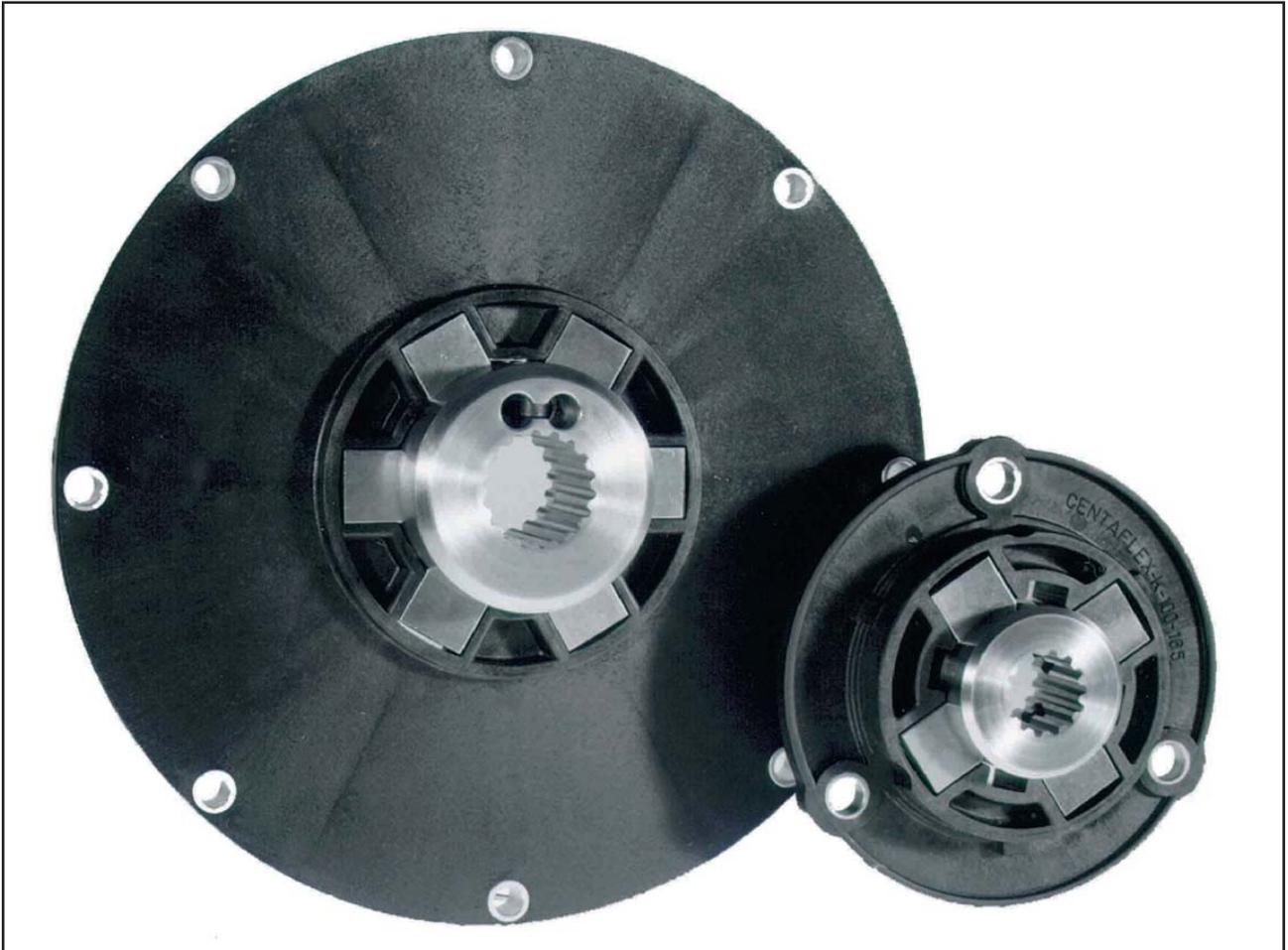


# CENTAFLEX<sup>®</sup>

## Series K



**are simple, robust, low priced couplings  
for the connection of  
Diesel engines with flange mounted hydraulic pumps  
and splitter gears.**

#### **Important areas of application**

The couplings are torsionally very stiff (almost rigid) enabling drives of hydraulic pumps and similar equipment having low mass of inertia to operate below the critical speeds by moving these above the operating speed range thus providing a drive free of harmful resonances.

Hydrostatic construction drives, mainly in the medium and low power range, e.g.:

Excavators, vibratory rollers, loaders, cranes, dumpers, forklifts, concrete mixers, concrete pumps, road finishers, rail vehicles, agricultural machines, tractors and small compressors.

### Salient Features and advantages:

- \* Compact, light, robust, safe in operation, long service life.
- \* Oil resistant and suitable for temperatures of  $-40^{\circ}$  to  $+150^{\circ}$  C ( $-40^{\circ}$  to  $+300^{\circ}$ F).
- \* High torsional stiffness - allowing operation below critical speed, without resonances, provided it is correctly selected.
- \* Service free combination of steel with highly shock resistant, temperature stabilized special Polyamid.
- \* Short mounting length, easy assembly since it can be plugged in axially.
- \* The hubs can be equipped with the proven, patented CENTALOC® clamping. With this the coupling hub can be fitted to splined shafts absolutely free of movement to eliminate fretting.
- \* The hubs can be modified in form and length as needed.
- \* Various series for standardized SAE-flywheels and non standard flywheels.
- \* Low priced and normally available from stock.

### Design and Materials

Modern design to give rational and economic manufacture - good material properties - design principle proven over the years.

### Hubs

High quality precision radial dogs of alloyed sintered steel are fastened to the steel hub which is machined all over (tensile strength  $600 \text{ N/mm}^2$  -  $85.000 \text{ psi}$ ). The mounting of these dogs is done in our works with precise fixtures and with controlled tightening torques ( $T_A = 90 \text{ Nm}$ ). Hubs with dogs are called "hub-stars". This should be seen as one unit and not be dismantled. The lateral flanks of the dogs are slightly crowned, to avoid edge pressure at angular misalignments.

### Technical Data

Size	Nominal Torque $T_{KN}$ (Nm)	Maximum Torque $T_{kmax}$ (Nm)	Max. Speed $N_{max}$ ( $\text{min}^{-1}$ )	Dyn. Torsional Stiffness $C_{Tdyn} \times 10^3$			
				0.25 $T_{KN}$	0.50 $T_{KN}$	0.75 $T_{KN}$	1.00 $T_{KN}$
100	300	800	500	55,0	62,0	90,0	120
125	800	1600	4500	155	180	315	460
150	1200	3000	4000	260	280	420	900
150D	2400	6000	4000	520	560 <sup>i</sup>	840	1800 <sup>ii</sup>
Relative Damping $\psi = 0,4$							

### Flywheel flanges

These flanges are moulded in high quality plastic strengthened with glass fibre to produce a heat stabilized product having high impact strength.

Fundamentally the flywheel flange is available in two different designs:

- a) **one piece**, with mounting measurements to SAE J620 and some other non standard flywheels.
- b) **two piece**, consisting of one universal plastic flange, which can be fitted with steel adaptor to any flywheel.

Such steel adaptors can be produced either by the customer himself or delivered by us. In the latter case the plastic flange is mounted onto the steel adaptor.

The one piece flanges can be mounted to the flywheel in two different positions, resulting in four different axial mounting lengths.

Using the different position of the flanges and different lengths of the hubs the ideal overall length for the coupling can be attained.

It is important that the flange is mounted in the correct position. We have numerous drawings for the various combinations of engines and pumps, gears etc., which include all important details, like position of the flange, length of the hub, spline of the hub, flange between pump and flywheel housing etc.

Therefore please ask for the right drawing for your specific application. Should we not have the drawing ready available, we will gladly make your specific drawing on our modern CAD system.

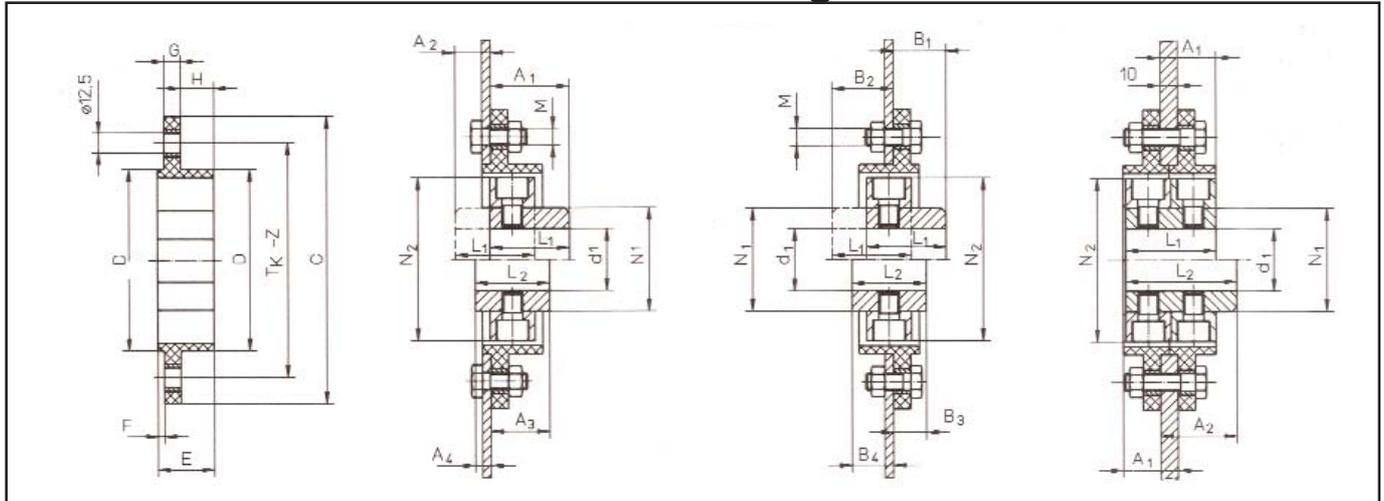
### Misalignment

As the coupling is torsionally very stiff, it is, of course, also very stiff in radial direction.

It is suitable for accurately aligned drives, i.e. flange mounted. The coupling is able to compensate the small radial and angular misalignments, that must normally be expected on flange mounted drives.

In axial direction the hub can move freely and be located a few mm from the ideal axial position, i.e. protrude out of the flange, without any disadvantage. Only at high loads the dogs should be completely engaged.

## Dimensions



Size	Nominal torque [Nm]	d <sub>1</sub>		C	D	E	F	G	H	L <sub>1</sub>	L <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	Bolt connection			Flange position A				Flange position B				Wt [kg]	Order Code
		min	max											TK	Z	M	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>		
100	300	15	40	174	125	34	4	10	20	42	42	60	<100	142	3X120°	M12	44	14	36	6	-	-	-	-	1,5	CF-K-100-165-A-*.**
																	-	-	-	-	24	34	16	26	1,5	CF-K-100-165-B-*.**
125	800	20	55	195	136	30	6	10	14	50	60	85	<125	165	6X60°	M12	46	28	39	21	-	-	31	29	2,4	CF-K-125-195-A-*.**
																	-	-	-	-	38	36	31	29	2,8	CF-K-125-195-B-*.**
150	1200	25	70	230	165	27	5	10	12	60	53	110	<150	200	8X45°	M12	55,5	38,5	35	19	-	-	-	25	5,4	CF-K-150-230-A-*.**
																	-	-	-	-	48,5	45,5	28	25	5,8	CF-K-150-230-B-*.**
150D	2400	30	70	230	165	27	5	10	12	52	70	110	<150	200	8X45°	M12	32	40	-	-	-	-	-	6,8	CF-K-150-D-*.**	

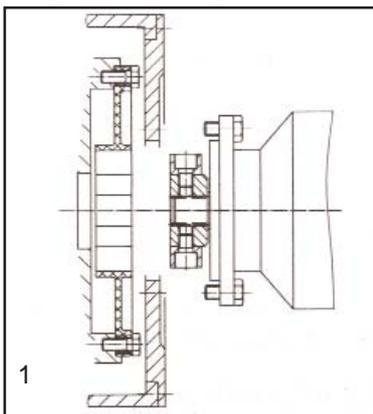
\* Please state overall length (e.g. 44 - see flange position A, dimension A<sub>1</sub> = 44) \*\* Please state finished bore

Above dimension table shows the general dimensions for the design of special versions. The standard types to SAE/DIN and popular special designs are shown on page 4. Other lengths of hubs - shorter or longer - or other axial positions of the dogs and hubs are possible.

### Mounting:

In most cases the diameter of the hubstar is smaller than the center locating diameter of the pump flange, ie. the hubstar passes through bore in the flange which connects the pump with the flywheel housing. The diameter of the hubstar is always a little smaller than the nominal sizes of the coupling, eg the rotation diameter of the hubstar for CF-K-100 is <100mm, ie it will pass through the bore in the pump mounting plate provided it is 100mm or 4 inches diameter or bigger. In this case the installation can be carried out acc. pict. 1:

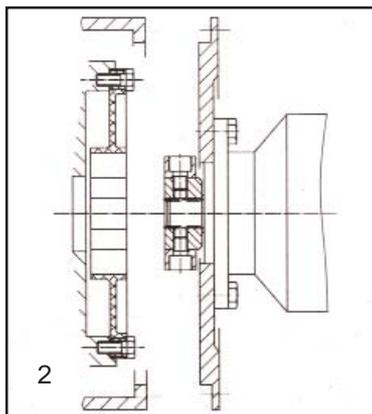
1. Bolt the coupling flange onto the flywheel.
2. Bolt the pump mounting plate onto the flywheel housing.



3. Fit coupling onto the pumpshaft and secure.
4. Offer up pump to engage coupling and pump in the pump mounting plate.

For the occasional case where the hubstar diameter is larger than the bore in the pump mounting plate, the installation should be carried out acc. pict. 2:

1. Bolt the coupling flange onto the flywheel.
2. Bolt pump mounting plate to pump.
3. Fit coupling hub onto the pumpshaft and secure.
4. Offer up pump and mounting plate so coupling engages and locate pump mount plate in the flywheel housing. Bolt complete assembly to flywheel housing.



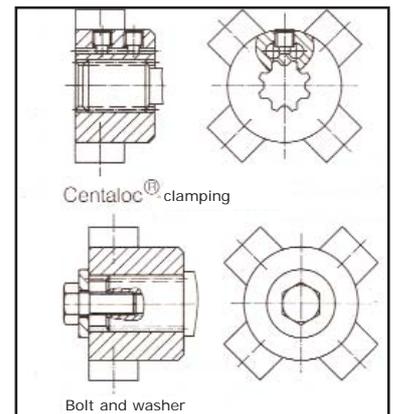
### Axial securing of hub

The hub can adjust its axial position freely, there is no axial stop. Therefore, the hub has to be secured onto the pump shaft axially. Preferably this is done with our proven CENTALOC-clamping system.

For light drives where the pumpshaft has a shoulder, it can be sufficient to clamp the hub against the shoulder using a bolt and washer fastened into the end of the pump shaft, provided it has a tapped hole.

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We reserve the right to alter details of this catalog without notice.







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