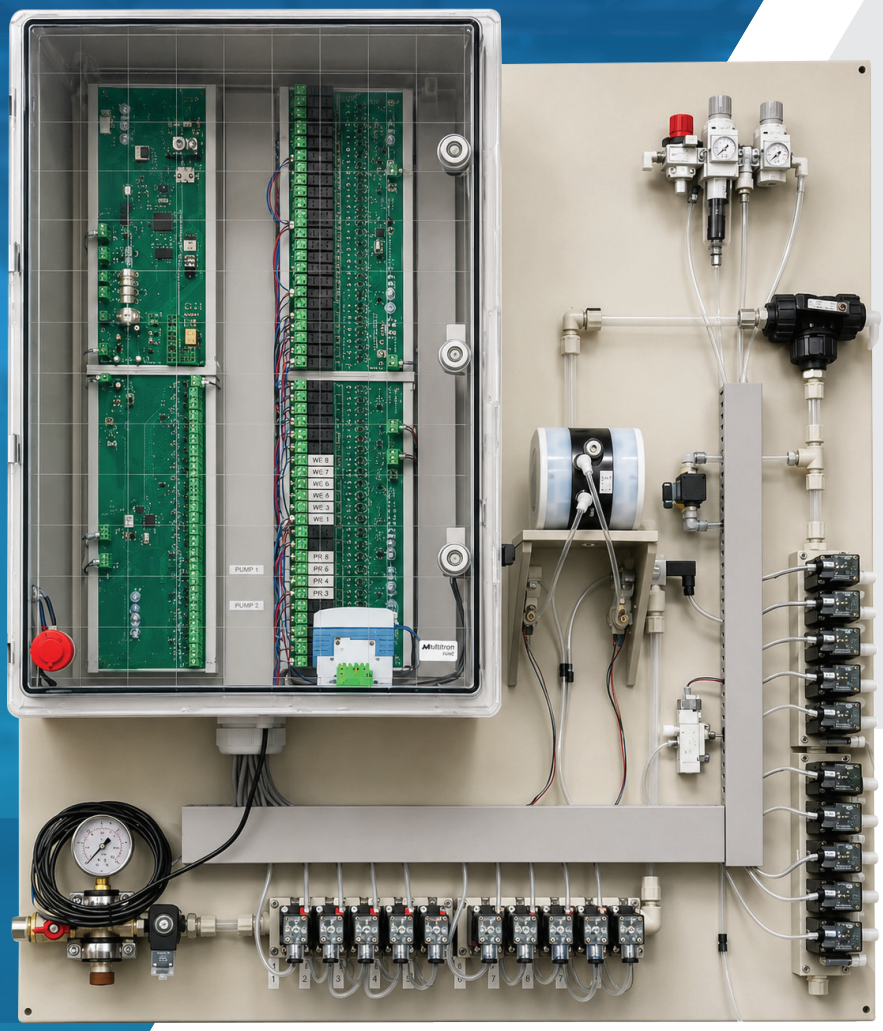
CM2W
CONNECT MACHINES TO WEB

CTDS

Dosing system for up to 15 washer extractors



Centralized Multi-Washing Dosing System

With shared pneumatic pump and electric valve distribution

Product Overview

A powerful, high-efficiency IoT dosing system for on-premise and larger industrial laundries, managing up to **15 washer extractors** and up to **10 chemicals**.

Equipped with **a shared pneumatic (air-operated) pump** and **electric valves** for detergent distribution, the system ensures high durability, low maintenance, and precise chemical dosing. Advanced **flow meter technology** provides reliable proof of delivery.

All operations are monitored and controlled in real time through a **cloud-based management software**, providing 24/7 access to performance data and consumption insights from any internet-connected device.

Key Benefits

- Real-time monitoring and control via the CM2W IoT platform
- Clear visualization, trends, and notifications
- Reliable cloud connectivity via 4G or Wi-Fi
- High dosing accuracy and proof of delivery
- Low-maintenance and reliable performance
- Easy operation with no special training required
- Remote calibration and programming

Technical Specifications

Hardware & Connectivity 1/2

	Parameter	Description
Physical specifications	Dimensions	• 100 (H) × 100 (W) × 25 (D) cm – configuration with 1 channel • Max. 100 (H) × 150 (W) × 25 (D) cm – configuration with 2 channels
	Weight	~ 40 kg (configuration with 1 channel)
	Mounting	Wall-mounted panel
	Power supply	60 W; 110-230 V, 50/60 Hz (external)
	Water supply	• Min: 1 bar / Max: 2 bars • 1/2" female connection
Connectivity	Internet connectivity	Via SIM card (mobile network) or Wi-Fi router connection
	Wireless infrastructure	Supports integration of wireless sensors (via external access point with RF module)
	Machine connectivity	Signal inputs
	RS485 serial port	1 port
Operational capacity	Max. washer extractors	15 washer extractors
	Max. products	10 products
	Max. dosing channels	2 dosing channels
	Max. load capacity	Up to 350 kg total load
	Max. extension boards	• 2 outputs extension boards • 1 flow sensor/dry contact extension boards • 1 access point
	Pumps	Up to 2 shared pneumatic pumps (2 dosing channels)
	Product valves	Up to 10 electric valves per dosing channel
	Distribution valves	Up to 15 electric valves

Hardware & Connectivity 2/2

	Parameter	Description
Operational capacity	Calibration valve	1 valve per dosing channel
	Water valve	1 water valve per dosing channel
	Signal inputs (galvanically isolated)	10 signal inputs per washer extractor (voltage ranges: [12–48] V, [48–230] V)
	Flow sensors	Up to 11 flow meters (max. 10 for products)
	Air flush line (optional)	Available on request
	Air pressure regulator	Centralized air pressure regulation for all pneumatic components
	Air pilot valve	Centralized control of pneumatic component operation

System Components 1/2

	Parameter	Description
Pumps	Type	Pneumatic (air-operated) pump with frequency control
	Flow rate (H_2O, 20°C)	Up to 9 L/min
	Body wetted areas material	New PFA
	Diaphragm material	PTFE
	Check valve material	New PFA / PTFE
	Pilot air pressure	0.2 to 0.5 MPa
	Withstand pressure	0.75 MPa
	Pilot air consumption	Max. 140 L/min (ANR)
	Suction lift	0.5 (dry pump) / up to 4 m (wet pump)
	Permissible ambient temperature	0 to 100 °C
	Operating fluid temperature	0 to 100 °C
	Mounting orientation	Horizontal (with mounting hole at bottom)
	Fluid suction port	3/8" female threaded fitting
	Air supply connection	1/4" female threaded fitting
Flow meters	Type	Standard turbine PVDF flow meter
	Measuring principle	Paddle wheel
	Flow range	0.07 – 5 L/min (H_2O, 20°C)
	Nozzle diameter	3.0 mm (integrated)
	Flow meter materials	PVDF / FKM
	Pulse rate	Approx. 2,500 pulses per liter (H_2O at 20°C)
	Acceptable viscosity (v)	0.2 – 20 mPas
	Operating pressure	-0.7 – 4 bar
	Burst pressure	>16 bar (at 22°C)
	Temperature range	-20°C to +100°C
Product valves	Type	Up to 10 electric valves
	Voltage	24V DC
	Body material	PP
	Diaphragm material	PTFE
	Connection to fittings	3/8” hose connection (Ø 10 mm ID)

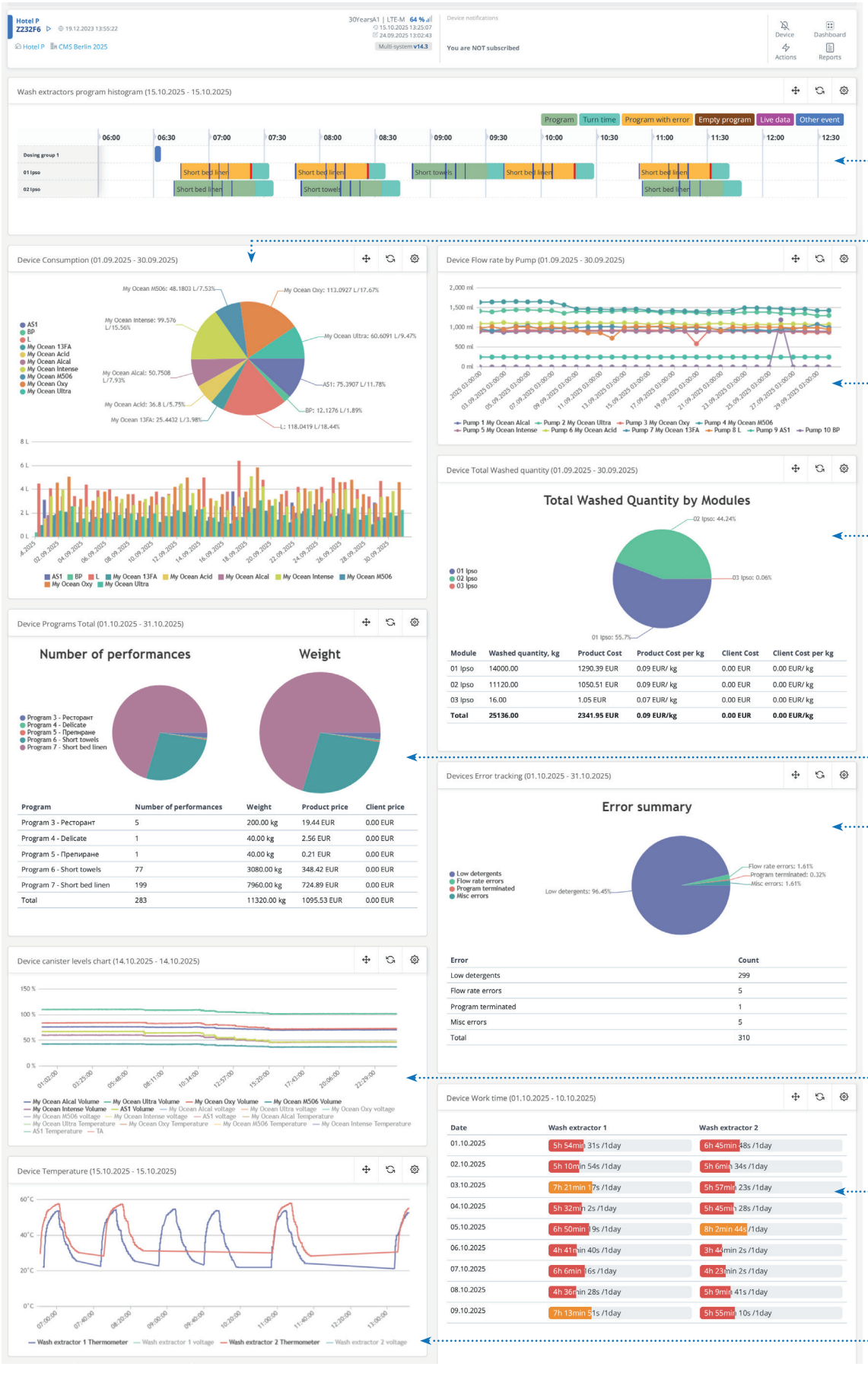
System Components 2/2

	Parameter	Description
Distribution valves	Type	Up to 15 electric valves
	Voltage	24V DC
	Body material	PP
	Diaphragm material	PTFE
	Connection to fittings	3/8" hose connection (Ø10 mm ID)
Water valve	Piloting valve voltage	24V DC
	Material	Brass
	Closure disk	IPDM
Fittings & tubing	Fittings material	PP
	Standard fittings connection	Ø 8 mm ID / Ø 10 mm ED
	Connection to pneumatic components	Ø 4 mm ID / Ø 6 mm ED
	Tubing material	FEP
	Tubing diameter	Ø 8 mm ID / Ø 10 mm ED
Program selectors	Display	16-digit LED program selector (one per washer)
Alarm	Internal alarm (audible)	Buzzer noise
	External alarm (visual)	Signal lamp
	Voltage range	10–30 V DC

Intelligent Dosing & IoT Features

	Parameter	Description
Dosing & calibration	Dosing methods	• **Fixed flow rate dosing** – based on pump flow rate • **Flow sensor dosing** – based on real-time flow sensor measurements
	Weight-based dosing	• **Manual** – controlled via keyboard • **Automatic** – based on weight detection signal duration
	Temperature-based dosing	Supported (via wireless temperature sensors)
	Program start	• **Manual** – controlled via keyboard • **Semi-automatic** – selected from keyboard, triggered by first signal • **Automatic** – based on signal combinations and/or duration
	Calibration	Manual (keyboard) or fully remote calibration and priming
IoT platform features	Access	24/7 in real time
	On-site dashboard	Centralized performance monitoring via smart TV
	Reporting	• Live histogram of program execution • Product consumption • Cost tracking • Flow rate monitoring • Laundry load processed • Machine usage • Total washed quantity • Temperature monitoring
	Error notifications	Filtered alerts with customizable levels, assigned to designated personnel for rapid response
	Input signals log	Tracking of input signal logs registered by the system
	Sensor-based monitoring	• Washer temperature monitoring (via wireless temperature sensors) • Heating rate monitoring (via wireless temperature sensors) • Product level monitoring (via wireless level sensors)
	Copy wizard	Duplicate settings and calibration data across multiple devices
	Offline programming	Device programming in offline environments

Monitoring via the CM2W IoT Platform



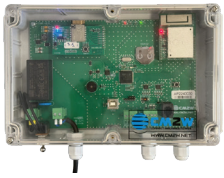
Module	Washed quantity, kg	Product Cost	Product Cost per kg	Client Cost	Client Cost per kg
01 Ipso	14000.00	1290.39 EUR	0.09 EUR/ kg	0.00 EUR	0.00 EUR/ kg
02 Ipso	11120.00	1050.51 EUR	0.09 EUR/ kg	0.00 EUR	0.00 EUR/ kg
03 Ipso	16.00	1.05 EUR	0.07 EUR/ kg	0.00 EUR	0.00 EUR/ kg
Total	**25136.00**	**2341.95 EUR**	**0.09 EUR/kg**	**0.00 EUR**	**0.00 EUR/kg**

Program	Number of performances	Weight	Product price	Client price
Program 3 - Ресторант	5	200.00 kg	19.44 EUR	0.00 EUR
Program 4 - Delicate	1	40.00 kg	2.56 EUR	0.00 EUR
Program 5 - Препиране	1	40.00 kg	0.21 EUR	0.00 EUR
Program 6 - Short towels	77	3080.00 kg	348.42 EUR	0.00 EUR
Program 7 - Short bed linen	199	7960.00 kg	724.89 EUR	0.00 EUR
Total	283	11320.00 kg	1095.53 EUR	0.00 EUR

Error	Count
Low detergents	299
Flow rate errors	5
Program terminated	1
Misc errors	5
Total	310

Date	Wash extractor 1	Wash extractor 2
01.10.2025	5h 54min 31s /1day	6h 45min 48s /1day
02.10.2025	5h 10min 54s /1day	5h 6min 34s /1day
03.10.2025	7h 21min 17s /1day	5h 57min 23s /1day
04.10.2025	5h 32min 2s /1day	5h 45min 28s /1day
05.10.2025	6h 50min 19s /1day	8h 2min 44s /1day
06.10.2025	4h 41min 40s /1day	3h 44min 2s /1day
07.10.2025	6h 6min 16s /1day	4h 23min 2s /1day
08.10.2025	4h 36min 28s /1day	5h 9min 41s /1day
09.10.2025	7h 13min 51s /1day	5h 55min 10s /1day

Suggested Kit Components

Component	Description	Product code
 Suction lance with level switch	Provides dry-run protection for chemical canisters. Product variations: • **Small:** 80.7 cm (L) × Ø 40 mm (ED); 1 tube connection • **Medium:** 100.7 cm (L) × Ø 50 mm (ED); 3 tube connections • **Large:** 160.7 cm (L) × Ø 50 mm (ED); 3 tube connections	*Request product sheet*
 Suction lance with wireless level sensor	Provides continuous monitoring of chemical level and canister temperature. Product variations: • **Small:** 63.2 cm (L) × Ø 40 mm (ED); 1 tube connection • **Medium:** 83.2 cm (L) × Ø 50 mm (ED); 3 tube connections • **Large:** 143.2 cm (L) × Ø 50 mm (ED); 3 tube connections ** Requires RF communication module on the controller.*	*Request product sheet*
 Standard PVDF flow meter	For adding an individual flow meter per product to ensure proof of delivery and enhanced dosing accuracy.	*Request product sheet*
 Wireless temperature sensor	Provides real-time monitoring of washer temperature and heating rate. ** Requires RF communication module on the controller.*	*RFTPIREX (EU market)* *RFTPIRNA (US market)*
 Access point with RF communication module	Ensures RF wireless infrastructure for integrating wireless level and temperature sensors.	*ACCPOINT (access point)* *RFMOEU (RF module for EU market)* *RFMO (RF module for US market)*