RegalRexnord™

PRODUCT INFO SHEET

CENTAFLEX™-TIR

FOR HIGH VIBRATION CHALLENGES

The CENTAFLEX-TIR is a new generation of roller couplings with soft progressive torsional characteristics to serve innumerous complex and challenging applications, e.g. Stage V and gear chatter with zero passing. These include, but are not limited to, hybrid drivelines.

This advancement of our CENTAFLEX-R coupling reduces idling speed, thus achieving significant fuel savings. CENTAFLEX-TIR is ideal for boat drives, providing a very low stiffness even at high torque and speed, shifting the torsional resonance below idling speed and preventing gear chatter.

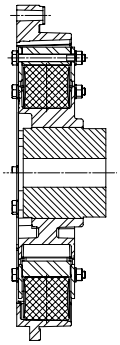
Construction machinery, industrial drives such as reciprocating pumps, general pump drives, trucks, variable speed gensets, and small/medium marine applications are perfect areas of application.

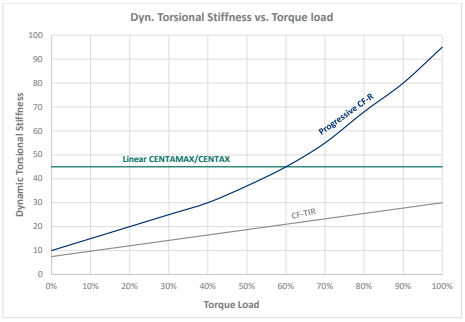
FEATURES

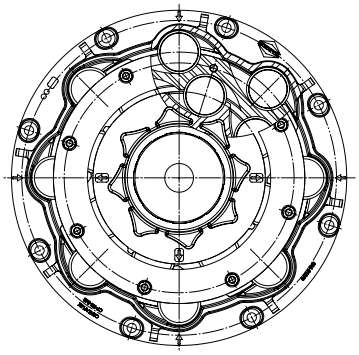
Robust
Soft progressive characteristics
High allowable power loss
Reduction of idling speed

AREAS OF APPLICATION

torque range	2.4 to 10 kNm
temperature range	> +100° C







DESIGN

Superior in design using rubber-in-compression concepts with modified chambers for smooth sliding of rollers, offers high reliability as it is free from a bonding process, common in couplings of equal performance under shear.

The new coupling family has been tested extensively for physical validation and achieved outstanding results.

FEATURES AND ADVANTAGES

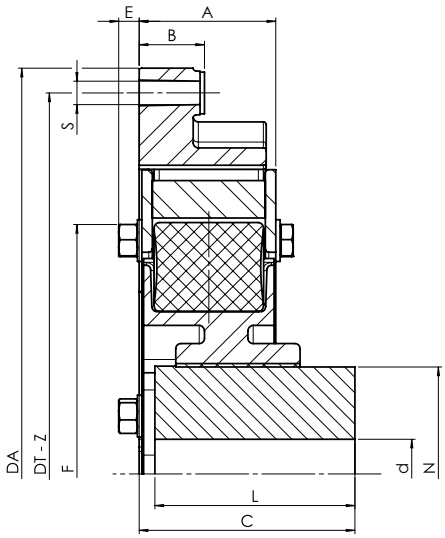
- CENTAFLEX-TIR is softer than CENTAFLEX-R (see diagram above)
- CENTAFLEX-TIR has 75% higher power loss load capacity dependent on sizes at high alternating torques compared to CENTAFLEX-R
- CENTAFLEX-TIR is an ideal solution for new generation Stage V engines
- High allowable energy loss as dual roller arrangements are integrated, and the introduction of middle rings helps to achieve better inner and outer ventilation
- Reduction of idling speed > reduction of fuel consumption and CO_2 emissions
- Significant reduction of alternating torque in the drive line > downsizing of system components, e.g. PVG
- Suitable for blind fitting in bell housings
- Economic/easy maintainable design
- High temperature capacity coupling design above 100° C is available on request

CENTA™

CENTAFLEX™-TIR

TECHNICAL DATA

Size	SAE J620	T_{KN} [kNm]	T_{Kmax} [kNm]	m_1 [kg]	J_1 [kgm²]	m_2 [kg]	J_2 [kgm²]	m_{ges} [kg]	n [min⁻¹]
178	11.5	2.4	7.2	4.6	0.11	10.4	0.06	15.0	4000
	14			6.1	0.17			16.5	3000
216	11.5	3.15	9.4	6.4	0.15	15.9	0.09	22.3	3500
	14			8.3	0.22			24.2	3000
268	14	4.25	12.5	11	0.44	28.1	0.31	39.1	3000
	18			13.8	0.61			41.9	2800
318	14	6.3	19	12.7	0.51	32.3	0.35	45	3000
	18			15.7	0.70			48	2800
420	18	10	30	17.7	1.10	51.3	0.90	69	2800
	21			24.6	1.71			75.9	2500



DIMENSIONS

CF-TIR Size	SAE J620	d min-max [mm]	N [mm]	L [mm]	A [mm]	B [mm]	C [mm]	E [mm]	F [mm]	S [mm]	Z	DA [mm]	DT [mm]
178	11.5	30 - 60	85	82	53.1	36	82.3	5.9	280	11.5	8x45°	352.4	333.4
	14				38.9	22.8	68.1	20.1	280	13.5		466.7	438.2
216	11.5	30 - 65	95	140	77.5	42	156	5.9	280	11.5	8x45°	352.4	333.4
	14				65.5	29	144	17.9	358	13.5		466.7	438.2
268	14	40 - 90	123	115	80.5	37.5	124	5.9	365	13.5	8x45°	466.7	438.2
	18				70.3	3	113.8	16.1	465	17	12x30°	571.5	542.9
318	14	40 - 90	123	130	92.5	47.5	138.5	5.9	365	13.5	8x45°	466.7	438.2
	18				82.8	3	128.8	15.6	465	17	12x30°	571.5	542.9
420	18	40 - 115	160	174.5	92.5	54	163	5.9	460	17	12x30°	571.5	542.9
	21					5		10	571			673.1	641.4

Regal Rexnord

regalrexnord.com/brands/centa

CENTA Antriebe Kirschey GmbH
Bergische Straße 7
42781 Haan Germany
+49-2129-912-0 Phone
+49-2129-2790 Fax
Kontaktieren Sie uns: centa.de@regalrexnord.com

regalrexnord.com

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