IsoFlex™

MINIMIZING VIBRATION

FLEXIBLE GEARGUARD COUPLINGS

MARINE INDUSTRIAL POWER GENERATION MINING EQUIPMENT

About Isoflex *High Performance Vibration Isolation*

Isoflex is a leading designer and manufacturer of high quality vibration isolating products. Isoflex products are used in OEM manufacture, new installations and retrofits: anywhere vibration isolation is required.

The company, Isoflex Technologies Pty Ltd, was established in Australia's Gold Coast Marine Precinct in 2005 with a mission to make vibration dampening products that surpassed what was available to the marine market. Isoflex products are Australian designed and manufactured and are sold factory direct, through our U.S. company branch and through dealers worldwide.

Isoflex couplings help alleviate drive line misalignment and associated vibrations, acting as a sacrificial link to protect the gearbox. Couplings also prevent binding and wear of the drive bearings, resulting in a lower long-term cost of ownership.

At Isoflex, we respond quickly to our customers' needs and technical inquiries. Our goal is to be your preferred source for vibration minimizing components, from simple applications to unique and high demand projects, and to deliver them with exceptional customer service.

The Isoflex Difference

Isoflex differentiated itself from the start by using composites and co-polymer instead of rubber or all metal components. This polymer material specifically resists fuel, oils, water and hydraulic fluids.

Isoflex products undergo comprehensive testing. They are supported by in-house engineering modeling in 3D, 2D and customized applications. Isoflex flexible couplings are certified by DNV Type Approval.

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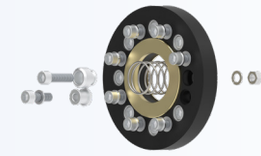

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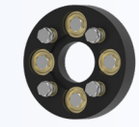

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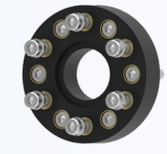

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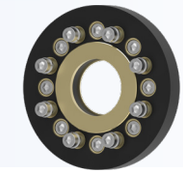

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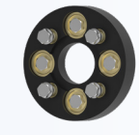

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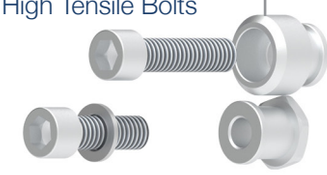
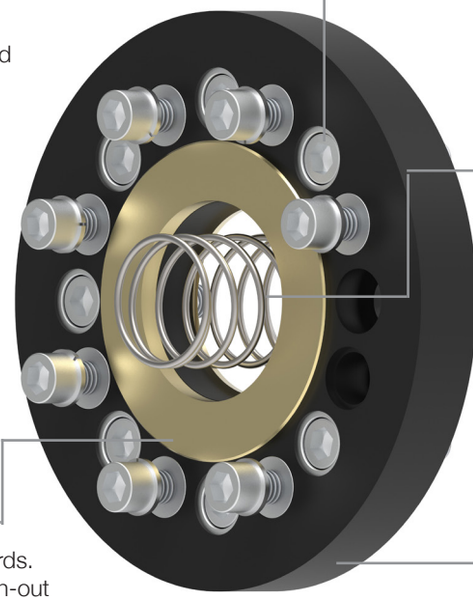
Isoflex Couplings - How They are Made

Steel Inserts

Steel inserts provide accurate fitting and a full depth to ensure maximum power transmission

High Tensile Bolts





Internal Hex Fitting

Reduces the chance of inserts turning

Bonding Spring (optional)

An internal coil spring may be fitted to ensure a secure electrical connection from the engine to the shaft and propeller

Index Ring (spigot or pilot)

Precision machined to gearbox standards. Fully chucked and faced for minimal run-out

On 8-bolt couplings the index ring is made from steel to control thermal expansion for a vibration free operation.

Coupling

Resilient element co-polymer resists fuel, oils, water and hydraulic fluids.

Isoflex couplings provide dramatic vibration reduction and are designed to be sacrificed in the event of a severe shock load to protect the gearbox.

Isoflex couplings assist engine mounts to do their job by allowing controlled engine movement to isolate vibration. This helps alleviate thrust-induced drive line misalignment. They are designed to cover a large percentage of Twin Disc, ZF, Hurth, Velvet Drive, Yanmar and Volvo gearboxes, plus many other gearboxes on the market. While designed for marine use, these couplings are used in many industrial applications too.

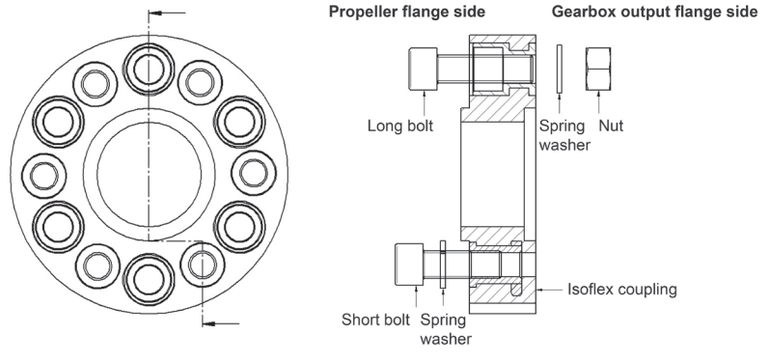
- ✓ Rated in commercial, intermediate and pleasure duty cycles
- ✓ Often required by various marine authorities for vessels going into survey
- ✓ Models up to 30,000 Nm torque capacity

Components

Isoflex coupling bolt sets

A bolt set is used to connect the Isoflex coupling between the gearbox flange and the propeller shaft flange. Isoflex supplies bolt kits with the coupling that will suit most manufacturers' standard flange thicknesses.

In some cases the flanges may be modified, custom made or may not suit the standard bolt lengths.



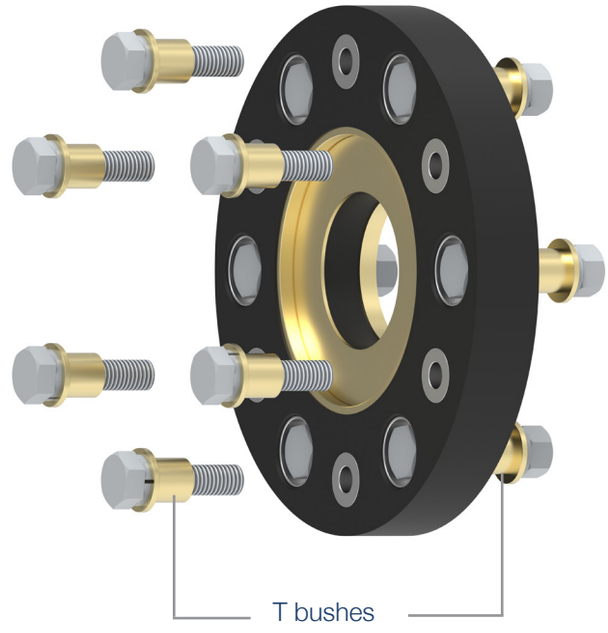
Coupling bolt sets include:

- Long bolts
- Short bolts
- Hex nuts to be used with the long bolts
- Lock (spring) washers, one for each bolt

T bushes

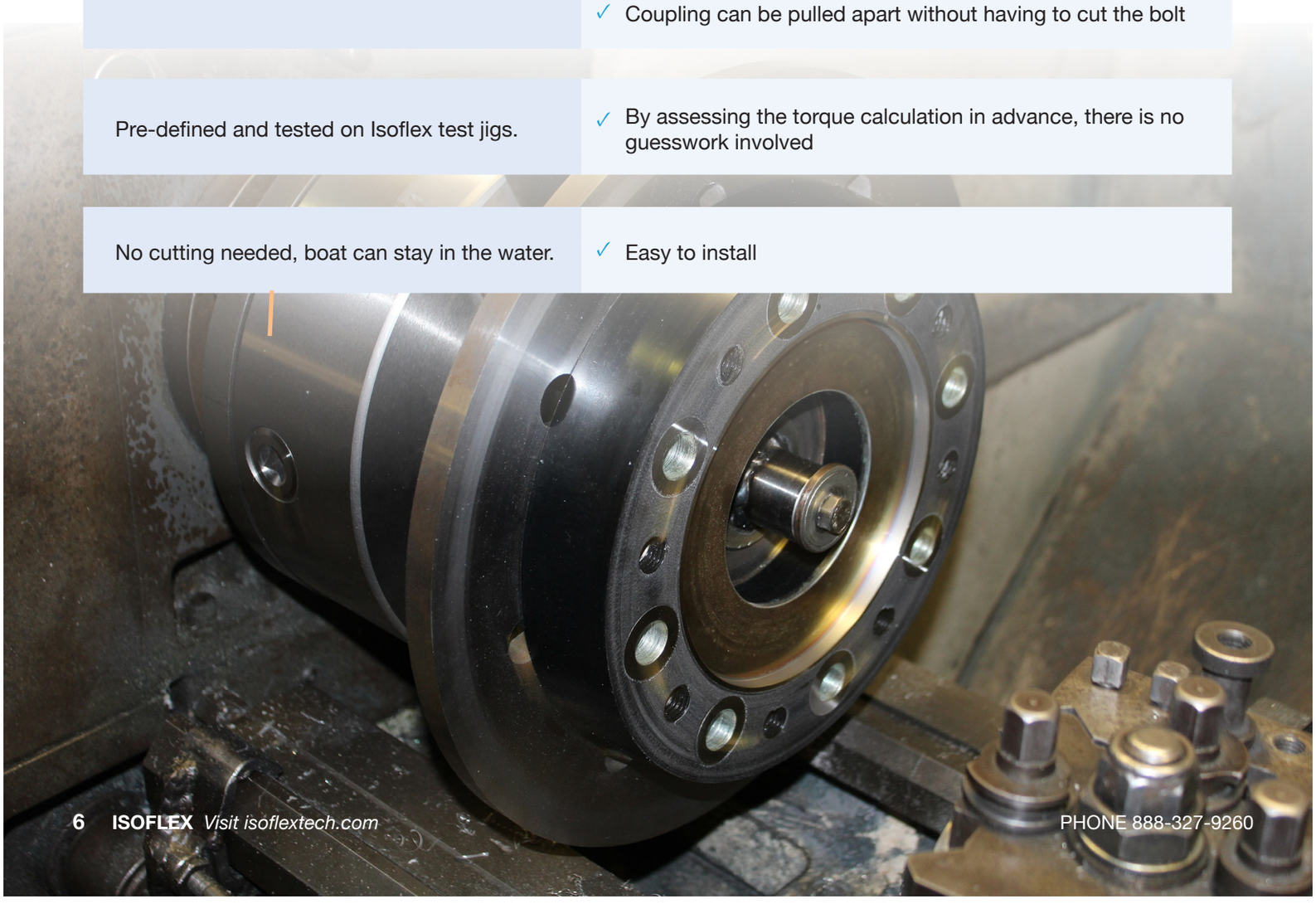
In some cases the bolt circle diameter (or PCD, pitch circle diameter) of the gearbox flange and the flange bolt size are such that to fit a flexible coupling in, smaller bolts must be used in the coupling. If this is the case, T bushes will be included for the gearbox flange and the propeller shaft flange to suit the smaller bolts.

Isoflex flexible couplings use twice the number of bolts than the original installation to accommodate the flanges on either side of the coupling.



Why Choose an Isoflex Coupling?

Features	Benefits
Isolate and minimize drive line misalignment, propeller pulse and gear chatter.	✓ Quieter boating experience ✓ Reduced equipment fatigue ✓ Assists engine mounts to do their job by allowing controlled engine movement
An Isoflex coupling acts as a fuse or sacrificial link.	✓ Protects the gearbox, reducing the chance of damage to the engine and transmission
Isoflex engineering-grade polymer.	✓ Superior resistance to corrosion, rust, fuels, oils, water, hydraulic fluids and climatic conditions
Internal hex-shaped fittings.	✓ Reduces the possibility of inserts turning in the coupling ✓ Bolts can be torqued to the correct tightness so coupling does not come loose ✓ Coupling can be pulled apart without having to cut the bolt
Pre-defined and tested on Isoflex test jigs.	✓ By assessing the torque calculation in advance, there is no guesswork involved
No cutting needed, boat can stay in the water.	✓ Easy to install



How to Measure

Most couplings can be defined by which gearbox you are using, and knowing the gearbox horsepower reduction ratio and duty cycle. However, if there are some unknowns, refer to the steps below.

Step 1 - Preparing to Measure

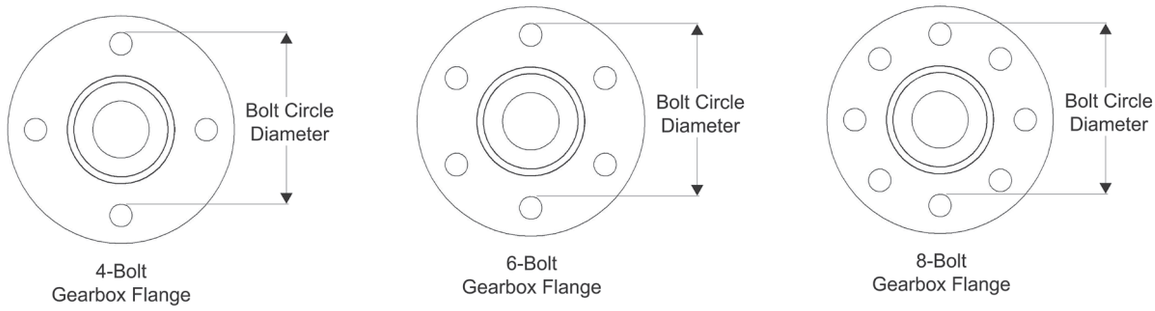
Before ordering a coupling, you will need to examine your current gearbox flange and propeller shaft flange.

- To do this, remove all bolts from the flanges.
- Slide the propeller shaft flange aft of the gearbox flange approximately 50mm.

These measurements are best taken with a caliper.

Step 2 - Number of bolt holes *(also referred to as Pitch Circle Diameter)*

In each gearbox flange, measure the outside edge of one hole, to the inside edge of the hole directly across from it. This is the bolt circle diameter. (Recommended: Measure two different sets of holes and compare results).



Step 3 - Number of bolt holes

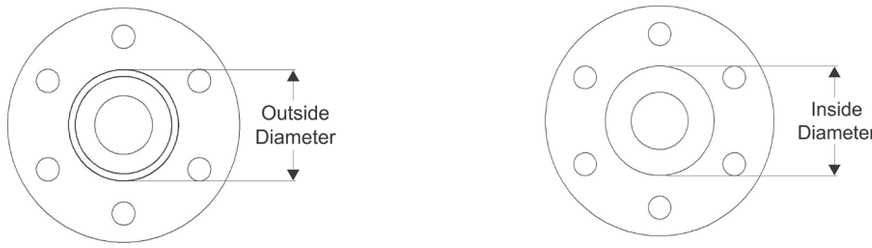
Count the number of bolt holes in the gearbox flange.

Step 4 - Gearbox flange bolt hole size

Measure the inside diameter of one or more of the holes in the gearbox flange.

Step 5 - Index ring type: Male or Female *(also referred to as **spigot** or **pilot**)*

Male index ring - Measure the inside diameter of the *metal index ring on the face* of the gearbox flange.
Female index ring - Measure the inside diameter of the *circular cavity in the center* of the gearbox flange.



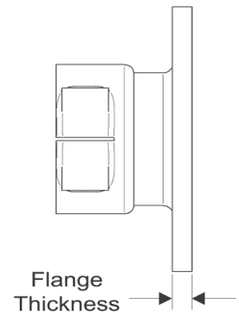
Male index ring

Female index ring

How to Measure

Step 6 - Propeller shaft flange thickness

Measure the propeller shaft flange thickness at its edge.



Step 7 - Drive train measurements

Propeller clearance from rudder:
The propeller shaft may have to be trimmed before installing the Isoflex coupling. Check that the the rudder is *at least 20% of the propeller shaft diameter aft* of the propeller, for proper water flow off the prop and onto the rudder.

Propeller clearance from strut:
The front end of the propeller should be *no more than one shaft diameter aft of the strut*, to prevent shaft vibration.

Step 8 - Torque calculation

For the coupling to work correctly, it must first be strong enough to meet the torque rating of your installation. This means it must be able to carry the torque loads generated by the engine/transmission during normal operation.

Before installing the coupling, determine the maximum allowable torque rating of your engine/transmission. Use the formulae below to calculate the rating for your specific installation and compare it to the coupling rating.

Regular Isoflex couplings are black in color and for some models a high torque option is available in dark blue.

Conversion Factors

1 ft-lb = 1.356 Nm	1 hp = 0.746 kW
1 Nm = 0.7376 ft-lb	1 kW = 1.34 hp

To determine the approximate engine/gearbox output torque in Nm, use one of the formulae below:

$$\text{Torque (Nm)} = \frac{\text{(Engine power (hp) x 7124 x gear reduction ratio)}}{\text{Engine RPM}}$$

$$\text{Torque (Nm)} = \frac{\text{(Engine power (kW) x 9550 x gear reduction ratio)}}{\text{Engine RPM}}$$

Torque (Nm) = 1.356 x Torque (ft-lb)

To determine the approximate engine/gearbox output torque in ft-lbs, use one of the formulae below:

$$\text{Torque (ft-lb)} = \frac{\text{(Engine power (hp) x 5252 x gear reduction ratio)}}{\text{Engine RPM}}$$

$$\text{Torque (ft-lb)} = \frac{\text{(Engine power (kW) x 7038 x gear reduction ratio)}}{\text{Engine RPM}}$$

Torque (ft-lb) = 0.737 x Torque (Nm)

How to Measure

Step 9 - Vessel operation type

Once you have identified the maximum output torque for your application, see the definitions below/to the right to determine which normal operation description best fits your vessel.

Refer to the torque charts that relate to the number of bolts in your coupling. Note the torque rating in the chart which matches:

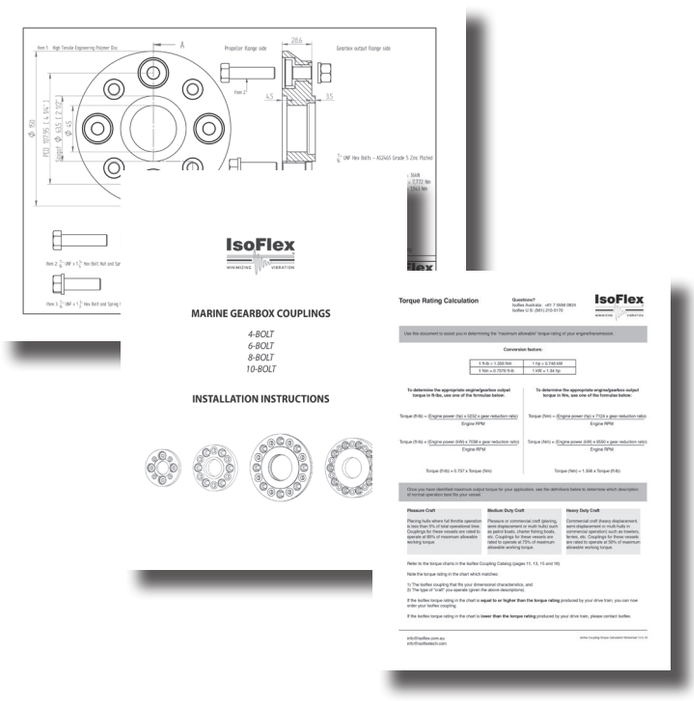
1) The Isoflex coupling that fits your dimensional characteristics,

and

2) The type of "craft" you operate (given the above descriptions).

If the Isoflex torque rating in the chart is **equal to or higher than the torque rating** produced by your drive train, you can now order your Isoflex coupling.

If the Isoflex torque rating in the chart is **lower than the torque rating** produced by your drive train, please contact Isoflex.



Pleasure Craft

Planing hulls where full throttle operation is less than 5% of total operational time. Couplings for these vessels are rated to operate at 85% of maximum allowable working torque.

Medium Duty Craft

Pleasure or commercial craft (planing, semi-displacement or multi-hulls) such as patrol boats, charter fishing boats, etc. Couplings for these vessels are rated to operate at 75% of maximum allowable working torque.

Heavy Duty Craft

Commercial craft (heavy displacement, semi-displacement or multi-hulls in commercial operation) such as trawlers, ferries, etc. Couplings for these vessels are rated to operate at 50% of maximum allowable working torque.

Available at isoflex.com.au and isoflextech.com

- ✓ Gearbox coupling selector tool
- ✓ Coupling torque rating worksheet
- ✓ Data sheets (general arrangements)
- ✓ Installation instructions

4-BOLT COUPLINGS

Dimensions

UNC = Unified National Coarse threads
UNF = Unified National Fine threads

METRIC DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(mm)			(mm)	(mm)	(mm)	(mm)	(kg)
IFC-4200-90	78	M10	F	50	125	35	25.0	0.8
IFC-4300-95	82.55	3/8" UNF	F	63.5	125	45	25.0	0.7
IFC-4300-SP	82.55	3/8" UNF	F	66.80	125	45	25.0	0.7
IFC-4400-95	100	M10	F	65	145	45	25.0	0.9
IFC-4500-95	107.95	7/16" UNF	F	63.5	150	45	28.6	1.2
IFC-4500-HT	107.95	7/16" UNF	F	63.5	150	45	28.6	1.2
IFC-4500IV-HT	107.95	7/16" UNF	F	63.5	150	54	36.0	1.5
IFC-4550-95	107.95	7/16" UNF	F	63.5	150	45	28.6	1.2
IFC-4550-HT	107.95	7/16" UNF	F	63.5	150	45	28.6	1.2
IFC-4600-95	80	M10	M	60	125	35	25.0	0.8
IFC-4700-95*	95.25	7/16" UNF	F	69.85	135	50	36.0	1.2
IFC-4700-HT*	95.25	7/16" UNF	F	69.85	135	50	36.0	1.2
IFC-4800-95*	79.38	3/8" UNF	F	60.32	125	35	25.0	0.7
IFC-4900-95*	120.65	1/2" UNC	F	95.25	175	50	36.6	2.1

IMPERIAL DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(in)			(in)	(in)	(in)	(in)	(lb)
IFC-4200-90	3.07	M10 (3/8" approx)	F	1.97	4.92	1.38	1	1.8
IFC-4300-95	3 1/4	3/8" UNF	F	2 1/2	4.92	1.77	1	1.5
IFC-4300-SP	3 1/4	3/8" UNF	F	2.63	4.92	1.77	1	1.5
IFC-4400-95	3.94	M10 (3/8" approx)	F	2.56	5.71	1.77	1	2.0
IFC-4500-95	4 1/4	7/16" UNF	F	2 1/2	5.91	1.77	1 1/8	2.6
IFC-4500-HT	4 1/4	7/16" UNF	F	2 1/2	5.91	1.77	1 1/8	2.6
IFC-4500IV-HT	4 1/4	7/16" UNF	F	2 1/2	5.91	2.13	1.42	3.3
IFC-4550-95	4 1/4	7/16" UNF	F	2 1/2	5.91	1.77	1 1/8	2.6
IFC-4550-HT	4 1/4	7/16" UNF	F	2 1/2	5.91	1.77	1 1/8	2.6
IFC-4600-95	3.15	M10 (3/8" approx)	M	2.36	4.92	1.38	1	1.8
IFC-4700-95*	3 3/4	7/16" UNF	F	2 3/4	5.31	1.97	1.42	2.6
IFC-4700-HT*	3 3/4	7/16" UNF	F	2 3/4	5.31	1.97	1.42	2.6
IFC-4800-95*	3 1/8	3/8" UNF	F	2 3/8	4.92	1.38	1	1.5
IFC-4900-95*	4 3/4	1/2" UNF	F	3 3/4	6.89	1.97	1.44	4.6

* Will work with Spicer configuration (refer to page 17)

4-BOLT COUPLINGS

Working Torque Ratings

METRIC

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(Nm)	(Nm)	(Nm)
IFC-4200-90	400	600	680
IFC-4300-95	500	750	850
IFC-4300-SP	500	750	850
IFC-4400-95	500	750	850
IFC-4500-95	675	1000	1150
IFC-4500-HT	1180	1770	2000
IFC-4500IV-HT	1180	1770	2000
IFC-4550-95	435	650	740
IFC-4550-HT	900	1350	1530
IFC-4600-95	375	560	640
IFC-4700-95*	600	900	1000
IFC-4700-HT*	1250	1875	2100
IFC-4800-95*	310	465	525
IFC-4900-95*	1200	1800	2000

IMPERIAL

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(ft-lb)	(ft-lb)	(ft-lb)
IFC-4200-90	290	440	500
IFC-4300-95	360	550	620
IFC-4300-SP	360	550	620
IFC-4400-95	360	550	620
IFC-4500-95	490	730	840
IFC-4500-HT	860	1300	1470
IFC-4500IV-HT	860	1300	1470
IFC-4550-95	320	470	540
IFC-4550-HT	660	990	1120
IFC-4600-95	270	410	470
IFC-4700-95*	440	660	730
IFC-4700-HT*	920	1380	1540
IFC-4800-95*	220	340	380
IFC-4900-95*	880	1320	1470

* Will work with Spicer configuration (refer to page 17)

Specific coupling performance data sheets are available at isoflex.com.au and isoflextech.com

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6-BOLT COUPLINGS

Dimensions

METRIC DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(mm)			(mm)	(mm)	(mm)	(mm)	(kg)
IFC-6000-95	98.43	7/16" UNF	M	63.5	150	50	32.0	1.6
IFC-6000-HT	98.43	7/16" UNF	M	63.5	150	50	32.0	1.6
IFC-6100-95	120.6	1/2" UNC	M	76.2	160	60	38.0	2.4
IFC-6100-HT	120.6	1/2" UNC	M	76.2	160	60	38.0	2.4
IFC-6100IV-HT	120.6	1/2" UNC	M	76.2	160	60	38.0	2.6
IFC-6125-95	120.6	1/2" UNC	F	76.2	160	60	38.0	2.4
IFC-6150-95	120.6	M16 SHCS	M	76.2	160	60	38.0	3.1
IFC-6150-HT	120.6	M16 SHCS	M	76.2	160	60	38.0	3.1
IFC-6155-95	120.6	M16 SHCS	M	76.2	160	60	38.0	3.0
IFC-6155-HT	120.6	M16 SHCS	M	76.2	160	60	38.0	3.0
IFC-6300-95	152.4	M16 SHCS	M	95.25	212	73	38.0	4.2
IFC-6300-HT	152.4	M16 SHCS	M	95.25	212	73	38.0	4.2
IFC-6300IV-HT	152.4	M16 SHCS	M	95.25	212	73	38.0	4.6
IFC-6400-95	152.4	M16 SHCS	M	95.25	195	73	38.0	3.8
IFC-6400-HT	152.4	M16 SHCS	M	95.25	195	73	38.0	3.8
IFC-6500-95	260	3/4" UNC	F	170	330	95	45.0	11.0
IFC-6600-95	205	M16 SHCS	F	130	260	95	38.0	5.7
IFC-6600-HT	205	M16 SHCS	F	130	260	95	38.0	5.7
IFC-6700-95	146	M14 SHCS	F	110	195	75	45.0	3.6
IFC-6700-HT	146	M14 SHCS	F	110	195	75	45.0	3.6

IMPERIAL DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(in)			(in)	(in)	(in)	(in)	(lb)
IFC-6000-95	3 7/8	7/16" UNF	M	2 1/2	5.91	1.97	1 1/4	3.5
IFC-6000-HT	3 7/8	7/16" UNF	M	2 1/2	5.91	1.97	1 1/4	3.5
IFC-6100-95	4 3/4	1/2" UNC	M	3	6.30	2.36	1 1/2	5.3
IFC-6100-HT	4 3/4	1/2" UNC	M	3	6.30	2.36	1 1/2	5.3
IFC-6100IV-HT	4 3/4	1/2" UNC	M	3	6.30	2.36	1 1/2	5.7
IFC-6125-95	4 3/4	1/2" UNC	F	3	6.30	2.36	1 1/2	5.3
IFC-6150-95	4 3/4	M16 SHCS (5/8" approx)	M	3	6.30	2.36	1 1/2	6.8
IFC-6150-HT	4 3/4	M16 SHCS (5/8" approx)	M	3	6.30	2.36	1 1/2	6.8
IFC-6155-95	4 3/4	M16 SHCS (5/8" approx)	M	3	6.30	2.36	1 1/2	6.6
IFC-6155-HT	4 3/4	M16 SHCS (5/8" approx)	M	3	6.30	2.36	1 1/2	6.6
IFC-6300-95	6	M16 SHCS (5/8" approx)	M	3 3/4	8.35	2.87	1 1/2	9.3
IFC-6300-HT	6	M16 SHCS (5/8" approx)	M	3 3/4	8.35	2.87	1 1/2	9.3
IFC-6300IV-HT	6	M16 SHCS (5/8" approx)	M	3 3/4	8.35	2.87	1 1/2	10.1
IFC-6400-95	6	M16 SHCS (5/8" approx)	M	3 3/4	7.68	2.87	1 1/2	8.4
IFC-6400-HT	6	M16 SHCS (5/8" approx)	M	3 3/4	7.68	2.87	1 1/2	8.4
IFC-6500-95	10 1/4	3/4" UNC	F	6.69	12.99	3.74	1 3/4	24.3
IFC-6600-95	8.07	M16 SHCS (5/8" approx)	F	5.12	10.24	3.74	1 1/2	12.6
IFC-6600-HT	8.07	M16 SHCS (5/8" approx)	F	5.12	10.24	3.74	1 1/2	12.6
IFC-6700-95	5 3/4	M14 SHCS (9/16" approx)	F	4.33	7.68	2.95	1 3/4	7.9
IFC-6700-HT	5 3/4	M14 SHCS (9/16" approx)	F	4.33	7.68	2.95	1 3/4	7.9

SHCS = Socket head cap screw UNC = Unified National Coarse threads UNF = Unified National Fine threads

6-BOLT COUPLINGS

Working Torque Ratings

METRIC

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(Nm)	(Nm)	(Nm)
IFC-6000-95	925	1375	1575
IFC-6000-HT	1350	2020	2350
IFC-6100-95	3050	4575	5175
IFC-6100-HT	3950	5940	6700
IFC-6100IV-HT	3050	4575	5175
IFC-6125-95	3050	4575	5175
IFC-6150-95	3050	4575	5175
IFC-6150-HT	4270	6405	7245
IFC-6155-95	3050	4575	5175
IFC-6155-HT	4270	6405	7245
IFC-6300-95	3600	5400	6120
IFC-6300-HT	4800	7200	8160
IFC-6300IV-HT	3600	5400	6120
IFC-6400-95	3000	4500	5100
IFC-6400-HT	4400	6600	7480
IFC-6500-95	8950	13400	Use Medium
IFC-6600-95	6000	9000	Use Medium
IFC-6600-HT	7450	11170	Use Medium
IFC-6700-95	3600	5400	6120
IFC-6700-HT	4800	7000	8000

IMPERIAL

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(ft-lb)	(ft-lb)	(ft-lb)
IFC-6000-95	680	1010	1160
IFC-6000-HT	990	1480	1730
IFC-6100-95	2240	3370	3810
IFC-6100-HT	2910	4370	4930
IFC-6100IV-HT	2240	3370	3810
IFC-6125-95	2240	3370	3810
IFC-6150-95	2240	3370	3810
IFC-6150-HT	3140	4720	5330
IFC-6155-95	2240	3370	3810
IFC-6155-HT	3140	4720	5330
IFC-6300-95	2650	3970	4510
IFC-6300-HT	3530	5300	6010
IFC-6300IV-HT	2650	3970	4510
IFC-6400-95	2210	3310	3750
IFC-6400-HT	3240	4860	5510
IFC-6500-95	6590	9870	Use Medium
IFC-6600-95	4420	6630	Use Medium
IFC-6600-HT	5490	8230	Use Medium
IFC-6700-95	2600	3900	4430
IFC-6700-HT	3500	5100	5900

Specific coupling performance data sheets are available at isoflex.com.au and isoflextech.com

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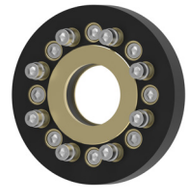
8-BOLT COUPLINGS

Dimensions



SHCS = Socket head cap screw
UNC = Unified National Coarse threads
UNF = Unified National Fine threads

METRIC DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(mm)			(mm)	(mm)	(mm)	(mm)	(kg)
IFC-8100-95	190.5	M16 SHCS	M	152.4	275	95	38.0	7.4
IFC-8100-HT	190.5	M16 SHCS	M	152.4	275	95	38.0	7.4
IFC-8200-95	190.5	M16 SHCS	M	152.4	242	95	38.0	6.8
IFC-8200-HT	190.5	M16 SHCS	M	152.4	242	95	38.0	6.8
IFC-8245-95	190.5	M16 SHCS	M	152.4	235	95	45.0	7.2
IFC-8245-HT	190.5	M16 SHCS	M	152.4	235	95	45.0	7.2
IFC-8300-95	152.4	M16 SHCS	M	95.25	195	73	38.0	4.5
IFC-8400-95	200	M16 SHCS	M	110	275	75	38.0	6.4
IFC-8400-HT	200	M16 SHCS	M	110	275	75	38.0	6.4
IFC-8534-95	222.25	3/4" UNC	M	127	315	75	45.0	10.9
IFC-8534-HT	222.25	3/4" UNC	M	127	315	75	45.0	10.9
IFC-8600-95	230	M20	M	150	315	100	45.0	11.4
IFC-8690-95	228.6	3/4" UNC	M	152.4	300	95	45.0	10.7
IFC-8695-95	241.3	3/4" UNC	M	152.4	330	95	45.0	11.4
IFC-8695-HT	241.3	3/4" UNC	M	152.4	330	95	45.0	11.4
IFC-8700-95	280	7/8" UNC	F	200	355	75	50.0	19.4
IFC-8800-95	340	1" UNC	M	180	455	130	60.0	30.5
IFC-8900-95	300	7/8" UNC	M	180	400	130	50.0	25.0
IFC-81610-HT*	155.6	3/8" UNF	F	168.28	220	50	28.0	2.2
IFC-81710-HT*	184.15	3/8" UNF	F	196.85	241	74	28.0	2.4

IMPERIAL DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(in)			(in)	(in)	(in)	(in)	(lb)
IFC-8100-95	7 1/2	M16 SHCS (5/8" approx)	M	6	10.83	3.74	1 1/2	16.3
IFC-8100-HT	7 1/2	M16 SHCS (5/8" approx)	M	6	10.83	3.74	1 1/2	16.3
IFC-8200-95	7 1/2	M16 SHCS (5/8" approx)	M	6	9.53	3.74	1 1/2	15.0
IFC-8200-HT	7 1/2	M16 SHCS (5/8" approx)	M	6	9.53	3.74	1 1/2	15.0
IFC-8245-95	7 1/2	M16 SHCS (5/8" approx)	M	6	9.25	3.74	1 3/4	15.9
IFC-8245-HT	7 1/2	M16 SHCS (5/8" approx)	M	6	9.25	3.74	1 3/4	15.9
IFC-8300-95	6	M16 SHCS (5/8" approx)	M	3 3/4	7.68	2.87	1 1/2	9.9
IFC-8400-95	7 7/8	M16 SHCS (5/8" approx)	M	4.33	10.83	2.95	1 1/2	14.1
IFC-8400-HT	7 7/8	M16 SHCS (5/8" approx)	M	4.33	10.83	2.95	1 1/2	14.1
IFC-8534-95	8 3/4	3/4" UNC	M	5	12.40	2.95	1 3/4	24.0
IFC-8534-HT	8 3/4	3/4" UNC	M	5	12.40	2.95	1 3/4	24.0
IFC-8600-95	9.06	M20 (3/4" approx)	M	5.91	12.40	3.94	1 3/4	25.1
IFC-8690-95	9	3/4" UNC	M	6	11.81	3.74	1 3/4	23.6
IFC-8695-95	9 1/2	3/4" UNC	M	6	12.99	3.74	1 3/4	25.1
IFC-8695-HT	9 1/2	3/4" UNC	M	6	12.99	3.74	1 3/4	25.1
IFC-8700-95	11	7/8" UNC	F	7 7/8	13.98	2.95	2	42.8
IFC-8800-95	13.39	1" UNC	M	7.09	17.91	5.12	2.36	67.3
IFC-8900-95	11.80	7/8" UNC	M	7.09	15.75	5.12	1.97	55.1
IFC-81610-HT*	6 1/8	3/8" UNF	F	6 5/8	8.66	1.97	1.10	4.9
IFC-81710-HT*	7 1/4	3/8" UNF	F	7 3/4	9.50	2.93	1.10	5.3

* Will work with Spicer configuration (refer to page 17)

8-BOLT COUPLINGS

Working Torque Ratings

METRIC

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(Nm)	(Nm)	(Nm)
IFC-8100-95	6850	10275	Use Medium
IFC-8100-HT	8500	12750	Use Medium
IFC-8200-95	4500	6750	Use Medium
IFC-8200-HT	7900	11850	Use Medium
IFC-8245-95	4500	6750	Use Medium
IFC-8245-HT	7900	11850	Use Medium
IFC-8300-95	3000	4500	5100
IFC-8400-95	7000	10500	Use Medium
IFC-8400-HT	8500	12750	Use Medium
IFC-8534-95	8500	12750	Use Medium
IFC-8534-HT	12600	19000	Use Medium
IFC-8600-95	8650	12975	Use Medium
IFC-8690-95	8650	12975	Use Medium
IFC-8695-95	9000	13500	Use Medium
IFC-8695-HT	13350	20100	Use Medium
IFC-8700-95	10000	15000	Use Medium
IFC-8800-95	22500	33750	Use Medium
IFC-8900-95	18300	27500	Use Medium
IFC-81610-HT*	3700	5500	Use Medium
IFC-81710-HT*	Contact Isoflex		

IMPERIAL

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(ft-lb)	(ft-lb)	(ft-lb)
IFC-8100-95	5040	7570	Use Medium
IFC-8100-HT	6260	9390	Use Medium
IFC-8200-95	3310	4970	Use Medium
IFC-8200-HT	5820	8730	Use Medium
IFC-8245-95	3310	4970	Use Medium
IFC-8245-HT	5820	8730	Use Medium
IFC-8300-95	2210	3310	3750
IFC-8400-95	5150	7730	Use Medium
IFC-8400-HT	6260	9560	Use Medium
IFC-8534-95	6260	9390	Use Medium
IFC-8534-HT	9280	14000	Use Medium
IFC-8600-95	6370	9560	Use Medium
IFC-8690-95	6370	9560	Use Medium
IFC-8695-95	6630	9940	Use Medium
IFC-8695-HT	9830	14810	Use Medium
IFC-8700-95	7370	11050	Use Medium
IFC-8800-95	16580	24870	Use Medium
IFC-8900-95	13480	20260	Use Medium
IFC-81610-HT*	2720	4050	Use Medium
IFC-81710-HT*	Contact Isoflex		

* Will work with Spicer configuration (refer to page 17)

Specific coupling performance data sheets are available at isoflex.com.au and isoflextech.com

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10-BOLT COUPLINGS
Dimensions

METRIC DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(mm)			(mm)	(mm)	(mm)	(mm)	(kg)
IFC-10325-HT	170	M14 SHCS	M	140	212	75	45.0	5.0

IMPERIAL DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(in)			(in)	(in)	(in)	(in)	(lb)
IFC-10325-HT	6.69	M14 SHCS (9/16" approx)	M	5.51	8.35	2.95	1 3/4	11.0

SHCS = Socket head cap screw

10-BOLT COUPLINGS
Working Torque Ratings

METRIC

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(Nm)	(Nm)	(Nm)
IFC-10325-HT	5000	7500	8500

IMPERIAL

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(ft-lb)	(ft-lb)	(ft-lb)
IFC-10325-HT	3690	5530	6270

Specific coupling performance data sheets are available at isoflex.com.au and isoflextech.com

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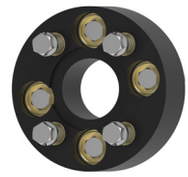
SPICER / UNI-JOINT COUPLINGS
Applications



SPICER FLANGE	ISOFLEX COUPLING
1310	IFC-4800-95
1350, 1410	IFC-4700-95
1410	IFC-4700-HT
1480, 1510, 1550	IFC-4900-95
1610	IFC-81610-HT
1710	IFC-81710-HT

SPICER / UNI-JOINT COUPLINGS
Dimensions

METRIC DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(mm)			(mm)	(mm)	(mm)	(mm)	(kg)
IFC-4700-95	95.25	7/16" UNF	F	69.85	135	50	36.0	1.2
IFC-4700-HT	95.25	7/16" UNF	F	69.85	135	50	36.0	1.2
IFC-4800-95	79.38	3/8" UNF	F	60.32	125	35	25.0	0.7
IFC-4900-95	120.65	1/2" UNC	F	95.25	175	50	36.6	2.1
IFC-81610-HT	155.6	3/8" UNF	F	168.28	220	50	28.0	2.2
IFC-81710-HT	184.15	3/8" UNF	F	196.85	241	74	28.0	2.4

IMPERIAL DIMENSIONS

COUPLING	GEARBOX FLANGE BOLT CIRCLE DIAMETER	GEARBOX FLANGE BOLT SIZE	GEARBOX FLANGE INDEX RING TYPE	GEARBOX FLANGE INDEX RING DIAMETER	ISOFLEX COUPLING OUTSIDE DIAMETER	ISOFLEX COUPLING INSIDE DIAMETER	ISOFLEX COUPLING THICKNESS	APPROX. WEIGHT INCL BOLT SET
	(in)			(in)	(in)	(in)	(in)	(lb)
IFC-4700-95	3 3/4	7/16" UNF	F	2 3/4	5.31	1.97	1.42	2.6
IFC-4700-HT	3 3/4	7/16" UNF	F	2 3/4	5.31	1.97	1.42	2.6
IFC-4800-95	3 1/8	3/8" UNF	F	2 3/8	4.92	1.38	1	1.5
IFC-4900-95	4 3/4	1/2" UNC	F	3 3/4	6.89	1.97	1.44	4.6
IFC-81610-HT	6 1/8	3/8" UNF	F	6 5/8	8.66	1.97	1.10	4.9
IFC-81710-HT	7 1/4	3/8" UNF	F	7 3/4	9.50	2.93	1.10	5.3

UNC = Unified National Coarse threads
UNF = Unified National Fine threads

SPICER / UNI-JOINT COUPLINGS
Working Torque Ratings

METRIC

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(Nm)	(Nm)	(Nm)
IFC-4700-95	600	900	1000
IFC-4700-HT	1250	1875	2100
IFC-4800-95	310	465	525
IFC-4900-95	1200	1800	2000
IFC-81610-HT	3700	5500	Use Medium
IFC-81710-HT	Contact Isoflex		

IMPERIAL

COUPLING	HEAVY DUTY	MEDIUM DUTY	PLEASURE CRAFT
	(ft-lb)	(ft-lb)	(ft-lb)
IFC-4700-95	440	660	730
IFC-4700-HT	920	1380	1540
IFC-4800-95	220	340	380
IFC-4900-95	880	1320	1470
IFC-81610-HT	2720	4050	Use Medium
IFC-81710-HT	Contact Isoflex		

COUPLING CROSS REFERENCE GUIDE

Isoflex couplings are designed to suit standard SAE gearbox flanges and as such, have a direct replacement for most coupling manufacturers. In some instances there may be slight differences but in most cases it should be a direct swap-out with no adjustments needed.

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
GLOBE DRIVESAVER TO ISOFLEX		
303, 353, 354, 404	n/a	
404A	IFC-4300-95	
404AC	IFC-4300-SP	Special index ring (spigot)
404V	IFC-4600-95	
404S	n/a	
424Y	IFC-4200-90	
4756	IFC-6000-95	
4756PR	IFC-6000-HT	
454	n/a	
504	IFC-4500-95	
504A, 504AC	n/a	
504PR	IFC-4500-HT	
504H	IFC-4550-95	
504HPR	IFC-4550-HT	
524Y	IFC-4400-95	
554	n/a	
4756	IFC-6000-95	
5756	IFC-6100-95	
5756A	IFC-6125-95	Female index ring (spigot)
5756APR	IFC-6125-HT	
5756AZF	IFC-6100-95	Male index ring (spigot)
5756AZFPR	IFC-6100-HT	
5756B, 5756T	IFC-6150-95	Isoflex 16mm bolts
6256	n/a	
7256	IFC-6300-95	Or IFC-6400-95
7256PR	IFC-6300-HT	
7258ZPR	IFC-8300-95	
7306Z	IFC-6400-95	Isoflex 7mm thicker
8078Z	n/a	
8010Z	IFC-10325-HT	Isoflex 7mm thicker
8858Z	n/a	
908 and 908PR	IFC-8100-95	Isoflex 1/2" thicker
908S	IFC-8200-95	Isoflex 1/2" thicker
908AC	n/a	
1058	IFC-8534-95	
1108	IFC-8695-95	
1108A	IFC-8690-95	
1308	n/a	

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
POLY FLEX TO ISOFLEX		
424(90)	IFC-4200-90	
434(90)/(95)	IFC-4300-95	
534(90)/(95)	IFC-4400-95	
524(90)/(95)	IFC-4500-95	
524FRL	IFC-4550-95	
464(90)/(95)	IFC-4600-95	
547(90)/(95)	IFC-4700-95	
484(90)/(95)	IFC-4800-95	
1550	IFC-4900-95	
546(95)	IFC-6000-95	
616 1/2 M	IFC-6100-95	
616 1/2 F	IFC-6125-95	
616 5/8 & 656	IFC-6150-95	
7206 5/8	IFC-6300-95	
7206 3/4	IFC-6300-95	+ 19mm T bushing kit
7606	IFC-6400-95	
7606 3/4	IFC-6400-95	+ 19mm T bushing kit
9858 5/8	IFC-8100-95	
9858 3/4	IFC-8100-95	+ T bushings to suit gearbox
9114	IFC-8200-95	
9114 3+3 IRM	IFC-8200-95	
9114	IFC-8200-95	+ 22mm T bushing kit
7608	IFC-8300-95	
9934	IFC-8400-95	
10834	IFC-8534-95	
11834A	IFC-8690-95	
11834	IFC-8695-95	
2308	IFC-8600-95	
2808	IFC-8700-95	
3408	IFC-8800-95	

COUPLING CROSS REFERENCE GUIDE

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
R&D TO ISOFLEX		
RA900-003	IFC-6000-95	
910-001	IFC-4300-95	
910-002	IFC-4200-95	
910-003	IFC-6100-95	
910-004	IFC-4300-95	
910-005	IFC-4300-95	Special index ring
910-006	IFC-6150-95	
910-007	IFC-4600-95	
910-009	IFC-4500-95	
910-012	IFC-4400-95	
910-013	n/a	
910-014	IFC-4300-95	
910-015	n/a	
910-016	n/a	
910-017	IFC-6400-95	+ 19mm T bushing kit
910-018	IFC-6400-95	
910-019	IFC-4600-95	
910-020	IFC-4600-95	
910-021	n/a	
910-022	IFC-8245-HT	
910-024	IFC-8534-95	+ 1" T bushing kit
910-025	IFC-6100-95 or IFC-6125-95	
910-026	IFC-6150-95	
910-027	n/a	
910-028	n/a	
910-029	IFC-4500-HT	
910-030	n/a	
910-032	IFC-6125-95	
910-033	IFC-6150-95	
910-034	IFC-4500-95	
910-035	n/a	
910-036	n/a	
910-037	IFC-4500-95	
910-038	n/a	
910-039	IFC-6400-95	+ 19mm T bushing kit
910-040	IFC-6400-95	
910-041	n/a	
910-042	n/a	
910-043	IFC-4200-90	
910-044	IFC-4500-95	
910-045	n/a	

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
R&D TO ISOFLEX	continued	
910-046	IFC-8200-95	+ 22mm T bushing kit
910-047	n/a	
910-048	IFC-8200-95	+ 22mm T bushing kit
910-049	n/a	
910-050	IFC-8200 -95	+ 22mm T bushing kit
910-051	IFC-8695-95	
910-052	IFC-6000-95	
910-053	n/a	
910-054	IFC-6100-95 or IFC-6125-95	
910-055	IFC-4300-95	
910-057	IFC-4500-HT	
910-058	n/a	
910-059	IFC-4600-95	

Notes

Due to different design features, Isoflex coupling thicknesses and R&D coupling thicknesses may vary. Contact Isoflex directly for more information.

TRANSMISSION CROSS REFERENCE GUIDE

Common Transmission Makes/Models

This guide includes an overview of common transmission makes and models, and the corresponding Isoflex coupling. Isoflex offers solutions for pleasure and light commercial vessels, and custom solutions for heavy commercial use.

If you can't find your model here, we're here to help. Please contact Isoflex directly.

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
TWIN DISC		
MG340, MG360, MG5010SC, MG5011SC, MG5010V	IFC-4300-95	
MG5005A, MG5012C, MG5015A, MG5020SC, MG5055A	IFC-4500-HT	
MG502-1, MG502, MG502A, MG502V	IFC-6000-95	
MG506, MG506-1, MG506-1A, MG506SC, MG5061, MG5061A, MG5062V	IFC-6150-95 or IFC-6300-95	+ 16mm to 19mm T bushing kit
MG5061A, MG5062V	IFC-6155-95	* See note below
MG5061SC	IFC-6155-95	
MG506DC	IFC-6400-95	
MG507, 507A-1, MG507SC 6" flange	IFC-6150-95	** See note below
MG507, 507A-1, MG507SC 7 1/4" flange	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG507-2, MG507A-2	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG509SC	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG509DC, MG509CP	IFC-8534-95	
MG510, MG510A, MG510SC	IFC-8100-95 or IFC-8534-95	IFC-8100-95 + 16mm to 22mm T bushing kit, or IFC-8534-95 + Adaptor
MG510DC	IFC-8534-95	+ 19mm to 25mm T bushing kit
MG511, MG512, MG513, MG514SC	IFC-8534-95	+ 19mm to 25mm T bushing kit
MG514 C DC	IFC-8695-95	
MG516 DC	IFC-8690-95	+ 19mm to 25mm T bushing kit
MG518, MG520, MG530, MG540	Contact Isoflex	
MG5010A, MG5011A, MG5011SC	Contact Isoflex	
MG5010DC, MG5050V	IFC-6150-95	
MG5050A, MG5050SC	IFC-6150-95	
MG5050	IFC-6150-95	+ Adaptor
MG5065A, MG5065SC	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG5075A 6" flange	IFC-6150-95	** See note below
MG5075A 7 1/4" flange	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG5075SC, MGX5075V	IFC-6400-95	+ 16mm to 19mm T bushing kit
MG5081, MG5081A, MG5082A, MG5082SC	IFC-6400-HT	+ 16mm to 19mm T bushing kit
MG5085, MG5085A, MG5085SC, MG5090A, MG5091, MG5091A	IFC-6400-HT	+ 16mm to 19mm T bushing kit

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
TWIN DISC	continued	
MG5095A, MGX5095A	IFC-6400-95	+ 16mm to 20mm special T bushing kit
MG5091DC, MG509DC, MG5111DC, MG5114DC, MG5113, MG514DC	IFC-8534-95	+ 19mm to 25mm T bushing kit
MG5111SC, 5111A, MGX5114IV	IFC-8100-95	+ 16mm to 22mm T bushing kit
MG5114A, MG514C, MGX5126A	IFC-8200-HT or IFC-8245-HT	+ 16mm to 22mm T bushing kit
MG5114SC	IFC-8200-HT or IFC-8245-HT	+ 16mm to 22mm T bushing kit
MG5114DC	IFC-8534-95	+ 19mm to 25mm T bushing kit
MG5135A, MGX5136A	IFC-8100-95	+ 16mm to 22mm T bushing kit
MG5135SC	IFC-8100-95	+ 16mm to 19mm T bushing kit
MG5141SC	IFC-8200-HT or IFC-8245-HT	+ 16mm to 25mm T bushing kit
MG5145A, MGX5145A, MGX5146A, MGX5147A	IFC-8400-95	= 16mm to 24mm T bushing kit
MGX5146DC	IFC-8534-95	+ Adaptor ** See note below
MG5202SC	IFC-8690-95	+ 19mm to 24mm T bushing kit

Notes

* Some gearbox variations such as the MG5061A and MG5062V may have an interference with the standard Isoflex coupling which will prevent it from being fitted. If there is interference such as with an oil pump, Isoflex has the IFC-6155 and IFC-4550 couplings with chamfered profiles to fit in this scenario. If the chamfered coupling still results in an interference, an adaptor may be required for the installation of a flexible coupling. It is important to check the coupling dimensions to ensure it will fit in your application.

** Depending on the engine and gearbox ratio, the output torque of the package may vary. The maximum output torque should always be checked and compared with the coupling torque limits. In some instances where a 95 coupling is listed, it may require a High Torque coupling if the horsepower, gearbox ratio or duty cycle is particularly high.

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Specifications are subject to change without notice.

TRANSMISSION CROSS REFERENCE GUIDE

Common Transmission Makes/Models

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
ZF		
5M, 10M, 12, 12M, 15M, 15MA, 15MIV, 25M, 25MA, 30M, 25, 25A, 45A, 450D, 45C with 4" Flange	IFC-4300-95	
41, A2/A3, 45A	IFC-4550-HT	
ZF63IV, 68IV	IFC-4500IV-HT	
68, 68A	IFC-4500-95 or IFC-4500-HT	Use 4 bolts only
50A2/A3, 63, 63A HSW630V, ZF90IVTS	IFC-4500-95 or IFC-4500-HT	
85IV, 800V1, 800V2, 80IV, 80-1IV	IFC-6100IV-HT	
80A, 85, 85A	IFC-6150-95	
220A	IFC-6000-HT	
220V	IFC-6300-95	
HSW220V-2, ZF110IVTS, 220IV	IFC-6100-95	
W220	IFC-8300-95	
280IV, 280-1, 280-1A, 285A, 285IV, 286A, 286IV, 301A, 301C, HSW800A2, HSW800A3, 280A, 280	IFC-6150-95	
220	IFC-6155-95 or IFC-6155-HT	
300TS, 300-1TS, 300ATS, 300-1ATS, 300VTS, 110ATS, 110IVTS, 220PL, 280V-LD, 280PL, 301PL-2, 301A-2	IFC-6150-95	
302IV, 304A, 304C, 305-1	IFC-8300-95	
305-2, 305-2A (10 bolt)	IFC-6300-95	+ Adaptor
311, 311A Using 8 bolt flange	IFC-8300-95	
311 10 bolt	IFC-10325-HT	
302, 310, 311, 311A Using 10 bolt flange	IFC-6300-95	+ Adaptor
320, 320A, 320PL	IFC-8534-95	+ Adaptor
325IV, 325-1, 325-1A (10 bolt flange option)	IFC-10325-HT	
325IV, 325-1, 325-1A (12 bolt)	IFC-8200-95	+ Adaptor
350, 350A, 350V (10 Bolt)	IFC-10325-HT	
350, 350A, 350V (12 Bolt)	IFC-8100-95	+ Adaptor
350, 350A, 350V (8 Bolt)	IFC-8100-95	+ Adaptor
360, 360A (10 bolt)	IFC-10325-HT	
360, 360A (12 bolt)	IFC-8200-95	+ Adaptor
400, 400A, 400IV, 400V	IFC-10325-HT	
500A, 500IV, 510-1A, 510V, 550, 550A, 550V, 550TS, 665, 665A, 665V, 665TS	IFC-10325-HT	
2000, 2000A, 2000V, 2050, 2050A, 2050V	Contact Isoflex	

Check torque in commercial applications. Flanges may vary depending on package or factory of origin's variations.

Note new ZF25A may interfere with oil pump - Isoflex coupling requires OD machining.

Review the Torque Rating

Before installing the coupling, determine the maximum allowable torque rating of your engine/transmission. Use the formulae below to calculate the rating for your specific installation and compare it to the coupling rating.

Conversion Factors

1 ft-lb = 1.356 Nm	1 hp = 0.746 kW
1 Nm = 0.7376 ft-lb	1 kW = 1.34 hp

To determine the approximate engine/gearbox output torque in Nm, use one of the formulae below:

$$\text{Torque (Nm)} = \frac{\text{(Engine power (hp) x 7124 x gear reduction ratio)}}{\text{Engine RPM}}$$

$$\text{Torque (Nm)} = \frac{\text{(Engine power (kW) x 9550 x gear reduction ratio)}}{\text{Engine RPM}}$$

Torque (Nm) = 1.356 x Torque (ft-lb)

To determine the approximate engine/gearbox output torque in ft-lbs, use one of the formulae below:

$$\text{Torque (ft-lb)} = \frac{\text{(Engine power (hp) x 5252 x gear reduction ratio)}}{\text{Engine RPM}}$$

$$\text{Torque (ft-lb)} = \frac{\text{(Engine power (kW) x 7038 x gear reduction ratio)}}{\text{Engine RPM}}$$

Torque (ft-lb) = 0.737 x Torque (Nm)

Commercial applications need close attention due to high demand and thrust. Contact Isoflex directly for more information.

TRANSMISSION CROSS REFERENCE GUIDE

Common Transmission Makes/Models

MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
ALLISON		
Allison M25	IFC-8100-95	+ 19mm T bushing kit
Allison M11, M15, M17, M20	IFC-6300-95	
Allison MH	IFC-8100-95	+ 19mm T bushing kit
BORG WARNER		
BW70C, BW71C 4", BW500, BW1000, BW1500	IFC-4300-95	
BW71C 5", BW72C 5", BW VELVET DRIVE 5000A	IFC-4500-95	
BW73C 6", BW 7000 SERIES	IFC-6100-95	
Note: Borg Warner is now part of ZF Group		
CAPITOL		
7700 and many others	IFC-8100-95	
HARDY SPICER		
1310	IFC-4800-95	
1350	IFC-4700-95	
1410	IFC-4700-95	Or use IFC-4700-HT
1480, 1510, 1550	IFC-4900-95	
1610	IFC-81610-HT	
1710	IFC-81710-HT	
HURTH / ZF		
HBW/HSW 5, HBW/HSW 10, HBW/HSW 35, HBW/HSW 40, HBW/HSW 50, HBW/HSW 100, HBW/HSW 125, HSW 150, HSW 150A, HSW 220, HSW 250	IFC-4300-95	
HSW 360, HSW 360A, HSW 400, HSW 450, HSW 450A, HSW 600, HSW 630, HSW 630A1, HSW 630H	IFC-4500-95	HSW 450A may need adaptor
HSW 800A	IFC-6100-95	
Note: If the model you are looking for is not listed here, see the ZF cross reference.		
NEWAGE PRM		
101, 140, 160, 260	IFC-4500-95	
175, 265, 310, 401, 402, 601 6" flange, 1000 6" flange	IFC-6125-95	
601, 1000 4:1, 1200S, 1500S, 1750S 7 1/4" flange	IFC-6300-95	
PRM DELTA, PRM 80, PRM 120, PRM 150	IFC-4300-95	
PRM 260, PRM 500, PRM 750	IFC-6125-95	
PRM 1000	IFC-6150-95	
PRM 1200D, PRM 1500D, PRM 1750D	IFC-8534-95	+ 19mm to 25mm T bushing kit
PRM 1000 DROP CENTRE 4:1	IFC-6300-95	

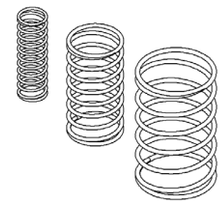
MANUFACTURER / MODEL #	ISOFLEX COUPLING	NOTES
NICO NAGATA		
Please contact Isoflex directly for coupling options for Nico Nagata transmissions.		
PARAGON		
4" Flange 2.63" Spigot required	IFC-4300-SP-95	
TECHNODRIVE		
TMC30, TM40P, TMC50, TMC60, TMC60A 4" Flange, TMC60E, TM260 4" Flange	IFC-4300-95	1 1/2" bolts required
TMC93, TMC93A, TMC345, TMC345A, TMC485, TMC545A	IFC-4500-95	
TM170, TM170A, TM880A	IFC-4500-HT	
TM130B, TM260, TM265A	IFC-6150-95	
TCM200B	IFC-6400-95	
TM360	IFC-8400-95	Check pump clearance
TM1200A	IFC-8300-95	
VOLVO		
MS, MS2, MS10, MS15, MS25, RB, MD10A, 2000 SERIES, MD7A, 11C, 38	IFC-4600-95	
MS3, MS4, MS4A, MS5	IFC-4500-95	
HS25A, HS45A, HS63A	IFC-4500-HT	
YANMAR KANSAKI		
YSE8,YSME8,YSBE8, YSE12,YSME12, YSBE12, 20M, 20H, 20G, 20F, JH-2-TF, 1GM10, 2GM20F, 3GM30F, 3HM/3HM35F, 2YM, 3YM, JH3, JH4 4" flange, YSM, YSB, SB, 2QM15, 2QM2030M, 30H, 30F, 30G 4" flange	IFC-4200-90	
30M, 30H, 30G 4 3/4" flange	IFC-4400-95	
KBW10, KM2P-1, KM2A, KM2C, KM3A, KM3A1, KM3P (4"), KM35A-2, KM35P	IFC-4200-90	
KBW20, KBW20-1, KBW21, KM4, KMH4, KMH4A, KMH4A-1, KH18 (3QM30, 4JHE, 4JH2, 4JH3, 4JH4 eng)	IFC-4400-95	
KM5, KM5A (4LH engines), KMH40	IFC-4550-95	
KMH40A, KMH41A, KMH50A, KMH50A-3, KMH51A	IFC-4550-HT	Check torque
KMH50V	IFC-4500IV-HT	Check torque
KMH60A/61A	IFC-6155-95	
KMH60V	n/a	
LH SERIES	IFC-4500-95	
YXH160	IFC-6600-95	
YXH180, YXH240	IFC-6500-95	
YX75, YX80	IFC-6700-95	

Isoflex has made every effort to identify gearbox couplings for common marine transmissions. However, these may vary due to original specification and suppliers. It is the responsibility of the end user/customer to check correctness of fit and duty cycle, etc.

General Comments on Installation

Electrical Isolation

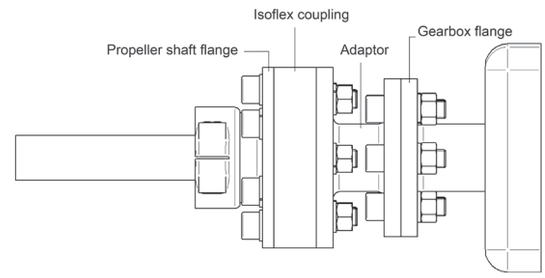
Isoflex couplings electrically isolate the propeller shaft from the engine and gearbox. If you want to ensure a secure electrical connection from the engine to the shaft and propeller, an internal coil spring (optional extra) may be fittted.



Adaptors

Some applications require an adaptor (sometimes referred to as a cotton reel or spool) to be fitted to the output flange of the gear-box to clear any obstructions (like an oil pump), and/or to allow a different bolt pattern between the output flange and the required coupling.

If your installation requires an adaptor it is recommended that it be manufactured by a marine engineering company from 1040 grade steel or equivalent and machined to the correct industry tolerances. Check carefully for fit and run-out once installed.



Dimensions

As gearbox manufacturers' dimensions and specifications are subject to change, it is necessary to check all dimensions to ensure the coupling fits and works correctly.

All Isoflex couplings are manufactured from engineering grade polymers. Although these materials are thermosetting polymers, dimensional changes may occur, depending on ambient operating (temperature) conditions. Steel spigots are used in large couplings to minimize the effect of thermal expansion and hence maintain axial run-out.

Full installation instructions are included with each coupling order and are available at isoflex.com.au and isoflextech.com

Tolerances

Tolerances on all machined index rings: +/- 0.002" (+/- 0.05mm) @ 25°C ambient temperature.
Tolerances on all other dimensions: +/- 0.02" (+/- 0.5mm) @ 25°C ambient temperature.

Recommended Bolt Assembly Torque

METRIC

Coupling bolt size	Recommended Assembly Torque		Recommended Bolt Grade
	ft-lb	Nm	
8mm	10	14	Class 8.8
10mm	31	42	Class 8.8
12mm	34	46	Class 10.9
14mm	63	85	Class 10.9
16mm	83	112	Class 10.9
20mm	150	200	Class 10.9

IMPERIAL

Coupling bolt size	Recommended Assembly Torque		Recommended Bolt Grade
	ft-lb	Nm	
3/8"	20	27	Grade 5
7/16"	32	43	Grade 5
1/2"	47	63	Grade 8
3/4"	155	210	Grade 8
7/8"	206	278	Grade 8
1"	250	338	Grade 8

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