

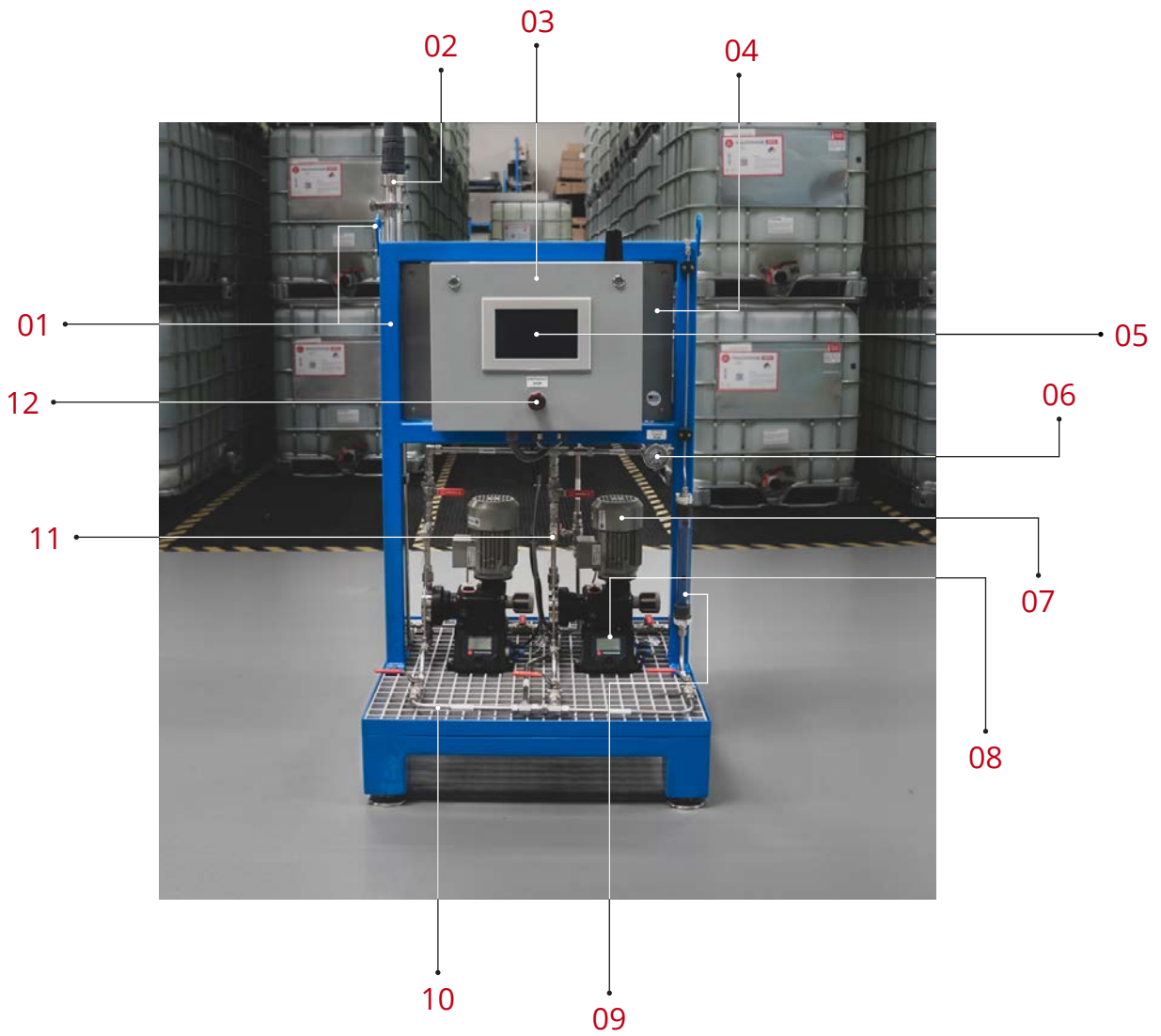


Anodamine® Dosing Systems

Anodamine dosing systems take the guesswork out of efficient and correct product dosage in your facility. Equipped with state-of-the-art features and intuitive capabilities, each dosing system is uniquely designed exclusively in the U.S.

From ultra-durable powder coated frames to the standard added option of a 9" resistive touch screen to allow digital screen control even while wearing gloves, each system is engineered with the client's and facility's needs at the forefront. An Anodamine dosing system is the key to accurate, effortless dosage control and a seamless product experience.

Dosing System Spec Sheet



<p>01 Frame / Hoist Lugs Steel frame welded and powder coated to withstand the toughest on-site conditions.</p>	<p>04 Main Power Junction Box Conveniently located on the back of the pump frame to access main power controls.</p>	<p>07 SIEMENS Motors Industry-trusted Siemens SIMOTICS motors as the perfect partner to the EMEC pumps.</p>	<p>10 Stainless Steel Fittings Premium-grade 316L stainless steel tubing, piping, and valves with custom locking handles.</p>
<p>02 Laser Level Sensor Easy, precise control over chemical supply volumes with intelligent capabilities.</p>	<p>05 Human Machine Interface (HMI) Resistive touch display for clear, user-friendly access and control.</p>	<p>08 EMEC Pumps Italian-engineered smart pumps with a built-in VFD and user control unit.</p>	<p>11 Pressure Release Valve Built-in stainless steel pressure safety feature allows performance with peace of mind.</p>
<p>03 Programmable Logic Controller (PLC) Innovative, customized multiparameter controls using Phoenix Contact platforms.</p>	<p>06 Pressure Gauge High-quality, stainless steel pressure gauge comes standard with every system.</p>	<p>09 Calibration Column An included calibration column to enable manual verification and calibration of pump</p>	<p>12 Emergency Stop A manual function to allow visible, easy-to-access control of safety shut off to main power.</p>

Anodamine[®] Dosing Systems

The new era in automation
and control.

Intuitive.
Accurate.
User-friendly.

01 Frame / Hoist Lugs



All frames are custom fabricated in the USA using 1/8" mild steel with an ultra-durable powder coat finish.

For added flexibility and ease, each frame comes standard with useful 1/4" mild steel hoist lugs.

02 Laser Level Sensor



All dosing systems come equipped with a laser level sensor that plugs into the integrated suction manifold. This new and improved design allows for the easy switching of chemical supply totes, without having to move and reconfigure a level sensor for each tote changeover.

The information the laser level sensor collects provides low-level alarms to DCS along with long-term statistics on chemical consumption and tracking, providing insight into the user's chemical dosage like never before.

Key Features:

- Laser Class II, 635 nm
- Power <1mW
- Sample: 1 per minute / 10 seconds laser on
- LED status messages for quick diagnostics

03 Programmable Logic Controller



The evolution of technology can improve your work experience only when you have complete control over it. The PLC is the control instrument that links the entire dosing system together with multiparameter control, providing the ease and safety you need.

Through collaboration, discussion, and identifying industry's needs, Anodamine has selected the Phoenix Contact PLCnext platform, a unique technology that creates an ecosystem for limitless automation. The PLC is suited for not only the user's current needs, but also optimized and prepared to meet future needs as well. This innovative system is built for automation with a combination of an open control platform, systematic cloud integration, and full customization for the customer's specific needs. All programs are transparent and can be customized.

The main signal connections are located on the front of the system where all DCS or controlling analog and digital inputs/output signals are neatly landed for easy connection.

Key Features:

- Programming according to IEC 61131-3
- Numerous protocols supported such as: http, https, FTP, OPC UA, SQR, Modbus TCP
- Up to 63 IO modules to 2 x ethernet interfaces (integrated switch)
- Increased resistance to EMI
- Temperature range of -25C to 60C+
- Arm® Cortex® – A9 2x 800 MHz processor
- 512 MB DDR3 SDRAM

04 Main Power Junction Box



Located on the rear of the dosing system pump frame, this electrical connection box is where main power to the system is wired, featuring a circuit breaker for each pump and controller, along with an electrical disconnect switch that has LOTO-capabilities.

The box also includes quick push-connect terminals for landing main power.

05 Human Machine Interface



The clear, functionally designed HMI allows simple operator access and control of the Anodamine dosing system. Information read-out is precise, accurate, and easy to use.

Key Features:

- 7" TFT color display
- Resistive touch (glove compatible)
- IP65 rating
- Logging, trending, and totalizer
- Full control of dosing system pumps and tank level

06 Pressure Gauge



All systems come equipped with 2-1/2" stainless steel pressure gauges with a dual scale 0 - 1,500 psi / 0 – 100 bar pressure rating.

07 SIEMENS Motors



The EMEC pumps used on all Anodamine systems come standard with industry-trusted Siemens SIMOTICS motors (*3~Mot. 1AV1073B D-90441*)

Specifications:

- 0.37 kW / 0.50 hp
- 230V / 60 Hz / 1.88 A (power transformed via pump smart controller)
- PF 0.75
- 1350 Max RPM
- IP 55
- IEC/EN 60034



Through vigorous testing and continuous optimizations, Anodamine heard industry's needs and now features EMEC PRIUS D MF dosing pumps throughout its entire line of dosing systems. These high-pressure, motor-driven metered pumps provide quality and reliability where it matters most. These Italian-engineered pumps ensure the highest accuracy in dosage settings with a smart built-in VFD and control unit.

Key Features and Materials:

- PTFE diaphragm
- 316L stainless steel pump head
- Aluminum enclosure
- Double ball check valve
- Flow regulation
- Compact, small-footprint design

Specifications:

- 50 bar, 725 psi
- 0 – 17 liters/hour capacity
- 1.5mm stroke length
- 25 kg, 55 lbs weight each

Control Modes:

Each pump comes with built-in working modes. The important ones utilized for Anodamine dosing systems are constant (manual), mA tracking, and batch dose.

- *Constant*: a manual mode set locally at the pump, where the operator can dial the pump capacity from 0 – 17 liters/hr. Simply set it and forget it.
- *mA Tracking*: an automatic mode where the pumps will automatically track a 4-20mA analog input to provide the desired dosage rate.
- *Batch Dose*: through a dry contact, the pump's current mode can be overridden to dose at a pre-set rate. Anodamine recommends setting this to the pump's max capacity to be used as a batch dosage mode. Once the dry contact is broken, the pump returns to the previously selected mode.

Alarms:

These highly intelligent pumps automatically activate an alarm output and display an informational message on the pump screen to notify the user of any errors. Key errors, such as a motor blockage, high or low-voltage input, and over-pressure (a redundancy, in case the pressure release valve fails and the pump is dead-headed) are included.

Speed Reference:

Each pump has a built-in mA output that tracks the current motor speed to provide a speed reference back to DCS.

09 Calibration Column



Anodamine dosing systems come equipped with a manual calibration column mounted on the frame to provide the user with another method to verify correct chemical dosage rates.

10 Stainless Steel Fittings



All fittings, valves, and tubing on an Anodamine dosing system are premium grade 316L stainless steel. All piping is standard 1/2" AISI-316L stainless steel with terminations in compression piping fittings.

All valves utilized on an Anodamine dosing system are 316L stainless steel with a 2000 psi / 137 bar pressure rating and have custom locking handles.

Safety comes first; each dosing pump includes pressure relief valves with a cracking pressure range from 750 –1500 psig and a maximum working pressure of 6000 psig @ 68°F.



11

Pressure Release Valve

At the push of a button, an emergency stop effectively disconnects power to the entire system. Conveniently located front and center on the system, the user has easy access at all times during operation.


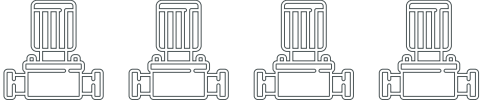
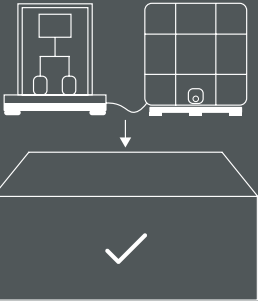
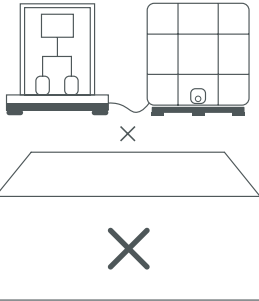




12

Emergency Stop

Ordering an Anodamine® Dosing System

Simply make the three selections below, include your supply line pressure, and submit a PO to orders@anodamine to place your custom order!

 <p>Two-Pumps</p>	OR	 <p>Four-Pumps</p>
 <p>Integrated Stainless Steel Containment</p>	OR	 <p>No Integrated Stainless Steel Containment</p>
 <p>110V</p>	OR	 <p>230V</p>

v1.1

Enter your supply line pressure (psi): _____

Anodamine® Dosing Systems

2-pump dosing system - Price available
on request + Shipping & delivery

4-pump dosing system - Price available
on request + Shipping & delivery

Add-on's:

Integrated stainless steel containment

Authorized Distributor:



877-KAAMGRP (522-6477)

A commitment to quality craftsmanship

At Anodamine, we are committed to upholding the strictest standards of quality and craftsmanship so our clients can rest assured the products they receive will perform and last according to the Anodamine superior standard.

Each dosing system is made-to-order and hand-assembled by our skilled custom fabrication team exclusively in the U.S.A using the highest quality materials and control measures.