

## MAGIS M16 – Product fiches

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### MAGIS M16

### Magis M16 - Energetic labels



Cod. 1.046249 rev 000

### Magis M16 - Low temperature table (30/35) average zones

Low temperature table (30/35	) average zones	5											
Model: Magis M16													
Air-to-water heat pump: yes	Air-to-water heat pump: yes												
Water-to-water heat pump: no													
Brine-to-water heat pump: no													
Low-temperature heat pump: no													
Equipped with a supplementar	Equipped with a supplementary heater: no												
Heat pump combination heater	: no												
The parameters are declared fo	r average climat	ic condition	15										
Element	Symbol	Value	Unit		Element	Symbol	Value	Unit					
Rated heat output	Prated	15	kW		Seasonal space heating energy efficiency	$\eta_S$	182	%					
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj Declared coefficient of performance or primary energy ratio for pa load at indoor temperature 20°C and outdoor temperature T <sub>j</sub>													
$T_j = -7 ^{\circ}\mathrm{C}$	Pdh	13.5	kW		$T_j = -7 ^{\circ}\mathrm{C}$	COPd	2.72	-					
$T_j = +2 ^{\circ}\mathrm{C}$	Pdh	8.6	kW		$T_j = +2 ^{\circ}\mathrm{C}$	COPd	4.41	_					
$T_j = +7 ^{\circ}\mathrm{C}$	Pdh	5.7	kW		$T_j = +7 ^{\circ}\mathrm{C}$	COPd	6.56	-					
$T_{j} = +12 ^{\circ}\text{C}$	Pdh	3.8	kW		$T_{j} = +12 ^{\circ}\text{C}$	COPd	8.51	-					
$T_j$ = bivalent temperature	Pdh	13.5	kW		$T_j$ = bivalent temperature	COPd	2.72	-					
$T_j$ = operation limit temperature	Pdh	12.5	kW		$T_j$ = temperature operating limit	COPd	2.48	-					
for air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	Pdh	-	kW		For air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	COPd	-	_					
Bivalent temperature	$T_{_{biv}}$	-7	°C		For air/water heat pumps: tem- perature operating limit	TOL	-10	°C					
Cycling interval capacity for heating	Pcych	-	kW		Cycling interval efficiency	COPcyc or PERcyc	-	-					
Degradation co-efficient	Cdh	0.9	_		Heating water operating limit temperature	WTOL	65	°C					
Power consumption in modes other	r than active mode	9			Supplementary heater								
OFF mode	P <sub>OFF</sub>	0.014	kW		Rated heat output	Psup	2.68	kW					
Thermostat-off mode	P <sub>TO</sub>	0.024	kW										
Standby mode	$P_{SB}$	0.014	kW		Type of energy input	Electrical							
Crankcase heater mode	Р <sub>СК</sub>	0.000	kW										
Other items						-							
Capacity control	Variable				For air-to-water heat pumps: Rated air flow rate, outdoors		4650	m³/h					
Sound power level, indoors/outdoors	$L_{_{W\!A}}$	-/68	dB		For water-/brine-to-water heat			m <sup>3</sup> /h					
Annual energy consumption	$Q_{\scriptscriptstyle HE}$	6804	kWh or GJ		pumps: Rated brine or water flow rate, outdoor heat exchanger		_	111 / 11					
For heat pump combination heater	:												
Declared load profile		-			Water heating energy efficiency	$\eta_{_{wh}}$	-	%					
Daily electricity consumption	$Q_{elec}$	-	kWh		Daily fuel consumption	$Q_{fuel}$	-	kWh					
Annual electricity consumption	AEC	-	kWh		Annual fuel consumption	AFC	-	GJ					
Contact information	IMMERGAS S	.p.A via Cis	a Ligure n.95	5 - 4204	1 Brescello (RE) Italy								

# **OIMMERGAS**

### Magis M16 - Medium temperature table (47/55) average zones

Medium temperature table (4	7/55) average z	ones										
Model: Magis M16												
Air-to-water heat pump: yes												
Water-to-water heat pump: no												
Brine-to-water heat pump: no												
Low-temperature heat pump: n	0											
Equipped with a supplementar	y heater: no											
Heat pump combination heater	: no											
The parameters are declared for	r average climat	ic condition	18									
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit					
Rated heat output	Prated	13	kW	Seasonal space heating energy efficiency	$\eta_S$	133	%					
Declared capacity for heating to 20°C and outdoor temperature	òr part load at in Tj	ndoor temp	erature	Declared coefficient of performa load at indoor temperature 20°C	nce or primate and outdoor	ry energy r temperatur	atio for part e T <sub>j</sub>					
$T_j = -7 ^{\circ}\mathrm{C}$	Pdh	11.5	kW	$T_i = -7 ^{\circ}\mathrm{C}$	COPd	1.99	-					
$T_j = +2 ^{\circ}\mathrm{C}$	Pdh	7.2	kW	$T_i = +2 ^{\circ}\mathrm{C}$	COPd	3.34	-					
$T_j = +7 ^{\circ}\mathrm{C}$	Pdh	4.7	kW	$T_j = +7 ^{\circ}\mathrm{C}$	COPd	4.61	-					
$T_j = +12 ^{\circ}\mathrm{C}$	Pdh	3.3	kW	$T_j = +12 \ ^{\circ}\mathrm{C}$	COPd	6.07	_					
$T_j$ = bivalent temperature	Pdh	11.5	kW	$T_j$ = bivalent temperature	COPd	1.99	_					
$T_j$ = operation limit temperature	Pdh	10.3	kW	$T_j$ = temperature operating limit	COPd	1.80	_					
for air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	Pdh	-	kW	For air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < -20 °C)	COPd	-	_					
Bivalent temperature	$T_{_{biv}}$	-7	°C	For air/water heat pumps: tem- perature operating limit	TOL	-10	°C					
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc or PERcyc	-	-					
Degradation co-efficient	Cdh	0.9	_	Heating water operating limit temperature	WTOL	65	°C					
Power consumption in modes other	r than active mode	9		Supplementary heater								
OFF mode	P <sub>OFF</sub>	0.014	kW	Rated heat output	Psup	2.67	kW					
Thermostat-off mode	Рто	0.024	kW									
Standby mode	$P_{SB}$	0.014	kW	Type of energy input	Electrical							
Crankcase heater mode	Р	0.000	kW									
Other items					-							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors		4650	m³/h					
Sound power level, indoors/outdoors	$L_{\scriptscriptstyle W\!A}$	-/68	dB	For water-/brine-to-water heat			m <sup>3</sup> /b					
Annual energy consumption	$Q_{\scriptscriptstyle HE}$	7895	kWh or GJ	rate, outdoor heat exchanger		-	111 /11					
For heat pump combination heater	:											
Declared load profile		-		Water heating energy efficiency	$\eta_{_{wh}}$	-	%					
Daily electricity consumption	$Q_{_{elec}}$	-	kWh	Daily fuel consumption	$Q_{_{fuel}}$	-	kWh					
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ					
Contact information	information IMMERGAS S.p.A via Cisa Ligure n.95 - 42041 Brescello (RE) Italy											



### Magis M16 + Omnistor 300 - Low temperature table (30/35) average zones

Low temperature table (30/35)	average zones	5											
Model: Magis M16 + Omnis	tor 300												
Air-to-water heat pump: yes													
Water-to-water heat pump: no													
Brine-to-water heat pump: no													
Low-temperature heat pump: no	Low-temperature heat pump: no												
Equipped with a supplementary	heater: no												
Heat pump combination heater	: yes												
The parameters are declared for	average climat	ic condition	18										
Element	Symbol	Value	Unit		Element	Symbol	Value	Unit					
Rated heat output	Prated	15	kW		Seasonal space heating energy efficiency	$\eta_S$	182	%					
Declared capacity for heating for 20°C and outdoor temperature	or part load at ii Tj	ndoor temp	erature		Declared coefficient of perform load at indoor temperature 20°C	ance or prima and outdoor	ry energy r temperatur	atio for part e T <sub>j</sub>					
$T_j = -7 ^{\circ}\mathrm{C}$	Pdh	13.5	kW		$T_j = -7 ^{\circ}\mathrm{C}$	COPd	2.72	_					
$T_j = +2 ^{\circ}\mathrm{C}$	Pdh	8.6	kW	]	$T_j = +2 ^{\circ}\mathrm{C}$	COPd	4.41	-					
$T_i = +7 ^{\circ}\mathrm{C}$	Pdh	5.7	kW	1	$T_i = +7 ^{\circ}\mathrm{C}$	COPd	6.56	_					
$T_{j} = +12 ^{\circ}\text{C}$	Pdh	3.8	kW	]	$T_j = +12 ^{\circ}\text{C}$	COPd	8.51	-					
$T_j$ = bivalent temperature	Pdh	13.5	kW		$T_j$ = bivalent temperature	COPd	2.72	_					
$T_j$ = operation limit temperature	Pdh	12.5	kW		$T_j$ = temperature operating limit	COPd	2.48	_					
for air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	Pdh	-	kW		For air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	COPd	-	_					
Bivalent temperature	$T_{_{biv}}$	-7	°C		For air/water heat pumps: tem- perature operating limit	TOL	-10	°C					
Cycling interval capacity for heating	Pcych	-	kW		Cycling interval efficiency	COPcyc or PERcyc	-	_					
Degradation co-efficient	Cdh	0.9	_		Heating water operating limit temperature	WTOL	65	°C					
Power consumption in modes other	than active mode	9			Supplementary heater								
OFF mode	P <sub>OFF</sub>	0.014	kW		Rated heat output	Psup	2.68	kW					
Thermostat-off mode	P <sub>TO</sub>	0.024	kW										
Standby mode	$P_{SB}$	0.014	kW		Type of energy input	Electrical							
Crankcase heater mode	Р <sub>СК</sub>	0.000	kW										
Other items	1												
Capacity control	Variable				For air-to-water heat pumps: Rated air flow rate, outdoors		4650	m³/h					
Sound power level, indoors/outdoors	$L_{\scriptscriptstyle W\!A}$	-/68	dB		For water-/brine-to-water heat		_	m <sup>3</sup> /h					
Annual energy consumption	$Q_{\scriptscriptstyle HE}$	6804	kWh or GJ		rate, outdoor heat exchanger			111 / 11					
For heat pump combination heater:					1								
Declared load profile		XL			Water heating energy efficiency	$\eta_{_{wh}}$	97	%					
Daily electricity consumption	$\mathcal{Q}_{_{elec}}$	8.394	kWh		Daily fuel consumption	$Q_{fuel}$	-	kWh					
Annual electricity consumption	AEC	1728	kWh		Annual fuel consumption	AFC	-	GJ					
Contact information	tact information IMMERGAS S.p.A via Cisa Ligure n.95 - 42041 Brescello (RE) Italy												



### Magis M16 + Omnistor 300 - Medium temperature table (47/55) average zones

Medium temperature table (4'	7/55) average z	ones					
Model: Magis M16 + Omnis	tor 300						
Air-to-water heat pump: yes							
Water-to-water heat pump: no							
Brine-to-water heat pump: no							
Low-temperature heat pump: n	0						
Equipped with a supplementar	y heater: no						
Heat pump combination heater	: yes						
The parameters are declared fo	r average climat	tic condition	15				
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output	Prated	13	kW	Seasonal space heating energy efficiency	$\eta_S$	133	%
Declared capacity for heating f 20°C and outdoor temperature	or part load at i Tj	ndoor temp	erature	Declared coefficient of perform load at indoor temperature 20°C	ance or primar and outdoor t	y energy ratemperature	atio for part e T <sub>j</sub>
$T_j = -7 ^{\circ}\mathrm{C}$	Pdh	11.5	kW	$T_j = -7 ^{\circ}\mathrm{C}$	COPd	1.99	_
$T_j = +2 ^{\circ}\mathrm{C}$	Pdh	7.2	kW	$T_j = +2 ^{\circ}\mathrm{C}$	COPd	3.34	_
$T_j = +7 ^{\circ}\mathrm{C}$	Pdh	4.7	kW	$T_j = +7 ^{\circ}\mathrm{C}$	COPd	4.61	_
$T_{j} = +12 ^{\circ}\text{C}$	Pdh	3.3	kW	$T_{j} = +12 ^{\circ}\text{C}$	COPd	6.07	_
$T_j$ = bivalent temperature	Pdh	11.5	kW	$T_i$ = bivalent temperature	COPd	1.99	_
$T_j$ = operation limit temperature	Pdh	10.3	kW	$T_j$ = temperature operating limit	COPd	1.80	_
for air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	Pdh	-	kW	For air-to-water heat pumps: $T_j = -15 \text{ °C}$ (if TOL < - 20 °C)	COPd	-	_
Bivalent temperature	$T_{_{biv}}$	-7	°C	For air/water heat pumps: tem- perature operating limit	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc or PERcyc	-	-
Degradation co-efficient	Cdh	0.9	_	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other	r than active mod	e		Supplementary heater			
OFF mode	P <sub>OFF</sub>	0.014	kW	Rated heat output	Psup	2.67	kW
Thermostat-off mode	P <sub>TO</sub>	0.024	kW				
Standby mode	$P_{_{SB}}$	0.014	kW	Type of energy input	Electrical		
Crankcase heater mode	Р <sub>СК</sub>	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors		4650	m³/h
Sound power level, indoors/outdoors	$L_{_{W\!A}}$	-/68	dB	For water-/brine-to-water heat			m <sup>3</sup> /h
Annual energy consumption	$Q_{\scriptscriptstyle HE}$	7895	kWh or GJ	rate, outdoor heat exchanger			111 / 11
For heat pump combination heater	:				-1		
Declared load profile		XL		Water heating energy efficiency	$\eta_{_{wh}}$	97	%
Daily electricity consumption	$Q_{_{elec}}$	8.394	kWh	Daily fuel consumption	$Q_{fuel}$	-	kWh
Annual electricity consumption	AEC	1728	kWh	Annual fuel consumption	AFC	-	GJ
Contact information	IMMERGAS S	S.p.A via Cis	a Ligure n.95	- 42041 Brescello (RE) Italy			

#### Additional DHW data

Model: Magis M16 + Omnistor 300												
Heat pump with storage tank												
Declared Load Profile	XL		Water heating energy efficiency		$\eta_{wh}$	96.9	%					
Daily electrical energy consumption	Qelec	8.394	kWh		COP (at 7°C)	COPDHW	2.27					
Annual electrical energy consumption	AEC	1728	kWh		Thermostat temperature	-	50	°C				
Standby Heat Loss	<b>P</b> <sub>stby</sub>	5.70	kWh /day	kWh /day	Reference hot water temperature	$ heta'_{WH}$	50.85	°C				
Storage volume	$V_m$	268.1	L		Volume of mixed water at 40°C	V <sub>40</sub>	340.7	L				
Test data as per EN 16147:2017												
Contact information IMMERGAS S.p.A via Cisa Ligure n.95 - 42041 Brescello (RE) Italy												