Spec Sheet 101-007
Section: **101**
Effective: **March 2017**
Replaces: **NEW**

GNX & GNXH Series
Alignment Free, Heavy Duty Sliding Vane Pumps

Design

Blackmer GNX and GNXH Series models are available in 2-, 2.5-, 3- and 4-inch flanged port sizes with capacities from 20 to 500 U.S. gpm (76 - 1,893 L/min). Industrial features include: nozzles porting in both 90° and 180° orientations, alignment-free no coupling design, and commercial grade gear reducer with many ratios to allow for precise flow selections. Provides extended mechanical seal life with locked rotor between bearing design.

Self-Priming and Dry Run Capability

GNX and GNXH series pumps utilize self-adjusting vane technology to maintain excellent volumetric and mechanical efficiency as well as providing self priming and line stripping capabilities. Zero alignment design makes GNX(H) an Industry first portable solution.

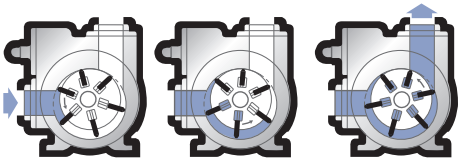
Application

Blackmer GNX and GNXH Series pumps are designed to handle a wide range of non-corrosive, clean industrial liquids and petroleum products. Typical applications include fuel oils, lube oils, jet fuels, gasoline, edible oils and a variety of solvents and thinners such as esters, ketones, naphthas, ethers, amines, aromatics, alcohols, terpenes, glycols and other similar liquids.

Features & Benefits

The market's only alignment free reduced speed positive displacement pump, the GNX and GNXH Series pumps are suited for both portable and stationary applications.

- 2", 2.5", 3" and 4" sizes
- Robust commercial-grade gear reducer with expanded ratio options
- Locked rotor between bearing design extends mechanical seal life
- Compact footprint utilizing close coupled, in-line design
- Alignment free design reduces downtime and simplifies maintenance
- Flexible porting – 90° and 180° options
- Advantages of vane technology:
  - More efficient than competitive technologies
  - Sustained high level performance
  - High suction lift and line stripping capabilities
  - Low maintenance and low life cycle costs



How Blackmer's sliding vane action works

Performance Data[1]

60 Hz Data, 1750 rpm motor speed

Pump Model	GNX2, GNXH2							GNX2.5, GNXH2.5							GNX3, GNXH3	GNX4, GNXH4
Rated Pump Speed (rpm)[2]	814	660	518	467	423	353	323	814	660	518	467	423	353	323	TBA	TBA
U.S. gpm	86	69	54	48	43	36	32	155	125	97	87	78	64	58	TBA	TBA
L/min	325	261	203	182	164	135	123	587	472	366	327	295	242	220	TBA	TBA
hp	3.4	2.8	2.2	2.0	1.8	1.5	1.4	6.1	4.8	3.6	3.2	2.9	2.4	2.1	TBA	TBA

50 Hz Data, 1450 rpm motor speed

Pump Model	GNX2, GNXH2							GNX2.5, GNXH2.5							GNX3, GNXH3	GNX4, GNXH4
Rated Pump Speed (rpm)[2]	674	547	429	387	350	292	268	674	547	429	387	350	292	268	TBA	TBA
U.S. gpm	71	57	44	39	35	29	26	127	102	79	71	63	52	47	TBA	TBA
L/min	267	215	166	149	134	110	100	482	387	299	268	240	197	179	TBA	TBA
hp	2.8	2.3	1.8	1.6	1.5	1.2	1.1	5.0	3.9	3.0	2.6	2.3	1.8	1.6	TBA	TBA

[1] Approximate capacities and horsepower (hp) are based on a 100 ssu (22 cSt) fluid at a 50 psi (3.45 bar) differential pressure. Refer to Characteristic Curves for capacities and horsepower at other pressures and viscosities. Centipoise (cP) = Centistokes (cSt) at fluid specific gravity of 1.0

[2] Rated Pump Speed is shown at the seven catalog gear ratios. Five additional ratio options are available upon request: 6.23, 7.69, 8.5, 10.3, & 13.1

Maximum Operating Limits[6]

Pump Model	Maximum Pump Speed			Minimum Pump Speed			Maximum Differential Pressure	Maximum Working Pressure	Maximum Operating Temperature
	Speed	Flow[3]	Maximum Viscosity[4]	Speed	Flow[2]	Maximum Viscosity[4]			
	rpm	gpm (L/min)	ssu (cSt)[5]	rpm	gpm (L/min)	ssu (cSt)[5]	psi (bar)	psi (bar)	°F (°C)
GNX2, GNXH2	814	86 (325)	100 (22)	68	7 (26)	20,000 (4,250)	125 (8.6)	175 (12.1)	300 (149)
GNX2.5, GNXH2.5	814	155 (587)	100 (22)	68	12 (45)	20,000 (4,250)	125 (8.6)	175 (12.1)	300 (149)
GNX3, GNXH3	TBA	TBA	TBA	TBA	TBA	20,000 (4,250)	125 (8.6)	175 (12.1)	300 (149)
GNX4, GNXH4	TBA	TBA	TBA	TBA	TBA	20,000 (4,250)	125 (8.6)	175 (12.1)	300 (149)

[3] Flow at viscosity of 100 ssu (22 cSt) and 50 psi (3.45 bar) differential pressure

[4] Blackmer GNX and GNXH pump models are also well suited for viscosities less than 31 ssu (1 cSt)

[5] Centipoise (cP) = Centistokes (cSt) at fluid specific gravity of 1.0

[6] Refer to Blackmer Material of Construction Sheet 101-096 to select materials suited for application requirements

Pipe Companion Flanges[7]

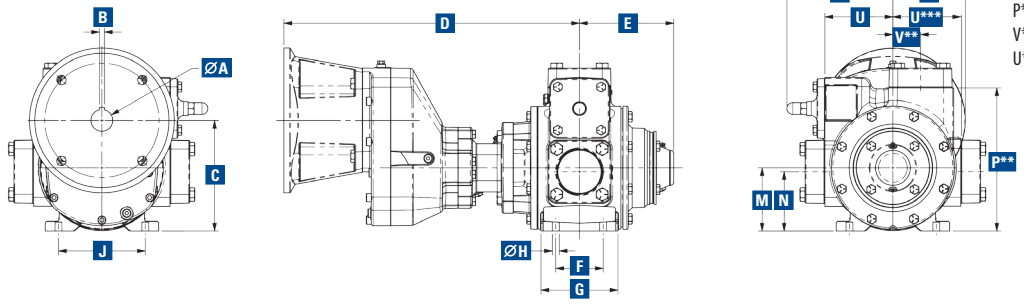
Pump Model	Standard	Optional
GNX2, GNXH2	2" NPT	2" Butt Weld, 2" ANSI Cl 150 RF
GNX2.5, GNXH2.5	2.5" NPT	2.5" Butt Weld, 2.5" ANSI Cl 150 RF
GNX3, GNXH3	3" NPT	3" Butt Weld, 3" ANSI Cl 150 RF
GNX4, GNXH4	4" NPT	4" Butt Weld, 4" ANSI Cl 150 RF

[7] GNX models have side inlet top outlet (90 degree ported)
GNXH models have side inlet side outlet (in-line 180 degree ported)

Dimensions

Pump Model		C	E	F	G	H	J	M	N	P	S	T	U	V	W	X	Max. Weight Pump & Gearbox
GNX(H)2	in.	7	5 1/4	1 5/8	3 1/2	7/16	5	4	3 1/2	8 1/8	5 7/8	4 9/16	4	1 1/2	3/4	1 3/16	118 lbs.
	mm	177.8	133.3	41.3	88.9	11.1	127	101.6	88.9	206.4	149.2	115.9	101.6	38.1	19.1	30.2	54 kg
GNX(H)2.5	in.	7	6	3	4 7/8	7/16	5 1/2	4	3 3/4	9 1/16	6 13/16	4 9/16	4 5/16	1 3/4	1 3/16	1 1/4	143 lbs.
	mm	177.8	152.4	76.2	123.8	11.1	139.7	101.6	95.3	230.2	173	115.9	109.5	44.4	30.2	31.8	65 kg
GNX(H)3	in.	TBA															
	mm																
GNX(H)4	in.	TBA															
	mm																

Motor Size	ØA	B	D GNX(H)2	D GNX(H)2.5
NEMA 140TC	7/8	3/16	16 15/16	N/A
NEMA 180TC	1 1/8	1/4	17 1/4	18
NEMA 210TC	1 3/8	5/16	18	18 3/4
NEMA 250TC	1 5/8	3/8	N/A	18 3/4
IEC 100/112	28mm	8mm	21 5/16	16 13/16



P** dimension applies to GNX models only
V** dimension applies to GNX models only
U*** dimension applies to GNXH models only

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