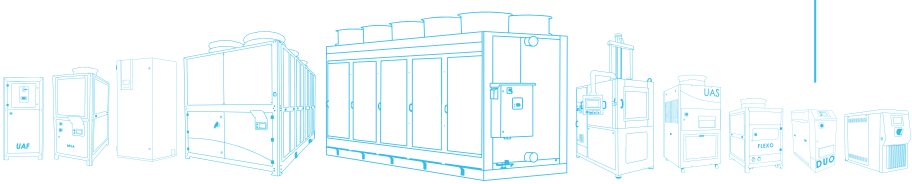
Mecalor

The evolution continues!

More than
25.000
Chillers in
Operation

TECHNOLOGY
IN CHILLER



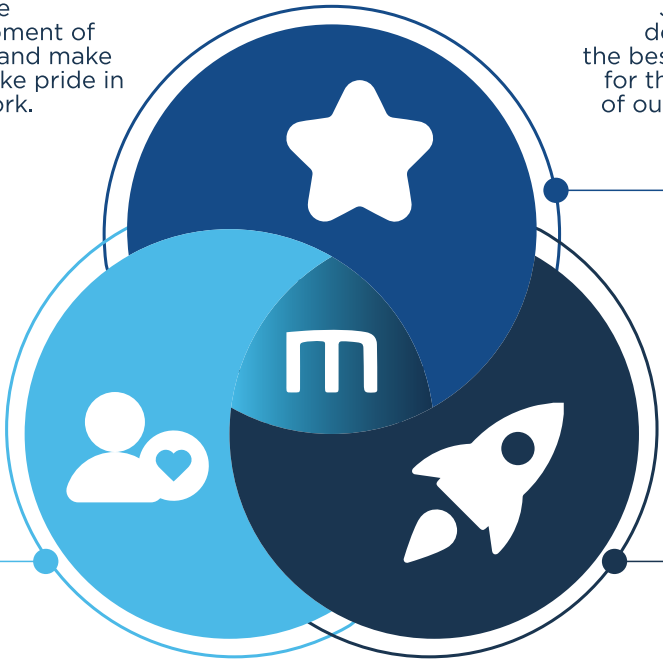
Quality Policy

Prefessional Happiness

Seek the development of people and make them take pride in their work.

Client's Satisfaction

Just settle down when the best solution for the success of our clients is achieved.



Continuous Innovation

To be recognized as a technology company, reference in innovation and pioneerism.

OUR CLIENTS

Plastics Industry

Auto Industry

Food Industry

Hospital Market

PHILIPS sense and simplicity
SIEMENS Healthineers
VARIAN medical systems
GE Healthcare
Canon
OSWALDO CRUZ
HOSPITAL ISRAELITA ALBERT EINSTEIN
HOSPITAL SÍRIO-LIBANÊS
Hospital do Coração HCor Associação do Sanatório Sírio São Paulo
allar médicos à frente
HERMES PARDINI
fleury
A.C.Camargo Cancer Center
dasa
REDE D'OR

Pharmaceutical Industry

gsk
MERIAL
Eurofarma
BAYER
achē

Home Appliances

Metalfrio
ELGIN
Electrolux
Whirlpool
HITACHI Inspire the Next

Mechanical and Metallurgical Industry

VALE
CSN
USIMINAS
GERDAU
BRASILATA

Datacenters

HostDime
MAGICCOMP
green 4T
Claro
america net 85

Others

ALSTOM
BASF The Chemical Company
Colgate
EMBRAER
FABER CASTELL
Klabin
GE Power
SUZANO PAPEL E CELULOSE
AVON
ZEISS

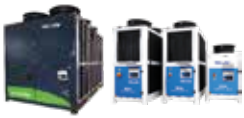
PLASTICS TRANSFORMATION

Thermal control in deformation of plastics

Precise temperature control is essential in the plastics industry.
For every application and raw material processed there is an ideal cooling or heating solution.

	APLICATIONS								
	Injection	Breath	Balloon extrusion	Flexography	Tube extrusion	Sheet extrusion	Lamination	Cut and Weld	Thermoforming
Chiller	●	●		●	●	●	●	●	●
DryCooler	●	●							
TermoRegulador	●	●		●		●	●		●
TermoChiller	●	●							
Dry Air			●						
Cold Air	●	●							
TermoChiller				●					

Modular and Compact DryCooler



Chiller Line

Dry and cold Air Units

140ºC

ThermoRegulator

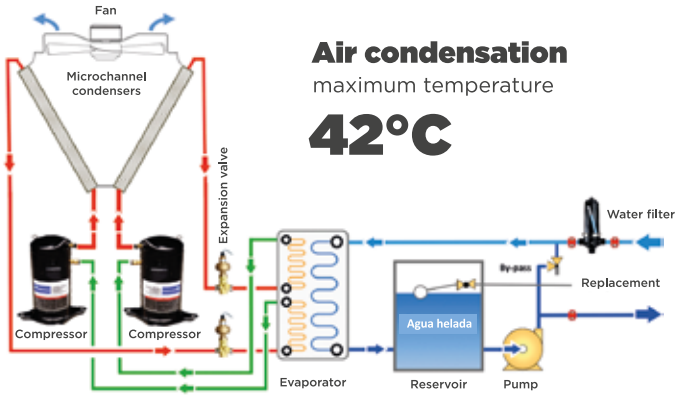
ThermoChiller

Heat Exchanger

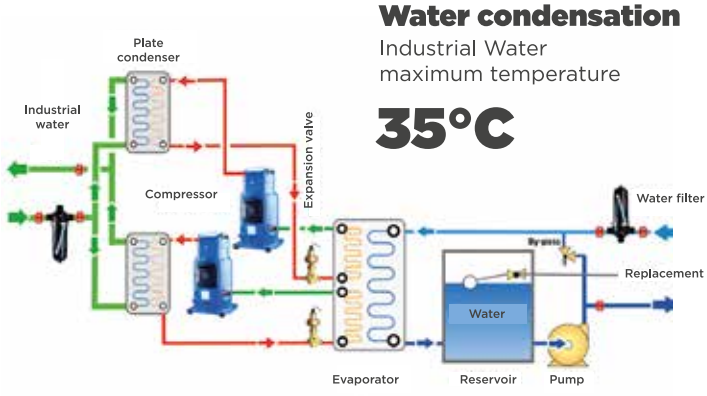
COOLING PROCESSES

Chiller

Chillers operate in a refrigerator cycle to cool the water.
The heat extracted from the process by the water, added to the power of the compressors, is dissipated through the flow of ambient air or industrial water.



Air condensation
maximum temperature
42°C



Water condensation
Industrial Water
maximum temperature
35°C

MiniChiller MCA

- Refrigeration capacity from 3 to 9.000 kcal/h.
- Easy-to-operate microprocessor control.
- Economy and ease installation.

Compact Chiller MSA

- Refrigeration capacity from 5 to 100.000 kcal/h.
- CLP with touch screen and full fault diagnosis.
- Double refrigeration circuit from 30.000 kcal/h.

- Adjustable chilled water temperature from 5 to 25°C.
- Eco-friendly coolant R-410A that does not harm the ozone layer.
- Integrated stainless steel reservoir and pump.
- Air-cooled with high-efficiency microchannel heat exchangers.

Model[1]	Rated Power[2]	Steady Power[3]	Power Installed[4]	Dimensions in millimeters			Process Pump		Water tank	Condenser Air	Pipe Diameter	Weight
	kcal/h	kW	kVA	Width	Length	Heigth	m^3/h	mca	liters	m^3/h	*Condens. Process*	kg
MCA-3	3.000	2,0	3,0	483	656	868	0,9	23	20	2.400	3/4"	150
MCA-5	5.000	2,5	3,8	483	666	868	1,4	30	20	2.400	3/4"	165
MCA-9	9.100	3,5	6,8	565	990	1.058	2,3	24	27	3.350	1"	180
MSA-5	6.610	3,5	7,0	670	920	1.285	1,5	30	30	7.500	1"	180
MSA-9	10.040	4,6	9,1	670	920	1.285	1,5	30	30	7.500	1"	200
MSA-15	16.400	6,3	11,4	802	951	1.382	3,2	30	30	8.000	1.1/2"	300
MSA-22	22.400	8,8	14,7	860	1.258	1.540	6,2	30	60	8.000	1.1/2"	370
MSA-30	30.500	10,5	19,2	831	1.363	1.945	6,2	30	60	8.600	1.1/2"	430
MSA-45	43.400	17,6	27,8	831	1.663	1.945	16,4	30	120	17.200	2"	500
MSA-60	65.800	23,4	37,7	831	1.663	1.945	16,4	30	120	16.000	2"	525
MSA-75	78.000	25,6	44,2	831	2.233	1.945	16,4	30	110	24.000	2"	600
MSA-100	101.500	36,9	62,5	831	2.520	2.250	24,5	37	110	32.100	3"	720

1. Dual independent cooling circuit is standard from MSA-30 onwards.
2. Cooling capacities valid for chilled water leaving at 10°C, returning at 14°C and ambient temperature of 27°C.
3. Active power with chiller operating at 100% capacity with chilled water at 10°C.
4. Total power for dimensioning the electrical installation must not be considered as energy consumption. For data on customized equipment, consult Mecalor Engineering.

Compact Chiller MSW

- Refrigeration capacity from 5 to 75,000 kcal/h.
- Adjustable chilled water temperature from 5 to 25°C.
- Ecological coolant R-410A.
- Integrated stainless steel reservoir and pump.
- CLP with touch screen and full fault diagnosis.
- Double refrigeration circuit from 30,000 kcal/h.

Water condensation
with high efficiency
plate heat exchanger

Model[1]	Rated Power[2]	Steady Power[3]	Power Installed[3]	Dimensions in millimeters			Process Pump		Water tank	Condenser Air	Pipe Diameter		Weight
	kcal/h	kW	kVA	Width	Length	Heigth	m³/h	mca	liters	m³/h	*Condens.*	*Process*	kg
MSW-5	6.430	2,4	5,5	670	920	1.031	1,5	32	30	1,5	1"	1"	180
MSW-9	9.820	3,4	7,6	670	920	1.031	3,1	26	30	2,3	1"	1"	200
MSW-15	16.850	4,8	9,9	802	900	1.406	4,0	29	65	3,9	1.1/2"	1.1/2"	300
MSW-22	23.000	6,9	13,2	802	900	1.406	6,2	30	80	5,5	1.1/2"	1.1/2"	370
MSW-30	32.800	8,7	17,7	828	1.250	1.573	6,2	30	115	7,6	1.1/2"	1.1/2"	500
MSW-45	44.000	13,7	25,0	828	1.250	1.573	11,1	41	115	10,6	1.1/2"	1.1/2"	700
MSW-60	70.800	18,9	34,5	828	1.250	1.573	16,0	30	215	16,2	2"	2"	800
MSW-75	81.400	21,4	39,9	830	1.250	1.573	16,0	30	215	18,2	2"	2"	850

1. Dual independent cooling circuit is standard from MSW-30 onwards.
2. Cooling capacities valid for cold water leaving at 10°C, returning at 14°C and industrial water at 30°C.
3. Active power with chiller operating at 100% capacity with chilled water at 10°C4.
4. Total power for dimensioning the electrical installation must not be considered as energy consumption. For data on customized equipment, consult Mecalor Engineering.

Industrial Chiller RLA

- Refrigeration capacity from 130,000 to 850,000 kcal/h.
- Adjustable chilled water temperature from 5 to 25°C.
- Ecological coolant R-410A.
- Integrated stainless steel reservoir and pump.
- CLP with touch screen and full fault diagnosis.
- Double independent cooling circuit.

Model[1]	Rated Power[2]	Steady Power[3]	Power Installed[3]	Dimensions in millimeters			Process Pump		Water tank	Condenser Air	Pipe Diameter	Weight
	kcal/h	kW	kVA	Width	Length	Heigth	m³/h	mca	liters	m³/h	*Condens. Process*	kg
RLA-130	126,800	47,5	75,0	1,143	2,604	2,619	33,0	42	290	43,000	3"	1,500
RLA-170	166,600	55,8	91,9	1,873	2,570	2,280	36,4	37	160	69,000	3"	1,400
RLA-210	212,000	72,1	118,8	1,873	2,570	2,280	60,0	30	160	69,000	3"	1,450
RLA-260	252,800	88,3	145,8	2,396	2,576	2,759	66,0	30	420	86,000	4"	2,000
RLA-330	326,000	107,9	187,7	2,396	3,741	2,759	95,0	30	420	129,000	4"	2,500
RLA-400	414,000	139,0	231,8	2,396	3,741	2,759	95,0	30	420	129,000	4"	3,900
RLA-500	492,600	161,6	298,2	2,396	5,071	2,759	145,0	30	730	172,000	6"	4,400
RLA-620	627,000	205,2	350,9	2,396	6,236	2,759	145,0	30	730	215,000	6"	5,200
RLA-800	795,000	270,6	429,2	2,396	7,401	2,759	198,0	30	780	258,000	6"	6,000

1. All models in the RL line have dual independent cooling circuits.
2. Cooling capacities valid for chilled water leaving at 10°C, returning at 14°C and ambient temperature of 30°C.
3. Active power with chiller operating at 100% capacity with chilled water at 10°C.

Industrial Chiller RLW

- Refrigeration capacity from 80,000 to 850,000 kcal/h.
- Compact and low noise.
- Ecological coolant R-410A.
- Maximum energy efficiency.
- Integrated stainless steel reservoir and pump.
- CLP with touch screen and full fault diagnosis.
- Integrated water filter for evaporator and condenser.
- Water condensation with plate heat exchanger with optional adjustable water heating from 40 to 50°C.

Sturdy
construction
with **fairing**

Model[1]	Rated Power[2]	Steady Power[3]	Power Installed[3]	Dimensions in millimeters			Process Pump		Water tank	Condenser Air	Pipe Diameter		Weight
	kcal/h	kW	kVA	Width	Length	Heigth	m^3/h	mca	liters	m^3/h	*Condens.*	*Process*	kg
RLW-100	105,000	29,0	56,0	1,327	1,801	2,107	24,7	36	280	24,1	3"	3"	1,300
RLW-130	133,200	38,3	69,7	1,327	1,801	2,107	33,0	42	280	31,4	3"	3"	1,500
RLW-170	167,400	46,7	85,5	1,327	1,801	2,107	36,4	37	280	39,7	3"	3"	1,600
RLW-210	221,400	60,0	108,8	1,327	1,801	2,107	60,0	30	280	52,7	3"	3"	1,700
RLW-260	264,400	74,3	132,4	2,160	2,606	2,425	66,0	30	720	62,7	4"	4"	2,000
RLW-330	333,200	92,3	167,6	2,160	2,606	2,425	95,0	30	720	78,9	4"	4"	2,500
RLW-400	441,000	117,4	211,8	2,160	2,606	2,425	95,0	30	720	101,4	4"	4"	3,900
RLW-500	499,800	138,0	271,4	2,160	2,606	2,425	145,0	30	720	115,7	6"	6"	4,400
RLW-620	648,000	174,0	317,5	2,160	2,606	2,425	145,0	30	720	152,3	6"	6"	5,200

1. All models in the RL line have dual independent cooling circuits.
2. Cooling capacities valid for chilled water leaving at 10°C, returning at 14°C and ambient temperature of 30°C.
3. Active power with chiller operating at 100% capacity with chilled water at 10°C.

ALUDRY | MODULAR

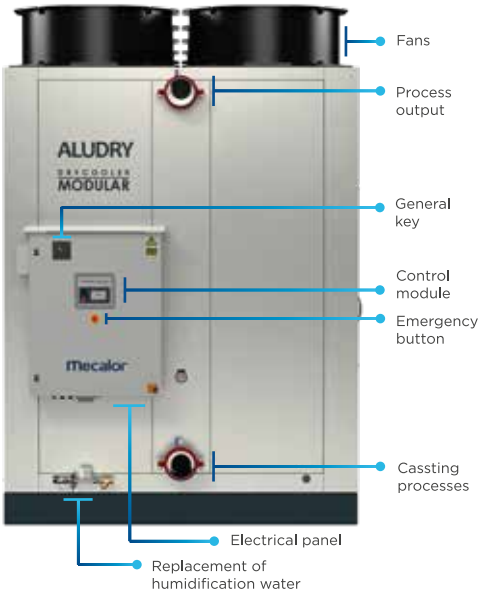
DryCooler is the eco-friendly replacement for conventional cooling towers.

Numerous industrial processes require cooling water in a temperature range considered "warm" (30°C to 35°C) and, for such a process, **AluDry Mecalor** is the best cost-effective option on the market.

Saving water and electricity, in addition to reducing monthly expenses, significantly reduces impacts on the environment.

APPLICATIONS

- PLASTICS
- BEVERAGES AND FOOD
- CHEMISTRY AND PETROCHEMISTRY
- DATA CENTER
- MACHINES AND TOOLS
- PHARMACEUTICAL
- HVAC
- RUBBER



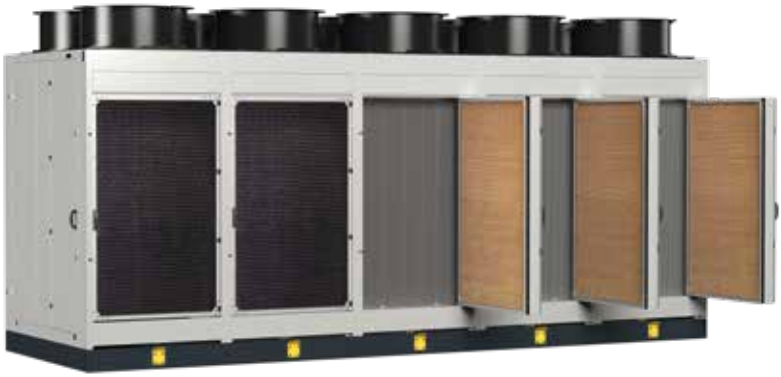
Download our content and learn more about **Aludry Mecalor.**

Return on investment

DryCooler operating cost is much lower compared to cooling towers. This makes the payback quite attractive, even considering a larger initial investment.

Calculation of Return on Investment (Payback)

Installation location		São Paulo/ SP		Notes
Required cooling capacity	kW	1.200		Each 120 kW of industrial water supplies approximately 4 injection machines of 300 Ton.
Cooling water flow	m^3/h	188		Based on T. wet bulb = 24 o C and (T. in - T. out) = 5 o C
Operating Regime	h/ month	617		6 days 24 hours a week
Water provided by the concessionaire	R$ / m^3	7,21		Average fare Brazil
Concessionaire's sewage fee	R$ / m^3	5,43		Average fare Brazil
DryCo Tower Unit Cost Variable	**Unit**	**Mast**	**DryCooler**	**Observations**
Replacement water	% flow rate	1,9%	0,06%	DryCooler operating with humidification for 8 hours/day on 200 days a year
Replacement water cost	R$/month	27.815	878	Based on cost of water and sewage and amount of replaacement water
Water treatment	R$/month	3.300	104	Survey carried out with companies specializing in water treatment
Maintenance	R$/month	42	124	Replacement of the DryCooler evaporative panel and the tower's filling
Cleaning of heat exchangers	R$/month	3.000	0	Labor to remove scale deposited by tower water
Electricity	R$/month	2.072	7.776	Electricity of R$ 0.30 / kWh and 70% utilization factor for the DryCoole
Total operating cost	R$/month	36.228	8.882	Total monthly cost for operating each equipment
Estimated Initial Investment	R$	60.000	570.000	Price of equipment in operation
Payback Term	months	18,6		Time to recoup the difference in investment between the Tower and



TermoChiller DUO

- Water condensation with plate heat exchanger.
- Water filter for evaporator and condenser.
- High flow and pressure of water for injection and blowing.
- Integrated stainless steel reservoir and pumps.
- Low (Δ T) for greater precision of the parts produced.
- Two-zone temperature control from 10 to 90°C.
- Water cooling and heating.
- Ecological coolant R-410A.

CLP with touch screen
that communicates
with the injection
molding machine
or blower.

Model	Rated Power[1]	Heating power in	Steady Power[2]	Power Installed[3]	Dimensions in millimeters			Process Pump[4]		Condenser water	Pipe Diameter		Weight
	kcal/h	kW	kW	kVA	Width	Length	Heigth	m^3/h	mca	m^3/h	*Process*	*Condens.*	kg
DUO 9/6	9.000	2 x 6	5,4	17,4	561	1.248	1.379	1,6	40	2,5	1"	3/4"	250
DUO 15/6	15.000	2 x 6	7,2	26,8	561	1.248	1.379	3,2	44	3,5	1"	3/4"	300
DUO 22/9	22.000	2 x 9	12,0	38,8	561	1.248	1.379	6,8	40	5,5	1.1/2"	1.1/4"	350
DUO 35/9	35.000	2 x 9	19,6	45,5	561	1.248	1.379	6,8	40	9,0	2"	1.1/4"	400
DUO 45/12	45.000	2 x 12	24,3	54,4	802	1.991	1.867	12,0	39	10,0	2"	1.1/2"	600
DUO 60/12	60.000	2 x 12	28,3	64,9	802	1.991	1.867	12,0	39	15,0	2"	2"	900
DUO 100/18	100.000	2 x 18	39,5	107,7	802	1.991	1.867	23,9	40	24,0	2.1/2"	2.1/2"	1.200

1. Capacities valid for water leaving at 10°C and condensing water at 35°C.
2. Electric power in valid regime for equipment operating at 100% of capacity without. heating resistors and with chilled water coming out at 10°C.
3. Total power for dimensioning the electrical installation must not be considered as energy consumption.
4. Valid data for each of the two process pumps.

Thermoregulator

- Direct or indirect cooling
- Stainless steel electrical resistors
- Precise control with ±0.5°C stability
- Stainless steel pump and hydraulic circuit
- Water or oil heating with power from 9 to 50 kW
- Adjustable oil temperature up to 200°C (optional up to 300°C)
- Adjustable water temperature up to 90°C (optional up to 150°C)
- High reliability two-way proportional valve

CLP with touch screen
that communicates with
the injection molding
machine or blower

Model	Heating Potency [1]	Steady Power[2]	Power Installed[3]	Dimensions in millimeters			Process Pump		Pipe diameter		Weight
	kW	kW	kVA	Width	Length	Heigth	m^3/h	mca	*Process*	*Cooling*	kg
TMR-9	9	0,8	11	300	820	591	2,0	28	1"	1/2"	50
TMR-12	12	0,8	14	300	820	591	2,0	28	1"	1/2"	50
TMR-18	18	1,1	20	300	820	591	5,5	30	1.1/2"	3/4"	50
TMR-21	21	1,1	23	329	672	1.173	5,5	30	1.1/2"	3/4"	80
TMR-30	30	1,1	32	329	672	1.173	5,5	30	1.1/2"	3/4"	80
TMR-42	42	2,6	47	550	850	1.100	16,5	30	2"	1"	200
TMR-50	50	2,6	55	550	850	1.100	16,5	30	2"	1"	200

1. Cooling capacity depends on operating conditions.
2. The TMR is sized to achieve an O T of up to 2°C between cold source and process water.
3. Power valid for equipment operating/cooling without heating resistor.
4. Dimensions valid only for TMR and water For oil TMR, consult Mecalor.

Flexo thermochiller

- Adjustable temperature from 5 to 20°C for the calenders and 25 to 50°C for the central drum.
- Single 20,000 kcal/h model for 4 to 12 color flexographic printers.
- Air-cooled with high-efficiency microchannel heat exchangers.
- Precise central drum control with ±0.5°C stability.
- Fully stainless steel pump and hydraulic circuit.
- Temperature control in two independent zones.

Optimized flow
to ensure **print quality and speed**

Modelo	Cooling[1]	Heating Power in	Regime[2]		Dimensions in millimeters		Process Pump[3]		Piping	Weight
	kcal/h	kW	kW	Width	Length	Heigth	m³/h	mca	Process	kg
FLEXO-20/9	22.400	12	9,3	863	1.258	1.539	5,8	20	1.1/4"	450

1. Valid capacity for process water leaving at 15°C and ambient temperature of 40°C
2. Power valid for equipment operating at 100% of capacity with chilled water at 10°C
3. Data valid for both process pumps.

UAF Cold Air Unit

- Remote air condenser option (split type).
- Independent units for air ring and IBC.
- Water condensation with plate heat exchanger.
- Can be installed on the extruder frame.
- Air temperature control with ±0.5°C accuracy.
- TFits monolayer or COEX extruders up to 7 layers.
- Air temperature from 5 to 25°C to ensure productivity
- Balloon extruders with production of up to 1000 kg/h of HDPE/LDPE

Maximum energy
efficiency without using
external chilled water

Heat exchanger TC

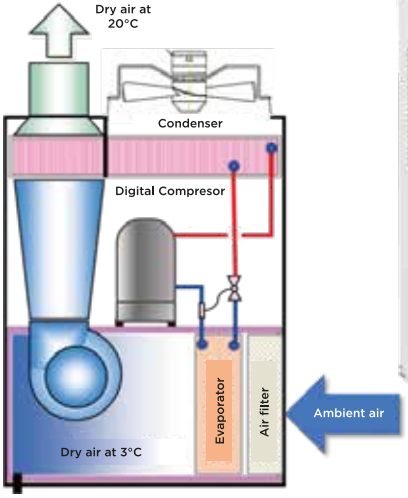
Modelo	Cold Air Flow[1]	Maximum plastic production[2]	Steady Power[3]	Dimensions in millimeters			Diameter inlet and outlet of air	Ice water	Condensation Water	Diameter of water connections	Weight
	m^3/h	kg/h	kW	Width	Length	Heigth	inches	m^3/h	m^3/h	inches	kg
TC-50	500	80	-	694	1.066	550	6"	2	-	1.1/2"	50
TC-200	2.000	250	-	899	1.235	741	8"	7	-	1.1/2"	80
TC-400	4.000	500	-	1.174	1.232	965	8"	15	-	2"	110
TC-700	7.000	700	-	1.332	1.334	1.155	10"	19	-	2"	200
TC-1000	10.000	1.000	-	1.305	1.398	1.305	12"	25	-	2.1/2"	350
UAF-A-1500	1.500	150	694	950	1.275	1.765	8"	-	-	-	350
UAF-A-2500	2.500	250	899	950	1.275	1.765	8"	-	-	-	450
UAF-A-4000	4.000	500	1.174	1.250	1.275	2.185	10"	-	-	-	800
UAF-A-6000	6.000	700	1.332	1.250	1.275	2.185	10"	-	-	-	950
UAF-W-1500	1.500	150	6,5	950	1.276	1.765	8"	-	7	1.1/2"	350
UAF-W-2500	2.500	250	11,6	950	1.200	1.765	8"	-	11	1.1/2"	450
UAF-W-4000	4.000	500	18,1	1.250	1.282	2.185	10"	-	14	3"	800
UAF-W-6000	6.000	700	23,4	1.250	1.282	2.185	10"	-	24	3"	950

1. Cold Air Unit (UAF) operates with adjustable air temperature from 5 to 20°C.
2. Heat exchanger (TC) operates with air 5°C above the available chilled water temperature.
3. Sizing based on average production of LDPE plastic film with air at 15°C, valid for air ring.
4. Active electrical power consumed from the UAF operating at 100% of capacity.

Dry Air Unit UAS

- 40 to 50% higher energy efficiency when compared to the use of desiccant rotor (chemical).
- Allows chilled water down to -5°C in injection and blow molds, without generating condensation in the cavities.
- It can be an individual unit per mold or a dry air plant for a line of machines.
- Refrigerated dehumidification technology with dew point up to 4°C.
- Increases productivity and eliminates stains on molded or blown parts.
- Regeneration (reheating dry air) through the condenser itself.
- Specially developed for injection and blow molds.

Does not require installation of chilled water (chiller) for pre-cooling



Modelo	Dry air flow	Power in Regime [1]	Dimensions in millimeters			Diameter of air exit	Weight
	m³/h	kW	Width	Length	Heigth	Inches	kg
UAS-1000	1.500	7,7	825	1.357	2.123	8"	400
UAS-1500	1.500	10,3	825	1.357	2.123	12"	500
UAS-2000	1.500	16,2	1.125	1.980	2.123	12"	600
UAS-3000	1.500	19,1	1.125	1.980	2.123	12"	850

1. Active power valid for UAS operating at 100% capacity.

AFTER SALES SERVICES

Free and Lifetime Support
Zero cost to troubleshoot over the phone.

Prices
Best value for money on the market.

Clients satisfaction
he average score **achieved** in recent months was **9.1**

Experienced Professionals
Trained technicians with more than 15 years of experience.

Market Leadership
+ 23,000 chillers in operation in Brazil and Latin America.

Workshop car
Equipped with **high-tech** parts and tools.

Mecalor Plans Preventive and Corrective Maintenance Services

SERVICES	BASIC PLAN	PLUS PLAN	TOTAL PROTECTION	CRITICAL MISSION
TELEPHONE SUPPORT	UNLIMITED	UNLIMITED	UNLIMITED	UNLIMITED
PREVENTIVE VISITS	Yes	Yes	Yes	Yes
CORRECTIVE VISITS	—	3	UNLIMITED	UNLIMITED
SPARE PARTS	—	10% of the contract	UNLIMITED	UNLIMITED
SERVICE TIME (SLA)	—	24 hours	12 hours	6 hours

Plans valid for equipment of any brand, subject to feasibility analysis after technical inspection.

Mecalor reform

Your equipment refurbished and guaranteed.

BESPOKE SOLUTIONS

Mecalor has a engineers specialists team to meet the needs and customer requirements, whether in customization of products, in the incorporation of engineering services, complex installations or turn-key projects.

Instalation of the industrial water system with Aludry

Cooling system with Smardt Oil Free Chillers

hydraulics interconection between the system of cold water system

#InstalaMecalor

Follow our YouTube channel

Chiller Oil Free SMARDT

Mecalor, with more than 60 years of experience in complex thermal engineering projects, joins Smardt, world leader of Oil Free compressor technology.
Oil-free, more efficient, and oil-free chillers that serve the most varied markets, with maximum energy efficiency capable of substantially reducing the cost of electricity. In addition to better performance and performance, chiller with Turbocor® compressors reduce the impact on the environment.

We provide service in the whole **Latin America**

Eng. George Szegö, PhD

Mecalor with more than 60 years of experience in complex thermal engineering projects, is exclusively licensed in Latin America by **Smardt**, World Leader in **Chiller Oil Free** technology.

Know more

HB-Therm

World leader in the manufacture of high-performance thermoregulators

Mecalor

Representative Latam

*Except Mexico

Learn more in our website

Mecalor

Brazil

Banduíra Street, 219
São Paulo | SP +55 11 2188 1700
www.**mecalor**.com

Mexico

Carretera Estatal 431, Km 1+300, Bodega 30 +52 1 442 629 1600
Conjunto P Ejido El Colorado, El Marqués, Querétaro . México