

# 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® and TB Woods®. 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 or TB Woods Dura-Flex 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 or TB Woods Dura-Flex size. The Rexnord coupling torque and bore capacity will be equivalent to the Dodge or TB Woods values.

**TABLE 1 – Downsizing Options**

Dodge Raptor	TB Woods Dura-Flex	Rexnord Omega HDY			Rexnord Viva		
		Size	Torque Capacity	Bore Capacity	Size	Torque Capacity	Bore Capacity
E2	WE2	....	....	....	....	....	....
E3	WE3	E2	CHECK	CHECK	....	....	....
E4	WE4	E3	CHECK	CHECK	V110	OK	CHECK
E5	WE5	E4	CHECK	CHECK	V125	OK	OK
E10	WE10	E5	CHECK	CHECK	V130	OK	OK
E20	WE20	E15	CHECK	CHECK	V150	CHECK	OK
					V170	OK	OK
E30	WE30	E20	CHECK	CHECK	V170	CHECK	CHECK
					V190	OK	OK
E40	WE40	E30	CHECK	CHECK	V215	OK	CHECK
E50	WE50	E40	CHECK	CHECK	V215	CHECK	CHECK
					V245	OK	OK
E60	WE60	E50	CHECK	CHECK	V245	CHECK	CHECK
					V290	OK	OK
E70	WE70	E60	CHECK	CHECK	....	....	....
E80	WE80	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 / TB Woods			Rexnord Omega STD			Rexnord Omega HDY			Rexnord Viva		
Size <sup>1</sup>	Torque Rating (lb-in) <sup>2</sup>	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 / WE2	194	1.13	E2	190	1.13	E2	238	1.13	V110	550	1.50
E3 / WE3	371	1.38	E3	365	1.38	E3	456	1.38	V110	550	1.50
E4 / WE4	558	1.63	E4	550	1.63	E4	687	1.63	V110	550	1.50
E5 / WE5	926	1.88	E5	925	1.88	E5	1,156	1.88	V125	930	1.89
E10 / WE10	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 / WE20	2,308	2.38	E20	2,300	2.38	E20	2,875	2.38	V170	2,730	2.56
E30 / WE30	3,651	2.88	E30	3,650	2.88	E30	4,563	2.88	V190	3,650	2.95
E40 / WE40	5,504	3.38	E40	5,500	3.38	E40	6,875	3.38	V215	5,830	3.15
E50 / WE50	7,656	3.63	E50	7,650	3.63	E50	9,563	3.63	V245	8,320	3.74
E60 / WE60	12,505	4	E60	12,500	4.00	E60	15,625	4.00	V290	12,530	4.33
E70 / WE70	22,132	4.5	E70	22,125	4.50	E70	27,656	4.50	V365	28,390	5.00
E80 / WE80	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	....	....	....

<sup>1</sup> Sizes with "E" are Dodge and those with "WE" are TB Woods.

<sup>2</sup> 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)

Size <sup>1</sup>	Dodge Raptor		TB Woods Dura-Flex		Rexnord Omega HDY						
	Weight <sup>2</sup> (lb)	Diameter (in)	Weight <sup>2</sup> (lb)	Diameter (in)	Size	Weight <sup>2</sup> (lb)	Diameter (in)	Compared to Raptor		Compared to Dura-Flex	
								Weight Reduction (lb)	Diameter Reduction (in)	Weight Reduction (lb)	Diameter Reduction (in)
E2 / WE2	....	....	....	....	....	....	....	....	....	....	....
E3 / WE3	2.3	4.00	3.3	4.24	E2	1.2	3.50	-1.1	-0.50	-2.1	-0.74
E4 / WE4	3.3	4.56	4.4	4.52	E3	2.4	4.00	-0.9	-0.56	-2.0	-0.52
E5 / WE5	5.4	5.38	7.4	5.40	E4	3.0	4.56	-2.4	-0.82	-4.4	-0.84
E10 / WE10	7.6	6.38	11.2	6.48	E5	5.4	5.38	-2.2	-1.00	-5.8	-1.10
E20 / WE20	12.7	7.25	16.3	7.36	E10	8.2	6.38	-4.5	-0.87	-8.1	-0.98
					E15	8.3	6.38	-4.4	-0.87	-8.0	-0.98
E30 / WE30	19.7	8.25	27.7	8.41	E20	13.0	7.25	-6.7	-1.00	-14.7	-1.16
E40 / WE40	33.5	9.50	45.4	9.71	E30	21.0	8.25	-12.5	-1.25	-24.4	-1.46
E50 / WE50	50.9	11.00	59.0	11.34	E40	35.0	9.50	-15.9	-1.50	-24.0	-1.84
E60 / WE60	71.3	12.50	82.6	12.53	E50	54.0	11.00	-17.3	-1.50	-28.6	-1.53
E70 / WE70	82.0	14.00	109.0	14.00	E60	72.0	12.50	-10.0	-1.50	-37.0	-1.50
E80 / WE80	169.4	16.00	242.0	16.00	E70	86.0	14.00	-83.4	-2.00	-156.0	-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	....	....

<sup>1</sup> Sizes with "E" are Dodge and those with "WE" are TB Woods.

<sup>2</sup> Weight values listed are with maximum bore.

TABLE 4 – Size and Weight Comparison (vs. Viva Downsizing Selection)

Size <sup>1</sup>	Dodge Raptor		TB Woods Dura-Flex		Rexnord Viva							
	Weight <sup>2</sup> (lb)	Diameter (in)	Weight <sup>2</sup> (lb)	Diameter (in)	Size	Weight <sup>2</sup> (lb)	Diameter (in)	Compared to Raptor		Compared to Dura-Flex		
								Weight Reduction (lb)	Diameter Reduction (in)	Weight Reduction (lb)	Diameter Reduction (in)	
E2 / WE2	....	....	....	....	....	....	....	....	....	....	....	
E3 / WE3	2.3	4.00	3.3	4.24	....	....	....	....	....	....	....	
E4 / WE4	3.3	4.56	4.4	4.52	V110	3.1	4.30	-0.2	-0.26	-1.3	-0.22	
E5 / WE5	5.4	5.38	7.4	5.40	V125	3.7	4.70	-1.7	-0.68	-3.7	-0.70	
E10 / WE10	7.6	6.38	11.2	6.48	V130	4.6	5.10	-3.0	-1.28	-6.6	-1.38	
E20 / WE20	12.7	7.25	16.3	7.36	V150	9.3	5.90	-3.4	-1.35	-7.0	-1.46	
					V170	9.5	6.60	-3.2	-0.65	-6.8	-0.76	
E30 / WE30	19.7	8.25	27.7	8.41	V170	9.5	6.60	-10.2	-1.65	-18.2	-1.81	
					V190	12.1	7.50	-7.6	-0.75	-15.6	-0.91	
E40 / WE40	33.5	9.50	45.4	9.71	V215	21.2	8.40	-12.3	-1.10	-24.2	-1.31	
E50 / WE50	50.9	11.00	59.0	11.34	V215	21.2	8.40	-29.7	-2.60	-37.8	-2.94	
					V245	31.7	9.60	-19.2	-1.40	-27.3	-1.74	
E60 / WE60	71.3	12.50	82.6	12.53	V245	31.7	9.60	-39.6	-2.90	-50.9	-2.93	
					V290	54.9	11.40	-16.4	-1.10	-27.7	-1.13	
E70 / WE70	82.0	14.00	109.0	14.00	V365	92.6	14.40	10.6	0.40	-16.4	0.40	
E80 / WE80	169.4	16.00	242.0	16.00	V365	92.6	14.40	-76.8	1.60	-149.4	1.60	
E100	252.6	21.00	....	....	V425	187.4	16.70	-65.2	-4.30	....	....	
					V460	205	18.10	-47.6	-2.90	....	....	
E120	419.4	25.00	....	....	....	....	....	....	....	....	....	
E140	593.4	30.00	....	....	....	....	....	....	....	....	....	

<sup>1</sup> Sizes with "E" are Dodge and those with "WE" are TB Woods.

<sup>2</sup> 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/ekl](http://www.rexnord.com/ekl).

Competitive coupling data used in this paper was sourced from ABB Dodge Raptor coupling catalog #9AKK2017-106583 and TB Wood's flexible coupling catalog #P-1690-TBW.



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