



SAMSON LIQUID RING VACUUM PUMPS

KS-SERIES

DATASHEET **KS-SERIES**

Range: 65 mbar, absolute to 3.0 bar, gauge

Capacity: From 200 to 1.300 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 shipment from the factory.

Delivery time

Samson Pumps has a stock of standard pumps and we are known for our short lead time.

Service

Samson Pumps has service facilities and all serviced pumps are tested to fulfill the original specifications.

Main markets:

- Fish Industry
- Offshore
- Waste handling
- Food industry
- Truck building industry

KS SERIES

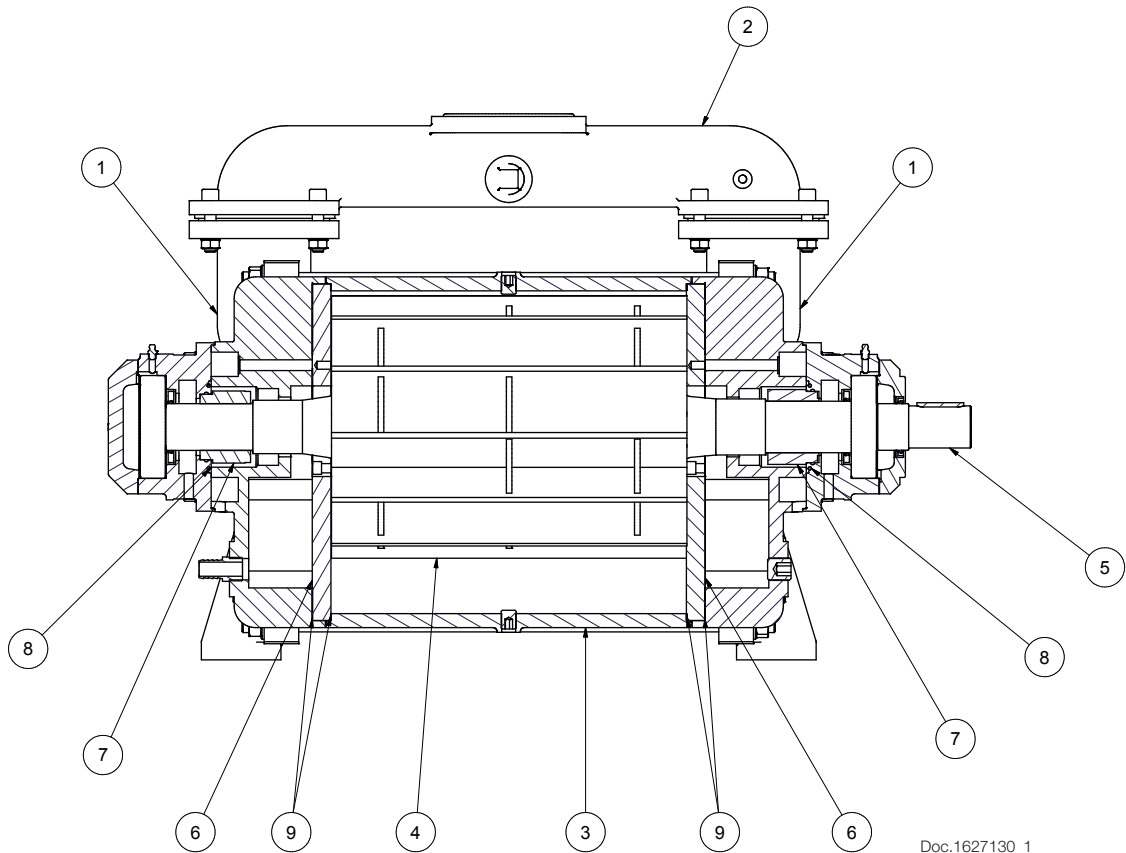
MATERIALS

Position / Components	Material		KS500	KS510	KS625	KS725	KS910	KS1025
1: Pump housing	Cast iron	EN-GJL-250; EN 1561	•	•	•	•	•	•
2: Branch pipes *	Cast iron	EN-GJL-250; EN1561	•	•	•	•	•	•
3: Shell	Cast iron	EN-GJL-250; En 1561	•	•	•	•	•	•
	Stainless steel	EN 1.4401	•	•	•	•	•	•
4: Rotor	Stainless steel	EN 1.4404	•	•	•	•	•	•
5: Rotor shaft	Stainless steel	EN 1.4418	•	•	•	•	•	•
6: Flow plates	Cast iron	EN-GJL-250; EN 1561	•	•	•	•	•	•
	Bronze	GC-CU-Sn10 DIN 1705	•	•	•	•	•	•
7: Mechanical shaft seal	Stainless steel/NBR/Carbon	EN 1.4301/NBR	•	•	•	•	•	•
8: O-rings	Nitrile	NBR	•	•	•	•	•	•
	VITON	FKM	•	•	•	•	•	•
9: Gaskets	Paper gasket	Oil resistant	•	•	•	•	•	•

Available = •

Not available = —

* = Accessories



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TECHNICAL DATA

			KS500	KS510	KS625	KS725	KS910	KS1025
Weight	Ex. branch pipes	[kg]	190	190	209	209	228	228
	Incl. branch pipes *	[kg]	215	215	236	236	261	261
Sound pressure		[db(A)]	78-80	78-80	78-80	78-80	80	80
Pressure test		[bar, gauge]	5	5	5	5	5	5
Rotation speed range		[rpm]	1.000 - 2.000					
Temperature	Gas temp, max	[°C]	120	120	120	120	120	120
	ATEX, Gas temp, max	[°C]	80	80	80	80	80	80
	Service liquid temp, max	[°C]	90	90	90	90	90	90
	ATEX, service liquid temp, max	[°C]	50	50	50	50	50	50
Bearing type	Ball bearing, DE		•	•	•	•	—	—
	Ball bearing, NDE		•	•	•	•	•	•
	Roller bearing, spheric, DE		—	—	—	—	•	•
Pump colour	RAL code	RAL 5021	•	•	•	•	•	•
Connection, water supply	Nipple hose	3/4"/Ø20	•	•	•	•	•	•
Approvals	ATEX certified	Ex II2 G c T4 (zone 1)	•	•	•	•	•	•

Available = •

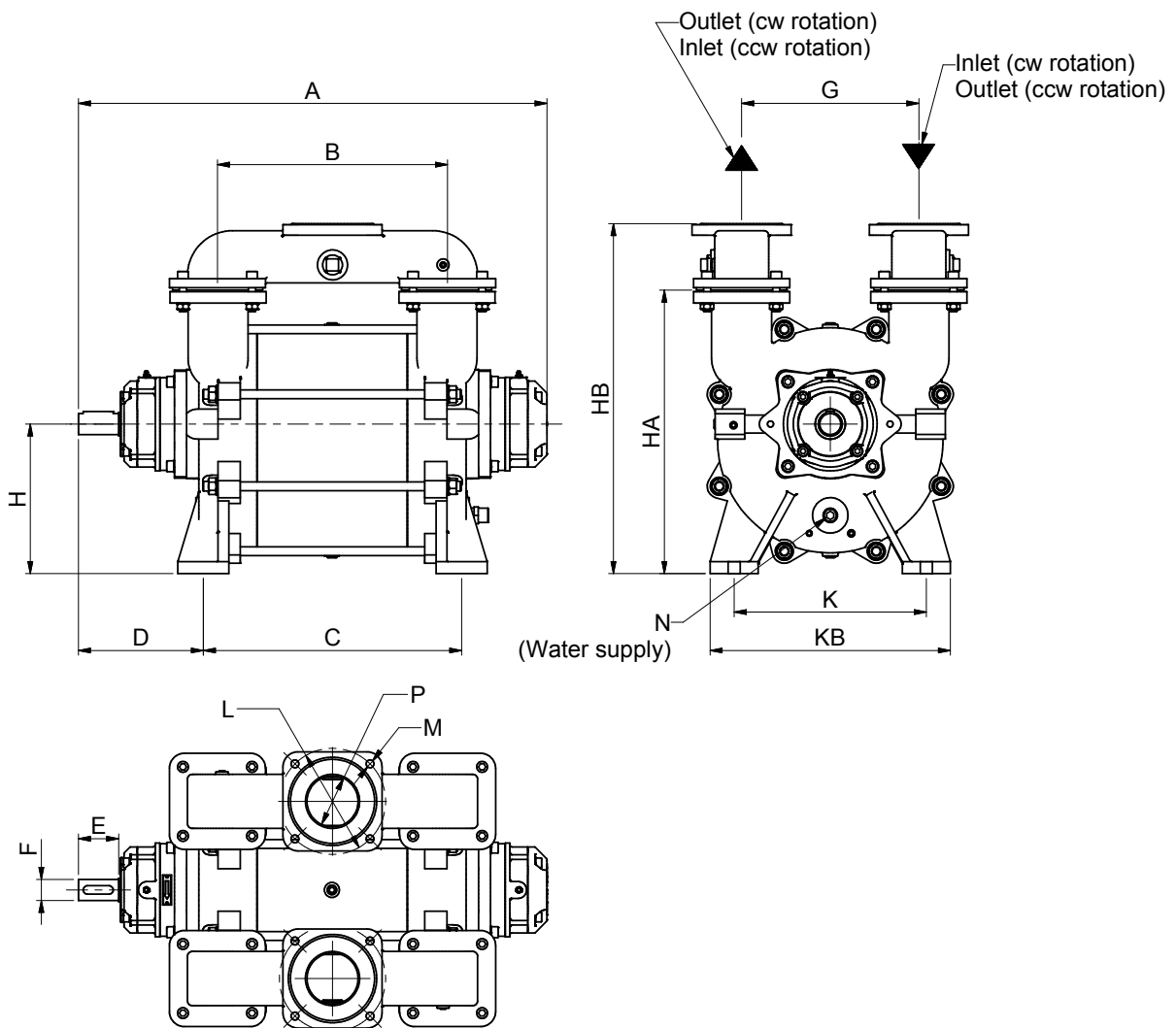
Not available = —

* = Accessories

KS SERIES

DIMENSIONS [mm]

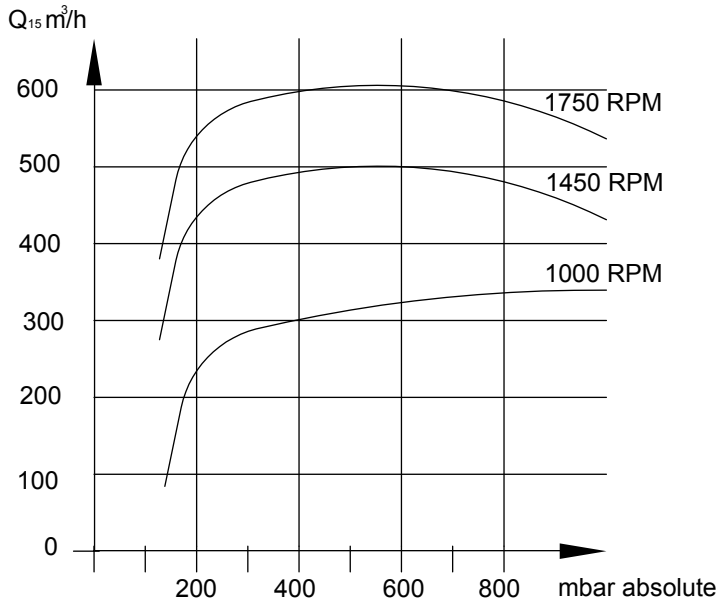
Pump type	A	B	C	D	E	F	G	GA	H	HA	HB	K	KB	L	M	MA	N	P
KS500	712	313	405	186	66	Ø35/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85
KS510	712	313	405	186	66	Ø35/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85
KS625	782	383	475	186	66	Ø35/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85
KS725	782	383	475	186	66	Ø35/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85
KS910	922	523	615	186	66	Ø45/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85
KS1025	922	523	615	186	66	Ø45/k6	295	—	249	580	472	320	400	Ø180	Ø13	—	3/4" / Ø20	Ø85



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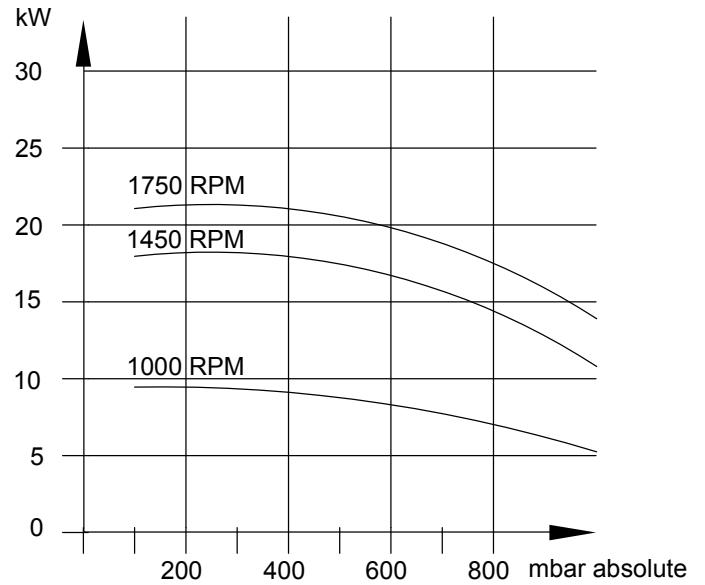
KS500 - Vacuum performance

KS500 VACUUM PERFORMANCE - DRY AIR

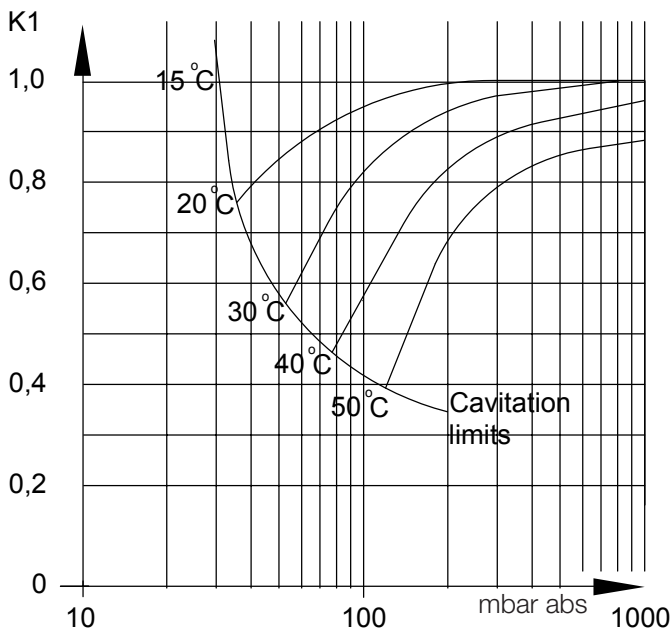


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KS500 POWER CONSUMPTION - VACUUM



CORRECTION FACTOR BASED ON SEALING LIQUID TEMPERATURE

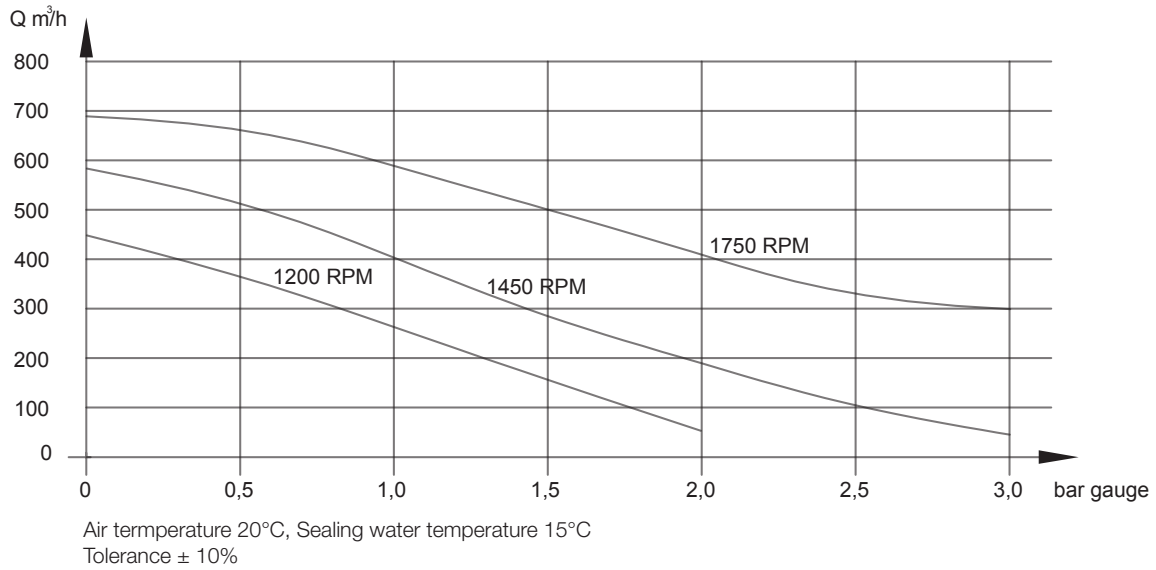


$Q_t = Q_{15} * K$
 Pump performance at temperature of sealing liquid higher than 15°C

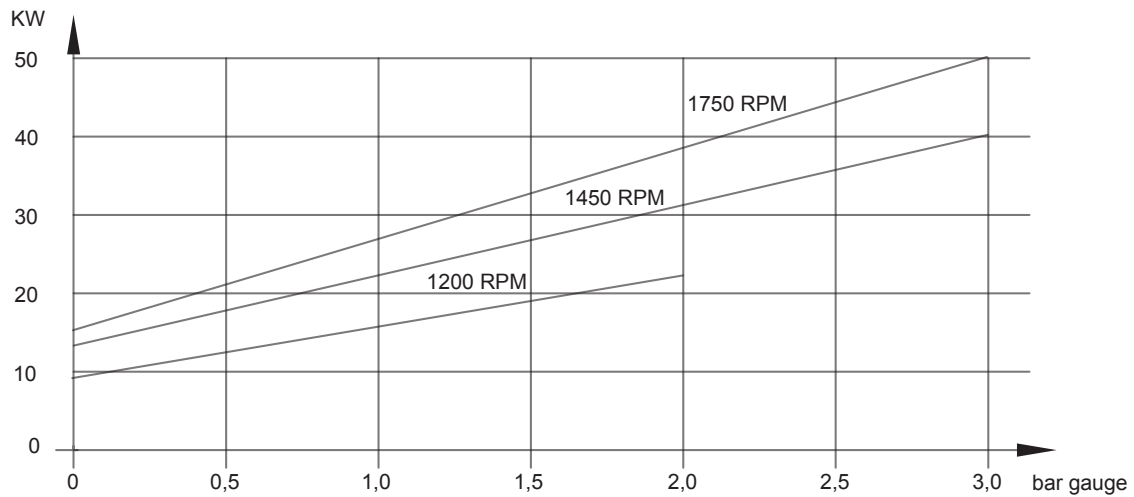
VACUUM OPERATION:

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.

KS500 - Pressure performance



KS500 POWER CONSUMPTION - PRESSURE



PRESSURE OPERATION:

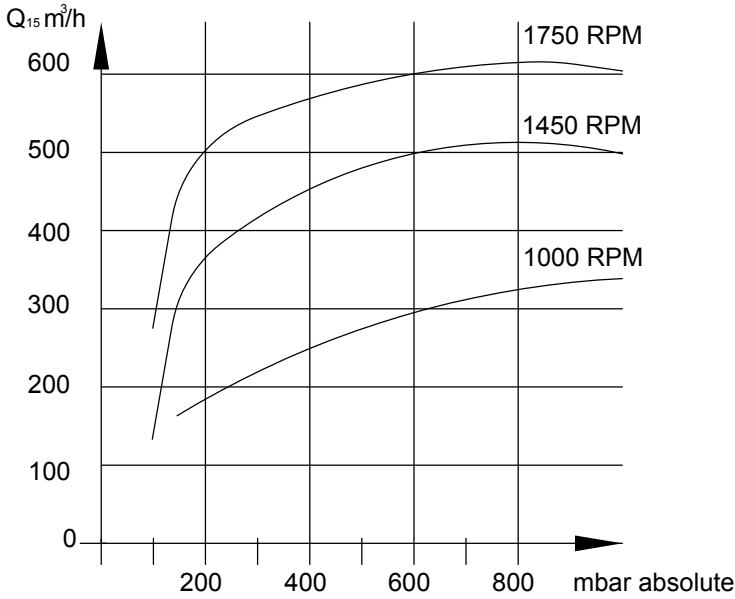
Performance and power consumption are based on a constant service liquid flow at 3.0 m³/h. Deviations will affect the performance and power consumption.

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.

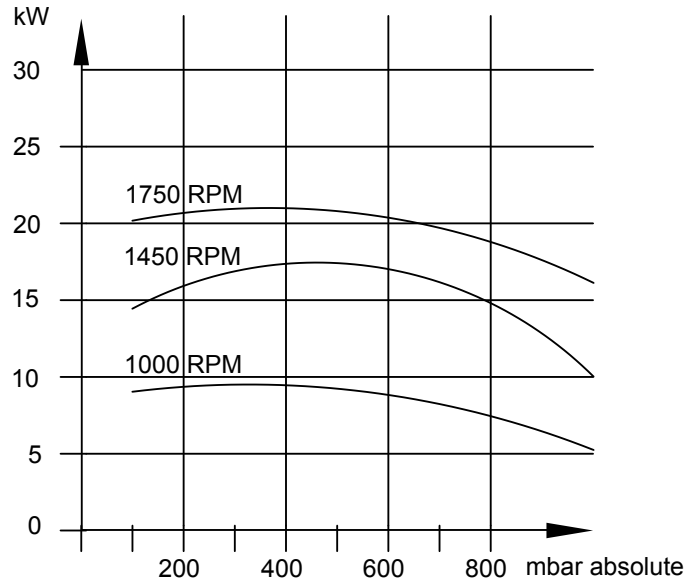
KS510 - Vacuum performance

KS510 VACUUM PERFORMANCE - DRY AIR

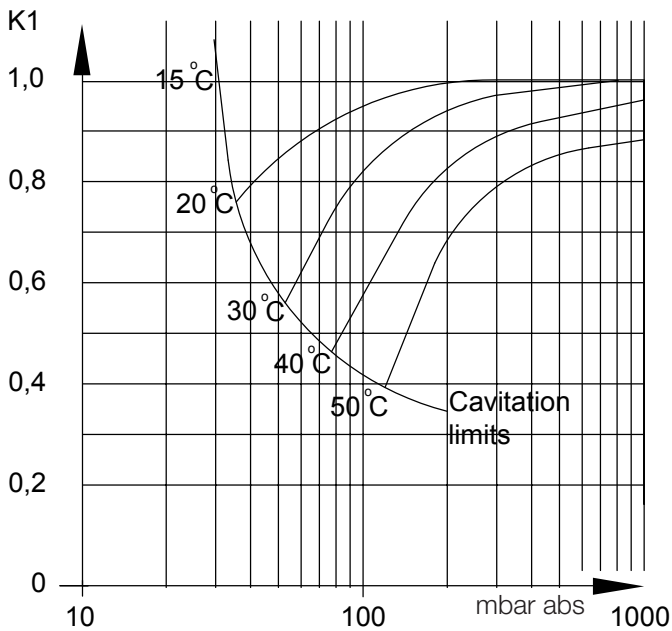


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KS510 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

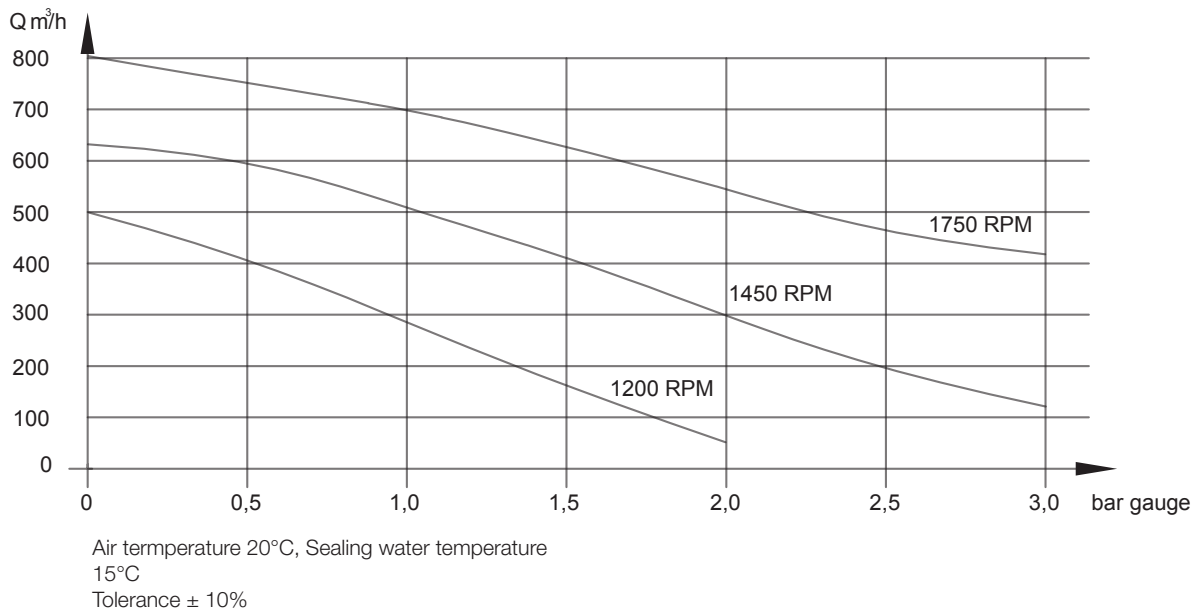
VACUUM OPERATION:

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.

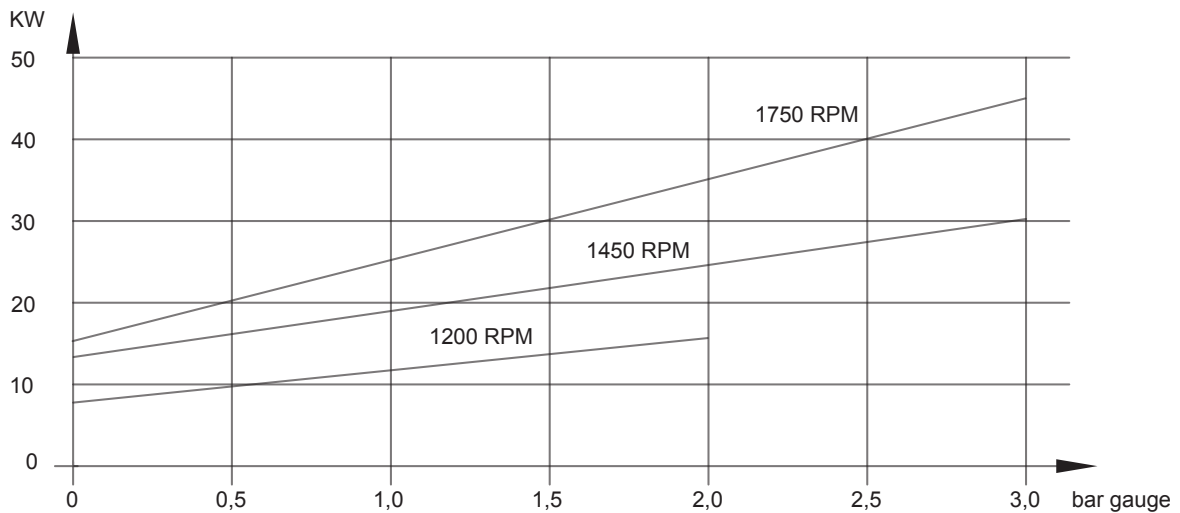
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If operating without liquid separator, the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KS510 - Pressure performance



KS510 POWER CONSUMPTION - PRESSURE

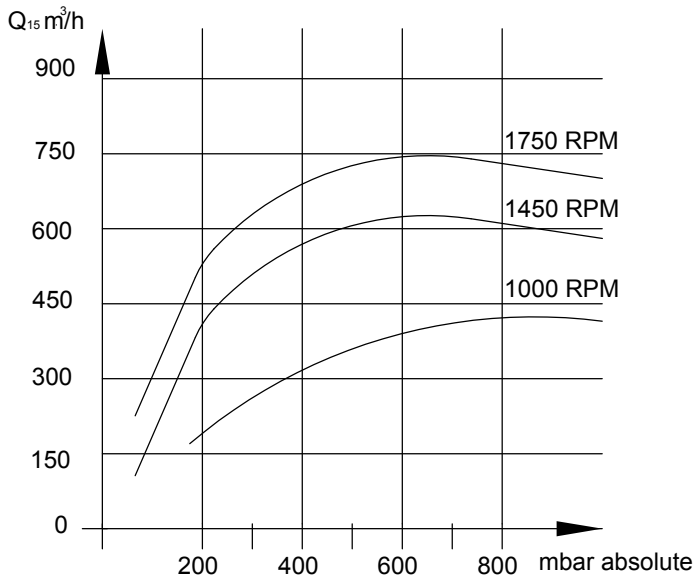


PRESSURE OPERATION:

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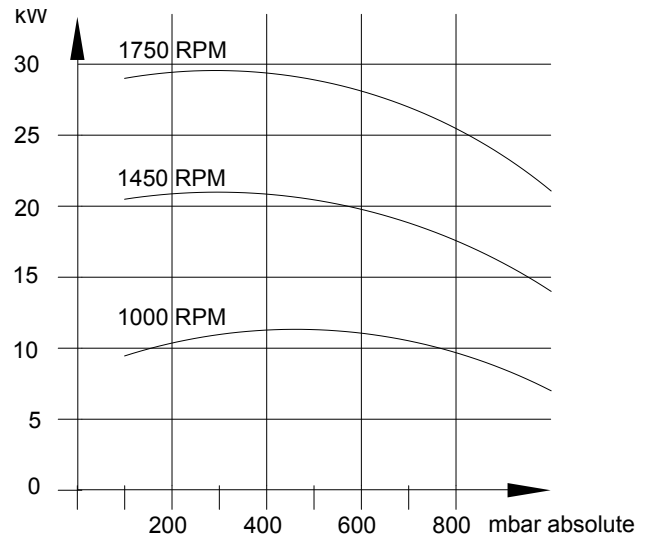
KS625 - Vacuum performance

KS625 VACUUM PERFORMANCE - DRY AIR

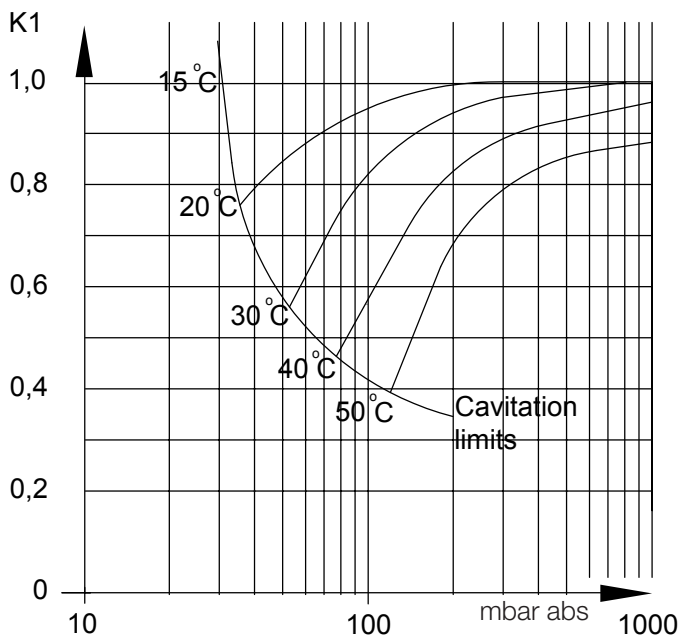


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KS625 POWER CONSUMPTION - VACUUM



CORRECTION FACTOR BASED ON SEALING LIQUID TEMPERATURE

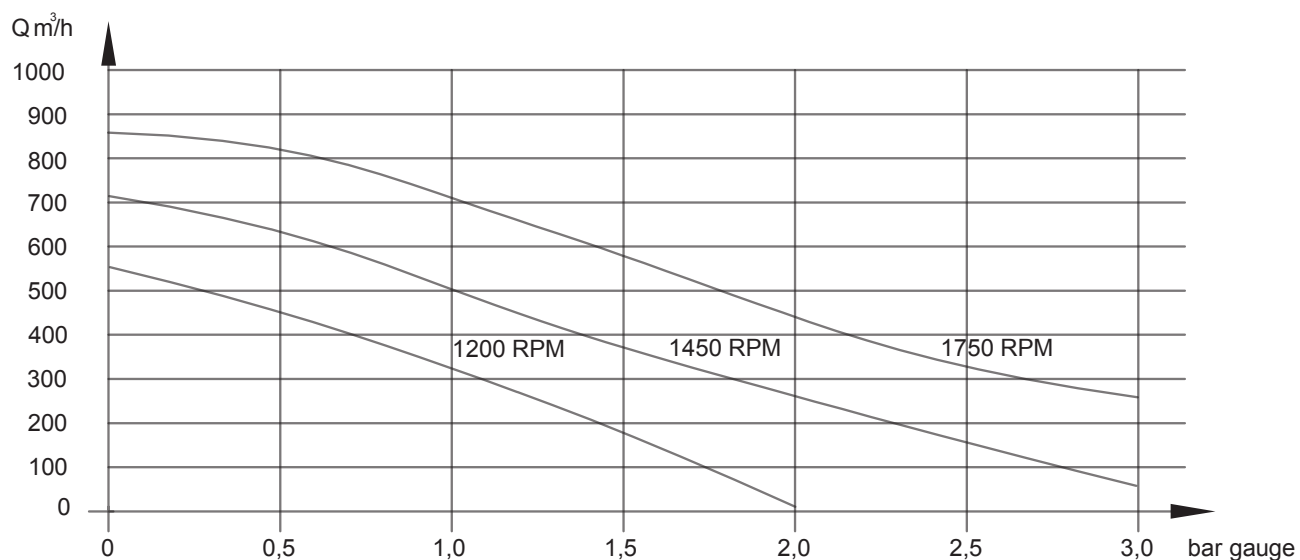


$Q_t = Q_{15} * K$
 Pump performance at temperature of sealing liquid higher than 15°C

VACUUM OPERATION:

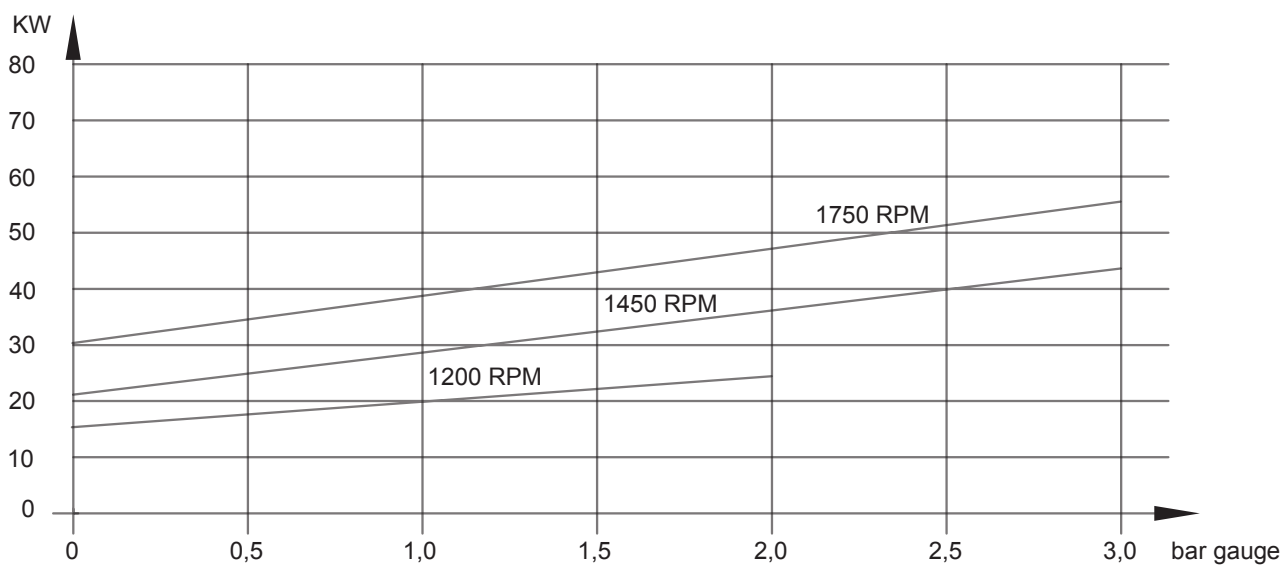
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KS625 - Pressure performance



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

KS625 POWER CONSUMPTION - PRESSURE

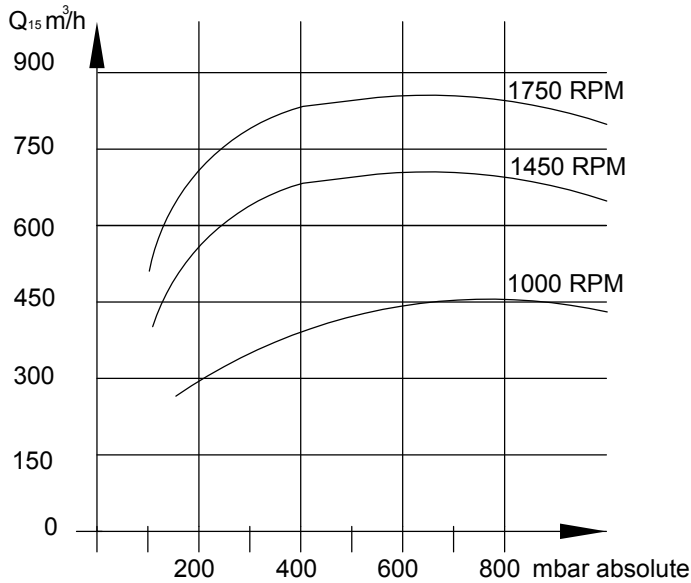


PRESSURE OPERATION:

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.

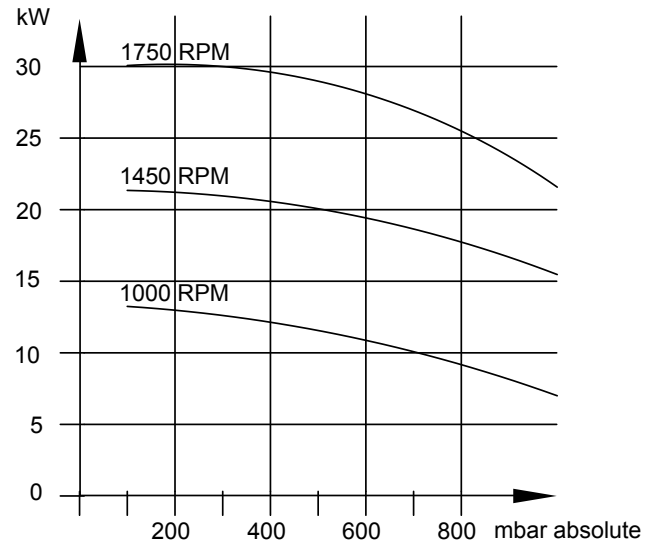
KS725 - Vacuum performance

KS725 VACUUM PERFORMANCE - DRY AIR

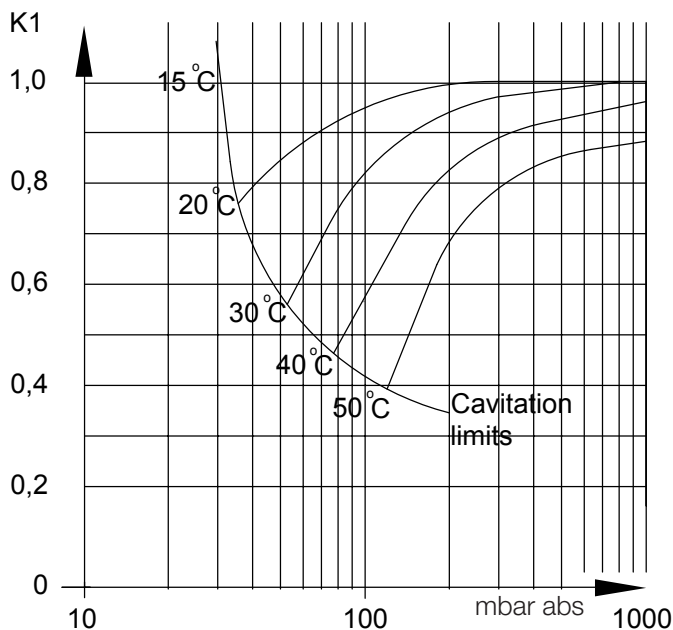


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KS725 POWER CONSUMPTION - VACUUM



CORRECTION FACTOR BASED ON SEALING LIQUID TEMPERATURE



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

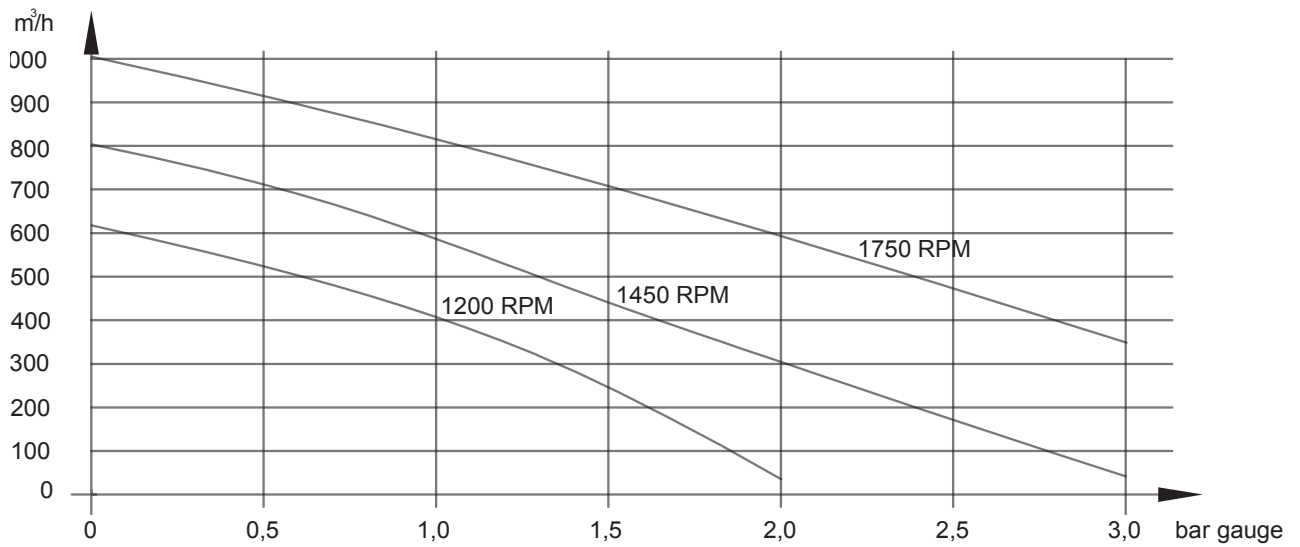
VACUUM OPERATION:

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.

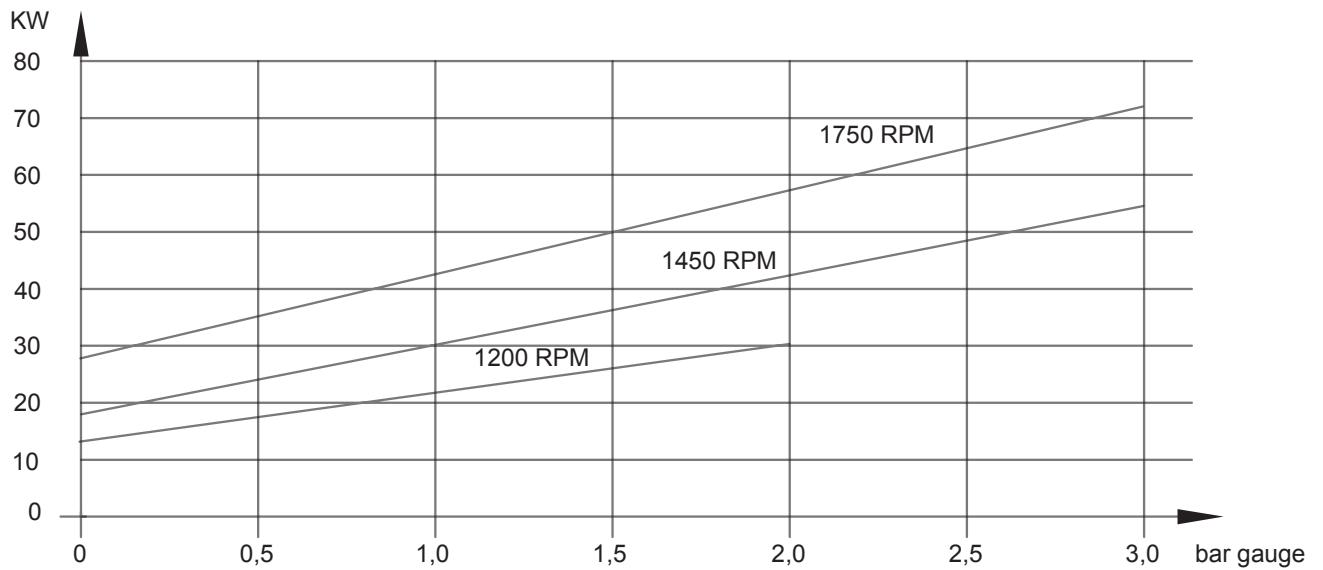
If operating without liquid separator, the pump must be supplied with 1.0 m^3/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KS725 - Pressure performance



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

KS725 POWER CONSUMPTION - PRESSURE



PRESSURE OPERATION:

Performance and power consumption are based on a constant service liquid flow at 3.0 m³/h.

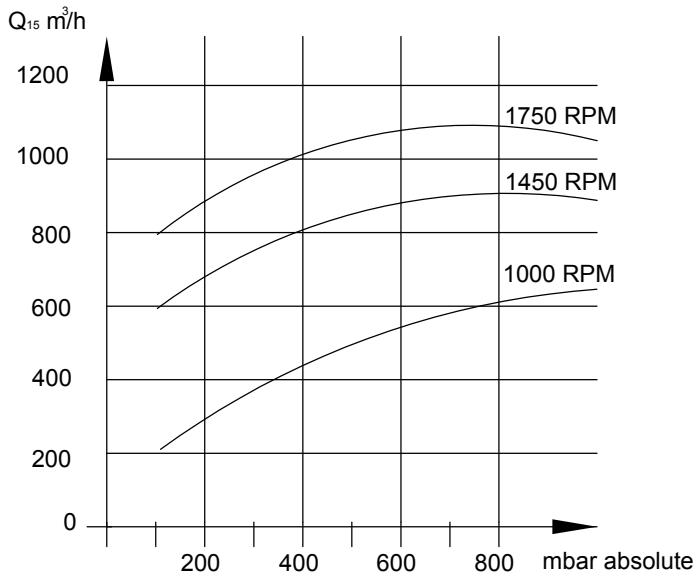
Deviations will affect the performance and power consumption.

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.

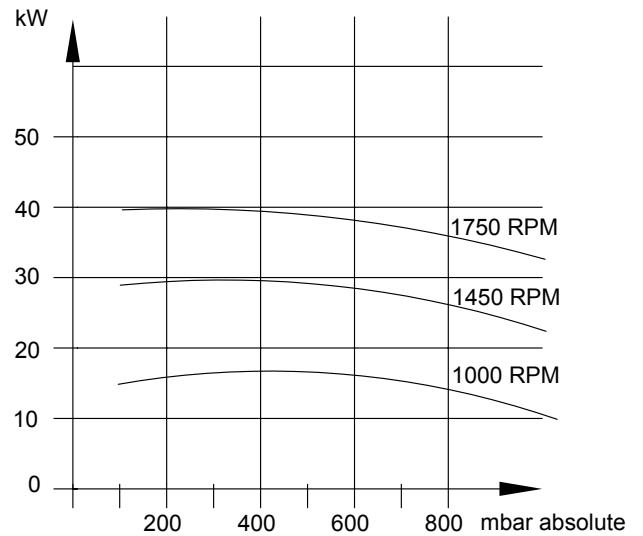
KS910 - Vacuum performance

KS910 VACUUM PERFORMANCE - DRY AIR

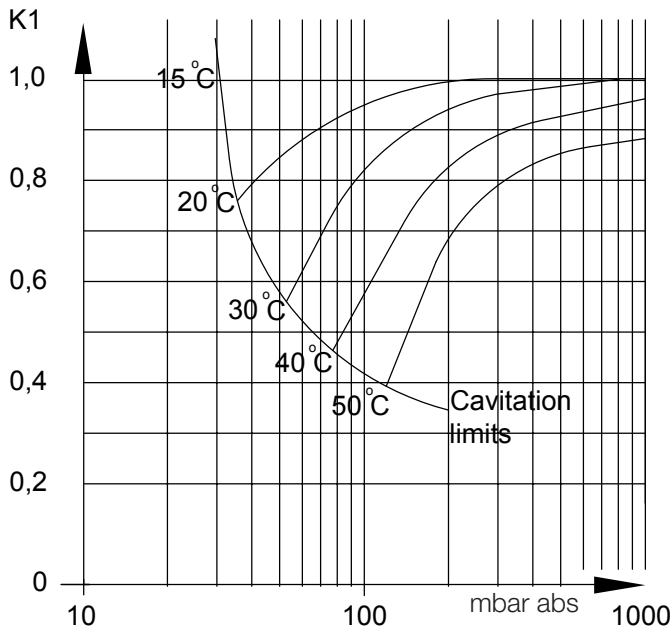


Air temperature 20°C
 Sealing water temperature 15°C
 Performance based on dry air at 1013 mbar absolute
 Tolerance +/- 10%

KS910 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

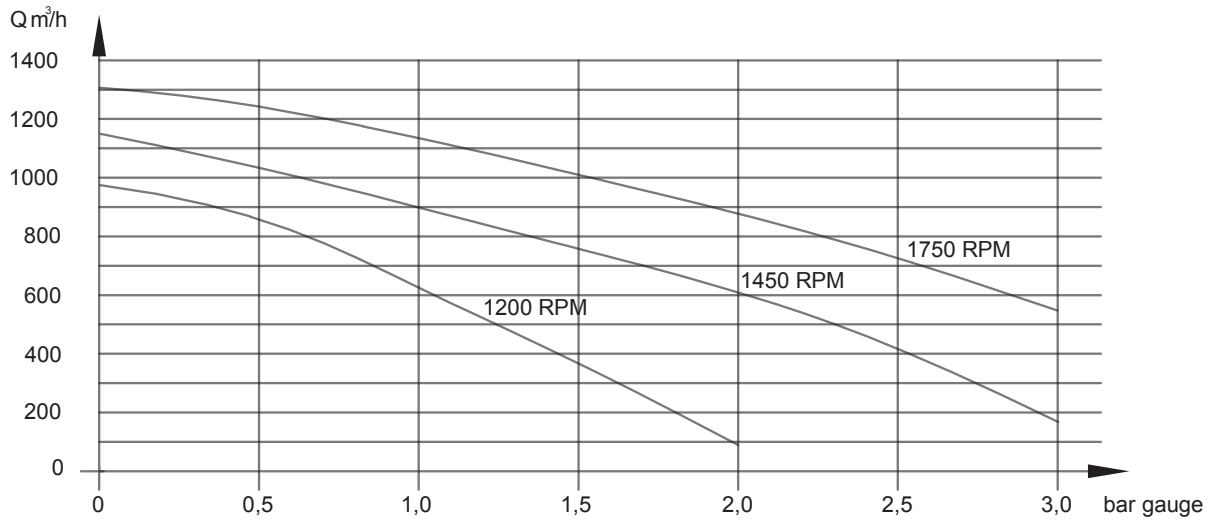
VACUUM OPERATION:

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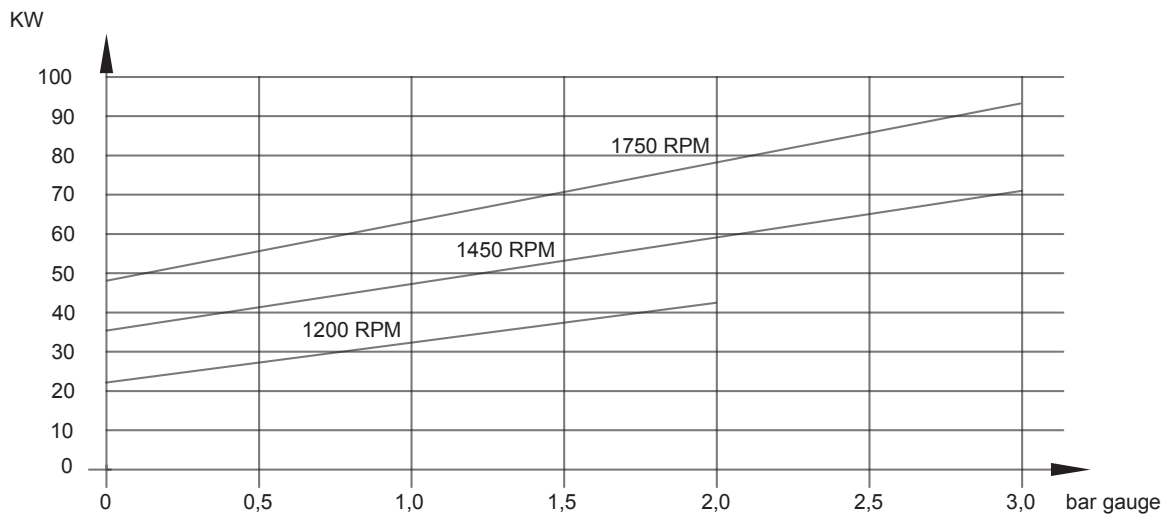
If operating without liquid separator, the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KS910 - Pressure performance



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

KS910 POWER CONSUMPTION - PRESSURE



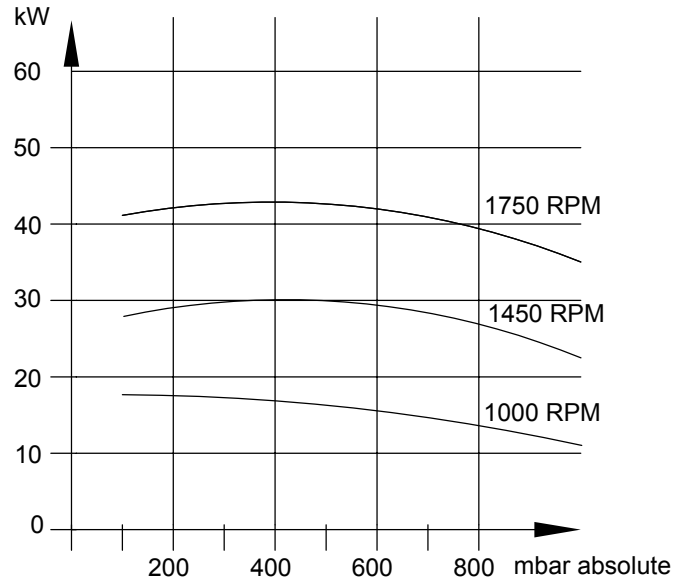
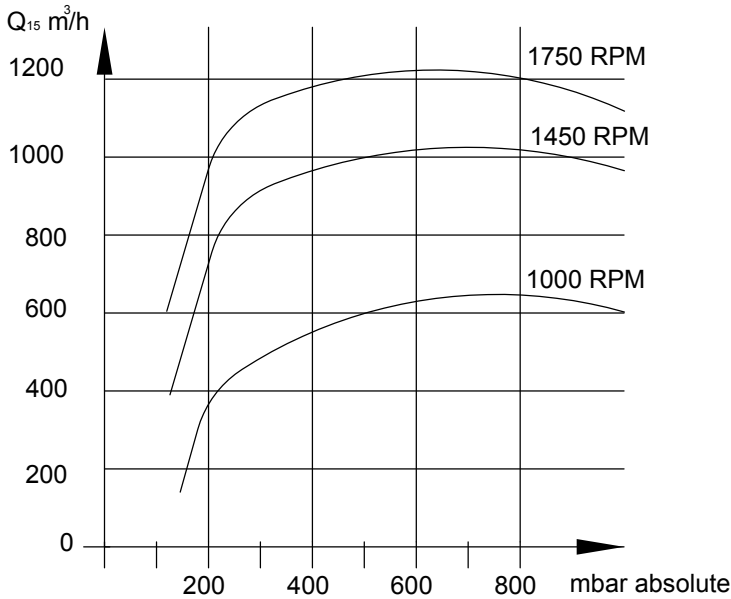
PRESSURE OPERATION:

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.

KS1025 - Vacuum performance

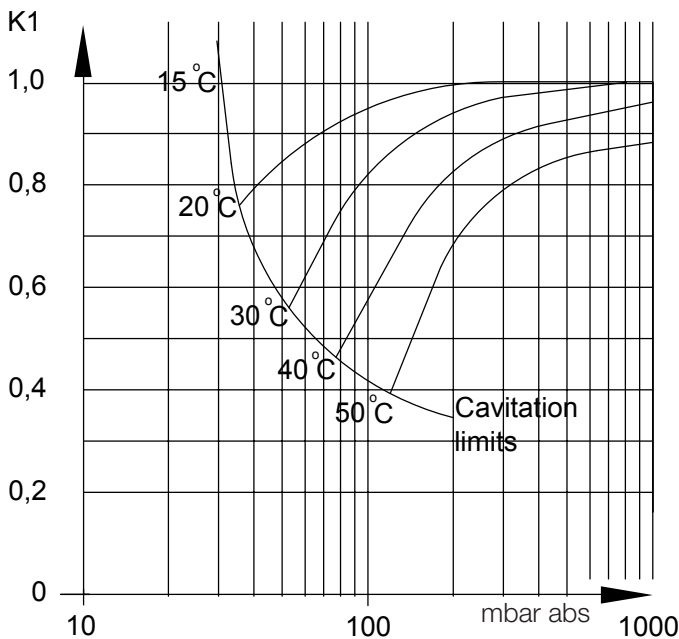
KS1025 VACUUM PERFORMANCE - DRY AIR

KS1025 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

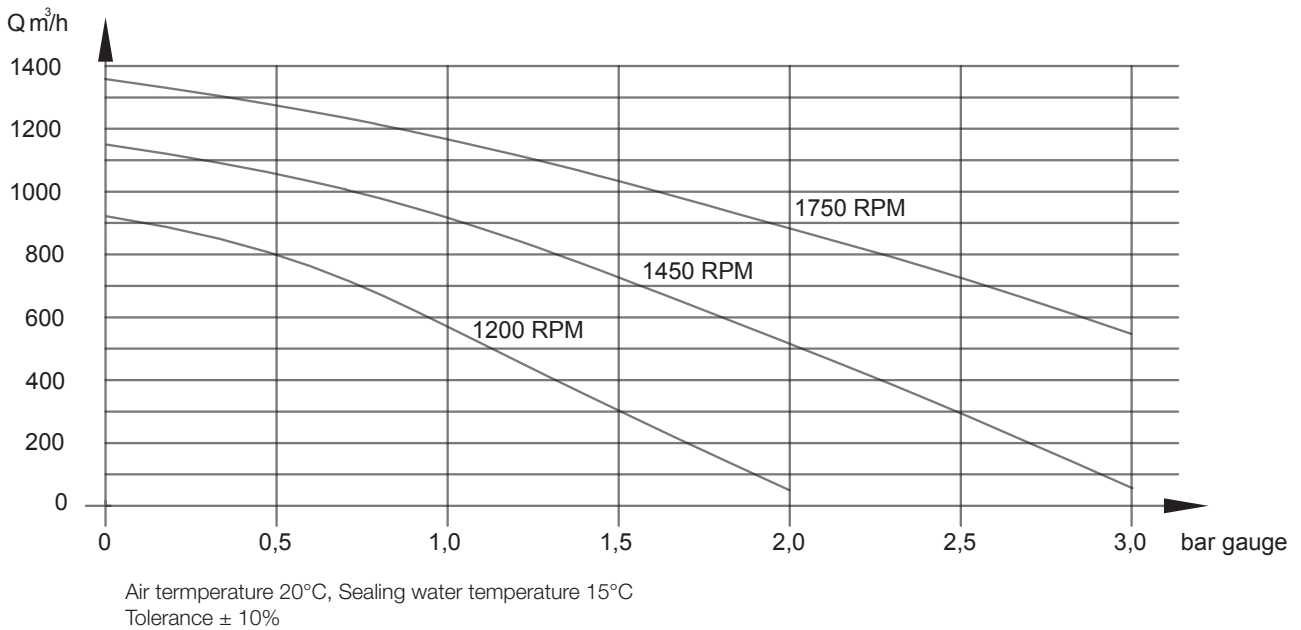
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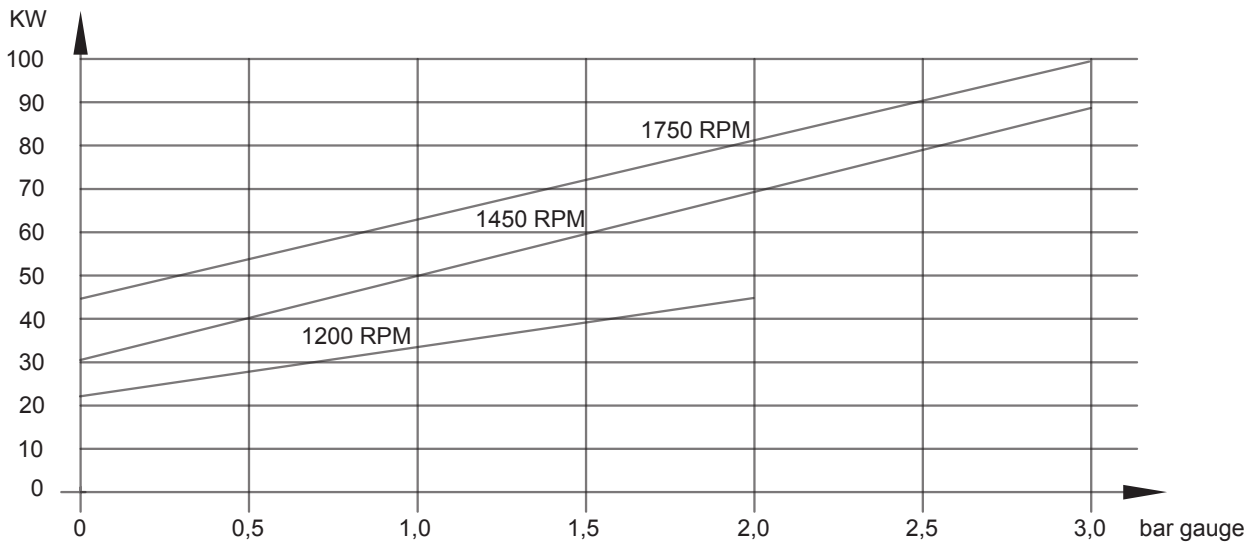
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If operating without liquid separator, the pump must be supplied with 1.0 m³/h as a minimum in considerations to lubrication and cooling of the mechanical shaft seals.

KS1025 - Pressure performance



KS1025 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.

ACCESSORIES

	KS500	KS510	KS625	KS725	KS910	KS1025	KS1800
Non return valve	•	•	•	•	•	•	•
Vacuum limiter	•	•	•	•	•	•	•
Service liquid valve	•	•	•	•	•	•	•
4-way valve	•	•	•	•	•	•	•
4-way valve with pneumatic actuator	•	•	•	•	•	•	•
Intermediate pipe for 4-way valve	•	•	•	•	•	•	•
Adaptor for hydraulic motor ISO	•	•	•	•	•	•	•
Adaptor for hydraulic motor SAE	•	•	•	•	•	•	•
Liquid separator	•	•	•	•	•	•	•
Temperature control, partial recovery	•	•	•	•	•	•	•
Temperature control, full recovery	•	•	•	•	•	•	•

Available = • Not available = —

KS SERIES

HOW TO ORDER KS

Example:

KS 510 R 0 S S S 1 0 A SD

Model:

KS	500
KS	510
KS	625
KS	725
KS	910
KS	1025
KS	1800

Rotation:

Clockwise	R
Counter clockwise	L

Rotor type:

Welded AISI 316	0
Cast iron EN-GJS-400-15; EN1561	1
Welded AISI 316 with spline	2

Pump housing:

Cast iron EN-GJL-250; EN1561	S
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Shell:

Cast iron EN-GJL-250; EN1561	S
Stainless steel AISI 316	E

Flow plates:

Cast iron EN-GJL-250; EN1561	S
Bronze GC-CU Sn10 DIN1705	B
Stainless steel AISI 316	E

Mechanical shaft seals:

NBR / AISI 316 / Carbon	0
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Gaskets:

Oakenstrong	0
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Colour:

Samson standard	A
Without paint	0
On request	X

Documentation:

Samson standard	SD
ATEX zone I	X1
ATEX zone II	X2

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