

# Hydraulic & Offshore SUPPLIES

## Water-oil Heat Exchangers

Contact our team *and*  
**Order today on:**  
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Offshore House, Southwick Industrial Estate, Sunderland, SR5 3TX  
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Gli scambiatori di calore acqua-olio EMMEGI, sono utilizzati per il raffreddamento di circuiti oleodinamici e sono normalmente inseriti su linee di ritorno.

La gamma **EMMEGI** comprende una vasta scelta di modelli caratterizzati da un'elevata efficienza. La scelta di materiali di prima qualità, lavorati con macchine di precisione, consente di ottenere un prodotto altamente affidabile.

Gli scambiatori **EMMEGI** hanno circuito acqua ispezionabile, a 1,2,4 passaggi, e possono essere forniti con valvola termostatica che consente un notevole risparmio sul consumo dell'acqua.

## Fluidi compatibili

- . OIL MINERALI, HL, HLP.
- . EMULSIONI ACQUA/OLIO
- . ACQUA/GLICOLE
- . ACQUA/ACQUA INDUSTRIALE
- . PER ALTRI FLUIDI CONSULTARE **EMMEGI**

## Specifiche tecniche

- . VERSIONI : STANDARDS - ACQUA MARINA - AISI - .....
- . PRESSIONE DI ESERCIZIO : 12 bar.
- . PRESSIONE DI COLLAUDO : 18 bar.
- . TEMPERATURA MAX DI ESERCIZIO : 120°C

## Installazione

In fig. 1 è indicata la corretta posizione d'entrata dei due fluidi, che devono circolare in controcorrente per ottenere il massimo scambio termico.

Il posizionamento dello scambiatore sulla macchina deve essere fatta utilizzando appositi supporti elastici, e quindi collegata all'impianto idraulico ed alla rete idrica mediante tubi flessibili. E' consigliabile prevedere, su impianti che lavorano in ambienti con forti escursioni termiche, una valvola di by-pass (fig.2) tra ingresso e uscita olio.

Con temperature molto basse e impianto fermo è opportuno mantenere l'acqua in continua circolazione per evitare dannose rotture; oppure svuotare lo scambiatore avvalendosi del tappo di scarico.

**EMMEGI** heat-exchangers water-oil are normally used for the cooling of oil hydraulic systems and are installed on the return line of the system.

The **EMMEGI** range comprises a vast choice of applicable models, highly efficient. The range of high quality material working with precision machinery, all produce an extremely reliable product.

The **EMMEGI** heat exchangers have a water system of 1,2 or 4 circuits as they can be supplied with thermostatic valves which greatly assist in the reduction of water consumption.

## Compatible fluids

- . MINERAL OILS; HL; HLP.
- . MIXTURE WATER/OIL
- . WATER-GLICOLIC ACID
- . WATER/INDUSTRIAL WATER
- . FOR OTHER FLUIDS, CONTACT **EMMEGI**

## Technical specification

- . VERSION: FRESH WATER - SEA WATER - AISI
- . OPERATING PRESSURE : 12 bar
- . TEST PRESSURE : 18 bar
- . MAX OPERATING TEMPERATURE : 120°C

## Installation

The correct position of inlet of the two fluids is indicated in fig. 1. They should circulate in opposite direction, in order to obtain the maximum heat exchange.

The positioning of the heat exchanger on the machine should be carried out using appropriate flexible supports and all those in connection with hydraulic or power plant, through flexible tubing. It is advisable, to preserve the heat exchanger, that a by-pass valve is inserted (fig.2).

At very low temperatures, it is advisable to keep the water in constant circulation, to prevent harmful fractures otherwise emptying the exchanger by use of the discharge valve.

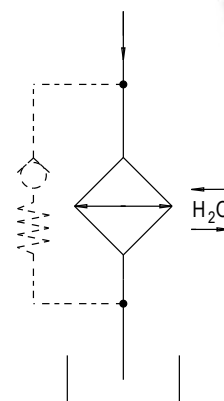
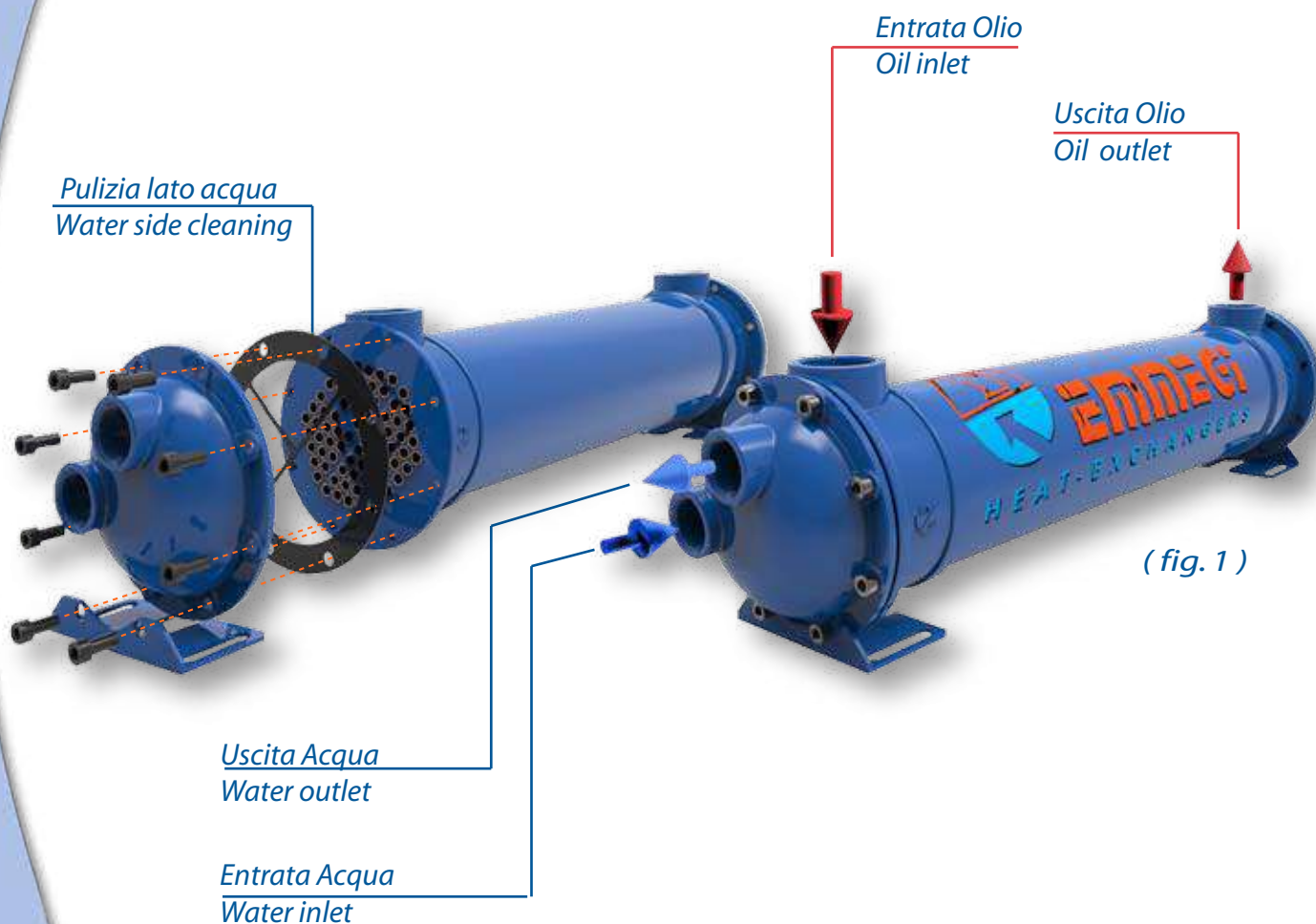


fig.2



## **Manutenzione**

### **Pulizia lato acqua**

Per garantire il massimo rendimento dello scambiatore, è consigliabile una periodica ispezione del circuito acqua al fine d'eliminare eventuali tracce di calcare o altre impurità che si sono depositate all'interno dei tubi. Quest'operazione si compie agevolmente togliendo solo il fondello e procedendo allo scivolamento dei tubi.

### **Pulizia lato olio**

Su questo lato del circuito, la pulizia avviene mediante flussaggio con perclorilene fatto circolare in controcorrente per ca. 30 min. Procedere quindi all'eliminazione dei residui tramite flussaggio con acqua calda.

## **Maintenance**

### **Water side cleaning**

*To guarantee the maximum effectiveness in exchange, an inspection of the water circuit is advisable, to eliminate all trace of lime or any other impurities, which might be deposited inside the tubes.*

*This operation will be easily accomplished by removing the headers and flushing out the tubes.*

### **Oil side cleaning**

*In this part of the circuit, the cleaning will be carried out through the circulation of perchloride in the opposite direction of the normal flow, for about 30 minutes. This will help to eliminate any residue left by flushing out with hot water.*

## Esempio di scelta dello scambiatore di calore

### DATI :

Portata olio	: 60 [lt/min.]
Peso specifico	: 0,88 [Kg/dm <sup>3</sup> ]
Calore specifico	: 0,49 [Kcal/Kg °C]
Viscosità	: 32 [cst]
Temperatura IN olio	: 55 [°C]
Temperatura IN acqua	: 20 [°C]
Potenza da dissipare	: 15 [KW]

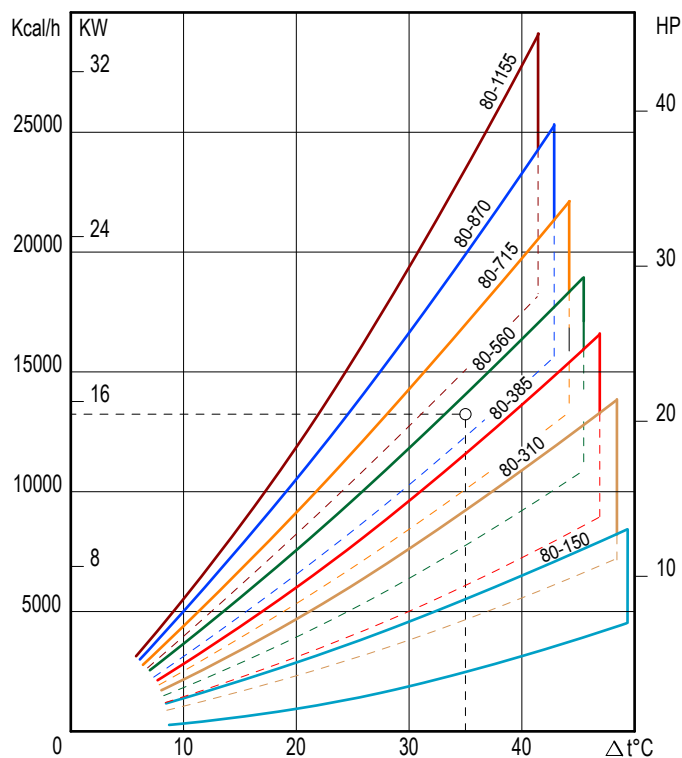
Conoscendo la portata dell'olio, la potenza da dissipare, e stabilito il  $\Delta T$ , ovvero la differenza tra la temperatura ingresso olio e la temperatura ingresso acqua, si può ricercare sui diagrammi riportati a catalogo lo scambiatore idoneo.

## Data relating to heat exchanger selection

### DATA :

Oil flow	: 60 [lt/min.]
Specific weight	: 0,88 [Kg/dm <sup>3</sup> ]
Specific heat	: 0,49 [Kcal/Kg °C]
Viscosity	: 32 [cst]
Oil temperature	: 55 [°C]
Water temperature	: 20 [°C]
Cooling power	: 15 [KW]

Knowing the fluidity and flow rate of the oil, cooling power and stability of  $\Delta T$  (IN running temperature of oil - water temperature) you can adjust these calculations to the specifications given in our catalogue.



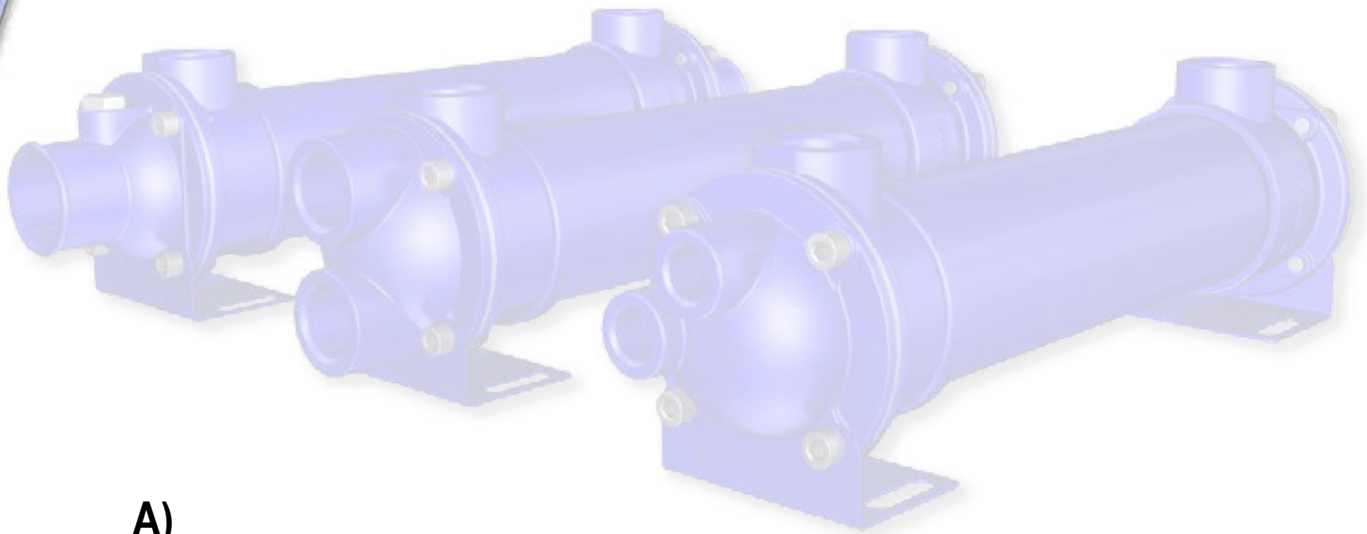
TIPO TYPE	PORTATA OLIO OIL FLOW ( lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL -55°C H20-20°C
MG 80-150-...	25 - 75	4 - 8
MG 80-310-...	25 - 80	7 - 14
MG 80-385-...	25 - 80	9 - 17
MG 80-560-...	25 - 80	12 - 20
MG 80-715-...	35 - 120	15 - 24
MG 80-870-...	40 - 130	18 - 29
MG 80-1155-...	40 - 130	22 - 36

Lo scambiatore selezionato risulta il modello MG-80-870-4.

La dissipazione segnata nel diagramma di rendimento espressa in HP si ottiene con viscosità pari a 32 cst e portate acqua indicate nella seguente tabella A:

Selected exchangers results in the model MG-80-870-4.

The marked dissipation on the exchange diagram expressed in HP will be arrived, with a viscosity of 32 cst and water flow as indicated in our following table A:



**A)**

n° passaggi lato acqua n° of water circuits	lt/min x ogni HP da dissipare l/min x any HP to be dissipated
1	3
2	2
4	1

Nel caso s'abbiano variazioni di temperatura e portata d'acqua, considerare i seguenti coefficienti:

In the case where there are substantial in temperature and flow of water, consider the following coefficients:

**B)**

**Fattore di correzione scambio termico**  
Cooling power correction factor

Portata acqua <i>Water flow</i>	Portata indicata in tabelle "A" <i>Flow expressed in table "A"</i>	Due volte la portata indicata nella tabella "A" <i>Flow expressed in table "A" multiply x 2</i>	Tre volte la portata indicata nella tabella "A" <i>Flow expressed in table "A" multiply x 3</i>
Fattore di correzione <i>Correction factor</i>	1	1,2	1,4

**C)**

**Fattore di correzione T °C acqua con olio a 55°C**  
Temp °C water correction factor with oil at 55°C

Temperatura acqua <i>Water temp</i>	20°C	25°C	30°C	35°C
Fattore di correzione <i>Correction factor</i>	1	0.85	0.70	0.60

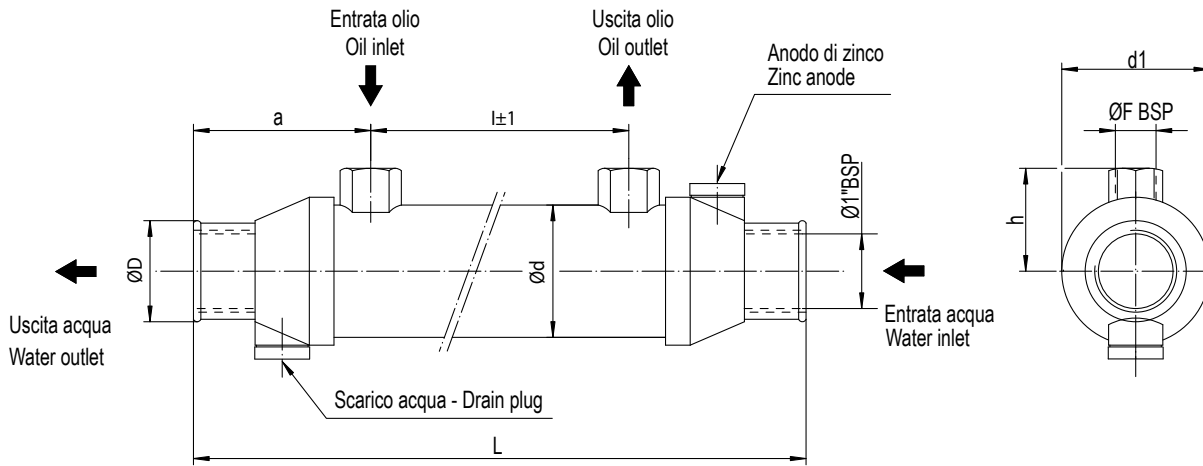
Se per la scelta, tutti i dati non sono conosciuti, contattare la **EMMEGI**.

If in doubt any of this data, contact **EMMEGI**.

# Scambiatori acqua-olio serie MG 54

## Water-oil heat exchangers series MG 54

Con circuito acqua a un passaggio. One way water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
SEA WATER	CuNi10Mn1Fe	CuZn37	CuZn37	CuZn40	CuZn37

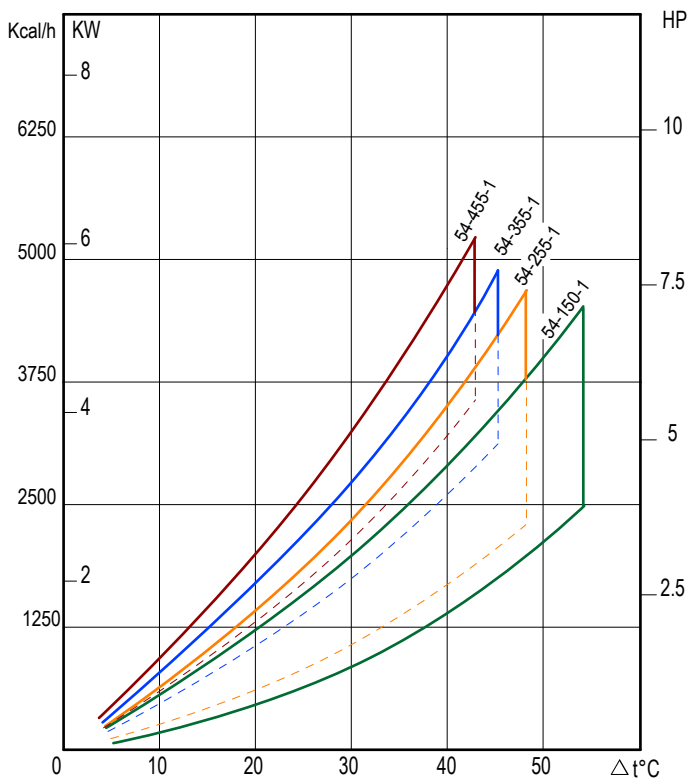
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITH OIL =55°C H <sub>2</sub> O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension							
					1 Pass							
					ØD	ØF	l	L	a	Ød	d1	h
MG 54-150-1	10-40	1.5-4	0.26	1.3	39	3/8"	150	303	74	54	60	42
MG 54-255-1	10-50	2-4.5	0.4	1.8	39	3/8"	255	399	74	54	60	42
MG 54-355-1	10-50	3.5-5.5	0.5	2.3	39	3/8"	355	499	74	54	60	42
MG 54-455-1	10-50	4-6.5	0.6	2.7	39	3/8"	455	599	74	54	60	42

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule



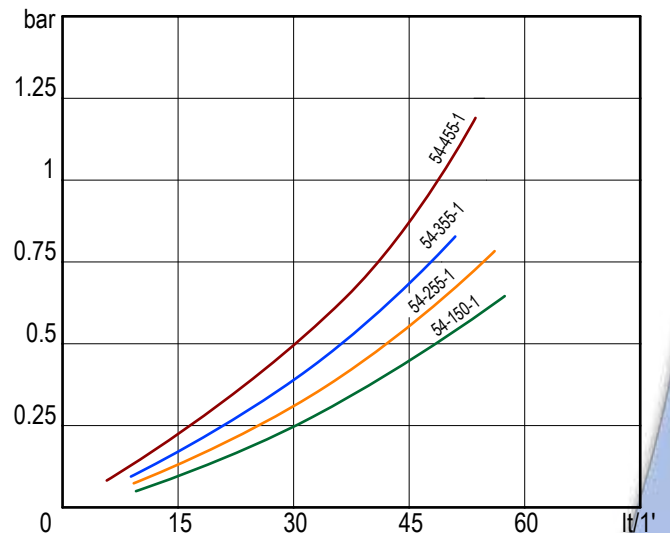
### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

#### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

### PERDITE DI CARICO (32 cst)

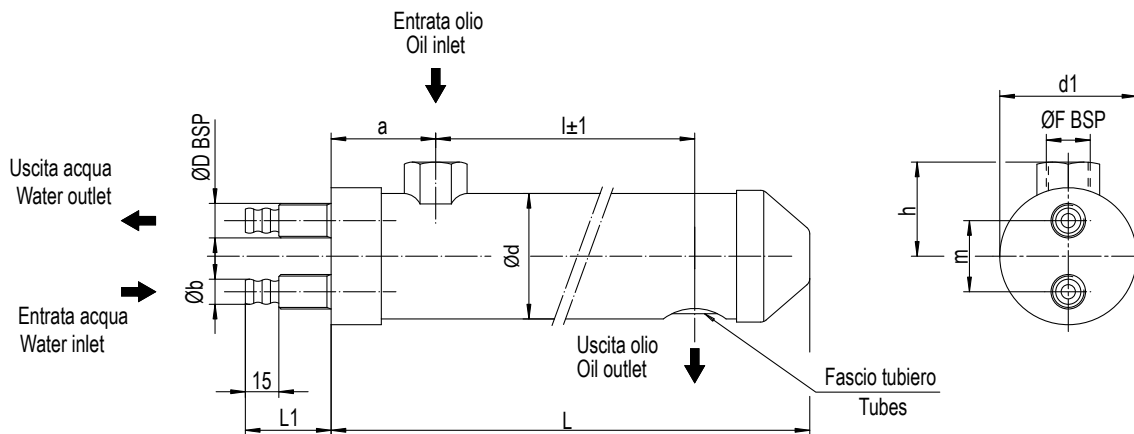
#### PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGC 60e80

## Water-oil heat exchangers series MGC 60e80

Con circuito acqua a due passaggi. Two ways water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

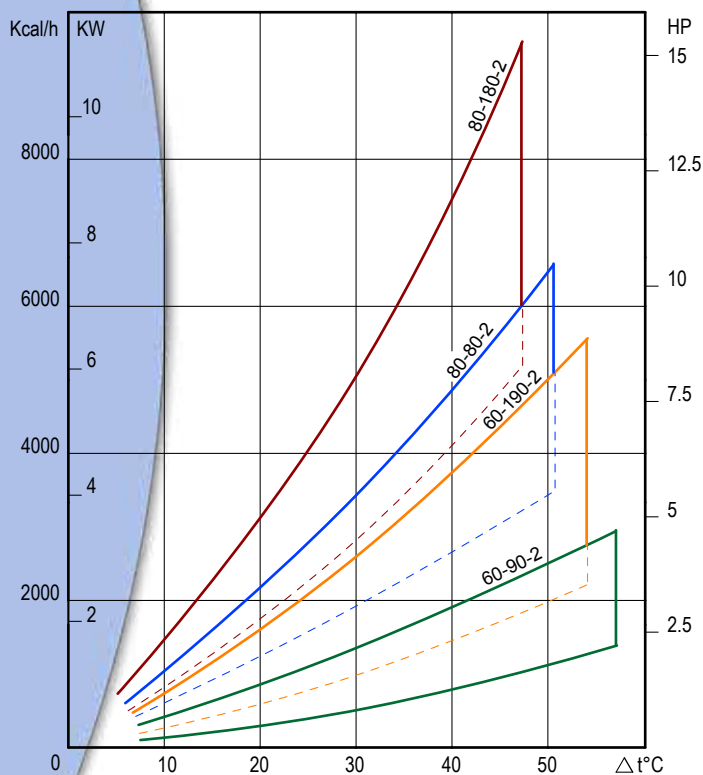
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H <sub>2</sub> O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension										
					2 Pass										
					ØD	ØF	l	L	L1	a	Øb	Ød	d1	h	m
MGC 60-90-2	5-30	1-2.5	0.3	1.5	3/8"	1/2"	90	190	40	48	13	60	65	45	38
MGC 60-190-2	7.5-40	2.5-5	0.4	2	3/8"	1/2"	190	290	40	48	13	60	65	45	38
MGC 80-80-2	25-60	3.5-6.5	0.5	2.3	1/2"	3/4"	80	190	40	50	16	80	85	65	45
MGC 80-180-2	30-80	5.5-10	0.7	3.5	1/2"	3/4"	180	290	40	50	16	80	85	65	45

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

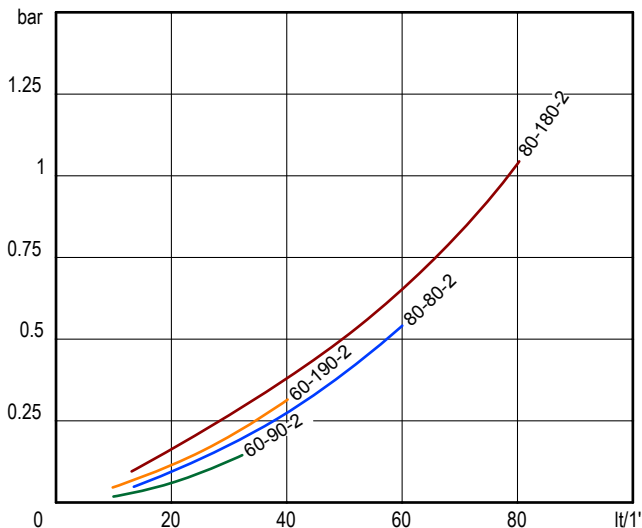
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

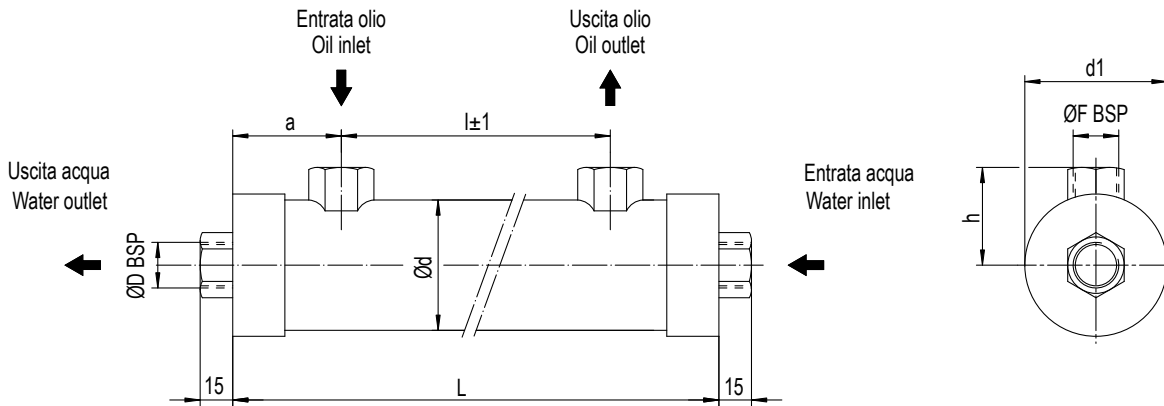
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGE 60

## Water-oil heat exchangers series MGE 60

Con circuito acqua a un passaggio. One way water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLI SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

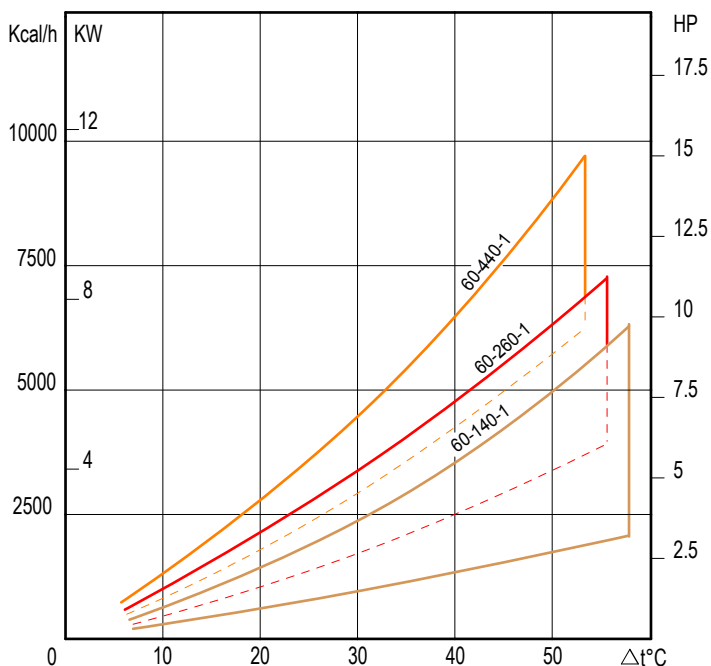
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H <sub>2</sub> O=20°	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension							
					1 Pass							
					ØD	ØF	l	L	a	Ød	d1	h
MGE 60-140-1	5-30	1.5-4.5	0.4	1.8	1/2"	1/2"	140	240	50	60	65	45
MGE 60-260-1	7.5-40	3.5-6.5	0.6	3	1/2"	1/2"	260	360	50	60	65	45
MGE 60-440-1	10-50	6-9	0.9	5	1/2"	1/2"	440	540	50	60	65	45

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule



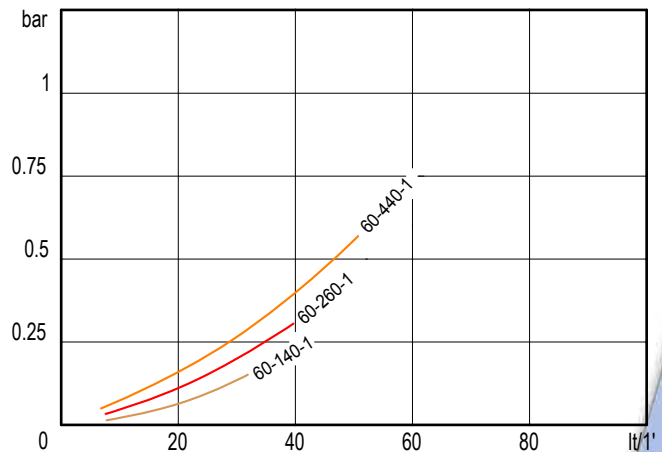
### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

#### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

### PERDITE DI CARICO (32 cst)

#### PRESSURE DROP (32 cst)

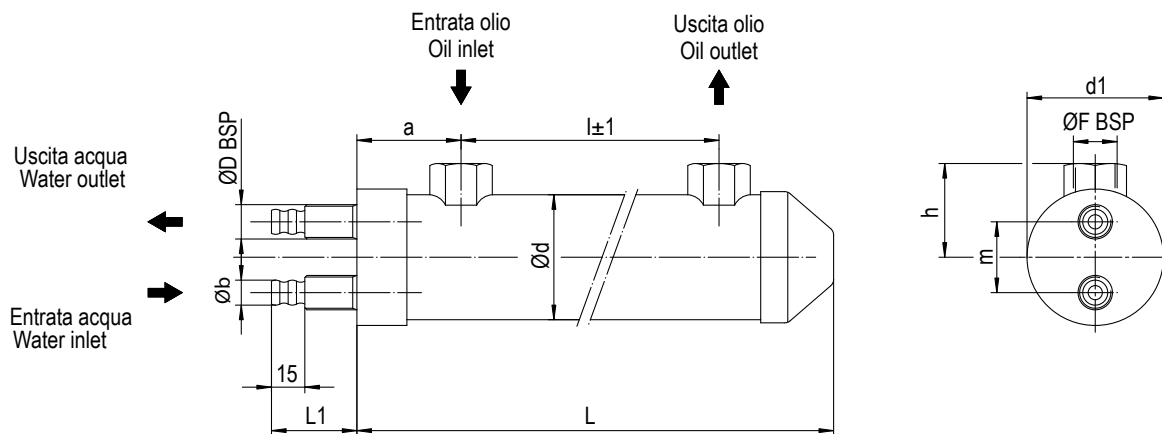




# Scambiatori acqua-olio serie MGE 60

## Water-oil heat exchangers series MGE 60

Con circuito acqua a due passaggi. Two ways water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension										
					2 Pass										
					ØD	ØF	l	L	L1	a	Øb	Ød	d1	h	m
MGE 60-140-2	5-30	1-4	0.4	1.8	3/8"	1/2"	140	245	40	50	13	60	65	45	38
MGE 60-260-2	7.5-40	3-6	0.6	3	3/8"	1/2"	260	365	40	50	13	60	65	45	38
MGE 60-440-2	10-50	5-8.5	0.9	5	3/8"	1/2"	440	545	40	50	13	60	65	45	38

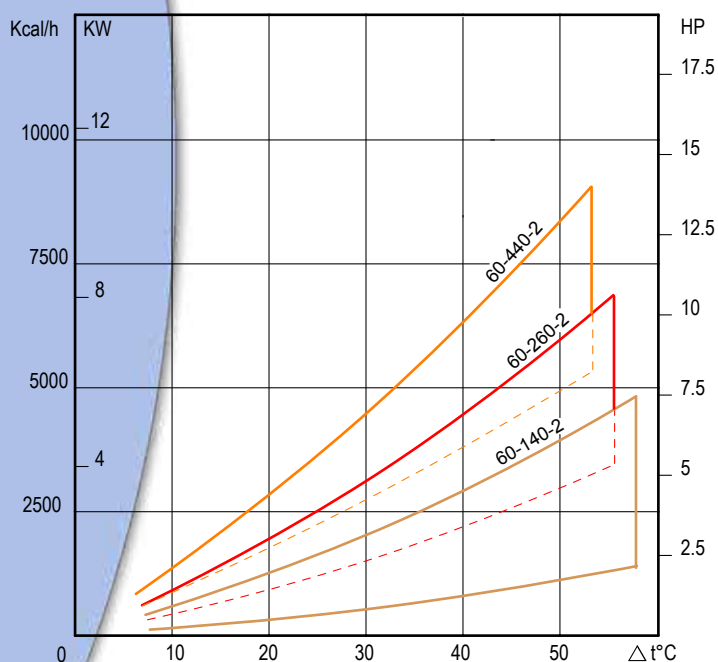


### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

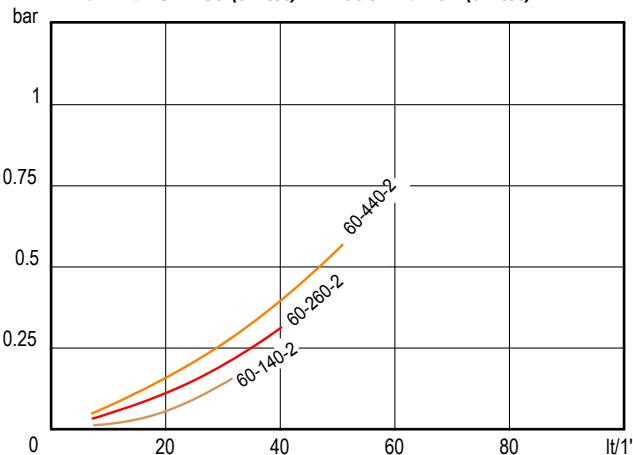
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

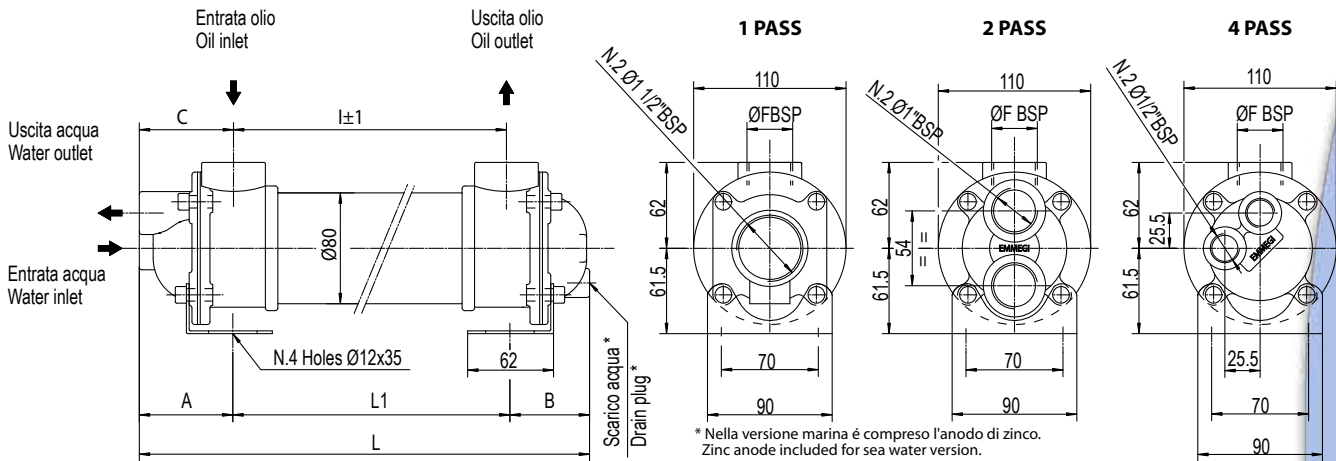
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG80

## Water-oil heat exchangers series MG80

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

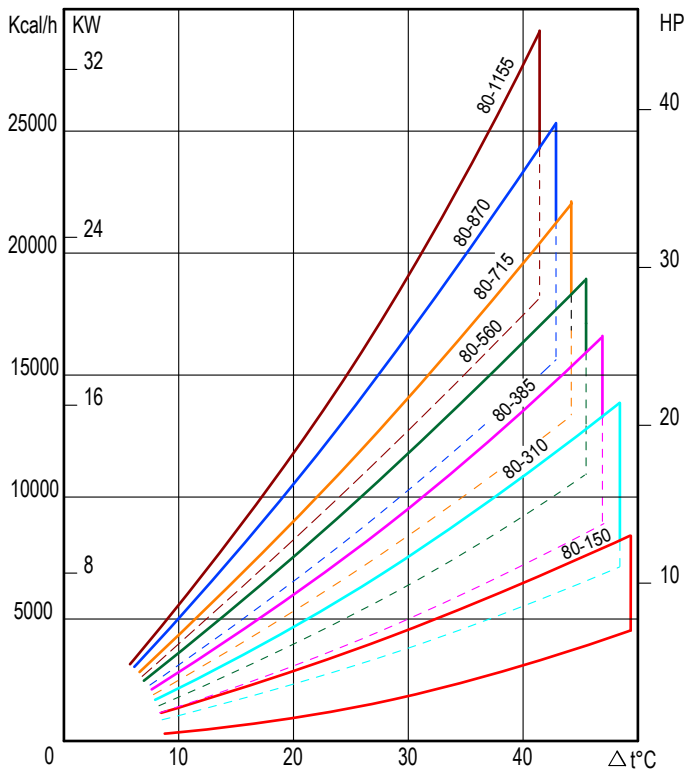
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H <sub>2</sub> O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																				
					1 Pass							2 Pass							4 Pass						
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1
MG 80-150-..	25-75	4-8	0.65	4.5	1"	90	90	85.5	150	321	141	1"	72	64	67.5	150	277	141	1"	72	64	67.5	150	277	141
MG 80-310-..	25-80	7-14	1.1	5.7	1"	90	90	85.5	310	481	301	1"	72	64	67.5	310	437	301	1"	72	64	67.5	310	437	301
MG 80-385-..	25-80	9-17	1.3	6	1"	90	90	85.5	385	556	376	1"	72	64	67.5	385	512	376	1"	72	64	67.5	385	512	376
MG 80-560-..	25-80	12-20	1.9	7.5	1"	90	90	85.5	560	731	551	1"	72	64	67.5	560	687	551	1"	72	64	67.5	560	687	551
MG 80-715-..	35-120	15-24	2.3	8	1"	90	90	85.5	715	886	706	1"	72	64	67.5	715	842	706	1"	72	64	67.5	715	842	706
MG 80-870-..	40-130	18-29	2.8	10	1"	90	90	85.5	870	1041	861	1"	72	64	67.5	870	997	861	1"	72	64	67.5	870	997	861
MG 80-1155-..	40-130	22-36	3.7	13.5	1"	90	90	85.5	1155	1326	1146	1"	72	64	67.5	1155	1282	1146	1"	72	64	67.5	1155	1282	1146

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

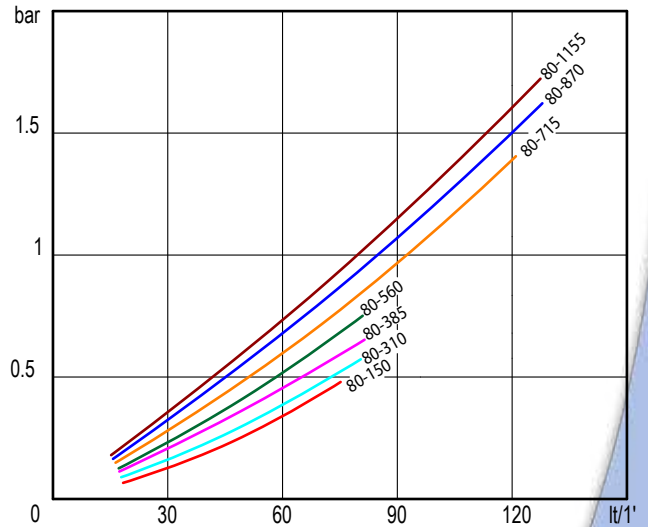
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

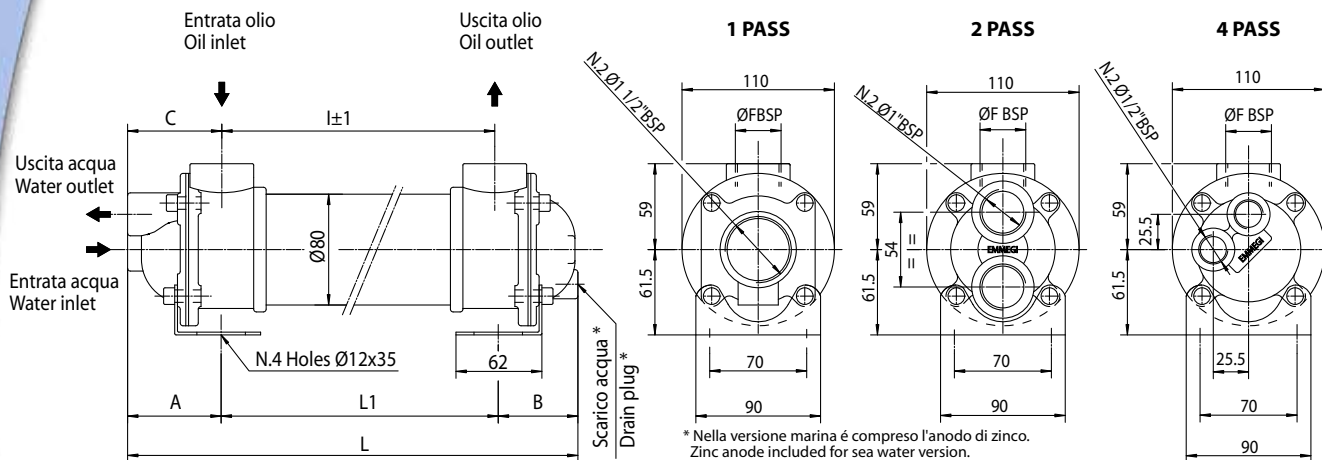
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG81

## Water-oil heat exchangers series MG81

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

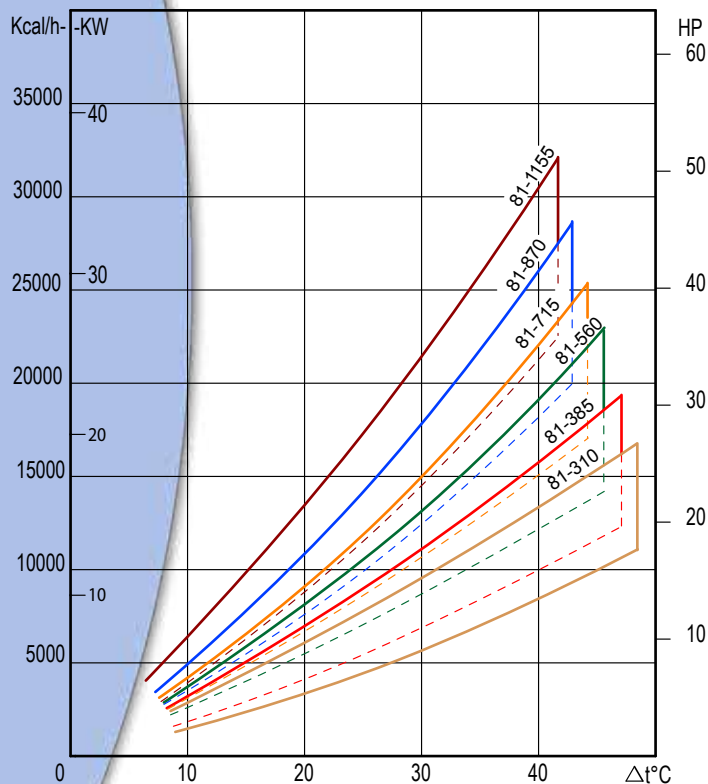
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																							
					1 Pass								2 Pass								4 Pass							
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1			
MG 81-310..	50-120	11-18	1.2	5.7	1 1/2"	90	90	92	310	494	314	1 1/2"	72	64	74	310	450	314	1 1/2"	72	64	74	310	450	314			
MG 81-385..	50-120	13-21	1.4	6	1 1/2"	90	90	92	385	569	389	1 1/2"	72	64	74	385	525	389	1 1/2"	72	64	74	385	525	389			
MG 81-560..	60-150	16-25	2	7.5	1 1/2"	90	90	92	560	744	564	1 1/2"	72	64	74	560	700	564	1 1/2"	72	64	74	560	700	564			
MG 81-715..	75-180	20-29	2.4	8	1 1/2"	90	90	92	715	899	719	1 1/2"	72	64	74	715	855	719	1 1/2"	72	64	74	715	855	719			
MG 81-870..	75-180	24-34	2.9	10	1 1/2"	90	90	92	870	1054	874	1 1/2"	72	64	74	870	1010	874	1 1/2"	72	64	74	870	1010	874			
MG 81-1155..	75-180	29-40	3.8	13.5	1 1/2"	90	90	92	1155	1339	1159	1 1/2"	72	64	74	1155	1295	1159	1 1/2"	72	64	74	1155	1295	1159			

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

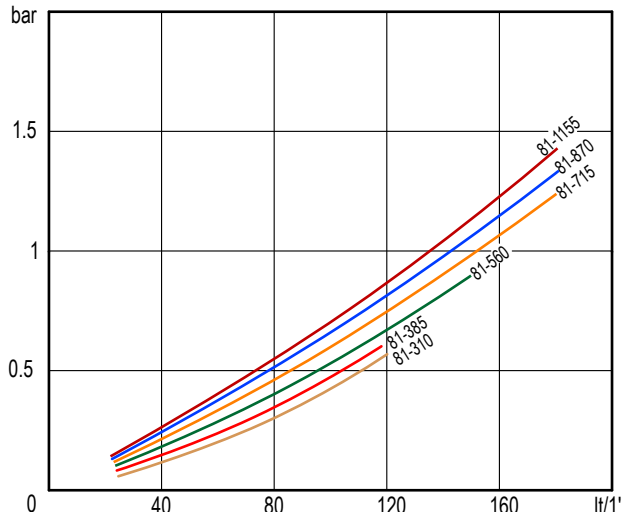
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

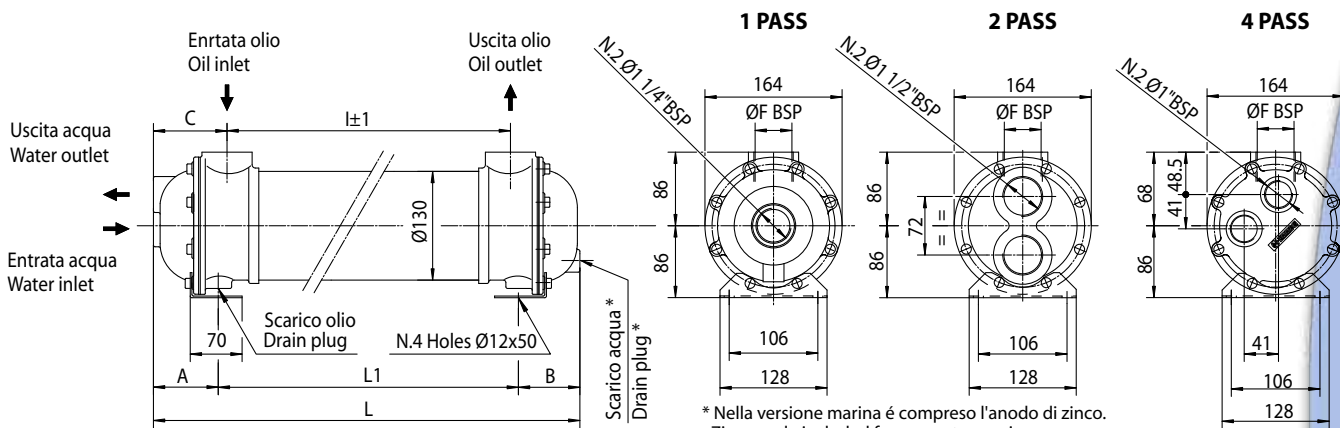
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG130

## Water-oil heat exchangers series MG130

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



\* Nella versione marina è compreso l'anodo di zinco. Zinc anode included for sea water version.

Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																							
					1 Pass								2 Pass								4 Pass							
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1			
MG 130-285..	60-160	12-30	3	16	1 1/2"	85	85	94	285	473	303	1 1/2"	80	75	89	285	458	303	1 1/2"	80	75	89	285	458	303			
MG 130-535..	80-200	18-48	5.2	22	1 1/2"	85	85	94	535	723	553	1 1/2"	80	75	89	535	708	553	1 1/2"	80	75	89	535	708	553			
MG 130-845..	120-280	35-68	7.9	28	1 1/2"	85	85	94	845	1033	863	1 1/2"	80	75	89	845	1018	863	1 1/2"	80	75	89	845	1018	863			
MG 130-995..	120-280	41-78	9.2	32	1 1/2"	85	85	94	995	1183	1013	1 1/2"	80	75	89	995	1168	1013	1 1/2"	80	75	89	995	1168	1013			
MG 130-1105..	120-280	50-90	10	35	1 1/2"	85	85	94	1105	1293	1123	1 1/2"	80	75	89	1105	1278	1123	1 1/2"	80	75	89	1105	1278	1123			

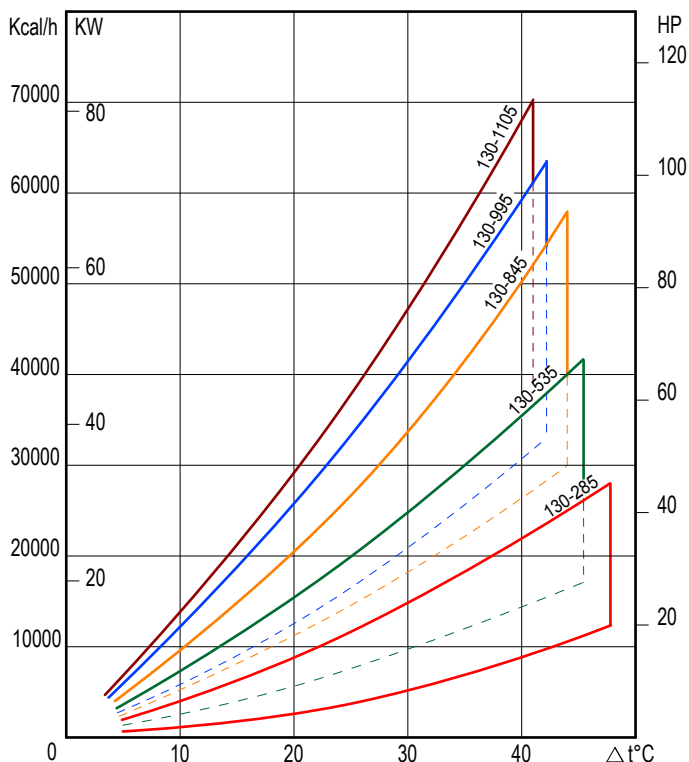


### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

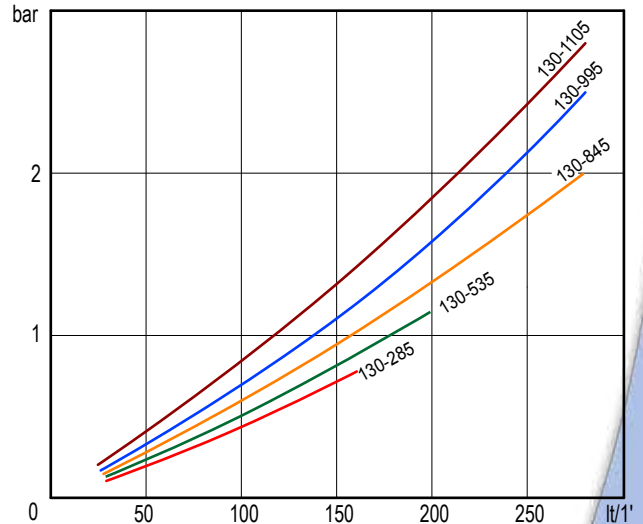


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

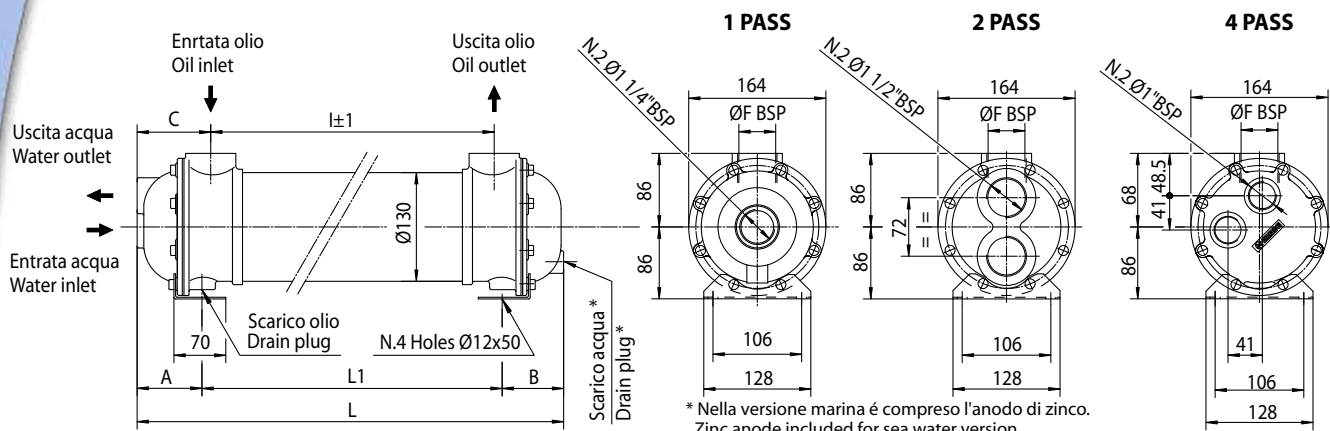
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG131

## Water-oil heat exchangers series MG131

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

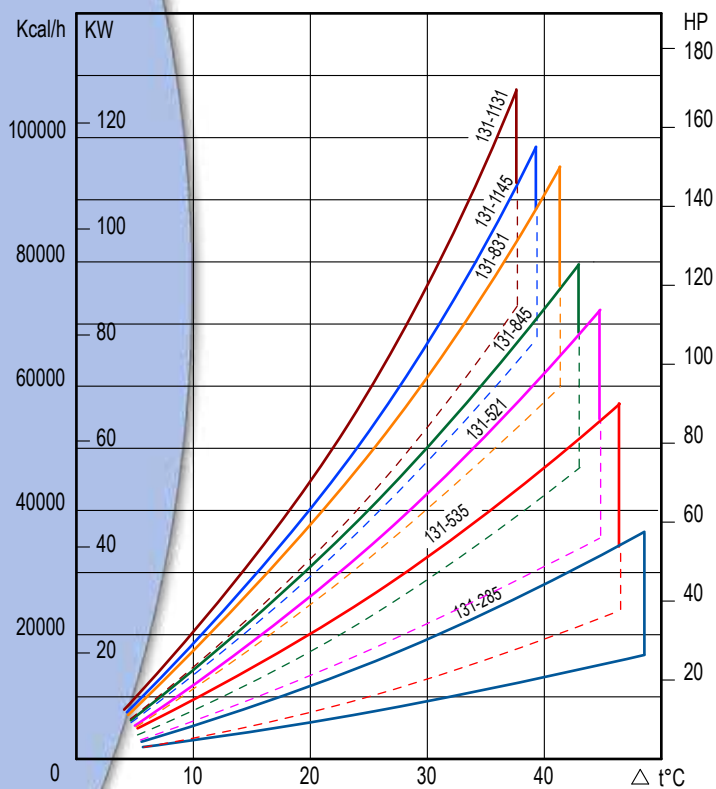
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																							
					1 Pass						2 Pass						4 Pass											
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1			
MG 131-285...	50-140	17-38	2.7	17	1 1/2"	85	85	94	285	473	303	1 1/2"	80	75	89	285	458	303	1 1/2"	80	75	89	285	458	303			
MG 131-535...	80-200	24-63	4.5	23	1 1/2"	85	85	94	535	723	553	1 1/2"	80	75	89	535	708	553	1 1/2"	80	75	89	535	708	553			
MG 131-521...	120-280	40-82	4.6	23	2"	85	85	102	521	725	555	2"	80	75	97	521	710	555	2"	80	75	97	521	710	555			
MG 131-845...	100-250	56-96	6.9	29	1 1/2"	85	85	94	845	1033	863	1 1/2"	80	75	89	845	1018	863	1 1/2"	80	75	89	845	1018	863			
MG 131-831...	160-400	77-120	7	29	2"	85	85	102	831	1036	866	2"	80	75	97	831	1020	865	2"	80	75	97	831	1020	865			
MG 131-1145...	120-280	85-132	8	36	1 1/2"	85	85	94	1145	1333	1163	1 1/2"	80	75	89	1145	1318	1163	1 1/2"	80	75	89	1145	1318	1163			
MG 131-1131...	160-420	102-153	8.1	36	2"	85	85	102	1131	1335	1165	2"	80	75	97	1131	1320	1165	2"	80	75	97	1131	1320	1165			

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

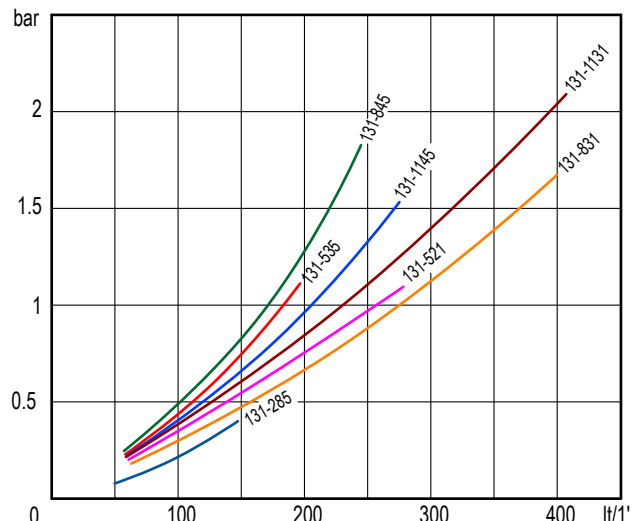
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

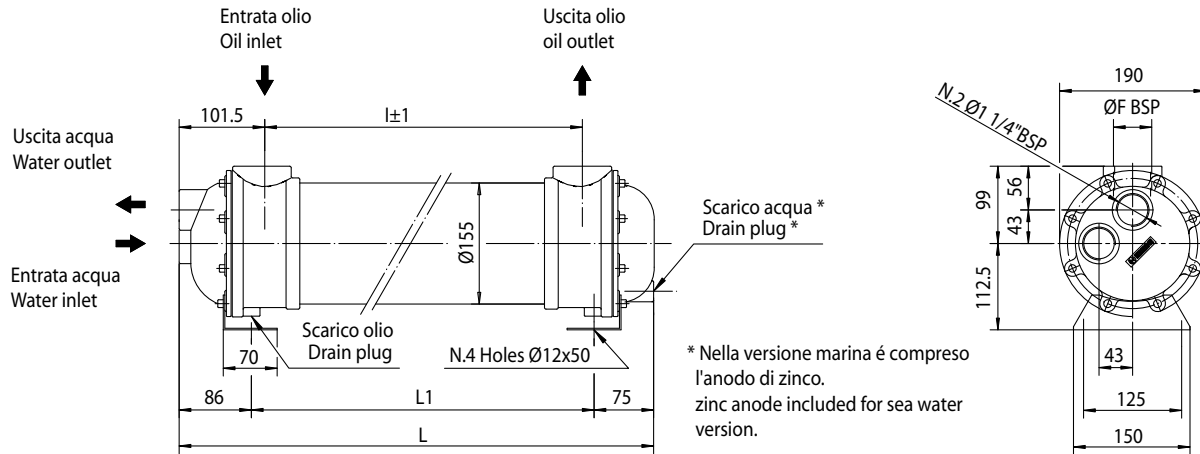
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG155

## Water-oil heat exchangers series MG155

Con circuito acqua ispezionabile a quattro passaggi. Four ways controllable water circuit



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

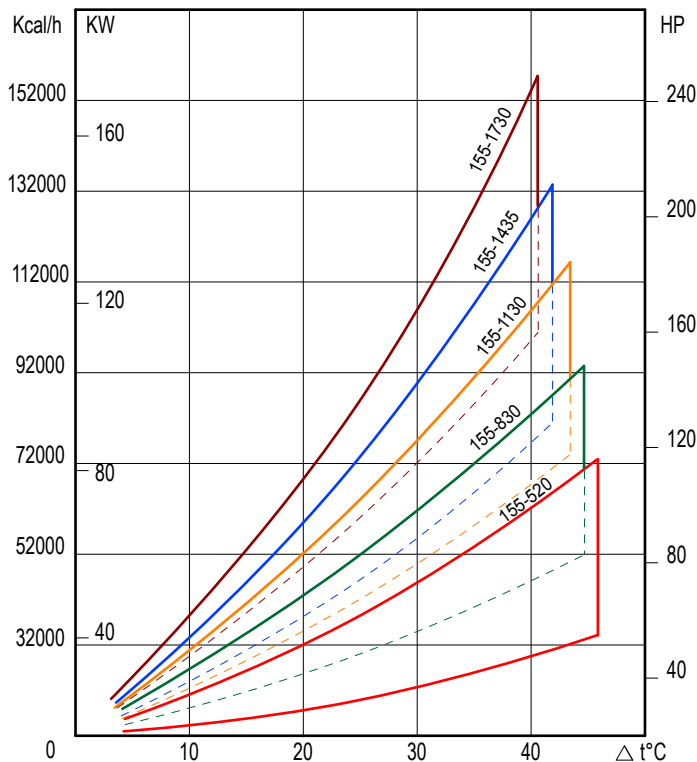
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension			
					4 Pass			
					ØF	I	L	L1
MG 155-520-4	120-300	55-120	6.4	35	2"	520	712	551
MG 155-830-4	140-380	95-155	9.6	43	2"	830	1022	861
MG 155-1130-4	160-420	115-185	12.8	51	2"	1130	1322	1161
MG 155-1435-4	180-450	135-235	16	58	2"	1435	1627	1466
MG 155-1730-4	180-450	160-250	19	66	2"	1730	1922	1761

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

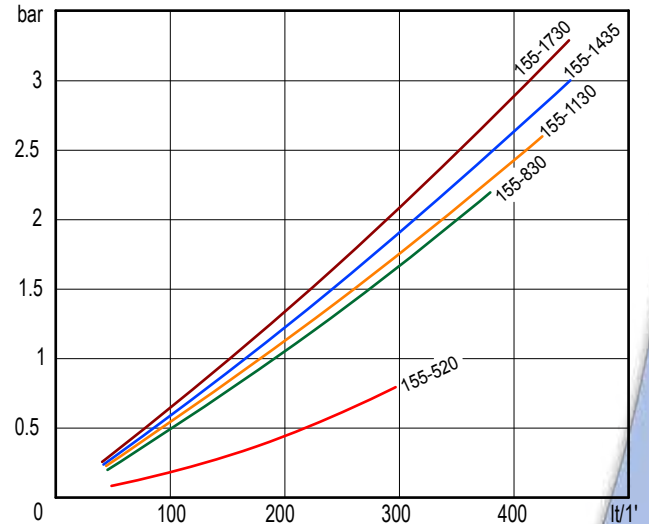


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

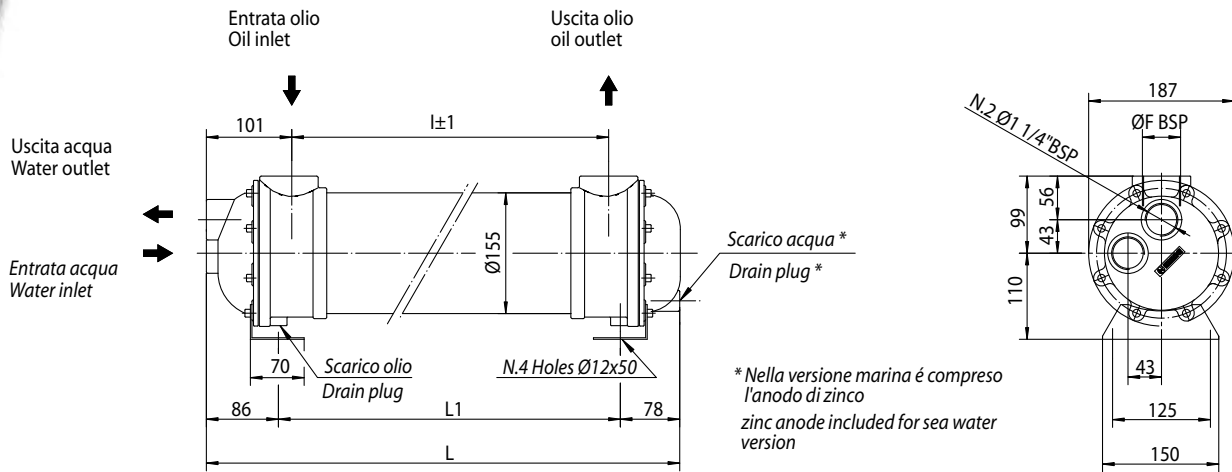
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MG157

## Water-oil heat exchangers series MG157

Con circuito acqua ispezionabile a quattro passaggi. Four ways controllable water circuit



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi30Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

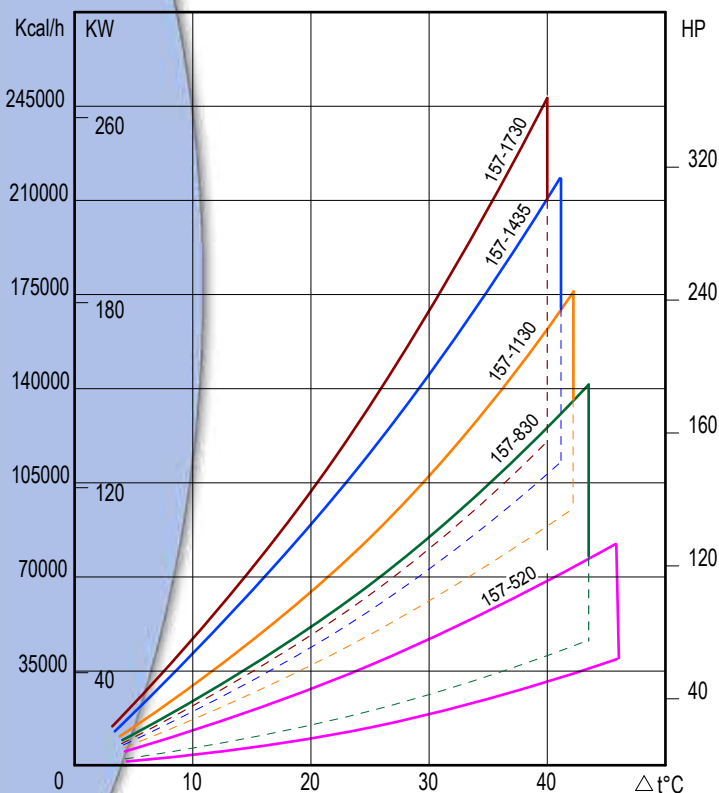
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension			
					4 Pass			
					ØF	I	L	L1
MG 157-520-4	120-300	35-92	5.5	40	2"	520	711	547
MG 157-830-4	140-380	54-166	8.4	50	2"	830	1021	857
MG 157-1130-4	160-420	110-215	11.3	59	2"	1130	1321	1157
MG 157-1435-4	180-450	140-280	14.1	66	2"	1435	1626	1462
MG 157-1730-4	180-450	155-315	17	76	2"	1730	1921	1757

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

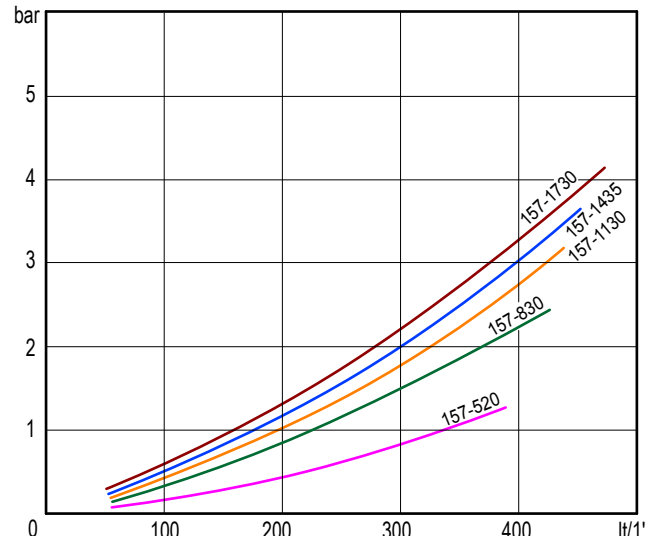


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

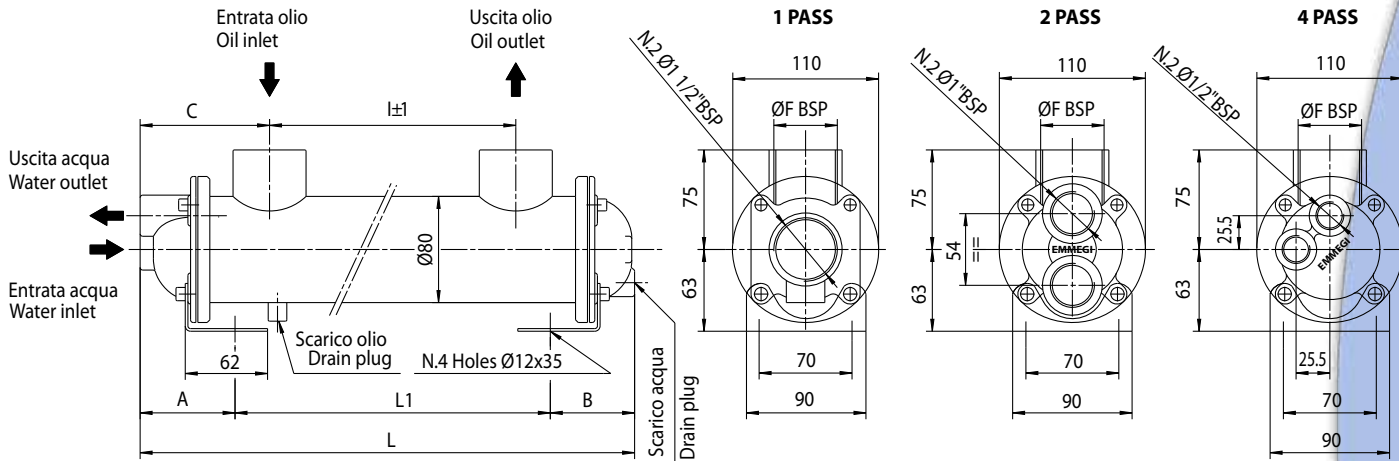
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGB80 - AISI 304

## Water-oil heat exchangers series MGB80 - AISI 304

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI	AISI 304	AISI 304	AISI 304	CuZn40	AISI 304	Graphite - kevlar

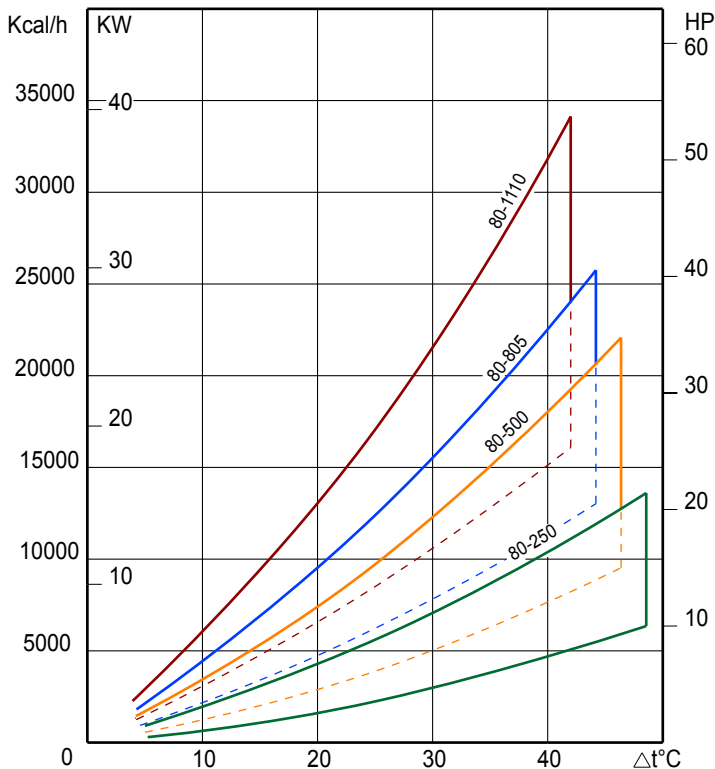
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																				
					1 Pass						2 Pass						4 Pass								
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1
MGB 80-250-..	30-160	6-14	1.1	6	1 1/2"	90	90	127.5	250	505	325	1 1/2"	72	64	127.5	250	461	325	1 1/2"	72	64	127.5	250	461	325
MGB80-500-..	40-180	10-24	2	9	1 1/2"	90	90	127.5	500	755	575	1 1/2"	72	64	127.5	500	711	575	1 1/2"	72	64	127.5	500	711	575
MGB 80-805-..	40-180	15-30	3	12	1 1/2"	90	90	127.5	805	1060	880	1 1/2"	72	64	127.5	805	1016	880	1 1/2"	72	64	127.5	805	1016	880
MGB 80-1110-..	50-200	20-42	4	15	1 1/2"	90	90	127.5	1110	1365	1185	1 1/2"	72	64	127.5	1110	1321	1185	1 1/2"	72	64	127.5	1110	1321	1185

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

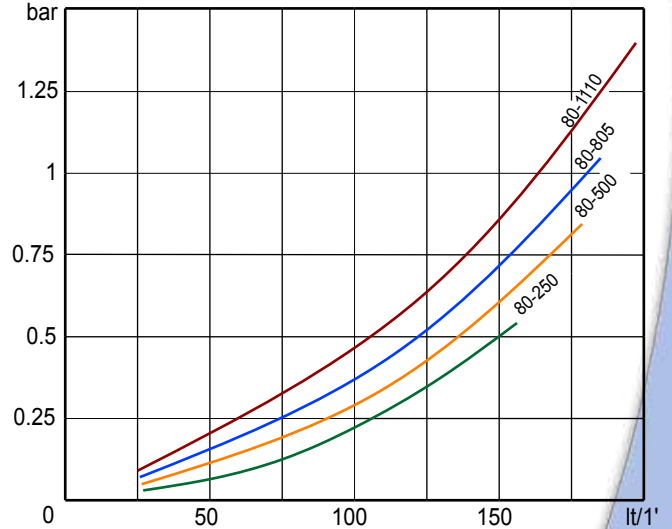
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)

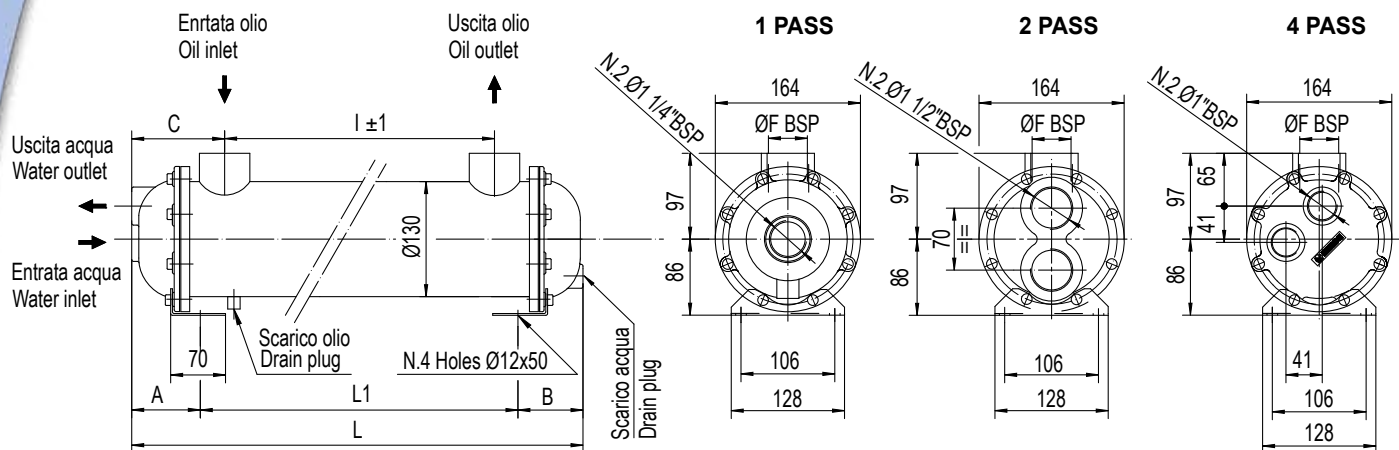




# Scambiatori acqua-olio serie MGB130 - AISI 304

## Water-oil heat exchangers series MGB130 - AISI 304

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI	AISI 304	AISI 304	AISI 304	CuZn40	AISI 304	Graphite-kevlar

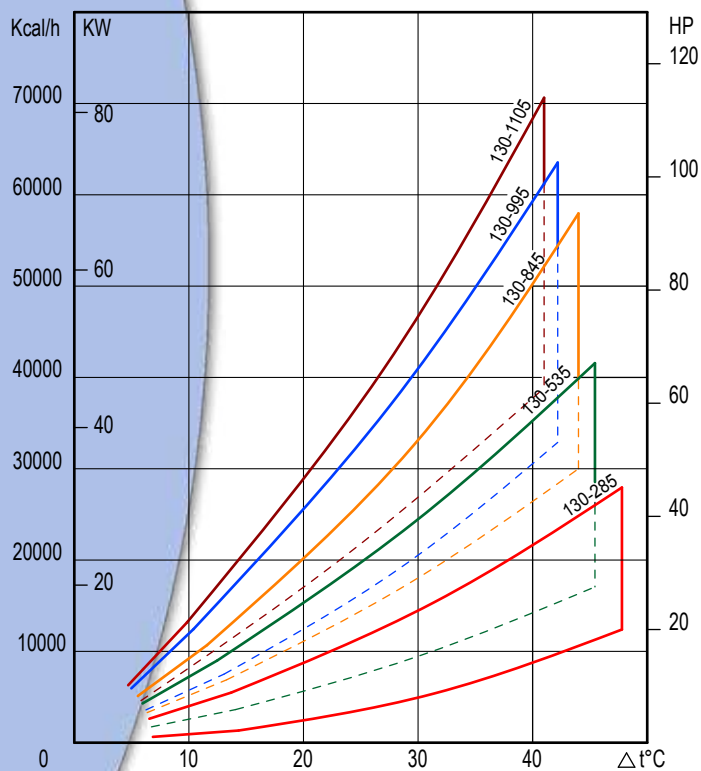
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																							
					1 Pass							2 Pass							4 Pass									
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1			
MGB130-285...	60-160	12-30	3	16	1 1/2"	85	85	132	285	549	379	1 1/2"	80	75	127	285	534	379	1 1/2"	80	75	127	285	536	381			
MGB130-535...	80-200	18-48	5.2	22	1 1/2"	85	85	129.5	535	794	624	1 1/2"	80	75	124.5	535	779	624	1 1/2"	80	75	124.5	535	781	626			
MGB130-845...	120-280	35-68	7.9	28	1 1/2"	85	85	124.5	845	1094	924	1 1/2"	80	75	119.5	845	1079	924	1 1/2"	80	75	119.5	845	1081	926			
MGB130-995...	120-280	41-78	9.2	32	1 1/2"	85	85	132	995	1259	1089	1 1/2"	80	75	127	995	1244	1089	1 1/2"	80	75	127	995	1246	1091			
MGB130-1105...	120-280	50-90	10	35	1 1/2"	85	85	129.5	1105	1364	1194	1 1/2"	80	75	124.5	1105	1349	1194	1 1/2"	80	75	124.5	1105	1351	1196			

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

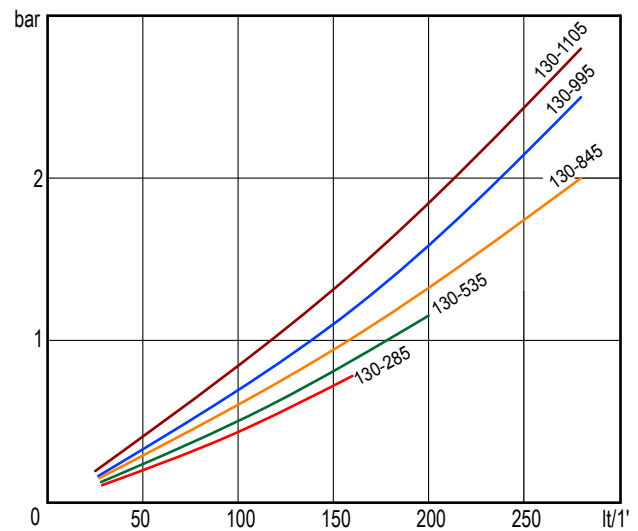


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

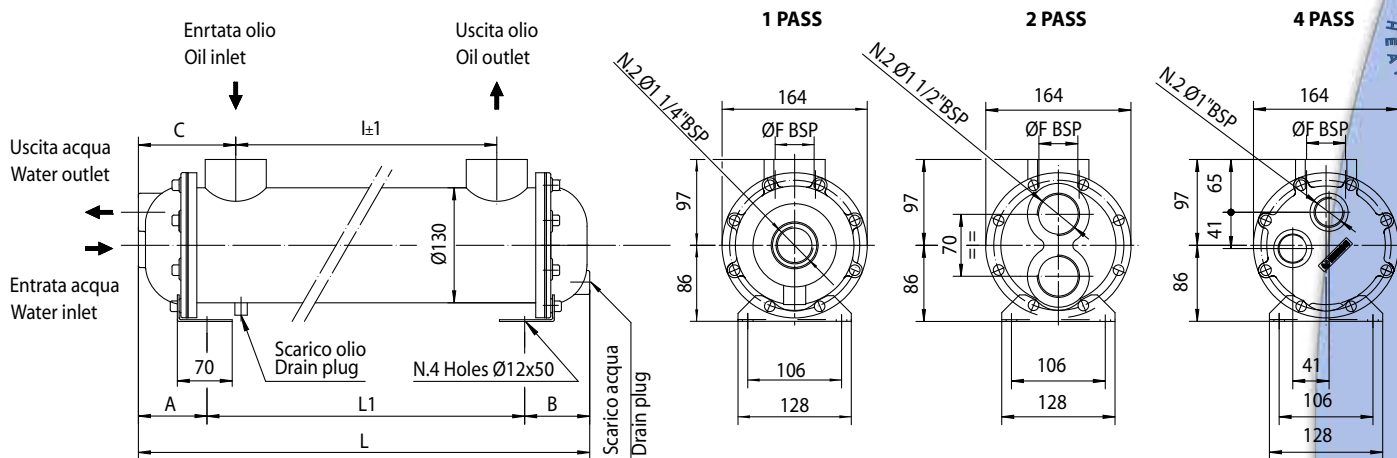
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGB131 - AISI 304

## Water-oil heat exchangers series MGB131 - AISI 304

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
Aisi	AiSi 304	AiSi 304	AiSi 304	CuZn40	AiSi 304	Graphite-kevlar

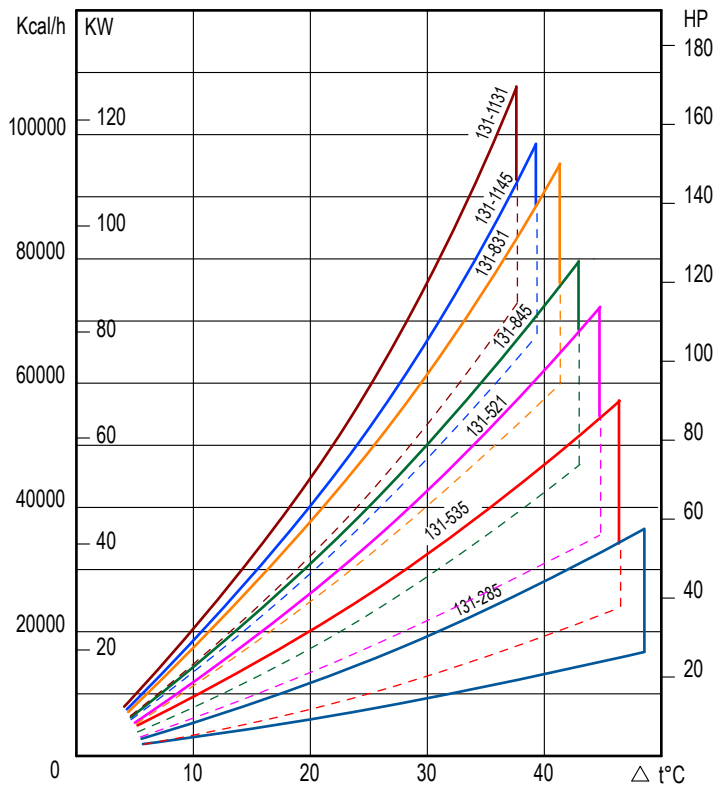
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																				
					1 Pass						2 Pass						4 Pass								
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1
MGB 131-285-..	50-140	17-38	2.7	17	1 1/2"	85	85	132	285	549	379	1 1/2"	80	75	127	285	534	379	1 1/2"	80	75	127	285	536	381
MGB 131-535-..	80-200	24-63	4.5	23	1 1/2"	85	85	129.5	535	794	624	1 1/2"	80	75	124.5	535	779	624	1 1/2"	80	75	124.5	535	781	626
MGB 131-521-..	120-280	40-82	4.6	23	2"	85	85	136.5	521	794	624	2"	80	75	131.5	521	779	624	2"	80	75	131.5	521	781	626
MGB 131-845-..	100-250	56-96	6.9	29	1 1/2"	85	85	124.5	845	1094	924	1 1/2"	80	75	119.5	845	1079	924	1 1/2"	80	75	119.5	845	1081	926
MGB 131-831-..	160-400	77-120	7	29	2"	85	85	131.5	831	1024	924	2"	80	75	126.5	831	1079	924	2"	80	75	126.5	831	1081	926
MGB 131-1145-..	120-280	85-132	8	36	1 1/2"	85	85	124.5	1145	1394	1224	1 1/2"	80	75	119.5	1145	1379	1224	1 1/2"	80	75	119.5	1145	1379	1224
MGB 131-1131-..	160-420	102-153	8.1	36	2"	85	85	131.5	1131	1394	1224	2"	80	75	126.5	1131	1379	1224	2"	80	75	126.5	1131	1379	1224

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

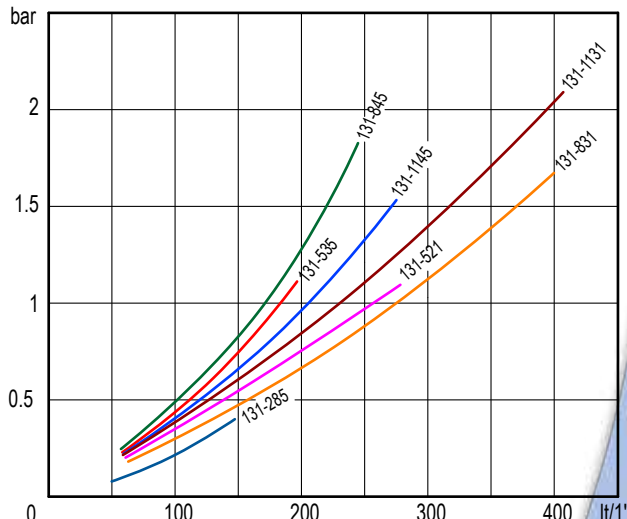
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

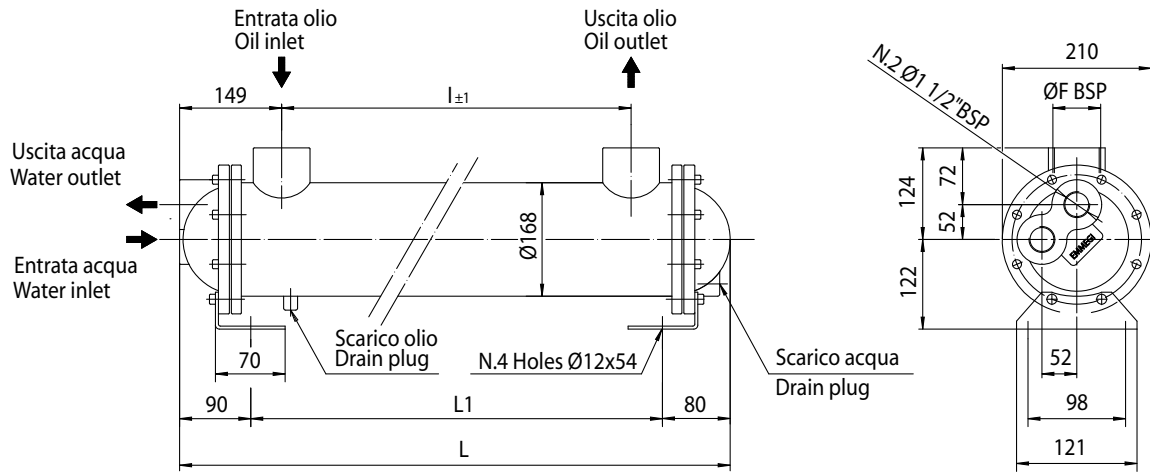
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGB 168 - AISI 304

## Water-oil heat exchangers series MGB 168 - AISI 304

Con circuito acqua ispezionabile a quattro passaggi. Four ways controllable water circuit



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI	AISI 304	AISI 304	AISI 304	G25	AISI 304	Graphite-kevlar

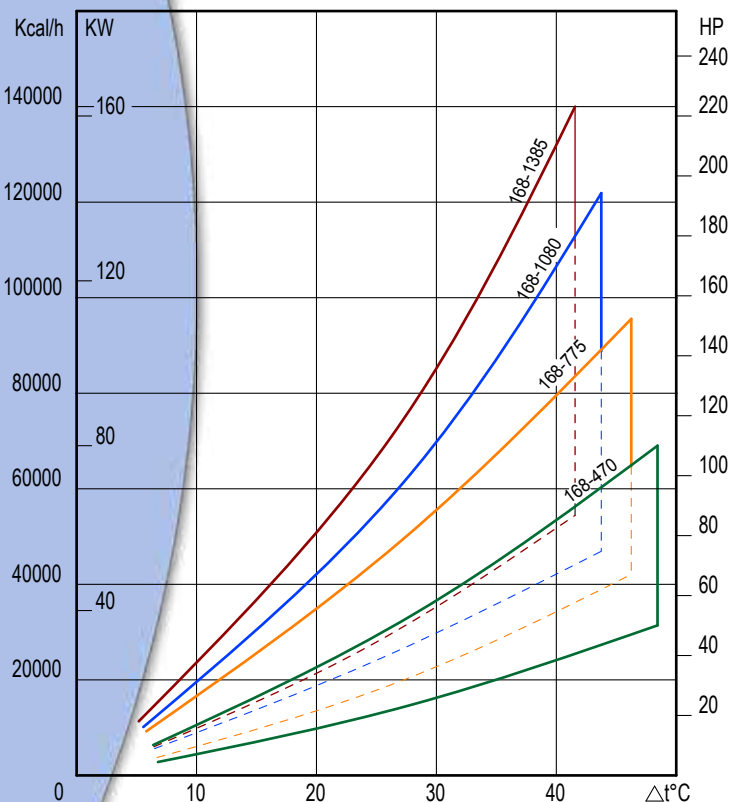
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension			
					4 Pass			
					ØF	I	L	L1
MGB 168-470-4	100-450	32-72	8.3	35	2"	470	756	586
MGB 168-775-4	120-500	45-105	12.5	43	2"	775	1061	891
MGB 168-1080-4	150-550	55-142	16.7	50	2"	1080	1366	1196
MGB 168-1385-4	150-550	70-172	21	57	2"	1385	1671	1501

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

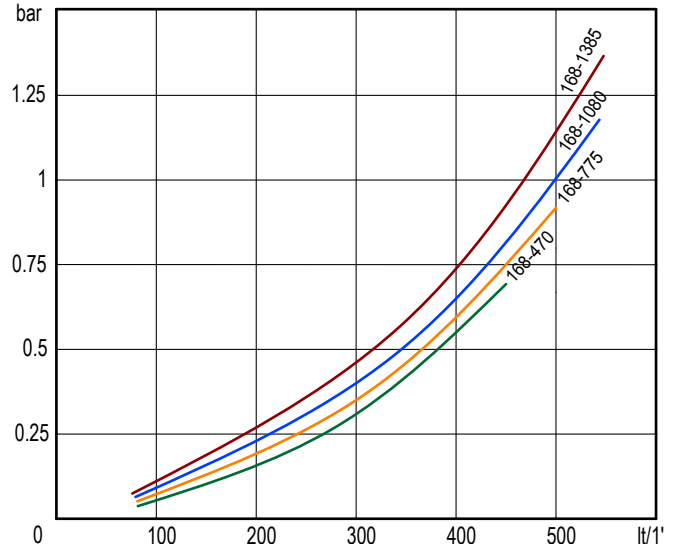


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

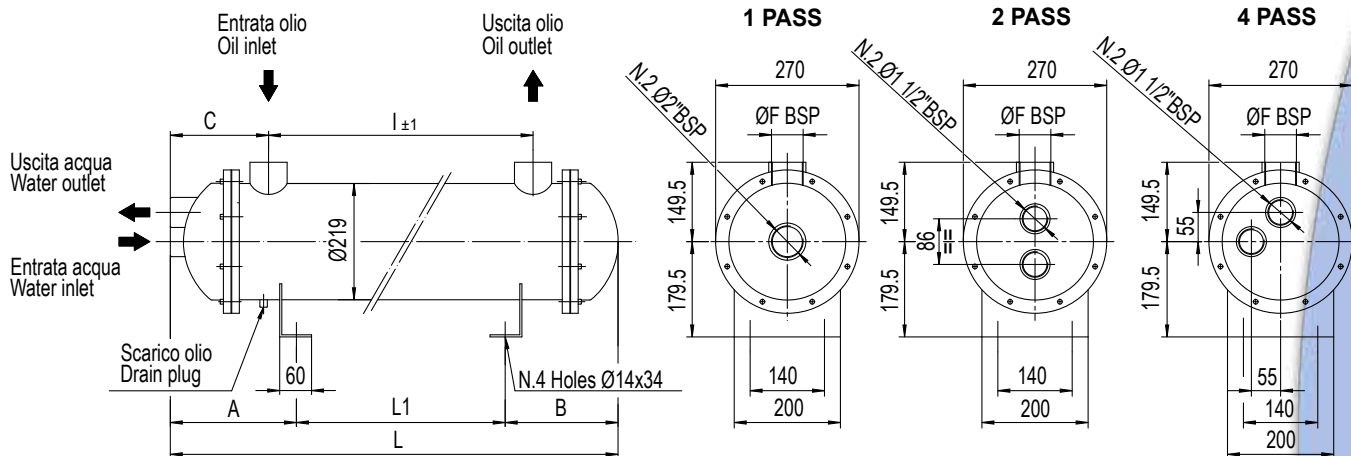
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGB 220

## Water-oil heat exchangers series MGB 220

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	C40	CuZn37	Fe 510.2	Fe510.2	OR 4900
Aisi	AiSi 304	AiSi 304	AiSi 304	AiSi 304	AiSi 304	OR 4900

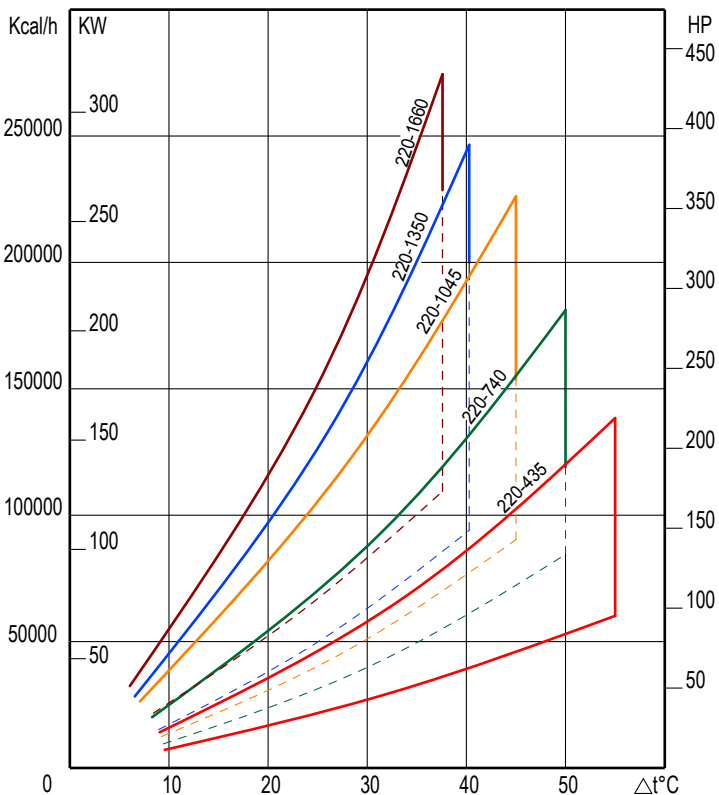
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H <sub>2</sub> O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension																				
					1 Pass							2 Pass							4 Pass						
					ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1	ØF	A	B	C	I	L	L1
MGB 220-435-..	80-800	50-120	11	48	2 1/2"	264	225	207.5	435	811	322	2 1/2"	235	225	178.5	435	782	322	2 1/2"	235	225	178.5	435	782	322
MGB 220-740-..	100-800	75-180	16.8	82	2 1/2"	264	225	207.5	740	1116	627	2 1/2"	235	225	178.5	740	1087	627	2 1/2"	235	225	178.5	740	1087	627
MGB 220-1045-..	100-800	100-250	22.2	110	2 1/2"	264	225	207.5	1045	1421	932	2 1/2"	235	225	178.5	1045	1392	932	2 1/2"	235	225	178.5	1045	1392	932
MGB 220-1350-..	100-800	125-320	27.9	120	2 1/2"	264	225	207.5	1350	1726	1237	2 1/2"	235	225	178.5	1350	1697	1237	2 1/2"	235	225	178.5	1350	1697	1237
MGB 220-1660-..	100-800	150-390	33.6	145	2 1/2"	264	225	207.5	1660	2036	1547	2 1/2"	235	225	178.5	1660	2007	1547	2 1/2"	235	225	178.5	1660	2007	1547

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

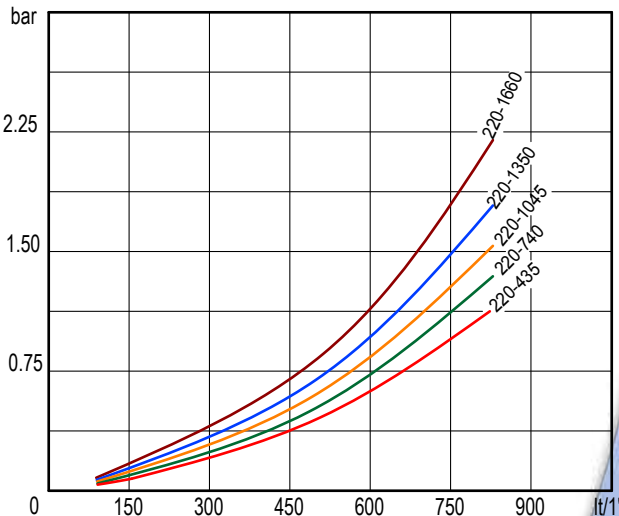
At the maximum and minimum flow stated in schedule



### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

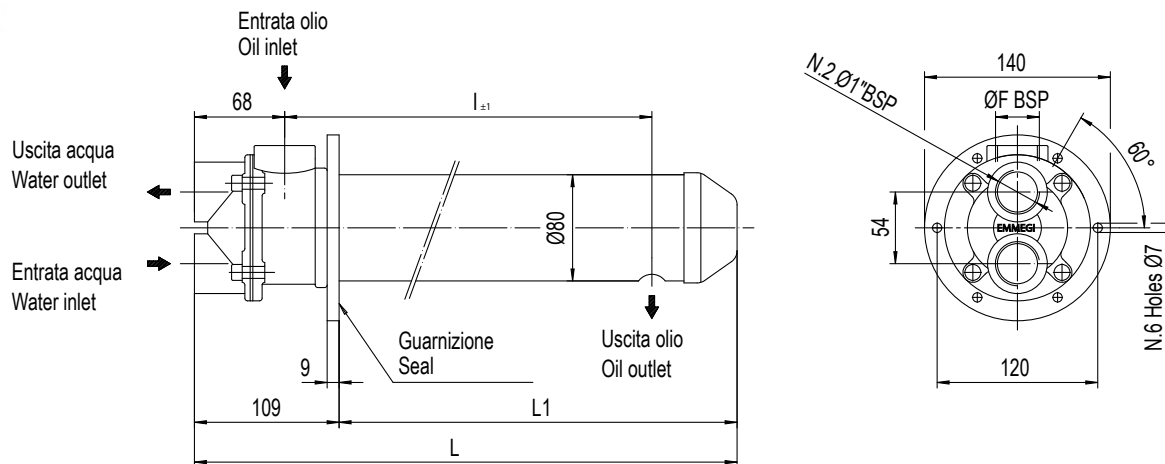
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGF 80

## Water-oil heat exchangers series MGF 80

Con circuito acqua ispezionabile a due passaggi. Two ways controllable water circuit



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37	Rubber-cork

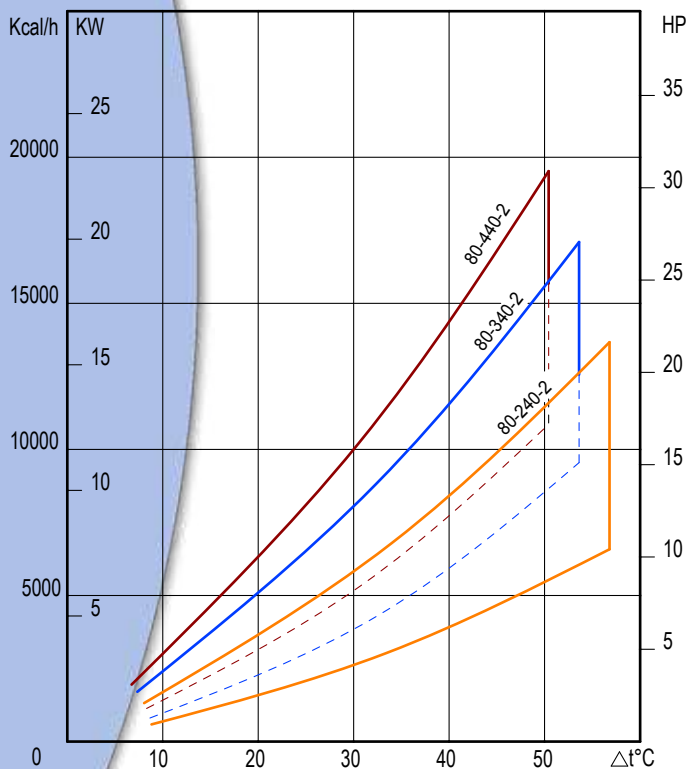
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL=55°C C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	Dimensioni - Over all dimension			
					2 Pass			
					ØF	I	L	L1
MGF 80-240-2	20-60	3-6	0.9	5	1"	240	369	260
MGF 80-340-2	30-70	6-9	1.2	5.7	1"	340	469	360
MGF 80-440-2	40-80	9-12	1.5	6.4	1"	440	569	460

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

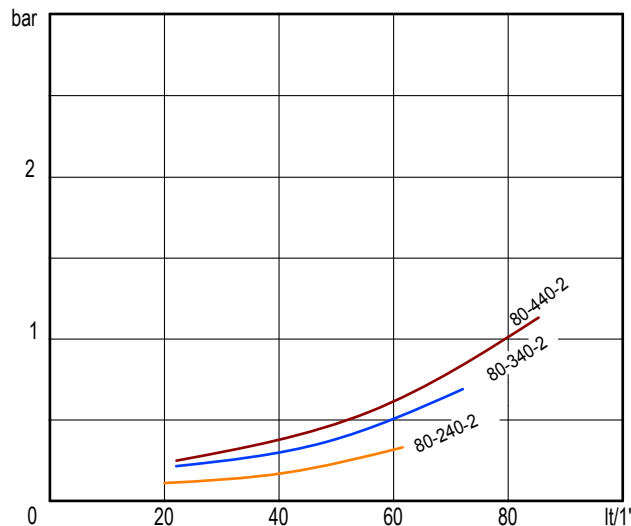


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

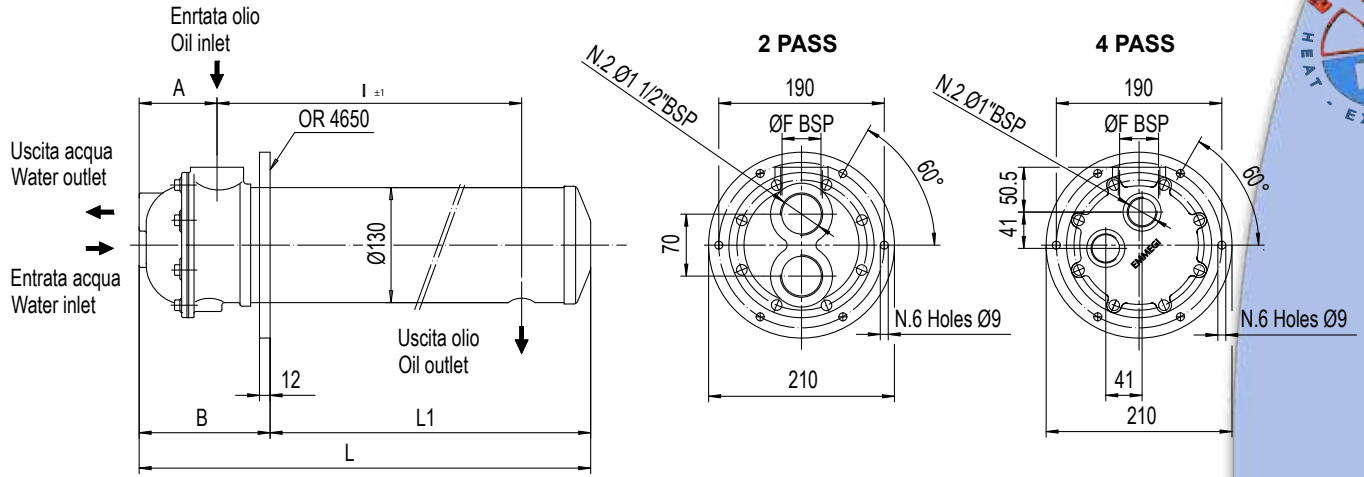
### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



# Scambiatori acqua-olio serie MGF 131

## Water-oil heat exchangers series MGF 131

Con circuito acqua ispezionabile a due-quattro passaggi. Two-four ways controllable water circuit.



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERSI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CONTENTS (lt)	Kg	A	B	Dimensioni - Over all dimension							
							2 Pass				4 Pass			
							ØF	I	L	L1	ØF	I	L	L1
MGF 131-310-..	50-150	20-40	3.2	16	88	148	1 1/2"	310	462	314	1 1/2"	310	462	314
MGF 131-453-..	100-150	40-75	4.3	22	88	148	1 1/2"	453	613	465	1 1/2"	453	613	465
MGF 131-623-..	150-300	58-96	5.7	28	95	160	2"	623	795	635	2"	623	795	635
MGF 131-805-..	150-350	78-118	7.1	32	95	160	2"	805	977	817	2"	805	977	817
MGF 131-1124-..	200-400	105-150	9.6	35	95	160	2"	1124	1296	1136	2"	1124	1296	1136

### DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

### PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

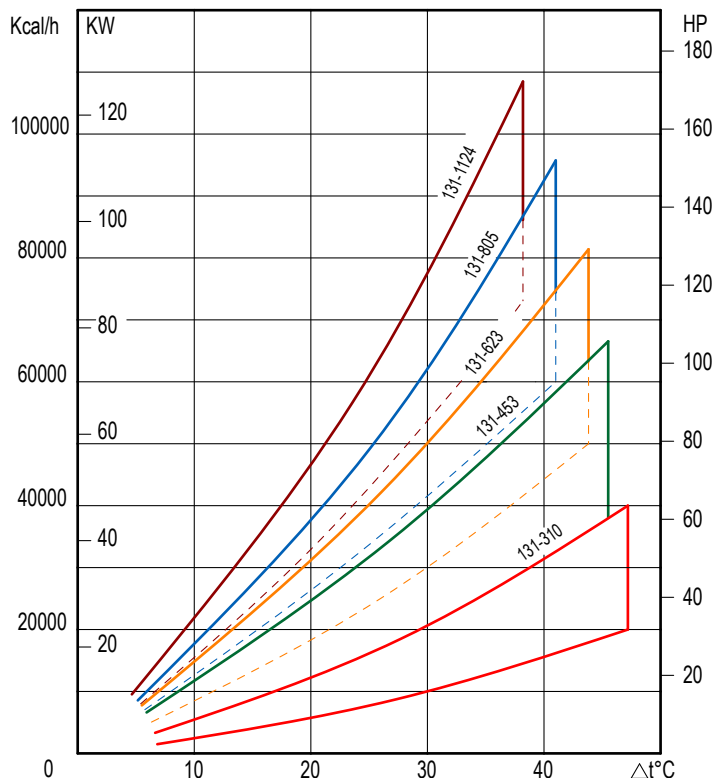
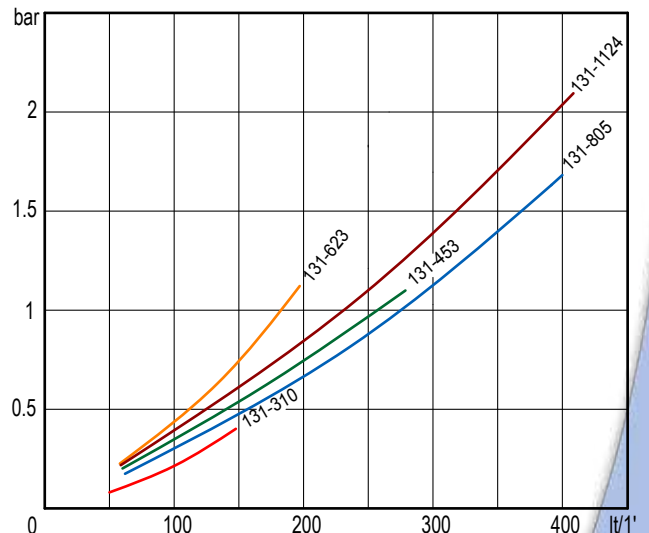


### FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

### CORRECTION FACTOR (F)-PRESSURE DROP

CST	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

### PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



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