Zelezniki

VACUUM CLEANER MOTOR PERFORMANCE
CALCULATED FROM METRIC TO IMPERIAL UNITS & ASTM ORIFICE

Date: 23.5.2006

Code:	491.3.417	Working order number:	137778
Voltage / fequency:	120/60 V/Hz	Request number:	07010506
Stator winding:	72/1,00	Number:	3
Rotor winding:	10/0,63	Absolute pressure:	96,22 kPa
Brushes:	X 89	Ambient temperature:	26,61 °C
Weight:	2280 g	Correction factor:	1,0507

Pf = 1438,96 W, Pi = 935,90 W, Pm = 1187,43 W

METRIC UNITS — MEASURED DATA

Orifice mm	Current A	Input Pow. W	Speed /min	Vacuum kPa	Air flow dm3/s	Air Power W	Efficiency %	Vac (inH2O)	Flow (CFM)
50	12,83	1448,06	20604	1,58	59,78	94,17	6,50	6,34	126,67
40	12,81	1442,36	20452	3,57	57,35	204,80	14,20	14,33	121,52
30	12,85	1446,76	20475	8,54	49,29	420,83	29,09	34,28	104,44
23	12,42	1401,02	20840	13,63	36,16	493,05	35,19	54,72	76,62
21	12,05	1360,90	21133	15,03	31,56	474,33	34,85	60,34	66,87
19	11,65	1317,92	21602	16,16	26,74	432,12	32,79	64,88	56,66
16	10,99	1247,80	22107	17,81	19,86	353,60	28,34	71,50	42,08
13	10,24	1166,34	23012	19,44	13,68	266,06	22,81	78,04	28,99
10	9,41	1076,60	23902	20,79	8,39	174,48	16,21	83,46	17,78
6,5	8,54	983,12	25052	21,76	3,67	79,84	8,12	87,36	7,78
0	7,85	909,64	26218	23,02	0,00	0,00	0,00	92,42	0,00

Maximum measured values:

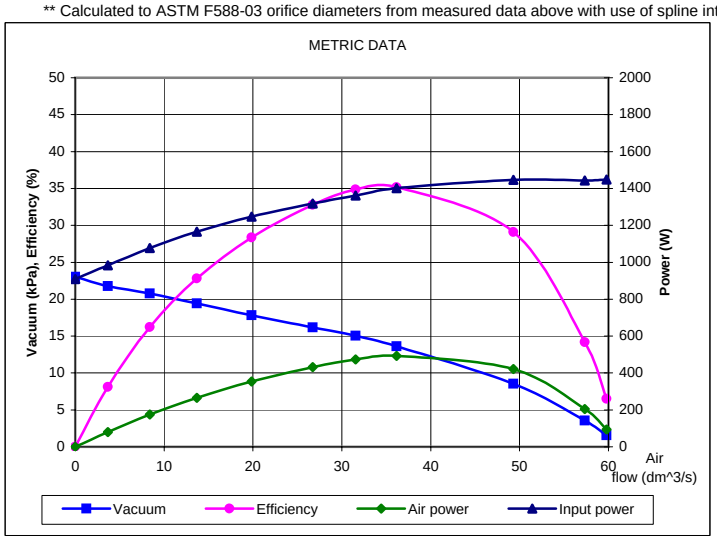
Input power = 1448,06 W, Air power = 493,05 W, Vacuum = 23,02 kPa = 92,42 inH2O, Air Flow * = 59,78 L/s = 126,67 CFM, Efficiency = 35,19 %

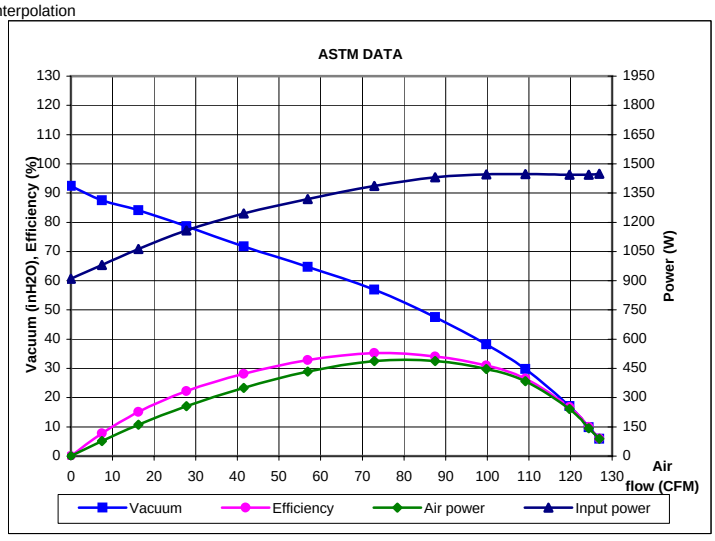
Note for units conversion: 1 inH2O = 0.2490889 kPa, 1 CFM = 0.4719474 l/s, 1 in = 25.4 mm (NIST Special Publication 811,1995)

IMPERIAL UNITS — CALCULATED DATA

Orifice in	Current A	Input Power W	Speed RPM	Vacuum inH2O	Air Flow CFM	Air Power W	Efficiency %	Oriffice mm
2,000	12,8	1449	20618	5,9	127,0	87,9	6,1	50,80
1,750	12,8	1443	20509	9,8	124,4	143,0	9,9	44,45
1,500	12,8	1443	20437	17,0	119,8	241,3	16,7	38,10
1,250	12,9	1447	20449	29,8	109,2	384,1	26,5	31,75
1,125	12,8	1445	20507	38,2	99,8	447,4	31,0	28,58
1,000	12,7	1431	20642	47,5	87,5	487,8	34,1	25,40
0,875	12,3	1387	20930	57,0	72,9	488,7	35,2	22,23
0,750	11,7	1319	21592	64,8	56,9	433,3	32,9	19,05
0,625	11,0	1245	22136	71,8	41,5	350,1	28,1	15,88
0,500	10,2	1158	23105	78,7	27,8	257,0	22,2	12,70
0,375	9,3	1062	24056	84,1	16,2	160,2	15,1	9,53
0,250	8,5	980	25095	87,5	7,5	76,6	7,8	6,35
0,000	7,9	910	26218	92,4	0,0	0,0	0,0	0,00

** Calculated to ASTM F588-03 orifice diameters from measured data above with use of spline interpolation





Measured in accordance with: IEC 60312

Measured by: Ivan Krmelj