed available if sensor disconnected

Analog Outputs 2 (optional isolated, 4-20 mA)

Control

On/Off

ORP assisting residual

P/PI/PID

Eco! Mode

Event timers

Uv boost / VFD control

Chlorine boost / Ozone control

Flow restored delay (adjustable)

Emergency "Off" for recirculation pump

Autofill

Chem feed verification (optional)

Pulsed pump speed

DCM 5 Series Controller

An Ultimate Water Chemistry Solution for Aquatics Applications

Communication	HTML server on board (standard) 10 base T, TCP/IP Ethernet, Optional wireless 3G cellular, Smartphone / iPad HTML, micro web server with DHCP or user definable IP address
Security	Local and remote access protected by access codes
System	
Power	120 or 230 VAC, 60/50 Hz, 5 A/3 A, single phase only
Fusing	5 A at 120 VAC or 2.5 A at 230 VAC
Surge Suppression	Relay 2-5 N.O. contacts snubbed at 0.1 μ F, 150 Ω
Accessory Power	15-22 VDC, Unregulated, Thermally fused at 50 mA
Enclosure	Non-metallic, NEMA 4X, 7.5"x11.3" x 5.5" (WxHxD)
Convenience	NSF/ANSI/CAN Standard 50 UL 61010-1 CSA CAN/CSA-22.2 No. 61010-1-12
Warranty	5 years on electronics 2 years on ORP, pH sensors 1 year on all other parts

Ordering Information

		Order no.
DCM 510	Controller package for pH, ORP and Temp	1080771
DCM 511	Controller package for pH, ORP and PPM on non-stabilized (CYA) water	1080772
DCM 512	Controller package for pH, ORP, PPM and Combined PPM on non-stabilized (CYA) water	1080773
DCM 513	Controller package for pH, ORP and PPM with CYA stabilized water	1080774

Dulcodes MP UV System

Inactivate Infectious Organisms and Destroy Chloramines!



Dulcodes MP UV systems are ideal for the destruction of combined chlorine in swimming pool water and the inactivation of chlorine resistant organisms like cryptosporidium. The result is improved quality of water for healthy, pleasant and safe swimming experience.

Features & Benefits

Stay Safe

- 3rd-Party Validated to MAHC 3-log Cryptosporidium requirement and the 400 J/m² MS2 RED per the New York State DOH
- Systems are EPA registered: EPA Est. 94453-CHK-1
- Chloramine reduction using dual-setpoint allows operation at both 600 J/m² and 400 J/m² dose as needed
- Electronic lamp drivers automatically adjust to changes in water clarity

Stay in Control

- Control display backlight is green when system operation is normal, yellow when in warning and red when in alarm
- Automatic wiper system with configurable actuation times
- Tru-View disk on chambers allow visual confirmation of lamps that are lit
- IIoT ready

Stay Economical

- Electronic lamp drivers run the lamps at lowest possible power level to save \$\$\$ and improve lamp longevity
- Remote interface with DCM512 allows for automatic selection of UV dose based on real-time combined chlorine levels saving \$\$\$
- Quick lamp change feature requires less labor

Applications

- Spray pads
- Swimming pools
- Spray pads
- Zoos
- Aquariums
- Drinking water

Certifications

- NSF50 (2012 standard); Annex H
- Single Pass validation for Cryptosporidium
- Electrical Certification: UL 508A, CSA C22.2 No. 14



Certified to
NSF/ANSI Standard 50



Dulcodes MP UV System

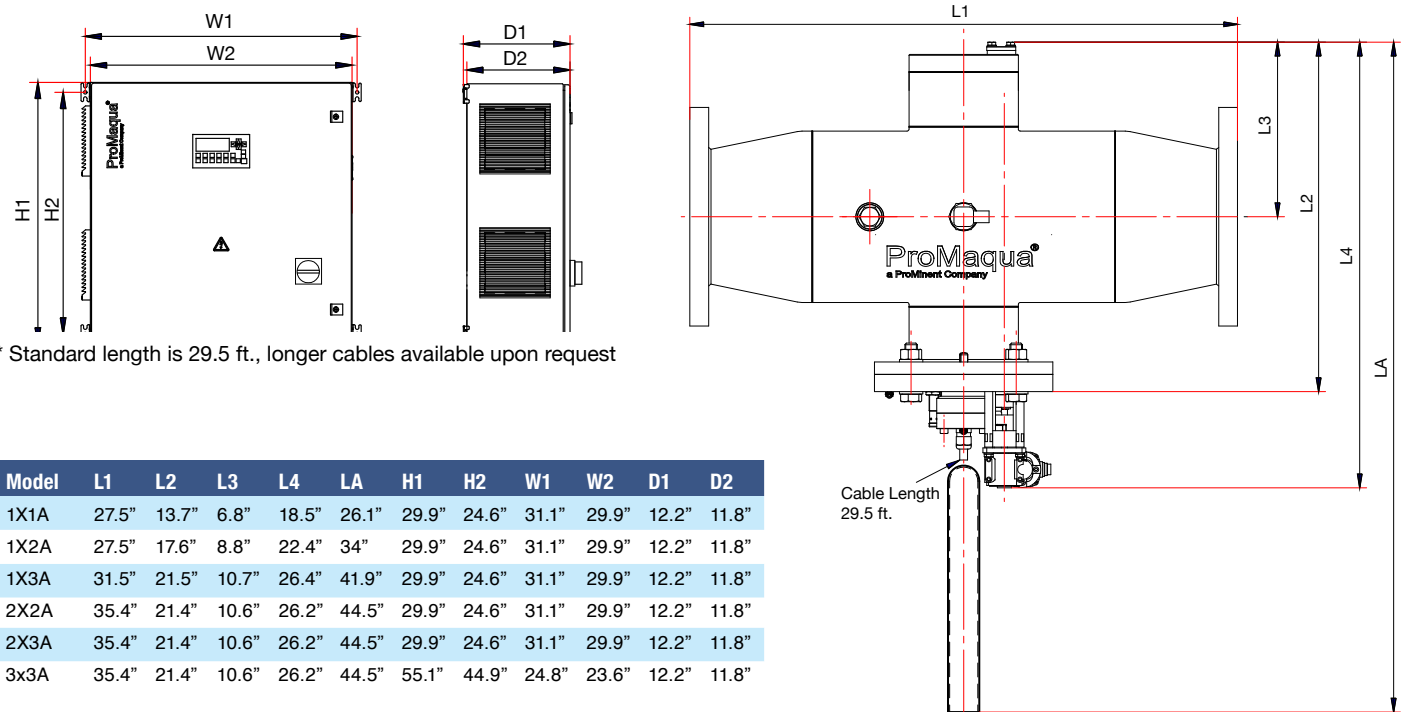
Technical Data

Lamp type..... Vario-Flux medium pressure lamp
 Controller type..... PLC
 Chamber Material..... 316L Stainless Steel
 Permissible operating pressure..... 150 psi
 Permissible ambient temperature..... 41-104 °F
 Permissible water temperature..... 37-160 °F
 Enclosure rating..... NEMA 12 (NEMA4X cabinet with A/C available as an option)

Technical Data												
Model	Part Number	# of Lamps	Power Output	GPM Max. @ 400 J/m ² @95% UVT	GPM Max. @ 600 J/m ² @95% UVT	Flange Size	Phase	Unit Voltage	FLA Amps	Chamber Weights Dry/Wet	Cabinet Weights	Shipping Dimensions
			Watts	GPM	GPM	in.		V	A	lbs.	lbs.	in.
1X1A	7781581	1	1000	368	245	4"	1	208/240	7.5/6.5	46/82	135	69.7"x38.2"x19.7"
1X2A	7781582	1	2000	627	418	6"	1	208/240	12/10	68/128	135	69.7"x38.2"x19.7"
1X3A	7781583	1	3000	1191	794	8"	3	480	13	115/260	135	69.7"x38.2"x19.7"
1X3A	7781584	1	3000	1191	794	8"	3	208/240	17/15	115/260	135	69.7"x38.2"x19.7"
2X2A	7781585	2	4000	1588	1059	8"	3	480	9	172/366	150	59.8"x40.2"x26.8"
2X2A	7781586	2	4000	1588	1059	8"	3	208/240	20/17	172/366	150	59.8"x40.2"x26.8"
2X3A	7781579	2	6000	2382	1588	10"	3	480	14	172/366	150	59.8"x40.2"x26.8"
2X3A	7781587	2	6000	2382	1588	10"	3	208/240	28/25	172/366	150	59.8"x40.2"x26.8"
3x3A	7781588	3	9000	3573	2382	12"	3	480	14	172/366	205	38.2"x34.3"x60.6"
3x3A	7781589	3	9000	3573	2382	12"	3	208/240	28/25	172/366	205	38.2"x34.3"x60.6"

UV System Flowrates Sized for 95% UVT

Drawings



Model	L1	L2	L3	L4	LA	H1	H2	W1	W2	D1	D2
1X1A	27.5"	13.7"	6.8"	18.5"	26.1"	29.9"	24.6"	31.1"	29.9"	12.2"	11.8"
1X2A	27.5"	17.6"	8.8"	22.4"	34"	29.9"	24.6"	31.1"	29.9"	12.2"	11.8"
1X3A	31.5"	21.5"	10.7"	26.4"	41.9"	29.9"	24.6"	31.1"	29.9"	12.2"	11.8"
2X2A	35.4"	21.4"	10.6"	26.2"	44.5"	29.9"	24.6"	31.1"	29.9"	12.2"	11.8"
2X3A	35.4"	21.4"	10.6"	26.2"	44.5"	29.9"	24.6"	31.1"	29.9"	12.2"	11.8"
3x3A	35.4"	21.4"	10.6"	26.2"	44.5"	55.1"	44.9"	24.8"	23.6"	12.2"	11.8"

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ProCal SV

Granular Calcium Hypochlorite Feeder

Technical Data Sheet



PRECISE CHLORINE DOSING FOR SWIMMING POOLS

Using calcium hypochlorite ($\text{Ca}(\text{ClO})_2$) as a chlorine source for water treatment in swimming pools has many benefits, and the ProCal SV is designed to generate a dilute solution of calcium hypochlorite from dry chemical granules. Granular Calcium Hypochlorite has high chlorine content which makes it an effective sanitizer against algae, bacteria and other harmful pathogens. Additionally, it has an infinite storage life, less impact on pH changes, requires less stabilizers, minimizes the adding of total dissolved solids (TDS) to the pool, and typically costs less than chlorine tablets.



The ProCal SV comes as a complete system ready for easy installation. The granules are stored in a chamber and then transferred to a mixing tank where they are mixed with the incoming make-up water. The dosing rate is manually

adjusted based on the chlorine needs of the pool or can be operated completely automatic with the addition of a DCM Controller Package.

APPLICATIONS

- Commercial Aquatic Centers
- Competition Pools
- Health & Fitness Clubs
- Hotels & Apartment Complexes
- Water & Splash Pad Parks
- Resorts & Spas
- Municipal & Public Pools
- Cold Plunge Pools

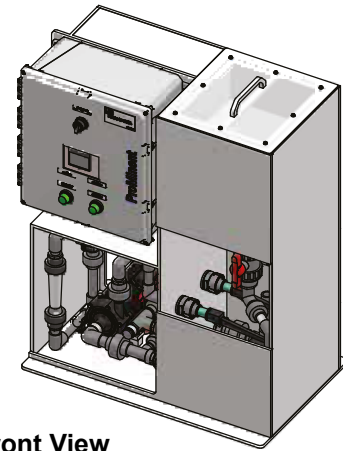
FEATURES

- Automatic Cleaning Cycle Prevents buildup of calcium and minimizes maintenance.
- Utilizes Granular Calcium Hypochlorite Improves return on investment through the use of any brand of calcium hypochlorite.
- Interface with ProMinent Controllers Automatically control process for easier operation.
- Supplied as a Complete System Simple installation and setup.

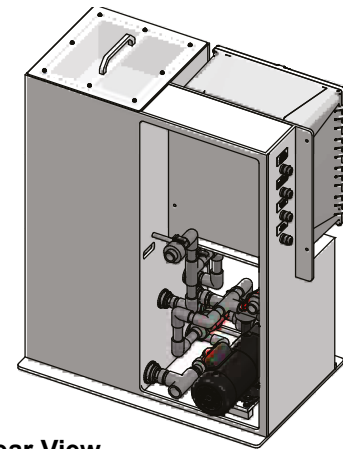
BENEFITS

SPECIFICATIONS

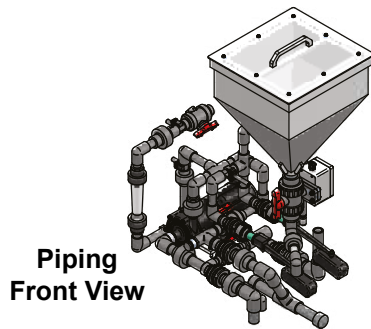
Dimensions	34" x 20" x 40" (864 x 508 x 1,016 mm)
Weight	120 LBS (54 kg)
Dry Granular Storage Capacity	66 LBS (30 kg)
Inlet Water Flow (minimum)	132 GPH (500 LPH)
Inlet Water Pressure (minimum)	14.5 psig (1 bar)
Maximum Solution Flow Rate	132 GPH (500 LPH)
Incoming Water pH Requirements	7.2 to 7.8
Temperature Range (Water/Ambient)	41 to 104°F (5 to 40°C)
Acid Injection Solution Recommendation	Hydrochloric Acid
Control Panel Material	Polycarbonate
Solution Outlet	3/4" PVC
Make-Up Water Inlet	3/4" PVC
Overflow / Drain	1" PVC
Approvals	UL508A, NSF 50
Recirculation Flow Rate	660 GPH (2,498 LPH)
Granular Capacity Feed Rate	Up to 8.99 oz/min (0.25 kg/min)
Granular Feeder Type	Vibrator
Acid Injection Pump Type	ProMinent concept b Solenoid-Drive
Transfer Pump Type	Mag-Drive Chemical Pump, 31GPM (117 LPM)
Electrical Requirements	120 VAC / 60 Hz / 10 A
Calcium Hypochlorite Concentration	78% maximum



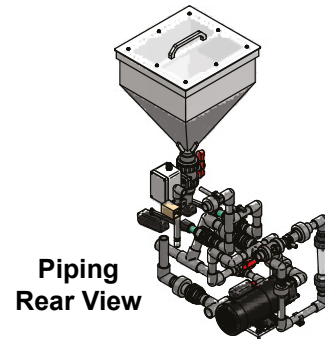
Front View



Rear View



Piping Front View



Piping Rear View

Technical Data Sheet

PROVEN SOLUTIONS THAT MEET YOUR NEEDS

ProMinent Fluid Controls offers the highest quality metering pumps, disinfection systems, polymer preparation systems, metering systems for solids, instrumentation, and custom designed systems. The Group is headquartered in Heidelberg, Germany with more than 2,800 employees throughout 50 sales and service locations and 11 production sites. With over 60 years of experience, our expertise and wide range of products positions us as your reliable solution partner for the treatment of water. To learn how we can help you, contact us at:

ABOUT PROMINENT NORTH AMERICA

Your partner for in-house system design, manufacturing, testing and certification, with complete aftermarket services, including field technicians for startup and repair, technical support, training, along with a large inventory of spare parts and components to keep your system operating at peak performance.

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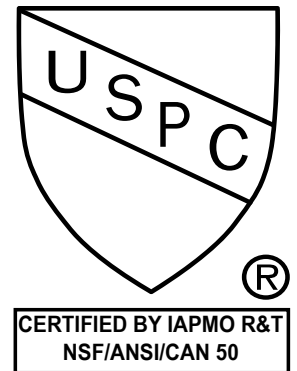
ProMinent[®]

One of the first Regenerative Media filters in the industry, and still arguably the best filter on the market today. Save money on water, chemicals, and electricity utilizing the Paddock Pool Equipment Company (PPEC) Regenerator, providing the pool facility the best water quality and return on investment.

Regenerator utilizes a user-friendly touch screen controller and innovative flexible filter elements to provide the most reliable and optimal particulate removal, down to one micron, and requires no backwashing. IAPMO R&T® approved for either Perlite or Diatomaceous Earth (D.E.).

Features & Benefits

- Fully automated system with manual override options available
- Designed to operate full filtration range
- Integration with VFD and secondary components
- All models are IAPMO R&T® listed
- Stainless steel components
- No backwashing conserving resources
- PPEC engineered bump mechanism
- Small footprint in equipment room
- Lower profile allowing access to more applications
- True ASME domed head for enhanced hydraulics
- No davit required to remove head for maintenance
- Reduces power usage, thermal heat loss, and chemical consumption
- 15 Year warranty, 40 year life use
- May earn LEED points



*Contact Manufacturer for assistance in proper plumbing layout

Regenerator Model #	Width 'A'	Height 'B'	Tank Influent Connection 'C'	Maximum Design Filtration*	Effective Filtration Area
Unit	Inches	Inches	Inches	GPM/FT ²	FT ²
PPEC 225S*	27.00	89.750	23.438	1.60	208.7
PPEC 350S*	33.00	90.188	24.469	1.60	351.2
PPEC 500S*	39.5	95.500	27.500	1.60	519.4
PPEC 700S*	45.00	98.031	28.313	1.60	707.3
PPEC 900S*	50.63	104.344	30.125	1.60	819.0
PPEC 1275*	51.00	105.563	29.063	1.60	935.8
PPEC 1400S*	58.63	109.688	32.688	1.60	1141.0
PPEC 2100*	63.50	116.938	34.250	1.60	1538.8



Regenerator Model #	Flow Range	Tank Volume	PreCoat Perlite	PreCoat Diatomaceous Earth (DE)**	Operating Weight	Shipping Weight	PreCoat Pipe	Tank Connection Influent & Effluent
Unit	GPM	Gallons	Pounds	Pounds	Pounds	Pounds	Ø, Inches	Ø, Inches
PPEC 225S*	212 - 335	129	26.0	50	1500	1025	3	4
PPEC 350S*	337 - 565	244	41.0	79	2600	1300	4	6
PPEC 500S*	528 - 835	291	65.5	126	4250	1750	4	6
PPEC 700S*	719 - 1138	396	82.0	158	4800	2200	6	8
PPEC 900S*	819 - 1310	496	95.0	190	6000	3100	6	8
PPEC 1275*	950 - 1505	525	109.0	210	6500	3100	6	8
PPEC 1400S*	1141 - 1825	721	135.0	260	9900	4100	8	10
PPEC 2100*	1560 - 2490	890	182.0	350	11600	5800	8	10

**Preferred Media

Drain Connection Note: All models have a 4" drain connection.