

# Scambiatori a Piastre Saldobrasate

## *Brazed Plate Heat Exchangers*



**EMMEGI**





## APPLICAZIONI:

### APPLICATIONS :

- Recuperi Termici da Processi Industriali / Industrial Process Heat Recovery
- Refrigeratori Olio / Oil Coolers
- Impianti Fotovoltaici / Photovoltaic Installations



**EMMEGI**

HEAT-EXCHANGERS  
[www.emmegi-heat-exchangers.com](http://www.emmegi-heat-exchangers.com)



# Scambiatori a Piastre Saldobrasate

## Brazed Plate Heat Exchangers

### Vantaggi degli scambiatori a piastre saldobrasate

- Alto coefficiente di scambio termico ;
- Dimensioni contenute con alte performance ;
- Alta resistenza alla pressione e temperatura ;
- Connessioni in AISI 321 ;
- Facile installazione ;

Gli scambiatori a piastre sono costituiti da piastre corrugate.

Le piastre sono ruotate di 180° l'una dall'altra al fine di creare un reticolo di canali intersecati. I fluidi possono fluire sia in controcorrente che equicorrente.

Le piastre sono unite insieme tra loro con materiale brasante in speciali forni sottovuoto.

La speciale corrugazione permette al fluido di turbolare aumentando lo scambio termico e riducendo i depositi di sporco nelle piastre.

### Advantages of Brazed Plate Heat Exchangers

- high heat transfer coefficient ;
- small unit size with high heat transfer capacity ;
- high resistance to pressure and temperature fluctuations ;
- stainless steel connections ;
- easy installation ;

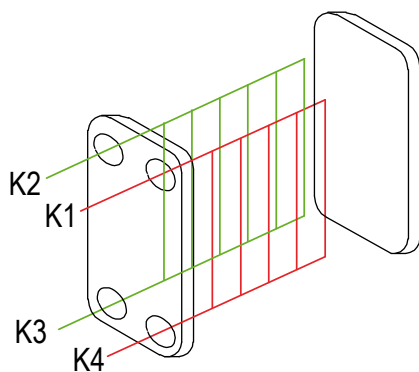
Brazed plate heat exchangers consist of stainless steel plate packs, which have embossed chevron patterns.

The plates are turned 180° to each other, causing the plate ridges to intersect, and creating a lattice of intersecting channels. The fluids can flow in counter-current or co-current way.

The entire construction is sealed together by the means of brazing in a special vacuum furnace.

Special corrugation patterns promote high turbulence flow. Turbulence dramatically improves heat transfer rates and reduces the amount of deposits inside the unit.

### Flow Channel Diagram in Heat Exchanger



one-pass - channels are parallel



# Denominazione codice prodotto

## Ordering code



**PB 014 030 F012 6**

**MODELLO** Model

**SERIE** Series

- 014
- 022
- 031
- 034
- 047
- 060
- 110
- 170

**NUMERO DI PIASTRE** Number of plates

- 006
- 010
- 020
- 030
- 040
- 050
- 060
- 070
- 080
- 090
- 100
- 110
- 120
- 130
- 140
- 150
- 160
- 170
- 180

**CONNESSIONI** Connection Type

1/2" BSP Femmina ( PB014 - PB022 - PB034 )  
Internal Thread 1/2" BSP

3/4" BSP Femmina ( PB34 )  
Internal Thread 3/4" BSP

1" BSP Femmina ( PB31 - PB047 - PB060 )  
Internal Thread 1" BSP

2" BSP Maschio ( PB110 - PB170 )  
External Thread 2" BSP

F012

F034

F100

M200

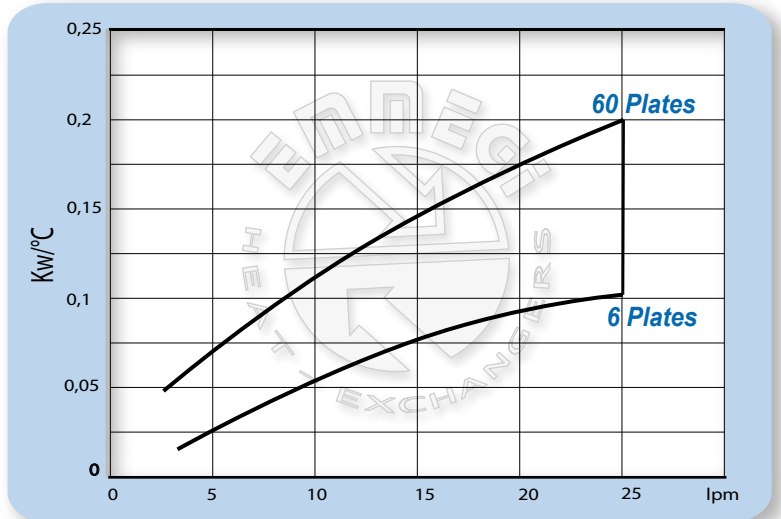


# PB014

## Dimensioni *Dimensions*

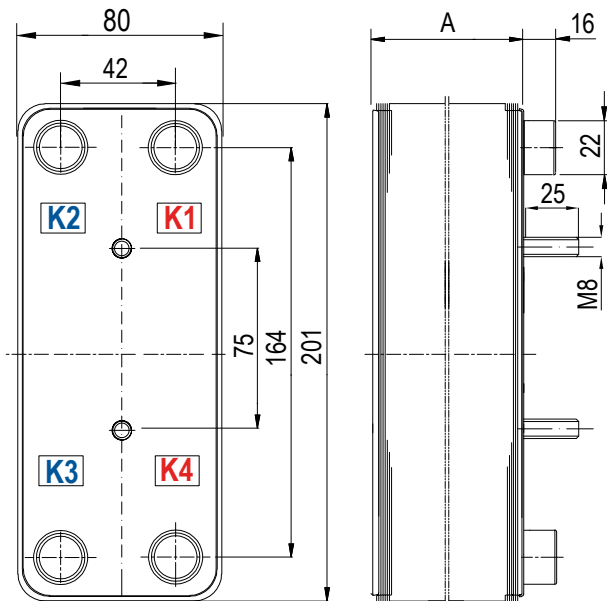


### Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

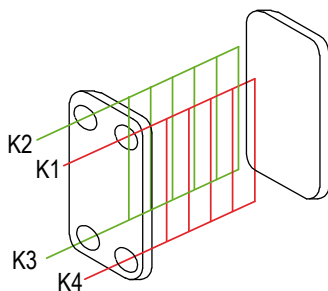
Per informazioni inerenti la perdita di carico contattare l' UTEC EMMEGI.  
For pressure drop information please contact EMMEGI's technical department.



Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	30 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1/2" Femmina Internal Thread G 1/2"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1/2" Femmina Internal Thread G 1/2"
A richiesta connessioni speciali Special connections on request	

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito lt Channel Volume
6	25	0.97	0.066
10	34	1.15	0.11
20	57	1.6	0.22
30	80	2.05	0.33
40	103	2.5	0.44
50	126	2.95	0.55
60	149	3.4	0.66

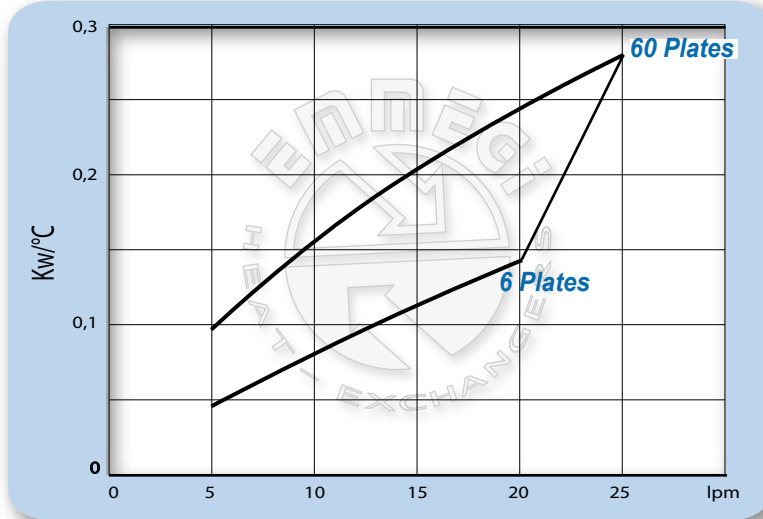


# PB014

# PB022

## Dimensioni *Dimensions*

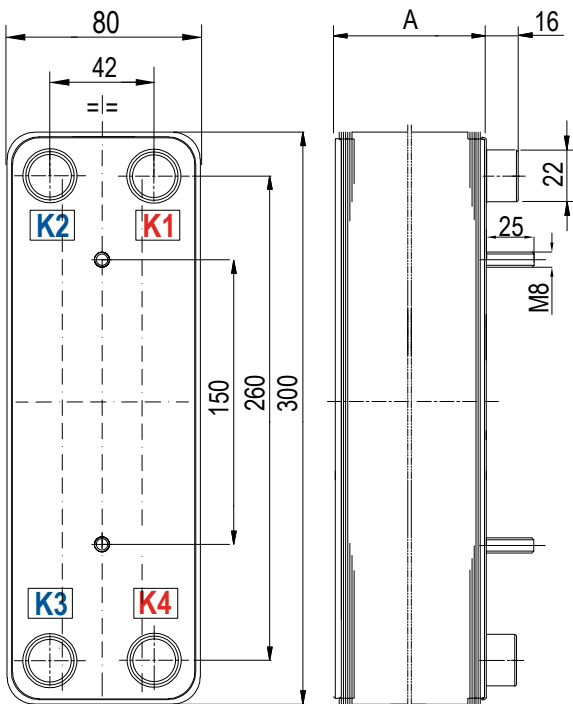
## Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

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# PB022

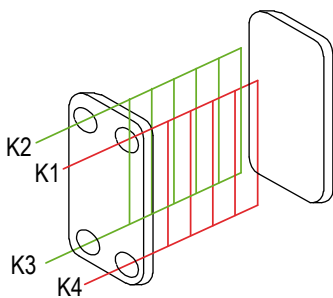


Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	30 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1/2" Femmina Internal Thread G 1/2"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1/2" Femmina Internal Thread G 1/2"

A richiesta connessioni speciali  
Special connections on request

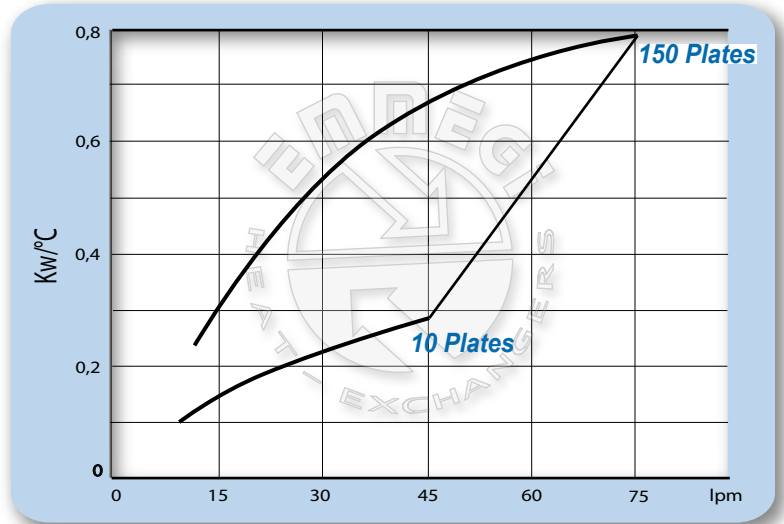
N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito lt Channel Volume
6	25	1.5	0.105
10	34	1.9	0.175
20	55	2.6	0.35
30	78	3.3	0.525
40	101	4.1	0.7
50	124	4.8	0.875
60	147	5.6	1.05



# PB031

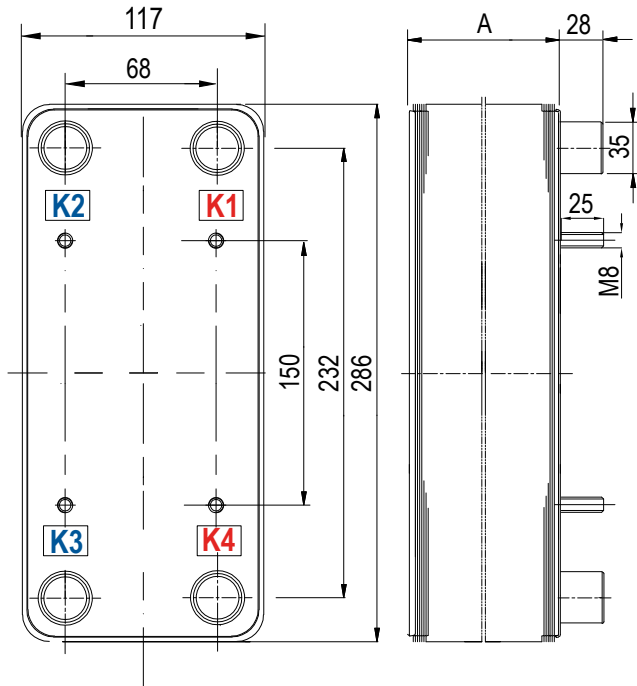
## Dimensioni Dimensions

## Diagramma rendimento Performance diagram - ISO VG46 @50°C



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

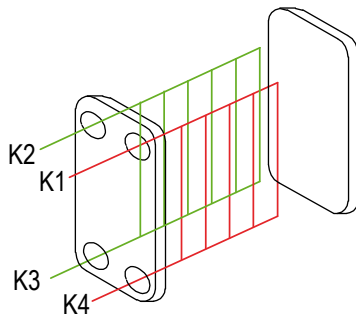
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For pressure drop information please contact EMMEGI's technical department.



Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	30 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina Internal Thread G 1"
A richiesta connessioni speciali Special connections on request	

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito It Channel Volume
10	33	3.09	0.24
20	57	4.33	0.47
30	88	5.57	0.76
40	105	6.81	0.94
50	129	8.05	1.18
60	153	9.29	1.41
70	177	10.53	1.65
80	201	11.77	1.88
90	225	13.01	2.16
100	251	14.25	2.35
110	273	15.49	2.59
120	297	16.73	2.82
130	321	17.97	3.06
140	345	19.21	3.29
150	369	20.45	3.53



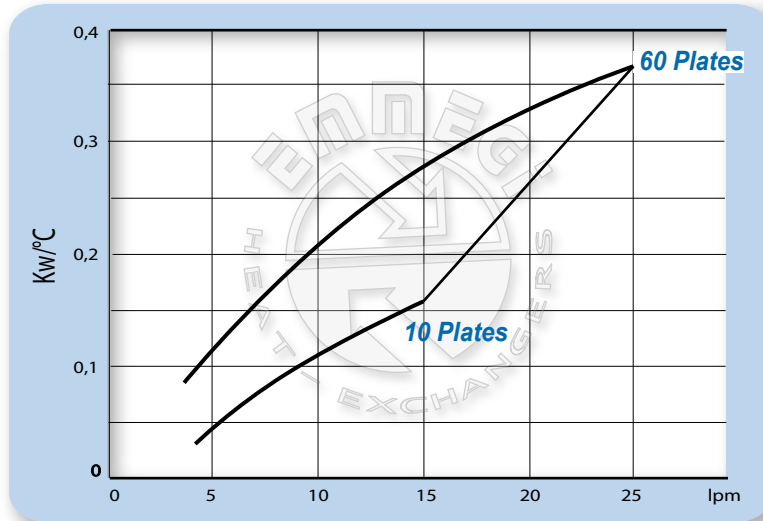
# PB031

# PB034

## Dimensioni Dimensions

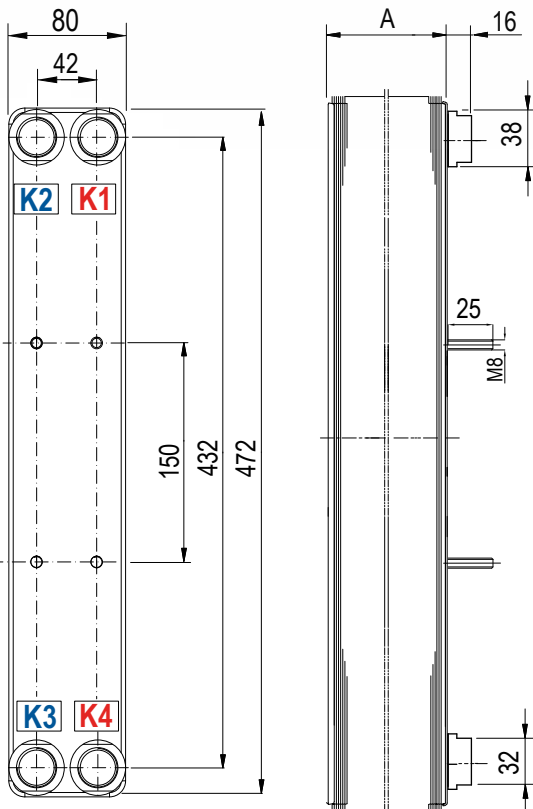


### Diagramma rendimento Performance diagram - ISO VG46 @50°C



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

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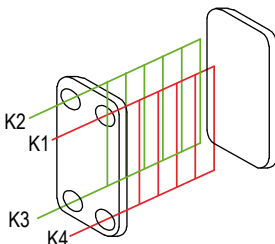
Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 3/4" Femmina Internal Thread G 3/4"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 3/4" Femmina Internal Thread G 3/4"

A richiesta connessioni speciali  
Special connections on request

	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito It Channel Volume
10	32	2.77	0.27
20	55	3.97	0.54
30	78	5.17	0.81
40	101	6.37	1.08
50	124	7.57	1.35
60	147	8.77	1.62



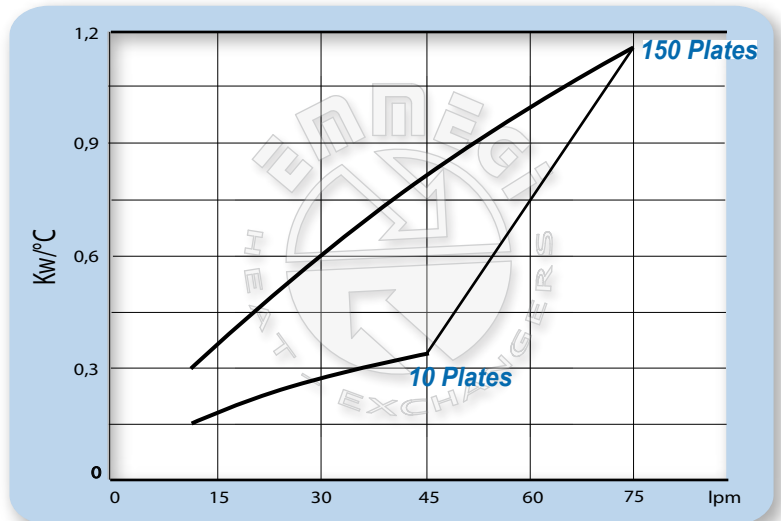
# PB034

# PB047

## Dimensioni *Dimensions*

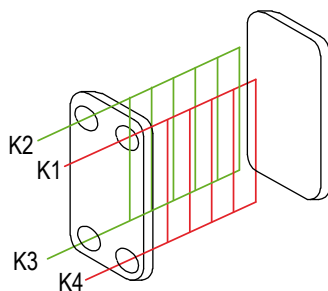
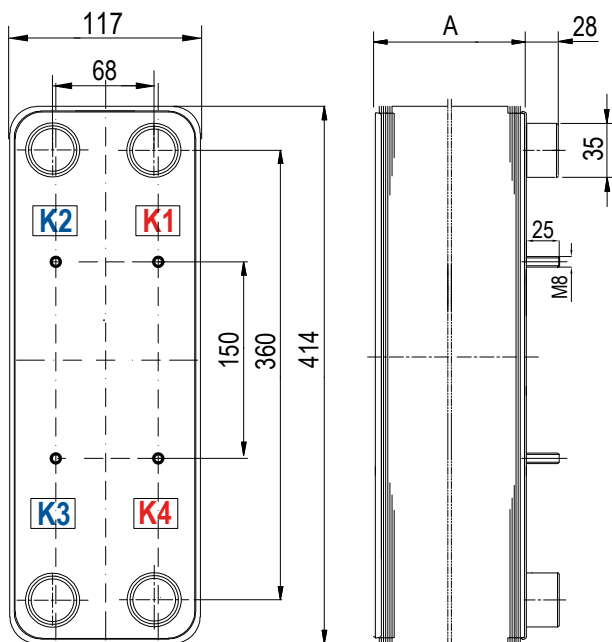


**Diagramma rendimento** *Performance diagram - ISO VG46 @50°C*



**Rapporto portata olio/acqua 2:1 - flow ratio 2:1**

**Per informazioni inerenti la perdita di carico contattare l' UTEC EMMEGI.**  
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Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	30 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina Internal Thread G 1"
A richiesta connessioni speciali <i>Special connections on request</i>	

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito It Channel Volume
10	35	4	0.36
20	59	5.9	0.72
30	83	7.8	1.08
40	107	9.7	1.44
50	131	11.6	1.8
60	155	13.5	2.16
70	179	15.4	2.52
80	203	17.3	2.88
90	227	19.2	3.24
100	251	21.1	3.6
110	275	23	3.96
120	299	24.9	4.32
130	323	26.8	4.68
140	347	28.7	5.04
150	371	30.6	5.4

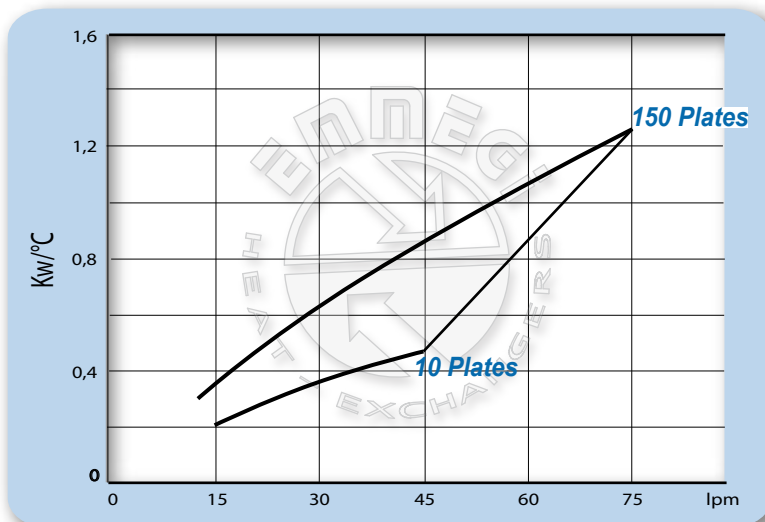
# PB047

# PB060

## Dimensioni Dimensions

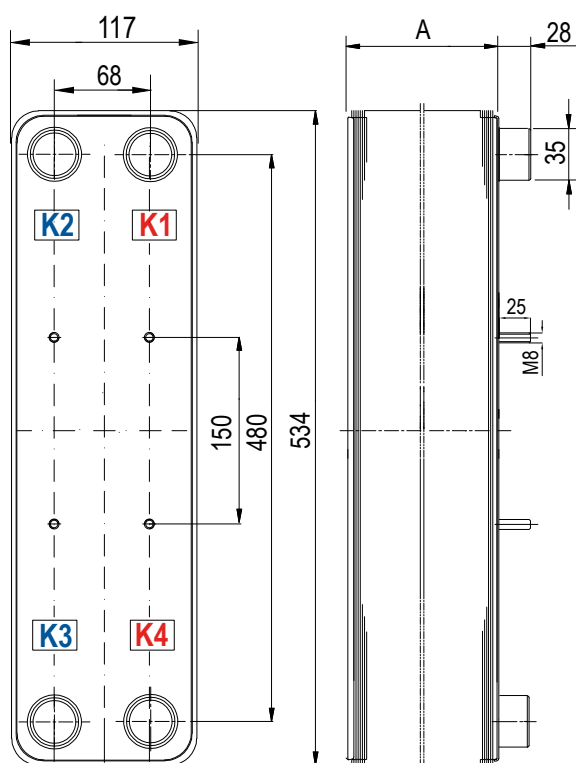


### Diagramma rendimento Performance diagram - ISO VG46 @50°C



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

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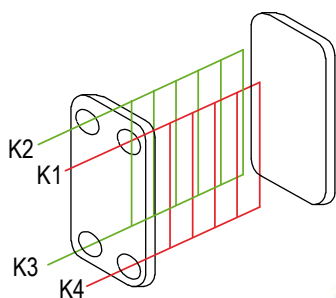


Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	30 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location		Connessioni Connection Types	
K1 / K4 - Ingresso/uscita caldo	K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina	Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo	K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina	Internal Thread G 1"

A richiesta connessioni speciali  
Special connections on request

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito It Channel Volume
10	35	4	0.36
20	59	5.9	0.72
30	83	7.8	1.08
40	107	9.7	1.44
50	131	11.6	1.8
60	155	13.5	2.16
70	179	15.4	2.52
80	203	17.3	2.88
90	227	19.2	3.24
100	251	21.1	3.6
110	275	23	3.96
120	299	24.9	4.32
130	323	26.8	4.68
140	347	28.7	5.04
150	371	30.6	5.4

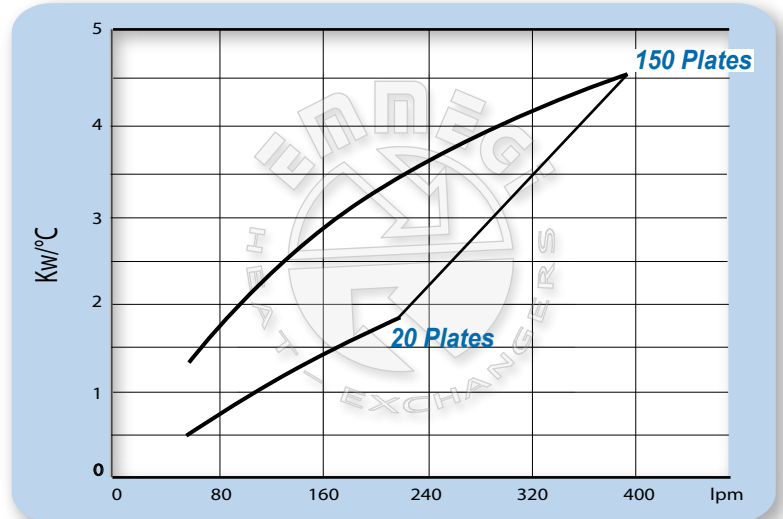


# PB110

## Dimensioni *Dimensions*

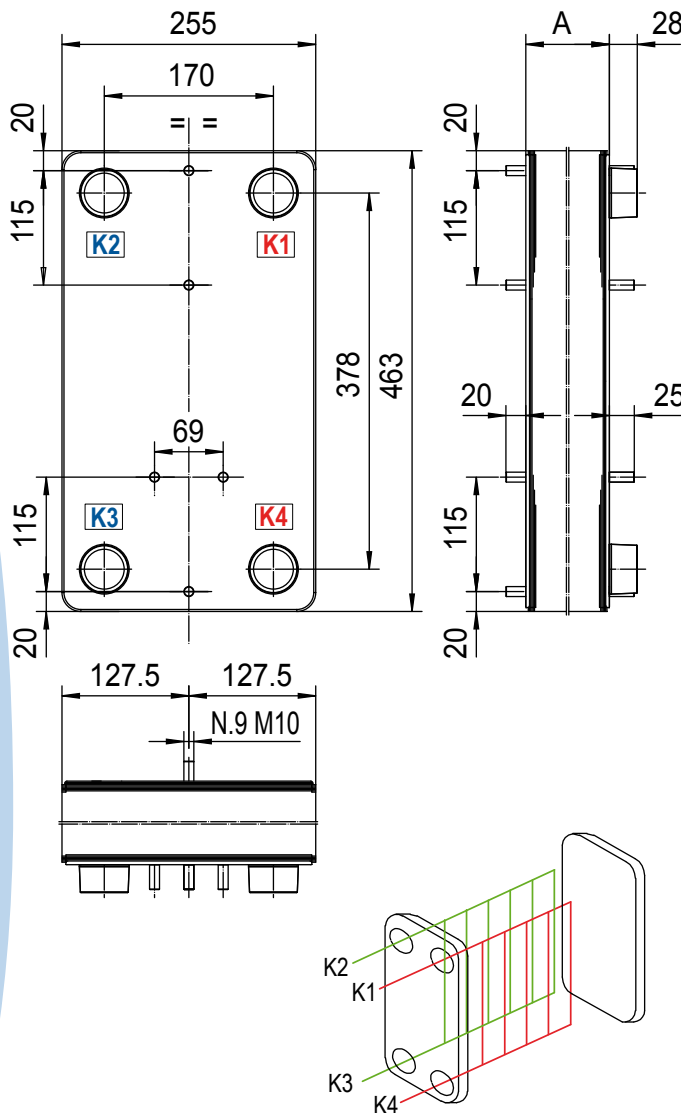


**Diagramma rendimento** *Performance diagram - ISO VG46 @50°C*



**Rapporto portata olio/acqua 2:1 - flow ratio 2:1**

**Per informazioni inerenti la perdita di carico contattare l' UTEC EMMEGI.**  
*For pressure drop information please contact EMMEGI's technical department.*



Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Max. Working Pressure	23 bar	Brasatura Brazing Material	Cu 99,95%

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 2" Maschio External Thread G 2"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 2" Maschio External Thread G 2"
A richiesta connessioni speciali Special connections on request	

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito It Channel Volume
20	58	17	1.62
30	82	21	2.43
40	106	25	3.24
50	130	29	4.05
60	154	33	4.86
70	178	37	5.67
80	202	41	6.48
90	226	45	7.29
100	250	49	8.1
110	274	53	8.91
120	298	57	9.72
130	322	61	10.53
140	346	65	11.34
150	370	69	12.15

# PB110

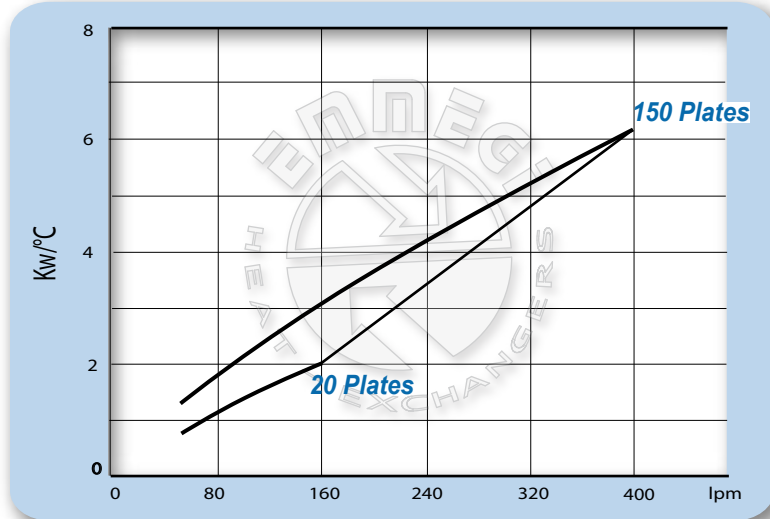
# PB170

## Dimensioni *Dimensions*

## Diagramma rendimento *Performance diagram - ISO VG46 @50°C*

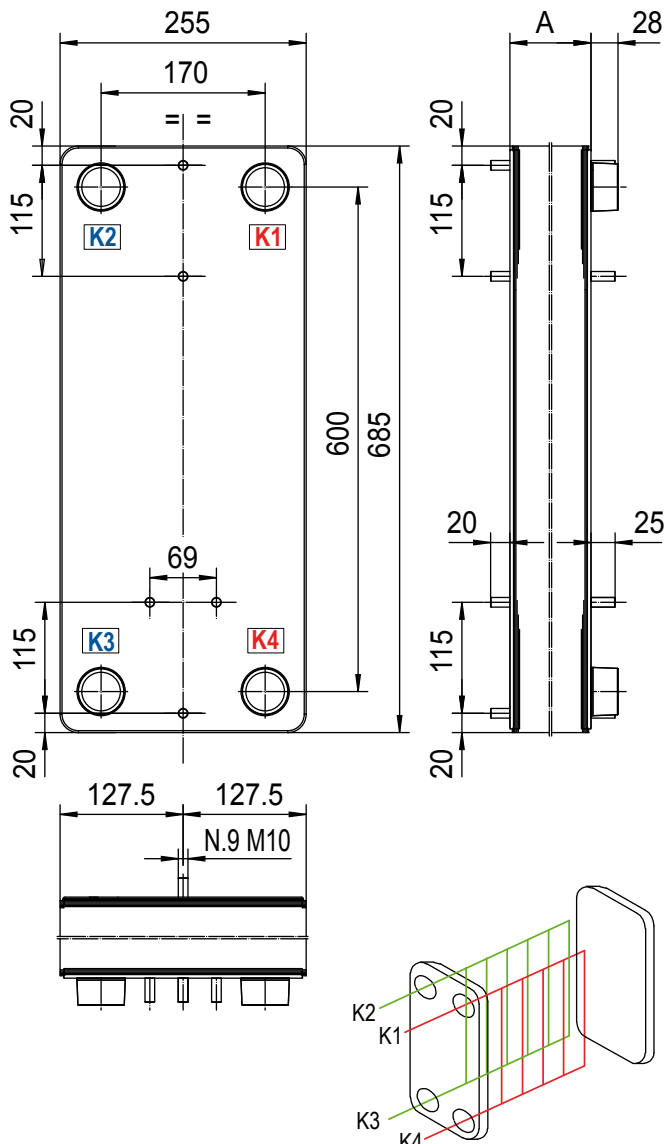


# PB170



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

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For pressure drop information please contact EMMEGI's technical department.



Condizioni di esercizio Working Conditions		Materiali Utilizzati Materials	
Massima Temperatura Max. Working Pressure	230°C	Piastre Plate	Aisi 316
Minima Temperatura Min. Working Temperature	-10°C	Attacchi Connection	Aisi 316
Massima Pressione Max. Working Pressure	23 bar	Brasatura Brazing Material	Cu 99,95%

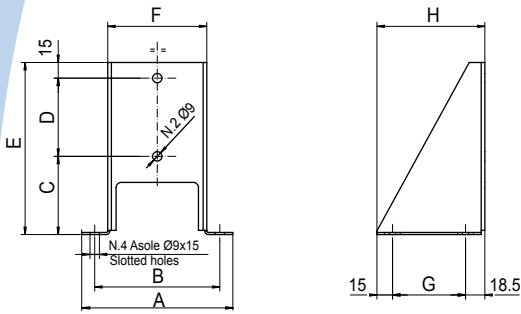
Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 2" Maschio External Thread G 2"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 2" Maschio External Thread G 2"
A richiesta connessioni speciali Special connections on request	

N° Piastre Plate No.	A (mm)	Peso ( Kg ) Weight ( Kg )	Capacità per circuito lt Channel Volume
20	58	17.35	2.55
30	82	23.10	3.83
40	106	28.85	5.10
50	130	34.60	6.38
60	154	40.35	7.65
70	178	46.10	8.93
80	202	51.85	10.20
90	226	57.60	11.48
100	250	63.35	12.75
110	274	69.10	14.03
120	298	74.85	15.30
130	322	80.60	16.58
140	346	86.35	17.85
150	370	92.10	19.13

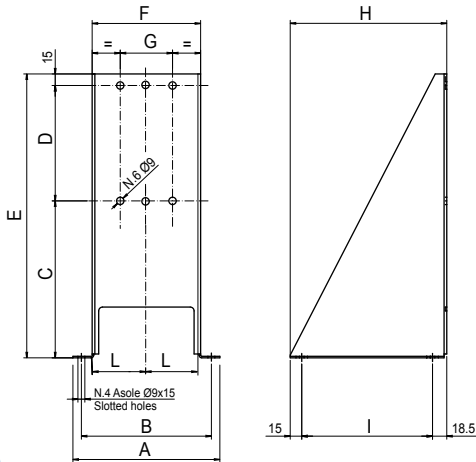


# STAFFE DI FISSAGGIO SERIE PB (ARTICOLO OPTIONAL) *assemblaggio a cura del cliente*

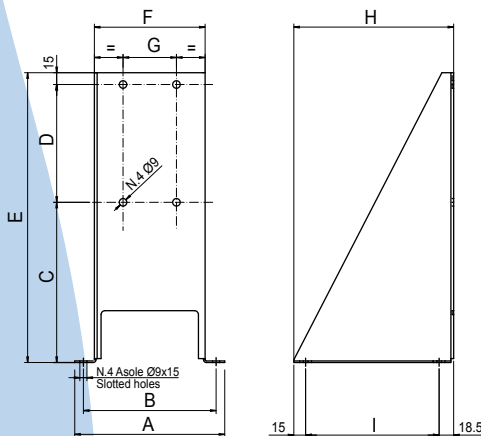
## PB Series supporting frame (OPTIONAL) *the assembling is at customer care*



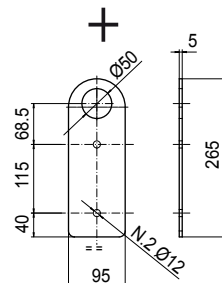
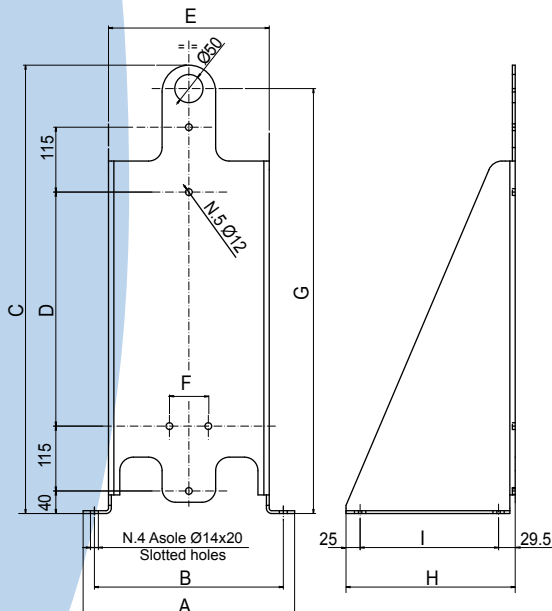
MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H		P/N
PB014	145	120	75	75	165	95	70	103.5		0533920



MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	L	P/N
PB022	145	120	87	150	252	95	42	103.5	47.5	0533923A



MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame	
	A	B	C	D	E	F	G	H	I	E	P/N
PB031	191	169	80	150	245	141	68	203.5	170		0533940
PB034	145	120	173	150	338	95	42	103.5	70		0533950
PB047	191	169	144	150	309	141	68	203.5	170		0533960
PB060	191	169	204	150	369	141	68	203.5	170		0533970



MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	I	P/N
PB110	375	335	573	193	285	69	531.5	300	245.5	0533980
PB170	375	335	795	415	285	69	753.5	300	245.5	0533990

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*This catalogue replace all the previous one.*

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