



SAMSON LIQUID RING VACUUM PUMPS

KM-SERIES

DATASHEET
KM-SERIES

Range: 150 mbar, absolute to
 2.0 bar, gauge

Capacity: From 1.100 to 2.950 m³/h



SAMSON PUMPS

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ABOUT SAMSON PUMPS

SAMSON PUMPS was established in 1938 by the local blacksmith in a small town near Viborg, Denmark. It all started with a production of machinery and tools for local farmers.

Now with more than 40 years of experience in liquid ring vacuum pumps and vacuum technology SAMSON PUMPS has a large number of equipment installed in industries worldwide. SAMSON vacuum pumps are well known for its strength, reliability and low maintenance costs.

Quality

All SAMSON vacuum pumps are tested before leaving the factory.

Delivery

SAMSON PUMPS has a large amount of standard pumps on stock and we are known for our short lead time.

Service

SAMSON PUMPS has service facilities and all repaired pumps are tested to fulfill the original specifications.

Main markets

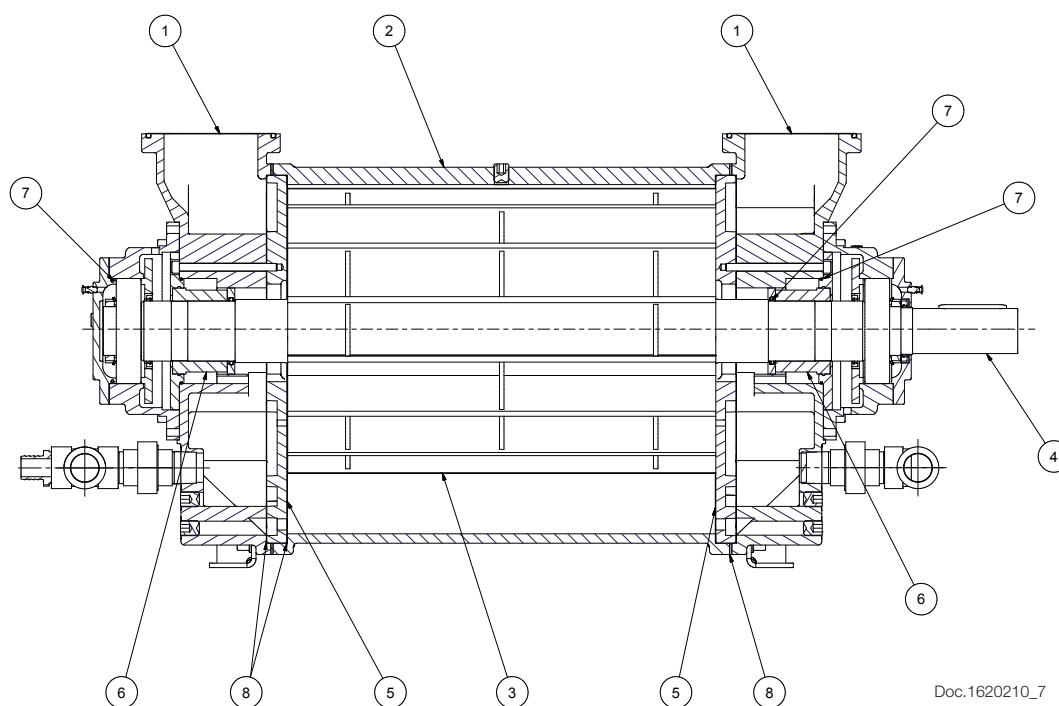
- Fish Industry
- Offshore
- Vacuum transport
- Food industry
- Truck building industry

MATERIALS

Position / Components	Material		KM2200	KM2700
1: Pump housing	Cast iron	EN-GJL-250; EN 1561	•	•
	Stainless steel	En 1.4401	—	—
2: Shell	Cast iron	EN-GJL-250; En 1561	•	•
	Stainless steel	EN 1.4401	—	—
3: Rotor	Cast iron	EN-GJS-400-15; EN 1561	—	—
	Stainless steel	EN 1.4404	•	•
4: Rotor shaft	Stainless steel	EN 1.4418	•	•
5: Flow plates	Cast iron	EN-GJL-250; EN 1561	•	•
	Bronze	GC-CU-Sn10 DIN 1705	•	•
6: Mechanical shaft seal	Stainless steel/NBR	EN 1.4301/NBR	•	•
	Stainless steel/EPDM	EN 1.4301/EPDM	—	—
	Stainless steel/Teflon	EN 1.4301/PTFE	—	—
7: O-rings	Nitrile butadiene rubber	NBR	•	•
	Ethylene propylene diene monomer	EPDM	—	—
	VITON	FKM	—	—
8: Gaskets	Paper gasket	Oil resistant	•	•
	Rubber gasket	NBR	•	•

Available = •

Not available = —



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TECHNICAL DATA

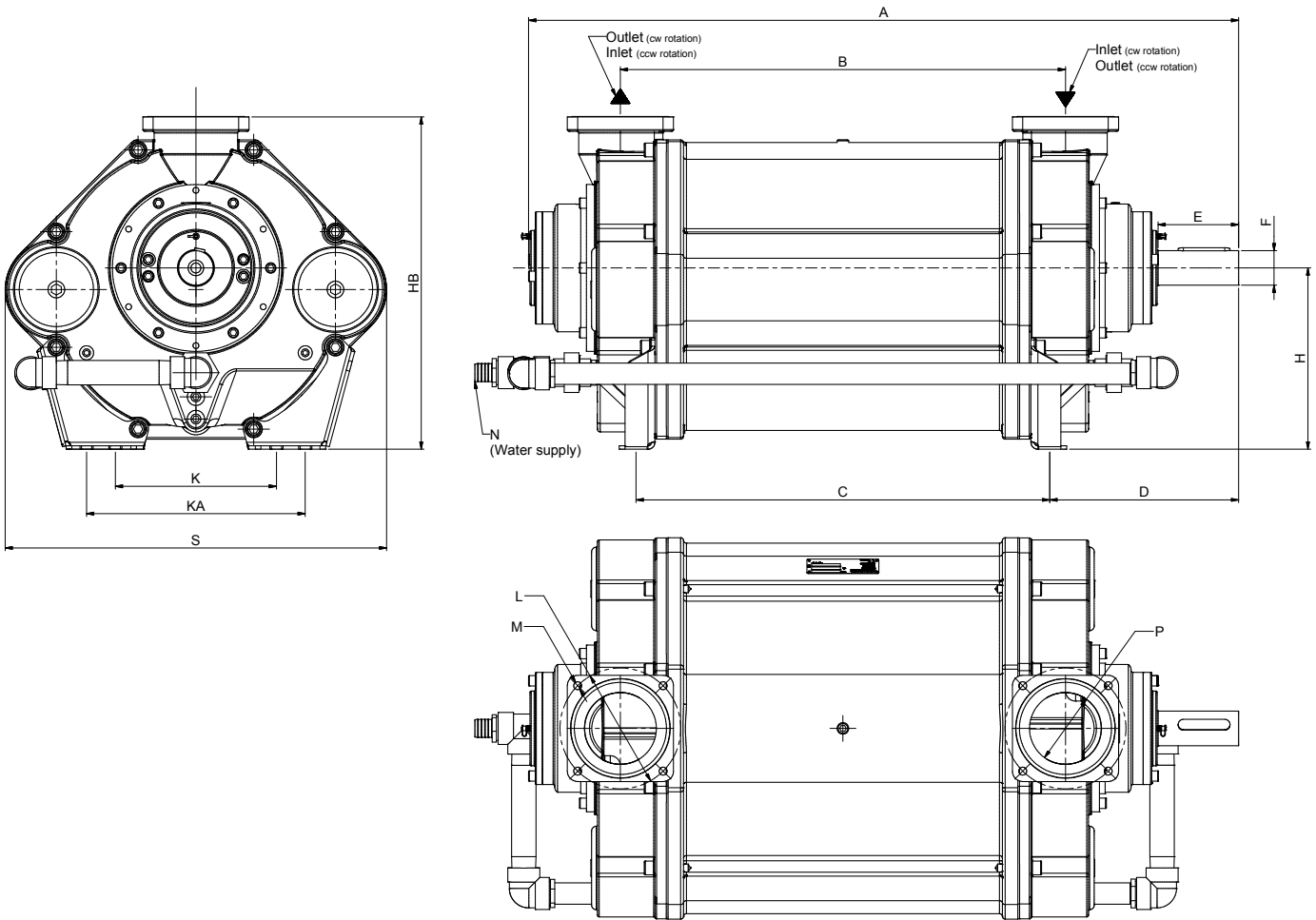
			KM2200	KM2700
Weight	Ex. branch pipes	[kg]	—	—
	Incl. branch pipes	[kg]	450	510
Sound pressure level		[db(A)]	80	80
Pressure test		[bar, gauge]	5	5
Rotation speed range		[rpm]	800 - 1.500	
Temperature	Gas temp, max	[°C]	120	120
	ATEX, Gas temp, max	[°C]	80	80
	Service liquid temp, max	[°C]	90	90
	ATEX, service liquid temp, max	[°C]	50	50
Bearing type	Ball bearing, DE		—	—
	Ball bearing, NDE		•	•
	Roller bearing, spheric, DE		•	•
	Roller bearing, spheric, NDE		—	—
Pump colour	RAL code	RAL 5021	•	•
Connection, water supply	Nipple hose	5/4"/Ø32	•	•
Approvals	ATEX certified	Ex II2 G c T4 (zone 1)	•	•

Available = •

Not available = —

DIMENSIONS [mm]

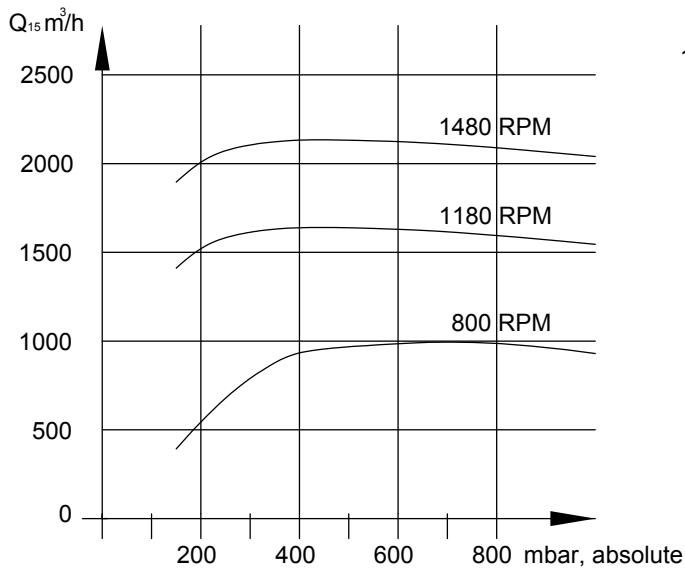
Pump type	A	B	C	D	E	F	H	HB	K	KA	L	M	N	P	S
KM2200	1100	640	605	310	140	Ø60k6	315	580	280	380	DCØ210	4xM16	5/4"-Ø32	Ø125	665
KM2700	1235	775	740	310	140	Ø60k6	315	580	280	380	DCØ210	4xM16	5/4"-Ø32	Ø125	665



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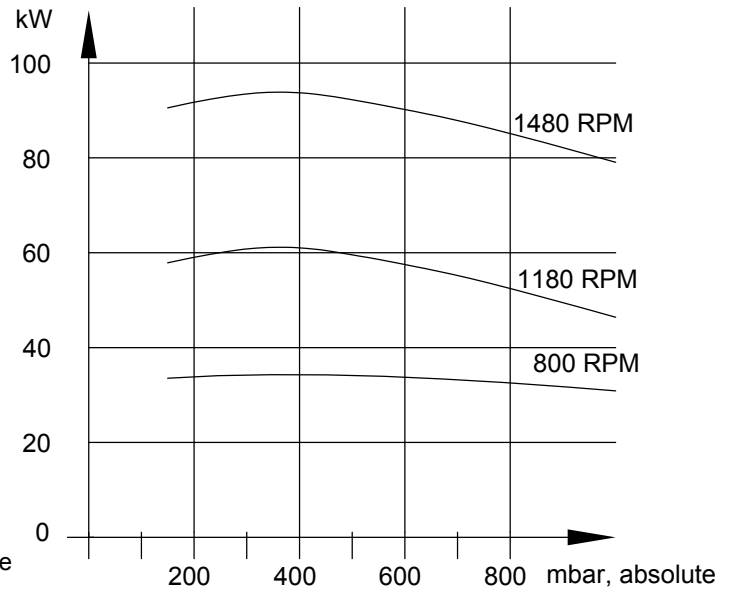
KM2200 - Vacuum performance

KM2200 VACUUM PERFORMANCE

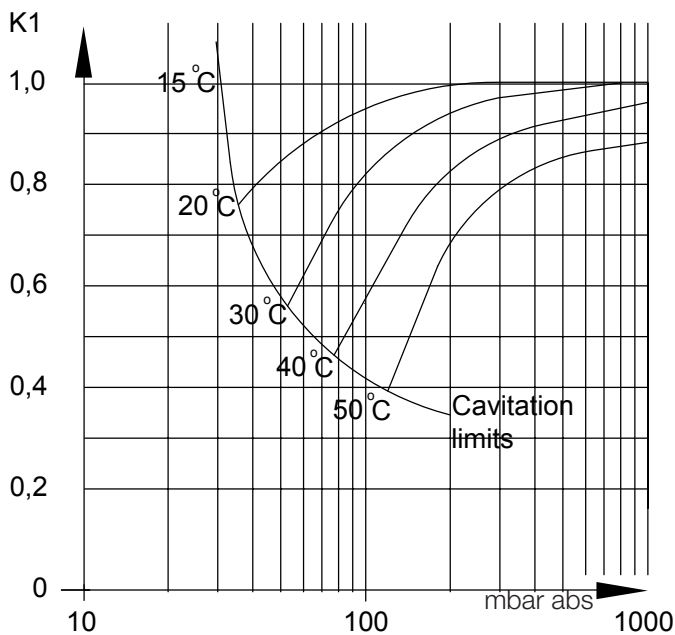


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KM2200 POWER CONSUMPTION - VACUUM



CORRECTION FACTOR BASED ON SEALING LIQUID TEMPERATURE



$Q_t = Q_{15} * K$
 Pump performance at temperature of sealing liquid higher than 15°C

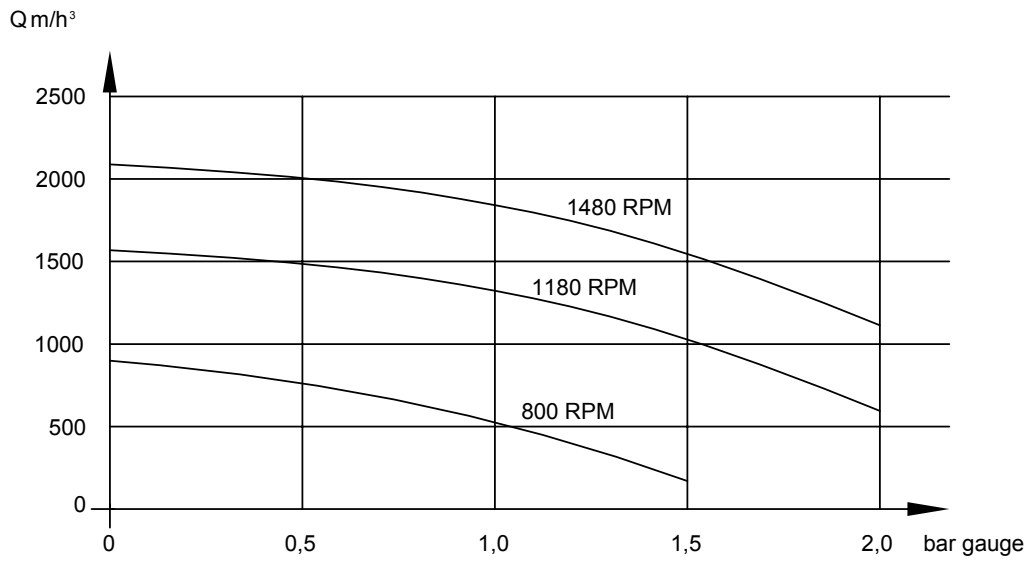
VACUUM OPERATION:

Performance and power consumption are based on a constant service liquid pressure at +/- 0.2 bar gauge. Deviations will affect the performance and power consumption.

Using a liquid separator from Samson Pumps the amount of water will be regulated automatically depending on the operating pressure. At the same time the water will be reused and will reduce the costs of operation.

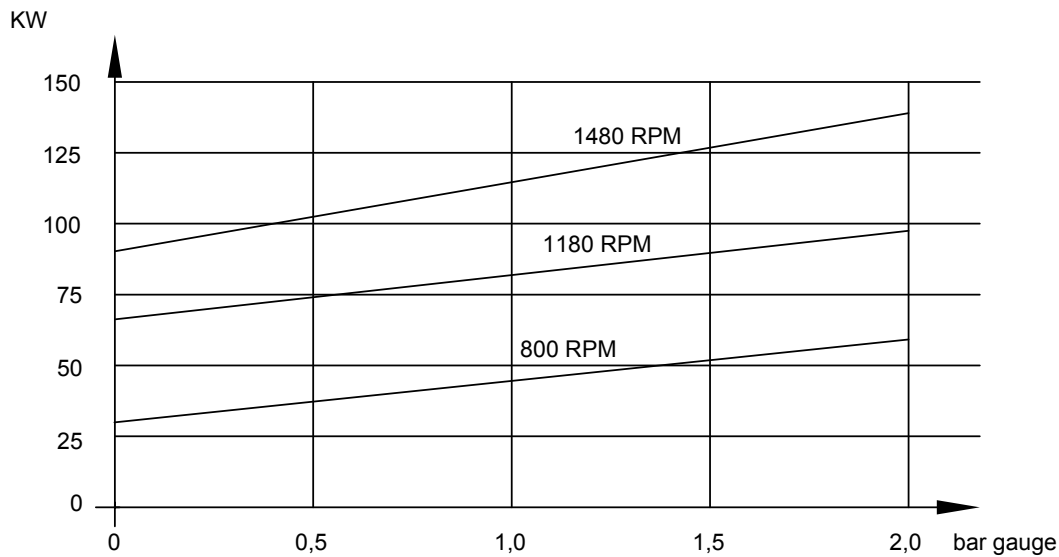
If operating without liquid separator, the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KM2200 - Pressure performance



Air temperature 20°C, Sealing water temperature 15°C
Tolerance ± 10%

KM2200 POWER CONSUMPTION - PRESSURE



PRESSURE OPERATION:

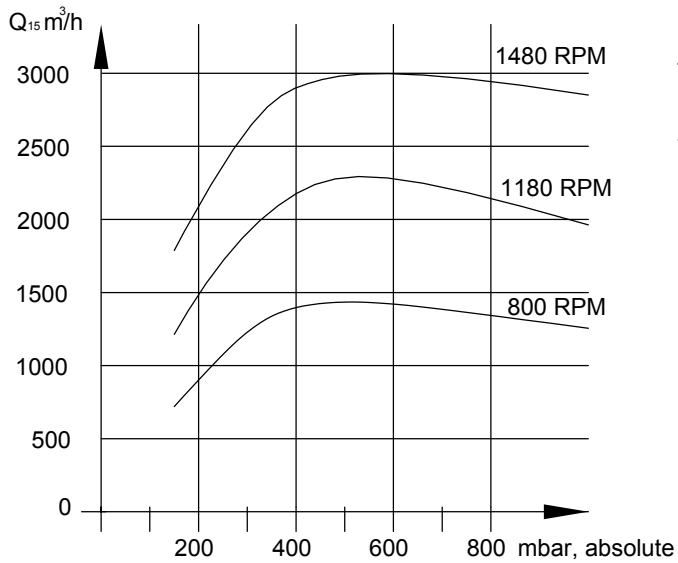
Performance and power consumption are based on a constant service liquid flow at 3.0 m³/h. Deviations will affect the performance and power consumption.

Using a liquid separator from Samson Pumps the amount of water will be regulated automatically depending on the operating pressure. At the same time the water will be re-used and will reduce the costs of operation.

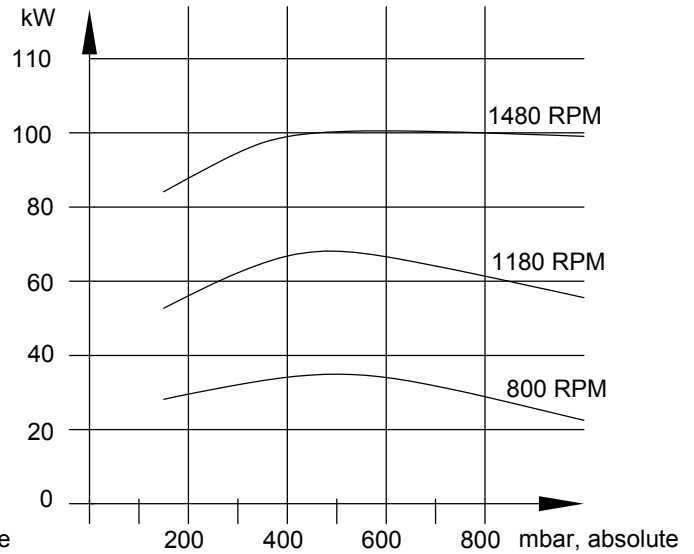
If operating without liquid separator the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KM2700 - Vacuum performance

KM2700 VACUUM PERFORMANCE

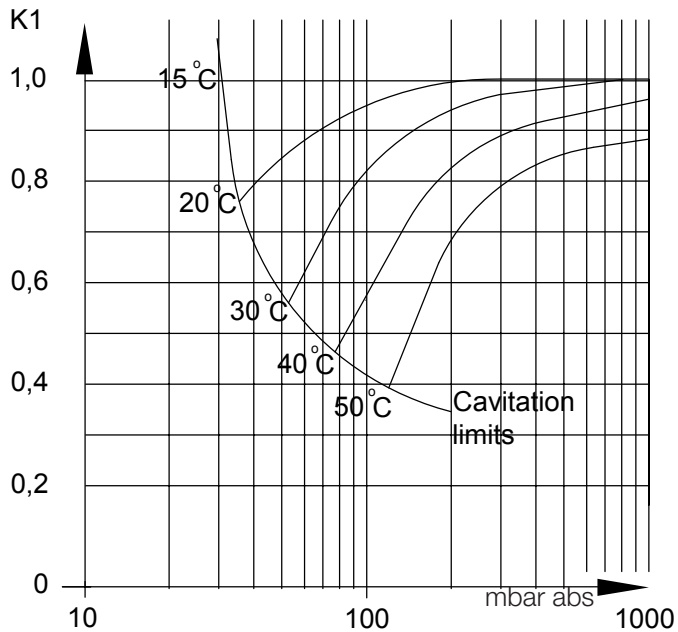


KM2700 POWER CONSUMPTION - VACUUM



Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

CORRECTION FACTOR BASED ON SEALING LIQUID TEMPERATURE



$Q_t = Q_{15} * K$
 Pump performance at temperature of sealing liquid higher than 15°C

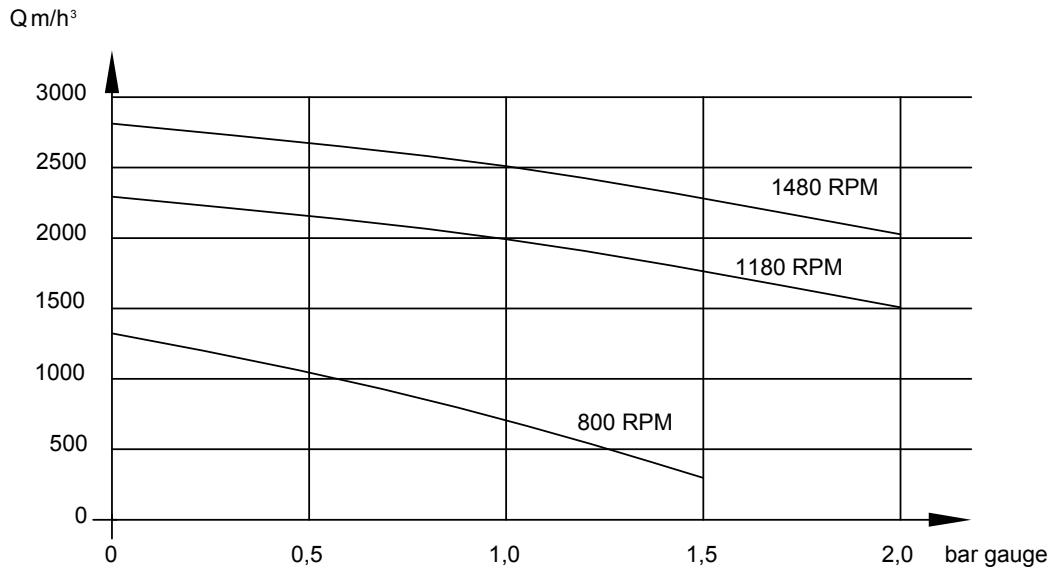
VACUUM OPERATION:

Performance and power consumption are based on a constant operation media pressure at +/- 0.2 bar gauge. Deviations will affect the performance and power consumption.

Using a liquid separator from Samson Pumps the amount of water will be regulated automatically depending on the operating pressure. At the same time the water will be reused and will reduce the costs of operation.

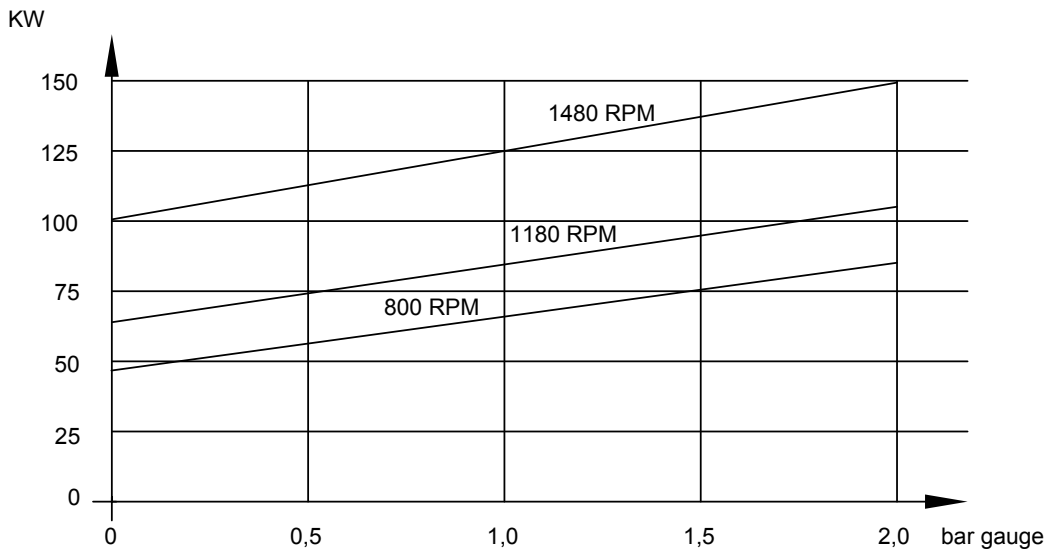
If operating without liquid separator the pump must be supplied with 1.0 m^3/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KM2700 - Pressure performance



Air temperature 20°C, Sealing water temperature 15°C
Tolerance ± 10%

KM2700 POWER CONSUMPTION - PRESSURE



PRESSURE OPERATION:

Performance and power consumption are based on a constant operation media flow at 3.0 m³/h. Deviations will affect the performance and power consumption.

Using a liquid separator from Samson Pumps the amount of water will be regulated automatically depending on the operating pressure. At the same time the water will be re-used and will reduce the costs of operation.

If operating without liquid separator the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

ACCESSORIES

		KM2200	KM2700
Non return flap valve	DN125	•	•
Vacuum limiter	1" connection	•	•
Service liquid valve	1" connection	•	•
4-way valve	DN125	•	•
4-way valve with pneumatic actuator	DN125	•	•
Intermediate pipe for 4-way valve	DN125	•	•
Adaptor for hydraulic motor ISO	F12-90	•	•
Adaptor for hydraulic motor SAE		•	•
Liquid separator		•	•
Temperature control, partial recovery		•	•
Temperature control, full recovery		•	•

Available = • Not available = —

HOW TO ORDER KM SERIES

Exsample:

KM 2200 R 0 S S S 1 0 A SD

Model:

- KM 2200
- KM 2700

Rotation:

- Clockwise R
- Counter clockwise L

Rotor type:

- Welded AISI 316 0

Pump housing:

- Cast iron EN-GJL-250; EN1561 S

Shell:

- Cast iron EN-GJL-250; EN1561 S

Flow plates:

- Cast iron EN-GJL-250; EN1561 S
- Bronze GC-CU Sn10 DIN1705 B

Mechanical shaft seals:

- NBR / AISI 316 1

Gaskets:

- Oakenstrong 0

Colour:

- Samson standard A
- Without paint 0
- On request X

Documentation:

- Samson standard SD

Samson Pumps A/S
Petersmindevej 21
DK-8800 Viborg

Phone | +45 87 50 95 70
www.samson-pumps.com

