

Save on Energy Costs with Quantis



With energy costs constantly rising, it's critical to identify opportunities that positively impact the bottom line.

Dodge QUANTIS® helical bevel gearing delivers significant energy savings over traditional worm or helical worm gears. When coupled with **Reliance Electric XE Premium Efficient motors**, even greater savings are achieved.

Contact Applied Industrial Technologies® to learn more about Dodge QUANTIS® helical bevel gearing and other products that can assist in your overall gearing efficiency.

CALCULATE YOUR POTENTIAL ENERGY SAVINGS:

Annual savings is based on \$0.08 per kilowatt hour, 7200 hours of operation per year.

Watts Saved = HP x 746 x [1 - (Existing Worm Gear Efficiency / Quantis Helical Gear Efficiency)]

\$ Savings per Year = (Hours Operation/Year) (Power Cost per Kwh) (Watts Saved) / 1000

Payback in Years = Difference in Hardware Cost / \$ Savings per Year

Example: Step one: Replace 1 HP, 1750 rpm input, 40:1 ratio worm gear with QUANTIS helical reducer.
Watts saved = 1 x 746 x [1 - (.69 / .95)] = 204
Savings per year = 7200 x .08 x 204 / 1000 = \$118

Step two: Replace 74% efficient standard motor with 86.5% efficient Reliance XE motor.
\$ Savings per year (from table) = \$84

Step three: TOTAL QUANTIS RHB + XE MOTOR ENERGY COST SAVINGS PER YEAR = \$202

Authorized Distributor:

A product of:



ENERGY EFFICIENCY

QUANTIS HIGH EFFICIENCY RHB MODULAR HELICAL GEAR REDUCER

HP	Gear Ratio	QUANTIS RHB - HELICAL BEVEL Efficiency	WORM or HELICAL WORM Efficiency *	Watts Saved	QUANTIS RHB Energy Savings per Year	Standard Efficient Motor Efficiency	Reliance XE Motor Efficiency	Motor Energy Savings per Year	QUANTIS + XE Motor Energy Savings per Year
1/2 @ 1750 rpm	10:1	95%	81%	55	\$32	66.0%	84.0%	\$70	\$101
	20:1	95%	71%	94	\$54	66.0%	84.0%	\$70	\$124
	30:1	95%	68%	106	\$61	66.0%	84.0%	\$70	\$131
	40:1	95%	65%	118	\$68	66.0%	84.0%	\$70	\$138
	50:1	95%	62%	130	\$75	66.0%	84.0%	\$70	\$144
	100:1	95%	62%	130	\$75	66.0%	84.0%	\$70	\$144
	150:1	95%	61%	133	\$77	66.0%	84.0%	\$70	\$147
3/4 @ 1750 rpm	10:1	95%	81%	82	\$47	70.0%	86.5%	\$88	\$135
	20:1	95%	77%	106	\$61	70.0%	86.5%	\$88	\$149
	30:1	95%	68%	159	\$92	70.0%	86.5%	\$88	\$179
	40:1	95%	68%	159	\$92	70.0%	86.5%	\$88	\$179
	50:1	95%	66%	171	\$98	70.0%	86.5%	\$88	\$186
	100:1	95%	65%	177	\$102	70.0%	86.5%	\$88	\$190
	150:1	95%	64%	183	\$105	70.0%	86.5%	\$88	\$193
1 @ 1750 rpm	10:1	95%	83%	98	\$57	74.0%	86.5%	\$84	\$140
	20:1	95%	77%	141	\$81	74.0%	86.5%	\$84	\$165
	30:1	95%	76%	149	\$86	74.0%	86.5%	\$84	\$170
	40:1	95%	69%	204	\$118	74.0%	86.5%	\$84	\$202
	50:1	95%	66%	228	\$131	74.0%	86.5%	\$84	\$215
	100:1	95%	65%	236	\$136	74.0%	86.5%	\$84	\$220
	150:1	95%	64%	243	\$140	74.0%	86.5%	\$84	\$224
1 1/2 @ 1750 rpm	10:1	95%	86%	106	\$61	75.5%	87.5%	\$117	\$178
	20:1	95%	84%	130	\$75	75.5%	87.5%	\$117	\$192
	30:1	95%	78%	200	\$115	75.5%	87.5%	\$117	\$232
	40:1	95%	72%	271	\$156	75.5%	87.5%	\$117	\$273
	50:1	95%	68%	318	\$183	75.5%	87.5%	\$117	\$300
	100:1	95%	67%	330	\$190	75.5%	87.5%	\$117	\$307
	150:1	95%	70%	294	\$170	75.5%	87.5%	\$117	\$287
2 @ 1750 rpm	10:1	95%	87%	126	\$72	78.5%	87.5%	\$113	\$185
	20:1	95%	83%	188	\$109	78.5%	87.5%	\$113	\$221
	30:1	95%	78%	267	\$154	78.5%	87.5%	\$113	\$266
	40:1	95%	72%	361	\$208	78.5%	87.5%	\$113	\$321
	50:1	95%	82%	204	\$118	78.5%	87.5%	\$113	\$230
	100:1	95%	73%	346	\$199	78.5%	87.5%	\$113	\$312
	150:1	95%	70%	393	\$226	78.5%	87.5%	\$113	\$339
3 @ 1750 rpm	10:1	95%	88%	165	\$95	75.5%	88.5%	\$251	\$346
	20:1	95%	83%	283	\$163	75.5%	88.5%	\$251	\$414
	30:1	95%	82%	306	\$176	75.5%	88.5%	\$251	\$427
	40:1	95%	82%	306	\$176	75.5%	88.5%	\$251	\$427
	50:1	95%	82%	306	\$176	75.5%	88.5%	\$251	\$427
	100:1	95%	73%	518	\$299	75.5%	88.5%	\$251	\$549
	150:1	95%	74%	495	\$285	75.5%	88.5%	\$251	\$536
5 @ 1750 rpm	10:1	95%	90%	196	\$113	80.0%	90.2%	\$304	\$417
	20:1	95%	84%	432	\$249	80.0%	90.2%	\$304	\$552
	30:1	95%	87%	314	\$181	80.0%	90.2%	\$304	\$485
	40:1	95%	86%	353	\$204	80.0%	90.2%	\$304	\$507
	50:1	95%	86%	353	\$204	80.0%	90.2%	\$304	\$507
	100:1	95%	75%	785	\$452	80.0%	90.2%	\$304	\$756
	150:1	95%	76%	746	\$430	80.0%	90.2%	\$304	\$733
7 1/2 @ 1750 rpm	10:1	95%	90%	294	\$170	81.5%	91.0%	\$413	\$582
	20:1	95%	90%	294	\$170	81.5%	91.0%	\$413	\$582
	30:1	95%	87%	471	\$271	81.5%	91.0%	\$413	\$684
	40:1	95%	88%	412	\$237	81.5%	91.0%	\$413	\$650
	50:1	95%	87%	471	\$271	81.5%	91.0%	\$413	\$684
	100:1	95%	77%	1060	\$611	81.5%	91.0%	\$413	\$1,023
	150:1	95%	76%	1119	\$645	81.5%	91.0%	\$413	\$1,057
10 @ 1750 rpm	10:1	95%	92%	236	\$136	82.5%	91.7%	\$523	\$658
	20:1	95%	91%	314	\$181	82.5%	91.7%	\$523	\$703
	30:1	95%	89%	471	\$271	82.5%	91.7%	\$523	\$794
	40:1	95%	88%	550	\$317	82.5%	91.7%	\$523	\$839
	50:1	95%	89%	471	\$271	82.5%	91.7%	\$523	\$794
	100:1	95%	77%	1413	\$814	82.5%	91.7%	\$523	\$1,337
	150:1	95%	76%	1492	\$859	82.5%	91.7%	\$523	\$1,382
15 @ 1750 rpm	10:1	95%	92%	353	\$204	82.5%	92.4%	\$837	\$1,041
	20:1	95%	92%	353	\$204	82.5%	92.4%	\$837	\$1,041
	30:1	95%	90%	589	\$339	82.5%	92.4%	\$837	\$1,176
	40:1	95%	90%	589	\$339	82.5%	92.4%	\$837	\$1,176
	50:1	95%	89%	707	\$407	82.5%	92.4%	\$837	\$1,244

* Shaded cells represent helical worm gear data.

Contact Your Local Applied Service Center
1-877-279-2799



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