





Limited Warranty

Superior Gearbox Company warrants its products to be free from defects in materials and workmanship for one year from date of shipment, or in-service date. The start of the in-service date cannot exceed ship date by more than one year. It is the responsibility of the customer to provide proof of in-service date. Superior Gearbox Company will repair or replace, at its option, any item found to be defective upon inspection at our factory. Warranty claims must be made in writing to Superior Gearbox Company, and authorization for return of defective items must be obtained prior to shipment. All shipments must be prepaid. Superior's responsibility under this warranty shall be limited to the repair or replacement of our product. The manufacturer disclaims any liability of consequential or special damages or economic loss resulting from the failure of the product.

Warranted Product Limited Warranty

In the event that a product is repaired or replaced under the warranty policy, that unit's warranty will extend to the original warranty date or sixty days from the date of shipment from Superior Gearbox Company, whichever is longer.

Contact the sales department to get a return authorization number. This number needs to be on the outside of the returned package. The gearbox warranty will be void if the gearbox has been opened. Items returned for restock will have a 15% restock fee issued once they are determined to be in new condition.



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(Revised September, 2018)



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Superior Gear Drives

Superior gear drives are engineered to meet even your most stringent requirements. If you need large capacity and high thermal capacity in a small package, our Split CaseTM aluminum gear drives are the perfect solution. Conversely, our economical iron gear drives are best suited for high capacity when your application is price sensitive and package size is less of an issue. Whatever your application, you will always find value in Superior gear drives

Revision: July 2018



About Our Company

Over Four Decades of Quality Manufacturing



Superior Products

Superior Gearbox Company has been manufacturing high quality gear drives for power transmission systems since 1975. Our gear drives include spur, helical, bevel, worm gear and spindle for various types of on and off-road applications. Superior can also custom design gear drives to meet even the most unique situations...taking products from prototype to final testing.

Superior Advantage

Our methods of manufacturing, utilizing the most up-to-date engineering software in the gear drive industry, enables Superior to produce consistent, yet economical products that deliver excellent service during years of use.

Superior Service

With Superior Gearbox Company you can count on attention to detail, customer intensive service and quality control; strengths that have grown our company over the many years we have been in business. Every product leaving our factory has experienced a barrage of inspection and testing procedures that ensure a Superior Gearbox every time.



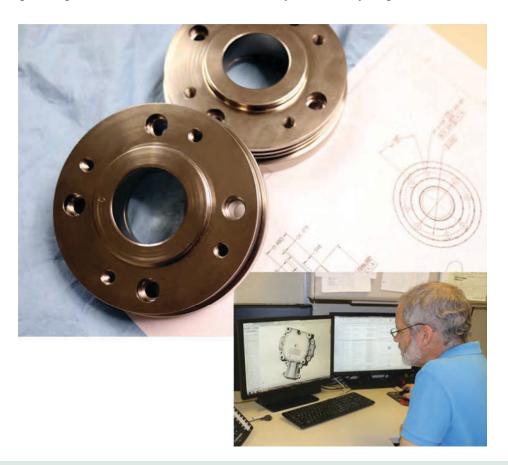
Research & Development

A Visionary Commitment

After almost fifty years of manufacturing gear related products for a complex array of applications, Superior Gearbox Company's engineers have carefully refined our processes to ensure quality and durability are never sacrificed

We enable this mission via an on-site, stand-alone Research and Development facility that allows our team to thoroughly test and review existing product updates, custom projects and new product development in a virtual application environment. Through this often painstaking process we are able to ferret out any irregularities that could potentially hamper the performance of our gear drives, as well as providing a platform for innovative ideas and concepts.

In an ever changing world that spawns many new products every year, Superior strives to stay on the cutting edge in supplying gear drives with optimal performance to meet a wide variety of industry requirements.





Custom Gear Drives

Superior Teamwork

Through our experience, we have developed six distinct core capabilities:

- Customer Service
- Engineering and Design
- Sourcing
- Shaft Turning
- Casting Machining
- Assembly and Testing

This gives us the versatility and flexibility to modify standard products or custom design products to meet your specific requirements. Our knowledgeable sales and engineering departments work closely with you to custom design new units for your individual applications.

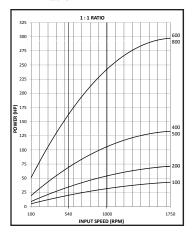
And, we're ready to assume as many responsibilities as necessary to ensure you have the product you need when you need it. From concept to production, you can count on Superior teamwork to find the best solution for your application.



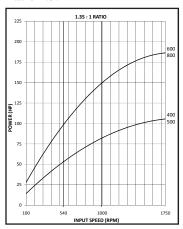


Bevel Quick Selection Guide

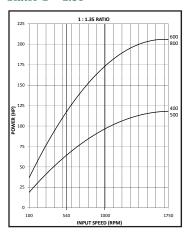
1 – 1 Ratio



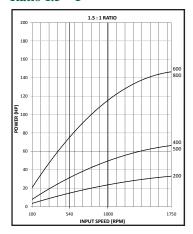
Ratio 1.35 - 1



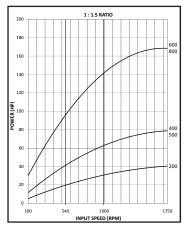
Ratio 1 – 1.35



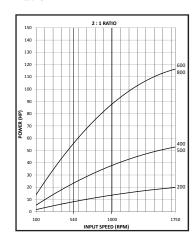
Ratio 1.5 – 1



Ratio 1 – 1.5



Ratio 2 – 1





Applications include turf equipment, mowers, sprayers, grain augers and separators, road and highway equipment.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in three ratios: 1:1, 1.1:1 and 1.43:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1" shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 100 Series weighs 7/10 lbs. including 6 oz of lubricant

Ra	ating Char	t							
					Inpu	ut RPM			
	Ratio ¹	Gear Design		100	540	1000	1750	2500	3000
	1:1	21, 21	Input HP	4.65	20.28	31.27	42.98	50.56	54.28
Miter		Forged Straight Bevel	Output Torque*	2931	2367	1971	1548	1275	1140
≅			Input kW	3.47	15.12	23.32	32.05	37.70	40.48
			Output Torque**	331	267	223	175	144	129
	1.1:1	30, 33	Input HP	3.46	15.24	23.64	32.71	38.64	41.57
		Forged Straight Bevel	Output Torque*	2399	1957	1639	1296	1072	961
S			Input kW	2.58	11.36	17.63	24.39	28.81	31.00
cer			Output Torque**	271	221	185	146	121	109
Reducers	1.43:1	21, 30	Input HP	2.25	10.21	16.21	23.02	27.67	30.02
~		Forged Straight Bevel	Output Torque*	2028	1704	1461	1186	998	902
			Input kW	1.68	7.61	12.09	17.17	20.63	22.39
			Output Torque**	229	193	165	134	113	102
	1:1.1	33, 30	Input HP	3.80	16.39	25.12	34.30	40.18	43.05
		Forged Straight Bevel	Output Torque*	2177	1739	1439	1123	921	822
			Input kW	2.83	12.22	18.73	25.58	29.96	32.10
			Output Torque**	246	196	163	127	104	93
S	1:1.43	30, 21	Input HP	3.15	13.46	20.45	27.67	32.22	34.42
ase		Forged Straight Bevel	Output Torque*	1388	1099	901	697	568	506
Increasers			Input kW	2.35	10.04	15.25	20.63	24.03	25.67
<u>n</u>			Output Torque**	157	124	102	79	64	57

All ratings specified with the #1 shaft as the input

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

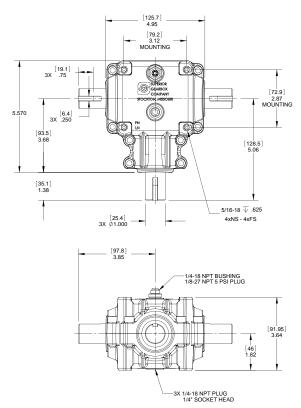
^{*}Torque measured in inch-lbs **Torque measured in N-m

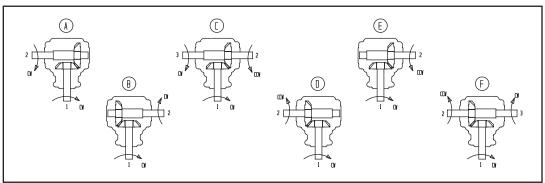


Service Fact	tors											
Character		Character of Power Source Shock Load										
of Shock		Electric	Motor		Mu	Multi-Cylinder Engine			Single-Cylinder Engine			
Driven	Uniform				Light Shock				Medium Shock			
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50	1.75	2.00	1.50	1.75	2.00	2.25	1.50	1.75	2.25	2.50

^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

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Applications include mowers, sprayers, grain augers, elevators, grain dryers and separators, small rototillers, road and highway equipment.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in three ratios: 1:1, 1.5:1 and 2:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1" shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 200 Series weighs 12/15 lbs. including 14 oz of lubricant

Ra	ating Char	t					
				In	put RPM		
	Ratio ¹	Gear Design		100	540	1000	1750
	1:1	19, 19	Input HP	8.43	35.46	53.23	71.42
		Forged Straight Bevel	Output Torque*	5313	4139	3355	2572
			Input kW	6.29	26.44	39.69	53.26
Miters			Output Torque**	600	468	379	291
Mit	1:1	21, 21	Input HP	5.38	22.86	34.63	46.73
		Cut Spiral Bevel	Output Torque*	3391	2668	2183	1683
			Input kW	4.01	17.05	25.82	34.85
			Output Torque**	383	301	247	190
	1.5:1	16, 24	Input HP	3.27	14.78	23.37	33.03
		Forged Straight Bevel	Output Torque*	3091	2588	2209	1784
S			Input kW	2.44	11.02	17.43	24.63
Reducers			Output Torque**	349	292	250	202
edt	2:1	16, 32	Input HP	1.76	8.30	13.54	19.84
~		Forged Straight Bevel	Output Torque*	2218	1937	1707	1429
			Input kW	1.31	6.19	10.10	14.79
			Output Torque**	251	219	193	161
S	1:1.5	24, 16	Input HP	4.80	20.14	30.25	40.46
Increasers		Forged Straight Bevel	Output Torque*	2017	1567	1271	971
rea			Input kW	3.58	15.02	22.56	30.17
ınc			Output Torque**	228	177	144	110

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

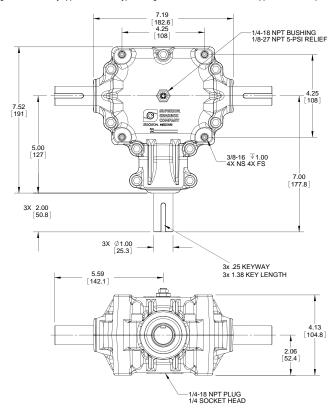
¹ All ratings specified with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m

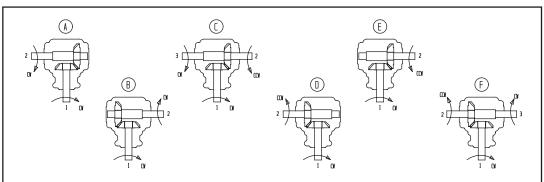


Service Fact	tors											
Character		Character of Power Source Shock Load										
of Shock Driven		Electric Unif c			Mu	lti-Cylin Light	Ŭ	ine	Single-Cylinder Engine Medium Shock			
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50	1.75	2.00	1.50	1.75	2.00	2.25	1.50	1.75	2.25	2.50

^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

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Applications include grain carts, mowers, combines, grain augers, potato harvesters, agricultural sprayers, irrigation pumps and conveyers.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in four ratios: 1:1, 1.35:1, 1.5:1 and 2:1
- Spiral bevel available in 1:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1.250" shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 400 Series weighs 25/30 lbs. including 28 oz of lubricant

Ra	iting Char	t				
				Input RPM	l	
	Ratio ¹	Gear Design		100	540	1000
	1:1	21, 21	Input HP	18.18	71.70	103.57
		Forged Straight Bevel	Output Torque*	11458	8368	6527
			Input kW	13.56	53.47	77.23
Miter			Output Torque**	1295	945	737
Ē	1:1	21, 21	Input HP	5.38	22.86	34.63
		Cut Spiral Bevel	Output Torque*	3391	2668	2183
			Input kW	4.01	17.05	25.82
			Output Torque**	383	301	247
	1.35:1	20, 27	Input HP	13.51	54.88	80.73
		Forged Straight Bevel	Output Torque*	11495	8647	6869
			Input kW	10.07	40.92	60.20
			Output Torque**	1299	977	776
ည	1.5:1	20, 30	Input HP	7.47	32.07	48.90
<u>Sel</u>		Forged Straight Bevel	Output Torque*	7062	5614	4623
Reducers			Input kW	5.57	23.91	36.47
œ			Output Torque**	798	634	522
	2:1	17, 34	Input HP	5.25	23.71	37.47
		Forged Straight Bevel	Output Torque*	6618	5535	4723
			Input kW	3.91	17.68	27.94
			Output Torque**	748	625	534
	1:1.35	27, 20	Input HP	17.77	67.02	94.25
		Forged Straight Bevel	Output Torque*	8296	5794	4400
ည			Input kW	13.25	49.98	70.28
Increasers			Output Torque**	937	655	497
cre	1:1.5	30, 20	Input HP	10.89	42.72	61.53
드		Forged Straight Bevel	Output Torque*	4576	3324	2585
			Input kW	8.12	31.86	45.88
			Output Torque**	517	376	292

¹ All ratings specilled with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m See information under Service Factors

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

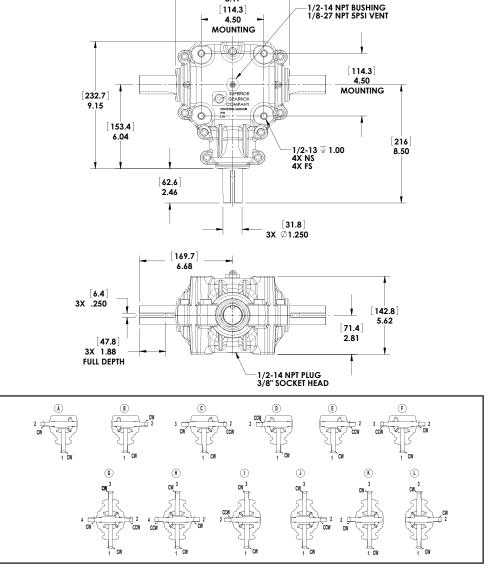


Service Fact	Service Factors											
Character		Character of Power Source Shock Load										
of Shock Driven	Electric Motor Multi-Cylin Uniform Light					lti-Cylin Light	·	ine	Single-Cylinder Engine Medium Shock			· ·
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50	1.75	2.00	1.50	1.75	2.00	2.25	1.50	1.75	2.25	2.50

^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

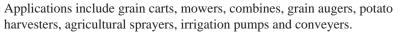
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Contact Superior Gearbox for your special requirements.





Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in four ratios: 1:1, 1.35:1, 1.5:1 and 2:1
- Spiral bevel available in 1:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1.375" shaft made of high strength steel is standard; 1.50" shaft available on limited options
- Serviced with 80W9 ge ar lubricant, run and leak tested before shipment
- The 500 Series weighs 25/30 lbs. including 28 oz of lubricant

Ra	ating Cha	rt				
				Input RPM	1	
	Ratio ¹	Gear Design		100	540	1000
	1:1	21, 21	Input HP	18.18	71.70	103.57
		Forged Straight Bevel	Output Torque*	11458	8368	6527
			Input kW	13.56	53.47	77.23
			Output Torque**	1295	945	737
	1:1	21, 21	Input HP	5.38	22.86	34.63
		Cut Spiral Bevel	Output Torque*	3391	2668	2183
Miter			Input kW	4.01	17.05	25.82
Σ			Output Torque**	383	301	247
	1.35:1	20, 27	Input HP	13.51	54.88	80.73
		Forged Straight Bevel	Output Torque*	11495	8647	6869
			Input kW	10.07	40.92	60.20
			Output Torque**	1299	977	776
	1.5:1	20, 30	Input HP	7.47	32.07	48.90
		Forged Straight Bevel	Output Torque*	7062	5614	4623
			Input kW	5.57	23.91	36.47
			Output Torque**	798	634	522
LS	2:1	17, 34	Input HP	5.25	23.71	37.47
Reducers		Forged Straight Bevel	Output Torque*	6618	5535	4723
edi			Input kW	3.91	17.68	27.94
<u>~</u>			Output Torque**	748	625	534
	1:1.35	27, 20	Input HP	17.77	67.02	94.25
		Forged Straight Bevel	Output Torque*	8296	5794	4400
			Input kW	13.25	49.98	70.28
			Output Torque**	937	655	497
LS	1:1.5	30, 20	Input HP	10.89	42.72	61.53
ase		Forged Straight Bevel	Output Torque*	4576	3324	2585
Increasers			Input kW	8.12	31.86	45.88
_T			Output Torque**	517	376	292

All ratings specified with the #1 shaft as the input See information under Service Factors *Torque measured in inch-lbs **Torque measured in N-m

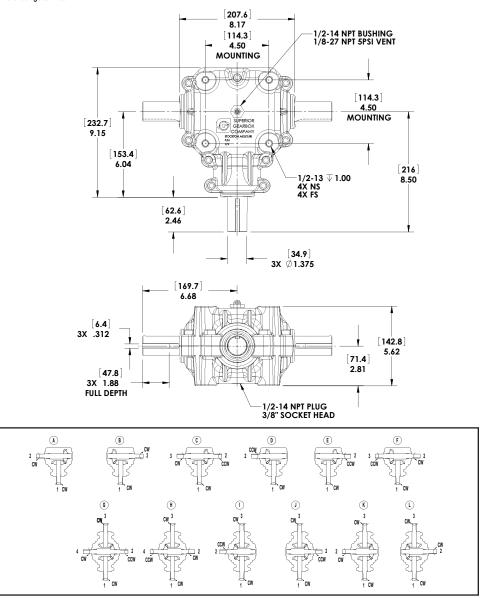
LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.



Character		Character of Power Source Shock Load										
of Shock Driven		Electric Motor Uniform			Multi-Cylinder Engine Light Shock				Single-Cylinder Engine Medium Shock			
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50	1.75	2.00	1.50	1.75	2.00	2.25	1.50	1.75	2.25	2.50

^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

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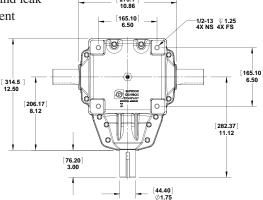
Contact Superior Gearbox for your special requirements.

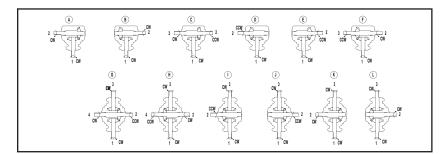


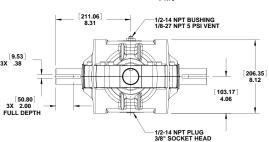
Applications include manure and water pumps, beet defoliators, grain carts, potato diggers, flail choppers, silo unloaders, conveyors, road and highway equipment.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in six ratios: 1:1, 1.18:1, 1.35:1, 1.5:1, 1.86:1 and 2:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1.75" shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 600 Series weighs 60/70 lbs. including 85 oz of lubricant







Service Fact	Service Factors											
Character				Chai	acter of	Power	Source	Shock L	oad			
of Shock	Electric Motor				Multi-Cylinder Engine			Si	ngle-Cy	linder E	ngine	
Driven		Unifo	rm			Light	Shock		Medium Shock			
Machine	Duration of Service (Hours per Day)											
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50	1.75	2.00	1.50	1.75	2.00	2.25	1.50	1.75	2.25	2.50

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Ra	iting Chart	t				
				Input RPM	l	
	Ratio ¹	Gear Design		100	540	1000
	1:1	22, 22	Input HP	47.56	171.29	235.29
		Forged Straight Bevel	Output Torque*	29975	19992	14829
er			Input kW	35.47	127.73	175.46
Miter			Output Torque**	3387	2259	1675
	1.18:1	28, 33	Input HP	36.62	133.71	184.98
		Forged Straight Bevel	Output Torque*	27201	18392	13740
			Input kW	27.31	99.71	137.94
			Output Torque**	3073	2078	1552
	1.35:1	20, 27	Input HP	26.27	102.47	146.32
		Forged Straight Bevel	Output Torque*	22352	16145	12449
			Input kW	19.59	76.41	109.11
			Output Torque**	2525	1824	1407
	1.5:1	20, 30	Input HP	19.51	77.85	113.27
		Forged Straight Bevel	Output Torque*	18444	13629	10708
			Input kW	14.55	58.05	84.47
			Output Torque**	2084	1540	1210
	1.86:1	14, 26	Input HP	20.45	82.74	121.42
		Forged Straight Bevel	Output Torque*	23936	17934	14212
			Input kW	15.25	61.70	90.54
			Output Torque**	2704	2026	1606
S	2:1	18, 36	Input HP	13.41	57.02	86.73
Icel		Forged Straight Bevel	Output Torque*	16903	13310	10932
Reducers			Input kW	10.00	42.52	64.68
~			Output Torque**	1910	1504	1235
	1:1.18	33, 28	Input HP	42.26	147.16	198.34
		Forged Straight Bevel	Output Torque*	22599	14573	10606
			Input kW	31.51	109.74	147.90
			Output Torque**	2553	1646	1198
	1:1.35	27, 20	Input HP	34.40	123.09	168.50
		Forged Straight Bevel	Output Torque*	16060	10642	7866
			Input kW	25.65	91.79	125.65
			Output Torque**	1814	1202	889
	1:1.5	30, 20	Input HP	28.13	100.66	137.80
		Forged Straight Bevel	Output Torque*	11819	7832	5790
			Input kW	20.98	75.06	102.76
			Output Torque**	1335	885	654
ers	1:1.86	26, 14	Input HP	35.65	121.61	162.59
sas		Forged Straight Bevel	Output Torque*	12098	7643	5518
Increasers			Input kW	26.58	90.69	121.25
=			Output Torque**	1367	863	623

¹ All ratings specified with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.



Applications include large rototillers, silage compactors, heavy-duty industrial equipment, material handling.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in a 2.92:1 ratio
- Tapered roller bearings provide increased load capacity and bearing life
- 1.75" input shaft and 2.75" output shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 700 Series weighs approximately 120 lbs. including 125 oz

Ra	Rating Chart											
				Input RPM								
	Ratio ¹	Gear Design		100	540	1000						
	2.92:1	12, 35	Input HP	28.86	119.25	177.41						
Reducers		Forged Straight Bevel	Output Torque*	53051	40594	32612						
ᇐ			Input kW	21.52	88.93	132.30						
Re			Output Torque**	5994	4586	3685						

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

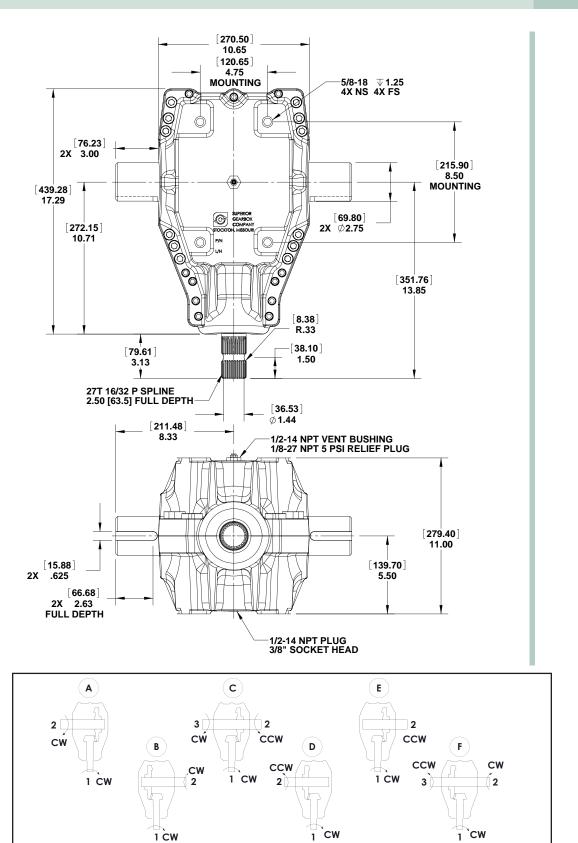
Service Fact	ors											
Character		Character of Power Source Shock Load										
of Shock		Electric Motor Multi-Cylinder Engine Single-Cylinder Engine										
Driven		Uniform Light Shock Medium Shock										
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75	1.25	1.50	1.75	2.00
Heavy	1.25	1.50									2.50	

^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

¹ All ratings specified with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m





Contact Superior Gearbox for your special requirements.



700 Series Iron

Applications include large rototillers, silage compactors, heavy-duty industrial equipment, material handling.



- One-piece iron housing for high capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in a 2.92:1 ratio
- Tapered roller bearings provide increased load capacity and bearing life
- 1.75" input shaft and 2.75" output shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 700 Series Iron weighs approximately 190 lbs. including 175 oz of lubricant

Ra	ating Char	t				
				Input RPM	1	
	Ratio ¹	Gear Design		100	540	1000
	2.92:1	12, 35	Input HP	28.86	119.25	177.41
Reducers		Forged Straight Bevel	Output Torque*	53051	40594	32612
퓽			Input kW	21.52	88.93	132.30
Re			Output Torque**	5994	4586	3685

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

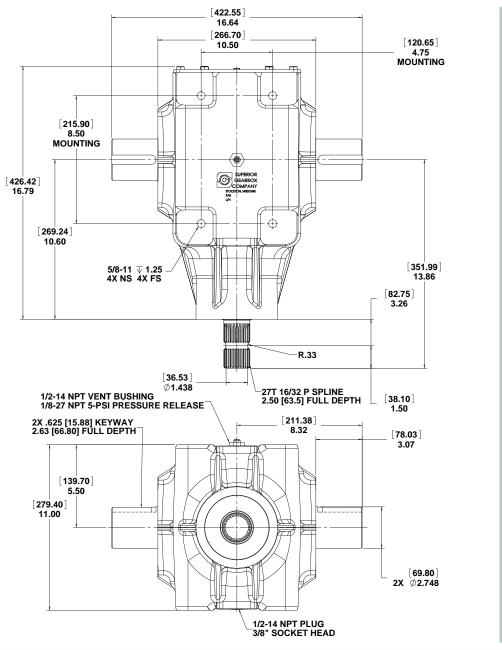
Service Fact	tors											
Character		Character of Power Source Shock Load										
of Shock Driven		Electric Motor Multi-Cylinder Engine Single-Cylinder Engine Uniform Light Shock Medium Shock										
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	1.00 1.25 1.50 1.00 1.25 1.50 1.75 1.25 1.50 1.75 2.00									
Heavy	1.25	1.50										2.50

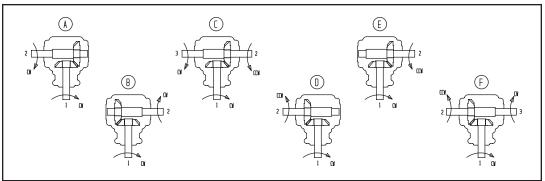
^{*} Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

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¹ All ratings specified with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m







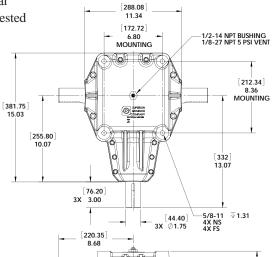
Contact Superior Gearbox for your special requirements.

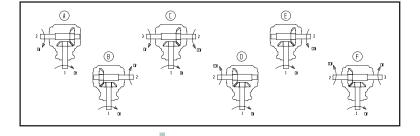


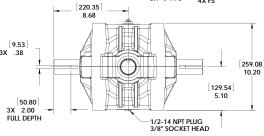
Applications include large rototillers, silage compactors, heavy-duty industrial equipment, material handling.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in five ratios: 1:1, 1.18:1, 1.35:1, 1.5:1 and 1.86:1
- Tapered roller bearings provide increased load capacity and bearing life
- 1.75" input shaft and 1.75" output shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The 800 Series weighs approximately 80/90 lbs. including 110 oz of lubricant







Service Fact	ors											
Character		Character of Power Source Shock Load										
of Shock		Electric Motor Multi-Cylinder Engine Single-Cylinder Engine										
Driven		Uniform Light Shock Medium Shock										
Machine		Duration of Service (Hours per Day)										
	.5	3	10	24	.5	3	10	24	.5	3	10	24
Uniform	0.60	0.80	1.00**	1.25	0.80	1.00	1.25	1.50	1.00	1.25	1.50	1.75
Moderate	0.80	1.00	00 1.25 1.50 1.00 1.25 1.50 1.75 1.25 1.50 1.75 2.00									
Heavy	1.25	1.50										

 $^{^{\}star}$ Divide the horsepower rating by the service factor to obtain the design horsepower. ** AGMA Class 1 Service

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.



Ra	iting Chart	t				
				Input RPM	1	
	Ratio ¹	Gear Design		100	540	1000
	1:1	22T, 22T	Input HP	47.56	171.29	235.29
		Forged Straight Bevel	Output Torque*	29975	19992	14829
Miter			Input kW	35.47	127.73	175.46
Ξ			Output Torque**	3387	2259	1675
	1.18:1	28T, 33T	Input HP	36.62	133.71	184.98
		Forged Straight Bevel	Output Torque*	27201	18392	13740
			Input kW	27.31	99.71	137.94
			Output Torque**	3073	2078	1552
	1.35:1	20T, 27T	Input HP	26.27	102.47	146.32
		Forged Straight Bevel	Output Torque*	22352	16145	12449
			Input kW	19.59	76.41	109.11
			Output Torque**	2525	1824	1407
	1.5:1	20T, 30T	Input HP	19.51	77.85	113.27
		Forged Straight Bevel	Output Torque*	18444	13629	10708
			Input kW	14.55	58.05	84.47
			Output Torque**	2084	1540	1210
S	1.86:1	14T, 26T	Input HP	20.45	82.74	121.42
Reducers		Forged Straight Bevel	Output Torque*	23936	17934	14212
edt			Input kW	15.25	61.70	90.54
~			Output Torque**	2704	2026	1606
	1:1.18	33T, 28T	Input HP	42.26	147.16	198.34
		Forged Straight Bevel	Output Torque*	22599	14573	10606
			Input kW	31.51	109.74	147.90
			Output Torque**	2553	1646	1198
	1:1.35	27T, 20T	Input HP	34.40	123.09	168.50
		Forged Straight Bevel	Output Torque*	16060	10642	7866
			Input kW	25.65	91.79	125.65
			Output Torque**	1814	1202	889
	1:1.5	30T, 20T	Input HP	28.13	100.66	137.80
		Forged Straight Bevel	Output Torque*	11819	7832	5790
			Input kW	20.98	75.06	102.76
			Output Torque**	1335	885	654
SIS	1:1.86	26T, 14T	Input HP	35.65	121.61	162.59
ase		Forged Straight Bevel	Output Torque*	12098	7643	5518
Increasers			Input kW	26.58	90.69	121.25
=			Output Torque**	1367	863	623

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

¹ All ratings specified with the #1 shaft as the input *Torque measured in inch-lbs **Torque measured in N-m



R20A Series

Applications include grain augers and elevators.



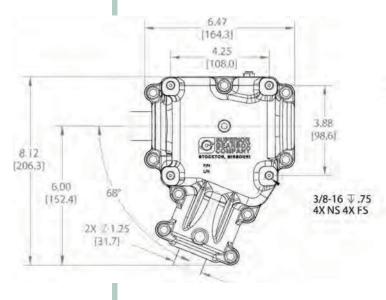
Features:

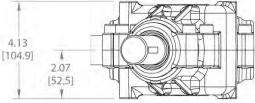
- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in 1:1 ratio
- Tapered roller bearings provide increased load capacity and bearing life
- Shafting made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The R20A Series weighs 12/15 lbs. including 12 oz of lubricant

Rating Char	t					
			Ir	put RPM		
Ratio ¹	Gear Design		100	540	1000	1750
1:1	19T, 19T	Input HP	8.43	35.46	53.23	71.42
	Forged Straight Bevel	Output Torque*	5313	4139	3355	2572
		Input kW	6.29	26.44	39.69	53.26
		Output Torque**	600	468	291	379

All ratings specified with the #1 shaft as the input

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.





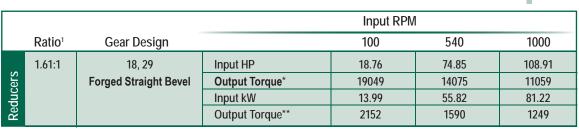
^{*}Torque measured in inch-lbs **Torque measured in N-m



H130 Gearboxes

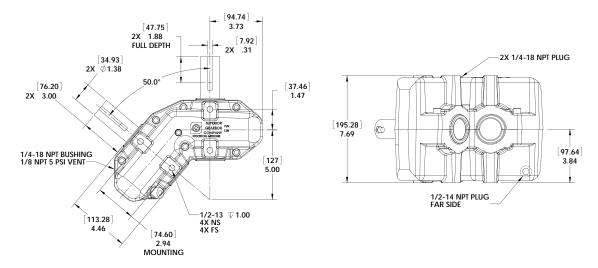
Features:

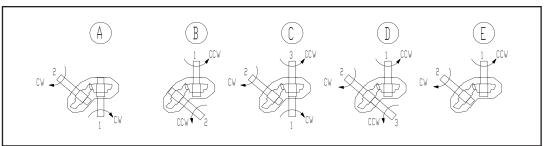
- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Precision forged gears are offered in a 1.61:1 ratio
- Tapered roller bearings provide increased load capacity and bearing life
- 1.375" shaft made of high strength steel is standard
- Serviced with 80W90 gear lubricant, run and leak tested before shipment
- The H Series weighs 35/40 lbs. including 26 oz of lubricant



¹ All ratings specified with the #1 shaft as the input

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^{*}Torque measured in inch-lbs **Torque measured in N-m



IP39 SERIES (Dual Input)



Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- Standard ratio 6.09:1
- Dual hydraulic motor input
- Ball bearings provide increased load capacity and bearing life

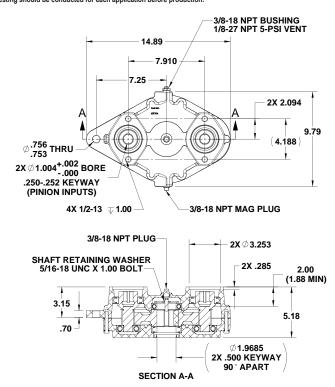
				nput RPM		
Ratio	Gear Design		120	360	720	1000
6:1	11T, 67T	Input HP	2.85	7.06	12.51	16.43
	From Forged Steel	Output Torque	9130	7528	6672	6306

Torque measured in inch-lbs

			ļ	Input RPM		
Ratio	Gear Design		120	360	720	1000
6:1	11T, 67T	Input kW	2.13	5.26	9.33	12.25
	From Forged Steel	Output Torque	1032	851	754	713

Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.





IP39 SERIES (Single Input)

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing setting
- Standard ratio 6.09:1
- Single hydraulic motor input
- Ball bearings provide increased load capacity and bearing life



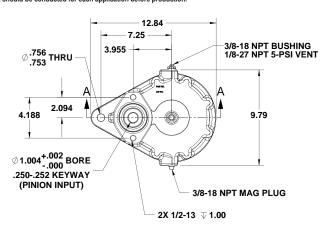
			I	nput RPM		
Ratio	Gear Design		120	360	720	1000
6:1	11T, 67T	Input HP	1.43	3.53	6.26	8.21
	From Forged Steel	Output Torque	4565	3764	3336	3153

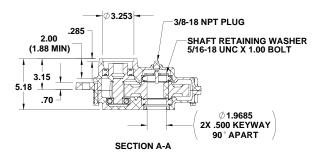
Torque measured in inch-lbs

				Input RPM		
Ratio	Gear Design		120	360	720	1000
6:1	11T, 67T	Input kW	1.06	2.63	4.67	6.13
	From Forged Steel	Output Torque	516	425	377	356

Torque measured in N-m

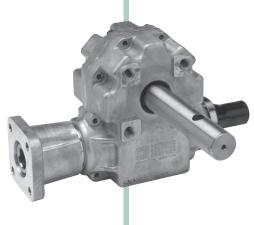
LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.







V210 Series



Features:

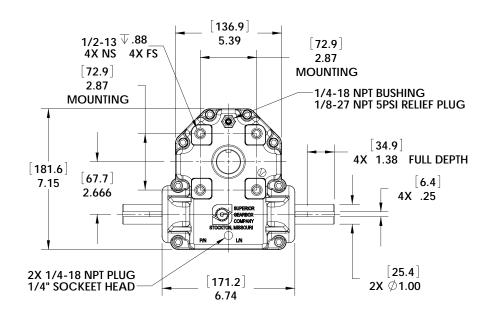
- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity.
- Precision machined for exact gear mesh and bearing preload.
- Standard ratios are offered in 5:1, 10:1 and 20:1—left and right hand
- 1" input or hydraulic motor input
- 1.25" output is standard
- Tapered roller bearings provide increased load capacity and bearing life
- Serviced with 85W140 gear lubricant, run and leak tested before shipment
- The V Series weighs approximately 20/25 lbs. including 14 oz of lubricant

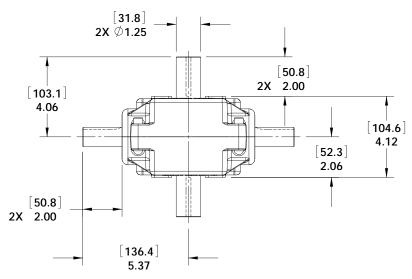
			Input	RPM		
Ratio	Gear Design			100	400	1200
5:1	4 Thread Worm	Mech.	Input HP	0.91	2.86	5.08
	20 Tooth Bronze Gear		Output Torque*	2242	1881	1168
			Input kW	0.68	2.13	3.79
			Output Torque**	253	213	132
		Thermal	Input HP	NA	1.51	2.02
			Output Torque*	NA	938	437
			Input kW	NA	1.13	1.51
			Output Torque**	NA	106	49
10:1	2 Thread Worm	Mech.	Input HP	0.58	1.96	3.02
	20 Tooth Bronze Gear		Output Torque*	2259	2161	1361
			Input kW	0.43	1.46	2.25
			Output Torque**	255	244	154
		Thermal	Input HP	NA	0.98	1.36
			Output Torque*	NA	1132	572
			Input kW	NA	0.73	1.01
			Output Torque**	NA	128	65
20:1	1 Thread Worm	Mech.	Input HP	0.40	1.15	1.90
	20 Tooth Bronze Gear		Output Torque*	2789	2360	1492
			Input kW	0.30	.86	1.42
			Output Torque**	315	267	169
		Thermal	Input HP	NA	0.54	0.72
			Output Torque*	NA	1025	526
			Input kW	NA	0.40	0.54
			Output Torque**	NA	116	59

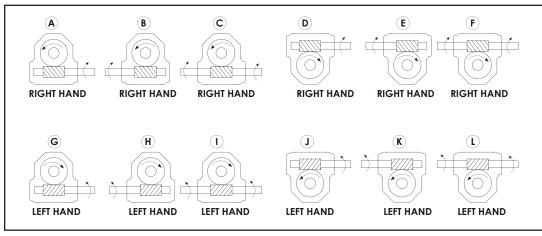
^{*}Torque measured in inch-lbs **Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.











W260 Series



Features:

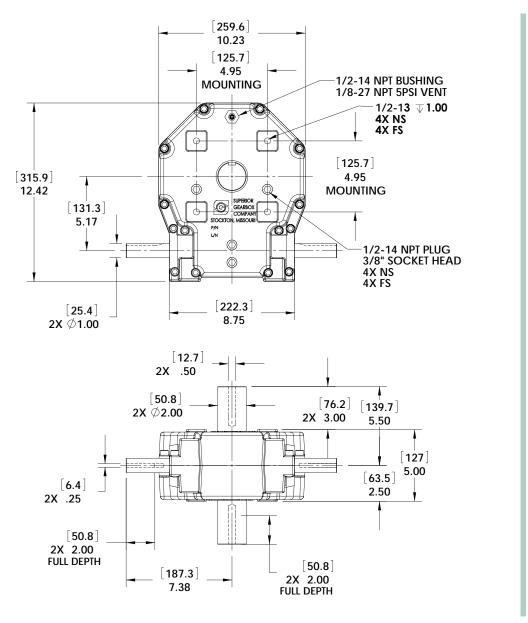
- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity.
- Precision machined for exact gear mesh and bearing preload.
- Standard ratios are offered in 25:1 and 50:1—left and right hand
- 1" input or hydraulic motor input
- 2" solid output shaft or 1.5" hollow bore output shafts available upon request
- Tapered roller bearings provide increased load capacity and bearing life
- Serviced with 85W140 gear lubricant, run and leak tested before shipment
- The W Series weighs 50/55 lbs. including 95 oz of lubricant

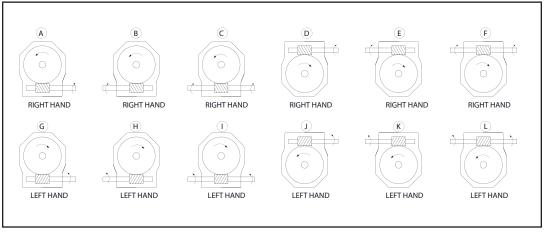
			Input	RPM		
Ratio	Gear Design			100	400	1200
25:1	2 Thread Worm	Mech.	Input HP	1.32	4.01	6.92
	50 Tooth Bronze Gear		Output Torque*	13740	11603	7304
			Input kW	0.96	2.99	5.16
			Output Torque**	1552	1311	825
		Thermal	Input HP	NA	2.12	2.88
			Output Torque*	NA	6159	3037
			Input kW	NA	1.58	2.15
			Output Torque**	NA	696	343
50:1	1 Thread Worm	Mech.	Input HP	0.82	2.34	3.61
	50 Tooth Bronze Gear		Output Torque*	13067	11058	6992
			Input kW	0.61	1.74	2.84
			Output Torque**	1476	1249	790
		Thermal	Input HP	NA	1.42	1.87
			Output Torque*	NA	6689	3437
			Input kW	NA	1.06	1.39
			Output Torque**	NA	756	388

^{*}Torque measured in inch-lbs **Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.









I210 Series

Features:

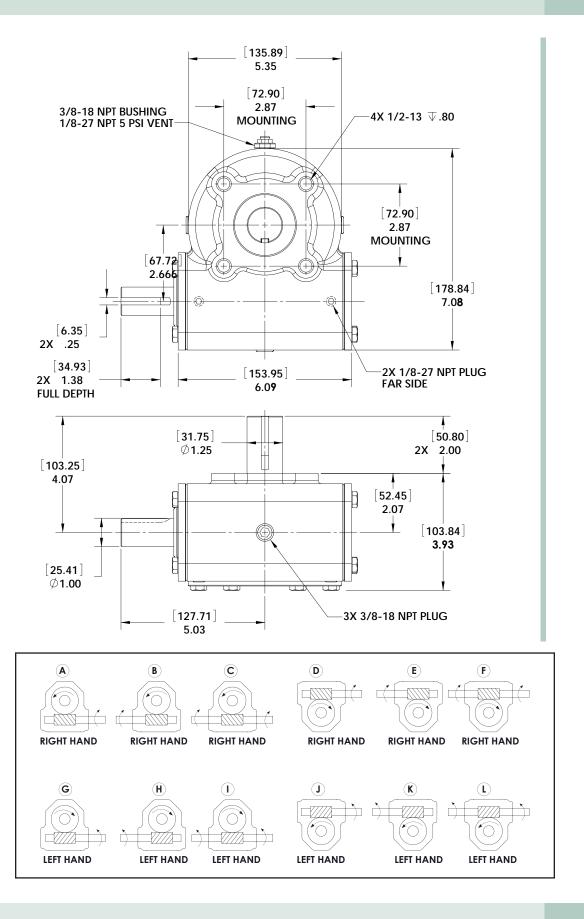
- One-piece iron housing
- Standard ratio is 20:1—left and right hand
- 1" input shaft and 1.25" output shaft is standard
- Tapered roller bearings provide increased load capacity and bearing life
- Serviced with 85W140 gear lubricant, run and leak tested before shipment
- The I210 weighs approximately 35 lbs. including 8 oz of lubricant

		Input RPM				
Ratio	Gear Design			100	400	1200
20:1	1 Thread Worm	Mech.	Input HP	0.40	1.15	1.90
	20 Tooth Bronze Gear		Output Torque*	2789	2360	1492
			Input kW	0.30	0.86	1.42
			Output Torque**	315	267	169
		Thermal	Input HP	NA	0.54	0.72
			Output Torque*	NA	1025	526
			Input kW	NA	0.40	0.54
			Output Torque**	NA	116	59

^{*}Torque measured in inch-lbs **Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.







I260 Series



- One-piece iron housing
- Standard ratios are 25:1 and 50:1—right or left hand
- 1" input shaft or hydraulic motor
- 2" solid or hollow bore output shaft
- Tapered roller bearings provide increased load capacity and bearing life
- Serviced with 85W140 gear lubricant, run and leak tested before shipment
- The I260 weighs approximately 80/85 lbs. including 46 oz of lubricant

		Input RPM						
Ratio	Gear Design			100	400	1200		
25:1	2 Thread Worm	Mech.	Input HP	1.32	4.01	6.92		
	50 Tooth Bronze Gear		Output Torque*	13740	11603	7304		
			Input kW	0.98	2.99	5.16		
			Output Torque**	1552	1311	825		
		Thermal	Input HP	NA	1.77	2.40		
			Output Torque*	NA	5133	2531		
			Input kW	NA	1.32	1.79		
			Output Torque**	NA	580	286		
50:1	1 Thread Worm	Mech.	Input HP	0.82	2.34	3.81		
	50 Tooth Bronze Gear		Output Torque*	13067	11058	6992		
			Input kW	0.61	1.74	2.84		
			Output Torque**	1476	1249	790		
		Thermal	Input HP	NA	1.18	1.56		
		1						

^{*}Torque measured in inch-lbs **Torque measured in N-m

LIMITATIONS ON HORSEPOWER AND TORQUE RATINGS: The horsepower and torque ratings given here are generalizations. Different conditions for various applications may result in higher or lower horsepower capacities. Under certain conditions the maximum indicated rpm may be exceeded. For these reasons the ratings cannot be guaranteed for any application. Prototype testing should be conducted for each application before production.

Output Torque*

Output Torque*

Input kW

NA

NA

NA

5574

0.88

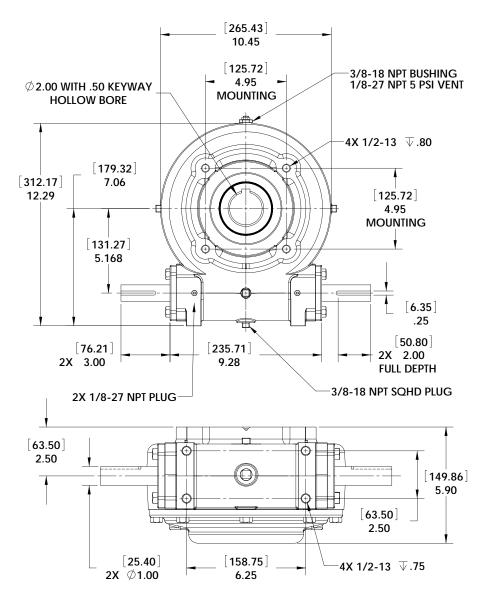
630

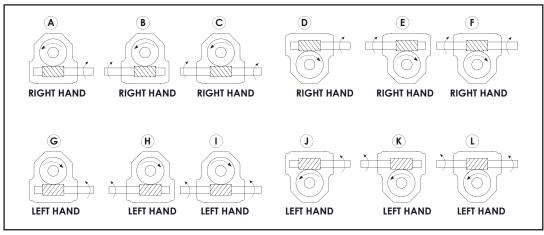
2864

1.16

324









I280 Series



Features:

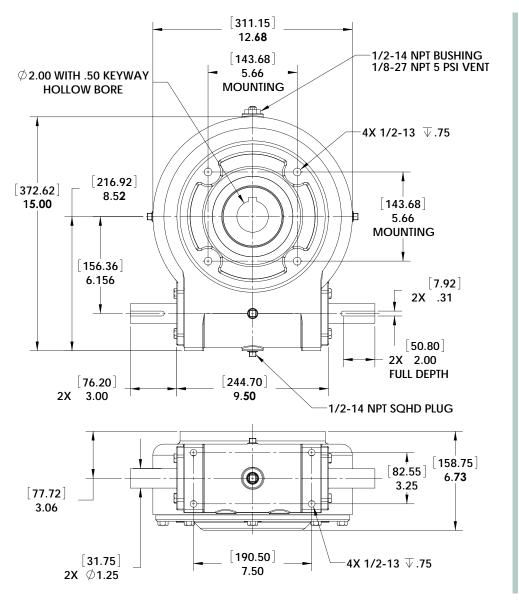
- · One-piece iron housing
- Standard ratios is 50:1—right or left hand
- 1.25" input and 2" hollow output shaft is standard
- Tapered roller bearings provide increased load capacity and bearing life
- Serviced with 85W140 gear lubricant, run and leak tested before shipment
- The I280 weighs approximately 100/110 lbs. including 88 oz of lubricant

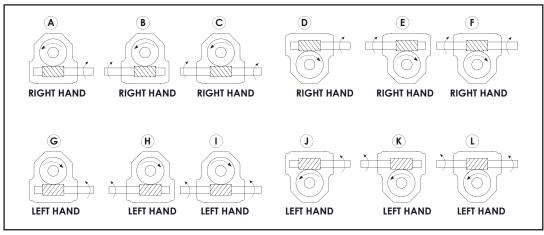
		Input RPM				
Ratio	Gear Design			100	400	1200
50:1	1 Thread Worm	Mech.	Input HP	1.28	3.57	5.64
	50 Tooth Bronze Gear		Output Torque*	22771	18722	11293
			Input kW	0.95	2.66	4.21
			Output Torque**	2573	2115	1276
		Thermal	Input HP	NA	1.87	2.51
			Output Torque*	NA	9057	4696
			Input kW	NA	1.39	1.87
			Output Torque**	NA	1023	531

^{*}Torque measured in inch-lbs **Torque measured in N-m

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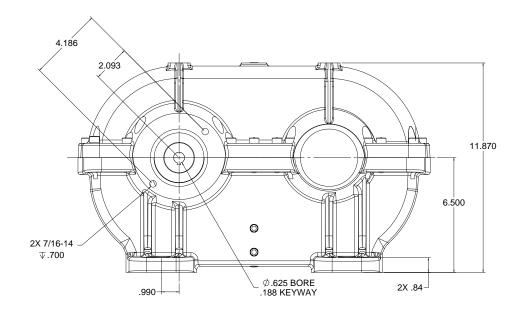


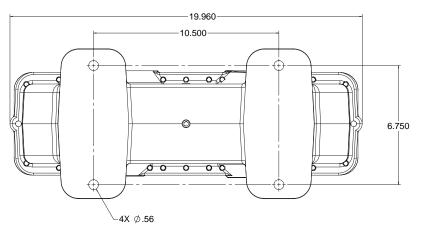
Shaker S10 Series

Applications include vibratory trenchers, vibrating conveyors and various sorting and screening devices.



- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Precision machined for exact gear mesh and bearing preload
- 100% leak tested
- High strength, cost effective ductile iron gears are cast with integral weights
- High strength alloy shafts
- Tapered roller bearings provide increased load capacity and bearing life
- The S10 Series weighs approximately 80/90 lbs.







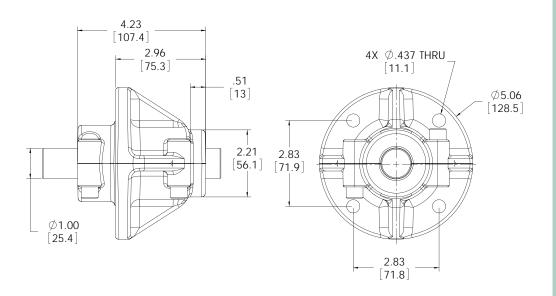
Spindle 240 Series

Applications include various mower decks.

Features:

- Two-piece aluminum housing for high strength, corrosion resistance and thermal capacity
- Die cast, fully machined case halves capture and protect bearings and double lip seals
- Tapered roller bearings provide increased load capacity and bearing life
- 1" shaft made of high strength steel standard
- The 240 series spindle weighs approximately 4.5 pounds, depending upon shaft and adapter configuration
- All Superior spindles are available with a variety of anti-warp devices to increase durability in mower applications
- The 240 is recommended for medium duty use where its low profile and short blade-to-deck dimension is needed









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