



# VACUUM CLEANER MOTOR PERFORMANCE CALCULATED FROM METRIC UNITS TO ASTM

Datum: 7.1.2005

Zelezniki

Code: 496.3.549  
Voltage / fequency: 120/60 V / Hz  
Stator winding: 72/1,00  
Rotor winding: 9/0,63  
Brushes: X72  
Weight: 2170 g

Working order number:  
Request number: 01080105  
Number: 1  
Absolute pressure: 95,35 kPa  
Ambient temperature: 25,15 °C  
Correction factor: 1,0536

Pf = 1219,02 W, Pi = 722,80 W, Pm = 970,91 W

METRICS	Orifice mm	Current A	Input Pow. W	Speed /min	Vacuum kPa	Air flow dm3/s	Air Power W	Efficiency %	Vac (inH2O)	Flow (CFM)
	40	11,16	1235,52	21308	3,27	54,91	179,43	14,52	13,13	116,35
	30	11,34	1257,48	21218	7,89	47,46	374,43	29,78	31,68	100,56
	23	10,95	1214,94	21511	12,92	35,28	455,92	37,53	51,87	74,75
	21	10,65	1182,00	21746	14,27	30,82	439,75	37,20	57,29	65,30
	19	10,35	1151,94	22049	15,56	26,28	408,90	35,50	62,47	55,68
	16	9,69	1086,28	22707	17,46	19,68	343,59	31,63	70,10	41,70
	13	8,87	997,80	23653	19,24	13,62	262,08	26,27	77,24	28,86
	10	7,92	896,12	24818	20,81	8,40	174,69	19,49	83,54	17,80
	6,5	6,92	789,28	26213	22,23	3,70	82,35	10,43	89,25	7,84
	0	5,93	683,10	28037	23,70	0,00	0,00	0,00	95,15	0,00

Maximum values:

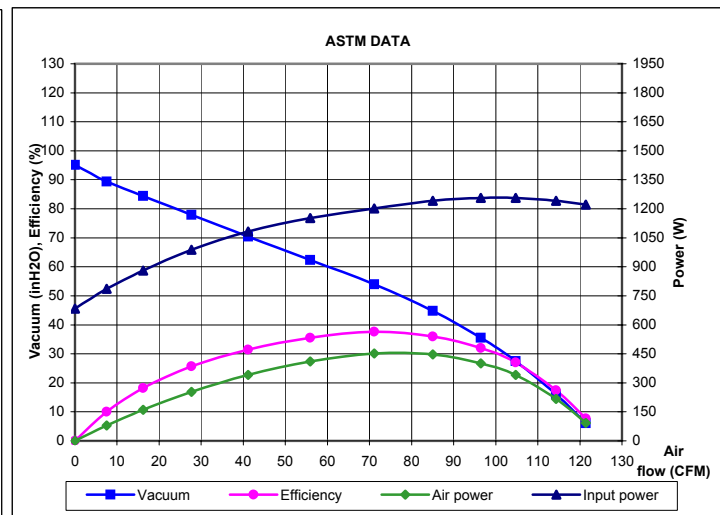
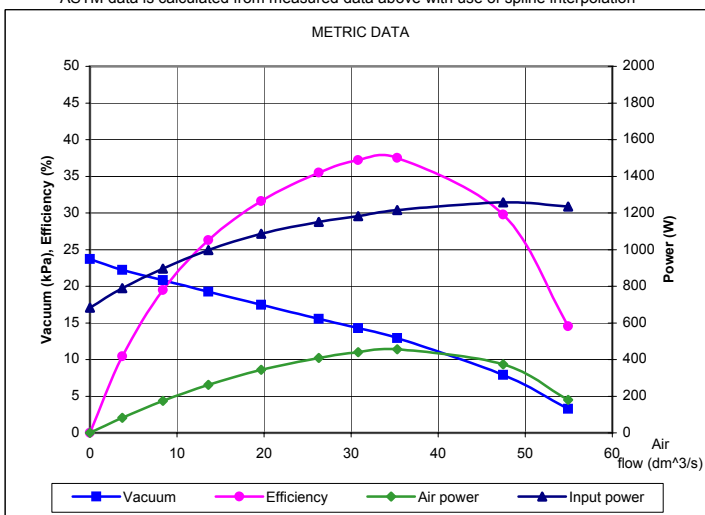
Input power = 1257,48 W, Air power = 455,92 W, Vacuum = 23,7 kPa = 95,15 inH2O, Air Flow \* = 61,29 L/s = 129,87 CFM, Efficiency = 37,53 %

Note: ASTM performance data are calculated from the Metric data above, 1 inH2O = 0,2490889 kPa, 1 CFM = 0,4719474 l/s (NIST Special Publication 811,1995)

ASTM	Orifice in	Current A	Input Power W	Speed RPM	Vacuum inH2O	Air Flow CFM	Air Power W	Efficiency %	Orifice mm
	2,000								50,80
	1,750	11,0	1221	21374	6,1	121,4	91,9	7,8	44,45
	1,500	11,2	1242	21277	16,0	114,3	216,8	17,4	38,10
	1,250	11,3	1257	21214	27,5	104,8	340,8	27,1	31,75
	1,125	11,3	1256	21232	35,5	96,4	401,1	32,0	28,58
	1,000	11,2	1242	21332	44,8	85,1	447,1	36,0	25,40
	0,875	10,8	1202	21594	54,0	71,2	452,0	37,6	22,23
	0,750	10,4	1153	22040	62,3	55,9	409,8	35,6	19,05
	0,625	9,7	1083	22741	70,4	41,1	340,5	31,4	15,88
	0,500	8,8	988	23762	77,9	27,7	253,4	25,7	12,70
	0,375	7,8	880	25013	84,4	16,2	160,9	18,3	9,53
**	0,250	6,9	786	26267	89,4	7,5	79,2	10,1	6,35
	0,000	5,9	683	28037	95,1	0,0	0,0	0,0	0,00

\* Maximum Air Flow is interpolated (3rd polynomial fit) from measured metric data to the point of zero pressure

\*\* ASTM data is calculated from measured data above with use of spline interpolation



Measured in accordance with: IEC 60312

Measured by: Ivan Krmelj  
Converted to ASTM by: Jure Pfajfar