

Blackmer® Introduces New GNX and GNXH Series Sliding Vane Pumps & New 15 hp Gear Reducer

Grand Rapids, MI, March 17, 2017 – Blackmer®, part of PSG®, a Dover company and a global leader in positive displacement pump, regenerative turbine pump, centrifugal pump, and reciprocating compressor technologies, is pleased to announce the release of its new GNX and GNXH Series Sliding Vane Pumps. Effective immediately, Blackmer is accepting orders on the 2" and 2.5" port sizes. **Larger 3" and 4" sizes will be available in October 2017.**

The GNX and GNXH models offer significant upgrades to the legacy GX Series pumps. The new models retain the compact footprint of the GX Series pumps, but include several improvements:

- Alignment free; no couplings (vs. current motor side coupling)
- Increased 15 hp rating (vs. current 7.5 hp rating)
- 12 speed ratios (vs. current 5 speed ratios)
 - Precise flow selections
- Locked rotor (vs. current floating rotor)
 - Increased seal life
 - Increased rotor/head life
- Synthetic oil as standard (vs. current no oil included)
- Both 180° and 90° porting options (vs. current 90° porting only)
- Optional casing drain (vs. current no casing drain option)
- Optional composite baseplate (vs. current bent metal as only option)



The current GX Series pumps use the HRO-GX gearbox. The new GNX and GNXH Series pumps use a commercial grade gearbox. The new gearboxes are single stage with aluminum housings and NEMA C-face (or IEC D-flange) motor input connections and a proprietary output shaft that accepts Blackmer's keyed pump shaft. This creates an alignment-free pump-build for flow rates ranging from 20 to 500 U.S. gpm (76 - 1,893 L/min).

The alignment-free design is well suited for portable applications. GNX and GNXH Series pumps are self-priming through the life of the pump, thanks to Blackmer's self-adjusting vanes. The GNX and GNXH Series are the only reduced speed alignment-free pumps that can dry run without damage during self-priming and line stripping. Please review the next pages for more information.



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Frequently Asked Questions:

1. ***Will there be training? Distribution Training Available***
2. ***Why is Blackmer upgrading the legacy GX2 and GX2.5?***
 - a. The HRO-GX gearbox is very limited (low power rating, not many ratio options, loses alignment when set-screws slip, does not allow locked rotors, etc). The HRO-GX gearbox is the weakest part of the pump unit (refer to Figure 1 on Page 4). The new GNX(H) Series upgrades this gearbox significantly, and also enhances the pump features with locked rotor and added options for casing drain and 180-deg porting. The new gearbox is truly an industrial grade product.
3. ***Can I purchase GX2 and GX2.5 pumps after April 14, 2017?***
 - a. No. Spare parts for GX2 and GX2.5 pumps remain available for a period of 5 years, including the splined rotor/shaft assembly. All other maintenance parts remain identical for GNX (vaness, bearings, seals, orings, etc), so these items will also be available. Nether HRO-GX gearbox parts nor HRO-GX gearbox assemblies will be available, as neither is considered a wearable part.
4. ***The GX2.5 is very limited by the 7.5 hp rated HRO gearbox. What about the GNX2.5?***
 - a. This is going to be a huge gain, as the GNX2.5 will have a 15 hp rated gearbox suited for the full operating range of the X2.5. Refer to Figure 1 on Page 4 for clarification.
5. ***What is the first shipment date?***
 - a. The first shipments will be week of April 10, 2017. Time between now and then is considered the preorder period.
6. ***What about Spare Parts?***
 - a. All wearable parts remain identical to current GX models.
7. ***I have a fleet of GX2 and GX2.5 pumps. What is required for future retrofit?***
 - a. GX to GNX conversion includes: new rotor/shaft assembly, new adapter piece, and new gearbox. Existing motors also require a C-face/D-flange conversion kit from the motor manufacturer.
8. ***Can I retrofit an existing X2 or X2.5 into a GNX2 or GNX2.5?***
 - a. X to GNX conversion includes: new inboard head, new adapter piece, and new gearbox. Existing motors also require a C-face/D-flange conversion kit from the motor manufacturer.
9. ***Is the GNX2 and GNX2.5 a drop in replacement for my GX2 and GX2.5?***
 - a. Yes/No. The piping and pump anchor bolts are unchanged (no piping modifications). However the motors are now C-face and will require revised conduit to terminal box, since the motors are higher than the pump.
10. ***What are the dimensional differences between GX and GNX models?***
 - a. There are minimal length/height increases and width decreases. Please refer to Pages 5-6 of this document for detailed side-by-side comparisons.
11. ***Are the GX3 and GX4 sizes affected?***
 - a. Not yet, because the larger 50 hp rated gearbox is not yet available. We currently plan to release the 3" and 4" sizes October 2017.
12. ***What is the GNX price impact?***
 - a. The GNX pump price remains identical to current GX model pumps.
 - b. The 15 hp GNX gearbox price remains identical to current HRO-GX gearboxes.
 - c. The GNX bent steel baseplate have welded pads supporting the motors, so pricing has increased for Blackmer supplied baseplates.
13. ***Does this affect the standalone HROF gearbox?***
 - a. No, the footed shaft in shaft out HROF gearboxes remain unchanged.



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14. What are the top selling features of the new GNX(H) pumps?

- a. New alignment-free design increases portability, uptime, and equipment reliability.
- b. Locked-rotor design improves mechanical seal life, rotor life, and head life.
- c. Increased gearbox torque rating yields 4x-6x rating of current HRO-GX gearboxes.
- d. Increased gearbox ratio options allow to peg a more narrow range of flow rates.
- e. Increased gearbox maximum speed (2.15 ratio) gearbox yields 5% additional flow rate.

15. What is the new baseplate option?

- a. As pictured in Figure 2 on the next page, Blackmer is now offering a composite baseplate manufactured by BaseTek. This baseplate offers several advantages, including corrosion resistance, pregrouted build, flatness of 0.002" per foot, and 24 times increased vibration damping of steel.

16. What does the GNX and GNXH nomenclature mean?

- a. G: integral gear reducer
- b. N: commercial grade Nord gear reducer
- c. X: external bearing
- d. H: horizontal 180° porting

17. What about ATEX?

- a. ATEX-rated gearboxes are available upon request at no additional cost. Please consult factory for ordering.

18. What is this new gearbox?

- a. Like the HRO-GX gearbox: it is single stage and attached to (supported by) the pump.
- b. Unlike the HRO-GX gearbox: it is rated for nominal 15 hp, has 12 speed options, comes with synthetic oil as a standard, is commercial grade industrial duty, uses C-face/D-flange motors (alignment free build), and is made from a durable aluminum alloy.
- c. It is made by Nord Gear Corporation, a globally reputable gear reducer manufacturer.

19. Can I purchase this gearbox directly from Nord?

- a. No, the GNX(H) gearboxes use a proprietary interface to Blackmer's GNX(H) pump models. The gearboxes will have a Blackmer nameplate, logo, and contact phone number.

20. Will the aluminum gearbox housings be painted?

- a. The gearboxes will be painted Blackmer blue, matching the pump color.

21. What is the warranty on the new gearbox?

- a. Blackmer will be managing all warranty claims. Blackmer's standard warranty applies.

22. Are the pump speeds similar to current GX models?

- a. Yes, and we are expanding options. The GNX(H) models have ratios very similar to the existing 5-speed options offered for HRO-GX. Additional intermediate and lower speed options are now also available.

23. Will this new gearbox be offered for stainless steel and lined models?

- a. Hopefully. This concept can be expanded to the XL, XLW, LGL, CRL, SGL, and SX model pumps, beginning 2018 at earliest.

The subsequent pages include figures and diagrams for clarification. If you have additional questions, please contact your Regional Manager. Blackmer is a product brand within PSG®, a Dover Company.



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Figure 1 - Current HRO Gearbox Limits GX2.5 to 50 psi... GNX2.5 has full range

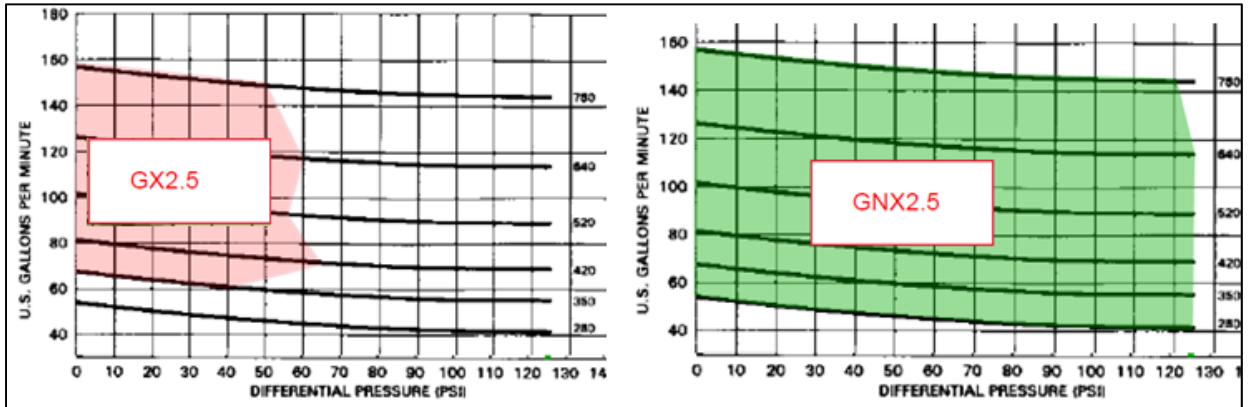


Figure 2 - GNX2-140TC with BaseTek Composite Baseplate



Figure 3 - View of Gearbox-to-Pump interface, including adapter piece (view looking at gearbox)



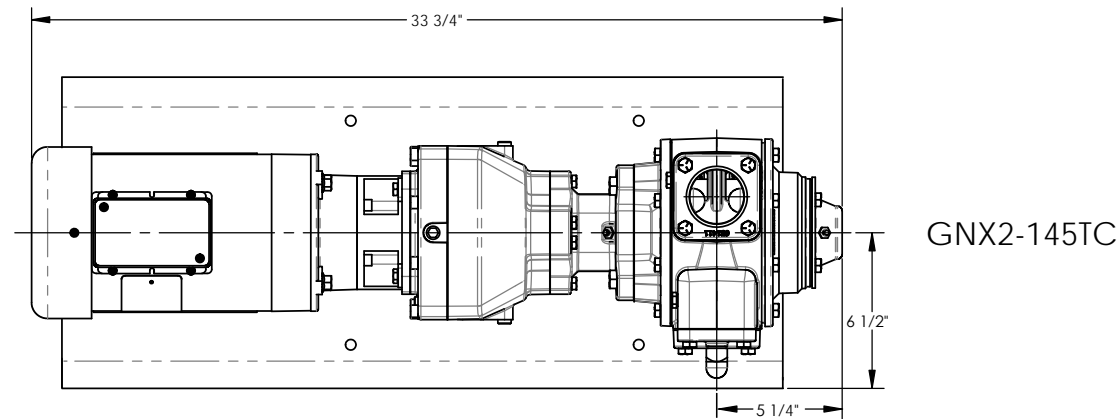


GNX & GNXH Series - Alignment Free Heavy Duty Sliding Vane Pumps for Industrial Applications

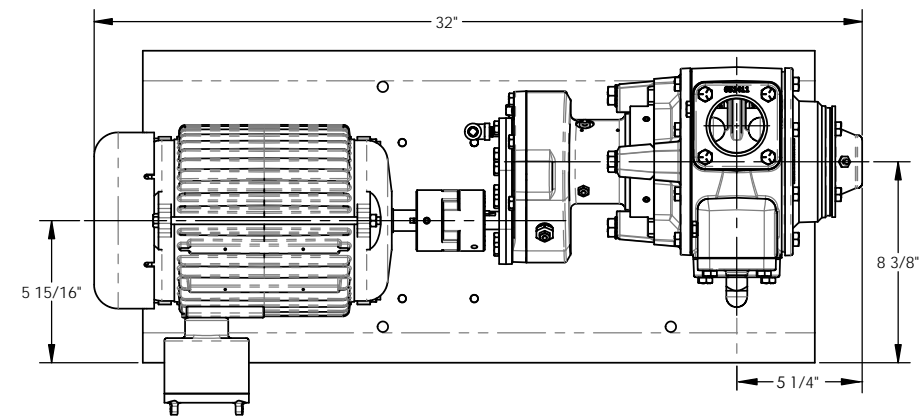
Side by Side Comparison: GX2 vs. GNX2

- NEMA 145T(C) HAS LARGEST IMPACT OF ALL MOTOR FRAME SIZES, THEREFORE THESE GRAPHICS SHOW LARGEST DIFFERENCE BETWEEN GX2 & GNX2.
- PIPING CONNECTIONS REMAIN IDENTICAL.
- COMPARISON FOR 2" PUMP UNIT FOOTPRINT:

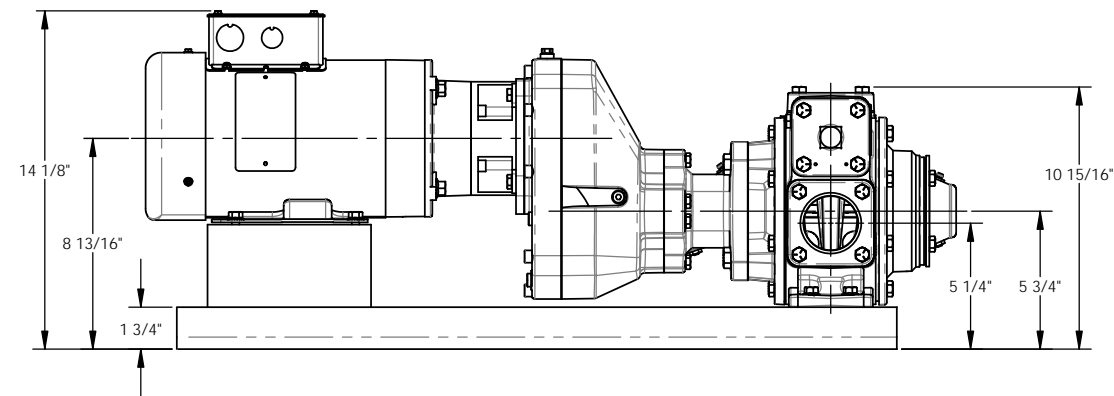
- *LENGTH: 1 3/4" (44.5mm) INCREASE
- *WIDTH: 7/8" (22.2mm) DECREASE
- *HEIGHT: 4 15/16" (125mm) INCREASE



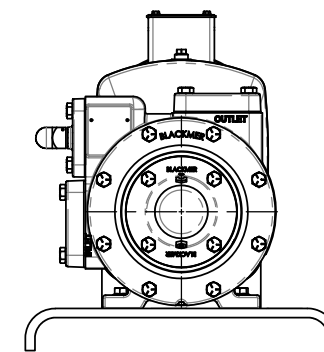
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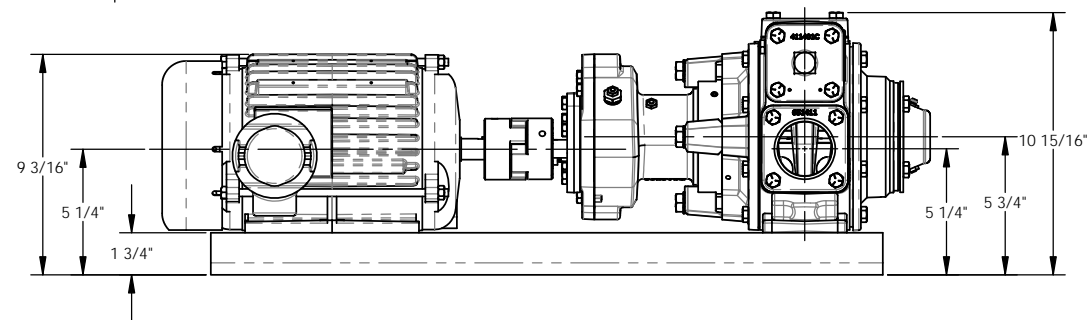
GX2-145T



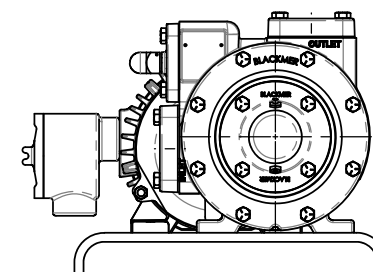
GNX2-145TC



GNX2-145TC



GX2-145T



GX2-145T

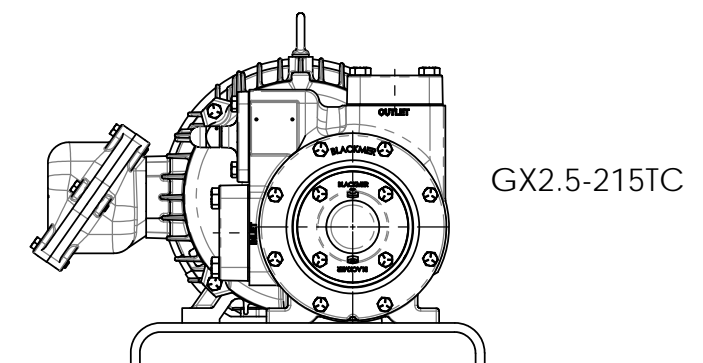
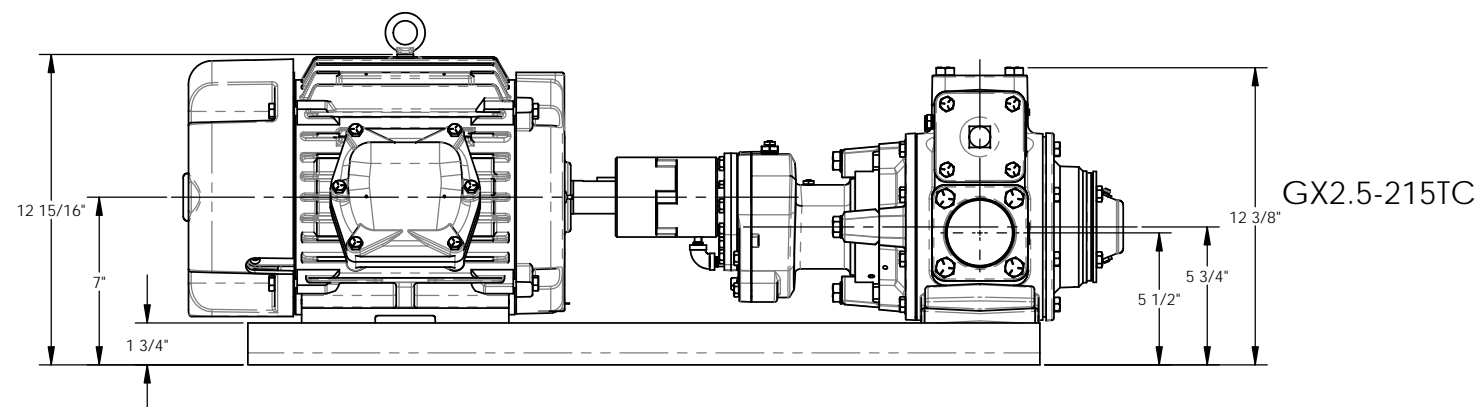
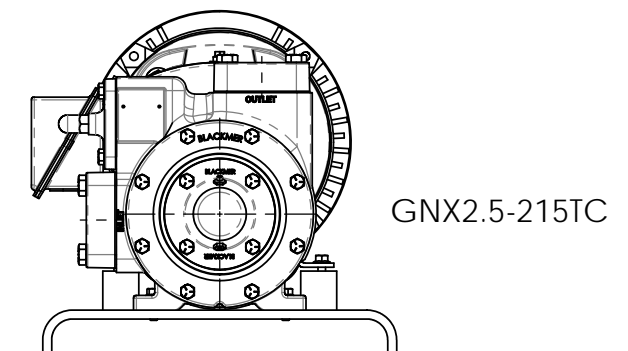
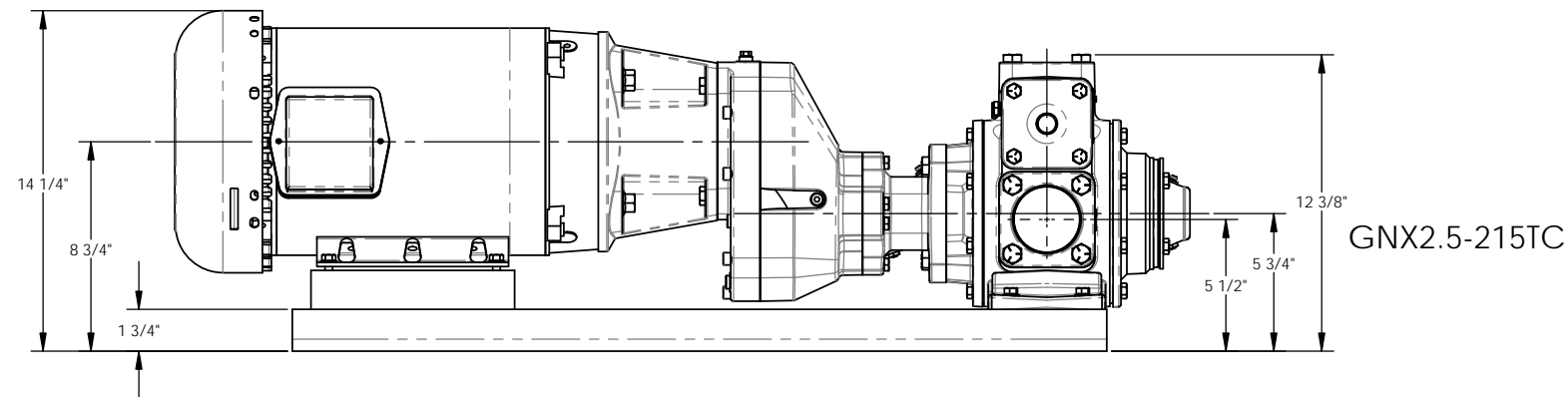
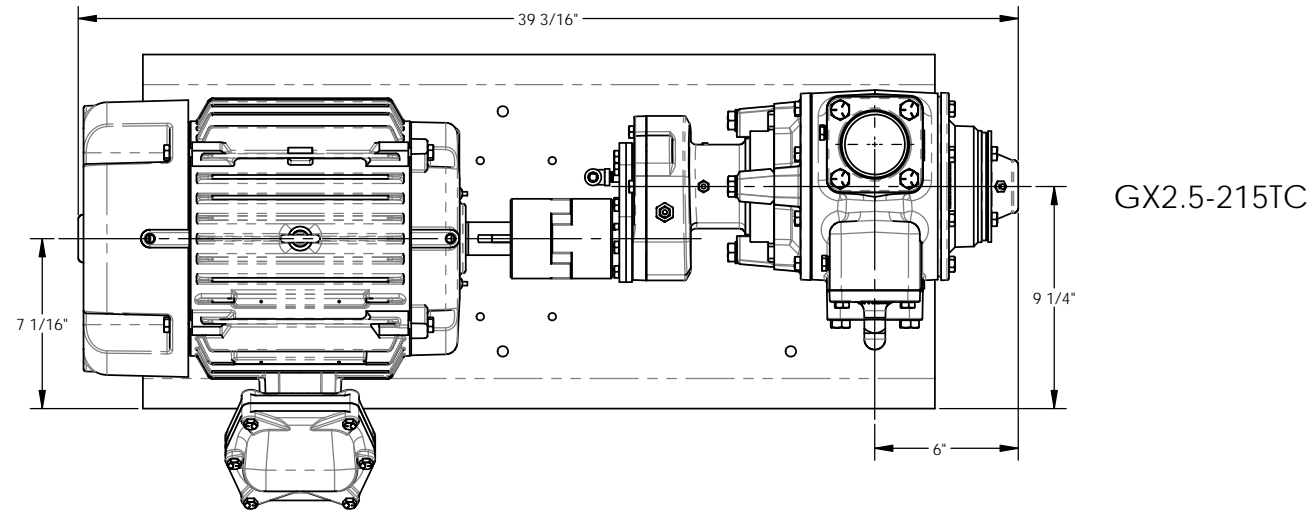
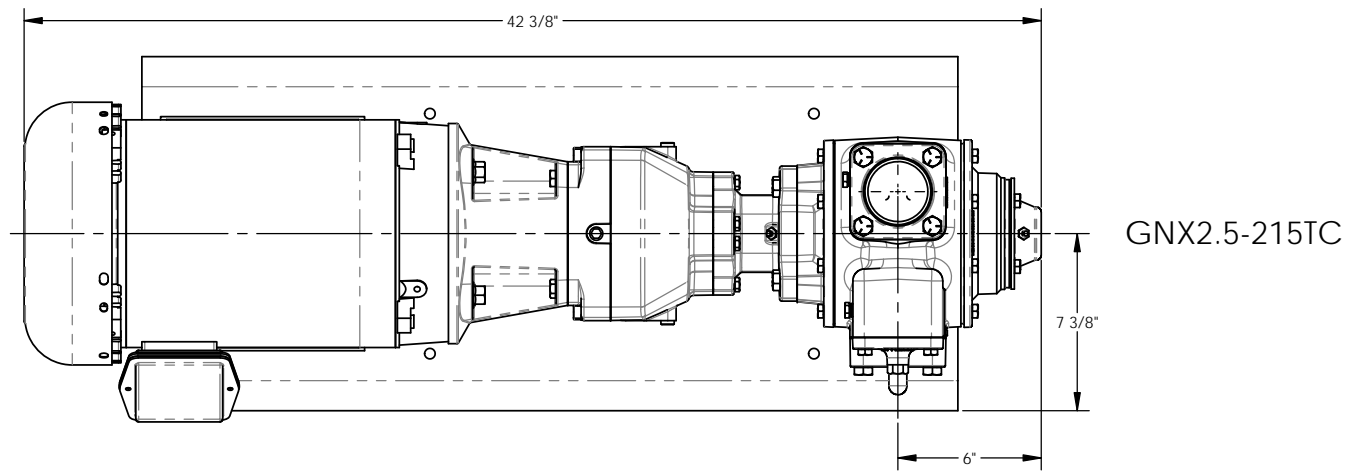
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GNX & GNXH Series - Alignment Free Heavy Duty Sliding Vane Pumps for Industrial Applications

Side by Side Comparison: GX2.5 vs. GNX2.5

- NEMA 215T(C) HAS LARGEST IMPACT OF ALL MOTOR FRAME SIZES, THEREFORE THESE GRAPHICS SHOW LARGEST DIFFERENCE BETWEEN GX2.5& GNX2.5.
- PIPING CONNECTIONS REMAIN IDENTICAL.
- COMPARISON FOR 2.5" PUMP UNIT FOOTPRINT:

*LENGTH: 3 3/16" (81mm) INCREASE
 *WIDTH: 1 3/4" (44mm) DECREASE
 *HEIGHT: 1 5/16" (33mm) INCREASE



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GNX & GNXH Series



Gearbox Selection Data: HRO-GX vs. SK771.1Z

New GNX gearboxes have 4x-6x rating of HRO-GX gearboxes
New maximum speed 2.15 ratio offers 5% additional flow capacity
New ratios double the speed options

Gearbox	Reduction Ratio	60 Hz Motors						50 Hz Motors			
		Approx. Pump RPM	1,750 RPM Motor Speed			Pump Load HP (2") @ 125 psi	Pump Load HP (2.5") @ 125 psi	Approx. Pump RPM	1,450 RPM Motor Speed		
			H.P. Rating ¹						3 Hr Duty	3-8 Hr Duty	8-24 Hr Duty
HRO-GX GX2 & GX2.5	2.24	780	8.4	7.5	5.9	8.3	15.4	650	7.7	6.2	5.0
	2.72	640	7.0	6.4	5.1	6.8	12.9	520	6.6	5.3	4.2
	3.32	520	6.2	5.1	4.1	5.6	10.8	420	5.3	4.2	3.4
	4.10	420	4.9	3.9	3.2	4.8	9.2	350	4.1	3.2	2.6
	4.94	350	3.7	3.0	2.3	3.9	7.5	280	3.1	2.4	2.0
SK771.1Z ² GNX(H)2 & GNX(H)2.5	2.15	815	33	28	22	8.6	15.8	675	27	23	18
	2.65	660	30	27	23	7.0	13.2	545	25	22	19
	3.38	520	24	22	20	5.5	10.6	430	20	18	17
	3.75	465	22	21	19	5.0	9.6	385	19	17	15
	4.41	395	23	19	15	4.6	8.8	330	19	16	12
	4.96	355	21	16	11	3.9	7.5	290	17	13	9
	5.41	325	11	8	6	3.5	6.3	270	9	7	5
	6.23	280	16	12	7	3.0	5.5	235	13	10	6
	7.69	230	14	10	5	2.4	4.4	190	12	8	4
	8.50	205	9	7	4	2.2	3.9	170	7	5	3
	10.3	170	6	4	3	1.8	3.2	140	5	3	2
13.1	135	7	4	1.5	1.4	2.5	110	6	4	1	

- 1 Ratings are based on 90°F (32°C) ambient air temperature; 200°F (93°C) max oil temperature using 100% synthetic oil.
- 2 SK771.1Z ratios 2.15 to 5.41 are catalog options. Consult Factory for ratios 6.23 to 13.1.
- 3 Pump load column is at 125 psi. Service Factors are as follows:
 - * New GNX gearboxes provide exceptional Service Factors of 3.6 (GNX2) and 1.8 (GNX2.5) on average
 - * Old HRO-GX gearboxes provided poor Service Factors of 0.85 (GNX2) and 0.35 (GNX2.5) on average

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