



Omega and Viva Elastomeric Coupling Downsizing & Interchange Guide



This guide outlines where Rexnord Omega™ High Density Yellow (HDY) and Viva™ elastomeric couplings could allow for a smaller size selection when compared to competitive couplings from Dodge®. It also provides a direct interchange table for situations where downsizing is not possible, yet the higher torque density of Omega HDY or Viva is desired.

When properly downsizing to an Omega HDY or Viva coupling is possible, the coupling could still meet the application requirements while being smaller in diameter and lower weight. Typically, these factors result in a lower purchase price. Tables 3 and 4 show the expected weight savings and diameter reduction associated with downsizing a coupling. For more information, please review the Omega & Viva content on-line for order placement or contact your Rexnord representative for interchanging assistance.

HOW TO USE THIS GUIDE

DOWNSIZING OPTIONS:

1. Using Table 1, select the Rexnord Omega HDY or Viva size that corresponds to the Dodge Raptor coupling size.
2. If the "Torque Capacity" notes "CHECK," compare the motor torque multiplied by the driven equipment service factor against the Omega HDY or Viva torque rating listed in Table 2.
3. If the "Bore Capacity" notes "CHECK," verify that the Omega HDY or Viva max bore listed in Table 2 equals or exceeds both shaft sizes of your application.

If torque and bore capacity are both adequate, downsizing to the smaller coupling could be done. If downsizing is not possible, review the Direct Interchange directions listed below.

DIRECT INTERCHANGE:

Review Table 2 and select the Rexnord coupling (Omega STD, Omega HDY, or Viva) size that corresponds to the Dodge Raptor. The Rexnord coupling torque and bore capacity will be equivalent to the Dodge values.

TABLE 1 – Downsizing Options

Dodge Raptor	Rexnord Omega HDY			Rexnord Viva		
	Size	Torque Capacity	Bore Capacity	Size	Torque Capacity	Bore Capacity
E2	....	....	....	....	....	....
E3	E2	CHECK	CHECK	....	....	....
E4	E3	CHECK	CHECK	V110	OK	CHECK
E5	E4	CHECK	CHECK	V125	OK	OK
E10	E5	CHECK	CHECK	V130	OK	OK
E20	E15	CHECK	CHECK	V150	CHECK	OK
				V170	OK	OK
E30	E20	CHECK	CHECK	V170	CHECK	CHECK
				V190	OK	OK
E40	E30	CHECK	CHECK	V215	OK	CHECK
				V215	CHECK	CHECK
E50	E40	CHECK	CHECK	V245	OK	OK
				V245	CHECK	CHECK
E60	E50	CHECK	CHECK	V290	OK	OK
			
E70	E60	CHECK	CHECK	....	....	....
E80	E70	CHECK	CHECK	V365	CHECK	CHECK
E100	E80	CHECK	CHECK	V425	CHECK	CHECK
				V460	CHECK	CHECK
E120	E100	CHECK	CHECK	....	....	....
E140	E120	CHECK	CHECK	....	....	....

Table 2 – Direct Interchange

Dodge Raptor			Rexnord Omega STD			Rexnord Omega HDY			Rexnord Viva		
Size	Torque Rating (lb-in) ¹	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)
E2	194	1.13	E2	190	1.13	E2	238	1.13	V110	550	1.50
E3	371	1.38	E3	365	1.38	E3	456	1.38	V110	550	1.50
E4	558	1.63	E4	550	1.63	E4	687	1.63	V110	550	1.50
E5	926	1.88	E5	925	1.88	E5	1,156	1.88	V125	930	1.89
E10	1,456	2.13	E10	1,450	2.13	E10	1,812	2.13	V130	1,450	2.17
....	....	....	E15	1,800	2.13	E15	2,249	2.13	V150	2,220	2.56
E20	2,308	2.38	E20	2,300	2.38	E20	2,875	2.38	V170	2,730	2.56
E30	3,651	2.88	E30	3,650	2.88	E30	4,563	2.88	V190	3,650	2.95
E40	5,504	3.38	E40	5,500	3.38	E40	6,875	3.38	V215	5,830	3.15
E50	7,656	3.63	E50	7,650	3.63	E50	9,563	3.63	V245	8,320	3.74

Table 2 – Direct Interchange, continued

Dodge Raptor			Rexnord Omega STD			Rexnord Omega HDY			Rexnord Viva		
Size	Torque Rating (lb-in) ¹	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)	Size	Torque Rating (lb-in)	Max Bore (in)
E60	12,505	4	E60	12,500	4.00	E60	15,625	4.00	V290	12,530	4.33
E70	22,132	4.5	E70	22,125	4.50	E70	27,656	4.50	V365	28,390	5.00
E80	39,503	6	E80	39,500	6.00	E80	49,375	6.00	V425	49,500	6.10
E100	85,085	6.75	E100	85,050	6.75	E100	106,312	6.75	V460	55,620	6.50
E120	170,170	7.5	E120	170,100	7.50	E120	212,625	7.50	....	....	....
E140	340,340	9	E140	340,200	9.00	E140	425,250	9.00	....	....	....

¹ Torque values listed are the greater of the two competitor's published catalog figures.

Table 3 – Size and Weight Comparison (vs. Omega HDY Downsize Selection)

Dodge Raptor			Rexnord Omega HDY				
Size	Weight ¹ (lb)	Diameter (in)	Size	Weight ¹ (lb)	Diameter (in)	Compared to Raptor	
						Weight Reduction (lb)	Diameter Reduction (in)
E2	....	....	....	....	....	....	....
E3	2.3	4.00	E2	1.2	3.50	-1.1	-0.50
E4	3.3	4.56	E3	2.4	4.00	-0.9	-0.56
E5	5.4	5.38	E4	3.0	4.56	-2.4	-0.82
E10	7.6	6.38	E5	5.4	5.38	-2.2	-1.00
E20	12.7	7.25	E10	8.2	6.38	-4.5	-0.87
			E15	8.3	6.38	-4.4	-0.87
E30	19.7	8.25	E20	13.0	7.25	-6.7	-1.00
E40	33.5	9.50	E30	21.0	8.25	-12.5	-1.25
E50	50.9	11.00	E40	35.0	9.50	-15.9	-1.50
E60	71.3	12.50	E50	54.0	11.00	-17.3	-1.50
E70	82.0	14.00	E60	72.0	12.50	-10.0	-1.50
E80	169.4	16.00	E70	86.0	14.00	-83.4	-2.00
E100	252.6	21.00	E80	170.0	16.00	-82.6	-5.00
E120	419.4	25.00	E100	244.0	21.00	-175.4	-4.00
E140	593.4	30.00	E120	425.0	25.00	-168.4	-5.00

¹ Weight values listed are with maximum bore.

Table 4 – Size and Weight Comparison (vs. Viva Downsize Selection)

Dodge Raptor			Rexnord Viva				
Size	Weight ¹ (lb)	Diameter (in)	Size	Weight ² (lb)	Diameter (in)	Compared to Raptor	
						Weight Reduction (lb)	Diameter Reduction (in)
E2 / WE2	....	....	....	....	....	....	....
E3 / WE3	2.3	4.00	....	....	....	....	....
E4 / WE4	3.3	4.56	V110	3.1	4.30	-0.2	-0.26
E5 / WE5	5.4	5.38	V125	3.7	4.70	-1.7	-0.68
E10 / WE10	7.6	6.38	V130	4.6	5.10	-3.0	-1.28
			V150	9.3	5.90	-3.4	-1.35
E20 / WE20	12.7	7.25	V170	9.5	6.60	-3.2	-0.65
			V170	9.5	6.60	-10.2	-1.65
E30 / WE30	19.7	8.25	V190	12.1	7.50	-7.6	-0.75
			V215	21.2	8.40	-12.3	-1.10
E40 / WE40	33.5	9.50	V215	21.2	8.40	-29.7	-2.60
			V245	31.7	9.60	-19.2	-1.40
E60 / WE60	71.3	12.50	V245	31.7	9.60	-39.6	-2.90
			V290	54.9	11.40	-16.4	-1.10
E70 / WE70	82.0	14.00	V365	92.6	14.40	10.6	0.40
E80 / WE80	169.4	16.00	V365	92.6	14.40	-76.8	1.60
			V425	187.4	16.70	-65.2	-4.30
E100	252.6	21.00	V460	205	18.10	-47.6	-2.90
E120	419.4	25.00	....	....	....	....	....
E140	593.4	30.00	....	....	....	....	....

¹ Weight values listed are with maximum bore.

REXNORD OMEGA AND VIVA COUPLING FAMILY

Omega Standard Orange



- General purpose applications requiring the highest misalignment capacity
- Available with imperial or metric capscrews

Omega Heavy Duty Yellow (HDY)



- 25% greater torque capacity over Omega Standard Orange allows for possible downsizing
- Available with imperial or metric capscrews

Omega Hydrolytically Stable Urethane Green (HSU)



- Ideal in hot or humid conditions in addition to acidic or alkaline environments
- Anti-corrosive shoe coating available (HSU-J) for use in highly caustic environments
- Available with imperial or metric capscrews

Viva



- The most torque-dense elastomeric coupling available allows for possible downsizing
- Hubs with two rows of radial holes grant more field spacing adjustability
- No special hubs or sleeve extensions needed for extra wide shaft gaps (up to 11.81 in.)

To review an example of how downsizing can offer a reduction in coupling weight, size, and total cost, download the Elastomeric Tire Coupling Whitepaper Imperial CP11-001 and Metric CP11-001_MA4 at www.rexnord.com/documentation.

Competitive coupling data used in this paper was sourced from ABB Dodge Raptor coupling catalog #9AKK2017-106583.

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