

VIPAIR 4.0

AIR/OIL MICRO-LUBRICATION



VIPAIR 4.0

VIPAIR 4.0 is the Air/Oil system with advanced diagnostic ideal for the micro-lubrication of spindles of the various types of machine tools.

The device consists of a main module that manages the cycles of each output completely independently and communicates the status of the entire system via IO-Link. It is also equipped with IoT connectivity thanks to the DropsA.app platform.

The main module can manage up to 4 mixing bases (8 outlet mini-pumps) and has an on-board lubricant level sensor with which it is possible to detect the percentage of liquid in the tank.

The system can operate in 2 modes:

- One fully autonomous, allowing stand-alone installation with remote diagnostics via IO-Link and IoT
- One in IO-Link mode, for remote management of the entire product via PLC

Through the parameters it is possible to enable lubrication with external pulses. In this modality the system will control the external input, and upon reaching the cycles set will activate the oil supply of the mini-pumps.

The output on the device is also configurable via the parameters and can be set as "System Status", "Refilling" or independent management via IO-Link command.



CHARACTERISTICS

AIR/OIL MICRO-LUBRICATION UP TO 8 POINTS FOR INDUSTRY 4.0 AND IOT CONNECTIVITY

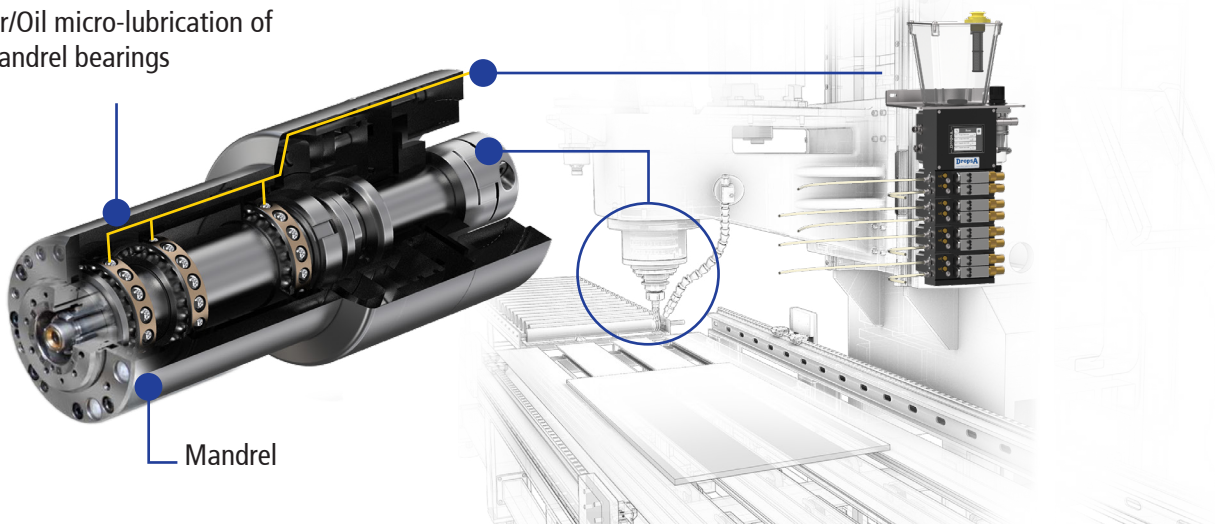
GRANULAR AIR AND OIL CONTROL ON EACH POINT

POSSIBILITY OF LOCAL MANAGEMENT VIA TOUCH-SCREEN OR REMOTE VIA PLC

MODULAR SYSTEM SCALABLE FROM 2 TO 8 POINTS.

INDEPENDENT CONTROL FOR EACH OUTLET: AIR AND OIL DOSAGE

Air/Oil micro-lubrication of mandrel bearings



Mandrel

TECHNICAL FEATURES		
Operating voltages	VDC	24 ±10%
Maximum current	A	2
Supply air pressure	bar	5 - 8
Minipump flow rate(2)	mm ³ /cycle	7 - 15 - 30
Operating temperature	°C [°F]	-5 - +50 [23 - +122]
Operating humidity	%	90 max
Degree of protection	IP	65
Lubricants (1)		Oil
Oil viscosity at working temperature	cSt	32 - 220
Storage temperature	°C [°F]	-20 - 65 [-4 - +149]
Air supply		Ø8 hose
Air/oil outlets		Ø4 hose
Digital inputs	No.	1
Digital outputs	No.	1
Power supply/IO-Link connector		M12x1 – 4 Male Pin
Signal connector		M12X1 – 4 Female Pin
Digital output		24V DC – 0.5A
Digital input		24 V DC
Hardware features		Protection from polarity inversion on the power supply

TECHNICAL SPECIFICATIONS IO-LINK SIGNALS		
INPUT - Signals		Independent command for each air outlet Independent oil supply command Clear alarms (Reset) Output signal command
OUTPUT – Tank level	%	0 - 100
OUTPUT - Air outlet pressure	Bar	0 - 10 (±1% FS)
OUTPUT - Signals		System status Solenoid valve status Signal of oil supply completed Status/refilling signal

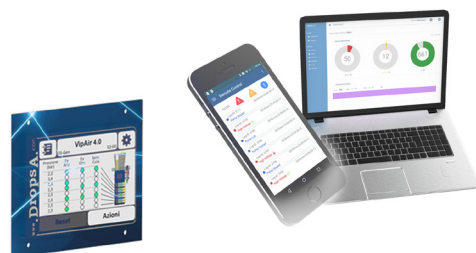
Note: Specifications refer to an operating temperature of +20°C (+68°F)

(1) If a different product is to be used, the suitability for use must be requested from DropsA S.p.A.

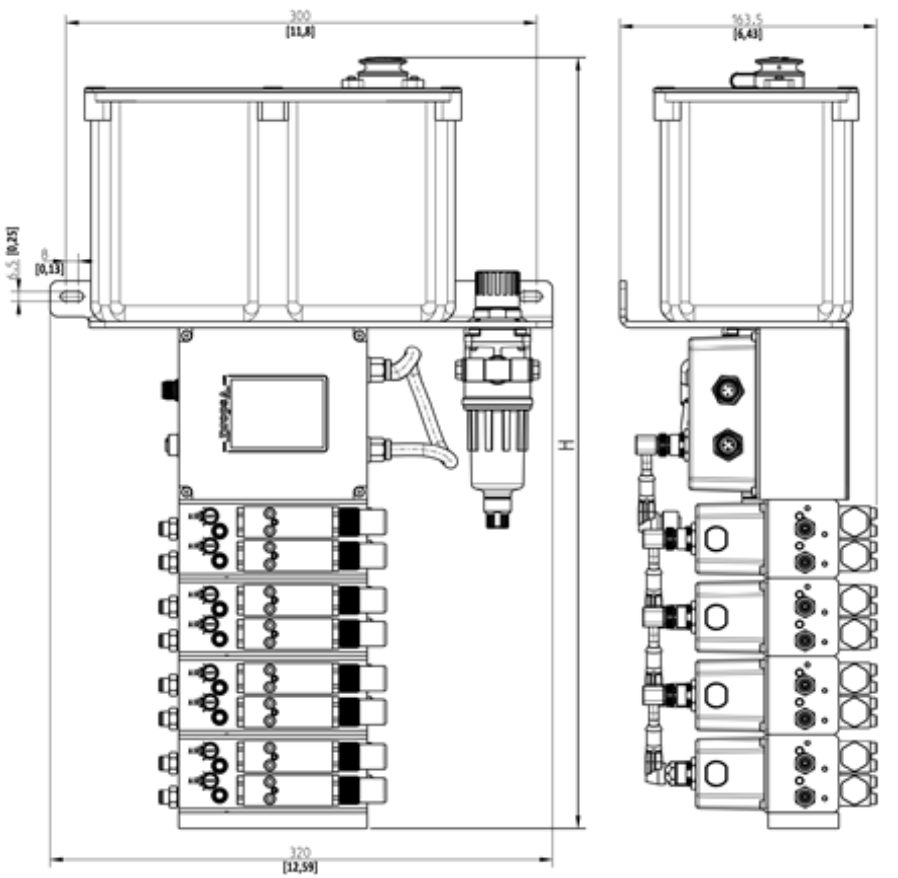
(2) To change the flow rate of the mini-pump, please refer to section 5.1.2



The combined IoT and 4.0 features offer advanced diagnostics and connectivity



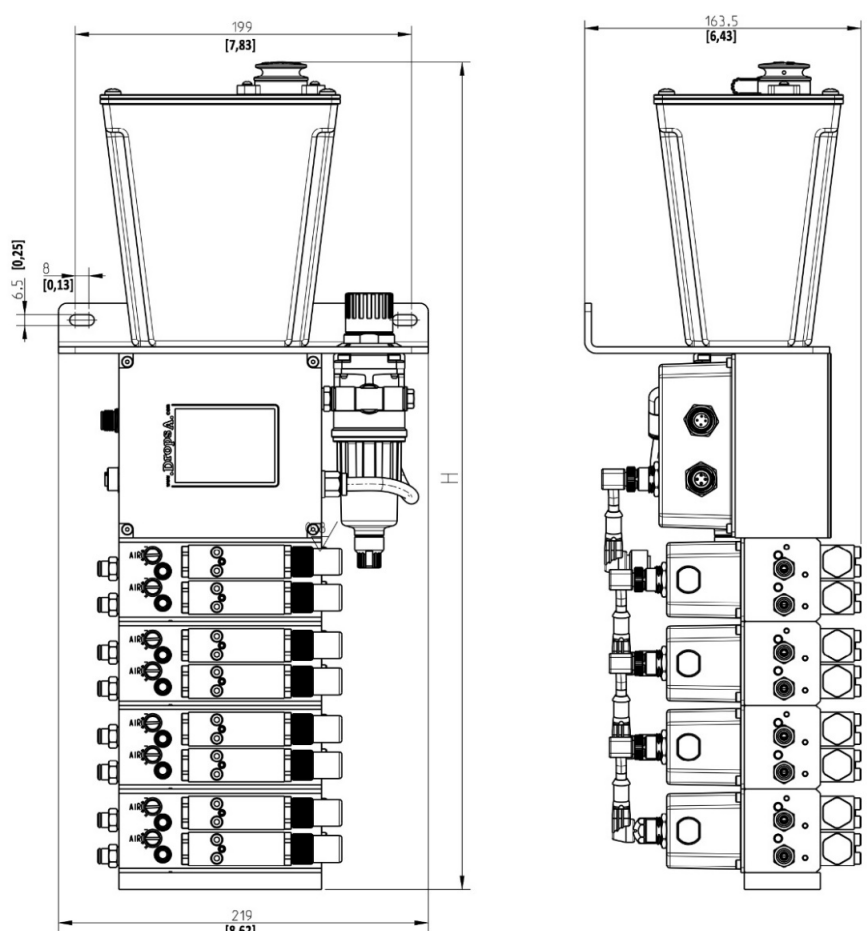
OVERALL DIMENSIONS MODEL SA 3LT



Dimensions in: mm [in]

"H" HEIGHT	
344	[13.5]
394	[15.5]
444	[17.5]
494	[19.4]

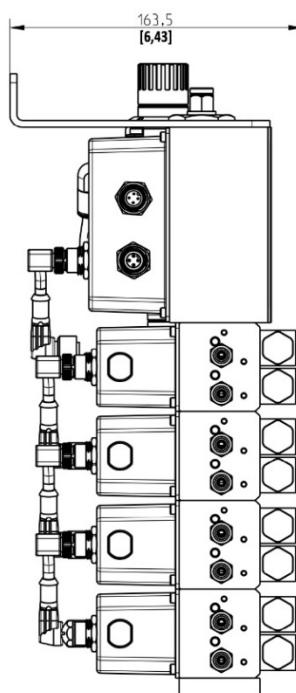
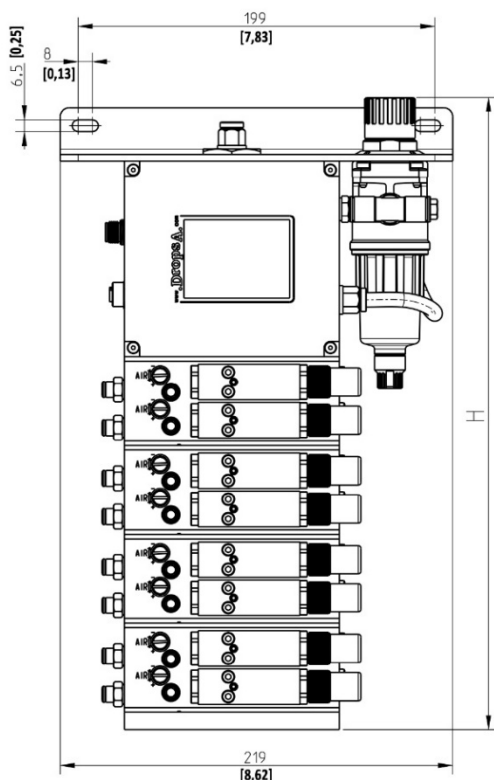
MODEL SA 2LT



Dimensions in: mm [in]

"H" HEIGHT	
343	[13.5]
393	[15.5]
443	[17.4]
493	[19.4]

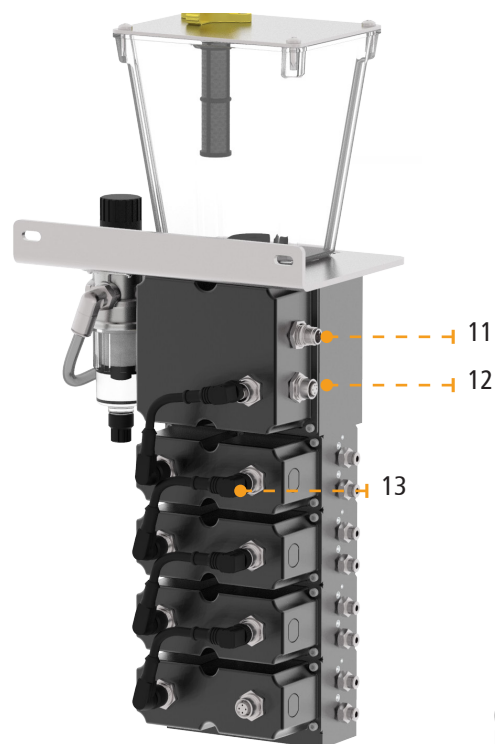
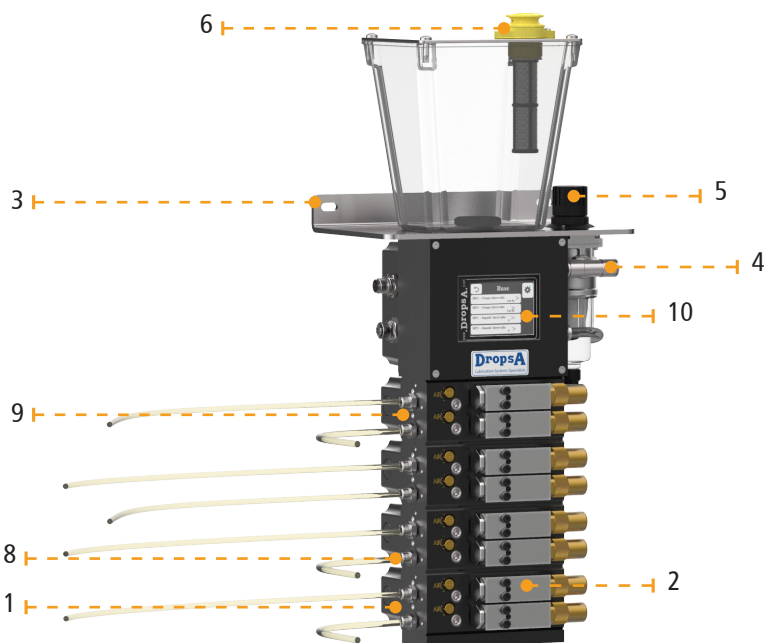
MODEL RM-SA



Dimensions in: mm [in]

"H" HEIGHT

206 [8.1]
256 [10]
306 [12]
356 [14]



STANDARD PARTS

1	Sub-base	8	Air/oil inlet - Ø4 hose
2	Minipump	9	Oil level sensor purge screw
3	Support bracket	10	Display
4	Air inlet - Ø8 hose	11	Power supply connector (PWR Conn.)
5	Inlet pressure adjustment	12	Inlet and outlet connector (I/O Conn.)
6	Oil filler with filter	13	Power cable and communication with sub-bases (MP Conn.)
7	Additional air adjustment at outlet		

ORDERING INFORMATION

DESCRIPTION	CODE	DESCRIPTION	CODE
Vip Air 4.0 – 2 Points-1L-SA	3135921	MODULE Vip4 Air4.0 - MODBUS	3135905
Vip Air 4.0 – 4 Points-1L-SA	3135922	1 metre IO-Link PUR cable	UE-CVPR054
Vip Air 4.0 – 6 Points-1L-SA	3135923	2 metres IO-Link PUR cable	UE-CVPR055
Vip Air 4.0 – 8 Points-1L-SA	3135924	M12 Connector 4pin Male Straight	0039171
Vip Air 4.0 – 2 Points-3L-SA	3135926	M12 Connector 4pin Female Straight	0039169
Vip Air 4.0 – 4 Points-3L-SA	3135927	*Fastening screw - 1 module	0014198
Vip Air 4.0 – 6 Points-3L-SA	3135928	*Fastening screw - 2 modules	0014191
Vip Air 4.0 – 8 Points-3L-SA	3135929	*Fastening screw - 3 modules	0014793
Vip Air 4.0 – 2 Points-RM-SA	3135931	*Fastening screw - 4 modules	0014795
Vip Air 4.0 – 4 Points-RM-SA	3135932	Sub-base	3071490
Vip Air 4.0 – 6 Points-RM-SA	3135933	Complete module (sub-base + mini-pumps)	3135905
Vip Air 4.0 – 8 Points-RM-SA	3135934	Cable	1639336

SPARE PARTS

SPARE PART DESCRIPTION	CODE
Minipump	3103015
Cover	6770209