

ELASTOMERIC COUPLINGS

Raptor™

Extend driven equipment life with patented WingLock™ technology



Your trusted partner

For more than 145 years, Dodge® has delivered power transmission solutions for the world's most demanding industrial applications. From aggregate, grain handling, and chemical processing to food production, pumping systems, pulp and paper mills, and steel production, our products are engineered to maximize uptime, reduce maintenance, and improve long-term productivity. For more than 70 years, that expertise has extended to coupling solutions, helping customers overcome misalignment, vibration, and harsh operating conditions with proven, reliable performance.

Designed for challenging environments and extended service life

Raptor combines elastomeric coupling performance with features designed to simplify installation and maintenance. Featuring patented WingLock technology and a split natural rubber element, Raptor addresses the limitations of polyurethane designs and delivers up to 6.7 times longer life in accelerated life testing. The design provides excellent vibration damping, greater tolerance for shaft misalignment, improved resistance to cyclic fatigue, and long-lasting durability. The result is a reliable, easy-to-maintain solution that extends driven equipment life, reduces maintenance demands and downtime, minimizes stress on connected equipment, and delivers dependable operation in demanding applications.



Key features

Natural rubber element effectively absorbs shock loads and accommodates industry-leading levels of misalignment



Patented WingLock technology increases surface area in the element's most critical regions, improving resistance to cyclic fatigue for longer service life

Slotted clamp ring holes support easier and faster installation



Offered in close-coupled and spacer configurations to accommodate varying shaft spacing requirements



Armored element configurations are available for added protection in harsh environments

Serrated, flanged-head hardware for increased reliability

 ATEX-certified upon request

Maintenance-free, split-tire design allows for element replacement without moving or realigning connected equipment



Industry-leading warranty

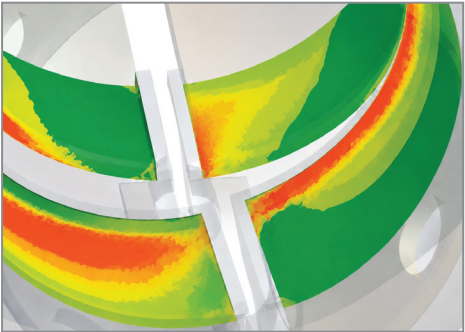
Raptor elements carry an industry-leading 5-year warranty, even when used with other manufacturer hubs

Designed and developed for longer life

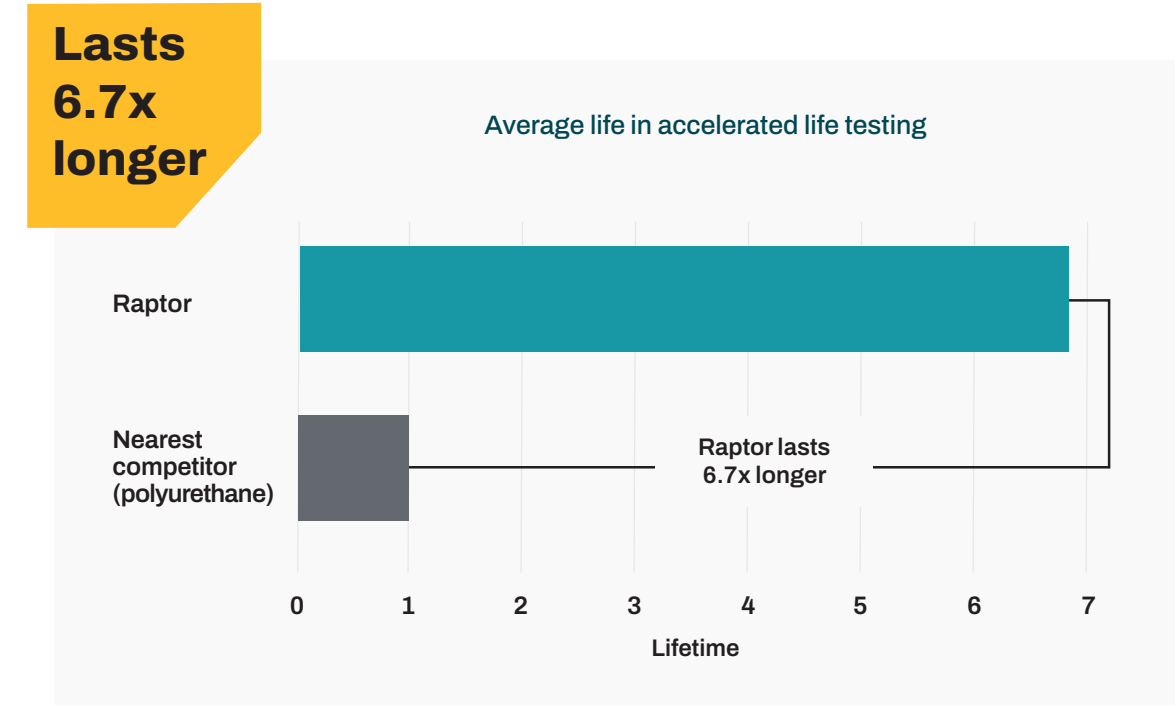
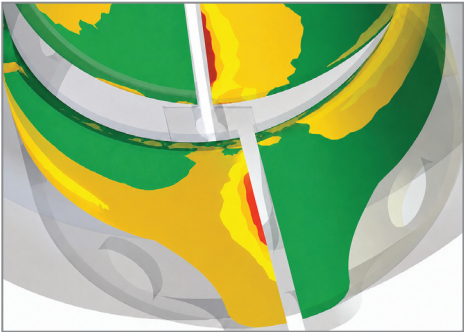
WingLock technology

Compared to other manufacturers’ designs, Raptor’s patented WingLock technology increases the surface area of the most critical regions of the element, enhancing bond strength and resistance to cyclic fatigue to help prevent failures and support longer service life. Finite element analysis (FEA) testing showed that WingLock maintains consistent positive pressure across the bonded joint, distributing loads more evenly than polyurethane designs. This helps reduce localized stress on individual components, supporting more reliable performance.

Pressure at bond without WingLock technology



Pressure at bond with WingLock technology



Testing parameters

- Testing input torque: 150 percent of catalog rating
- Angular misalignment: 4 degrees
- Parallel misalignment: 3/16 inches (4.8 millimeters)

Comparative benchmark testing confirms the performance improvements associated with Raptor’s WingLock element design. Even under worst-case misalignment and torque conditions, testing results show that Raptor lasts up to 6.7 times longer than the nearest competitor.

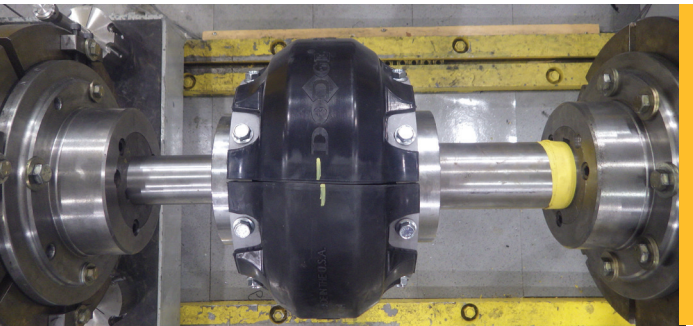
Natural rubber material

The natural rubber material provides ultraviolet (UV) resistance for indoor and outdoor applications, while static-conductive properties safely dissipate electrical current and help prevent arcing.

- Improved thermal conductivity and resistance to cracking, fatigue, and hydrolysis help maintain element performance in humid environments where polyurethane elastomers commonly degrade
- Lower hysteresis reduces internal heat generation during cyclic loading, supporting longer element life, improved driven equipment protection, and increased system reliability

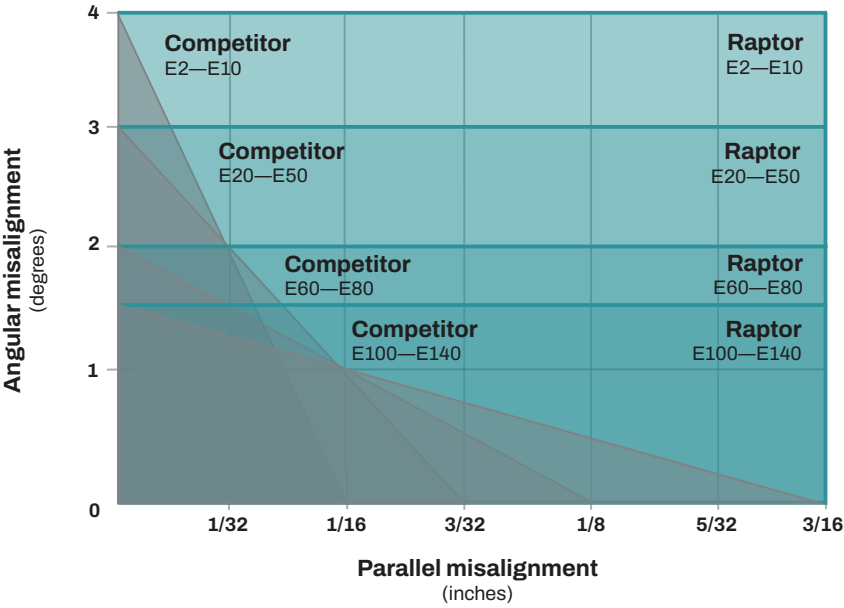
Proven through rigorous cyclic load testing

Engineers at our Advanced Development Laboratory designed and tested Raptor to perform under the most extreme conditions. In validation testing, Raptor successfully passed the rigorous DIN 740 reverse-cyclic loading coupling test—not once, not twice, but 10 times with a single coupling.



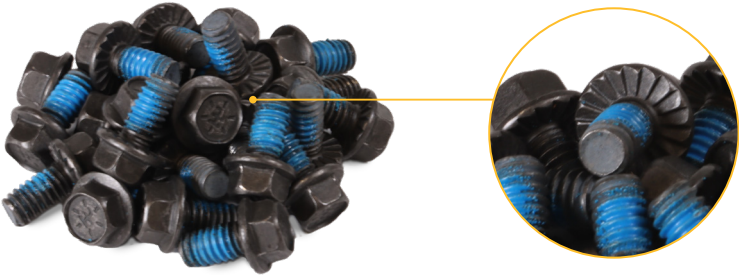
Enhanced misalignment capability

Raptor’s natural rubber element delivers industry-leading performance under misaligned conditions, accommodating greater angular and parallel misalignment while maintaining reliable performance as equipment and operating conditions change over time.



Engineered hardware

Raptor uses high-strength Grade 8 cap screws with serrated flange heads and a Nylok® thread-locking patch to maintain clamp force and resist loosening.



Easier installation and reduced maintenance

Element flexibility

Raptor's natural rubber element is engineered to provide 50 percent lower torsional and bending stiffness than polyurethane elements, helping simplify installation through greater flexibility and shaft misalignment capability

By absorbing shock loads and reducing stress on connected equipment, the natural rubber design also helps minimize maintenance demands, support longer service life, and promote reliable operation in demanding applications.

Slotted clamp rings

Competitor's circular clamp ring holes



vs.

Raptor's slotted clamp ring holes



Raptor's slotted clamp ring design provides 187% more clearance than competitive designs that help prevent hardware binding or pinching during installation for faster assembly and simplified maintenance.

Installation as easy as 1-2-3

Installing Raptor is quick and straightforward. Its horizontally split element eliminates the need to lock shafts during installation, reducing tool requirements and helping prevent shaft damage.



Step 1: Fasten shaft hubs



Step 2: Install element



Step 3: Tighten hardware

Application versatility

Interchangeable design

Raptor is designed as a drop-in interchange for existing applications using other polyurethane split-tire designs by meeting or exceeding torque, bore, and speed ratings.

Flexible mounting options allow Raptor elements to fit onto existing Rexnord® Omega® and TB Wood's® Dura-Flex® hubs without equipment modification.

Backed by an industry-leading 5-year limited warranty, Raptor elements are covered even when used with other manufacturers' hubs, providing added confidence and long-term value.

Spacer design configurations

For applications like pump skids requiring additional space between shaft ends, Raptor is available with two spacer options. Each design accommodates all standard ANSI and ISO spacer lengths, simplifying selection for varying shaft spacing requirements.

One-piece spacer design simplifies installation and is interchangeable with existing designs to streamline upgrades and replacements



Extension kit spacer design features a modular full- or half-spacer configuration that helps consolidate inventory by bolting onto a close-coupled element

Armored element option

Armored element configurations provide additional external protection from ozone, petroleum oils, and select chemical environments while maintaining the performance of standard Raptor elements.

Raptor armored elements exceed ASTM 1149-07 rubber deterioration standards, verified through third-party testing.



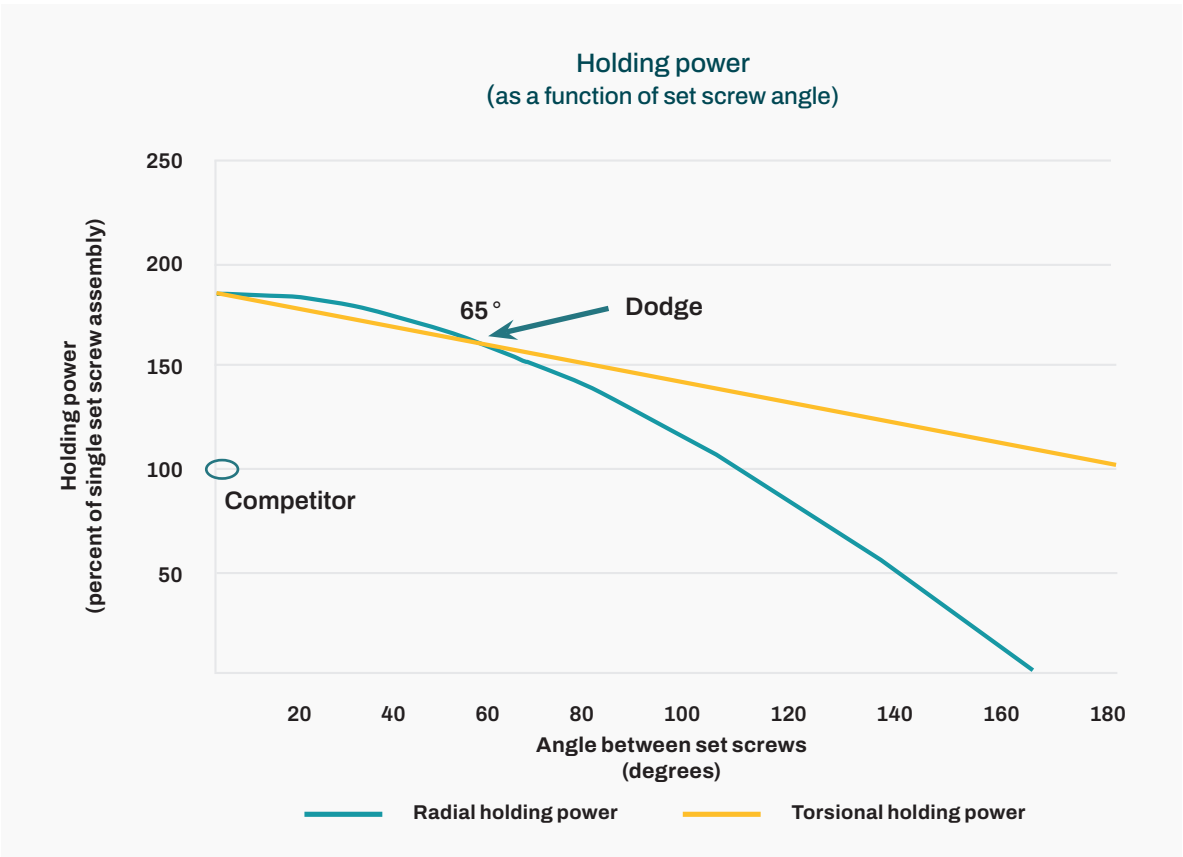
Shaft attachment styles

Raptor hubs are available in multiple shaft attachment styles, with reversible hubs that can be installed in either direction to accommodate varying shaft spacing and support interchangeability between close-coupled and spacer designs.

- Set screw
- Taper-Lock®-bushed
- QD-bushed

Set screw

Finished-bore and rough-stock bore configurations use a dual set screw locking mechanism for quick installation and secure shaft engagement. Two set screws at a 65-degree angle maximize radial and torsional shaft holding capability, delivering up to 75 percent greater holding strength than single set screw designs.



Taper-Lock-bushed

The original Taper-Lock design has been an industry standard for more than 50 years, valued for its ability to provide secure shaft engagement while simplifying installation and removal.

The split-tapered design allows the bushing to install with minimal effort, reducing the need for excessive force or hammering that can damage shafts or surrounding components.

Raptor couplings equipped with Taper-Lock-bushed hubs meet MPTA-B9i Taper-Lock bushing standards for compatibility and interchangeability.



QD-bushed

Quick Detachable (QD) bushings allow fast installation and removal using a four-degree taper and built-in removal holes that make disassembly simple without heating, cooling, or press-fitting.

Increased bore capacities accommodate larger shaft sizes and expand application flexibility.

Raptor couplings using our QD-bushed hubs meet MPTA QD bushing standards.



Find the right solution with PT Wizard™

Backed by over 145 years of engineering excellence, PT Wizard is the easy-to-use program that provides a guided experience with built-in tools—from product selection to competitive part interchange and system design—at your fingertips to ensure you can quickly find the right solution for any application.

For Raptor, the coupling selection tool guides you through application requirements, available product options, and matched component details to help you build a configuration for your application.

Select your coupling in four steps

Enter your application requirements, compare coupling options, save your selection, and move seamlessly from specification to ordering.

- 1

Enter your application details

Enter your motor information, shaft dimensions, and operating conditions.
- 2

Pick your coupling

Compare coupling styles side by side, then pick the one that fits your application.
- 3

Save and share your selection

Download a report with matched components, part numbers, specifications, and application details. Save or share it as needed.
- 4

From selection to order

Authorized customers can view pricing and availability, then move directly from selection to order through PT Place.

More ways PT Wizard helps you find the right solution

Competitive part interchange
Identify drop-in replacements for supported competitive parts, with full dimensional and rating comparisons.

System design
Design complete power transmission systems by selecting and matching motors, couplings, reducers, bearings, and related components to meet your application requirements.

Coupling

Default Units
US Customary

Start Configuration →

Individual units can be changed at any time.



Raptor (Split-Tire) - **Elastomeric**
Natural rubber split element provides easy installation, reduces maintenance, and improves reliability by accommodating misalignment and supporting long life in demanding applications.
Temperature Rating (°F): -45° to 220°
Misalignment Compatibility: Axial: ●●○ Parallel: ●●○ Angular: ●●●



Sidewinder™ (Wrap) - **Elastomeric**
Wrap-style element eases installation and replacement without moving equipment, simplifying maintenance. Patent-pending CoreStrike™ technology provides 2.5 times longer life compared to oth...
Temperature Rating (°F): -40° to 200°
Misalignment Compatibility: Axial: None Parallel: ●○● Angular: ●●○



D-Flex (Sleeve) - **Elastomeric**
Elastomeric sleeve coupling that absorbs vibration while accommodating misalignment, supporting easy installation and reliable operations. Available in EPDM, Neoprene, and Hytrel® element materials.
Temperature Rating (°F): -65° to 275°
Misalignment Compatibility: Axial: ●○● Parallel: ●○● Angular: ●○●



StratoLink™ D71 (Disc) - **Metallic**
Metallic disc pack coupling transmits torque without lubrication, supports drop-in interchangeability with existing designs, is designed around API 610 standards, and features a unitized disc pack design that...
Temperature Rating (°F): -40° to 200°
Misalignment Compatibility: Axial: ●○● Parallel: ●○● Angular: ●○●



Grid-Lign® (Grid) - **Metallic** - **Lubrication Required**
Tapered grid style that is interchangeable with other tapered grid couplings. A spring steel element provides a torque-dense solution that absorbs vibration to protect connected equipment.
Temperature Rating (°F): -22° to 215°
Misalignment Compatibility: Axial: ●●● Parallel: ●○● Angular: ●○●



Gear - **Metallic** - **Lubrication Required**
AGMA-designed gear coupling with crowned gear tooth design transmits high torque while accommodating misalignment, supporting a broad range of sizes and application requirements.
Temperature Rating (°F): -20° to 250°
Misalignment Compatibility: Axial: None Parallel: None Angular: ●●○



Para-Flex® (Tire) - **Elastomeric**
Flexible tire element accommodates industry-leading misalignment and dampens vibration, supporting extended equipment life and reliable operation in applications with varying load conditions.
Temperature Rating (°F): -45° to 210°
Misalignment Compatibility: Axial: ●○● Parallel: ●●○ Angular: ●●●



StarFlex (Jaw) - **Elastomeric**
Straight jaw coupling that transmits torque without lubrication while accommodating misalignment, supporting straightforward installation and reliable operation across applications.
Temperature Rating (°F): -60° to 250°
Misalignment Compatibility: Axial: None Parallel: ●○● Angular: ●○●

Get started with PT Wizard



Find the right solution for your application today at ptwizard.com



Part numbers and ratings

Close-coupled				
Size	Element	Max speed (rpm)	Max torque	
			lb-in	hp/100
E2	015843	6,600	194	0.31
E3	015844	6,600	371	0.59
E4	015845	6,600	558	0.89
E5	015846	6,600	926	1.47
E10	015847	6,600	1,456	2.31
E20	015848	6,600	2,308	3.66
E30	015849	5,800	3,651	5.79
E40	015850	5,000	5,504	8.73
E50	015851	4,200	7,656	12.10
E60	015852	3,800	12,505	19.80
E70	015853	3,600	22,132	35.10
E80	015854	2,000	39,503	62.70
E100	015931	1,900	85,085	135.00
E120	015932	1,800	170,170*	270.00*
E140	015933	1,500	340,340*	540.00*

* For Taper-Lock and QD mounting, refer to bushing torque ratings
1. All inch fasteners are Grade 8
2. Maximum bore dimensions are based on shallow keys

One-piece spacer				
Size	Element	Max speed (rpm)	Max torque	
			lb-in	
ES2-R*	101771	6,600	194	
ES3-R*	101772	6,600	371	
ES4-R*	101773	6,600	558	
ES5-R*	101774	6,600	926	
ES10-R*	101775	6,600	1,456	
ES20	101776	4,800*	2,308	
ES30	101777	4,200*	3,651	
ES40	101778	3,600*	5,504	
ES50	101779	3,100*	7,656	
ES60	101780	2,800*	12,505	
ES70	101781	2,600*	22,132	
ES80	101782	1,800*	39,503	

* Suffix R designates high-speed rings are included as standard offerings and required for sizes ES2-R—ES10-R
Note: For sizes ES20—ES80, high-speed rings are optional and sold separately; to achieve the max allowable speed of close-coupled couplings, the installation of high-speed rings is required

Size	Close-coupled			One-piece spacer		
	Dodge	Rexnord Omega	TB Wood's Dura-Flex	Dodge	Rexnord Omega	TB Wood's Dura-Flex
E2	015843	7300005	WE2	101771	7300075	WES2
E3	015844	7300010	WE3	101772	7300080	WES3
E4	015845	7300015	WE4	101773	7300085	WES4
E5	015846	7300020	WE5	101774	7300090	WES5
E10	015847	7300025	WE10	101775	7300095	WES10
E20	015848	7300030	WE20	101776	7300100	WES20
E30	015849	7300035	WE30	101777	7300105	WES30
E40	015850	7300040	WE40	101778	7300110	WES40
E50	015851	7300045	WE50	101779	7300115	WES50
E60	015852	7300050	WE60	101780	7300120	WES60
E70	015853	7300055	WE70	101781	7300125	WES70
E80	015854	7300060	WE80	101782	7300130	WES80
E100	015931	7300065	WE100	—	—	—
E120	015932	7300070	WE120	—	—	—
E140	015933	7300071	WE140	—	—	—

Spacer extension kit						
Size	Complete spacer element assemblies				Replacement components	
	Standard (natural rubber) elements		Close-coupled elements ⁽¹⁾⁽²⁾		Spacer extension kit ⁽³⁾⁽⁴⁾	Replacement hardware
	Half spacer	Full spacer	Standard (natural rubber)	Armored		
ES2	017182	017064	015843	017126	017040	017000
ES3	017183	017065	015844	017127	017041	017001
ES4	017184	017066	015845	017128	017042	
ES5	017185	017067	015846	017129	017043	
ES10	017186	017068	015847	017130	017044	017180
ES20	017187	017069	015848	017131	017045	017002
ES30	017188	017070	015849	017132	017046	
ES40	017189	017071	015850	017133	017047	
ES50	017190	017072	015851	017134	017048	017003
ES60	017191	017073	015852	017135	017049	
ES70	017192	017074	015853	017136	017050	
ES80	017193	017075	015854	017137	017051	017004

1. For replacement on existing Raptor half- or full-spacer couplings, purchase only close-coupled element if spacer extensions remain on shaft hubs
2. For replacement on existing Raptor half- or full-spacer couplings, purchase close-coupled element and one set of replacement hardware if spacer extensions have been removed from shaft hubs
3. For a half-spacer design, purchase one spacer extension kit
4. For a full-spacer design, purchase two spacer extension kits





Dodge Industrial, Inc.

1061 Holland Road, Simpsonville, SC 29681

+1 864 297 4800

dodgeindustrial.com

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