



**TEMPERING UNITS**  
CATALOGUE



# TRADITION AND MODERNITY



BYDGOSZCZ CITY

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# ABOUT US

Ecoflow Ltd with its production plant located in Bydgoszcz city in Poland specializes in design and production of industrial heating and cooling tempering controllers.

From 2007 company continues development from engineering design office to full production facility gradually increasing independence from outsourcing.

Today Ecoflow Ltd has got a production capacity for over 1000 basic tempering units annually.

The company is active globally but with individual approach for local law and certifications. Ecoflow cooperates with distribution partners and customers from:

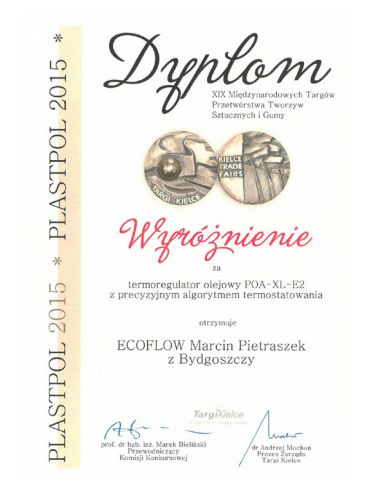
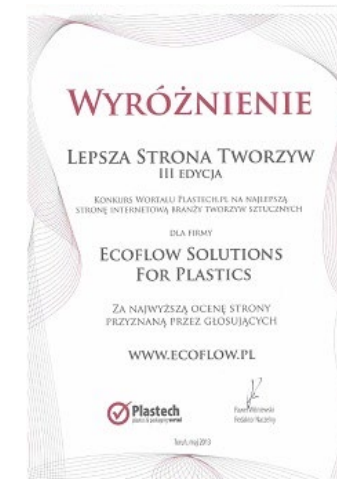
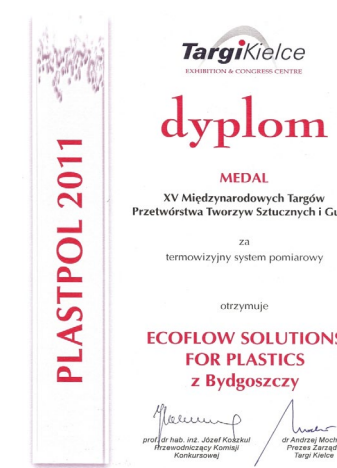
Germany, USA, UK, Russia, Czech rep., Slovak rep., Hungary, Turkey, South africa, India, Vietnam, South Korea and many others.

Our clients include companies in chemical industry particularly from plastics and rubber processing, besides from die casting and food industry.

# AWARDS

Our mission is to increase market share by building strong and long lasting relationship with distributors and customers which is based on high quality products and competitiveness.

Trough many years ecoflow tempering controllers were awarded by international fairs of plastics „Plastpol” for innovation and design.







## DURABILITY AND RELIABILITY

For 10 years Ecoflow designs, develops and produce tempering units. Gained experience brings significant benefits to end users in term of high quality, durability and reliability of delivered products. Our tempering units are made for most demanding work conditions.



# PRODUCTS RANGE

Products range consist of wide spectrum of tempering units in term of process temperatures from +5degc up to +350degc. Company offers cooling units from 1kW up to 1000kW and heating units from 1 kW up to 100kW.

Although standard product range meets demands of majority of industrial applications any individual solutions concerning products customization and configuration is always possible.

Despite our products are designed for industrial applications some of them are also present in chemical research laboratories due to precision and advanced functionality.



# EXTENSIVE RANGE OF POWER AND TEMPERATURE



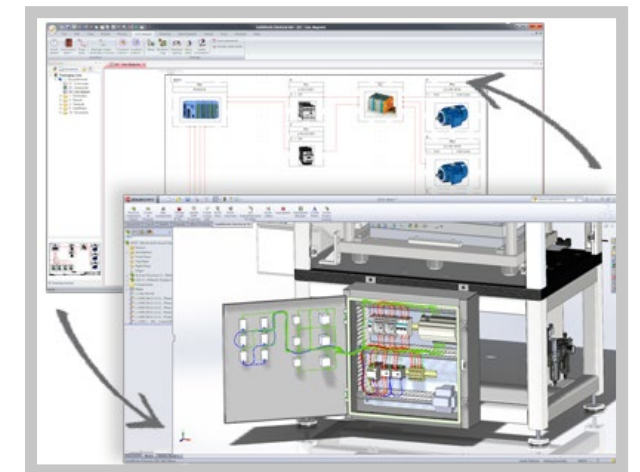
# RESEARCH AND DEVELOPMENT

Implementation of modern computer aided design and simulation software CAD/CAM/CAE significantly improved calculation and design process. However development of high quality products requires many years of hard work, many experiments and humility. In ECOFLOW R&D Department we continuously build our know-how and research for new solutions. The most innovative results are subject of patent protection.



# INNOVATIONS

OUR R&D DEPARTMENT continuously research for quality improvements and manufacturing cost reductions. During many years of engineering design ECOFLOW created knowledge database of technical and technological solutions.



NEED

IDEA

PROJECT

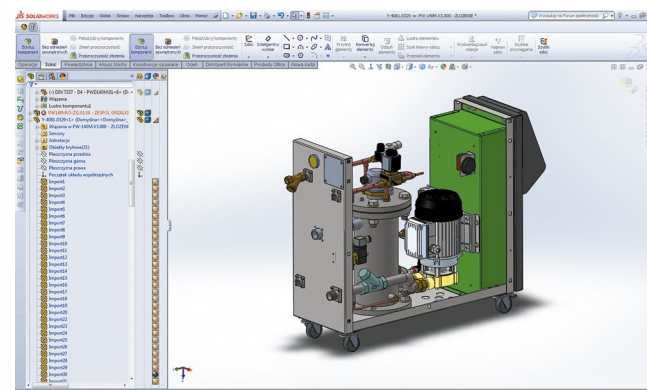
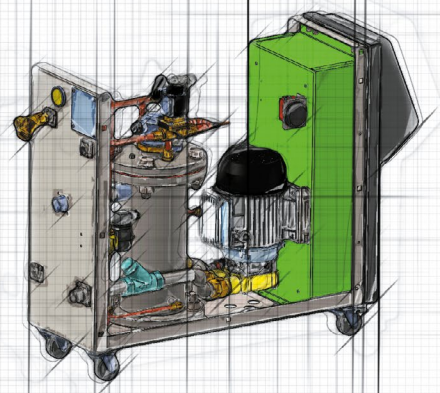
SIMULATION

PROTOTYPE

PRODUCTION

To our major achievements belong innovative S3 controller which includes colour touch panel HMI and modular structure of PLC. This concept enables coverage of complete product range and options within one system platform and with unified user's interface.

ECOFLOW developed also BLUEPOWER system which is energy savings solution and brings up to 70% of electric power reduction. This system was awarded by GOLDEN MEDAL of PLASTPOL exhibitions.



# TEMPERING UNITS SERIES W90 | O150 | O200

90

UNITS		TAW 90	TBW 90	TCW 90	TDW 90	TEW 90
MEDIUM		water	water	water	water	water
HEATING CAPACITY	kW	3/6/9	9/12	12/18/24	12/18/24/ 36/48	12/18/24/ 36/48/72
COOLING CAPACITY	kW	61	84	164	244	320
PUMP TYPE		P1A/P1B	P2A/P2B	P3	P4	P5
MAX FLOW RATE	LPM	40	60/70	100	150	200
PUMP PRESSURE	bar	3,2/5,0*	3,2/5,0*	5,0	5,0	5,0
PUMP MOTOR CAPACITY		0,5	0,5/1,0	2,2	2,8	2,8
MAX TANK VOLUME	L	12	30	40	60	100

150

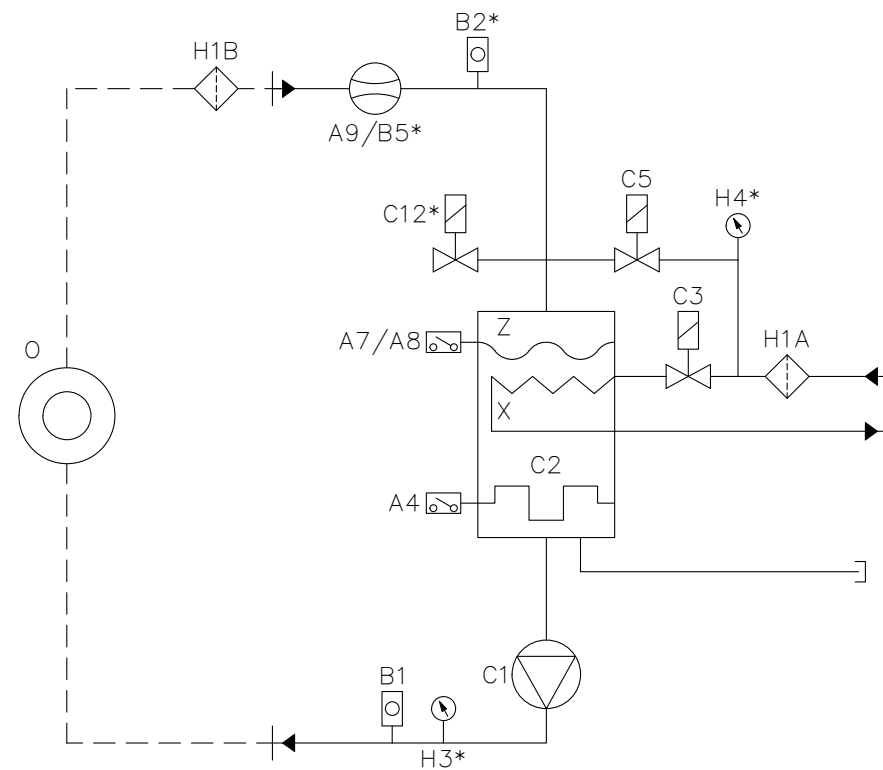
		TBO 150	TCO 150	TDO 150	TEO 150
MEDIUM		oil	oil	oil	oil
HEATING CAPACITY	kW	9/12	18	24-36	48
COOLING CAPACITY	kW	42	82	122	160
PUMP TYPE		P2A/P2B	P3	P4	P5
MAX FLOW RATE	LPM	60/70	100	150	200
PUMP PRESSURE	bar	3,2*5,0*	5,0	5,0	5,0
PUMP MOTOR CAPACITY		0,5	2,2	2,2	2,8
MAX TANK VOLUME	L	30	40	60	100

200

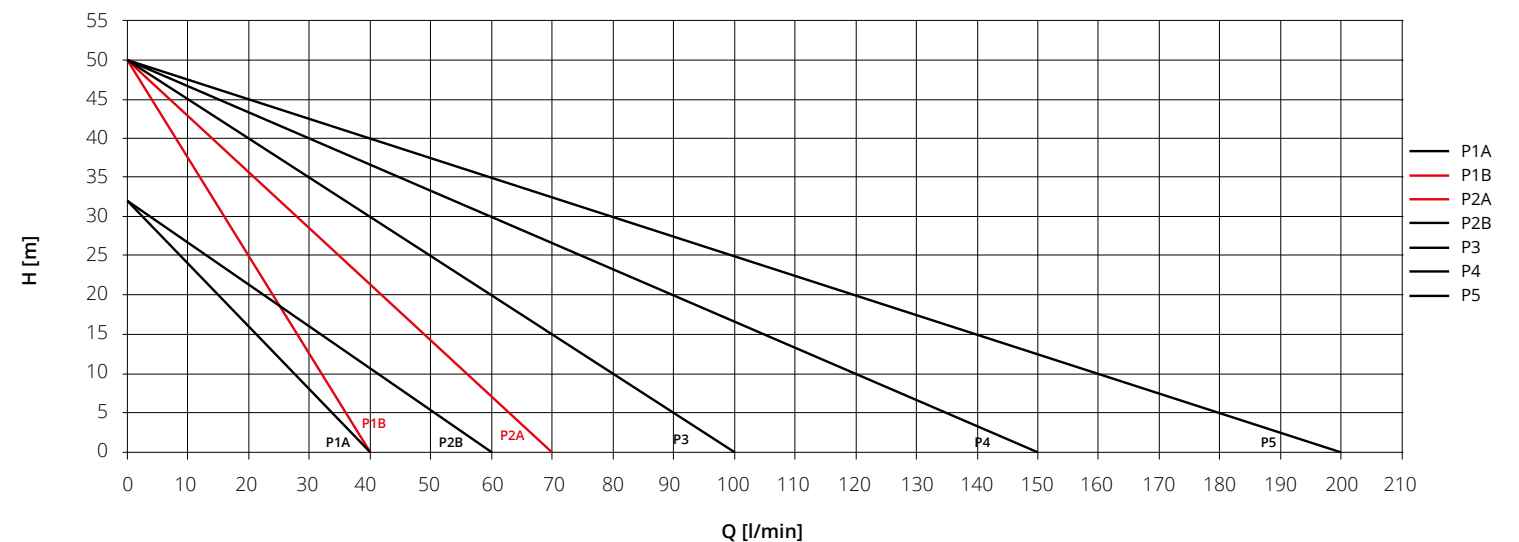
		TBO 200	TCO 200	TDO 200	TEO 200
MEDIUM		oil	oil	oil	oil
HEATING CAPACITY	kW	9	12-18	24	36-48
COOLING CAPACITY	kW	42	82	122	160
PUMP TYPE		P2A/P2B	P3	P4	P5
MAX FLOW RATE	LPM	70	100	150	200
PUMP PRESSURE	bar	5,0	5,0	5,0	5,0
PUMP MOTOR CAPACITY		0,5	2,2	2,2	2,8
MAX TANK VOLUME	L	30	40	60	100

HOT LINE CONNECTIONS		G3/4"	G3/4"	G1"	G1"	G1"
COOLING LINE CONNECTIONS		G3/8"	G1/2"	G3/4"	G1"	G1"
DIMENSIONS	WxLxH	250x715x625	300x845x700	500x1150x810	600x1200x1000	600x1200x1300
WEIGHT	kg	50	75	100	200	250
COLOUR	RAL	7034/9002				
POWER SUPPLY		3ph/400VAC/50Hz				

\* Cooling capacity  
Cooling capacity is specified for value 80°C on cooling/20°C on inlet of cooling water  
Cooling flow = max. Pump capacity



- STANDARD:**  
 C1 - PUMP  
 C2 - HEATER  
 H1A - STRAINER IN COOLING CIRCUIT  
 B1 - TEMPERATURE SENSOR ON SUPPLY  
 A4 - SAFETY THERMOSTAT  
 C5 - FILLING ELECTRO VALVE  
 C3 - VALVE ON COOLING CIRCUIT  
 X - HEAT EXCHANGER  
 Z - TANK  
 O - RECEIVER/MOILD
- OPTIONS\*:**  
 C12 - VALVE ON SUNCTION  
 H4 - PRESSURE GAUGE ON COOLING SUPPLY  
 H3 - PRESSURE GAUGE ON MOULD SUPPLY  
 A9 - FLOW SENSOR 0/1  
 B5 - DIGITAL FLOW METER  
 B2 - TEMPERATURE SENSOR ON RETURN LINE



TECHNICAL DETAILS



# TEMPERING UNITS SERIES W100 | W120 | W140 | W180

100

UNITS		TAW 100	TBW 100	TCW 100	TDW 100	TEW 100
MEDIUM		water	water	water	water	water
HEATING CAPACITY	kW	6-9	12	18	24	48
COOLING CAPACITY	kW	84	164	244	244	320
PUMP TYPE		P8	P9	P10	P10	P11
MAX FLOW RATE	LPM	60	100	220	220	320
PUMP PRESSURE	bar	4,5	4,5	5	5	5

120

UNITS		TAW 120	TBW 120	TCW 120	TDW 120	TEW 120
MEDIUM		water	water	water	water	water
HEATING CAPACITY	kW	6-9	12	18	24	48
COOLING CAPACITY	kW	84	164	244	244	320
PUMP TYPE		P12	P13	P14	P14	P15
MAX FLOW RATE	LPM	60	100	220	220	320
PUMP PRESSURE	bar	4,5	4,5	5	5	5

140

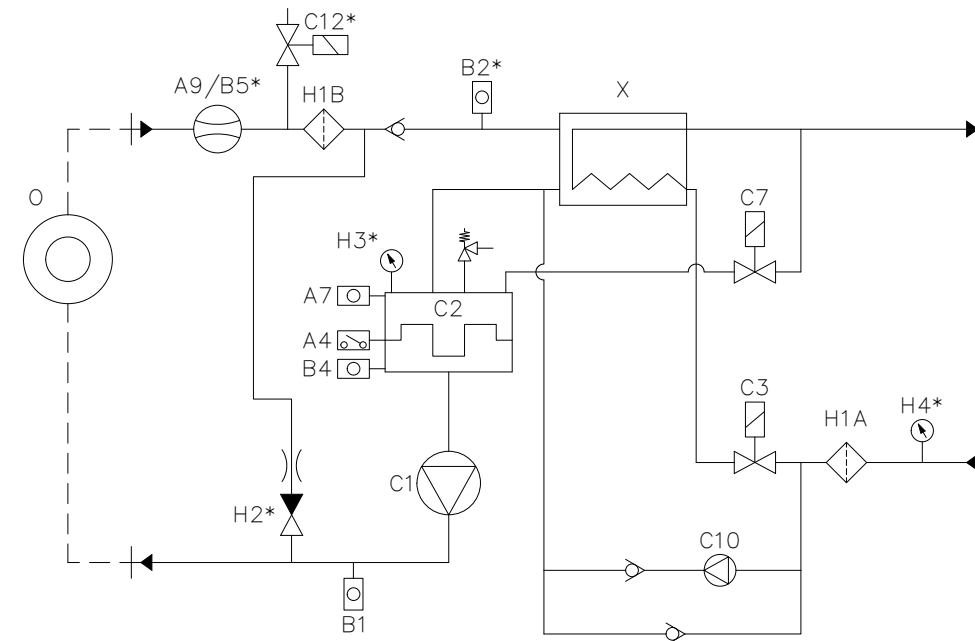
UNITS		TAW 140	TBW 140	TCW 140	TDW 140	TEW 140
MEDIUM		water	water	water	water	water
HEATING CAPACITY	kW	6-9	12	18	24	48
COOLING CAPACITY	kW	42	84	125	164	185
PUMP TYPE		P16	P17	P18	P19	P20
MAX FLOW RATE	LPM	30	55	85	145	200
PUMP PRESSURE	bar	6	6	7,5	8	8

180

UNITS		TBW 180	TCW 180	TDW 180	TEW 180
MEDIUM		water	water	water	water
HEATING CAPACITY	kW	9	12	18	24
COOLING CAPACITY	kW	42	84	125	164
PUMP TYPE		P21	P22	P23	P24
MAX FLOW RATE	LPM	30	55	85	150
PUMP PRESSURE	bar	7	5,8	8	8

HOT LINE CONNECTIONS		G3/4"	G3/4"	G1"	G1"	G1"
COOLING LINE CONNECTIONS		G3/8"	G1/2"	G3/4"	G1"	G1"
DIMENSIONS	WxLxH	250x715x625	300x845x700	500x1150x810	600x1200x1000	600x1200x1300
WEIGHT	kg	50	75	100	200	250
COLOUR	RAL	7034/9002				
POWER SUPPLY		3ph/400VAC/50Hz				

\* Cooling capacity  
Cooling capacity is specified for value 80°C on cooling/20°C on inlet of cooling water  
Cooling flow = max. Pump capacity



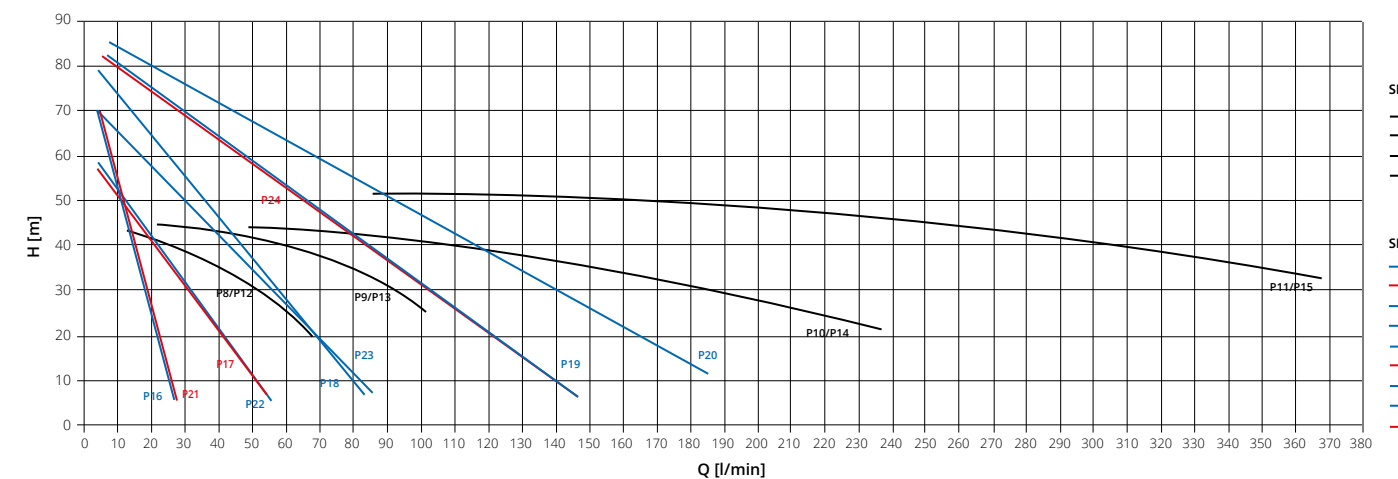
**STANDARD:**

- C1 - PUMP
- C2 - HEATER
- H1A - STRAINER IN COOLING CIRCUIT
- H1B - STRAINER IN HEATING CIRCUIT
- A4 - SAFETY THERMOSTAT
- A7 - LEVEL SENSOR MIN/MAX
- B1 - TEMPERATURE SENSOR ON SUPPLY
- B4 - PRESSURE TRANSMITTER
- C3 - VALVE ON COOLING CIRCUIT
- C7 - PRESSURE VALVE RELIEF
- X - HEAT EXCHANGER
- O - RECEIVER/MOULD

**SERIES - 140 / 180**  
C10 - ADDITIONAL PUMP

**OPTIONS\*:**

- C12 - VALVE ON SUNCTION
- H2 - BY-PASS
- H4 - PRESSURE GAUGE ON COOLING SUPPLY
- H3 - PRESSURE GAUGE ON MOULD SUPPLY
- A9 - FLOW SENSOR 0/1
- B5 - DIGITAL FLOW METER
- B2 - TEMPERATURE SENSOR ON RETURN LINE



SERIES W100/W120

- P8/P12
- P9/P13
- P10/P14
- P11/P15

SERIES W140/W180

- P16
- P17
- P18
- P19
- P20
- P21
- P22
- P23
- P24

TECHNICAL DETAILS



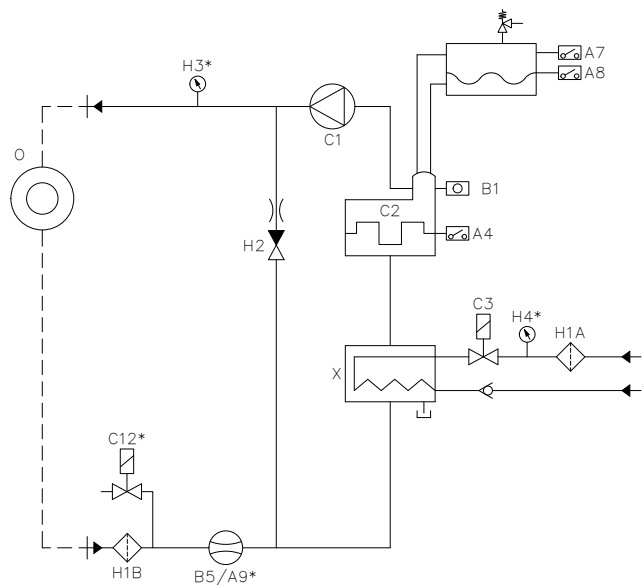
# TEMPERING UNITS SERIES O350

350

		TEO 350	TFO 350	TXO 350
MEDIUM		olej	olej	olej
HEATING CAPACITY	kW	12-24	36-48	72-96
COOLING CAPACITY	kW	82	125	160
PUMP TYPE		P25-P26	P27	P28-P29
MAX FLOW RATE	LPM	80-150	200	400-1000
PUMP PRESSURE	bar	8,2	8,2	4,0
MAX TANK VOLUME	L	40	60	80
HOT LINE CONNECTIONS		DN25	DN40	DN65
COOLING LINE CONNECTIONS		G3/4"	G1"	G1"
DIMENSIONS	WxLxH	600x1200x1300	700x1600x1800	800x2000x2200
WEIGHT	kg	200	450	800
COLOUR	RAL	7034/9002		
POWER SUPPLY		3ph/400VAC/50Hz		

TECHNICAL DETAILS

\* Cooling capacity  
Cooling capacity is specified for value 80°C on cooling/20°C on inlet of cooling water  
Cooling flow = max. Pump capacity

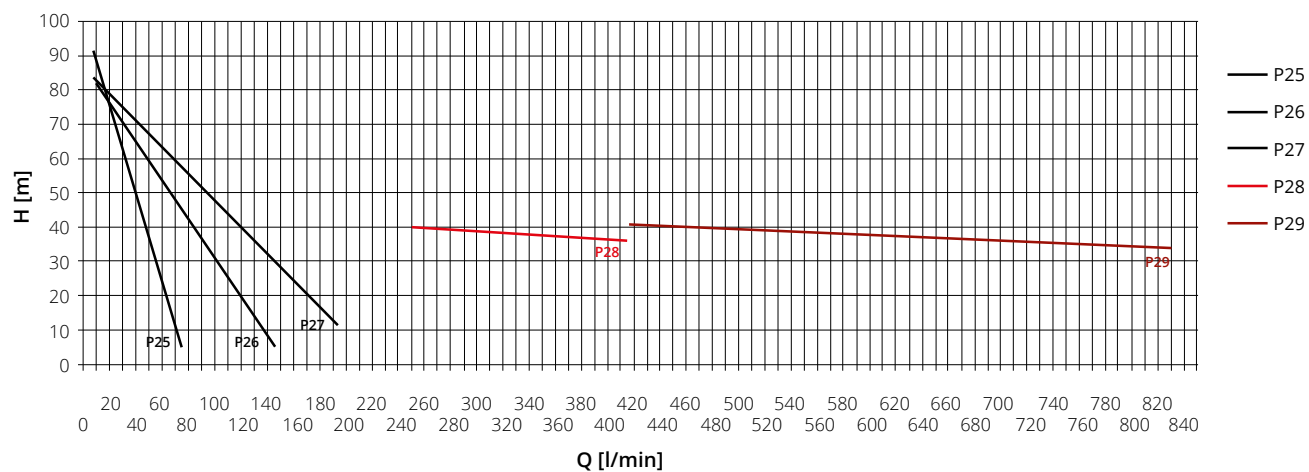


**STANDARD:**

- C1 - PUMP
- C2 - HEATER
- H1A - STRAINER IN COOLING CIRCUIT
- H1B - STRAINER IN HEATING CIRCUIT
- H2 - BY-PASS
- A4 - SAFETY THERMOSTAT
- A7/A8 - LEVEL SENSOR MIN/MAX
- B1 - TEMPERATURE SENSOR
- C3 - VALVE ON COOLING CIRCUIT
- X - HEAT EXCHANGER
- O - RECEIVER/MOULD

**OPTIONS\*:**

- C12 - VALVE ON SUNCTION
- H4 - PRESSURE GAUGE ON COOLING SUPPLY
- H3 - PRESSURE GAUGE ON MOULD SUPPLY
- A9 - FLOW SENSOR 0/1
- B5 - DIGITAL FLOW METER



**IDENTIFICATION OF UNITS**

**TAW -90 -9- 61 -P1A -A9**

**Unit size**

TAW; TBW; TCW; TDW; TEW; TBO; TCO; TDO; TEO; TFO; TXO

**Max temperature**

90°C; 100°C; 120°C; 140°C; 150°C; 180°C; 200°C; 350°C;

**Heating capacity**

6kW; 9kW; 12kW; 18kW; 24kW; 36kW; 96kW

**Cooling capacity**

61kW - 320kW

**Pump type**

P1A-P29

**Options**

Available depending on the model  
Np. A9, H4;



# KEY FEATURES

Tempering units from ECOFLOW LTD. features high durability and reliability. For all units we provide 24months of warranty with possibility to extend it.

- The products are built from high quality components mostly produced in European Community.
- Open tanks or pressure vessels are only made of stainless steel
- Brass fittings are in standard, optionally also made of stainless steel
- Strainers for heating and cooling circuits are in standard
- Highly effective, corrosion and scaling resistant heaters made of INCOLOY or optionally AISI316
- For oil type units heaters with no negative impact on oil cracking

- Scaling resistant heat exchangers are made of copper with large flow sections which increase maintenance period
- Innovative and intuitive controller based on S3 HMI+PLC platform;
- For units with heating capacity greater than 12kW, Solid State Relays are in standard which significantly increase maintenance period

For complete product range there is variety of optional functions dedicated for customized demands for example: digital communication with Injection Moulding Machine, high temperature resistant flow meters, special materials, special heat exchangers etc;

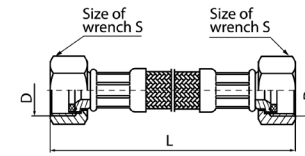
# BLUE POWER ENERGY SAVING SYSTEM

Energy cost is one of a major cost of production. In order to meet market demand for energy savings ECOFLOW introduced innovative solution called BLUEPOWER which is based on servo pump controlled by dynamic demand for energy output required from production process (for example injection moulding process). Due to BLUEPOWER technology it is possible to reduce up to 70% of electrical energy consumption against classic tempering units with fixed power output. The bigger unit the bigger energy savings.

For this solution ECOFLOW was awarded by international fairs PLASTPOL 2015.

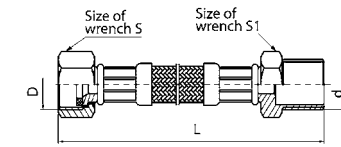


# ACCESSORIES



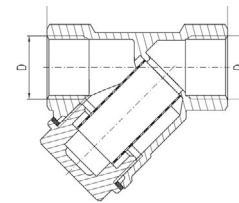
## HYDRAULIC HOSE WITH FEMALE G-TYPE THREAD

MATERIAL TYPE: TEFLON  
 MAX WORKING TEMP.: 180°C  
 G: 3,8" // 1/2" // 3/4" // 1"  
 L: MIN.1M – MAX.:  
 ACCORDING TO THE ORDER  
 ORDER NO.: PHA-(GW1-GW2-L)



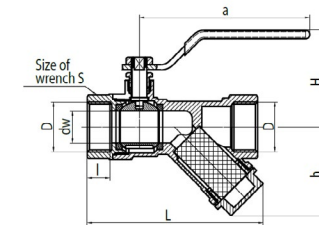
## HYDRAULIC HOSE WITH FEMALE-MALE G-TYPE THREAD

MATERIAL TYPE: TEFLON  
 MAX WORKING TEMP.: 180°C  
 G: 3,8" // 1/2" // 3/4" // 1"  
 L: MIN.1M – MAX.:  
 ACCORDING TO THE ORDER  
 ORDER NO.: PHB-(GW1-GW2-L)



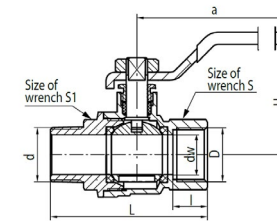
## STRAINER

MATERIAL TYPE: BRASS  
 MESH: 0,2MM  
 G: 3,8" // 1/2" // 3/4" // 1"  
 ORDER NO.: FS -(G)



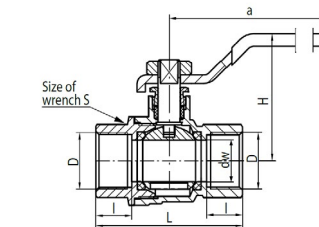
## BALL VALVE WITH INT. STRAINER

MATERIAL TYPE: STAINLESS STEEL  
 MESH: 0,2MM  
 G: 3,8" // 1/2" // 3/4" // 1"  
 ORDER NO.: ZKF -(G)



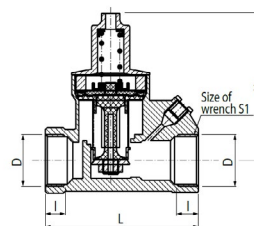
## BALL VALVE MALE-FEMALE G-TYPE THREAD

MATERIAL TYPE: STAINLESS STEEL  
 G: 3,8" // 1/2" // 3/4" // 1"  
 ORDER NO.: ZKA -(G)



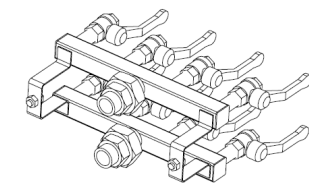
## BALL VALVE FEMALE-FEMALE G-TYPE THREAD

MATERIAL TYPE: STAINLESS STEEL  
 G: 3,8" // 1/2" // 3/4" // 1"  
 ORDER NO.: ZKB -(G)



## PRESSURE REGULATOR 1-10 bar

MAX WORKING TEMP.: 180°C  
 MATERIAL TYPE: STAINLESS STEEL  
 G: 3,8" // 1/2" // 3/4" // 1"  
 ORDER NO.: RCN -(G)



## MANIFOLD 4X

4X INLET/OUTLET WITH BALL VALVES  
 MATERIAL: STAINLESS STEEL / BRASS  
 N1: WE 3/4" → 4WY 3/8"  
 N2: WE 1" → 4WY 1/2"  
 ORDER NO.: R4X -(N)



## DESCALING MEDIUM

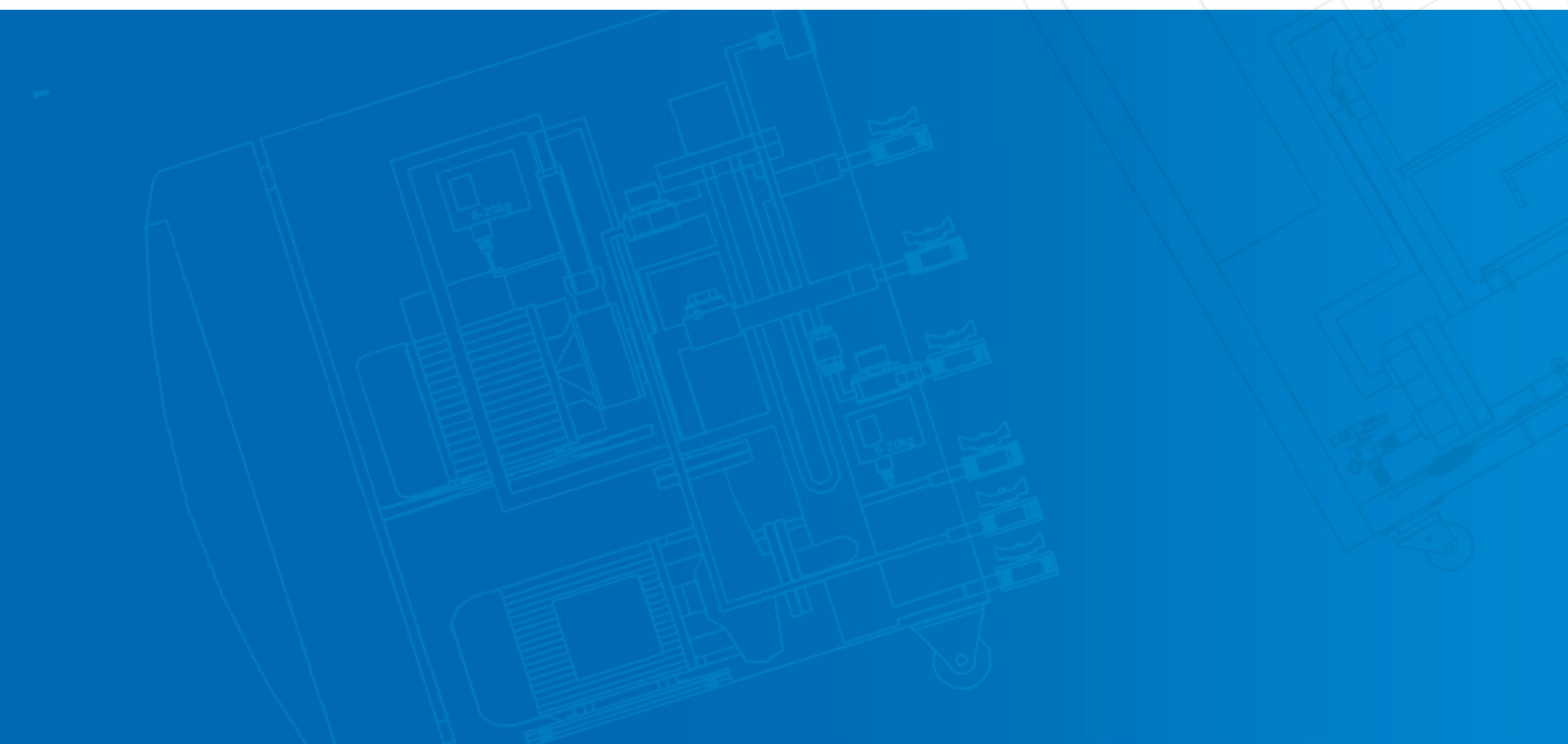
VOLUME: 20L  
 ORDER NO.: PDO



## THERMAL OIL UP TO 350degC

MARLOTERM  
 ORDER NO.: SOT-350





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