



Date: 11/22/09

Supersedes: 7/18/06

TECHNICAL DATA SHEET

VOONER VANEGARD® LIQUID RING VACUUM PUMP

Specified, constructed, tested, and guaranteed by:

Vooner FloGard® Corporation

P.O. Box 240360, Charlotte, NC 28224-0360
4729 Stockholm Court, Charlotte, NC 28273

Telephone: (704) 552-9314
Toll Free: 1-800-345-7879
Telefax: (704) 554-8230

Model: VG4

Type: Single stage rotor, cone shape ports, liquid ring vacuum pump

Sealing liquid flow rate nominal: 15”HgV (-L cone) - 5 gpm (20 lpm)
20”-24”HgV (-M cone) - 12 gpm (45 lpm)
24”-26”HgV (-H cone) - 15 gpm (55 lpm)

Sealing liquid connection: ¾” NPT

Shaft sealing: Packing

Bearing design: Double row spherical roller bearing, external, grease lubricated, Type: NSK 21309EAE4

Shaft diameter, drive end: 1⁵/₈”

Pump flange connections: 3” inlet, 2¹/₂” outlet

Manifold flange connections: 5” inlet (4” optional on fabricated inlet), 3” outlet

Approximate pump weight: 540 lbs. (245 kg)

MATERIAL CONSTRUCTION FEATURES

| Model | Rotor | Cones | Heads | Bearing Carrier | Housing | Shaft | Packing Gland, Studs, Nuts |
|--------------|--------------|--------------|--------------|------------------------|----------------|--------------|-----------------------------------|
| A | Ductile Iron | Cast Iron | Cast Iron | Carbon Steel | Cast Iron | Carbon Steel | 316 SS |
| C | 304 SS | 304 SS | Cast Iron | Carbon Steel | Cast Iron | 410 HT SS | 316 SS |
| S | 304 SS | 304 SS | Cast Iron | Carbon Steel | 304 SS | 410 HT SS | 316 SS |
| SS4 | 304 SS | 304 SS | 304 SS | Carbon Steel | 304 SS | 316 SS | 316 SS |
| SS6 | 316 SS | 316 SS | 316 SS | Carbon Steel | 316 SS | 316 SS | 316 SS |

(SS - cast stainless steel)

(HT - heat treated)

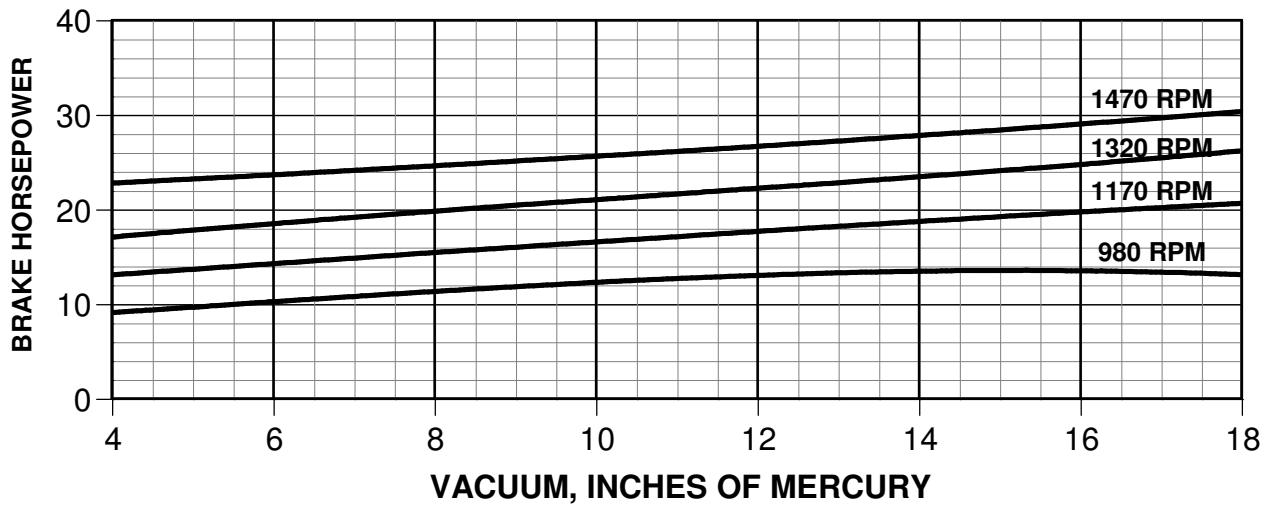
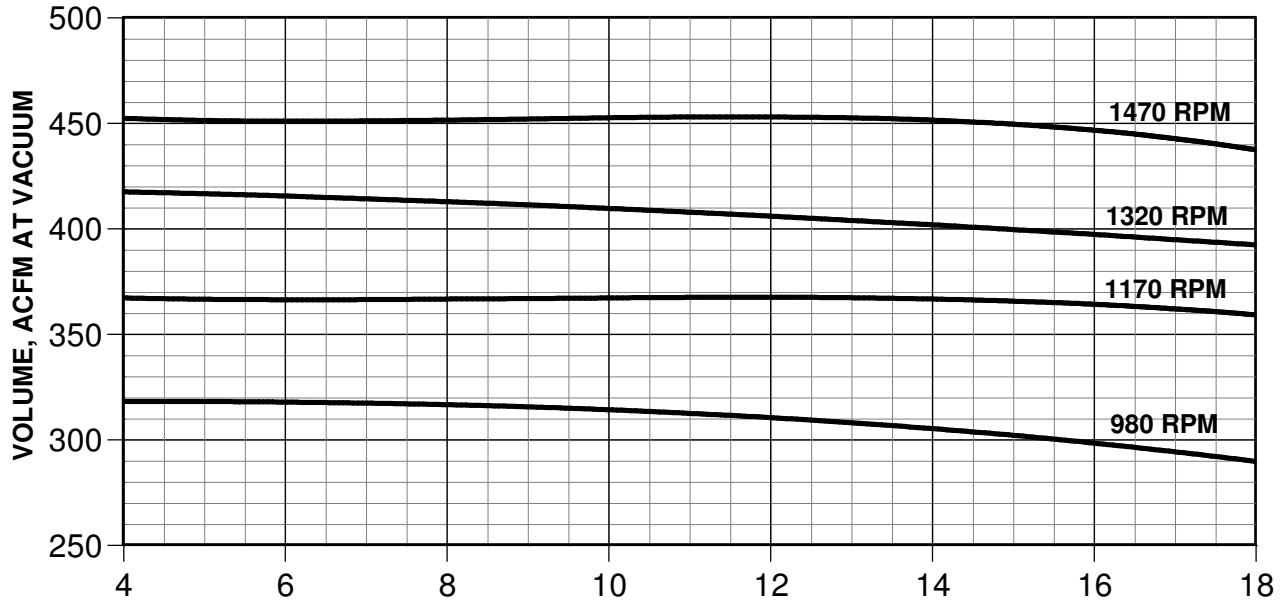
(N/A - not available)



Vooner®

VACUUM PUMP, CONE PORT, SINGLE STAGE , LIQUID RING

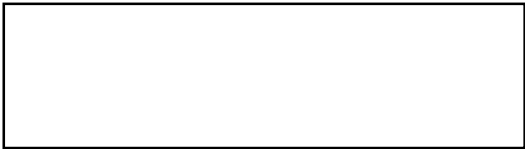
MODEL: VG4-L



TEST DATA CONDITIONS:
 INLET GAS TEMPERATURE: 60 F @ 50% RELATIVE HUMIDITY
 BAROMETRIC PRESSURE: 29.9" HG ABSOLUTE
 SEALING LIQUID TEMPERATURE: 60 F

Issue date: 11/22/06
 Supersedes date: 03/20/00

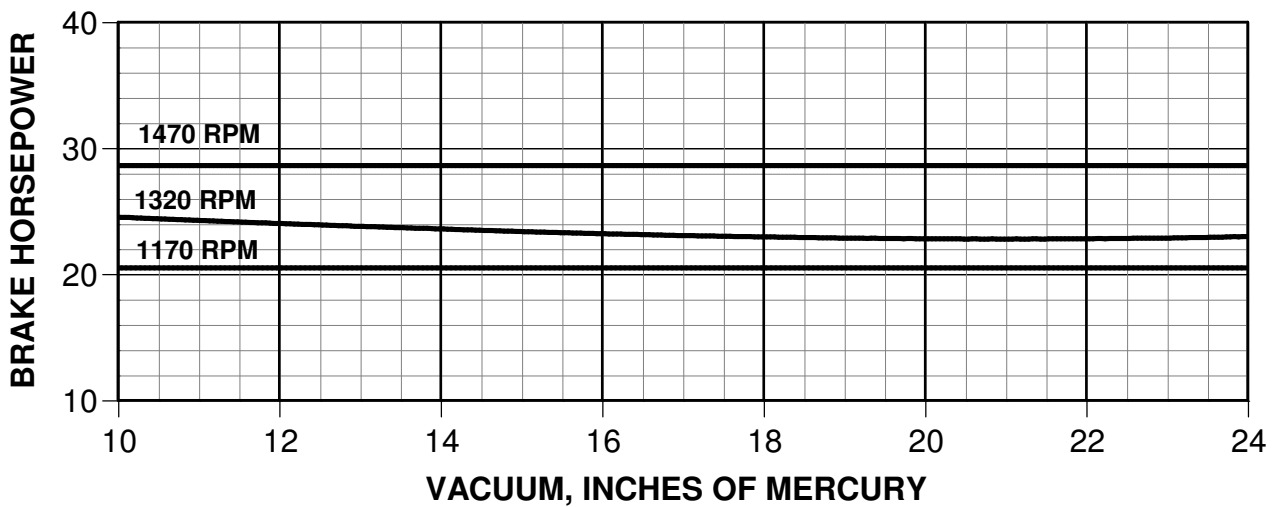
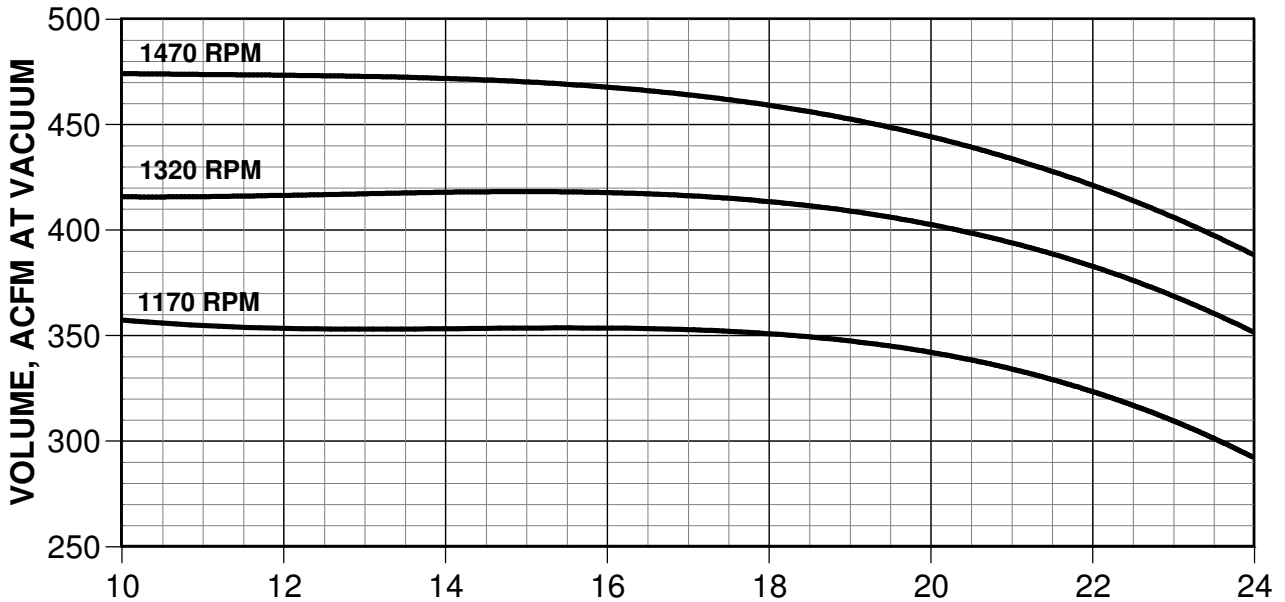
Performance to Heat Exchange Institute Standards (HEI)



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VACUUM PUMP, CONE PORT, SINGLE STAGE , LIQUID RING

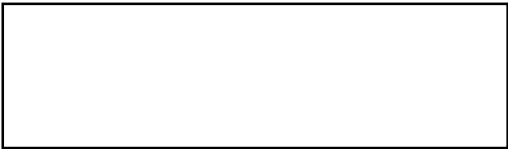
MODEL: VG4-M



TEST DATA CONDITIONS:
 INLET GAS TEMPERATURE: 60 F @ 50% RELATIVE HUMIDITY
 BAROMETRIC PRESSURE: 29.9" HG ABSOLUTE
 SEALING LIQUID TEMPERATURE: 60 F

Issue date: 11/22/06
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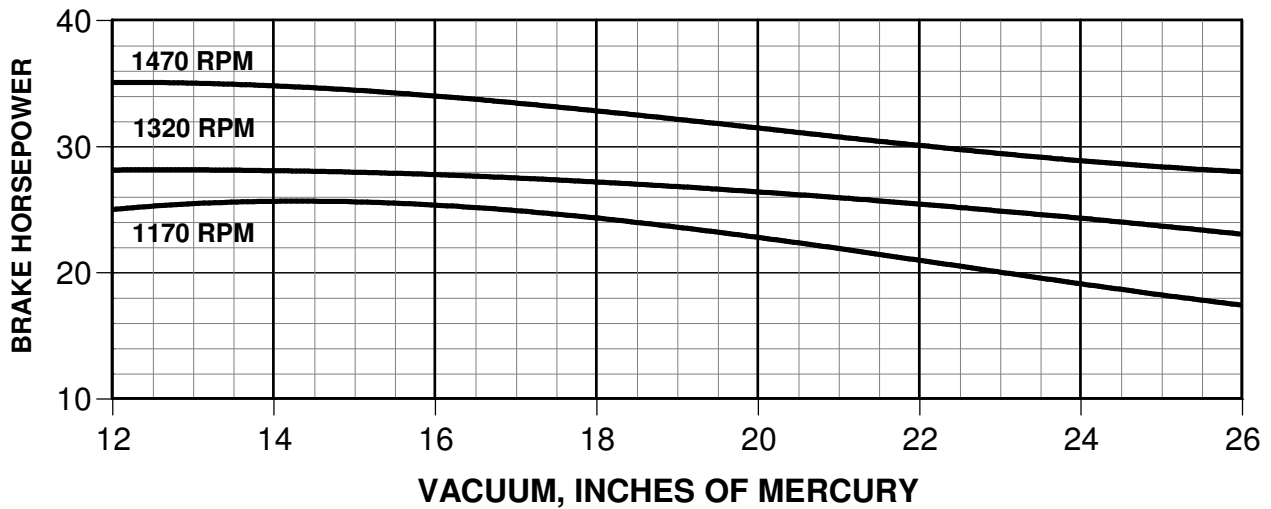
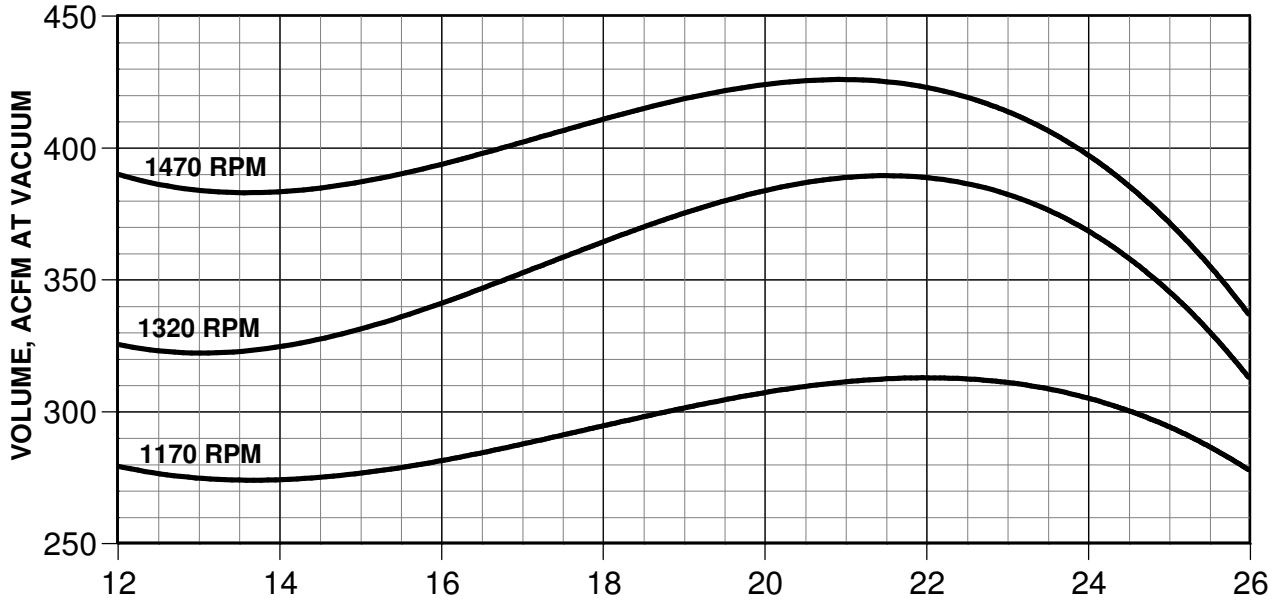
Performance to Heat Exchange Institute Standards (HEI)



Vooner®

VACUUM PUMP, CONE PORT, SINGLE STAGE, LIQUID RING

MODEL: VG4-H



TEST DATA CONDITIONS:
 INLET GAS TEMPERATURE: 60 F @ 50% RELATIVE HUMIDITY
 BAROMETRIC PRESSURE: 29.9" HG ABSOLUTE
 SEALING LIQUID TEMPERATURE: 60 F

Issue date: 11/22/06
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Performance to Heat Exchange Institute Standards (HEI)

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* COMPONENTS ARE IRON. FOR S/STL ADD 13%.

| APPROX. WEIGHTS | LBS. [Kg] |
|----------------------|-----------|
| PUMP ASSY - DRY | 540 [245] |
| IMPELLER/SHAFT ASSY | 130 [59] |
| HOUSING* | 117 [53] |
| HEADS (EA.)* | 132 [60] |
| CONES (EA.)* | 15 [7] |
| BEARING CARRIER (EA) | 18 [8] |

| SIZE | FSCH NO. | DWG NO. | REV |
|------|----------|---------|-----|
| A | NONE | VG4 | B |

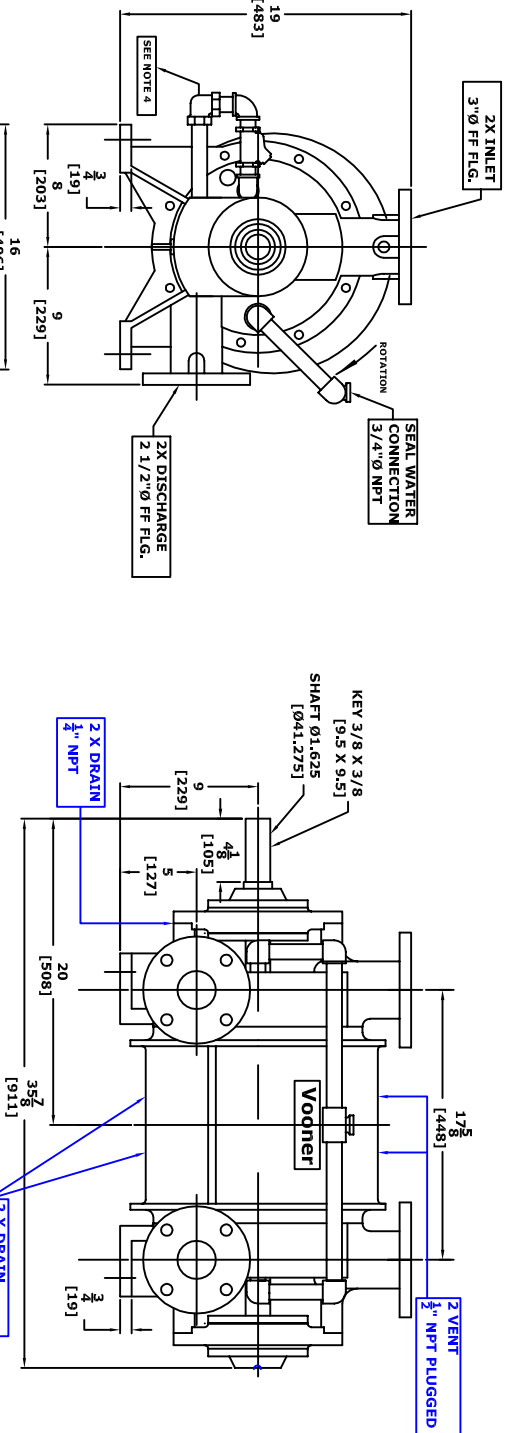
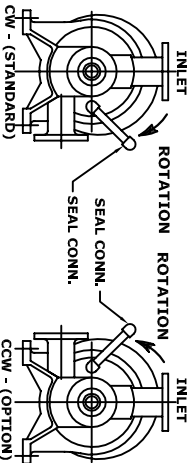
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OUTLINE DRAWING VG4

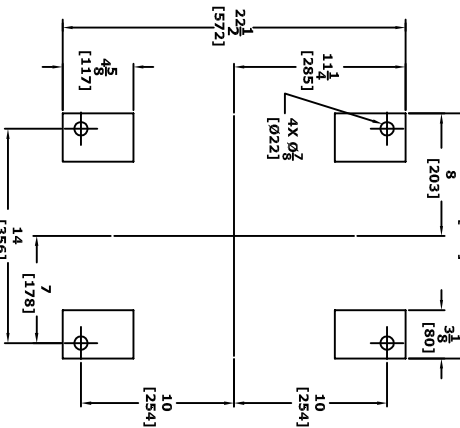
Vooner Flogard
VOONER FLOGARD CORPORATION
CHARLOTTE, NC 28273

- GENERAL NOTES:
- 1) DIMENSIONS ARE IN INCHES. [mm]
 - 2) PRIMERS TO BE AS PER AS 12
 - 3) BOLT PATTERNS AND THICKNESS- BOLT HOLES STRADDLE CENTER LINES
 - 4) SHROUD VENT RIDGING FURNISHED ONLY ON "-M" AND "-H" MODELS.

ASSY POSITIONS (FACING DRIVE END)



PUMP FOOTING



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