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Solutions for Industry

Innovative Solutions


DMU 65 FD monoBLOCK

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EMULSION PREPARATION

ZATRIX® MANUAL MIXING SYSTEMS

The waterjet-powered ZatriX® metering pump is ideal for accurately dispensing water-soluble metalworking fluids and mixing them with water, thereby making it easier to optimize the use of additives.

ZatriX® does not require electrical power for precise dispensing of liquid concentrates, using water flow and pressure as the energy source. Unlike traditional electric pumps, the ZatriX® proportional dispenser allows dispensing regardless of location without the need to be plugged in. Its operation and installation are very simple, making it an ideal device for applications.

It has a patented internal mixing chamber that ensures homogeneous mixing while keeping aggressive chemicals from coming into contact with critical components of the unit.

ZatriX® Technical details:

Model	Operating pressure (Bar)	Water flow (L/H)	%	Scope	ON/OFF switch	BSP Inlet/Outlet	Max. Temp. (°C)
ZatriX®2	0.34-6.2	10-2500	0.2-2.0	1:500-1:50	NO	3/4"	38
ZatriX®5	0.34-6.2	10-2500	0.78-5.0	1:128-1:20	NO	3/4"	38
ZatriX®10	0.5-4.5	50-2200	2.0-10.0	1:50-1:10	YES	3/4"	38

Housing: patented multi-component material
Dosing precision: +/-10%
Repeatability: +/- 3% (ZatriX®10) and +/- 5% (ZatriX®2 and ZatriX®5)
Self-priming: Yes
Max temp: 38°C
Min temp: 1°C

Dosing of metalworking fluids:

- ✓ Lubricating coolants
- ✓ Coolants
- ✓ Degreasers
- ✓ Preparations for washing parts
- ✓ Additives for die coating
- ✓ Biocides
- ✓ Additives for vibratory grinding

Main advantages:

- ✓ Superior mixing quality
- ✓ You can adjust the dosage during operation
- ✓ A built-in ON/OFF switch allows the user to stop the injection, but not the entire system (ZatriX® 10)
- ✓ Interchangeable spigots in the same series
- ✓ Special design minimizes emulsion formation and backflow in the drum
- ✓ Consistent and accurate dosing, even with changes in pressure or water flow
- ✓ Strong and durable body, reinforced with fiberglass
- ✓ Patented mixing chamber - protects the main piston from contact with the chemical, which extends the life of the dispenser
- ✓ The entire dispenser is made of polypropylene/fiberglass, which is more resistant to aggressive chemicals. No PVDF option needed

ZATRIX® AUTOMATIC MIXING SYSTEMS

ZATRIX® A series, type A5 or A10, is used to produce a new cooling-lubricating emulsion (for machining) of the proper concentration desired by the user, by dosing proper additions of concentrate into water (mineral, semi-synthetic or synthetic water-based oil).

ZATRIX® A5 is designed for the preparation of a cooling and lubricating emulsion with a concentration of up to 5%
ZATRIX® A10 is designed for the preparation of a cooling and lubricating emulsion with a concentration of up to 10%

Technical details ZATRIX® Series A-.....:

		MODELS AVAILABLE			
	Unit	ZATRIX® A5	ZATRIX® A5S	ZATRIX® A10	ZATRIX® A10S
Concentration	%	0-5	0-5	0-10	0-10
Accuracy	%	+/- 0.1	+/- 0.1	+/- 0.1	+/- 0.1
Connection	GZ	¾"	¾"	¾"	¾"
Connection spacing	mm	160	160	160	160
Weight	kg	4.8	4.8	4.8	4.8
Dimensions (W x D x H)	mm	159x117x390	159x117x390	159x117x390	159x117x390
Power supply	VAC, Hz, A	230, 50, 2.5	230, 50, 2.5	230, 50, 2.5	230, 50, 2.5
Power	W	75	75	75	75
Supply voltage	VDC	24	24	24	24

	EQUIPMENT			
LCD display	•	•	•	•
Electronically preset concentration	•	•	•	•
Control of SAUM solenoid valve	o	•	o	•
Control of SAUM level sensor	o	•	o	•
Control of SAUM overflow sensor	o	•	o	•
Configurable input - external signal *	o	•	o	•
Configurable output **	o	•	o	•
Network operation ***	o	•	o	•
Reading consumption data ****	•	•	•	•
Operation in ZATRIX® APP *****	o	•	o	•

SAUM - system of automatic replenishment of the machine medium
* possibility of cooperation with an external device, e.g.: dosing start/end signal, concentration reading from a refractometer,
** configurable output, such as: min. concentrate level alarm, dosing error
*** operation of one or multiple devices (up to 256) in one MODBUS network - management from ZATRIX® APP
**** in A-5 and A-10 version locally from LCD display
***** ZATRIX® APP - PC software for operating ZATRIX® A-...s series dispensers enabling:

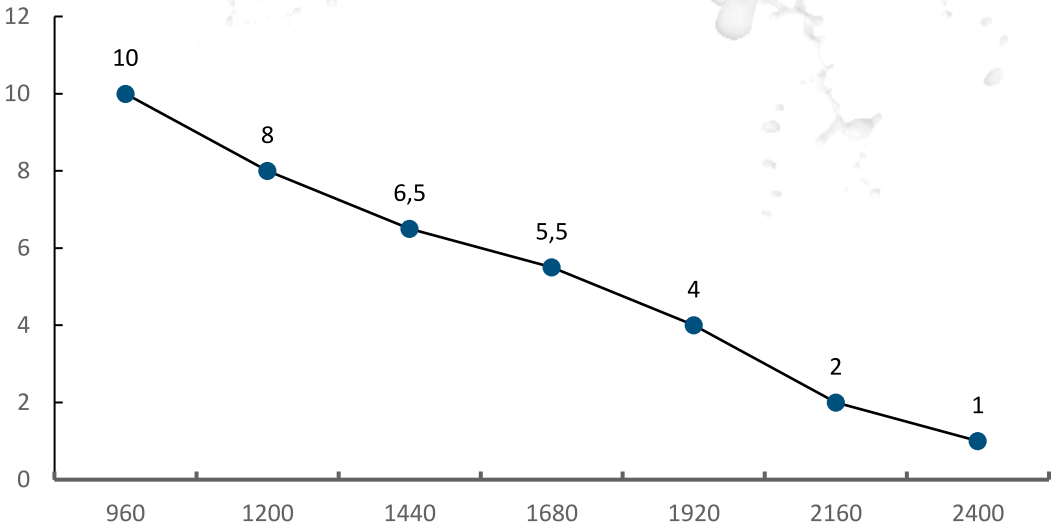
- Creation of dispenser network topology - division into groups
- Remote presetting of concentrations to individual units/groups of dispensers
- Readout of water and concentrate consumption data
- Generation of consumption reports in the form of graphs
- Readout of statuses: operation, levels, concentrations, warnings and alarms depending on equipment expansion

Main advantages:

- ✓ Ability to set the required concentration with an accuracy of 0.1%
- ✓ Concentration range 0.5-10%
- ✓ Full monitoring of consumption of water and concentrate
- ✓ Ability to generate comprehensive consumption reports
- ✓ Ability to plug up to 256 dispensers into one central network
- ✓ Fully automatic system
- ✓ Reduction of concentrate consumption
- ✓ Reduction of water consumption
- ✓ Very high stability of concentration behavior
- ✓ Reduced cost of disposal of used emulsion
- ✓ Generate quick consumption reports using "ZATRIX® APP"
- ✓ Option of managing a network of dispensers in the app

ZATRIX® provides maximum accurate emulsion dosing for better machining quality, reduced handling of coolant monitoring and many other factors, streamlining operation on all connected machines.

L/h flow rate in relation to % emulsion



The station is prepared for expansion with additional components such as a minimum level sensor, maximum level sensor, anti-overflow sensor and a control solenoid valve - shutting off the supply to the machine. In addition, in combination with our state mixers, it is capable of preparing an emulsion ready for feeding into central buses - a central system.

Other advantages:

- ✓ Possibility to connect analog or digital level sensors to the tank with prepared emulsion
- ✓ Possibility of connecting an electro-valve that opens / closes the water supply to the machine tank
- ✓ Option of controlling the pump feeding the system with the medium
- ✓ Metering capability, based on the reading of an optional additional connected external water flow meter
- ✓ Ability to remotely switch on metering, via digital signal
- ✓ Ability to control the concentration setpoint by analog signal

Potential uses of ZatriX® A-Series:

Replenishment of emulsion in the machine tank - float shut-off valve

Machine tank refilling - automatic regulation of emulsion level in the machine tank

Refilling of the machine tank - automatic level control + control of the minimum level of the concentrate tank

Machine tank refilling with concentration averaging + automatic level control

Central machine replenishment system with automatic level control

Communication via RS 485 and ZATRIX® APP software - LAN version or USB version

ZATRIX® A series type A30se and A30xse was developed for the preparation of a cooling and lubricating emulsion with a concentration higher than 10%.

We offer two devices of this type:

- ✓ ZATRIX® A30se
- ✓ ZATRIX® A30xse

Mixers were developed based on the ZATRIX® version:

- ✓ DMP-A30se
- ✓ DMP-A30xse

The above equipment is dedicated to work with greases, oils, adhesives, and in forges for mixing graphite agents.

An intermediate version of the above devices is the DMP-50M, while where concentrations of less than 10% are required the following versions will work perfectly: ZATRIX® A5 or A10 and DMP-50DC or DMP-50ST. Note, however, that these units are not dedicated to working with lubricants.

Technical details:

	ZATRIX® A30se	ZATRIX® A30xse	DMP - A30se	DMP-A30xse
Type:	FLOW	FLOW	MIXER	MIXER
Concentration:	10 ÷ 25%	15 ÷ 60%	10 ÷ 25%	15 ÷ 60%
Concentrate:	RELEASE AGENTS	WATER -BASED LUBRICANTS AND OILS	RELEASE AGENTS	WATER -BASED LUBRICANTS AND OILS
Power supply:	ELECTRICAL 230VAC (Schuko type plug)	ELECTRICAL 230VAC (Schuko type plug)	ELECTRICAL 230VAC (Schuko type plug)	ELECTRICAL 230VAC (Schuko type plug)
Rated power:	130W	820W	920W	1.7kW
Dimensions (W x D x H):	400x200x800mm	400x250x1,000mm	800x700x1,700mm	800x700x1,700mm
Weight:	11kg	15kg	90kg	110kg
Type of installation:	WALL	WALL	STANDALONE/MOBILE	STANDALONE/MOBILE
Buffer tank:	NO	NO	YES	YES
Usable capacity of the buffer tank:	---	---	300L*	300L*
Output pump:	NO	NO	YES	YES
Operating pressure:	~2BAR	~2BAR	1 ÷ 6BAR*	1 ÷6BAR*
Workflow:	~20L/MIN	~25L/MIN	50L/MIN*	50L/MIN*
Option of working in central installations:	YES - additional equipment required	YES - additional equipment required	YES	YES
Number of machine tanks handled:	1 ÷ 2 or up to 10 in central installations	1 ÷ 2 or up to 10 in central installations	10 ÷ 40*	10 ÷ 40*
Agitator in the buffer tank:	---	---	NO accessories	YES
Operation from the ZATRIX® APP:	YES	YES	YES	YES
Pre-mixing the concentrate with water:	YES	YES	YES	YES

	ZATRIX® A30se	ZATRIX® A30xse	DMP-A30se	DMP - A30xse
STANDARD EQUIPMENT FEATURES:	✓ Control from a 7" HMI panel ✓ Concentration set in 0.1% increments ✓ Water consumption reading ✓ Concentrate consumption reading ✓ Consumption reading emulsion (water + concentrate) ✓ Rinse function ✓ Cleaning function ✓ Control in manual mode for diagnostic purposes ✓ External interface to connect to the machine: switch to automatic mode, fault signaling ✓ Operation with ZATRIX® APP ✓ Exporting data to an external USB drive ✓ Automatic shutdown after loss of concentrate - error indication ✓ Operational status indication: operation/fault + beep	✓ Control from a 7" HMI panel ✓ Concentration set in 0.1% increments ✓ Water consumption reading ✓ Concentrate consumption reading ✓ Consumption reading emulsion (water + concentrate) ✓ Rinse function ✓ Cleaning function ✓ Control in manual mode for diagnostic purposes ✓ External interface to connect to the machine: switch to automatic mode, fault signaling ✓ Operation with ZATRIX® APP ✓ Exporting data to an external USB drive ✓ Automatic shutdown after loss of concentrate - error indication ✓ Operational status indication: operation/fault + beep	✓ Control from a 7" HMI panel ✓ Concentration set in 0.1% increments ✓ Output pump with adjustable operating pressure ✓ Integrated 300L buffer tank with suitable sensors ✓ Water consumption reading ✓ Concentrate consumption reading ✓ Consumption reading emulsion (water + concentrate) ✓ Rinse function ✓ Cleaning function ✓ Control in manual mode for diagnostic purposes ✓ External interface to connect to the machine: switch to automatic mode, fault signaling ✓ Compatible with ZATRIX® APP ✓ Exporting data to an external USB drive ✓ Automatic shutdown after loss of concentrate - error indication ✓ Operational status indication: operation/fault + beep ✓ 50L vertical tank	✓ Control from a 7" HMI panel ✓ Concentration set in 0.1% increments ✓ Output pump with adjustable operating pressure ✓ Integrated 300L buffer tank with suitable sensors ✓ Integrated agitator inside the buffer tank ✓ External tank with agitator for grease-based agents ✓ Water consumption reading ✓ Concentrate consumption reading ✓ Consumption reading emulsion (water + concentrate) ✓ Rinse function ✓ Cleaning function ✓ Control in manual mode for diagnostic purposes ✓ External interface to connect to the machine: switch to automatic mode, fault signaling ✓ Compatible with ZATRIX® APP ✓ Exporting data to an external USB drive ✓ Automatic shutdown after loss of concentrate - error indication ✓ Operational status indication: operation/fault + beep
ADDITIONAL ON REQUEST:	✓ Concentrate container level sensor ✓ 150L vertical tank - central installations ✓ LCM-30 + solenoid valve + sensors ✓ Float shut-off valve ✓ Installation of hydraulic central plant	✓ Concentrate container level sensor ✓ 150L vertical tank - central installations ✓ LCM-30 + solenoid valve + sensors ✓ Float shut-off valve ✓ Installation of hydraulic central plant	✓ Agitator in the buffer tank ✓ Concentrate container level sensor ✓ LCM-30 + solenoid valve + sensors ✓ Float shut-off valve ✓ Installation of hydraulic central plant	✓ Concentrate container level sensor ✓ LCM-30 + solenoid valve + sensors ✓ Float shut-off valve ✓ Installation of hydraulic central plant

DMP PRECISION METERING AND MIXING SYSTEMS

DMP-50DC are metering and pumping stations designed to work with industrial machines, either individually or in central systems. Used for dispensing water-based release agents as well as micro-spraying agents.

They work without integration into the machine. Instead, they have an interface for such a connection, which is needed for the automatic cleaning option.

Technical details:

REQUIRED PARAMETERS OF THE ELECTRI CAL CONNECTION	
Power supply	230 VAC
Control voltage	24 VDC
Power consumption	1.5 kW*
REQUIRED PARAMETERS OF WATER CONNECTION	
Supply - mains water	3/4"
Pressure	≥ 2 bar
Flow	15÷25 l/min
PARAMETERS OF THE PNEUMATIC CONNECTION (only with automatic cleaning system)	
Pressure	≥ 6 bar
Flow	100l/min
DIMENSIONS AND WEIGHT	
Shipping weight	150 kg*
Payload weight (with full tank)	~250 kg*
Dimensions (W x D x H)	650 x 570 x 1,580* mm
PROCESS SYSTEM	
System pressure	adjustable 0.5÷6 bar
Maximum output	50l/min.
Controlling the concentration of the medium	1÷7%*
Dosage accuracy	0.1%
Tank capacity	100l*
Diameter of output to medium receivers	3/4"
Operation in central concentrate systems	yes

* Larger parameters on request

Main advantages:

- ✓ Dosage accuracy and repeatability up to 0.1%
- ✓ Constant system pressure without peaks thanks to PID control of the main pump
- ✓ Reading of water and concentrate consumption data at any time to external media or viewing on LAN
- ✓ System to protect the system from leakage and possible blockage in the system
- ✓ Integrated mixing system to ensure constant movement of the medium in the tank
- ✓ Concentration and operating pressure set from the control panel

Other advantages:

- ✓ Fully automatic - maintenance-free system
- ✓ Works 24/7
- ✓ Saves space on the production floor
- ✓ Ability to integrate with an internal system that supervises production processes
- ✓ Full monitoring of consumption - water, concentrate
- ✓ Electrically set concentration
- ✓ Easy operational maintenance, or virtually no maintenance at all
- ✓ Saves concentrate
- ✓ Improves the quality of manufactured products

Additional options:

- ✓ Automatic tank cleaning
- ✓ Automatic cleaning of the central bus
- ✓ Aeration system
- ✓ Integrated agitator
- ✓ GSM failure signaling
- ✓ Integrated concentrate tank
- ✓ Integrated concentration measurement system

DMP-50M is designed to prepare the desired coolant-lubricant agent / coolant (for machining) based on water-based oils, with the exact percentage concentration (0-50%) according to the user's expectations.

The mixer is suitable for the preparation of salt-based release agents applicable to casting machines and rolling mills. The mixing systems used in the device prevent sedimentation of the release agent and keep it at a constant, preset concentration, which makes the production process stable and repeatable.

Advantages of DPM-50M, compared to other mixers:

- ✓ Easy to install, simple to use,
- ✓ Easy to disassemble and replace its individual components,
- ✓ Allows reading of water and concentrate consumption data,
- ✓ It guarantees precise and extremely accurate concentration over the entire operating range.

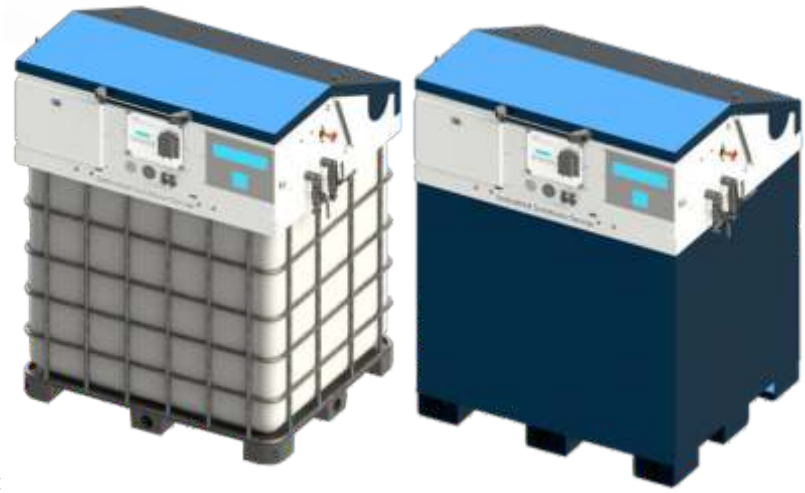
Technical details:

ELECTRICAL SYSTEM	
Power supply	230 VAC, 50 Hz
Power consumption	0.5 kW
Control voltage	24 VDC
Power cord	3x1.5 mm^2
Main protection	C10
PNEUMATIC SYSTEM	
System pressure (supplying pumps and pneumatically operated valve actuators)	4.5 - 5 bar
PROCESS SYSTEM	
Maximum usable capacity of the "metering tank"	~60 l
Maximum usable capacity of the "main tank"	~80 l
System capacity	35 l/min = 2.1 m^3/min
Max. working pressure of water	3 bar
Max. coolant output pressure	2 - 5 bar
Max. coolant discharge height	5 m
Operating temperature	+5 to +40°C
Max. suction height from external concentrate tank	5 m
Material	Stainless steel 1.4301

ACCEPTABLE SPACING AND OPERATING DETAILS	
Voltage fluctuations	±10% of line voltage
Frequency fluctuations	±2% of the mains frequency
Work environment	inside well-ventilated rooms without explosive, flammable gases/fumes
Ambient temperature	+5°C to +40°C
Air humidity	max. 70%
The height of the location of the installation and the machine	up to 1,000 meters above sea level.
DIMENSIONS 1 WEIGHT	
Transport weight (with empty "metering tank" and "main tank")	170 kg
Transport weight (with full "metering tank" and "main tank")	~310 kg
Width	660 mm
Depth	890 mm
Height	1,758 mm

ELECTRICAL CONNECTION PARAMETERS	
Supply voltage	230 VAC, 50 Hz
Power cord	3x1.5 mm^2
Main protection	C16
PARAMETERS OF THE PNEUMATIC CONNECTION	
Connection diameter	½"
Required pressure at the connection	5-10 bar (0.5-1 MPa)
Required flow rate	250 Nl/min (0.25m^3/min)
WATER CONNECTION PARAMETERS	
Connection diameter	½"
Required pressure at the connection	2-16 bar
Required flow rate	20-50 l/min
Temperature	Min. 5°C Max. 30°C
PARAMETERS OF THE CONCENTRATE CONNECTION	
Connection diameter	½"
Temperature	Min. 5°C Max. 30°C

DMP-50ST and DMP-50PT are used to prepare a solution of water with a concentrate based on mineral or synthetic oils at a specific concentration desired by the user with high accuracy, and then feed the newly formed solution to the installation/production machine.



The DMP-50 comes in two versions:

- ✓ DMP-50PT in the form of an overlay on an IBC container
- ✓ DMP-50ST integrated with steel tank

Main advantages:

- ✓ Guarantees precise and accurate concentrations down to 0.1% over the entire operating range
- ✓ Provides the option to read water and concentrate consumption data at any time
- ✓ Direct feeding of the prepared solution to the processing plant/machine
- ✓ It has an integrated mixing system to ensure constant movement of the medium
- ✓ Easy to install and simple to use

Technical details:

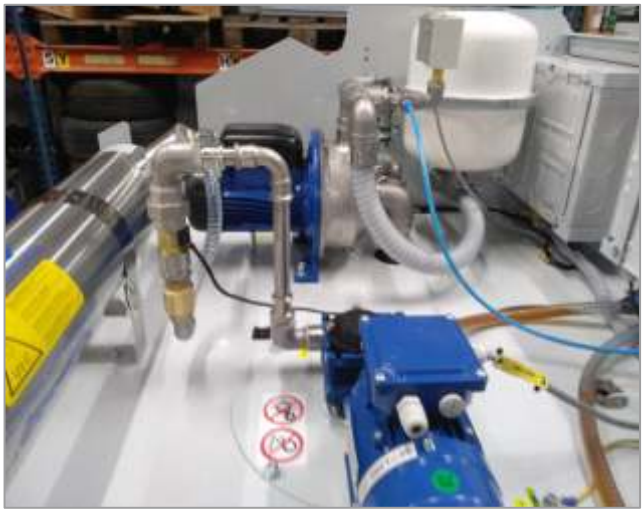
ELECTRICAL SYSTEM	
Power supply	400 VAC, 50 Hz
Power consumption	3.2 kW
Control voltage	24 VDC
Power cord	5x2.5 mm^2
Main protection	C16
PROCESS SYSTEM	
Concentration range	0÷10%
Accuracy of the set concentration	0.1%
Usable capacity of the agitator tank	1,000 l (or more on request)
Concentrate tank capacity	N/A
Working flow of water	8÷14 l/min
Max. working pressure of water	1÷3 bar
Capacity	~ 50 l/min
System pressure	0.5÷0.7 bar
Maximum discharge height of the solution	7 m
Solution output and return connection	1"
Material	Powder-coated steel 1.0037

Additional options:

- ✓ Removal of microorganisms in feed water by UV irradiation, using a UV sterilizer/lamp
- ✓ Maintain a constant solution temperature of up to 30°C, using a heater built into the agitator tank
- ✓ Concentrate tank built into the machine

ACCEPTABLE SPACING AND OPERATING DETAILS	
Frequency fluctuations	±2% of the mains frequency
Work environment	indoors in well-ventilated areas without explosive, corrosive flammable gases/fumes
Ambient temperature	+5°C to +40°C
Air humidity	Max. 50% at 40°C Max. 80% at 28°C
The height of the location of the installation and the machine	up to 1,000 meters above sea level.
DIMENSIONS AND WEIGHT	
Weight (with empty agitator tank)	301 kg
Width	1,200 mm
Depth	1,000 mm
Height	1,560 mm

The device in both versions has an integrated stirrer that keeps the prepared solution in constant motion thus preventing its stratification and keeps it at a constant preset concentration making the production process stable and reproducible.



Technical details for sample versions/types (depending on customer requirements):

DMP ST	DMP-50ST HU	DMP-50ST CU
U - sterilizer / UV lamps	•	•
H - heater in the mixer tank	•	o
C - concentrate tank built into the machine	o	•
DIMENSIONS AND WEIGHT		
Transport weight (with empty agitator tank)	301kg - version with a tank of 1,000l	394kg - version with a tank of 1,500l
Operating weight (with the agitator tank filled)	~1,320kg - version with a tank of 1,000l	~2014 - version with a tank of 1,500l
Width	1,400mm	
Depth	1,200mm - version with a tank of 1,000l	1,550mm- version with a tank of 1,500l
Transport height (with the cap cover closed)	1,563mm - version with a tank of 1,000l	1,663mm - version with a tank of 1,500l
Operating height (with the cap cover closed and open)	1,563⁄2,363mm - version with a tank of 1,000l	1,663/2,463mm - version with a tank of 1,500l
ELECTRICAL SYSTEM		
Power supply	400VAC 50Hz	
Power consumption	3.2kW	0.7kW
Control voltage	24VDC	
REQUIRED PARAMETERS OF THE ELECTRICAL CONNECTION		
Supply voltage	400VAC, 50 Hz.	
PROCESS SYSTEM		
Concentration range (depending on order)	0÷10%	0÷10%
Accuracy of the set concentration	0.1%,	0.1%,
Usable tank capacity	1,000l	1,500l
Concentrate tank capacity	-	100l
Working flow of water	8÷14l/min	10÷15l/min
Maximum working pressure of water	1÷3 bar	3 bar
Capacity	~50l/min	~60l/min
System pressure	0.5÷0.7 bar	0.5÷1.2bar
Maximum discharge height of solution/coolant	7m	10m
Maximum solution temperature - an option when equipping the agitator tank with a heater (applies to machines of the type version with the letter H, such as DMP-50 HU)	20°C	
Material	Steel 1.0037 powder-coated RAL 7035 and 5002	
REQUIRED PARAMETERS OF WATER CONNECTION		
Connection diameter	½"	
Supply pressure	3bar ÷16bar	
Required flow rate	≥20l/min	
REQUIRED PARAMETERS OF THE CONCENTRATE CONNECTION		
Connection diameter	3/8"	
PARAMETERS OF SOLUTION OUTPUT TO PRODUCTION AND RETURN FROM PRODUCTION		
Connection diameter	1"	

DMP SE type DMP-50SE is used to produce a release agent from "difficult" concentrates, e.g. on the basis of mineral salts or graphite, in the proper concentration desired by the User, thanks to automatic dosing into water of the proper additions of the concentrate, and then supplying machines/installations with the produced solution.

The installed agitator allows thorough mixing of water and concentrate of the prepared solution. The ZATRIX® A automatic mixer used in the device, depending on the option ordered, allows the preparation of a solution of concentrate and water, with a concentration of 10-30%.

DMP SE features the following advantages:

- ✓ Setting the required concentration with an accuracy of 0.1%
- ✓ Reading water and concentrate consumption data
- ✓ Supply of prepared solution to processing plants/machines

Technical details:

DIMENSIONS AND WEIGHT	
Dimensions (W x D x H)	492 x 605 x 1,438 mm
Transport weight (with empty tank)	75kg
Operating weight (with full tank)	~125kg
ELECTRICAL SYSTEM	
Power supply	230VAC 50Hz
Power consumption	105W
Control voltage	24VDC
REQUIRED PARAMETERS OF THE ELECTRICAL CONNECTION	
Supply voltage	230VAC 50 Hz.
PNEUMATIC SYSTEM	
Compressed air system pressure	5bar (±0.5bar)
REQUIRED PARAMETERS OF THE COMPRESSED AIR CONNECTION	
Required connection	¼", quick-connect NW7.2 MO
Required pressure	5.5÷8bar (0.55÷0.8MPa)
Required flow rate	200Nl/min
PROCESS SYSTEM	
Concentration range (depends on the option selected by the customer)	1÷30%
Accuracy of the set concentration	0.1%,
Usable capacity of tank with agitator	~50l
Water supply flow	5÷25l/min
Water pressure: with closed circulation: with open circulation:	 ≤2bar ≤1bar
Maximum solution/coolant outlet pressure (adjustable)	4 bar
Material	stainless steel 1.4301
REQUIRED PARAMETERS OF WATER CONNECTION	
Connection diameter	½"
Required water pressure	2bar ÷16bar
Required flow rate	≥30l/min
PARAMETERS OF THE CONCENTRATE CONNECTION	
Connection diameter	3/8"

DMP DS M-AC-DA 150 is designed for operation in central systems and is used to supply processes with a non-flammable medium with a precisely defined percentage concentration, as expected by the user, thanks to the parameterization of the entire process.

The DMP is equipped with an automatic concentrate tank change system. Thanks to the use of the "IBC agitator", the liquid remains in constant motion maintaining its proper parameters throughout the volume and does not delaminate. A spigot is also lowered into the tank, allowing the liquid to be pumped out, as well as a medium level sensor to control the amount of concentrate. The use of three main pumps feeding the system ensures that it can operate continuously.

Technical details:

PROCESS SYSTEM	
Range of electronically controlled concentration levels	0.5÷35%
Working capacity of the "main tank"	1,400 l (700 l+700 l)
Medium flow rate (automatic regulation according to demand)	100 l/min
Working pressure of the medium	1÷9bar
Weight	1 800 kg
Dimensions (L x W x H)	3,440 x 2,900 x 3,396
ELECTRICAL SYSTEM	
Supply voltage	3 x 400VAC 50 Hz. 32A
Power consumption	11 kW
Control voltage	24V DC
ELECTRICAL CONNECTION PARAMETERS	
Supply voltage	3 x 400 VAC 50 Hz. 40A
Power consumption [kW]	15 kW
Control voltage	24V DC
PARAMETERS OF THE PNEUMATIC CONNECTION	
Required pressure	6÷10 bar
Compressed air demand	200Nl/min
WATER CONNECTION PARAMETERS	
Power supply	3/4"
Pressure	>3 bar
Required flow rate	>25l/min

Key technical details:

- ✓ Flow rate up to 300L/min
- ✓ Concentration range 0-40% with an accuracy of 0.1%
- ✓ Option of integrating with central systems
- ✓ Integrated mixing systems
- ✓ Aeration of the medium
- ✓ Full monitoring of water and concentrate consumption
- ✓ Remote viewing of parameters and ability to remotely control station operation
- ✓ GSM module for operation status notification
- ✓ Automatic circulation system
- ✓ Concentration set remotely and from the control panel

DMP-DS M-AC-DA 150

MRD MEDIUM MOBILE DISTRIBUTION STATION

Mobile coolant distribution station type MRD-200 is used to produce a solution of a given concentrate with water, in the proper concentration desired by the User in the range of 0.5%-10% (thanks to the use of manual mixer ZatriX), and then to manually fill tanks (machining or other applications) with the solution, at a maximum distance of 30m from the water connection.

The station is equipped with a gun with an electric meter, allowing you to control the amount of solution filled. An important advantage of the MTD-200 is its mobility, thanks to the installed wheels it is possible to transport it anywhere. The use of retractors with suction and discharge hoses allows the operator to unwind these hoses to the length that is actually needed at the time, while being able to easily and quickly retract these hoses after the work is completed.

Technical details:

DIMENSIONS AND WEIGHT	
Weight (without concentrate tank)	165kg
Permissible weight of the concentrate tank	220kg
Overall dimensions (W x L x H mm)	660 x 1,300 x 1,583
TECHNOLOGICAL LAYOUT DETAILS	
Operating pressure	1÷3bar
Capacity	5÷30l/min
Cable/hose length on a single retractor	15m
Maximum distribution distance from water connection	approx. 30m
Cable/hose diameter on retractors	½"
REQUIREMENTS FOR EXTERNAL WATER CONNECTION	
Required water connection pressure	3÷16 bar
Required water flow	≥10l/min

AUTOMATIC MEDIUM REPLENISHMENT STATIONS LCM

The automatic medium replenishment system is dedicated to all machines that do not have such a solution as standard, in combination with level sensors it automatically replenishes the machine medium to the appropriate level.

The system can work with all digital sensors (I/O) and does not require any configuration.

Technical details:

	Unit	LCM-30
Electricity supply	VAC, Hz	230, 50
Control voltage	VDC	24
Rated power	W	30
Dimensions (H x W x D)	mm	135x170x85
Weight	kg	1.4
Power cord	mm^2	3x1.5
Power cord length	m	5

Main advantages:

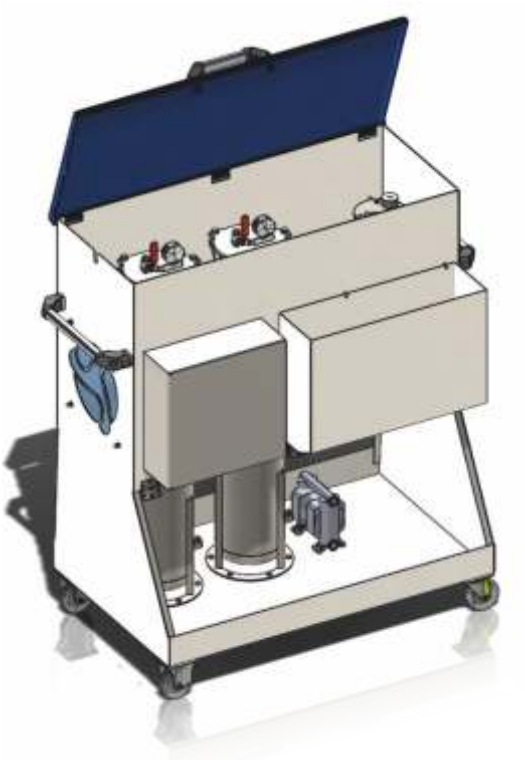
- ✓ Maintenance-free
- ✓ Fully automatic
- ✓ Constant emulsion level
- ✓ No downtime due to minimum emulsion level
- ✓ Reduction in operator handling of emulsion levels
- ✓ Reduction of foaming on the feed pump
- ✓ Stable processing
- ✓ Stable emulsion concentration

FILTRATION/SEPARATION

MOBILE FILTER STATIONS

FS-M900 mobile filtration system is a device that enables filtration of:

- ✓ Coolants
- ✓ Oils
- ✓ Other industrial liquids



The device has a set of three filters supervised by dirt sensors with control of their status: a pre-filter and two post-filters - with appropriately selected filtration accuracy, operating alternately, changing automatically when dirty. Powering the device requires only compressed air. The rest of the operation is carried out by a built-in rechargeable battery, which allows it to operate without the possibility of plugging in mains power, and gives it the possibility of being used for up to 2 weeks on a 24-hour/day cycle without recharging.

Technical details:

	Unit	Value
Electricity supply	V, Hz, A	230, 50, 10 - battery charging
Pneumatic supply	bar	6-10, 200 Nl/min - quick connect NW 7.2
Dimensions (L x W x H)	mm	1,300x680x1,250
Weight	kg	150
Maximum flow	L/h	3,000
Hose length	m	5
pH value	pH	6.5 - 11
Operating temperature	°C	paź.50
Noise level	dB	<80
Lifting height	m	3
Material		Powder-coated steel

Advantages during use:

- ✓ Extending the life of coolant and oils
- ✓ Separation of up to 99% of oil and particles
- ✓ Filtration accuracy as low as 1 micron
- ✓ Power supply by compressed air only
- ✓ Reduced cost of disposing coolant and oil
- ✓ Compact size, easy to move

Mobile filtration station MBF-25 is designed for filtering hydraulic oils: mineral, synthetic and glycol-based. The three-way valve used in front of the filters and the check valves located behind each of the two filters of the device allow cleaning of a dirty bag filter, while the other filter is operating at the same time, without having to shut down the operation of the entire station. The filtration accuracy depends on the filter cartridge used (l÷30µm).

The station, thanks to the installed wheels, allows you to freely transport it anywhere, and the hoses used in it allow one to filter oil from the tank which is located even in a hard-to-reach place.

Technical details:

DIMENSIONS AND WEIGHT	
Dimensions (W x L x H)	600 x 800 x 1,306 mm
Weight	80 kg
ELECTRICAL SYSTEM	
Power supply	230V AC 50 Hz.
Power consumption	0.37 kW
Power cord length	10 m
PROCESS SYSTEM	
Maximum viscosity of pumped liquids	consistent with the viscosity of SAE 30 type mineral oils at 30MC.
Maximum liquid density	1.1 g/cm3
Maximum liquid temperature	90°C
Maximum output	28 l/min
Maximum pressure	2.5 bar
Filtration accuracy	1÷30µm depending on the cartridges used in the filters
Hose length and diameter (input and output)	2x10m, ¾"
Maximum suction height	approx. 6m (depending on the properties of the liquid, the total length of the hoses and pipes and their cross sections)
Maximum discharge height	20m
Body/carriage design	black steel 1.0037 protected by anti-corrosive powder coating

WS MOBILE WASHING STATION

The mobile washing station is an ideal solution for maintenance services, workshops, tool shops and all other places where there is a need for quick and efficient cleaning of components and other assemblies. The WS-M900 station is used to wash components such as: dirty machine parts of equipment, hydraulic valves, small hydraulic blocks, various types of housings, etc.

Operating principle:

The WS-M900 has two chambers. Chamber one is equipped with a segmented hose that allows flooding with detergent to pre-soak the detergent and better cleaning effect in the second chamber. The second chamber has a pass-through brush through which the cleaning agent flows. In the first and second chambers, the flow of the agent is regulated by valves. Chamber 2 has a platform made of perforated sheet metal to prevent small items from entering the unit.

Both chambers have stainless steel mesh filters for repeated cleaning. The device has a built-in heater which makes it possible to heat the detergent up to 40 °C, the temperature can be adjusted using a thermostat.

It also has a low detergent level indication. The device during operation does not have to be turned off each time on the switch because the pump is protected by a bleeder valve, that is, after turning off the valves from the brush and hose, the pump can work and will not be damaged.

Technical details:

DIMENSIONS AND WEIGHT	
Weight	155 kg
Dimensions (L x W x H)	1,401 x 680 x 1,120 mm
ELECTRICAL SYSTEM	
Power supply	230VAC 50 Hz. 10A
Power consumption	520W
Control voltage	230VAC
PROCESS SYSTEM	
Washing agent tank capacity	10l
Operating temperature	10 ÷ 40°C
MATERIAL	
Cart	powder-coated steel
Bathtub	stainless steel

Main advantages:

- ✓ Mobile device
- ✓ High performance
- ✓ No consumables
- ✓ Compact design
- ✓ Two-chamber design

BOS MOBILE OIL SEPARATOR

BOS-M300 and BOS-M500 oil separators are the ideal solution for any machine with a foreign oil problem. The emulsion fed into the separator is first filtered from solid particles, and then, thanks to the unique design of the separator, foreign oil is separated from it and discharged. This results in better oxygenation, elimination of anaerobic bacteria and a significant increase in the life of the process agent.

Operating principle:

The separation process is based on the principle of pumping the processing fluid through a specially designed coalescer, through which we separate 99.9% of foreign oils. The cleaned emulsion is then returned to the machine's tank. Compact design and by-pass operation ensure easy installation, trouble-free operation and high separator performance.

Technical details:

	BOS-M300	BOS-M500
Height	1,008mm	
Length	825mm	880mm
Width	358mm	
Weight	41kg	46kg
Particulate filtration (settling filter)	1,000µm	
Maximum efficiency of the system	approx. 5l/min	
Separation of foreign oils	99.9%	
Tank capacity	approx. 51l	
Suction height	1.5m	
Return height	by gravity	
Diameter and length of the suction hose/suction line of the contaminated emulsion	1/2", 3m	3/4", 3 m
Diameter and length of the return hose/return lance of the purified emulsion	1 1/4", 3m	1 1/2", 3 m
Required pressure of the compressed air connection	5÷10bar	
Material of the body and covers	stainless steel	

Main advantages:

- ✓ Foreign oil separation efficiency up to 99.9%
- ✓ Extending the life of the emulsion
- ✓ No consumables
- ✓ Pre-filter
- ✓ Reduction of cutting tool wear
- ✓ Reduction of machine downtime due to emulsion condition
- ✓ Reduction in disposal costs
- ✓ Reduction of oil mist on the production floor
- ✓ Compressed air supply only
- ✓ By-pass operation
- ✓ Compact design
- ✓ Small size, large mobility

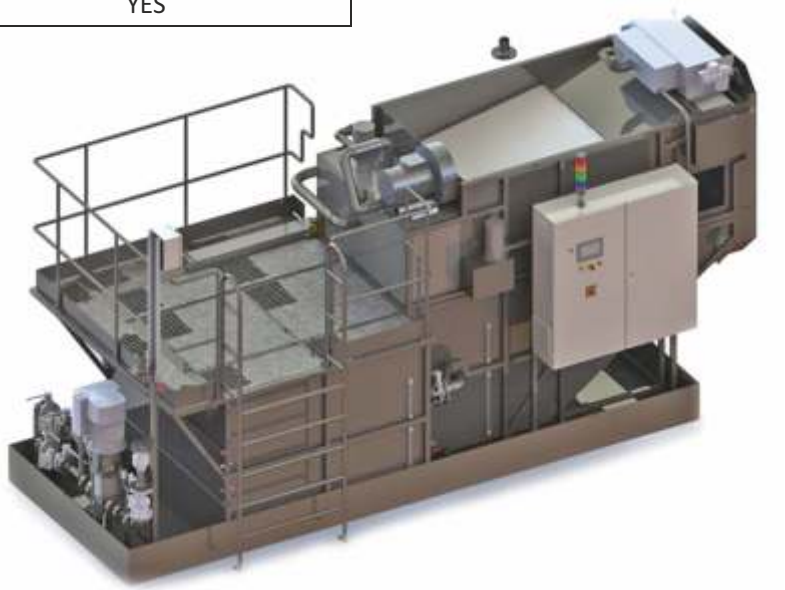
CUF CENTRAL FILTRATION SYSTEMS

Central filtration systems for coolants, emulsions and washing baths with a flow rate of up to 5,000L/min. This is the most practical solution if high flows and limited space on the production floor are involved. The machining fluids in our central systems are filtered at several stages depending on the customer's needs and the required final quality, cooled, stored and completely reconditioned, so that they arrive at the machines in impeccable condition. All components from pumps to filters and tank are compactly connected, which minimizes maintenance work, significantly improves the quality of machining fluids, reduces monitoring time to a minimum, saves space on the production floor (one central station instead of a station at each machine), and reduces consumption.

Technical details:

CUF PARAMETERS	
Flow *	100-5,000 L/min
Filtration accuracy	5-500 µm
Operating pressure	6-12 bar
System capacity	3-100 m^3
Operating temperature	15-60°C
Operating pH range	6-13 pH
Electricity supply	3x400 V, PE N
ADDITIONAL OPTIONS	
Chiller	YES
Automatic emulsion dosing	YES
Automatic monitoring of parameters	YES
GSM/VPN remote access	YES

DEGREES OF FILTRATION **	
Scraper	YES
Decanter	YES
Magnetic filter	YES
Gravity filter	YES
Drum filter	YES
Vacuum mat	YES
Separation of foreign oils	YES
Ozonator	YES
Bag filter	YES



Main advantages:

- ✓ Flow automatically adapted to production needs
- ✓ Final quality of machining fluids at a consistent level
- ✓ Significantly extend the life of machining fluids, tools and machines
- ✓ Fully automatic system
- ✓ 24/7 automatic operation
- ✓ Saves space on the production floor
- ✓ Ability to integrate with internal plant system/network and remote monitoring
- ✓ Full monitoring of consumption
- ✓ Option of installing automatic dosing and concentration control module




Additional advantages and benefits:

- ✓ Reducing concentrate consumption
- ✓ Higher surface quality of manufactured parts
- ✓ Reduced costs associated with machine cleaning
- ✓ Extending coolant life up to 400%
- ✓ Reduced cost of disposal of used coolant
- ✓ Reducing defects in terms of corrosion reduction
- ✓ Reduction of operator work in terms of replenishing and monitoring of coolant

Application:

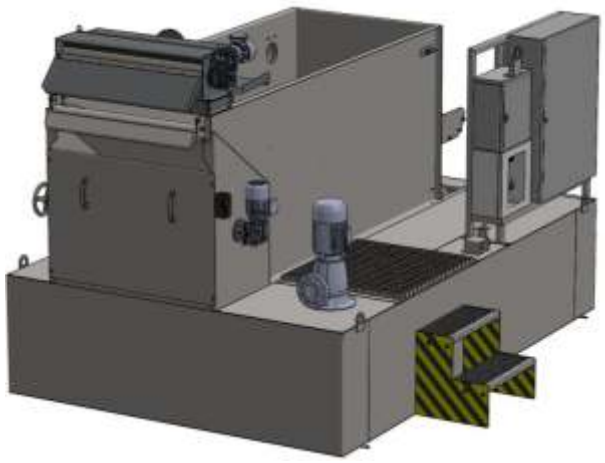
- ✓ In any machining process (turning, grinding, milling, others), where machines work with the same machining fluid
- ✓ The minimum number of machines to be connected is 2 machines and the maximum is more than 40 machines
- ✓ In processes requiring fine filtration with high flow rates

INDIVIDUAL CS FILTRATION SYSTEMS

Dedicated coolant filtration systems with flow rates up to 5,000 L/min* are specially designed to filter contaminants down to 5 microns in applications such as:

- ✓ Sheet metal profiling
- ✓ Coarse and fine grinding
- ✓ Honing
- ✓ CNC machining

Each filtration system we design is fully customized to meet production requirements. It can operate either in by-pass mode or directly feed the machine, depending on the application.



By using filtration systems, we are able to introduce high process stability and generate savings in the form of:

- ✓ Reducing the cost of purchasing concentrate,
- ✓ Reduction of production defects,
- ✓ Reduction of coolant quality monitoring time,
- ✓ Reduction of irritation and allergies in workers,
- ✓ Reduction of machine downtime due to cyclic cleaning of tanks/internal machinery.

Technical details Coolant System type CS M-FH 800:

DIMENSIONS AND WEIGHT	
Weight	1,200kg
Dimensions (L x W x H mm)	3,350 x 2,300 x 2,230
ELECTRICAL SYSTEM	
Electricity supply	400VAC 50 Hz. 32A
Power consumption	6 kW
Control voltage	24V DC
REQUIRED PARAMETERS OF THE ELECTRICAL CONNECTION	
Supply voltage	3 x 400 VAC 50 Hz.
PROCESS SYSTEM	
System capacity	800 l/min
Medium filtration accuracy	5÷50 µm
REQUIRED PARAMETERS OF WATER CONNECTION	
Connection diameter	½"
Supply pressure	≥1÷≤16bar
Required flow rate	≥30l/min
REQUIRED PARAMETERS OF THE PNEUMATIC CONNECTION	
Connection diameter	1/2"
Required pressure	6÷16bar (0.5÷1.6MPa)
Required flow rate	500Nl/min (0.5m³/min)

It is possible to equip the system with additional modules (on request), i.e.:

- ✓ Module for automatic averaging of emulsion concentration
- ✓ Emulsion regeneration module based on
- ✓ UV or ozone
- ✓ Chiller
- ✓ Other, as required

YOMA OIL MIST FILTERS

Oil mist and dust particles created in manufacturing plants are airborne particles invisible to the naked eye. Depending on the type of treatment and the material being processed, these particles vary in size and composition. They can be absorbed by the human body and can accumulate in the blood and have a tremendously dangerous effect. They can cause, among other things: allergies, asthma, cancer and can even cause death.

By using YOMA series oil mist separators equipped with an innovative 4-stage filter cartridge, the actual measured contaminant capture rate is a minimum of 80%. YOMA are capable of filtering out more than 95% of 0.4 µm particulates and more than 96.8% of 0.2 µm particulates.

ECONOMY AND CARE FOR THE ENVIRONMENT

Comparing the electricity consumption of the motor in YOMA separators and models of the same class (with similar airflow capacity), we can see more than 50% less energy consumption, resulting in savings on electricity charges.

YOMA separators - basic information:

- ✓ Flow rate from 700 to 2,300 m3
- ✓ Filters up to HEPA H13 (depending on the model)
- ✓ Very low electricity consumption

Available models/series:

EMULSIONS:
- ✓ N series - basic separator without HEPA for water emulsions
- ✓ Y series - F9/HEPA final filter separator for water and oil emulsions
- ✓ P series - HEPA final filter separator with extended life for water emulsions

OILS:
- ✓ H series separator with F9/HEPA filter for oil emulsions
- ✓ A series - for oil emulsion and heavy processing
- ✓ 30AD series - oil smoke

YOMA-N SERIES

FOR WATER-BASED EMULSIONS

1200 m^3/h

The use of an additional oil mist separation system and further filtering of the collected oil is not necessary. The aluminum alloy fan turbines used in the separator are known for their lightweight and quiet operation. The separator is characterized by high operating efficiency. The first 4 stages allow cleaning in a repetitive manner without any wear items.
Equipped with a Stage-1 filter (woven stainless steel screen), the separator is capable of filtering metal dust and allows easy cleaning, which extends the service life. Other Stage-2, Stage-3 and Stage-4 filters made of resin fibers are capable of filtering water and oil mist.

YOMA-Y SERIES

FOR WATER-BASED EMULSIONS AND LIGHT PROCESSING

85%
PM 10µm

The YOMA-Y series oil mist separator is capable of completely capturing oil and water mist. Thanks to its innovative Stage-4 cartridge, it can effectively collect more than 95 percent of oil mist.
Equipped with a Stage-1 filter (woven stainless steel screen), the separator is capable of filtering metal dust and allows easy cleaning, which extends the service life. The airflow spoiler mounted in front of the Stage-1 filter provides high airflow, low noise, 50% less energy consumption, effectively reducing wind resistance and pressure loss.

YOMA-P SERIES

FOR USE WITH WATER-BASED EMULSIONS + AIR PURIFICATION

The YOMA P-series separator has the ability to capture particulate matter with PM 2.5 µm accuracy up to 99%. For use with a water-soluble cleanser.
It has a highly durable, economical and efficient filter cartridge that provides a natural downward flow of air and oil. Optional to use a pressure gauge to indicate filter obstruction.

The YOMA-P series is characterized by high airflow volume, low noise and high operating efficiency.

99%
PM 2,5µm

YOMA-H SERIES

FOR USE WITH OIL-BASED COOLANT FOR LIGHT MACHINING

YOMA-H is capable of capturing particulate matter with PM 1.0 µm filtration accuracy of up to 99%.
The separator has a HEPA/E9 class filter cartridge that allows it to achieve PM 0.4 µm filtration accuracy of more than 95%. It can be equipped with a pressure gauge to indicate filter obstruction in the front and rear.

The YOMA-H series is characterized by high airflow volume, low noise and high operating efficiency.

99%
PM 1,0µm

YOMA-A SERIES

FOR USE WITH OIL-BASED COOLANT FOR HEAVY-DUTY MACHINING

The YOMA-A separator can capture particulate matter, with a PM filtration accuracy of 0.5 µm to 99%.
It has a HEPA/E11 filter cartridge with PM 0.2 µm filtration accuracy of more than 96.8%. With the optional HEPA/H13 filter, the filtration accuracy of PM 0.2 µm particles is above 99.95%. In addition, it is possible to use a pressure gauge to identify filter obstructions. The life of the filter system is 1 to 3 years.

99%
PM 0,5µm

YOMA-30AD SERIES

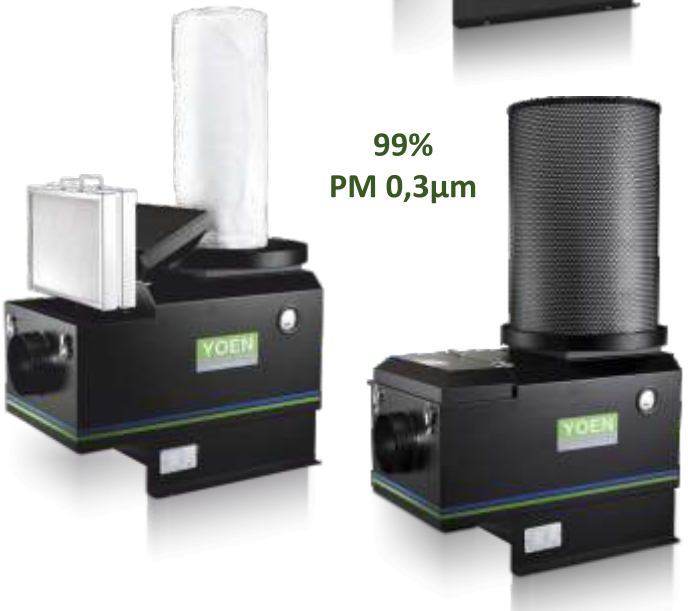
OIL SMOKE + HEAVY DUST CONTAMINATION

Using the YOMA-30AD series separator, we are able to collect PM 0.2µm particles with an accuracy of more than 99%.

The separator has disposable Stage-1 and Stage-2 cotton filters, which do not need to be cleaned, and a Stage-3 filter bag, which is capable of effectively capturing very fine, dry dust. The cost of consumables is low. It comes standard with a pressure gauge to indicate filter obstruction at the front and rear.

YOMA-30AD has a HEPA / E11 class filter cartridge that allows it to achieve a filtration accuracy of PM 0.2 µm of more than 96.8%. It is also possible to equip the separator with a HEPA / H13 class filter cartridge, whose filtration accuracy of PM 0.2 µm is above 99.95%.

99%
PM 0,3µm



Technical details of available YOMA models/series:

Parameters	Units	YOMA-10N	YOMA-15N	YOMA-20N	YOMA-30N
Engine power	kW	0.18	0.37	0.56	0.75
Current load	A	0.95/0.63	1.2/0.82	2.04/0.97	3.2/1.42
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz			
Airflow	m^3/min	15/14	20/18	25/22	32/26
Noise level	dB	64/63	66/64	68/65	69/63
Diameter of the inlet opening	mm	⌀148	⌀148	⌀148	⌀148
Dimensions (L x W x H)	mm	660x330x475	675x350x508	780x390x534	804x420x561
Weight	kg	31.2	34.2	40.4	48.6

Parameters	Units	YOMA-10Y	YOMA-15Y	YOMA-20Y	YOMA-30Y
Engine power	kW	0.18	0.37	0.56	0.75
Current load	A	1.1/0.68	1.43/0.92	2.4/1.1	3.7/1.6
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz			
Airflow	m^3/min	16/14	21/19	26/23	34/28
Noise level	dB	65/64	68/65	69/66	72/65
Diameter of the inlet opening	mm	⌀148	⌀148	⌀148	⌀148
Dimensions (L x W x H)	mm	660x350x749	675x350x782	780x390x812	804x439x1,139
Weight	kg	36	38.4	45	56.4

Parameters	Units	YOMA-10P	YOMA-15P	YOMA-20P	YOMA-30P
Engine power	kW	0.18	0.37	0.56	0.75
Current load	A	0.93/0.6	1.4/0.8	2.2/0.94	3.1/1.4
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz			
Airflow	m^3/min	16/13	21/17	26/21	31/25
Noise level	dB	61/58	62/59	63/61	65/60
Diameter of the inlet opening	mm	⌀148	⌀148	⌀148	⌀148
Dimensions (L x W x H)	mm	660x350x749	675x350x1,080	780x390x1,108	804x439x1,139
Weight	kg	33.3	39.7	45.9	57

Parameters	Units	YOMA-10A	YOMA-15A	YOMA-20A	YOMA-30A
Engine power	kW	0.18	0.37	0.56	0.75
Current load	A	0.93/0.62	1.3/0.84	2.26/1	3.4/1.5
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz			
Airflow	m^3/min	16/13	21/17	26/21	31/25
Noise level	dB	64/63	65/63	66/63	66/61
Diameter of the inlet opening	mm	⌀148	⌀148	⌀148	⌀148
Dimensions (L x W x H)	mm	660x350x749	675x350x1,080	780x390x1,108	804x439x1,119
Weight	kg	36.4	42.8	49	60.2

Parameters	Units	YOMA-10H	YOMA-15H	YOMA-20H
Engine power	kW	0.18	0.37	0.56
Current load	A	0.93/0.62	1.18/0.83	2.13/0.98
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz		
Airflow	m^3/min	15/12	20/16	25/20
Noise level	dB	65/63	66/64	67/64
Diameter of the inlet opening	mm	⌀148	⌀148	⌀148
Dimensions (L x W x H)	mm	660x350x749	675x350x780	780x390x813
Weight	kg	36.4	39.6	45.8

Parameters	Units	YOMA-30AD
Engine power	kW	0.75
Current load	A	2.5/1.2
Power supply	V/Hz	3⌀ 220V/380V/60Hz/50Hz
Airflow	m^3/min	26/20
Noise level	dB	61/57
Diameter of the inlet opening	mm	⌀148
Dimensions (L x W x H)	mm	804x439x1,139
Weight	kg	63.2

CART FOR QUICK CLEANING OF MACHINES

A mobile, compact and high-performance filter cart designed for cleaning all kinds of coolants, alkaline cleaning media, paint fluids and treatment of machining oils.

In a very short time, the truck also cleans the coolant tank by removing all contaminants with the help of a high-pressure pump. A high-performance filter cart cleans media to reduce machine downtime and reduce the amount of substances sent for disposal.

Technical details:

	AW 2675	AW 2645
Length	2,150 mm	1,830 mm
Width	960 mm	960 mm
Height	1,520 mm	1,400 mm
Weight	450 kg	400 kg
Capacity	750 l	450 l
Filter area	565x690 mm (0.4 m^2)	565x690 mm (0.4 m^2)

Application areas:

- ✓ Purification of coolants
- ✓ Cleaning of cooling and lubricating oils
- ✓ Cleaning the interior of machines and tanks
- ✓ Complete cleaning of emulsion tanks
- ✓ Extraction of the surface layer of foreign oils
- ✓ Collecting chips and grinding sludge

Main advantages:

- ✓ Perfect emulsion cleaning in machines
- ✓ Extend the use time and improve the appearance of the emulsion
- ✓ Emulsion replacement in the shortest possible time
- ✓ Short machine downtime
- ✓ Reduction in disposal costs
- ✓ Easy to use

FILTER MAT

- 100% polyester
- Weight 45 - 50 g / m^2
- Thickness 0.5 mm
- Air permeability 3,500 l / m^2 s
- Perfect for fine filtration

ELECTRIC CONTROL SYSTEM

- Motor switch for vacuum pump
- Motor switch for drain pump
- Main switch
- Cable 10 m 2.5 mm2
- CEE 16A phase inverter

CONNECTION FOR SUCTION HOSE NW 50

- Suction capacity with clean filter cloth approximately 200 l/min

HIGH-PRESSURE WASHER WITH HIGH-PRESSURE HOSE

- 230 V / 50 Hz / 7.5 A
- Working pressure 120 bar

DRAIN PUMP

- 380 - 415 V / 50 Hz. / 0.75 kW
- approx. 200 l / min
- With gate valve and type C connector
- 2" drain valve

GAS SPRING

- Gas spring as well as high quality bearing unit for easy operation and mat replacement

DIRT TANK

- The dirt tank is mobile and equipped with forklift mounts
- Tank can be rotated for easy emptying

STANDARD ACCESSORIES

- 1 pc. suction hose 5 m nom. width 50
- 1 pc. drain hose 3 m nom. width 25
- 1 pc. set of suction nozzles

MAGNETIC SEPARATORS

The magnetic separator is used to filter ferromagnetic chips/particles from the coolant. The filtration accuracy of the magnetic separator varies, depending on the material to be processed as well as the particle size, up to a maximum of 2 microns. It can be used in the installation of central filtration systems as well as in individual machines. The operating principle of the device is based on a rotating magnetic core. The coolant is fed to the magnetic core by means of a pump or by gravity. When ferromagnetic particles come into contact with a magnetic field, they are attracted and then separated. Contaminants are transferred outside the system.

We have 2 types of magnetic filters, depending on the process:

- ✓ Smooth shaft magnetic separator (SMG)
- ✓ Magnetic disk separator (SMD)

Technical details type SMG:

MODELS AVAILABLE

	Unit	SMG-300	SMG-00	SMG-500	SMG-600	SMG-700	SMG-800	SMG-900	SMG-1000
Flow	L/min	300	400	500	600	700	800	900	1,000
Height	mm	449	449	449	449	449	449	449	449
Length	mm	900	900	900	900	900	900	900	900
Width	mm	659	864	905	987	1,028	1,110	1,192	1,233
Flow	DN	65	80	100	100	100	100	100	100

Technical details SMD type:

MODELS AVAILABLE

	Unit	SMD-300	SMD-400	SMD-500	SMD-600	SMD-700	SMD-800	SMD-900	SMD-1000
Flow	L/min	300	400	500	600	700	800	900	1,000
Height	mm	449	449	449	449	449	449	449	449
Length	mm	900	900	900	900	900	900	900	900
Width	mm	659	864	905	987	1,028	1,110	1,192	1,233
Flow	DN	65	80	100	100	100	100	100	100

LIFTING STATIONS

Lifting station SP1Y2 is used for automatic pumping of liquids, in process lines. Its design allows for controlled pumping of liquids into tanks, with viscosity up to 10,000 cP, maximum particle size up to 6 mm, and maximum operating temperature of 80°C.
Lifting station SP1Y2 is also equipped with a system flushing, on the discharge side of the liquid, which prevents contamination.

Lifting station type SP SLU is used to pump the medium from external tanks. Its design allows it to pump liquids into tanks, with viscosity up to 10,000 cP, maximum particle size up to 10 mm and maximum operating temperature of 40°. The station is equipped with a filter that allows filtration of the pumped medium.

The pumping process is carried out automatically, thanks to the station's connection with the "Pump Control System" type LS HS_2, which sends a signal to the station when the minimum level is reached in the tank from which the medium is pumped, and when the maximum level is reached in the "buffer tank" into which the medium is pumped.

Technical details:

	SP1Y2	SP SLU
DIMENSIONS 1 WEIGHT		
Weight	-50 kg	~56kg
Dimensions (W x D x H)	650 x 550 x 1,300 mm	650 x 600 x 1,050 mm
TECHNICAL PARAMETERS		
Maximum pump capacity	158l/min	330l/min
Maximum wet suction height	8m	8m
Maximum lift height	50m water column	50 m water column
Maximum size of impurities	6mm	10mm
REQUIRED PARAMETERS OF THE PNEUMATIC CONNECTION		
Required pressure	6÷10 bar	5÷10 bar
Required flow rate	200Nl⁄min	200Nl⁄min
REQUIRED PARAMETERS OF WATER CONNECTION		
Supply - mains water	1"	-
Pressure	3 bar	-
ELECTRICAL SYSTEM		
Electricity supply	230VAC 10A	230 VAC 6A
REQUIRED PARAMETERS OF THE ELECTRICAL CONNECTION		
Supply voltage	230V AC 50 Hz	230 V AC 50 Hz
Power consumption [kW]	200 W	200 W
Control voltage	24V DC	24V DC

REGENERATION

MOBILE RS EMULSION REGENERATION STATION

In an era of ever-increasing industrial wastewater disposal costs, the RS-M900 mobile regeneration system is a device that brings real savings to any company using machining coolants.

MOBILE EMULSION REGENERATION SYSTEM RS-M900 is a compact device that combines three functions:

- ✓ Filtration of particulate matter from 100 to 300 microns
- ✓ Separation of foreign oils
- ✓ Removal of microorganisms

The above coolant purification processes are optimally designed and dedicated to restoring proper coolant parameters.

Advantages during use:

- ✓ Separation of up to 99% of foreign oils
- ✓ Filtration of particulate matter from 100 to 300 microns
- ✓ Removal of microorganisms up to 90%
- ✓ Extending the life of the coolant
- ✓ Extending tool life
- ✓ Reduction in disposal costs
- ✓ Oil mist reduction on the shop floor
- ✓ Operation without stopping machines, in by-pass mode
- ✓ Recovery of contaminated and oily coolant
- ✓ Reduction of irritation and allergies in machine operators
- ✓ Reduction in machine downtime due to emulsion replacement

Technical details:

	RS-M900	RS-M900APD	RS-M900AP	RS-M900A	RS-M900P	RS-M900PD
A - emulsion lifting station	o	•	•	•	o	o
P - pH monitoring	o	•	•	o	•	•
D - automatic dosing station	o	•		o	o	•
DIMENSIONS AND WEIGHT						
Height	1,210 mm					
Length	1,401 mm	1,531 mm	1,401 mm	1,401 mm	1,401 mm	1,531 mm
Width	680 mm					
Weight	180 kg	235 kg	230 kg	200 kg	182 kg	215 kg
ELECTRICAL SYSTEM						
Power supply	230VAC 50 Hz. 10A	400VAC 50 Hz. 10A	400VAC 50 Hz. 10A	400VAC 50 Hz. 10A	230VAC 50 Hz. 10A	230VAC 50 Hz. 10A
Power consumption	60W	200W	180W	180W	80W	100W
Control voltage	24V DC					
Power cord length	5m					
PNEUMATIC SYSTEM						
Required pressure of the compressed air connection	7÷8 bar					
Compressed air demand	200NI/min					
PROCESS SYSTEM						
Particulate matter filtration	1,000 µm					
Separation of foreign oils	99%					
Removal of microorganisms	90%					
Capacity of the oil separator chamber	140 l					
Capacity of the ozonator chamber	50 l					
Suction height	1m					
Pumping height (return)	by gravity	1.5m	1.5m	1.5m	1.5m	by gravity
Maximum efficiency of the system	approx. 9,001/h					
PH measurement range	N/A	0.00 ÷ 14.00 pH	0.00 ÷ 14.00 pH	N/A	0.00 ÷ 14.00 pH	0.00 ÷ 14.00 pH
Operating temperature (medium)	10 ÷ 40°C					
Performance of the ozone generator	up to 7,000 mg/h					
Diameter and length of the suction hose/suction line of the contaminated emulsion	¾", 3 m					
Diameter and length of the return hose/return lance of the purified emulsion	1 ¼" 3m	¾", 3 m	¾", 3 m	¾", 3 m	1 ¼" 3m	1 ¼" 3m
Separated oil tank capacity	10 l					
Noise level	70.7dB					
MATERIAL						
Cart	powder-coated steel					
Oil separator/ozonator separator	stainless steel					

CENTRAL CRS EMULSION REGENERATION SYSTEMS

Central regeneration system CRS-50 is used for recovery, through a process of separation, filtration and removal of unwanted microorganisms from supplied coolant coming from CNC machining, grinders, milling machines and, if necessary, to prepare completely new coolant of the desired concentration.

The emulsion regeneration system uses technology to remove bacteria and fungi from emulsifying agents used in industry. Microbial removal is done by ozonation of the emulsifying agent in combination with aeration, oxygenation and UV irradiation. The device also removes particulate matter down to the 5-micron level and foreign oils that contribute to the growth of bacteria and fungi.

The CRS-50 coolant regeneration system combines the following main advantages:

- ✓ Particulate matter filtration,
- ✓ Oil separation,
- ✓ Removal of microbial formation in the used coolant by ozonation and UV irradiation - optional equipment,
- ✓ Improving the concentration of coolant concentrate and water, as well as the new cooling emulsion being prepared, with the "metering station" - optional equipment.

CRS-50

Technical details:

ELECTRICAL SYSTEM	
Power supply	230 VAC, 50 Hz
Power consumption	1 kW
Control voltage	24 VDC
Power cord	3x2.5 mm^2
Main protection	B16
PNEUMATIC SYSTEM	
System pressure (powering pumps and pneumatically operated valve actuators)	4-4.5 bar
Pressure of the ozone system	0.3 - 0.5 bar
PROCESS SYSTEM	
Max. usable capacity in "chamber 1"	1.2 m^3
Max. usable capacity in "chamber 2"	1.2 m^3
Max. usable capacity in the "oil separator"	0.05 m^3
Max. usable capacity of separated oil tank	15 l
System performance (depending on the condition of the coolant)	5 m^3/24 h
Filtration accuracy	Depends on the F3 filter cartridge used
Max. working pressure	4.5 bar
Water flow	20 l/min
Operating temperature (medium)	10 - 50°C
Performance of ozone generator - optional equipment	6 - 7 g/h
Separation of foreign oils	90%
Removal of microorganisms - optional equipment	95 %
Suction height from "tank 1" (IBC 1000)	5 m
Discharge height to "tank 2" (IBC 1000)	5 m
Material	Stainless steel

ELECTRICAL CONNECTION PARAMETERS	
Supply voltage	230 VAC, 50 Hz, 20 A
Power cord	3x2.5 mm^2
Main protection	B20
Max. ambient temperature range	+5°C to +40°C
PARAMETERS OF THE PNEUMATIC CONNECTION	
Connection diameter	⌀ 12 - ½"
Required pressure	6-10 bar (0.6 - 1 MPa)
Required flow rate	1000 Nl/min (1 m^3/min)

DIMENSIONS AND WEIGHT	
Weight (with empty tanks)	450kg
Dimensions (L x W x H mm)	1,532 x 1,560 x 1,500

CRS COMPLEX series is used for recovery of overworked medium from processing machines, basic regeneration of used coolants containing a large amount of solid particles and foreign oils, causing a reduction in quality and production standards. Thanks to using appropriate solutions, this device filters and regenerates the recovered emulsion.

The main advantages of the COMPLEX system:

- ✓ Regeneration from 4 to 20 m^3 per day
- ✓ Filtration accuracy up to 2 microns (optional)
- ✓ Process visualization on the HMI panel
- ✓ Remote monitoring of operation and coolant parameters
- ✓ Comprehensive reports on water consumption, concentrate, electricity and other parameters
- ✓ Central installation of automatic replenishment of coolant in machine tanks (up to 100 machines)
- ✓ Automatic operation, IO-link, 4.0 technology

Technical details:

ELECTRICAL CONNECTION PARAMETERS	
Supply voltage	3 x 400 VAC 50 Hz. 32A
Power consumption [kW]	15 kW
Control voltage	24V DC
PARAMETERS OF THE PNEUMATIC CONNECTION	
Required pressure	7 bar
Required flow rate	400Nl/min
WATER CONNECTION PARAMETERS	
Supply - mains water	1 ¼"
Pressure	>3 bar

FOUNDRY EQUIPMENT

MTD ALUMINUM ALLOY REFINER

The design of the device for refining and modifying aluminum alloys is based on the latest knowledge and long-standing experience in the foundry industry.

Automatic refining equipment is used to remove dissolved gases in aluminum, which are the cause of microporosity in castings, as well as to eliminate non-metallic inclusions. The process is carried out by means of a rotating head through which inert gas is introduced.

Refining makes it possible to improve the quality of the alloy, which translates into improved quality of the castings obtained from it.

The main advantages of the MTD-120 refiner:

- ✓ Solid steel construction
- ✓ Repeatability of cycles
- ✓ Elimination of alloy gassing and mechanical inclusions
- ✓ Automatic salt dosing system, with low level control
- ✓ Rotor position height adjustment
- ✓ Simple rotor replacement
- ✓ Control from a HMI panel
- ✓ Option of creating formulas
- ✓ Full history of operations
- ✓ Password-locked parameters

Technical details:

BASIC DATA	
Gas used for degassing	nitrogen or argon
Max. pressure of inert gas	6 bar
Inert gas filtration accuracy	0.01 µm
Rotor rotation	100 ÷ 800 min^{-1} - vortex option (VORTEX)
Material of the machine	Black steel S235JR (1.0037) powder coated
Material of the covers	AISI 304L (1.4307) stainless steel and S235JR (1.0037) black steel powder coated
Material of graphite elements	Graphite GG8 double impregnated





MTD-120

ELECTRICAL SYSTEM	
Power supply	400 VAC, 50 Hz
Power consumption	3 kW
Control voltage	24 VDC
Power cord	5x2.5 mm^2
Main protection	C20
REFINING SALT FEEDER	
Dosage accuracy	±2%
Capacity for powder	5 kg/h
Powder tank	16 dcm^3
Stepper motor power supply	230 V, 50 Hz
Power supply for asynchronous tank agitator motor	3 x 400 V, 50 Hz
SET-UP 1 OPERATION	
Voltage fluctuations	±10% of line voltage
Frequency fluctuations	±2% of the mains frequency
Work environment	inside well-ventilated rooms without explosive, flammable gases/fumes
Ambient temperature	+5°C to + 40°C
Air humidity	max. 70%
The height of the location of the installation and the machine	up to 1,000 meters above sea level.
GRANULATE DISPENSER	
Number of granulate dispensers	1 or 2 *
Granulate dosing capacity	1kg/5s or 2kg/5s *
Powder tank	30 or 60dcm^3 *
Grain size of the granulate	1.5÷5mm
Material	black steel S235JR (1.0037) powder coated

* depending on the options

DIMENSIONS AND WEIGHT	
Weight	650 kg
Width	575 mm
Depth	1,777 mm
Height	3,500 mm

WASTE MANAGEMENT

EVAPORATORS FOR WASTEWATER REDUCTION

Vacuum evaporators allow efficient separation of water from contaminants without the use of chemicals.

They reduce liquid waste by up to 98%. In this way, they generate savings in the wastewater treatment sector of up to 95%.

Wastewater treatment is carried out by evaporating an aqueous solution under near vacuum pressure. The resulting water vapor is condensed and exhausted from the system as a pure distillate, while the non-volatile components are collected in condensate.

The use of evaporators helps minimize the rising cost of wastewater disposal. On the other hand, by-products recovered from wastewater in the process can be reused. Very low electricity consumption is achieved through maximum heat recovery. The system is fully automatic, which reduces handling of the installation to a minimum.

The main advantages of the technology:

Vacuum evaporation technology is classified as the best available method for wastewater treatment.

- ✓ Low electricity consumption
- ✓ Single-stage fully automatic wastewater treatment
- ✓ Consistent performance for a wide range of concentrations
- ✓ Compact design
- ✓ No additional pumps or heating
- ✓ Integrated automatic system cleaning system
- ✓ Modern controls and ease of use
- ✓ Effective treatment of even the most contaminated wastewater

Advantages:

Economical

- ✓ Running water savings
- ✓ Sewage disposal savings
- ✓ Low cleaning costs
- ✓ Optimized energy consumption
- ✓ Integration with existing processes

Environmental

- ✓ Production without wastewater
- ✓ Reusable distillate
- ✓ Reduced use of running water
- ✓ Chemical-free evaporation
- ✓ Recovery of precious metals
- ✓ Meeting the highest environmental standards

The plant is used for treatment of:

- ✓ Emulsions and coolants
- ✓ Wastewater from industrial treatment processes and industrial washers
- ✓ Wastewater containing active baths
- ✓ Active baths
- ✓ Cleaning water with the addition of release agent

KLC-MASTER LINE
VACUUM DISTILLATION WITH MODULAR DESIGN

The KLC-MASTER line is a new generation of KLC evaporators for high-quality treatment of industrial process water. In the smallest possible space, efficient and proven components have been installed that dramatically improve distillate quality and significantly reduce energy consumption. The new modular design makes it possible to adapt the KLC-MASTER line to the requirements of a wide range of process water types.

With additional configurations, even the most difficult process waters can be treated. At the same time, the concentration ratio is increased - the best quality distillate is obtained. This modular, customized design maximizes availability and reduces life-cycle costs. By reusing distillate, it is possible to achieve closed-loop water management, which saves resources and meets environmental standards. Thanks to this innovative design, production with zero liquid emissions is possible.

Main advantages:

- ✓ Low energy consumption
- ✓ No need for upstream and downstream process water treatment
- ✓ Higher concentration of concentrate
- ✓ Compact design
- ✓ Fully automated cleaning system
- ✓ State-of-the-art control system, intuitive operation

KLC-MASTER is used for cleaning of:

- ✓ Process water from production processes
- ✓ Washing and cleaning fluids
- ✓ Rinsing fluids and active baths
- ✓ Wastewater from landfills and mine water
- ✓ Wastewater containing release agents and glycol
- ✓ Moderately radioactive wastewater

Technical details:

Model type	Capacity[1] [l/h]	Annual capacity[2,4] [m³] (7,000 h/a)	Installed power (kW)	Energy consumption[3,4] [kWh/m³] from	Unladen weight [kg]	Dimensions l. x w x h. [mm]
KLC-MASTER ML 250 line	250	1,750	33	50	3,000	2,760x1,430x2,500
KLC-MASTER ML 300 line	300	2,100	33	50	3,000	2,760x1,430x2,500
KLC-MASTER ML 350 line	350	2,450	40	50	3,200	2,760x1,430x2,500
KLC-MASTER ML 400 Line	400	2,800	40	50	3,200	2,760x1,430x2,500

[1] Municipal water hardness <10° dH, inlet temperature >15°C
[2] With 7,000 hours of operation per year with municipal water (6 days/50 weeks)
[3] Values refer to machine at operating temperature
[4] The data for each type of process water is determined in the calculations for the customer

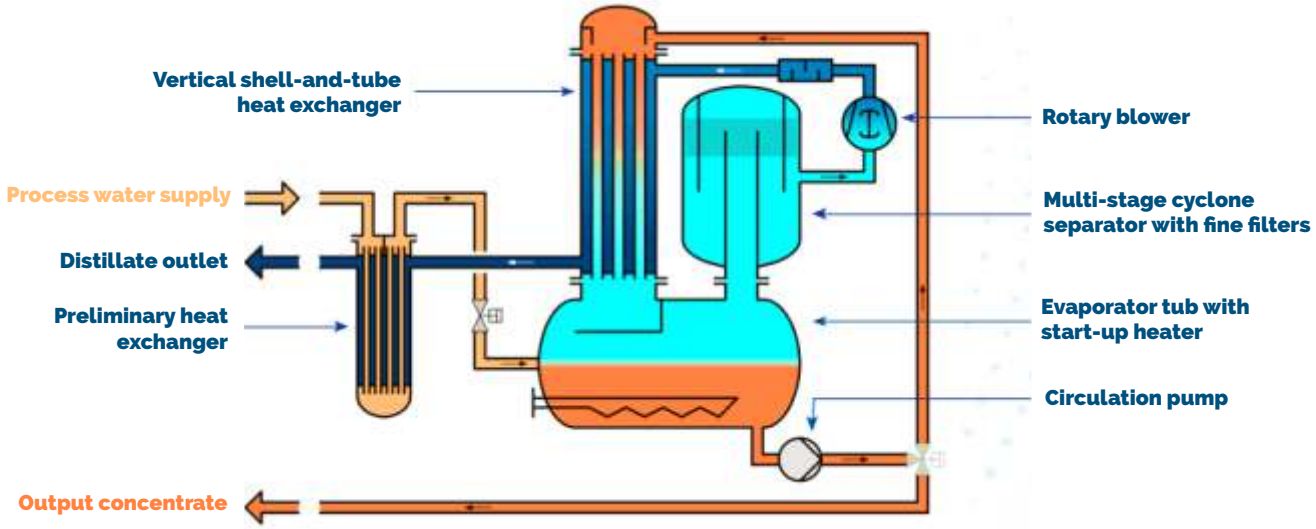
PROWADEST®/1

VACUUM DISTILLATION WITH FORCED CIRCULATION AND VAPOR COMPRESSION

PROWADEST® P are robust and reliable KLC evaporators that are designed to treat water for industrial processes using the principle of forced circulation. In the smallest possible space, efficient and effective components have been installed that dramatically improve the quality of the distillate and significantly reduce energy consumption. Over the years, continuous optimization of the system has been carried out to meet the requirements of a wide range of process water types, especially those that are highly foamy and contain salts .

With additional configurations, it is possible to treat even the most difficult process waters. By reusing distillate, it is possible to achieve closed-loop water management, which saves resources and meets the highest environmental standards. The reliable operation and performance of the evaporator makes it possible to achieve production with zero liquid discharge.

Operating principle:



Main advantages:

- ✓ Suitable for highly foaming and salt-containing process water
- ✓ Very low energy consumption due to maximum heat recovery
- ✓ High installation efficiency thanks to an efficient and automatic cleaning system
- ✓ Compact design
- ✓ State-of-the-art control system, intuitive operation, user-friendly machine interface

It is particularly suitable for the following process waters:

- ✓ Rinse and active bath after surface treatment
- ✓ Emulsions
- ✓ Water from the washing and cleaning process
- ✓ Process water with release agents
- ✓ Flushing water from crack detection systems
- ✓ Penetrants

Technical details:

Model type	Capacity[1] [l/h]	Annual capacity[2.4] [m³] (7,000 h/a)	Installed power (kW)	Energy consumption[3,4] [kWh/m³] from	Unladen weight [kg]	Dimensions l. x w x h. [mm]
PROWADEST P 30	30	210	8	80	600	1,790 x 920 x 2,180
PROWADEST P 40	40	280	8	80	620	1,790 x 920 x 2,180
PROWADEST P 60	60	420	10	75	650	1,790 x 920 x 2,180
PROWADEST P 90	90	630	15	75	700	1,790 x 920 x 2,180
PROWADEST P 120	120	840	20	65	920	2,160 x 1,280 x 2,320
PROWADEST P 160	160	1,120	24	65	960	2,160 x 1,280 x 2,320
PROWADEST P 200	200	1,400	25	60	1,200	2,160 x 1,280 x 2,320
PROWADEST P 240	240	1,680	30	60	1,450	2,350 x 1,550 x 2,500
PROWADEST P 300	300	2,100	33	55	1,500	2,350 x 1,550 x 2,500
PROWADEST P 350	350	2,450	41	55	1,600	2,350 x 1,550 x 2,500
PROWADEST P 400	400	2,800	41	55	1,770	2,350 x 1,550 x 2,500
PROWADEST P 500	500	3,500	85	40	4,000	3,340 x 2,100 x 2,760
PROWADEST P 600	600	4,200	85	40	4,000	3,340 x 2,100 x 2,760
PROWADEST P 800	800	5,600	85	40	4,000	3,340 x 2,100 x 2,760
PROWADEST P 1000	1,000	7,000	113	35	5,500	3,550 x 2,390 x 3,300
PROWADEST P 1200	1,200	8,400	128	35	5,500	3,550 x 2,390 x 3,300
PROWADEST P 1500	1,500	10,500	128	35	5,500	3,550 x 2,390 x 3,300
PROWADEST P 2000	2,000	14,000	170	35	7,200	4,000 x 2,450 x 3,560
PROWADEST P 2500	2,500	17,500	204	35	9,500	4,400 x 2,900 x 3,890

[1] Municipal water hardness <10° dH, inlet temperature >15°C
[2] With 7,000 hours of operation per year with municipal water (6 days/50 weeks)
[3] Values refer to machine at operating temperature
[4] The data for each type of process water is determined in the calculations for the customer

BRIQUETTING PRESSES FOR SHAVINGS AND GRINDING SLUDGE

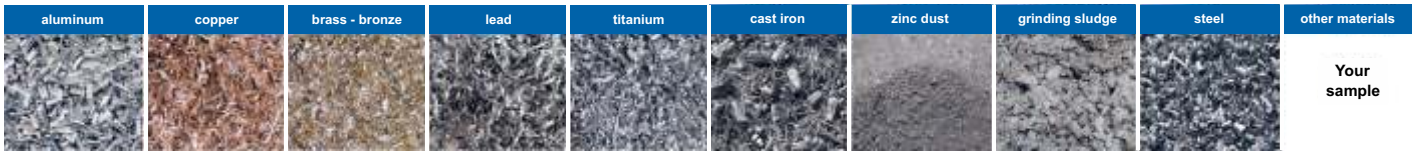
Metalworking chips are a valuable raw material that should be handled as economically as the original material. The use of briquetting presses for processing chips is one of the possible and economically beneficial solutions. The briquetting technology is designed for mechanical machining plants, as well as for companies engaged in the secondary processing of metal chips.

Briquetting machines complement the system for transporting chips from processing centers, or they can operate independently with a large-volume container or a crusher placed at the front. The press tanks are usually filled by a screw conveyor from a container of material near the press. They can be filled with a dump truck or manually. The described technology is not demanding, and significantly reduces the material costs of casting operations and reduces storage and handling requirements. The turnaround period for metal briquetting machines ranges from 6 months to one year.

The main advantages of briquetting:

- ✓ Reduction of waste disposal costs up to 100%
- ✓ Recovery of coolant (emulsion, oil) up to 90%
- ✓ External resale of briquettes
- ✓ Increase in the purchase price of waste material (Briquettes - raw material for metallurgical furnaces)
- ✓ Reduction in frequency of waste disposal (lower transportation and storage costs)

The **iSwarf** presses are economical machines with low energy consumption. They process shavings generated during the machining of steel, cast iron and non-ferrous metals, especially aluminum. The standard range of iSwarf presses is wide and offers many variations in performance and equipment. The combination of hydraulic pump motor power from 4 kW to 15 kW and the diameter of pressing tools from 55 mm to 100 mm makes it possible to meet the briquette quality and performance requirements of the briquetting machine. The advantage of the iSwarf briquetting machine is the use of a patented hydraulic system design, which makes it very easy to increase pressing power for increased production. The type of hopper can be chosen depending on the material and how it is connected to the process line. Thanks to their modular design, iSwarf presses meet the most demanding expectations for automation of operation and process equipment.



iSwarf50 is used to process metal swarf and metal chips from machining operations as standard equipment on a machining center. The machine is small and compact, suitable for direct connection under the conveyor belt of a machining center or as a stand-alone machine with manual filling.

iSwarf 50 offers:

- ✓ Increased resale price of the chips produced
- ✓ Reduces the volume of chips produced at the 1:10 ratio
- ✓ Reduces the frequency of swarf and chip removal from the machining center, other operations and transportation in general
- ✓ Separates liquids contained in the material and allows them to be reused
- ✓ Increases the cleanliness of the work environment
- ✓ Reduces the risk of environmental contamination by petroleum substances leaking from chips and swarf
- ✓ Eliminates the need for a central chip transport system

The device is designed for:

- ✓ Industrial plants producing metal swarf and chips from machining operations
- ✓ Operations on multiple machining center
- ✓ Operations performed on a single machining center

Machine placement:

- ✓ Directly under the machining center chip belt conveyor - automatic operation depending on the material in the machine hopper
- ✓ Free-standing, not connected to other machines - manual filling with material or dumping of material into the machine hopper

Main advantages:

- ✓ Compact, simple, reliable design
- ✓ Easy operation and maintenance
- ✓ Easy installation of the device
- ✓ Possibility to equip the machine with an additional module for processing long chips

Technical details:

Type	Capacity [kg/h] aluminum(cast iron)	Pump power [kW]	Installed power [kW]	Briquette diameter [mm]	Tank capacity [m^3]
iSwarf 50	40 (90)	4	4.5	60	0.1

iSwarf 440/550 is a series that combines a compact, easy-to-use briquetting machine that works with high efficiency. The equipment of the machine is individually configured according to the wishes and needs of the customer. High level of machine condition diagnostics and the ability to connect the machine to the company network - the briquetting machine can be remotely monitored by both the operator and the manufacturer.

Purpose of the briquetting machine:

- ✓ Plants where meta chips are produced
- ✓ Foundries
- ✓ Waste processing plants

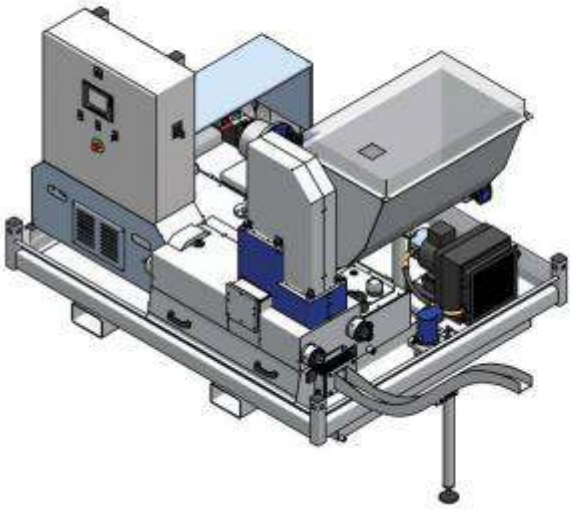
iSwarf 440/550 offers:

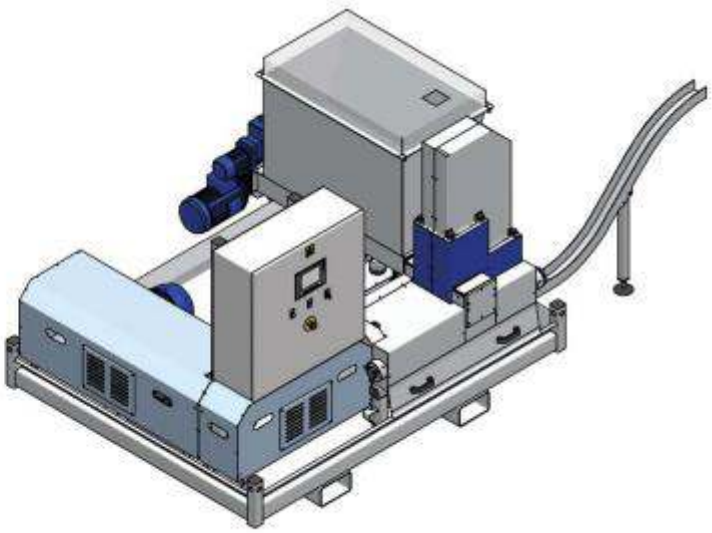
- ✓ Capacity from 60 to 700 kg/h
- ✓ High compression rate of briquette
- ✓ Minimum residual moisture content
- ✓ Briquette diameter from 45 to 100 mm
- ✓ Stepless adjustment of briquette density
- ✓ Optimum energy efficiency
- ✓ Comprehensive machine diagnostics
- ✓ Possibility to connect to the company network

Technical details:

		iSwarf 440	iSwarf 550
Briquette diameter [mm]		45-60	60-100
Briquette length [mm]		40-80	50-110
Pump motor [kW]		4/5.5	7.5/11/15
Working pressure in the cast [MPa]		130-280	130-360
Capacity [kg/h] *	Aluminum	60-220	120-450
	Steel + Cast Iron	12-330	150-650
	Non-ferrous metals	150-400	180-700
Basic dimension (L x W x H) [mm]		2,250 x 2,050 x 1,590	2,300 x 2,160 x 1,630
Briquette trough [mm]		1,230	1,290

* The given capacities are approximate. Performance varies depending on the material processed and the diameter of the briquette.





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Polska Agencja Inwestycji i Handlu Grupa PFR
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