FEATURES

- CONSTANT FLOW RATE EVEN UPON VARYING THE INFLOWING AND OUTFLOWING PRESSURE
- INDEPENDENT SOLENOID VALVE CONTROL
- THE PRESSURE COMPENSATION VALVE CAN MAINTAIN THE OIL FLOW RATE CONSTANT EVEN UPON VARIATION OF THE AIR INFLOW AND OUTFLOW PRESSURE
- AN OIL SUCTION SYSTEM IS INTEGRATED IN THE COAXIAL SYSTEMS
- THE STANDARD VERSION COMES WITH SINGLE-PIPE OR COAXIAL PIPE
- RESERVOIR CAPACITY: 1 L 3 L
- FLOW RATE: VARIABLE, 0÷2 CC/ MIN
- OIL AND AIR FLOW RATE CAN BE REGULATED PER SINGLE ELEMENT
- AIR ANDOIL REGULATION PER SINGLE ELEMENT

APPLICATIONS

- MACHINE TOOL
- MACHINE FOR CUTTING AND FOLDING SHEETS
- STEEL PLANTS

MINIMAL AIR LUBRICATION CENTRALISED SYSTEM – PNEUMATIC CONTROL AIR

EFFICIENT AND COMPLETE

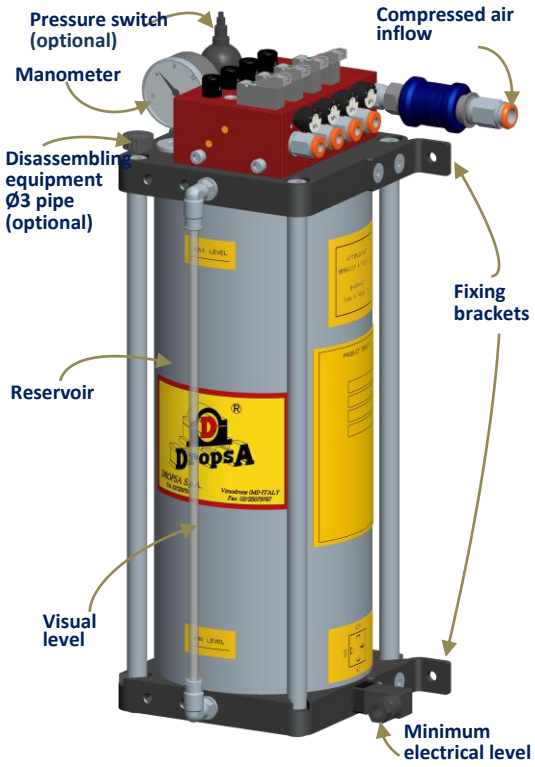
The MiQueL air/oil modular system was conceived for minimal lubrication of machine tools in general, machines for cutting and folding sheets, steel plants. It can be used on any system that requires calibrated lubrication as well as controlling all functions.
Up to 8 mutually connected elements that can be cut off or activated separately by means of a solenoid valve integrated therein at any time can fitted.

FUNCTIONAL AND EASY TO USE

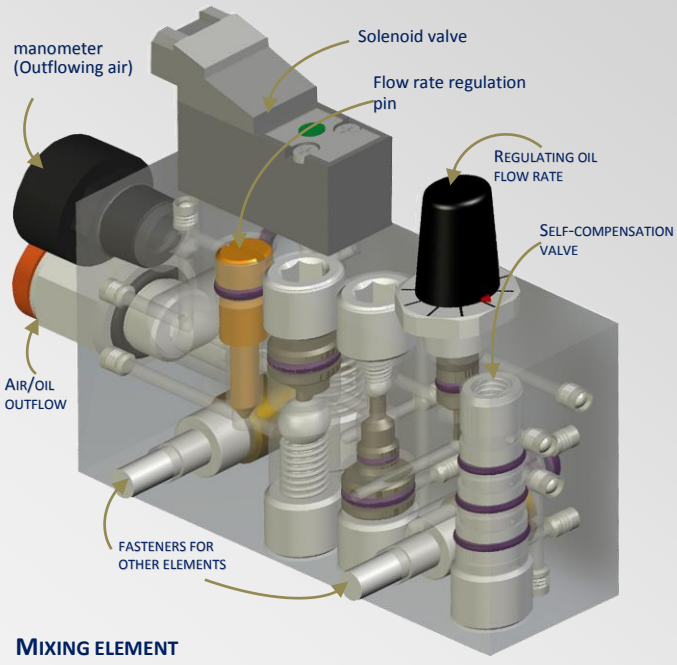
Both the air flow rate and oil flow rate can be controlled separately per single element.

CLEAN

The system comes with a device that ensures that the lubricant does not drip upon completing the lubrication cycle.

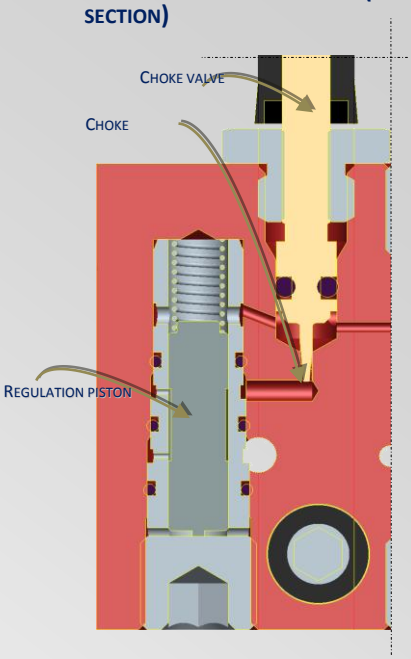


OPERATING PRINCIPLE



MIXING ELEMENT

SELF-COMPENSATION VALVE (OFF-SCALE SECTION)



Upon varying the inflow and outflow pressure, the lubricant flow rate remains constant thanks to the self-compensation valve which maintains the Δp between the inflowing oil pressure and the outflowing pressure constant.

$\Delta p_{(oil)}$= constant (~2 bars) ⇒ $Q_{(oil)}$= constant

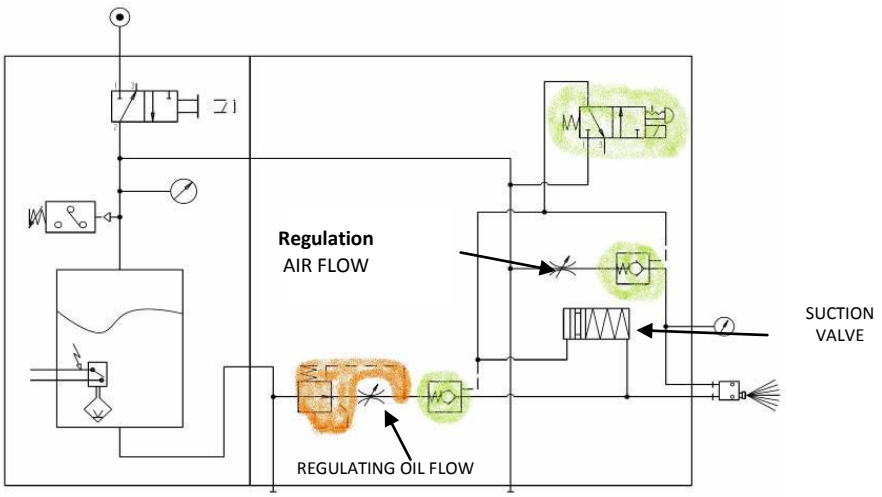
TECHNICAL FEATURES

TECHNICAL FEATURES		
Reservoir capacity		*1L – 3L*
Maximum number of modules		*8*
Air inflow pressure		*4 bars ÷ 7bars*
Maximum consumption of outflowing air		*~50Nl/min (per module)*
Air inflow pipe		*Ø10 mm*
Air outflow pipe		*Ø6 mm*
Oil outflow pipe		*Ø3 mm*
Oil flow rate per element	**PRO**	*0.1 ÷ 2.7 cc/min (oil 10cSt)* *0 ÷ 1 cc/min (oil 32cSt)* *0 ÷ 0.2 cc/min (oil 100cSt)*
	BASE	*0.3 ÷ 8 cc/min (oil 10cSt)* *0.1 ÷ 3 cc/min (oil 32cSt)* *0 ÷ 0.6 cc/min (oil 100cSt)*
	CART	*cc/min = (P x 8.16)/V* *P = operating pressure in [bars]* *V = viscosity [Engler] at operating temp.*
Lubricating oil		*10cSt ÷ 100cSt*
Degree of protection for element "-i"	**standard**	*IP 00*
	upon request (special)	*IP 65*
Degree of protection of the reservoir		*IP 65*
Calibration of the pressure switch (optional)		*6 bars*
Maximum load of the pressure switch (optional)		*Clean contact maximum voltage 250V* *Maximum power 100W*
Maximum load minimum level		*0.2A @ 30V*
Element solenoid valve power supply		*24 Vdc*
Operating temperature		*+5°C ÷ +50°C*
Storage temperature		*-10°C ÷ +80°C*
Max relative humidity without operating condensate		*90%*
Sound pressure level		*< 70 db (A)*
Net weight		*~5Kg (mod. 1 L) – ~7Kg (mod. 3 L)*

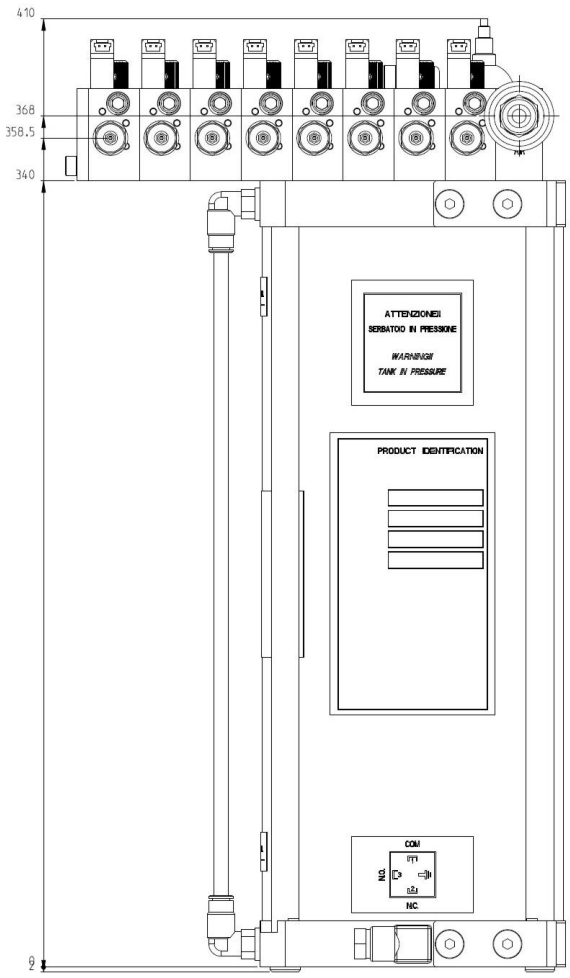
HYDRAULIC DIAGRAM

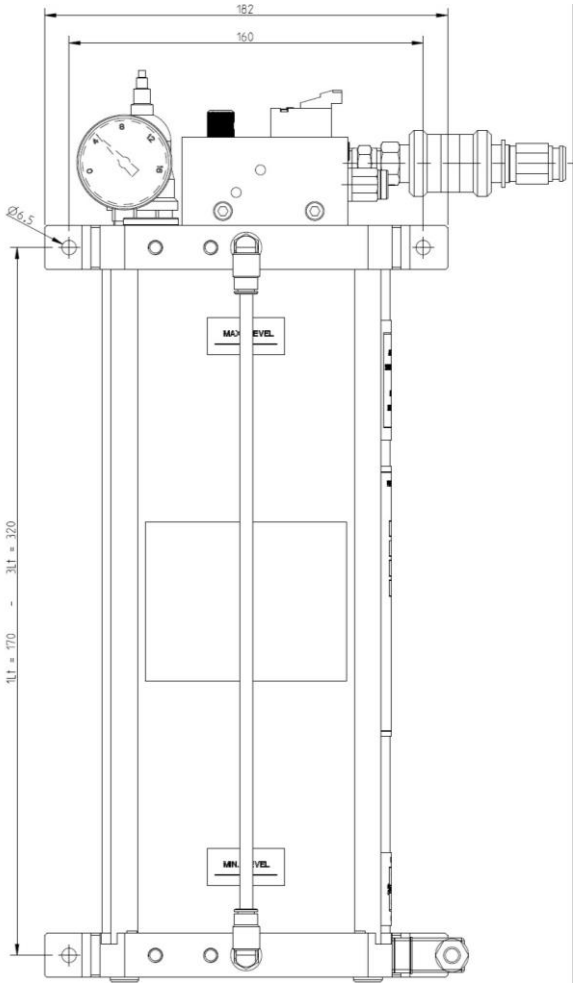
→ **PRO** Version

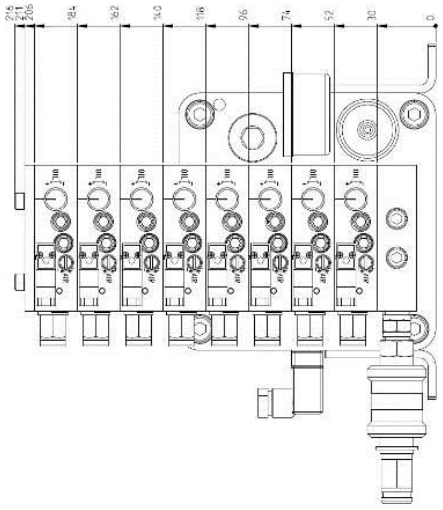
→ **I**-Version



DIMENSIONS (DRAWINGS NOT TO SCALE)







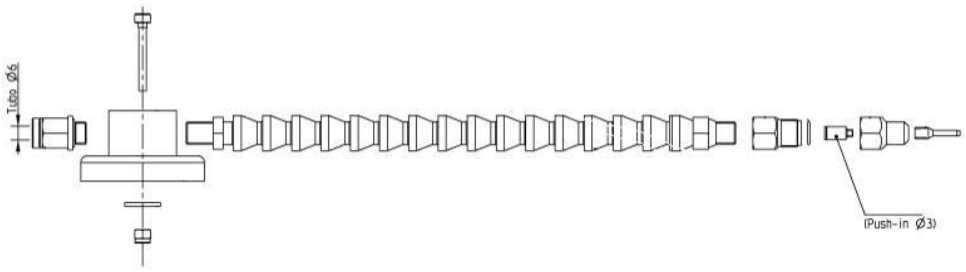
ORDER SPECIFICATIONS

MODEL	DESCRIPTION	MODULES	RESERVOIR CODE 1 L	CODE RESERVOIR 3 L
MiQueL PRO	Air/Oil Modular Minimal System **with** compensation valve **without** independent control solenoid valve	1	3135501	3135541
		2	3135502	3135542
		3	3135503	3135543
		4	3135504	3135544
		5	3135505	3135545
		6	3135506	3135546
		7	3135507	3135547
		8	3135508	3135548
MiQueL PRO - *i*	Air/Oil Modular Minimal System **with** compensation valve **with** independent control solenoid valve	1	3135511	3135551
		2	3135512	3135552
		3	3135513	3135553
		4	3135514	3135554
		5	3135515	3135555
		6	3135516	3135556
		7	3135517	3135557
		8	3135518	3135558
MiQueL BASE (BASIC)	Air/Oil Modular Minimal System **without** compensation valve **without** independent control solenoid valve	1	3135521	3135561
		2	3135522	3135562
		3	3135523	3135563
		4	3135524	3135564
		5	3135525	3135565
		6	3135526	3135566
		7	3135527	3135567
		8	3135528	3135568
MiQueL BASE (BASIC) - *i*	Air/Oil Modular Minimal System **without** compensation valve **with** independent control solenoid valve	1	3135531	3135571
		2	3135532	3135572
		3	3135533	3135573
		4	3135534	3135574
		5	3135535	3135575
		6	3135536	3135576
		7	3135537	3135577
		8	3135538	3135578
MiQueL BASE (BASIC) - *i* IP65	Air/Oil Modular Minimal System **without** compensation valve **with** independent control solenoid valve Degrees of protection IP65	1	3135681	3135621
		2	3135682	3135622
		3	3135683	3135623
		4	3135684	3135624
		5	3135685	3135625
		6	3135686	3135626
		7	3135687	3135627
		8	3135688	3135628
MiQueL CART - *i*	Air/Oil Modular Minimal System **without** compensation valve and oil regulation **with** independent control solenoid valve	1	-	3135641
		2	-	3135642
		3	-	3135643
		4	-	3135644
		5	-	3135645
		6	-	3135646
		7	-	3135647
		8	-	3135648
MiQueL BASE NO-EV (BASIC)	Air/Oil Modular Minimal System **without** compensation valve **with** pneumatic valve for independent control	1	3135441	3135451
		2	3135442	3135452
		3	3135443	3135453
		4	3135444	3135454
		5	3135445	3135455
		6	3135446	3135456
		7	3135447	3135457
		8	3135448	3135458

ACCESSORIES	
DESCRIPTION	**CODE**
AIR inflow solenoid valve Kit	**3133559**
Module AIR outflow manometer (***-i***)	**0020694**
Module solenoid valve connector (***-i***) with 600 mm cable	**1525446**
Module solenoid valve connector (***-i***) with 8 M cable	**1525476**
Ø3 OIL outflow pipe	**5717232**
Ø6 AIR outflow pipe	**5717301**
20 L MK 150 oil	**3226664**
25 L MK 100 oil	**3226665**
29 L MK High Performance oil	**3226666**
20 L MK Stainless oil	**3225465**
FULL cone coaxial nozzle kit	**3132768**
FULL cone coaxial nozzle	**3133455**
65° FLAT jet coaxial nozzle	**3133558**
FULL cone single-pipe nozzle FULL cone single-pipe nozzle	**3133564**
65° FLAT jet single-pipe nozzle	**3133565**
Single-pipe nozzle for 50 mm BLADE	**1525050**
Single-pipe nozzle for 70mm BLADE	**1525051**
Ø3 pipe disassembling equipment	**1525475**

SPARE PARTS	
DESCRIPTION	**CODE**
MiQueL PRO- *i* - Modular Element	**1525430**
MiQueL PRO - Modular Element	**1525440**
MiQueL BASE (BASIC) - *i* - Modular Element	**1525450**
MiQueL BASE (BASIC) - Modular Element	**1525460**
MiQueL BASE (BASIC)- *i* - IP65 - Modular Element	**1525456**
MiQueL CART- *i* - Modular Element	**1525688**
MiQueL CART- ***i*** - Without SV - Modular Element	**1525871**
MiQueL BASE- *i* - NO-EV - Modular Element	**1526013**
Module solenoid valve (***-i***)	**1525442**
Minimum electrical level sensor	**1525431**
Minimum electrical level connector	**0039841**
Pressure switch calibrated at 6 bars (optional)	**3291028**
Reservoir manometer	**0020566**

FULL CONE COAXIAL NOZZLE KIT



CODE
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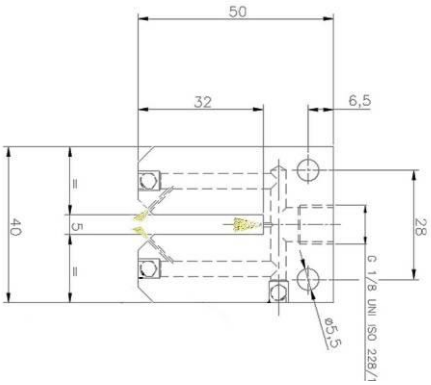
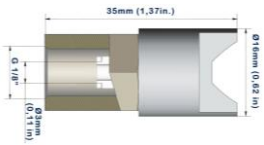
BLADE LUBRICATION NOZZLE



INLET	OUTLETS	BLADE THICKNESS	CODE
1	3	50 mm	1525050
		70 mm	1525051

CONICAL JET



CODE
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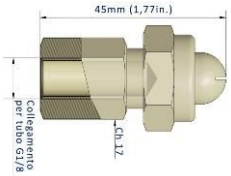
BLADE JET



CODE
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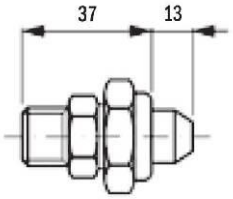

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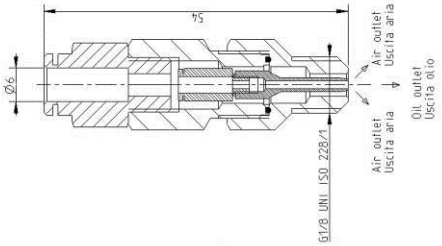

CODE
3133455

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