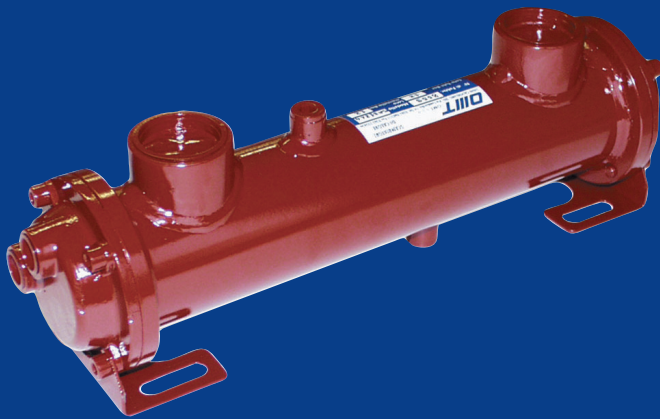


# F indynamica

drive and control products



SERIE **SAB** SERIES  
Scambiatori di calore  
Heat exchangers

# SCAMBIATORI DI CALORE SERIE "SAB" HEAT EXCHANGERS SERIES "SAB"

Gli scambiatori di calore acqua-olio della OMT, sono indicati per impieghi gravosi ed hanno inoltre una elevata capacità di scambio. La gamma di portata di tali scambiatori è molto ampia, varia dai 0.15 m<sup>3</sup>/h ai 49 m<sup>3</sup>/h. Inoltre gli scambiatori della serie "SAB", esposti nel presente catalogo prevedendo due versioni: "S" per portate di olio medio/basse e "L" per portate maggiorate.

## CARATTERISTICHE TECNICHE

Scambiatori di calore costruiti in versione a 2 e 4 vie e nelle varianti "S" e "L".

- Fascio tubiero in rame e tubi mandrinati sulle piastre per garantire una maggiore resistenza e tenuta anche in presenza di vibrazioni.
- Deflettori realizzati in lamiera.
- Corpo esterno realizzato in acciaio al carbonio con adeguati spessori per garantire la massima sicurezza.
- Coperchi realizzati in ghisa ad alta resistenza in versione a 2 e 4 vie.

## ESECUZIONI SPECIALI

A richiesta vengono prodotti scambiatori con:

- Conessioni con flange SAE - UNI - ANSI
- Coperchi in acciaio al carbonio
- Fascio tubero in INOX 304 e 316/L
- ALLUMINIUM/BRASS - FERRO - CUPRO/NICHEL - MUNTZ
- Scambiatori con fascio tubiero a "U" per alte temperature
- Piastre in INOX
- Fascio estraibile

## GARANZIA

La durata della garanzia è di 12 mesi a partire dalla data di consegna e, per i prodotti sostituiti, dalla data di sostituzione. Si garantisce la conformità dei prodotti forniti, intendendosi cioè che i prodotti sono privi di difetti nei materiali e nelle lavorazioni. La garanzia accordata decade per errati montaggi, corrosioni e incrostazioni causate da un utilizzo non corretto.

## Pressione d'esercizio      Temperatura massima

<b>Lato mantello:</b>	12 bar	<b>Lato mantello:</b>	99°C
<b>Lato tubi:</b>	12 bar	<b>Lato tubi:</b>	99°C

## DIAGRAMMI DI RENDIMENTO

**Rendimento per olio idraulico:** 32 cSt  
**Temperatura acqua:** 15°C  
**Temperatura olio:** 50°C

I diagrammi di rendimento nelle pagine seguenti sono stati calcolati con un olio 32 cSt (VG32) e una differenza di temperatura di ingresso di 35°C tra l'olio e l'acqua. Di seguito viene riportato un esempio per come effettuare la scelta dello scambiatore, nel momento in cui la differenza tra le due temperature è diversa dai 35°C.

<b>Δt olio/acqua:</b>	35°C	30°C	25°C	20°C	15°C
<b>Coefficiente:</b>	1	1.2	1.4	1.6	1.8

Esempio: si vogliono dissipare 1000 Kcal/h con Δt di 25°C 1000 x 1.4 = 1400 quindi per ottenere la dissipazione voluta occorre utilizzare una curva più alta.

**Perdite di carico lato olio:** l'impiego di olii con differenti viscosità genera variazioni nelle perdite di carico indicate nei diagrammi.

La sottoindicata tabella permette di calcolare il valore effettivo.

<b>cSt</b>	10	15	20	32	40	50	60	80	100	200
<b>cF</b>	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

OMT water/oil heat exchangers are constructed for heavy duties and with high exchange. Their flow range goes from 0.15 m<sup>3</sup>/h to 49 m<sup>3</sup>/h. Heat exchangers "SAB" Series stated in our leaflet are designed for 2 versions: "S" for medium/low and "L" for bigger oil flows.

## TECHNICAL FEATURES

Produced in 2 or 4 ways, "S" and "L" version.

- Tubes bundle are in copper rolled into tubesheet to give the most safety construction under vibration.
- Baffles made in steel plate.
- Shell made of carbon steel in adapted tightness to guarantee the max. safety.
- Covers made of cast-iron with high resistance in a 2 and 4 ways version.

## SPECIAL APPLICATION

On request:

- Connection with SAE - UNI - ANSI flanges
- Covers in carbon steel
- Tubes bundle in INOX 304 and 316/L
- ALUMINIUM/BRASS - IRON - CUPRO/NICHEL - MUNTZ
- Heat exchangers with "U" tubes for high temperatures
- Removable bundle.

## GUARANTEE

It is of 12 months from delivery date and, for replaced items, from replacement date.

We guarantee items with no material and working defect. Our guarantee is not valid for wrong installation, corrosion or incrostation caused by a wrong use.

## Working pressure      Max working temperature

<b>Shell side:</b>	12 bar	<b>Shell side:</b>	99°C
<b>Tubes side:</b>	12 bar	<b>Tubes side:</b>	99°C

## PERFORMANCE DIAGRAMS

**Efficiency for hydraulic oil to 32 cSt:** 32 cSt  
**Water temperature:** 15°C  
**Oil temperature:** 50°C

Performance diagrams that follow have been calculated with a 32 cSt (VG32) oil and an inlet temperature difference of 35°C between oil and water. You will find an between the 2 temperatures is different from 35°C.

<b>Δt oil/water:</b>	35°C	30°C	25°C	20°C	15°C
<b>Factor:</b>	1	1.2	1.4	1.6	1.8

Exemple: if want to dissipate 1000 Kcal/h con Δt di 25°C 1000x1.4 = 1400 to obtain the wanted dissipation, you have to use a higher curve.

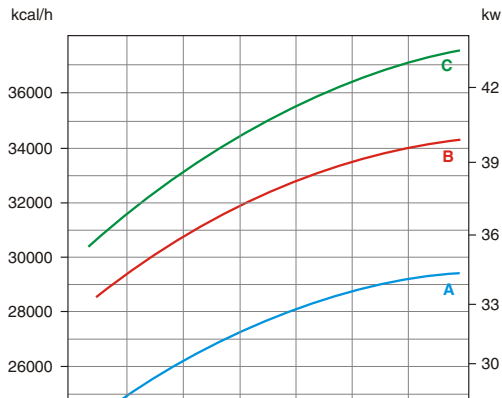
**Oil side pressure drops:** the use of oils with different viscosities, produces variations in the pressure drops indicated in the diagrams.

The following table allows to calculate the effective value.

Scambiatori di calore  
serie "SAB" acqua-olio  
Water-oil heat exchangers  
series "SAB"

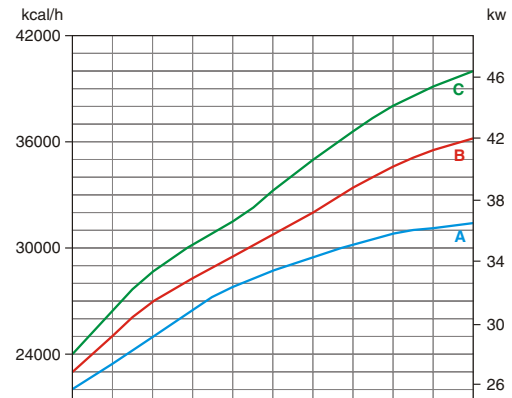
TIPO / SERIES

**SAB133-845-S4**



TIPO / SERIES

**SAB133-845-L4**



**CARATTERISTICHE TECNICHE  
TECHNICAL FEATURES**

Modello Type	Portata olio m³/h Oil Flow m³/h		* kW resi kW dissipated with oil	A	B	C	K	I	E	F	H	øG	øW 4 vie 4 ways	øW 2 vie 2 ways
	S	L												
SAB83-250	1 - 6	5 - 10	3 - 10	ø83	420	250	90	305	75	70	60	1 1/2" BSP	1/2" BSP	1" BSP
SAB83-500	1 - 6	5 - 10	5 - 17	ø83	690	500	90	560	75	70	60	1 1/2" BSP	1/2" BSP	1" BSP
SAB83-805	1 - 6	5 - 10	9 - 23,5	ø83	1000	805	90	865	75	70	60	1 1/2" BSP	1/2" BSP	1" BSP
SAB83-1110	1 - 6	5 - 10	13 - 28	ø83	1300	1110	90	1170	75	70	60	1 1/2" BSP	1/2" BSP	1" BSP
SAB133-285	2 - 9	5 - 15	10 - 24	ø133	500	285	-	345	110	105	100	1 1/2" BSP	1" BSP	1 1/2" BPS
SAB133-535	2 - 9	5 - 15	18 - 34	ø133	750	535	-	595	110	105	100	1 1/2" BSP	1" BSP	1 1/2" BPS
SAB133-845	2 - 9	5 - 15	23 - 46	ø133	1060	845	-	905	110	105	100	1 1/2" BSP	1" BSP	1 1/2" BPS
SAB133-995	2 - 9	5 - 15	28 - 50	ø133	1210	995	-	1055	110	105	100	1 1/2" BSP	1" BSP	1 1/2" BPS
SAB133-1105	2 - 9	5 - 15	30 - 56	ø133	1320	1105	-	1165	110	105	100	1 1/2" BSP	1" BSP	1 1/2" BPS
SAB168-470	2,5 - 16	6 - 36	24 - 68	ø168	765	470	145	570	130	98	120	2" BSP	1 1/2" BSP	2" BSP
SAB168-775	2,5 - 16	6 - 36	32 - 87	ø168	1080	775	145	875	130	98	120	2" BSP	1 1/2" BSP	2" BSP
SAB168-1080	2,5 - 16	6 - 36	35 - 105	ø168	1380	1080	145	1180	130	98	120	2" BSP	1 1/2" BSP	2" BSP
SAB168-1385	2,5 - 16	6 - 36	45 - 120	ø168	1700	1385	145	1485	130	98	120	2" BSP	1 1/2" BSP	2" BSP
SAB219-435	3 - 18	7 - 49	32 - 90	ø219	800	435	175	330	180	140	180	3" BSP	2" BSP	2 1/2" BSP
SAB219-740	3 - 18	7 - 49	60 - 115	ø219	1090	740	175	635	180	140	180	3" BSP	2" BSP	2 1/2" BSP
SAB219-1045	3 - 18	7 - 49	80 - 150	ø219	1400	1045	175	940	180	140	180	3" BSP	2" BSP	2 1/2" BSP
SAB219-1350	3 - 18	7 - 49	90 - 170	ø219	1700	1350	175	1245	180	140	180	3" BSP	2" BSP	2 1/2" BSP
SAB219-1660	3 - 18	7 - 49	110 - 190	ø219	1980	1650	175	1555	180	140	180	3" BSP	2" BSP	2 1/2" BSP

\* kW resi con scambiatori a 4 vie.

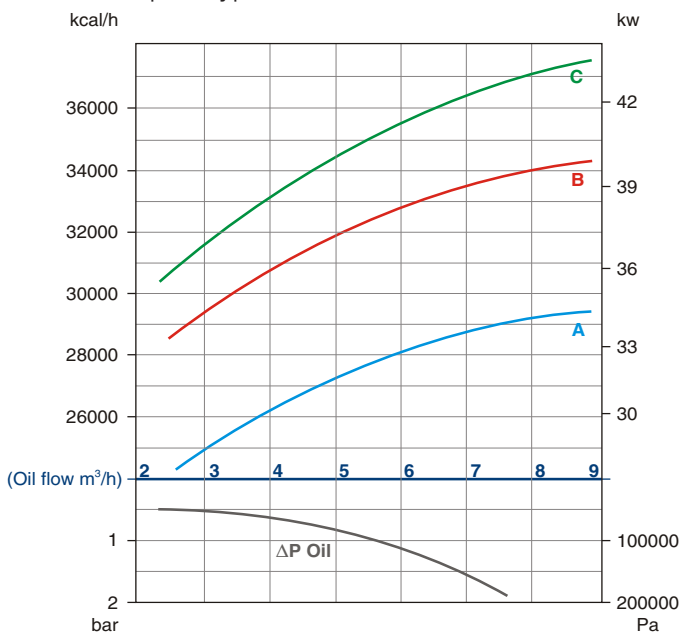
Per scambiatori a 2 vie pregasi contattare il nostro Ufficio Tecnico

Dissipated kW using 4 ways heat exchangers.

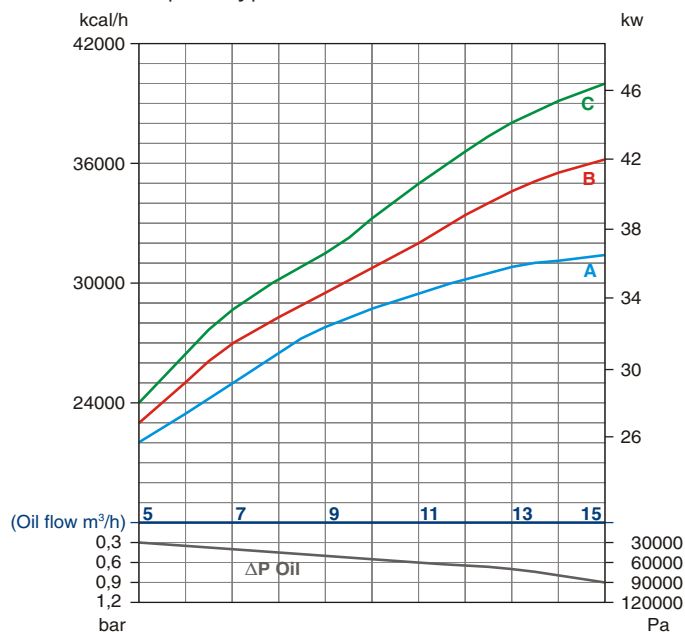
For 2 ways heat exchangers please get in touch with our technical department.

Scambiatori di calore  
serie "SAB83" acqua-olio  
Water-oil heat exchangers  
series "SAB83"

tipo / type **SAB83-250-S4**

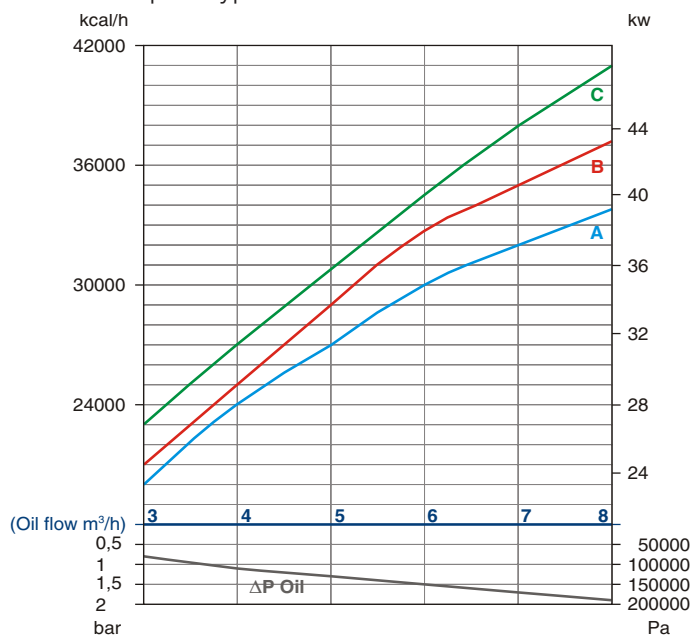


tipo / type **SAB83-250-L4**

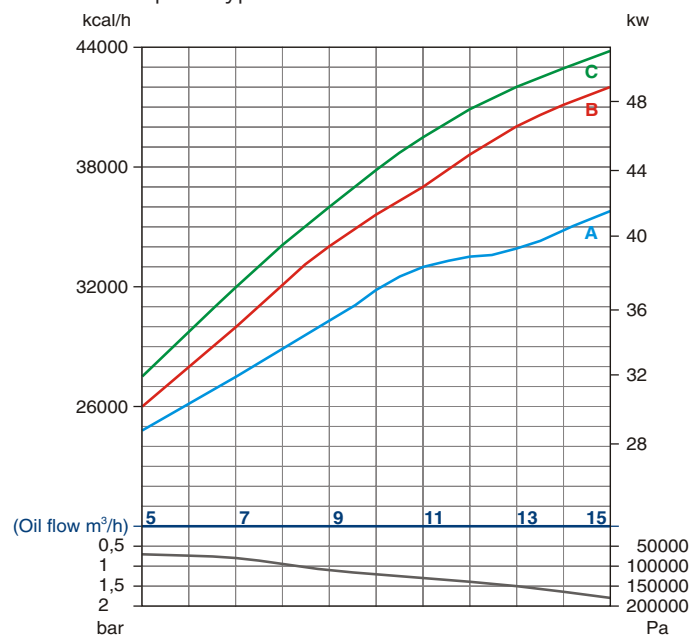


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB83-250</b>	A	0,5
	B	1,25
	C	2

tipo / type **SAB83-500-S4**



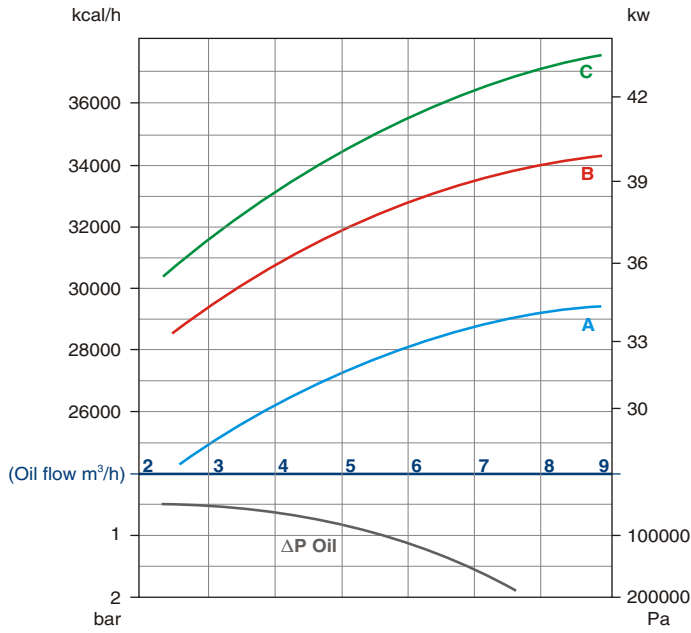
tipo / type **SAB83-500-L4**



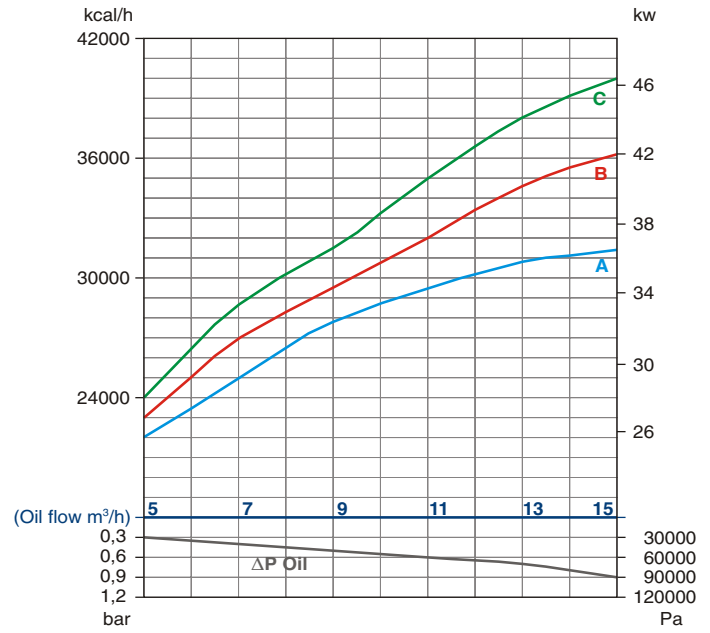
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB83-500</b>	A	0,5
	B	1,25
	C	2

Scambiatori di calore  
serie "SAB83" acqua-olio  
Water-oil heat exchangers  
series "SAB83"

tipo / type **SAB83-805-S4**

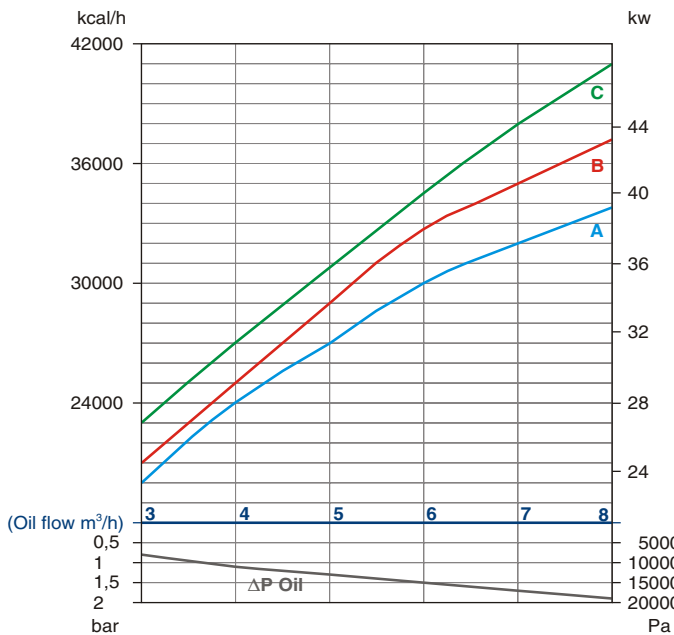


tipo / type **SAB83-805-L4**

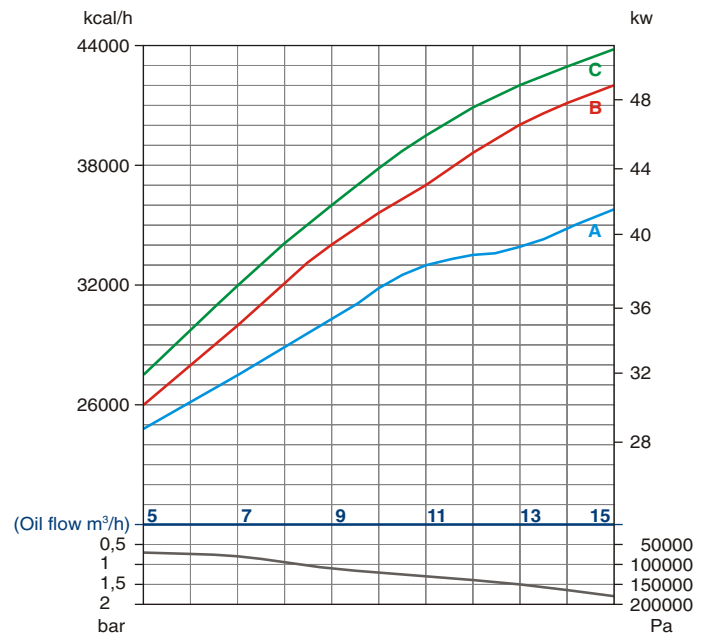


Tip0 / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB83-805</b>	A	1
	B	1,5
	C	2

tipo / type **SAB83-1110-S4**



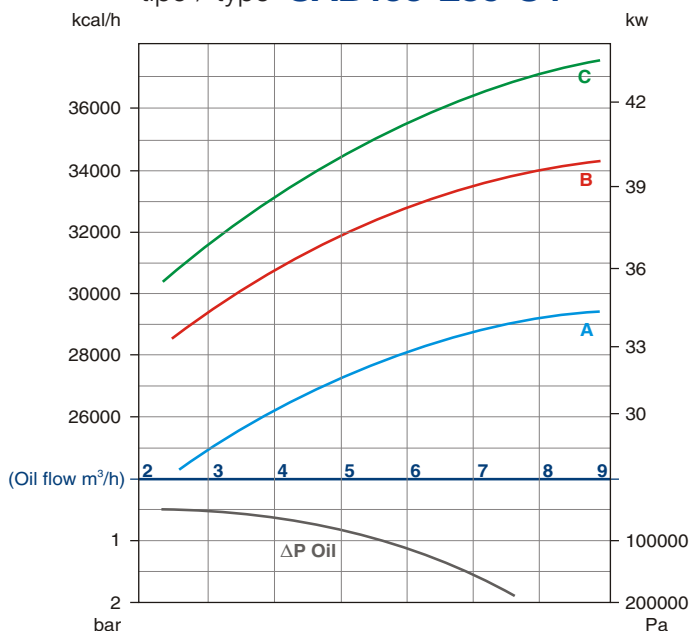
tipo / type **SAB83-1110-L4**



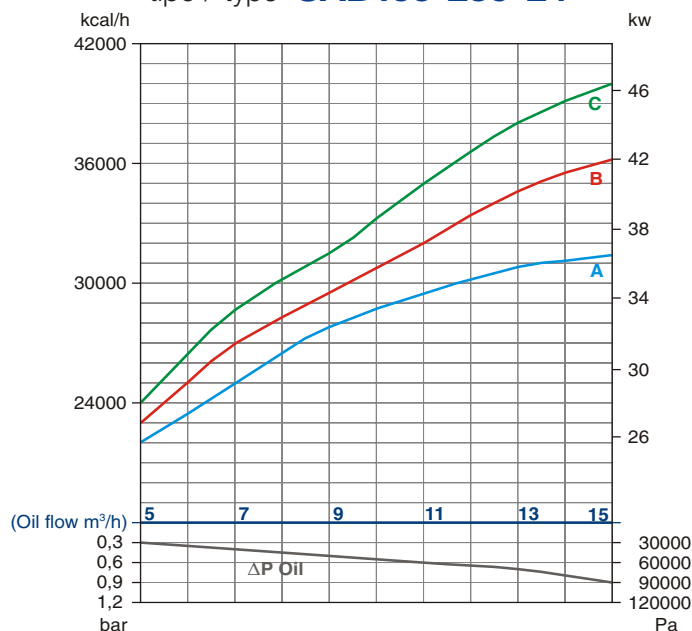
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB83-1110</b>	A	1
	B	1,5
	C	2

Scambiatori di calore  
serie "SAB133" acqua-olio  
Water-oil heat exchangers  
series "SAB133"

tipo / type **SAB133-285-S4**

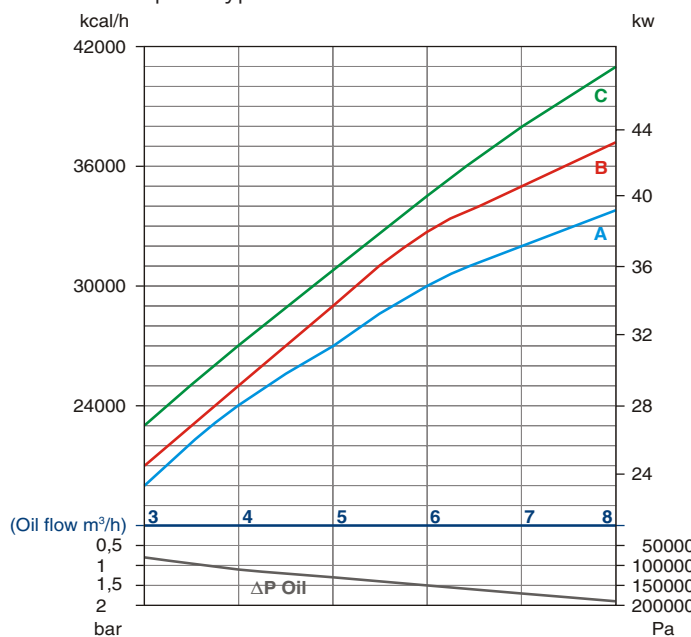


tipo / type **SAB133-285-L4**

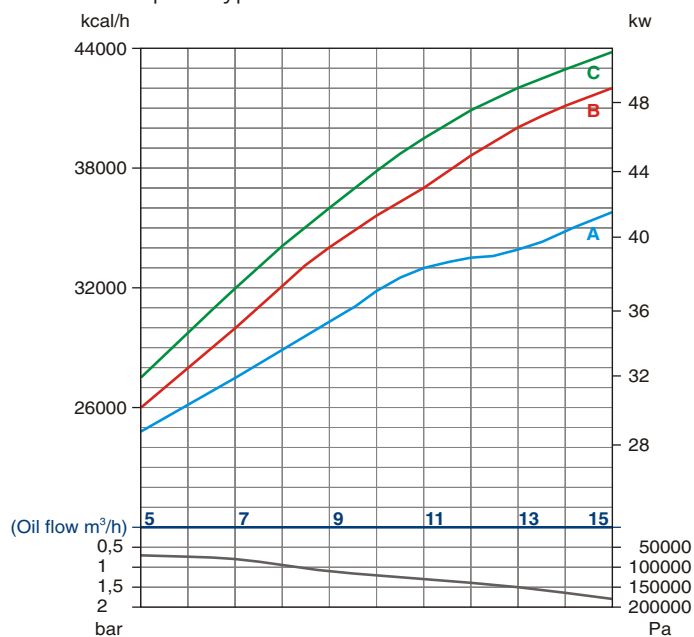


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB133-285</b>	A	2
	B	3
	C	4

tipo / type **SAB133-535-S4**



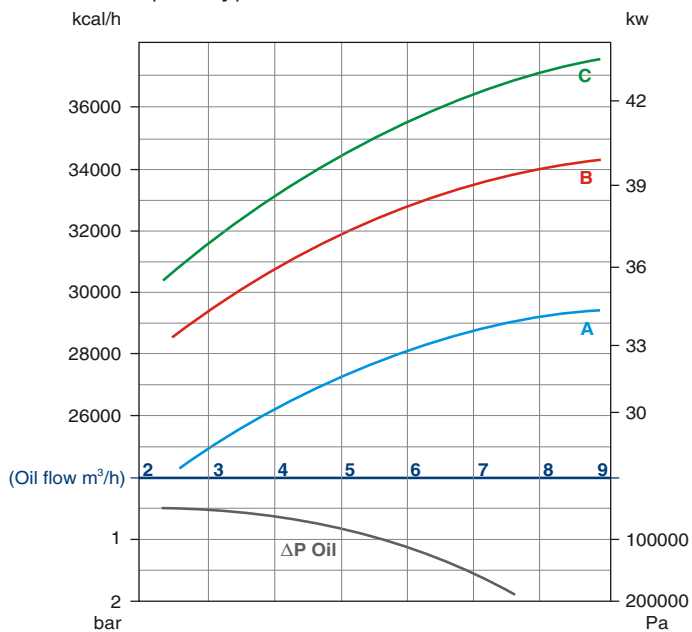
tipo / type **SAB133-535-L4**



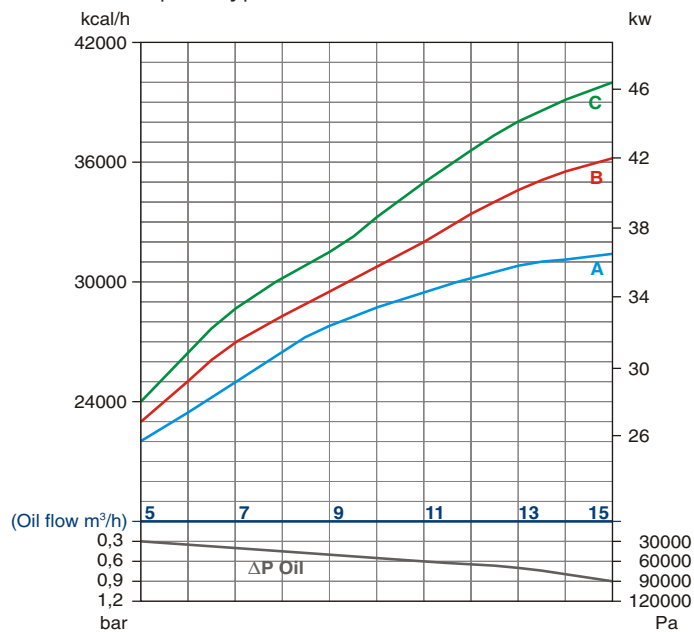
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB133-535</b>	A	2
	B	3
	C	4

Scambiatori di calore  
serie "SAB133" acqua-olio  
Water-oil heat exchangers  
series "SAB133"

tipo / type **SAB133-845-S4**

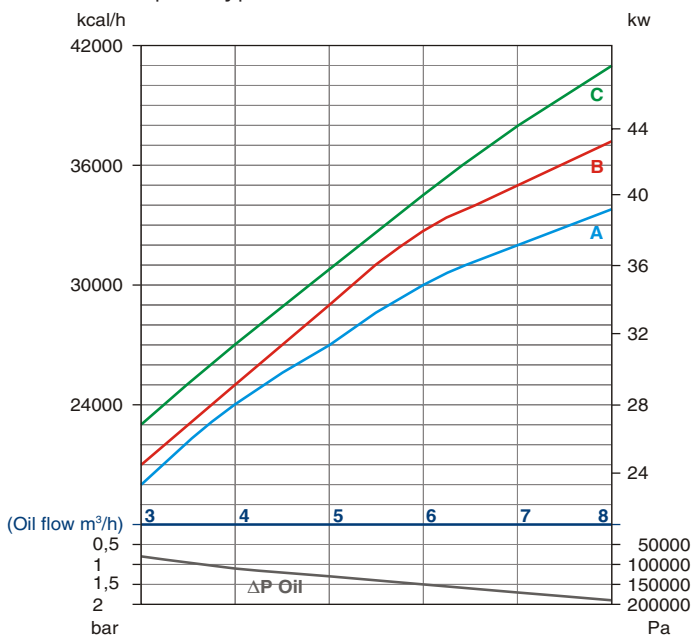


tipo / type **SAB133-845-L4**

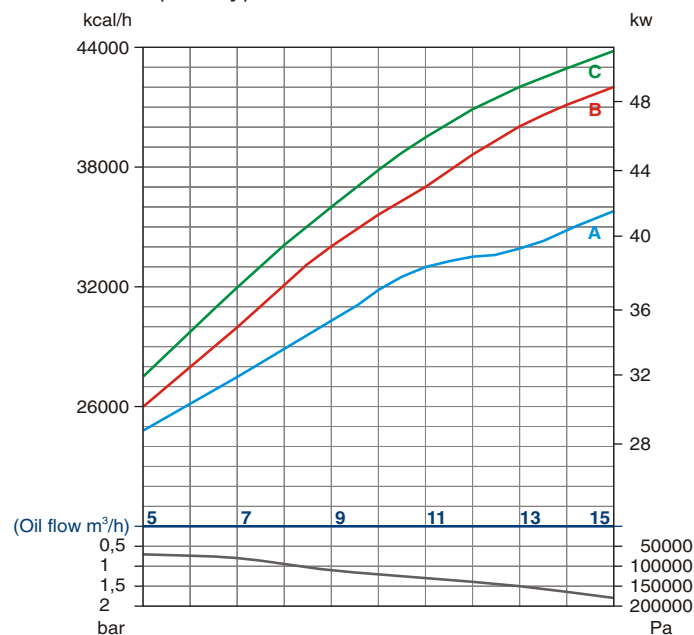


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB133-845</b>	A	2,5
	B	3
	C	4

tipo / type **SAB133-995-S4**



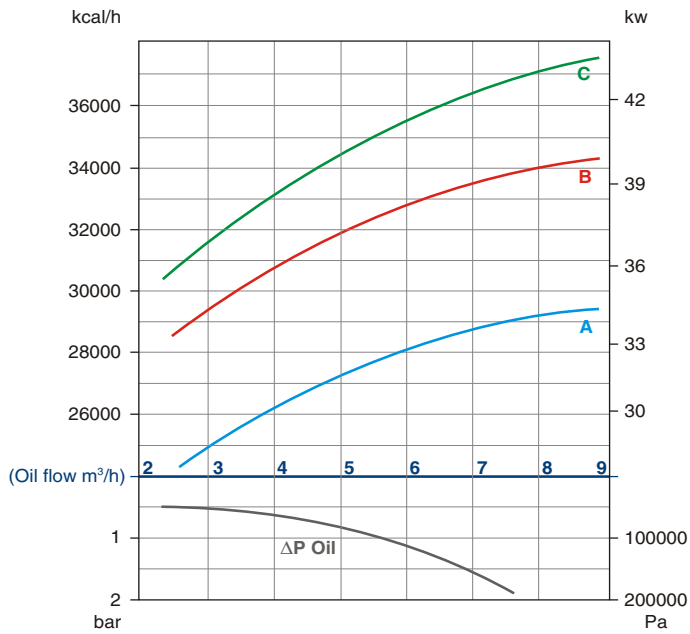
tipo / type **SAB133-995-L4**



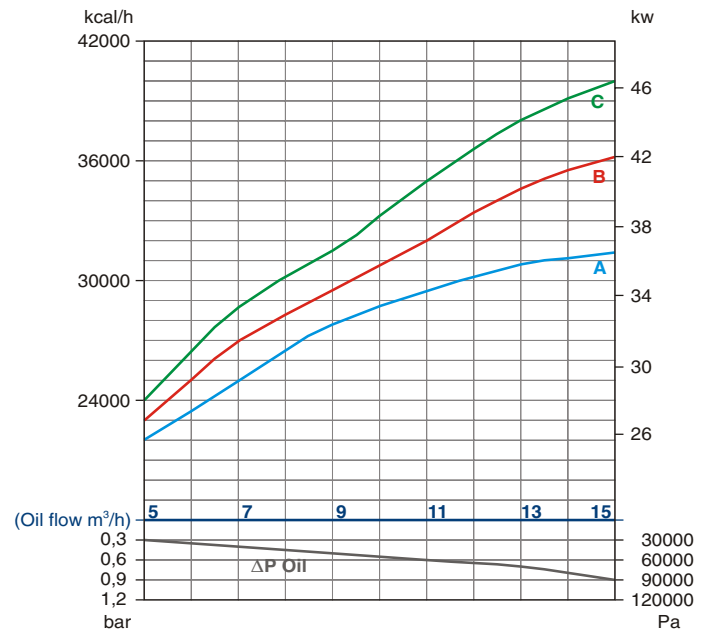
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB133-995</b>	A	2,5
	B	3
	C	4

Scambiatori di calore  
serie "SAB133" acqua-olio  
Water-oil heat exchangers  
series "SAB133"

tipo / type **SAB133-1105-S4**



tipo / type **SAB133-1105-L4**

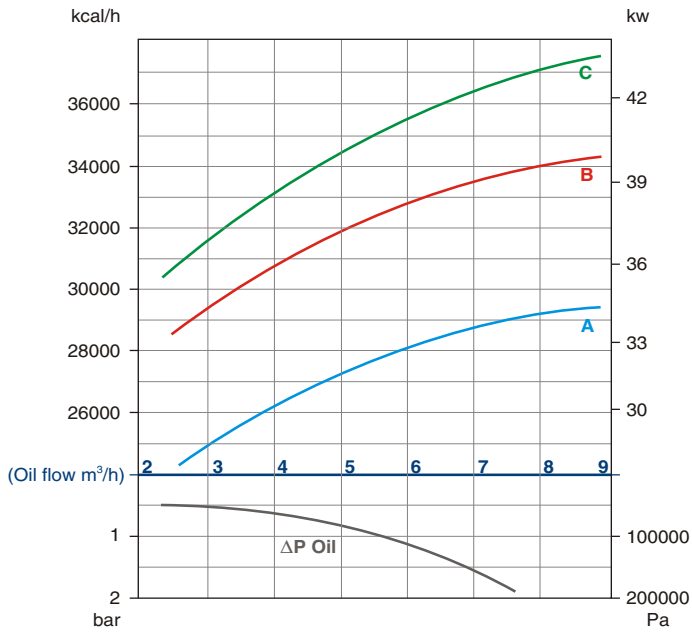


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB133-1105</b>	A	2,5
	B	3
	C	4

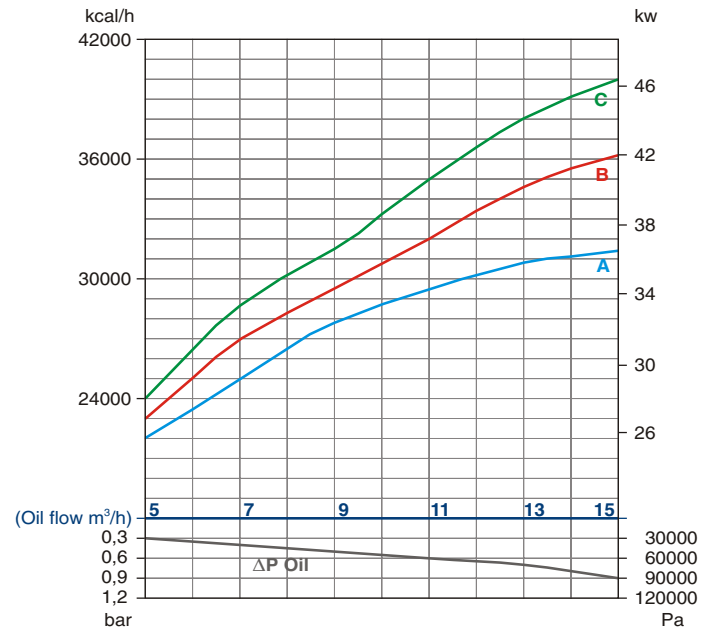


Scambiatori di calore  
serie "SAB168" acqua-olio  
Water-oil heat exchangers  
series "SAB168"

tipo / type **SAB168-470-S4**

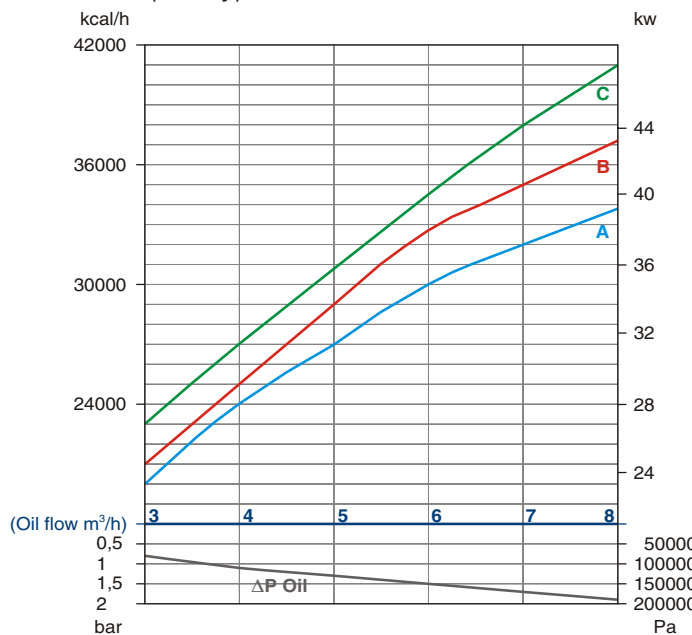


tipo / type **SAB168-470-L4**

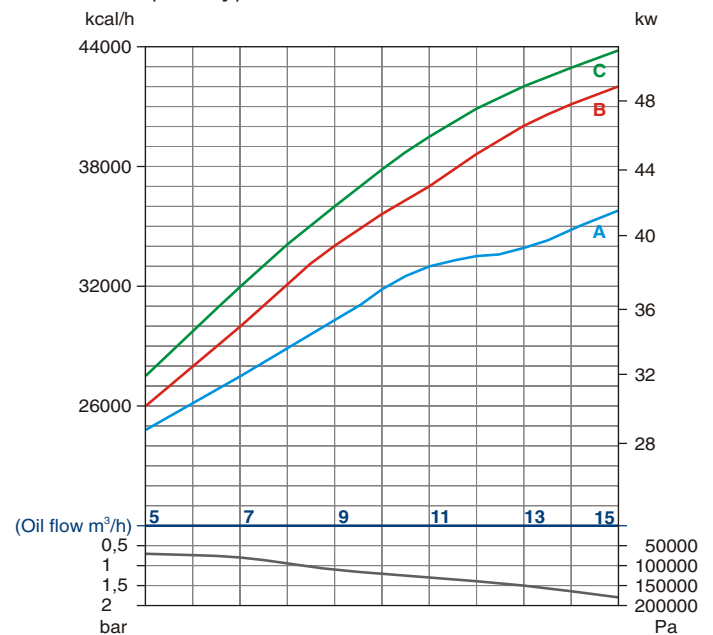


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB168-470</b>	A	2,5
	B	4
	C	5,5

tipo / type **SAB168-775-S4**



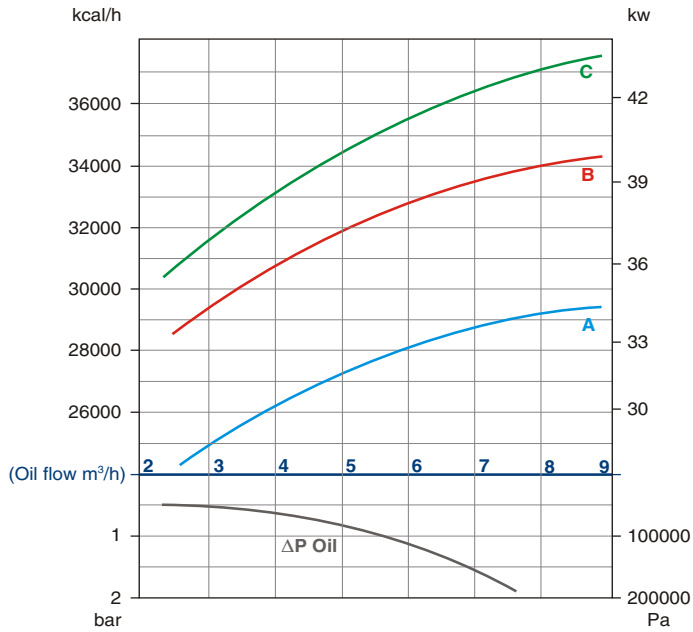
tipo / type **SAB168-775-L4**



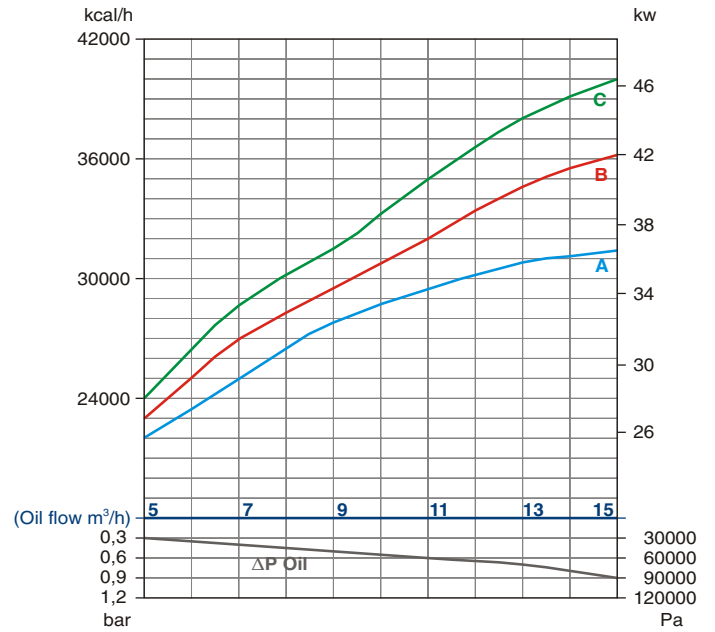
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB168-775</b>	A	2,5
	B	4
	C	5,5

Scambiatori di calore  
serie "SAB168" acqua-olio  
Water-oil heat exchangers  
series "SAB168"

tipo / type **SAB168-1080-S4**

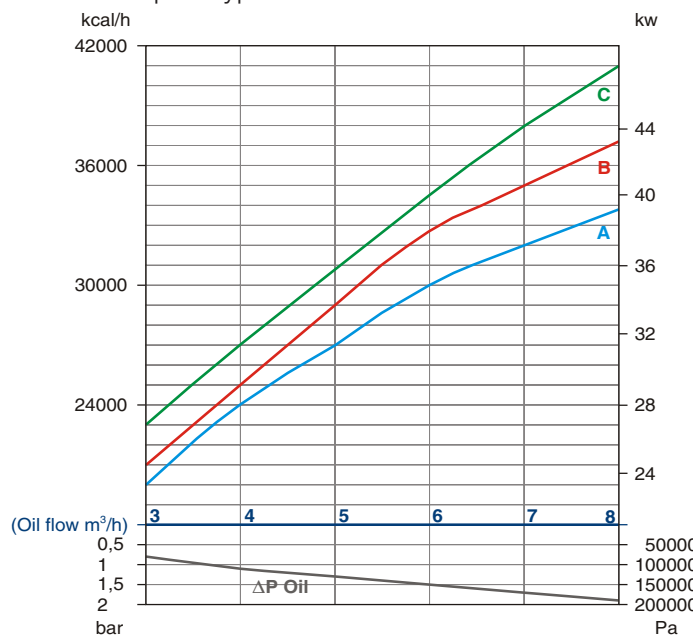


tipo / type **SAB168-1080-L4**

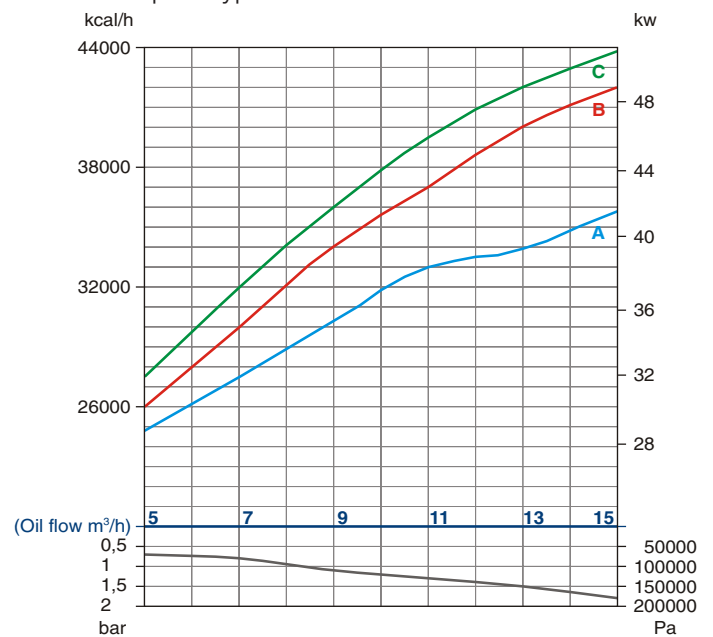


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB168-1080</b>	A	3
	B	5
	C	6

tipo / type **SAB168-1385-S4**



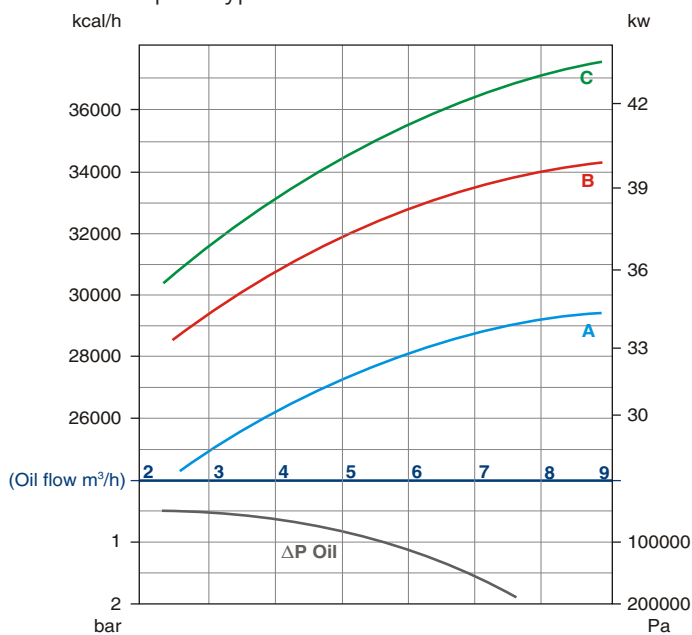
tipo / type **SAB168-1385-L4**



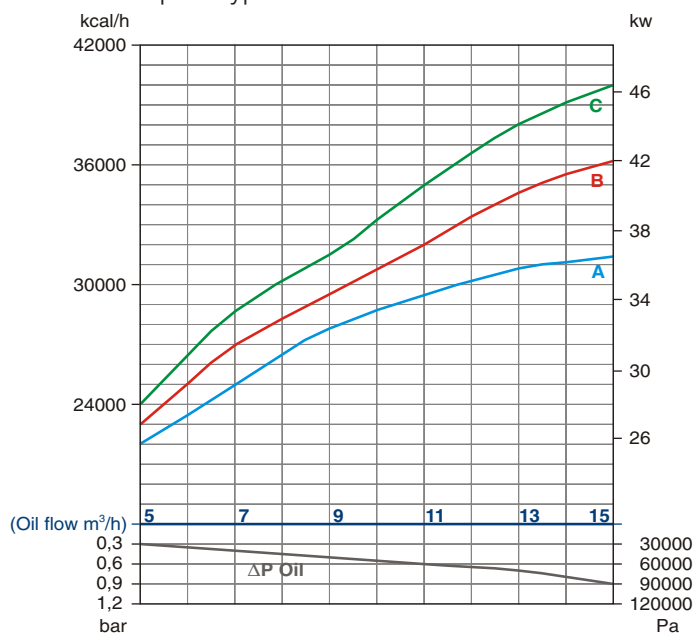
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB168-1385</b>	A	3
	B	5
	C	6

Scambiatori di calore  
serie "SAB219" acqua-olio  
Water-oil heat exchangers  
series "SAB219"

tipo / type **SAB219-435-S4**

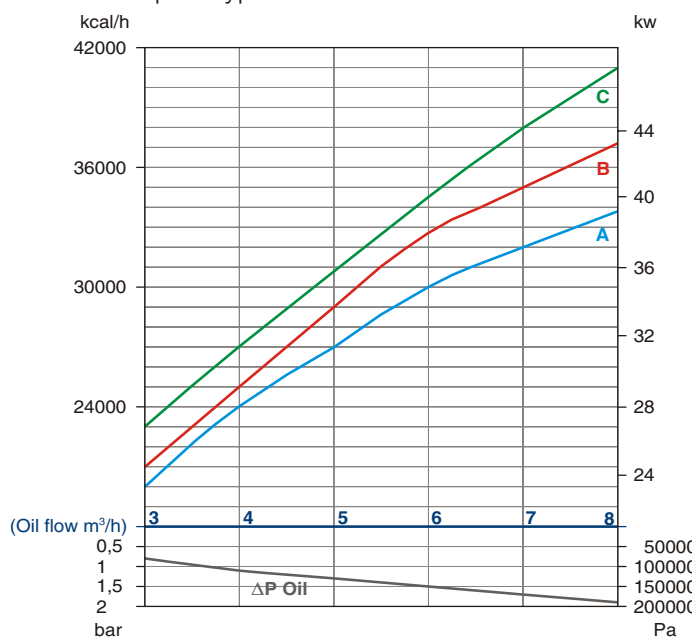


tipo / type **SAB219-435-L4**

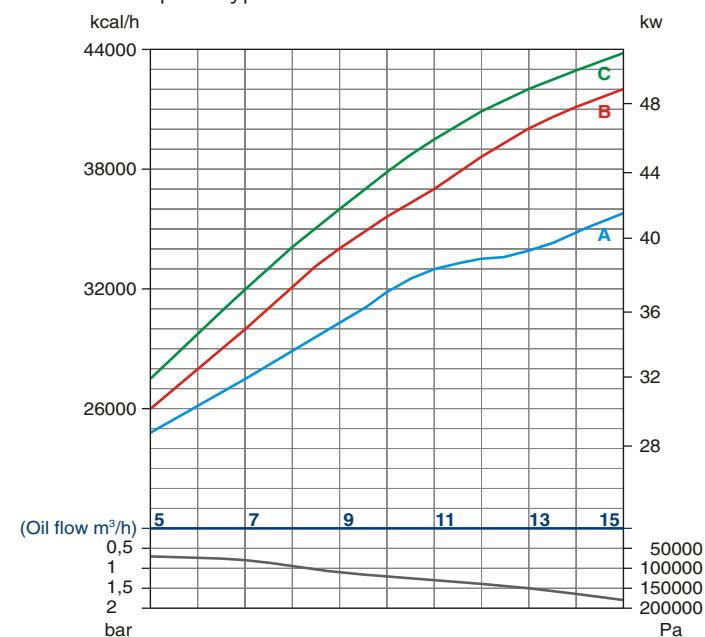


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB219-435</b>	A	5
	B	6
	C	7

tipo / type **SAB219-740-S4**



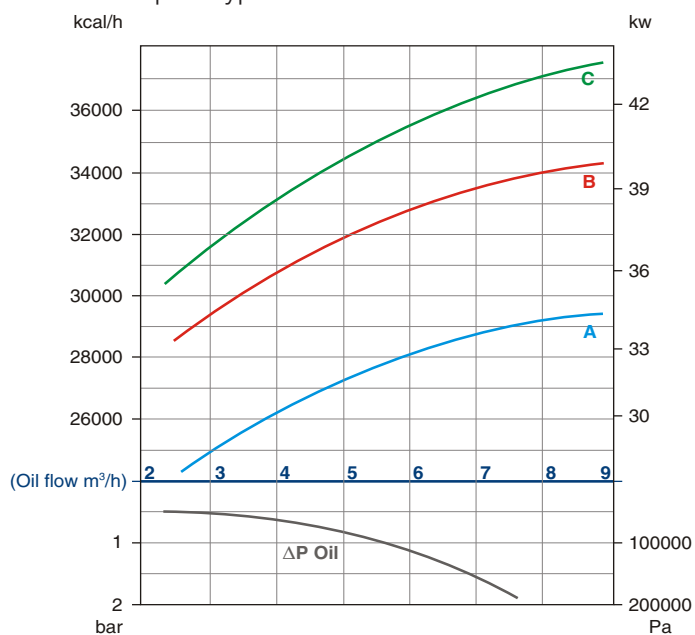
tipo / type **SAB219-740-L4**



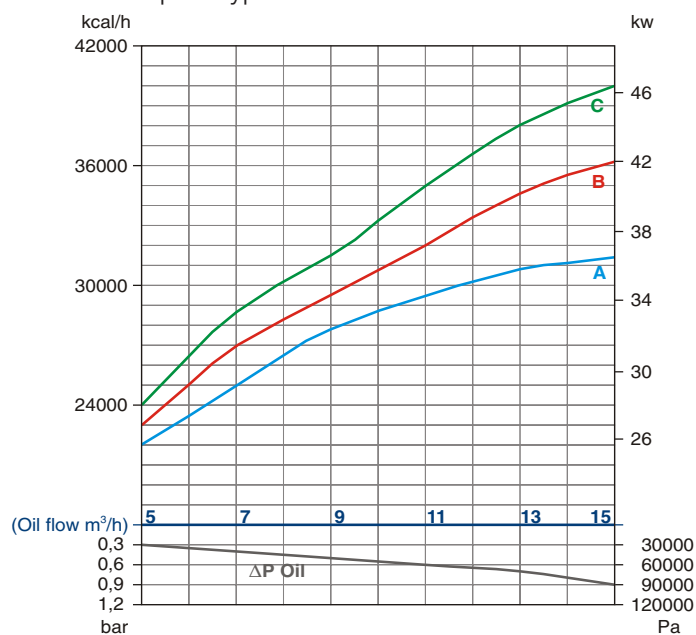
Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB219-740</b>	A	5
	B	6
	C	7

Scambiatori di calore  
serie "SAB219" acqua-olio  
Water-oil heat exchangers  
series "SAB219"

tipo / type **SAB219-1045-S4**

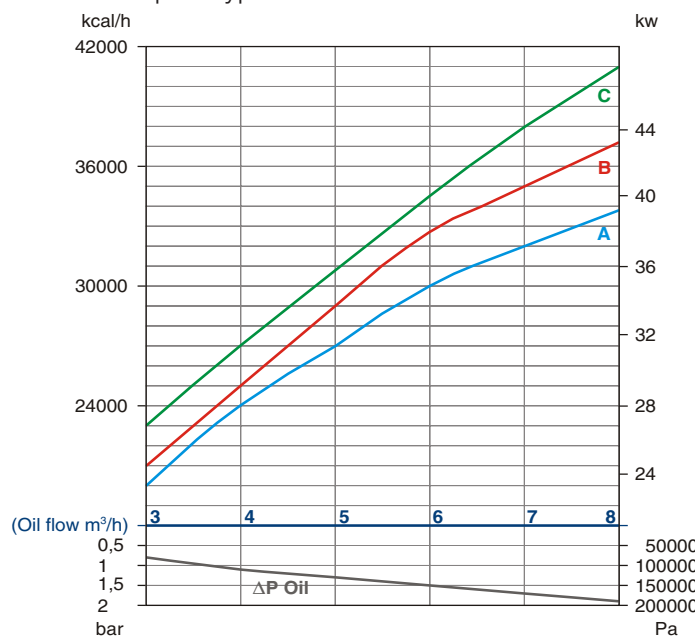


tipo / type **SAB219-1045-L4**

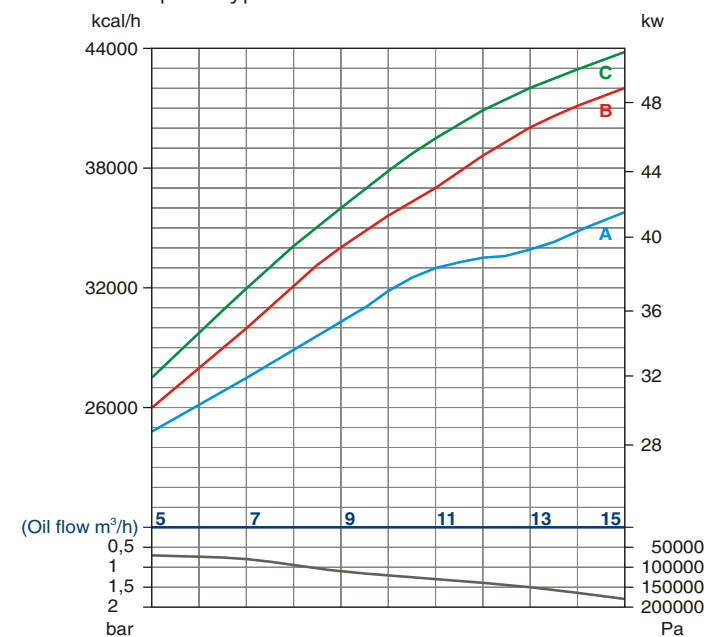


Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB219-1045</b>	A	7
	B	8
	C	9

tipo / type **SAB219-1350-S4**

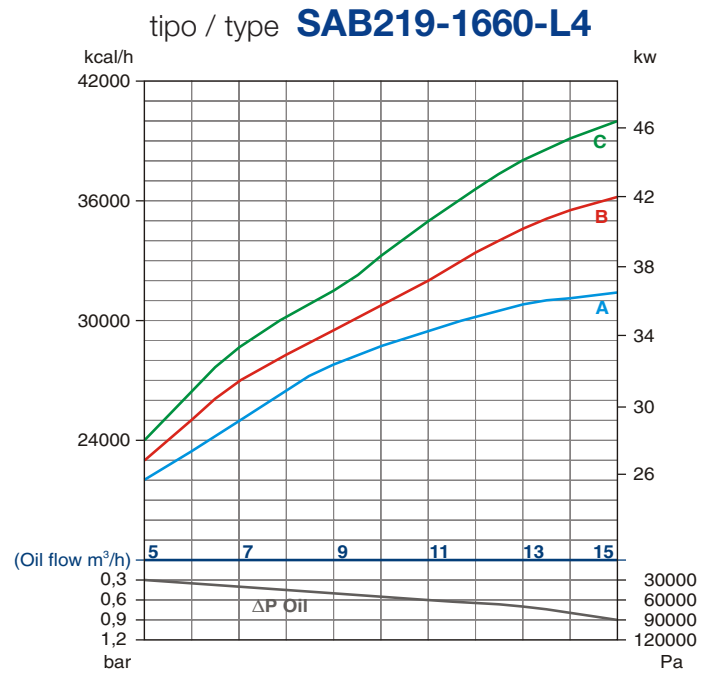
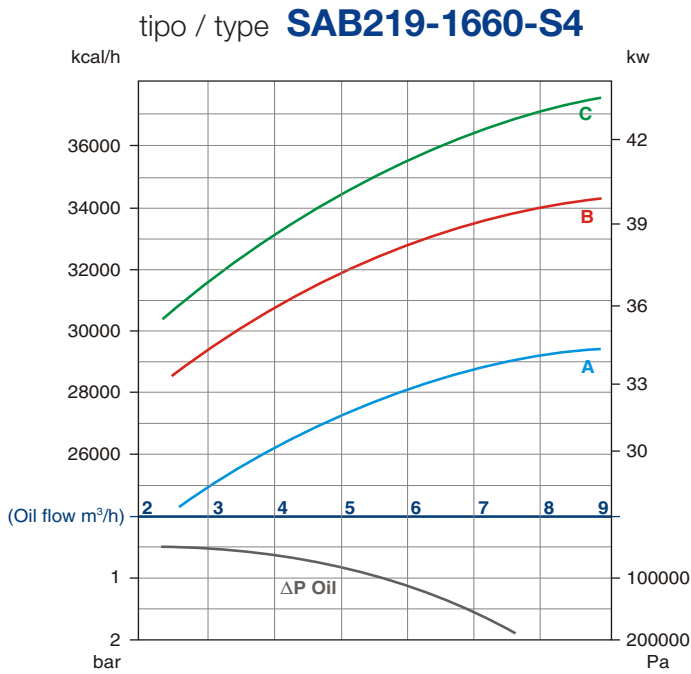


tipo / type **SAB219-1350-L4**



Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m³/h
<b>SAB219-1350</b>	A	7
	B	8
	C	9

Scambiatori di calore  
serie "SAB219" acqua-olio  
Water-oil heat exchangers  
series "SAB219"



Tipo / Type	Consumo Acqua / Water consumption	
	Curva / Line	m <sup>3</sup> /h
<b>SAB219-1660</b>	A	8
	B	9
	C	10

Codice di ordinazione  
 Scambiatori di calore serie "SAB"  
 How to order heat exchangers  
 series "SAB"

SAB83-500

S

4

Tipo Type
SAB83-250
SAB83-500
SAB83-805
SAB83-1110
SAB133-285
SAB133-535
SAB133-845
SAB133-995
SAB133-1105
SAB168-470
SAB168-775
SAB168-1080
SAB168-1385
SAB219-435
SAB219-740
SAB219-1045
SAB219-1350
SAB219-1660

Portata olio Oil flow
S
L

N. vie Ways
2
4