

RKR Performance Data Sheet

Rotary Piston Blower

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 Appendix 1

Project No. P-666A
 Project POWDER TRANSFER BLOWER
 Item No. 40-BL-401A/B
 Remark Option B

Rotary Piston Blower **K90R6**
 Bare Shaft Blower BS90

Suction Connection (Machine) NW DN 250
 Discharge Connection (Machine) NW DN 250

Drive V-Belt Drive
 Type of Drive Constant Speed
 Operation Pressure

Medium Gas / Gas mixture (93,1% N₂, 6,9% C₆H₁₄)
 Standard Density of Medium ρN kg/Nm³ 1,4294
 Specific Heat Capacity of Medium cp kJ/kg K 1,1438

Altitude above Sea Level H m aSL 0,0
 Ambient Pressure pU mbar abs. 1013,0
 Ambient Temperature tU °C 20,0
 Ambient Relative Humidity rFU % n.a.

Operating point

	1 Max. Pressure	2 RATED	3 Nor.
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Relative Humidity (Calculation of operating point)	rF	%	40,00	40,00	40,00
Density at suction condition	ρ ₁	kg/m ³	1,2153	1,2153	1,2153
Inlet pressure	p ₁	mbar abs.	1020,0	1020,0	1020,0
Pressure difference p ₂ - p ₁	Δp	mbar	900,0	850,0	640,0
Discharge pressure	p ₂	mbar abs.	1920,0	1870,0	1660,0
Inlet temperature	t ₁	°C	45,0	45,0	45,0

Suction flow					
at working condition	V ₁	m ³ /h	4237,02	4256,90	4347,59
at working condition	V ₁	m ³ /min	70,62	70,95	72,46
at standard condition ¹⁾	VN	Nm ³ /h	3525,13	3541,67	3617,13
at standard condition ¹⁾	VN	Nm ³ /min	58,75	59,03	60,29

Mass flow					
at working condition	m ₁	kg/h	5149,30	5173,46	5283,68
Tolerance of suction flow and mass flow			± 5%		

Discharge temperature	t ₂	°C	119	115	96
Blower speed	nG	RPM	1984	1984	1984
Blower shaft power ³⁾	PK	kW	132,99	125,89	96,04
Tolerance of blower shaft power			± 5%		

Motor power ⁴⁾	PM	kW	200,0	200,00	200,00
Net frequency	fNetz	Hz	50,00	50,00	50,00
No. of poles, motor	polM	[-]	4	4	4
Motor speed	nM	RPM	1488	1488	1488
Motor frequency at frequency converter	fM	Hz	n.a.	n.a.	n.a.

Sound pressure level without sound hood ²⁾	Lp(A)	dB(A)	99	98	97
Sound pressure level with sound hood ²⁾	Lp(A)	dB(A)	75	74	73
Sound pressure level with sound hood and extra mesures ²⁾	Lp(A)	dB(A)	n.a.	n.a.	n.a.

1) Suction flow at standard conditions at 1013 mbar abs. and 0 °C or 273 K.

2) Values acc. to DIN EN ISO 2151: 2009-09, free field measurement, tolerance ± 2dB.

3) Incl. power consumption for accessories (silencers, fittings etc.) and V-belt drive (if included).

4) Other motor ratings after technical clarification. Motor power valid for a coolant temperature of 40 °C maximum and an altitude of 1000 m aSL maximum. Conditions deviating from the above, must be considered in individual cases. The actual order data may differ from the calculated design data. (20211008)