

PRODUCT DATASHEET

Chemical Dosing Equipment Range

Liquid preparation and metering | automatic dry-polymer make-down

DATASHEET NO.

DS-YS-CDE-R03

ENGINEERING BASIS

LIQUID / DRY

TWO PACKAGE FAMILIES

Liquid reagent storage and metering are separate from automatic dry-polymer wetting and maturation.

500-30,000 L

PUBLISHED TANK RANGE

Storage and day-tank volume follow consumption, delivery interval, bunding and chemical stability.

500-5,000 L/h

POLYMER MAKE-DOWN RANGE

Preparation capacity and solution concentration are selected from active-polymer demand.

COMPAT.

REAGENT-SPECIFIC MATERIALS

Every wetted component is selected against chemical, concentration, temperature and pressure.

CATEGORY OVERVIEW

YORA chemical-dosing packages convert treatment demand into a controlled chemical solution flow. The range combines preparation, mixing, storage, metering and automatic control within a coordinated package boundary. Systems can serve coagulation, flocculation, pH correction, disinfection, nutrient control, carbon dosing, corrosion control and other water-treatment duties. Final pump size, materials and control philosophy are selected from the reagent properties, required dose, process flow, injection pressure and operating range.



LIQUID CHEMICAL DOSING

Preparation, storage, metering and process-responsive injection



DRY POLYMER MAKE-DOWN

Powder feeding, wetting, dissolution, aging and solution delivery

Representative unbranded equipment views. Final tank arrangement, pump quantity, piping, controls and finish are project specific.

PRODUCT DATASHEET

Liquid Chemical Dosing Systems

Preparation, storage, metering and automatic feedback control



CD

Liquid Chemical Preparation and Metering

A compact package integrating chemical mixing, solution storage, metering pumps and controls for continuous or demand-responsive injection into a water-treatment process.

- Listed preparation/storage tank range: 500-30,000 L
- Stepless-adjustable metering flow selected to duty and injection pressure
- PLC control can use flow, pH, conductivity or other approved process signals
- Compact arrangement supports factory assembly and simplified site interfaces

WORKING PRINCIPLE

CHEMICAL MAKE-UP	HOMOGENEOUS MIXING	SOLUTION STORAGE	METERED INJECTION	PROCESS FEEDBACK
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A prepared reagent is mixed to the required concentration and held ready for use. The metering pump delivers the solution to the injection point. In automatic service, approved process instruments provide real-time feedback so the PLC can adjust pump output and maintain the selected control target.

LISTED MODEL RANGE

MODEL	TANK CAPACITY (L)	DIAMETER (mm)	HEIGHT (mm)
CD-500	500	800	1,100
CD-1000	1,000	1,050	1,300
CD-1500	1,500	1,200	1,550
CD-2000	2,000	1,300	1,650
CD-3000	3,000	1,500	1,900
CD-5000	5,000	1,840	2,200
CD-6000	6,000	2,000	2,300
CD-8000	8,000	2,000	2,750
CD-10000	10,000	2,200	2,800
CD-15000	15,000	2,730	3,000
CD-20000	20,000	2,730	3,850
CD-25000	25,000	3,100	3,700
CD-30000	30,000	3,100	4,350

Metering-pump quantity, capacity, turndown, head, motor and wetted materials are selected to the actual chemical and duty. Additional tank capacities and multi-tank arrangements are available on request.

TYPICAL TECHNICAL CONFIGURATION

ITEM	TYPICAL PROJECT CONFIGURATION
Mixing	Listed SS304 agitator blade for compatible duties; FRP, PP or other compatible blade offered as an Extra Option
Storage	Vented solution tank with fill, drain, overflow, level indication and access provisions
Metering	Listed stainless-steel metering pump for compatible duties; alternative compatible liquid-end materials offered as Extra Options
Instrumentation	Tank level, flow and selected process analyzer inputs such as pH or conductivity
Controls	Local PLC/HMI, automatic dosage calculation, pump-speed control, alarms and remote interface as specified

PRODUCT DATASHEET

Automatic Dry-Polymer Make-Down

Controlled powder feeding, wetting, dissolution, aging and dosing



DP

Continuous Polymer Preparation System

A fully automatic package that meters dry powder into dilution water, completes controlled wetting and mixing, provides dissolution and aging volume, and delivers prepared solution for dosing.

- Listed preparation range: 500-5,000 L/h
- Automatic concentration adjustment: 0.05-0.5%
- Powder hopper, screw feeder, pre-mixer and multi-stage tank in one system
- PLC alarms for water, powder/solution level, mixing and concentration conditions

PROCESS SEQUENCE

DILUTION WATER	POWDER METERING	PRE-WETTING	DISSOLUTION	AGING / STORAGE	SOLUTION DOSING
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PREPARATION CAPACITY AND DRIVES

MODEL	PREPARATION (L/h)	HOPPER (L)	FEEDER (kW)	DOSING PUMPS (kW)
DP-500	500	55	0.18	0.37 * 2
DP-1000	1,000	55	0.18	0.37 * 2
DP-2000	2,000	110	0.18	0.55 * 2
DP-3000	3,000	110	0.18	0.75 * 2
DP-5000	5,000	200	0.25	0.75 * 2

DIMENSIONS, MATERIALS AND MASS

MODEL	STANDARD	SPECIAL OPTIONS	L x W x H (mm)	MASS (kg)
DP-500	SS304	SS316 / PP / PVC	1,800 x 800 x 1,200	300
DP-1000	SS304	SS316 / PP / PVC	2,440 x 1,000 x 1,100	430
DP-2000	SS304	SS316 / PP / PVC	2,440 x 1,220 x 1,200	550
DP-3000	SS304	SS316 / PP / PVC	3,000 x 1,500 x 1,400	700
DP-5000	SS304	SS316 / PP / PVC	3,150 x 1,500 x 1,520	990

OPERATING VALUE

PROCESS BENEFITS	CONTROL FUNCTIONS
› Repeatable concentration and wetting sequence › Continuous preparation with staged aging volume › Reduced manual powder handling and operator variability › Demand-based chemical use and lower risk of overdosing	› Automatic powder feed, water addition and mixing › Flow, level and mixer status monitoring › Low water, low powder and low solution alarms › Mixing fault and abnormal-concentration alarms

Polymer type, bulk density, solution viscosity, aging time and dosing-pump duty must be confirmed before final selection.

PRODUCT DATASHEET

Selection, Configuration and Scope

Chemical compatibility, dosing accuracy and safe package integration

DOSING SYSTEM SELECTION BASIS

DESIGN FACTOR	INFLUENCE ON SELECTION	PROJECT INPUT REQUIRED
Chemical properties	Determines tank, piping, seals and pump-head materials	Reagent, concentration, density, viscosity, temperature and safety data sheet
Dose requirement	Sets pump capacity, operating point and turndown	Minimum, normal and maximum dose plus process flow range
Injection conditions	Sets pump discharge pressure and accessories	Line pressure, elevation, injection location and backpressure
Preparation duty	Defines tank volume, mixer and dry-polymer system size	Batch or continuous operation, concentration, aging time and daily demand
Control objective	Defines instruments, feedback loop and pump-control method	Flow paced, residual based, pH, conductivity or laboratory-setpoint control
Safety and environment	Determines containment, ventilation and electrical classification	Chemical hazards, ambient range, flood level and hazardous-area requirements

TYPICAL MATERIALS, ACCESSORIES AND PROTECTION

ITEM	AVAILABLE PROJECT CONFIGURATION
Tanks / preparation body	Listed standard material retained for compatible duty; SS316, PP, PVC, PE/HDPE, FRP or other compatible execution offered as an Extra Option
Wetted piping	uPVC, CPVC, PP, PVDF, PE, SS304 or SS316 selected for reagent concentration, pressure and temperature
Metering pump	Diaphragm or other project-selected metering technology with compatible liquid end, required turndown and duty/standby philosophy
Injection accessories	Calibration column, suction lance, strainer, relief valve, backpressure valve, pulsation dampener, pressure gauge and injection quill
Containment and safety	Bunded base, leak detection, segregated drains, splash protection, ventilation and chemical-handling provisions offered where required
Electrical and controls	Local PLC/HMI, variable-speed control, analyzer input, alarms, data logging, remote SCADA and hazardous-area execution where specified

STANDARD SUPPLY SCOPE	EXTRA OPTIONS
› Selected preparation / storage tank or make-down body › Agitator, metering equipment and package piping › Core level and operating instruments › Local controls and automatic sequence › General arrangement and equipment documentation	› Duty / standby or multiple independent dosing pumps › Calibration, pressure-control and injection accessories › Secondary containment, leak and flood detection › Enclosure, insulation, ventilation, HVAC and lighting › Online analyzers, telemetry, commissioning and training › Eyewash / safety-shower interface and segregated chemical drain

INFORMATION REQUIRED FOR FINAL SELECTION

1 CHEMICAL	2 DOSING DUTY	3 CONTROL	4 SITE BASIS
Reagent, concentration, physical properties, SDS and compatible-material requirements	Minimum / normal / maximum dose, process flow, injection pressure and operating hours	Required dosing logic, analyzer signals, alarms, redundancy and remote interface	Utilities, climate, area classification, containment, drainage and package boundaries

Published configurations are a preliminary basis only. Final tank volume, pump duty, wetted materials, accessories, containment, dosing accuracy, turndown, electrical load, applicable standards and control performance are confirmed from the reagent SDS, actual operating conditions and client technical specifications. Non-standard additions are identified as Extra Options.