Zelezniki

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

Date: 11.1.2006

| | | | |
|---|---|---|---|
| Code: | 496.3.720-2 | Working order number: | 128451 |
| Voltage / fequency: | 120/60 V / Hz | Request number: | 00330106 |
| Stator winding: | 50/1,12 | Number: | 2 |
| Rotor winding: | 8/2×0,50 | Absolute pressure: | 97,59 kPa |
| Brushes: | X 89 | Ambient temperature: | 23,18 °C |
| Weight: | 2510 g | Correction factor: | 1,0328 |

Pf = 1647,06 W, Pi = 1122,80 W, Pm = 1384,93 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 | 14,09 | 1637,38 | 25894 | 2,22 | 70,80 | 157,01 | 9,59 | 8,91 | 150,02 |
| 40 | 14,26 | 1656,72 | 25773 | 4,71 | 65,69 | 309,68 | 18,69 | 18,91 | 139,19 |
| 30 | 14,39 | 1671,70 | 25665 | 10,65 | 54,71 | 582,74 | 34,86 | 42,76 | 115,92 |
| 23 | 14,17 | 1646,96 | 25909 | 16,75 | 39,71 | 665,01 | 40,38 | 67,25 | 84,14 |
| 21 | 13,86 | 1613,12 | 26162 | 18,56 | 34,70 | 644,01 | 39,92 | 74,51 | 73,53 |
| 19 | 13,49 | 1571,62 | 26545 | 20,41 | 29,67 | 605,42 | 38,52 | 81,94 | 62,87 |
| 16 | 12,86 | 1501,10 | 27503 | 23,14 | 22,28 | 515,42 | 34,34 | 92,90 | 47,21 |
| 13 | 12,00 | 1404,90 | 28801 | 25,95 | 15,51 | 402,37 | 28,64 | 104,18 | 32,86 |
| 10 | 11,00 | 1292,24 | 30542 | 27,84 | 9,51 | 264,75 | 20,49 | 111,77 | 20,15 |
| 6,5 | 10,03 | 1181,82 | 32748 | 29,64 | 4,18 | 124,05 | 10,50 | 118,99 | 8,86 |
| 0 | 9,25 | 1092,52 | 34859 | 31,42 | 0,00 | 0,00 | 0,00 | 126,14 | 0,00 |

Maximum measured values:

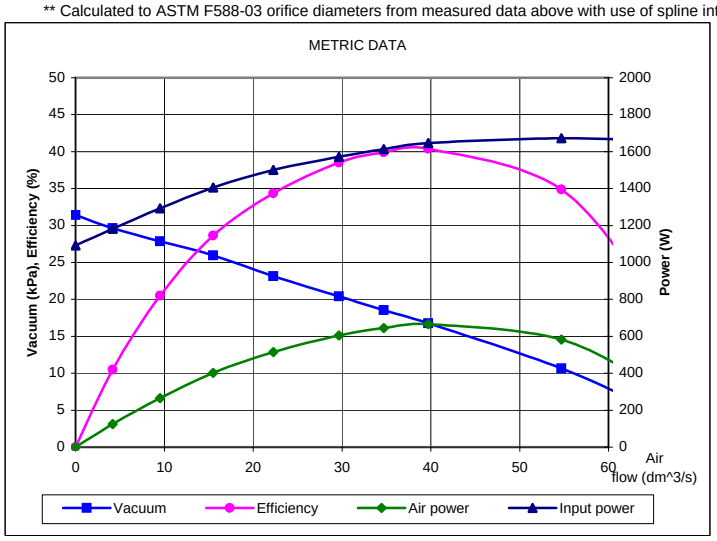
Input power = 1671,7 W, Air power = 665,01 W, Vacuum = 31,42 kPa = 126,14 inH2O, Air Flow * = 70,8 L/s = 150,02 CFM, Efficiency = 40,38 %

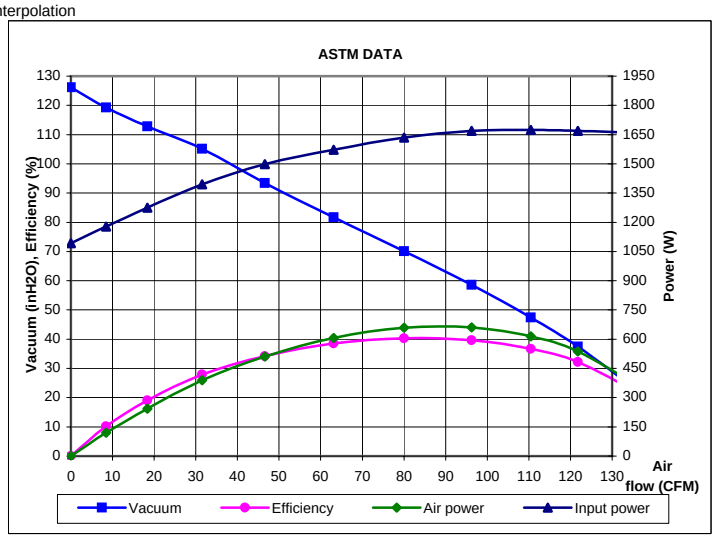
Note for units conversion: 1 inH2O = 0.2490889 kPa, 1 CFM = 0.4719474 l/s, 1 in = 25.4 mm (NIST Special Publication 811,1995)

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 | 14,1 | 1636 | 25903 | 8,3 | 150,7 | 147,9 | 9,0 | 50,80 |
| 1,750 | 14,2 | 1649 | 25830 | 13,4 | 144,7 | 226,7 | 13,7 | 44,45 |
| 1,500 | 14,3 | 1660 | 25746 | 22,2 | 136,3 | 357,3 | 21,5 | 38,10 |
| 1,250 | 14,4 | 1669 | 25673 | 37,4 | 121,8 | 537,8 | 32,2 | 31,75 |
| 1,125 | 14,4 | 1673 | 25666 | 47,4 | 110,5 | 614,5 | 36,7 | 28,58 |
| 1,000 | 14,4 | 1668 | 25738 | 58,6 | 96,3 | 660,9 | 39,6 | 25,40 |
| 0,875 | 14,1 | 1635 | 25995 | 70,0 | 80,1 | 659,3 | 40,3 | 22,23 |
| 0,750 | 13,5 | 1573 | 26533 | 81,8 | 63,1 | 606,6 | 38,6 | 19,05 |
| 0,625 | 12,8 | 1498 | 27550 | 93,4 | 46,6 | 511,1 | 34,1 | 15,88 |
| 0,500 | 11,9 | 1394 | 28955 | 105,1 | 31,5 | 389,4 | 27,9 | 12,70 |
| 0,375 | 10,8 | 1275 | 30852 | 112,8 | 18,3 | 243,1 | 19,1 | 9,53 |
| 0,250 | 10,0 | 1178 | 32827 | 119,3 | 8,5 | 119,3 | 10,1 | 6,35 |
| 0,000 | 9,3 | 1093 | 34859 | 126,1 | 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