



New Isotherm Cooling Units

PRODUCT INFORMATION No. 2018-04

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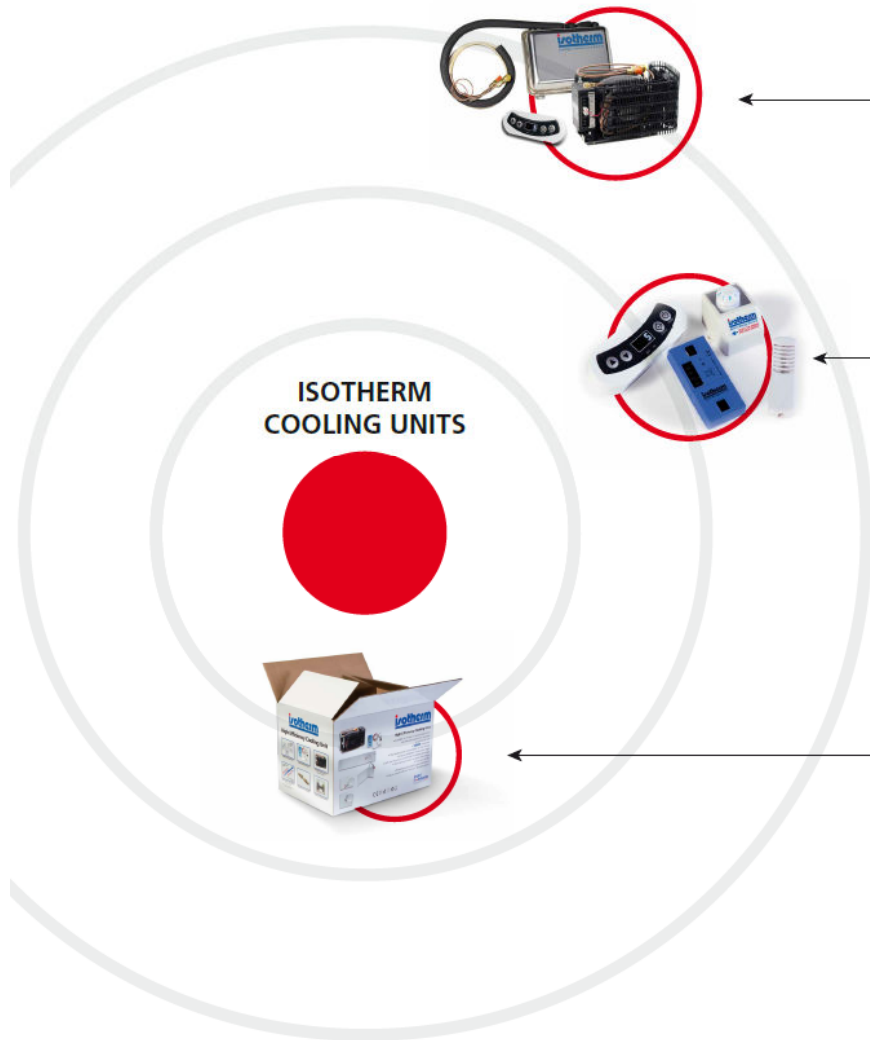
Indel Webasto Marine
Sales & Marketing

- The Indel Webasto Marine product portfolio, with regards to cooling units, is the most technologically advanced and complete available on the market
- To standard product solutions we are offering customized packages that satisfy the highest demands in terms of comfort onboard and installation features
- Over the years, we have set new market standards, thanks to exclusive patented solutions like our SP cooling system, ASU eutectic plate, etc..



- The recently introduced advanced technology control systems as SEC (Smart Energy Control) and ITC (Intelligent Temperature Control) have given us the opportunity to refresh our cooling units portfolio
- Our high quality cooling units program will match any demand, **ranging from 60 to 600 liters**, flexible in product customization
- Customers will be able to select the best control system based on their application needs, with the unique plus of being delivered with a **self-explanatory all-in-one packaging** (on main units' range)
- The worldwide appreciated and award winning **ASU system will be replaced by the new Isotherm ITC+**, capable to perform in consistent advantages Vs. his predecessor
- The product selection will be now based (main matrix customers' choice)
 - **on saving energy factors**
 - **control type**
 - **cooling performances**

AN EASY SOLUTION MATCHING PERFECTLY ANY DEMAND



HIGH QUALITY COOLING UNITS

- SECOP compressors 12/24V - AC/DC as option
- Air cooled or water cooled (Magnum or Self-pumping)
- Multi-purpose: fridge or freezer
- All sizes : from 60 liters up to 600 liters

1

MULTIPLE POWER SAVING OPTIONS

Define your needs, select your Isotherm unit

	Control Interface	Energy Saving	Fast Cooling	Functions
	Mechanical	O	++	
	Digital	++	++	1. Dynamic control of battery charging status 2. Standard energy savings (overcooling, fixed compressor speeds)
	Digital	+++	+	3. Eco mode to extend battery autonomy 4. AC and/or DC applications possible
	Electronic	++++	+++	1. Full modulation of compressor' speed 2. Advanced parameter settings to maximize energy savings 3. High energy savings without need for cold storage device 4. DC application only

2

ALL IN ONE PACKAGING

3in1: cooling unit + evaporator + control in one box
 Colourful, self-explanatory packaging for aftermarket
 Fast installation: re-usable quick couplings and click-on compressor system

3

The brand new product strategy will be updated as follows:



Isotherm Compact cooling units



Isotherm SEC (Smart Energy Control) cooling units



Isotherm ITC (Intelligent Temperature Control) cooling units



Isotherm ITC+ (Intelligent temperature Control with eutectic plate) cooling units



The Isotherm state of the art cooling unit device will no longer be the ASU system, but ITC+ (ITC digital panel with the addition of the eutectic plate)



 + *BENEFITS VS* 



20% HIGHER ENERGY SAVINGS



DIGITAL INTERFACE WITH ACCURATE DISPLAY OF T°C



CONTROL OF DEEP FREEZING TEMPERATURES (<-6°C)



FREEZE PROTECTION (T°C SENSOR IN CABINET)



CHOICE OF VARIOUS BATTERY PROTECTIONS



AC/DC APPLICATIONS POSSIBLE

- Main elements composing it:
 - Ranging from 60 to 600 liters
 - 3 different cooling systems
 - Air cooled
 - Water cooled self pumping (SP)
 - Water cooled Magnum
 - 2 different evaporator types:
 - Standard roll-bond evaporator
 - Eutectic holding plate
 - 2 different control elements:
 - Mechanical thermostat
 - ASU control panel



Standard thermostat



ASU control panel

Cooling Units

Compact Classic



Air cooled

SP

Magnum

ASU



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 - Ranging from 60 to 600 liters
 - 3 different cooling systems
 - Air cooled
 - Water cooled self pumping (SP)
 - Water cooled Magnum
 - 2 different evaporator types:
 - Standard roll-bond evaporator
 - Eutectic holding plate
 - 3 different control elements:
 - Mechanical thermostat
 - Smart Energy Control
 - ITC digital panel



Standard thermostat



*SEC
Smart Energy
Control*



*ITC
Intelligent
Temperature
Control*

Cooling Units







1. High Quality Cooling units

- Nidec (formerly Secop) compressors 12/24V DC
- AC/DC converter kit available as optional
- Air cooled or water cooled with Magnum or SP systems
- Multi purpose, fridge or freezer function
- Widest range ever, from 60 to 600liters



2. Multiple power saving options

- Define your needs, select your Isotherm unit

	Control Interface	Energy Saving	Fast Cooling	Functions
	Mechanical	O	++	
	Digital	++	++	1. Dynamic control of battery charging status 2. Standard energy savings (overcooling, fixed compressor speeds) 3. Eco mode to extend battery autonomy 4. AC and/or DC applications possible
	Digital	+++	+	
	Electronic	++++	+++	1. Full modulation of compressor' speed 2. Advanced parameter settings to maximize energy savings 3. High energy savings without need for cold storage device 4. DC application only

ITC/ECO logic privileges battery savings/protection versus set temperature. Basic overcooling function (2 speeds / fixed ΔT)



SEC logic privileges temperature control and performance. Continuous modulation of compressor' speed to save energy



3. All in *one* packaging

- Cooling unit + evaporator + control system in one box
- Self-explanatory package system, highlighting product features and USP
- Ideal for aftermarket purposes











BD35F*



BD50F



-  350x250 mm Capacity (L): fridge 80, freezer 26
Compressor BD35F
-  240x85x210 mm Capacity (L): fridge 125, freezer 41
Compressor BD35F
-  320x100x230 mm Capacity (L): fridge 150, freezer 50
Compressor BD35F
-  350x130 mm Capacity (L): fridge 60, freezer 20
Compressor BD35F
-  250+110x350 mm Capacity (L): fridge 100, freezer 33
Compressor BD35F
-  400+170x210 mm Capacity (L): fridge 125, freezer 41
Compressor BD35F

-  300x210x60mm Capacity (L): fridge 100, freezer 35
Compressor BD35F*
-  355x280x60mm Capacity (L): fridge 150, freezer 50
Compressor BD50F
-  355x280x90mm Capacity (L): fridge 200, freezer 65
Compressor BD50F



3. All in *one* packaging –coding specifications

P/N	Description	Previous Model
U060X020P17161AA	FRIDGE/FREEZER UNIT 60/20L FLAT EVAPORATOR 350x130mm 12/24V ITC (2005)	2005
U080X026P17161AA	FRIDGE/FREEZER UNIT 80/26L FLAT EVAPORATOR 350x250mm 12/24V ITC (GE80)	GE80
U100X033L17161AA	FRIDGE/FREEZER UNIT 100/33L “L” BENT EVAPORATOR 250+110x350mm 12/24V ITC (2007)	2007
U100X035A17161AA	FRIDGE/FREEZER UNIT 100L/35L HOLDING PLATE 2L 12/24V ITC+ (3201)	3201
U125X041L17161AA	FRIDGE/FREEZER UNIT 125/41L “L” BENT BIG EVAPORATOR 400+170x210mm 12/24V ITC (2010)	2010
U125X041R17161AA	FRIDGE/FREEZER UNIT 125/41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V ITC (2001)	2001
U150X050A17161AA	FRIDGE/FREEZER UNIT 150L/50L HOLDING PLATE 3L 12/24V ITC+ (3701)	3701
U150X050R17161AA	FRIDGE/FREEZER UNIT 150/50L OVAL EVAPORATOR 7,5L 320x100x230mm 12/24V ITC (2301)	2301
U200X065A17161AA	FRIDGE/FREEZER UNIT 200L/65L HOLDING PLATE 6L 12/24V ITC+	

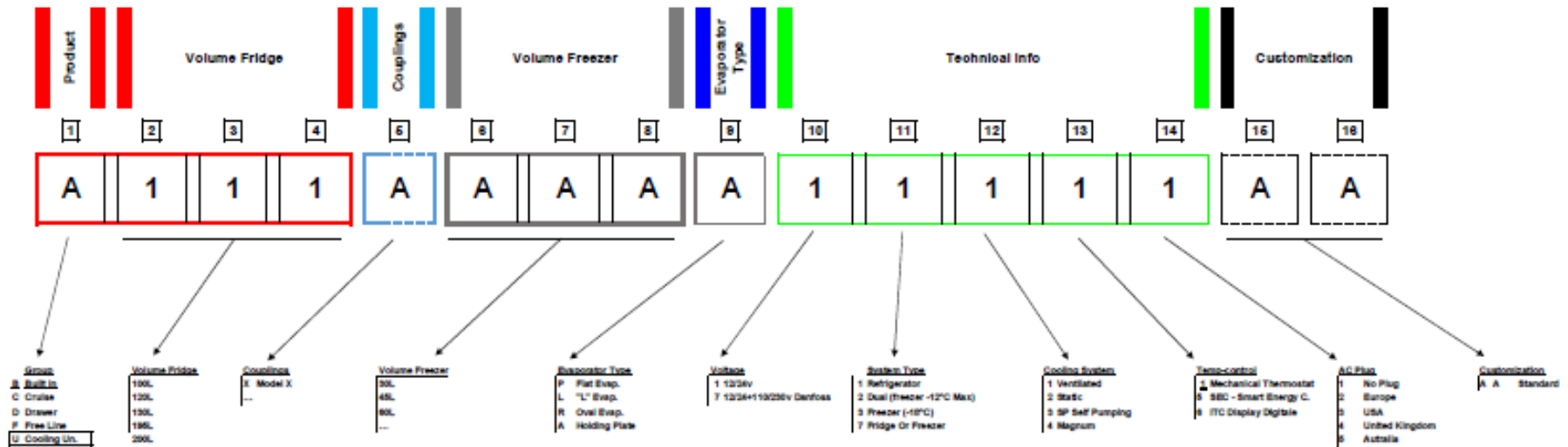
Based on accurate testing, the previous model TP 3701 with 3L holding plate has been resized with a lower volume capacity. A new model added with a bigger 6 litres holding plate for best product performances (200lt. Fridge Vs 65lt. Freezer).



- 1. User friendly coding system*
- 2. Reusable new quick couplings gas connectors*
- 3. "Click-on" bracket system suitable for AC/DC applications*
- 4. ITC digital panel suitable for cooling units*



Legenda:



- Speaking code divided by index groups. Every group gives a clear indication of the product's technical specification.
- Immediate feedback by part number reading, regarding volume and function. Example on standard fridge-cooling unit:
 - **U125**X**000**R11111AA FRIDGE UNIT 125L OVAL EVAPORATOR 4L 240x210x85mm 12/24V (EX 2001)
 - **U125= Fridge unit 125 maximum liters' capacity**
 - **X= new quick couplings**
 - **000= No freezer option**



- Immediate feedback by part number reading, regarding volume and function.
Example on standard freezer-cooling unit:
 - **U000**X**041**R13111AA FREEZER UNIT 41L OVAL EVAPORATOR 4L
240x210x85mm 12/24V (EX 2001)
 - **U000**= No fridge option
 - **X**= new quick couplings
 - **041**= Freezer unit 41 maximum liters' capacity



- Immediate feedback by part number reading, regarding volume and function.
Example on standard Dual-cooling unit:
 - **U125X041R17151AA** FRIDGE/FREEZER UNIT 125L/41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V SEC (EX 2001)
 - **U125= Fridge unit 125 maximum liters' capacity**
 - X= new quick couplings
 - **041= Freezer unit 41 maximum liters' capacity**





New P/N example



Old P/N	Old description	New P/N	Description	Type	Control	Version
42001BA100000	REFR.UNIT COMPACT 125L/V EV. O-SMALL	U125X000R11111AA	FRIDGE UNIT 125L OVAL EVAPORATOR 4L 240x210x85mm 12/24V (2001)	Fridge	Thermostat	12/24 V
42001BA700000	REFR.UNIT AC-DC COMPACT 125L/V EV. O-SMALL 12/24V + KIT AC-DC 115/230V	U125X000R71112AA	FRIDGE UNIT 125L OVAL EVAPORATOR 4L 240x210x85mm 12/24V (2001) + KIT AC-DC 115/230V	Fridge	Thermostat	AC/DC
42001BC100000	REFR.UNIT FREEZER COMPACT 41L/V EV. O-SMALL	U000X041R13111AA	FREEZER UNIT 41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V (2001)	Freezer	Thermostat	12/24 V
42001BC700000	REFR.UNIT FREEZER AC-DC COMPACT 125L/V EV. O-SMALL 12/24V + KIT AC-DC 115/230V	U000X041R73112AA	FREEZER UNIT 41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V (2001) + KIT AC-DC 115/230V	Freezer	Thermostat	AC/DC
42001BS1X0000	REFR.UNIT COMPACT 125L/V EV. O-SMALL SEC	U125X041R17151AA	FRIDGE/FREEZER UNIT 125L/41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V SEC (2001)	Fridge/Freezer	SEC	12/24 V
		U125X041R17161AA	FRIDGE/FREEZER UNIT 125L/41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V ITC (2001)	Fridge/Freezer	ITC	12/24 V
		U125X041R77162AA	FRIDGE/FREEZER UNIT 125L/41L OVAL EVAPORATOR 4L 240x210x85mm 12/24V ITC (2001) + KIT AC-DC 115/230V	Fridge/Freezer	ITC	AC/DC
43201EE100000	REFR.UNIT "3201" ASU 125L TP3201K	U100X035A17161AA	FRIDGE/FREEZER UNIT 100L/35L HOLDING PLATE 2L 12/24V ITC+ (3201)	Fridge/Freezer	ITC	12/24 V
		U100x035A77162AA	FRIDGE/FREEZER UNIT 100L/35L HOLDING PLATE 2L 12/24V ITC+ (3201) + KIT AC-DC 115/230V	Fridge/Freezer	ITC	AC/DC

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- All cooling units will be equipped with the new type of quick couplings. The new quick couplings can be disconnected without any gas leaking like the former versions.
 - In addition to the above, the valve assembly inside the coupling's body can be easily replaced, without welding operations.
 - Remember though that all interventions on the gas circuit must be effected by a technician authorized according to the new European regulation 517/2014 regarding the global warming.
 - **For more detailed information please refer to Indel Webasto Marine Product Info document n.01-2016**



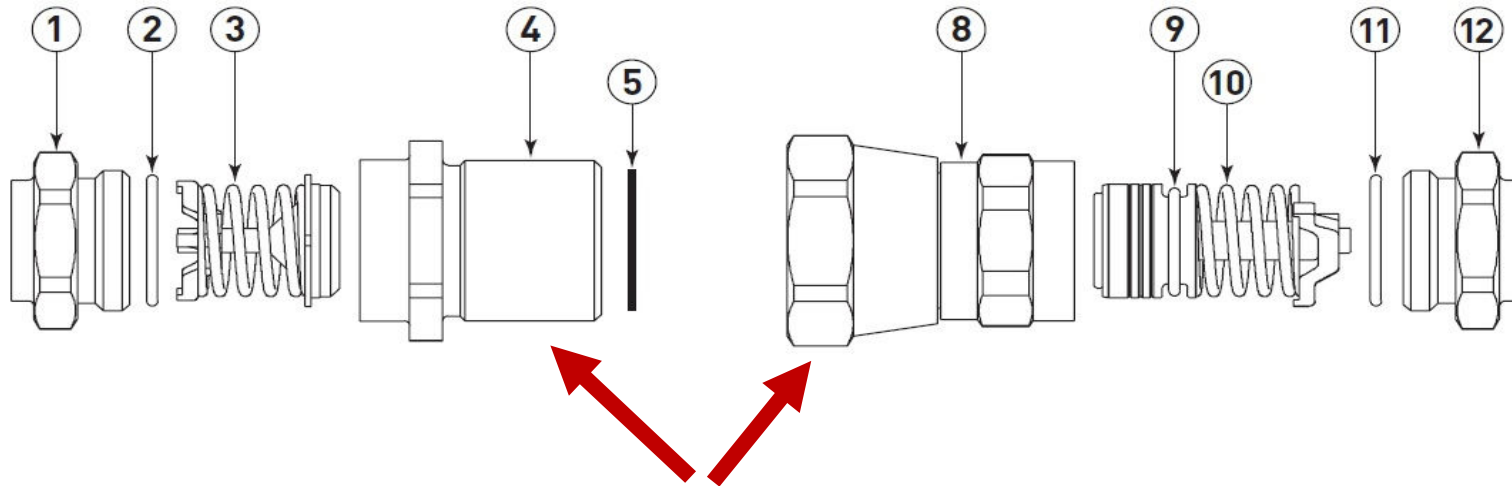
Poppet valve assembly



Valve and sleeve assembly



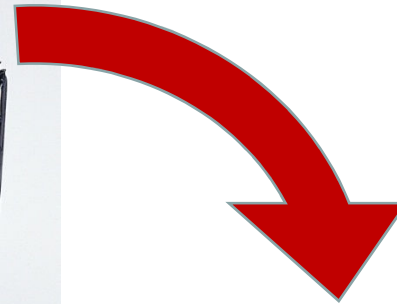
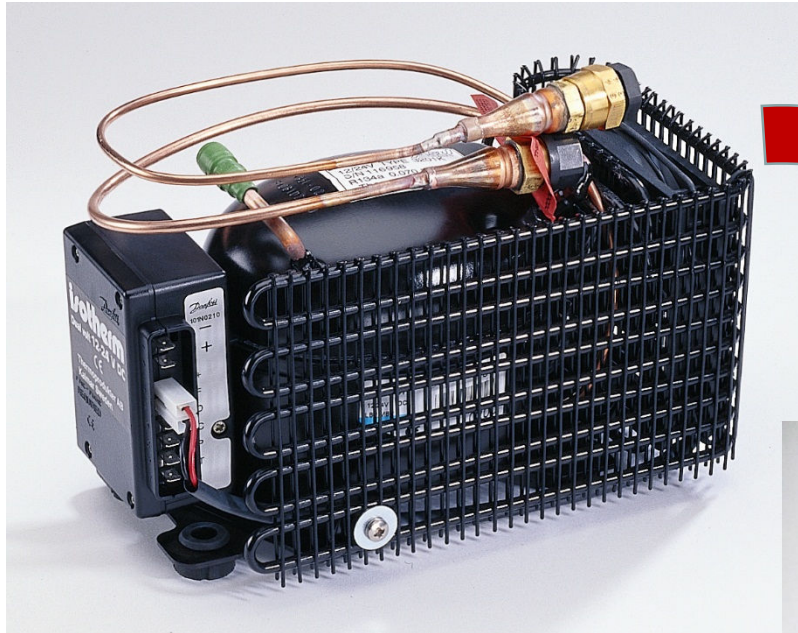
Components



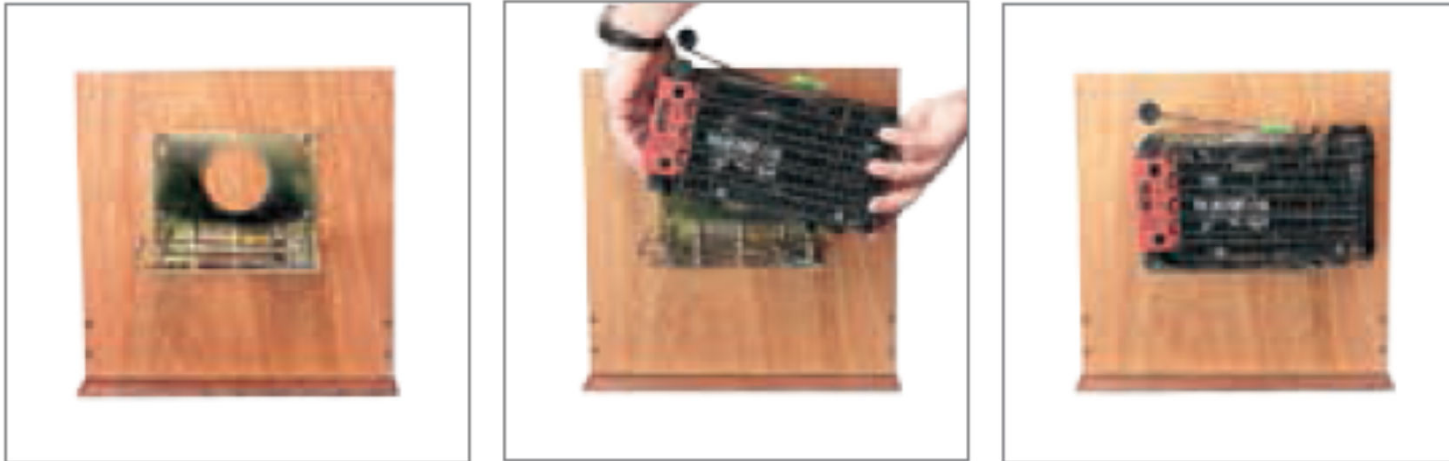
- 1 Tubing Adapter (Brass)
- 2 O-Ring
- 3 Poppet Valve Assembly
- 4 Body
- 5 Gasket Seal
- 8 Union Nut and Body Assembly
- 9 O-Ring
- 10 Valve and Sleeve Assembly
- 11 O-Ring
- 12 Tubing Adapter (Brass)

Screw these two parts to connect the couplings, tightening force from 13,5 to 16 Nm

**Unscrew components 1 from 4 and 8 from 12, only in case of valve replacement.
Caution: unscrewing the above mentioned parts, all the gas will be lost.**

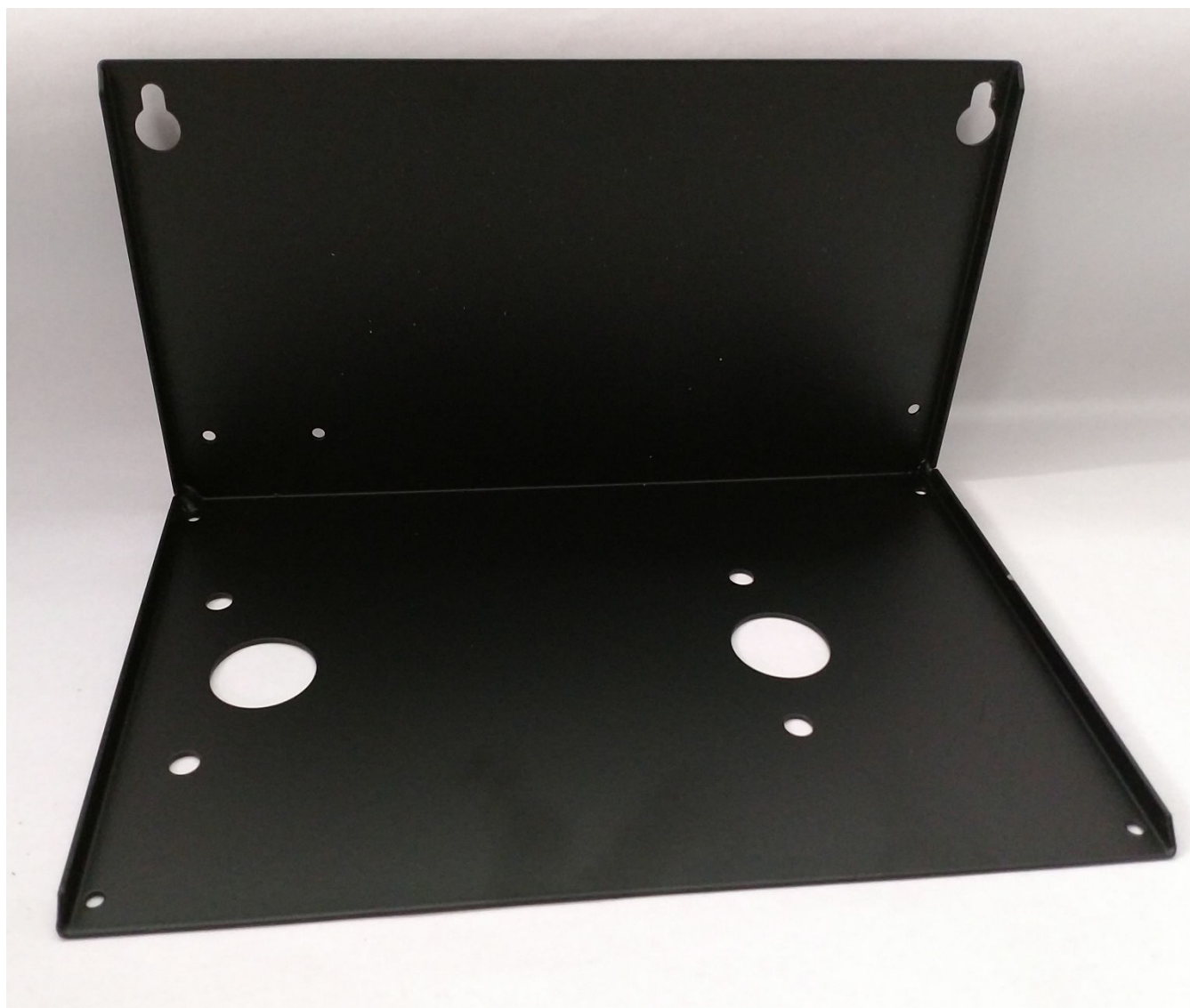


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- Starting from June 2018, a practical «click-on» mounting bracket, suitable for horizontal or vertical mounting, will be included also on AC/DC refrigerating units
 - The black «L» shaped bracket will be replaced by the «click-on» system
 - Take advantage of this easy solution and put the compressor on it with a very simple Click-On movement
 - AC/DC units will be codified with a new P/N that will be communicated as soon as possible
 - **For more detailed information please refer to Indel Webasto Marine Product Info document n.03-2018**

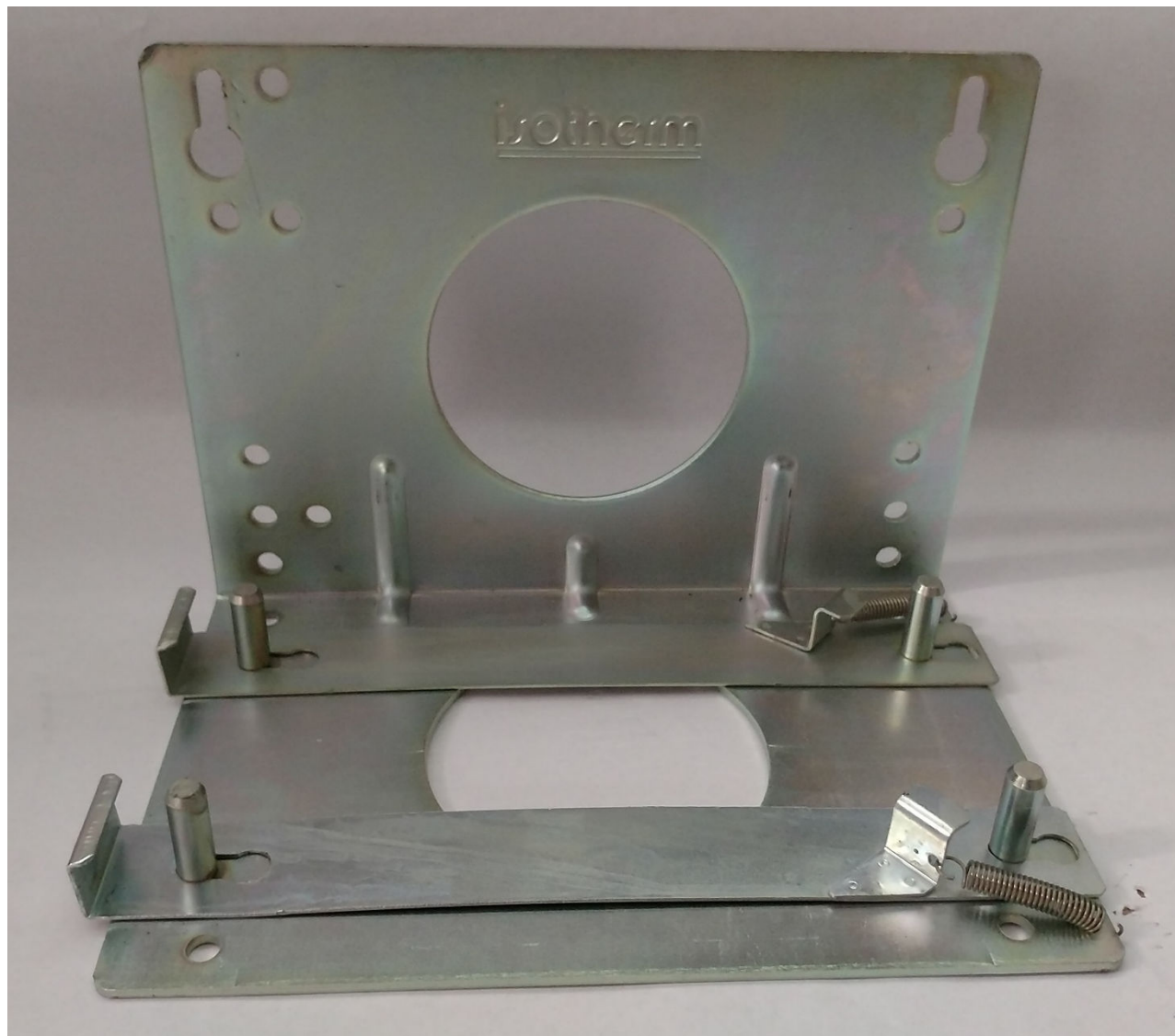


Mounting “Click-On” bracket and compressor - SGE00012AA

Screw the bracket safely to bedding, either horizontal or vertical. Open the lockings by pulling them aside and lift them up slightly. They will then stay there in open. Position lower the compressor to the bracket. The rubber feet shall enter the pins. Push it down a little and the lockings will enter locked position. Check that the compressor is safely locked.



«L» bracket P/N SBE00178AA



«Click-on» bracket P/N SGE00012AA

- The Digital Display clearly and simply displays, controls and regulates the temperature within a refrigerated compartment from the outside.
- Main operating parameters are handled by the micro processor in order to maximize performances.
- Product integration is simple, since the device is fully compatible with control unit IWM P/N SEG00002DA (Secop version 101N0212, for BD35/50F), and IWM P/N SEG00030GA (Secop version 101N0510)
- **For more detailed information please refer to Indel Webasto Marine Product Info document n.09-2017**



The system logic provides as standard smart features like:

- ***Soft Start*** *for effective, safe start-up of the compressor*
- ***Fast Cooling*** *to lower the temperature as quickly as possible*
- ***Over Cooling*** *to accumulate cold when there is a surplus of energy*
 - *When battery is in charging mode (battery charger, engine on, etc.)*
 - *If provided with AC/DC kit when shore power is available*



- **Turning the product on and off** without opening the refrigerated compartment
- **Instant display of the actual temperature** inside the refrigerated compartment
- **Display and/or change of the set temperature** with a simple press of the up and down keys
- Possibility of selecting temperature **indication in Celsius or Fahrenheit**
- Instant **display of main operating faults**
- Possibility of selecting **three different battery protection levels**
- Three different temperature's **offset levels available**

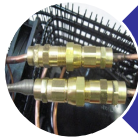


Part Numbers, Description, Prices and Availability

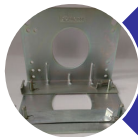
- Indel Webasto Marine cooling units are produced in Italy and must be ordered from the warehouse in Sant'Agata Feltria, Italy
- The switch over will take place from June 2018, progressively based on current stock
- No minimum order quantity is requested
- Delivery time is usually 4 weeks from order; minimum stock-in-trade always available for emergencies



Wide range from 60 up to 600 liters capacity



Reusable quick couplings



Click-on bracket system



Advanced control systems



Multiple energy saving options



All-in-one packaging



Lowest power consumption units available on the market

Thank you for your attention