

Dodge Tigear 2 Gear Reducers – Frequently Asked Questions

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Does Tigear-2 have an ATEX rating? ([back to top](#))

At this point in time, we do not have plans to get Tigear-2 ATEX rated. If a customer contacts us with a large opportunity that requires ATEX certification, please have the FSE contact product marketing.

Does Tigear-2 offer an anti-rotation device or backstop? ([back to top](#))

Tigear-2 does not have an anti-rotation device or backstop. In place of those two devices, we normally recommend a motor with a brake connected to a 3-Piece Coupled reducer to prevent the reducer from being back-driven by the load.

Does Tigear-2 carry a BISSC (Baking Industry Sanitation Standards Committee) certification? ([back to top](#))

Yes, Tigear-2 is BISSC certified.

What are the ratings for input speeds other than 1750 rpm? ([back to top](#))

Contact Applications Engineering for ratings not published in the 2021 Tigear-2 catalog.

Can a C-face clutch/brake be used with Tigear-2? ([back to top](#))

Yes, a clutch/brake can be used with a 3-Piece Coupled reducer. Quill input reducers are not suitable for C-face clutch/brake.

Does Tigear-2 have C-face inputs? ([back to top](#))

Yes, the Quill and 3-Piece Coupled Tigear-2 reducers are C-face inputs.

What type of input couplings comes with the 3-Piece Coupled Tigear-2? ([back to top](#))

“L-series” Jaw type couplings

Do we have disassembly and repair instructions for Tigear-2? ([back to top](#))

The drawings shown in the 2021 Tigear-2 catalog are the only drawings with dimensions. Scaled drawings can be downloaded from our Dodge-PT.com website. Directions for downloading CAD drawings are available from the Knowledge Base.

Are CAD drawings and models available for Tigear-2? ([back to top](#))

Yes, both 2-D and 3-D CAD drawings and models are available in many formats through our link on the Dodge-PT.com website. Instructions for downloading a CAD file can be accessed from the Knowledge Base.



Are certified drawings available for Tigear-2? ([back to top](#))

Yes, certified drawings will be made after the certified drawing charge has been added to the BUS order. Contact Application Engineering with the order number after the order has been placed.

How is efficiency calculated for Tigear-2? ([back to top](#))

Efficiency = $\frac{\text{Mechanical Output Hp}}{\text{Mechanical Input Hp}} \times 100\%$

Mechanical Input Hp

Mechanical Input and Output Hp's can be obtained from the Tigear-2 catalog:

RATIO	OUTPUT RPM	RATING DATA 1750 INPUT RPM		PART NUMBER		SHAFT POSITION
				56C	140TC	
5	350	Mechanical Input Hp	2.59	17Q05L56	17Q05L14	L
		Thermal Input Hp	3.97	17Q05R56	17Q05R14	R
		Output Torque (lb in.)	430	17Q05LR56	17Q05LR14	LR
		Mechanical Output Hp	2.39	17Q05H56	17Q05H14	HOLLOW
		Output OHL (lbs.)	1050			

Where is the drain plug on Tigear-2 Reducers? ([back to top](#))

There is no drain plug. Tigear-2 reducers are designed to be a sealed-for-life system. Oil changes are not required for periodic maintenance.

Are breathers available for Tigear-2? ([back to top](#))

We do not have breathers on the Tigear-2 product. The Tigear-2 product line is sold as a sealed for life product. Sealing the reducer keeps external contaminants such as abrasive dust, chemicals, and water out of the reducers.

Do we sell a low backlash version of Tigear-2? ([back to top](#))

No, a special version of Tigear-2 with low backlash is not available. The backlash in

Tigear-2 is typical of industrial worm reducers.

Are any hollow bore diameters available for Tigear-2 that are not shown in the catalog?

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Generally, the sizes shown in the catalog are the only sizes available. However, if a large opportunity arises, please contact Product Marketing to see if the volume would justify the tooling for a special bore.

Do the hollow bore diameters on older Tigear hollow bore reducers differ from Tigear-2?

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They can be depending on reducer size. The bore sizes for Tigear-2 were reduced on some sizes after an analysis was done on original Tigear sales. The analysis showed that a large percentage of original Tigear customers were purchasing bushing kits to reduce the bore of the product. Since the bushings are an optional feature that

increased the total cost to the customer, the hollow bores were reduced on Tigear-2. The chart below shows the old and the new bore sizes.

Reducer Size		Hollow Bore Sizes	
Adaptable Tigear		Tigear-2	
H version		HA version	
A133 / Size 13	0.625" (5/8)	.750" (3/4)	not offered
A150 / Size 15	1.000"	.750" (3/4)	not offered
A175 / Size 17	1.000"	1.000"	not offered
A200 / Size 20	1.438" (1 & 7/16)	1.250" (1 & 1/4)	1.188" (1 & 3/16)
A262 / Size 26	1.9375" (1 & 15/16)	1.4375" (1 & 7/16)	1.6875" (1 & 11/16)
A350 / Size 35	2.188" (2 & 3/16)	1.9375" (1 & 15/16)	not offered

Is there a bushing that can be used on 140TC quill inputs to allow the use of 56C motors?

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Dodge previously sold a bushing that would allow this. However, due to problems customers encountered with the bushing, we no longer recommend the use of this bushing.

Can a hydraulic motor be used with a Tigear-2 reducer? [\(back to top\)](#)

We do not offer a special adapter to allow the customer to directly attach a hydraulic motor to the reducer. However, if the customer can use a shaft-in version without a motor adapter, such as a 30S20R56, they can connect a hydraulic motor to the reducer. Since most hydraulic motors create significantly more torque than standard electric motors, please contact Application Engineering for Tigear-2 applications that utilize a hydraulic motor.

What is the maximum input speed for Tigear-2? ([back to top](#))

Tigear-2 was designed to operate at 1800 rpm. Contact Application Engineering if the customer has a need for higher input speeds.

Does Tigear-2 have integral motors? ([back to top](#))

Currently, Tigear-2 does not have an integral motor option. If a customer contacts us with a large opportunity that requires integral motors, please have the FSE contact Product Marketing.

Should the standard key supplied with a c-face motor be used with Tigear-2 Quill reducers?

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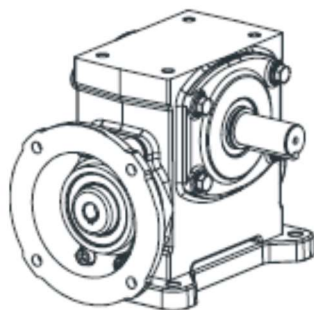
No. The Tigear-2 reducer comes with a special key that is pre-installed in the input quill of the reducer. Standard motor keys are not the correct length for use in the quill.

Can a standard key be used with hollow bore reducers? ([back to top](#))

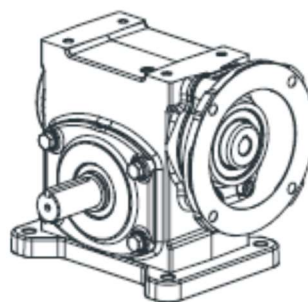
No. Most of our hollow bore reducers use a special rectangular key to accommodate the special depth of the keyway in the hollow output shaft. The customer should machine their shaft keyway per standard keyway dimensions.

Can a Tigear-2 reducer be mounted in a “worm under” position with the motor below the input shaft? ([back to top](#))

This mounting position is not recommended, and reducer damage may occur with quill input reducers due to inadequate lubrication. We recommend the use of the riser kits or spacer kits if additional height is needed.



NOT RECOMMENDED



RECOMMENDED

How loud should a Tigear-2 run? ([back to top](#))

We do not have published data for the sound pressure levels but worm gear reducers tend to be very quiet products. If an abnormal noise exists in an application, have the customer check the surrounding equipment to see if it is the cause.

Are all Tigear-2 reducers shipped with oil? ([back to top](#))

Yes, every Tigear-2 reducer is shipped with oil. For additional information on the oil, see the Kluber oil information below. MSDS for the Tigear-2 oils can be found online at the Knowledge Base.

Kluber oil information:

Product Brand Name:	Klubersynth UH1 6-460	Klubersynth UH1 6-150
Oil Type:	High-Performance Synthetic (PAG Chemistry)	
Oil Viscosity:	ISO 460	ISO 150
Food Grade:	-----H1-----	
Min Temp Limit:	30 deg F	-10 deg F
Max Temp Limit:	limited by 200 deg F sump temp	

Can other brands and types of oil be used in Tigear-2? ([back to top](#))

No. Kluber UH1 series oils are the only approved oils for Tigear-2. We feel the Kluber oil is vastly superior to the other brands and types of oil.

Do we offer the Kluber oil through the Renewal Parts group? ([back to top](#))

Yes, both the standard temperature and low-temperature oils are available in Quarts and Gallons.

Volume	Standard Temp	Low Temp
Quart	334863	334861
Gallon	334862	334860

Are oils other than the Kluber oil available from DODGE for the Tigear-2? ([back to top](#))

No. Kluber UH1 series oils are the only approved oils for Tigear-2. We feel the Kluber oil is vastly superior to other brands and types of oil.

Are oil changes required on Tigear-2? ([back to top](#))

No. Tigear-2 is designed as a sealed-for-life system. Oil changes are only recommended if opening the gearbox for other maintenance/repairs.

What is the oil volume for a reducer? ([back to top](#))

Oil volumes are listed on page 177 of the 2021 Tigear-2 catalog. Please contact Application Engineering for details on how to check for the correct oil level.

How can a customer check the oil level on their Tigear-2 reducer? ([back to top](#))

The oil level can be checked but Application Engineering will need to be contacted to help the customer through the process.

Can the cast output flange be used with the solid output shaft? ([back to top](#))

No. The solid output shaft is not designed to mate with the cast output flange. However, if a volume opportunity exists for an application that requires the cast flange, please contact Product Marketing.

In what direction does the output shaft rotate if the input shaft is rotated clockwise?

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Input Rotation	Output Rotation	
	Left Output	Right Output
CW	CW	CCW
CCW	CCW	CW

Who can help with parts questions on both current Tigear-2 and older versions of Tigear?

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Please contact Dodge Application Engineering at 864-284-5700 or email:
engineering@dodgeindustrial.com

What gear ratios are available for Tigear-2? [\(back to top\)](#)

Tigear-2: 5:1 up to 60:1

Tigear-2 & Helical Attachment: up to 300:1

Do we offer ratios for Tigear-2 reducers other than those listed in the catalog? [\(back to top\)](#)

Yes, if enough volume exists to justify tooling expense. If so, please have the local Dodge FSE put together the information and pass it on to the Tigear-2 Product Marketing personnel.

Is there a Scoop Mount or Top Mount option for Tigear? [\(back to top\)](#)

No. Tigear-2 reducers usually have motors directly mounted to the input shaft via the Quill or 3-Piece Coupled motor adapters.

A Distributor or Customer wants to know the dimensions of our seals. Can we provide them?

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Not typically if the seals are in stock. Our seals are made to our specific requirements and have special materials and dimensions to optimize the sealing performance in the reducer. Off-the-shelf seals will not likely provide the same performance.

Does Tigear-2 have self-locking worm gearing? [\(back to top\)](#)

Tigear-2 ratios cannot be counted upon to always be self-locking. When an anti-rotation device is needed, the reducer should not be relied upon to prevent rotation. An external backstop or motor brake should be used.

Is there a sight glass option for Tigear-2? [\(back to top\)](#)

No. Tigear-2 is a sealed-for-life system that is shipped with the correct oil level for

any mounting position.

Do we have slide bases for Tigear-2? ([back to top](#))

Most customers mount Tigear-2 reducers directly to the device they are driving with the reducer so we don't offer slide bases. If a customer contacts us with a large opportunity that requires slide bases, please have the FSE contact Product Marketing.

Can Tigear-2 be back-driven? ([back to top](#))

Some Tigear-2 ratios can be back-driven depending on the ratio, but worm gears should not be used as a speed increaser.

How hot should a Tigear-2 reducer run? ([back to top](#))

Tigear-2 reducers can operate under sustained sump temperatures of up to 200° F (93°C). During the initial break-in period, the reducer may exceed 200° F for a short period.

When should a Tie Rod kit be used? ([back to top](#))

Tie Rod kits should be used with hollow bore reducers.

Why are Tigear-2 E-Z Kleen and Ultra Kleen reducers not available with a Separate input? ([back to top](#))

The input seal on Tigear-2 reducers is not available in a harsh duty design and the input shaft is not made from a corrosion-resistant material.