

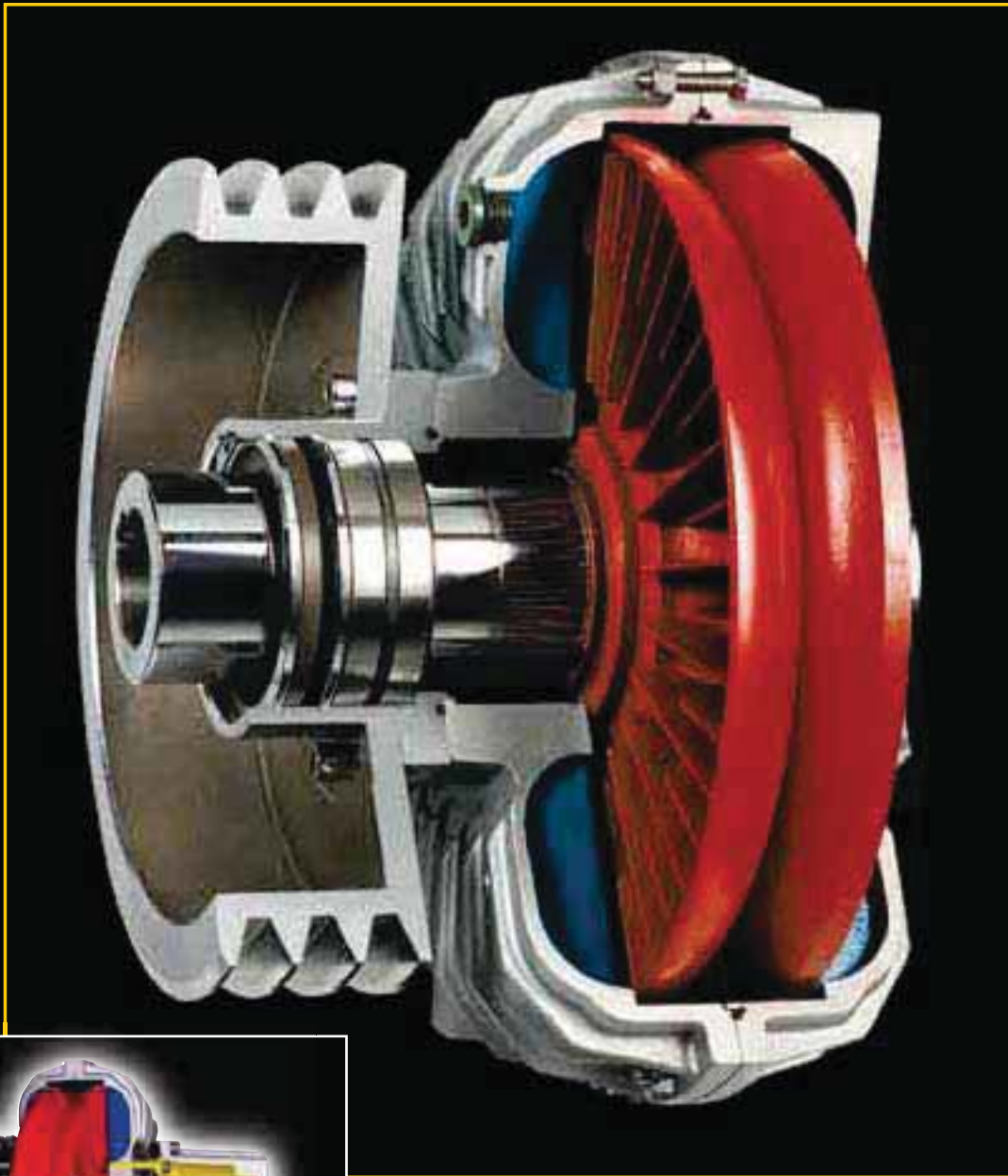


WESTCAR s.r.l.

ROTOFLUID

ENGLISH

FLUID COUPLINGS





WESTCAR PRODUCTS

ROTOFLUID hydraulic couplings for rated power up to 4000 kW



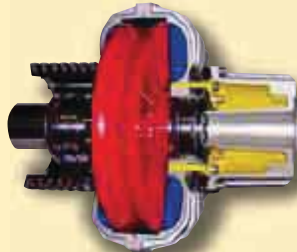
ROTOGEAR tooth gear couplings for torques up to 383.000 Nm

ROTOFLUID GGG hydraulic couplings (with cast-iron casing) for rated power from 100 to 6000 kW



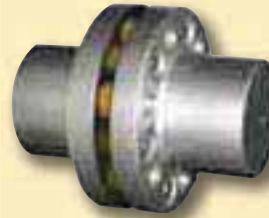
ROTOFLEXI® flexible couplings with quick replacement of the rubber element without axial hubs movement. For torques up to 4.000 Nm.

ROTOFLUID-SCF/DCF hydraulic couplings with simple/double delay chamber



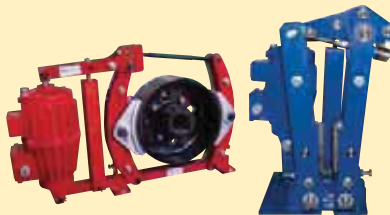
HBX – GCX – HPX disc couplings. With spacer HBSX – GCSX – HPSX - BE. Torques up to 1.043.300 Nm

ROTOFLUID-CA hydraulic couplings with annular chamber and starting torque lower than nominal motor torque



ROTOPIN flexible couplings with pins and buffers axially sliding. For torques up to 300.000 Nm

Drum and disc brakes with brake servo



ROTOGRID flexible taper grid couplings. For torques up to 169.500 Nm

SOFTSTART
Static starter with digital control for rated power up to 750 kW.
Energy saving function.
Water hammering control.
Programming also via RS 485



ROTOMECH hydromechanical couplings with hydraulic start-up and centrifugal mechanical lock-up with zero slip at running. For rated power up to 1500 kW

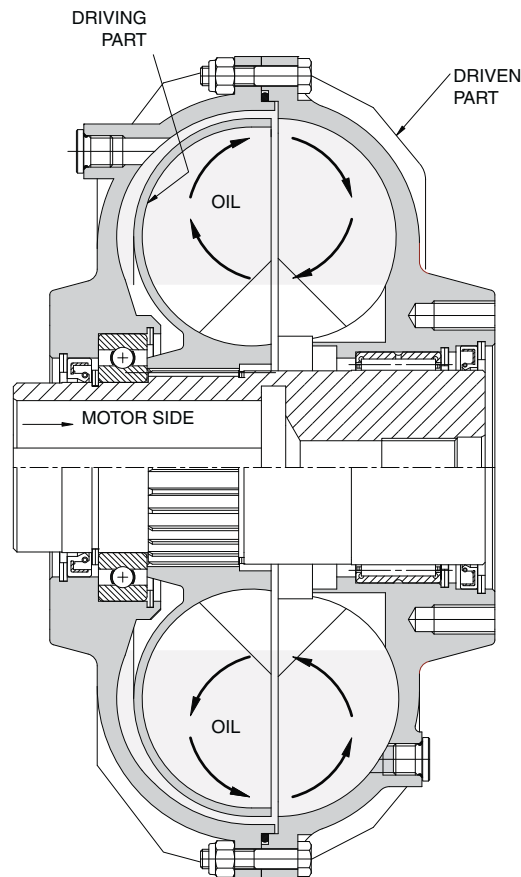


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The ROTOFLUID fluid coupling is designed to provide your plant with optimum reliability and durability. It is fitted between the motor (drive) and machine (driven component).

The ROTOFLUID fluid coupling comprises basically two impellers, with radial blades, opposed to each other, one connected to the motor shaft and the other to the input shaft of the Driven Equipment or Machine.

The ROTOFLUID fluid coupling acts like a centrifugal clutch, by driving an impeller, the oil passing from the blades to the driven part, which acts as a driven impeller, transmits the power to the Equipment or Machine. The oil, which fills the fluid coupling, transfers the torque and also lubricates moving parts.

Fluid couplings are the easiest and cheapest way of creating a perfectly Flexible Drive Train, because no mechanical parts are necessary between the motor and the Equipment or Machine being driven.

Without mechanical parts, there is practically no wear.

Losses in the fluid coupling become power drops according to the following formula:

$$S\% = \frac{n_m - n_u}{n_m} \times 100$$

where:

n_m = motor speed in rpm

n_u = output speed from the fluid coupling in rpm

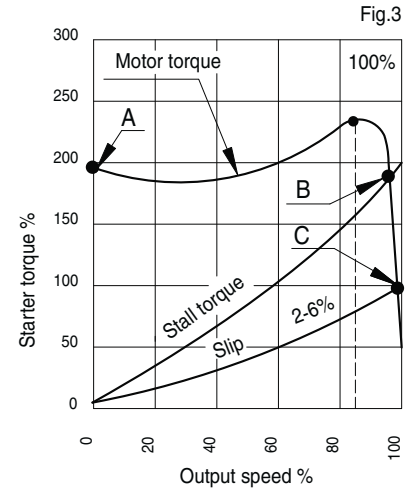
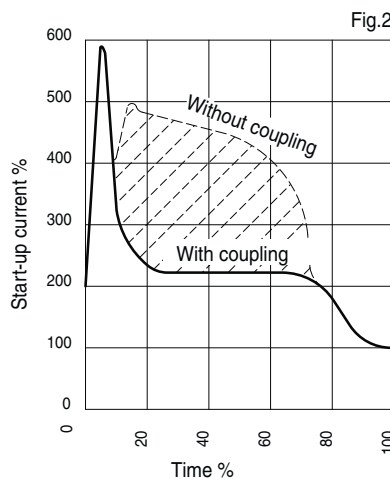
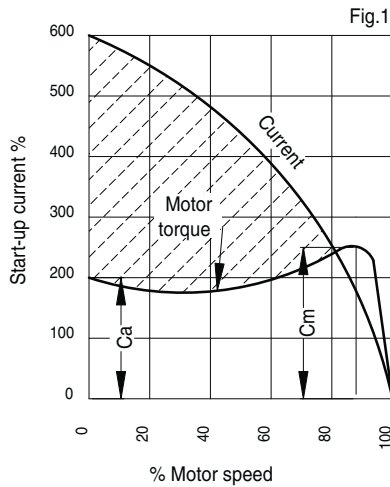
The elasticity of the fluid coupling solves problems of power peaks in conventional electric motors and the machines they drive.

THE ADVANTAGES OF USING FLUID COUPLINGS

- easy start-up with gradual acceleration of the driven component
- automatic load speed adjustment on the basis of the synchronous speed of two or more motors
- the drive train is protected against overloads
- rotational vibrations are dampened
- the torque transmitted complies with pre-set values
- direct on-line start electric motors can be used, without star-delta starters or slip-ring motors with rheostat

FITTING A ROTOFLUID FLUID COUPLING GIVES YOU THE FOLLOWING BENEFITS:

- a large range of accessories
- interchangeable accessories on the basic cell
- the dimensions of the shaft-pulley system are perfectly suited to the needs of the drive train
- all fluid couplings that utilise a belt drive, from Size 40P up, are fitted with ball bearings under the pulley to guarantee above-standard radial loads
- all the fluid couplings used for Horizontal applications are fitted with ROTOFLEXI Elastic Flexible coupling, which gives the advantage of, the user, of being able to replace the Flexible element, by removing it radially from the coupling, without either disturbing the Motor or the Driven Equipment or Machine



START-UP WITHOUT FLUID COUPLING

Figure 1 represents the typical start-up of an electric motor directly coupled to the load. The dotted line represents the energy lost bringing the motor and load up to operating speed.

As can be seen, direct start-up has the following disadvantages:

- the difference between start-up torque (C_a) and the load requirement (C_m) is very low; the maximum torque is between 80%-85% of the operating speed.
- the current absorbed during start-up may be up to 6 times the rated current, causing electrical overloads and higher costs, an increase in motor temperature and fewer possible start-ups.

To limit peak currents, a characteristic of direct start-ups, a system with reduced voltage for start-ups must be used, most commonly the Y / Δ system. In this way the current and peak torque are reduced by about 1/3 compared to direct starting.

The disadvantages of this type of start-up include:

- greater costs for wiring (2 3-pole cables per motor)
- high currents when switching from Y to Δ
- you cannot choose start-up features because current/torque parameters are pre-set and cannot be adjusted.
- It cannot be used for applications where the start-up requires a high load or resistant torque.

START-UP WITH ROTOFUID FLUID COUPLING

With a ROTOFUID fluid coupling between the Motor and Driven Equipment or Machine the motor can start up directly and the starting torque (C_a) is used solely to accelerate the rotor and primary part of the connected coupling.

Figure 2. shows the peak current of an electric motor directly connected to the load, with direct start-up, and start-up with a fluid coupling. The dotted line shows the energy lost as heat during start-up without a fluid coupling.

In the first case, the peak current is 6 times the rated current, and continues to be high until the operating speed is reached.

With a ROTOFUID fluid coupling, the peak current is high for only a few seconds (the energy required to accelerate the rotor) and drops to acceptable values throughout the process of reaching operating speed.

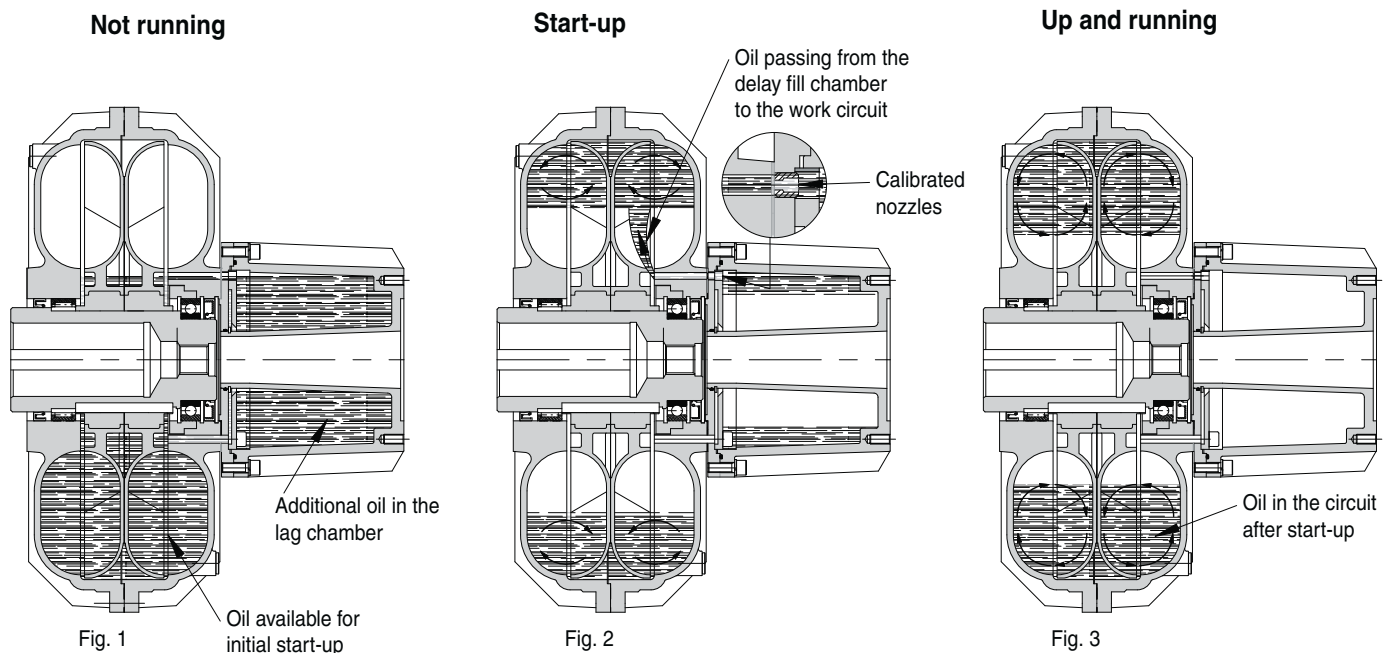
CHARACTERISTIC CURVES FOR START-UP WITH FLUID COUPLING

Figure 3. shows a characteristic torque curve for an electric motor, the stall curve of the fluid coupling and the slip curve at operating speed.

The fluid coupling allows the motor to reach 80-85% speed in a few seconds (shift from point A to point B) where it meets the stall curve of the fluid coupling (slip=100%), the point of maximum motor torque.

Point C is the point of functioning of the fluid coupling after the motor has reached operating speed.

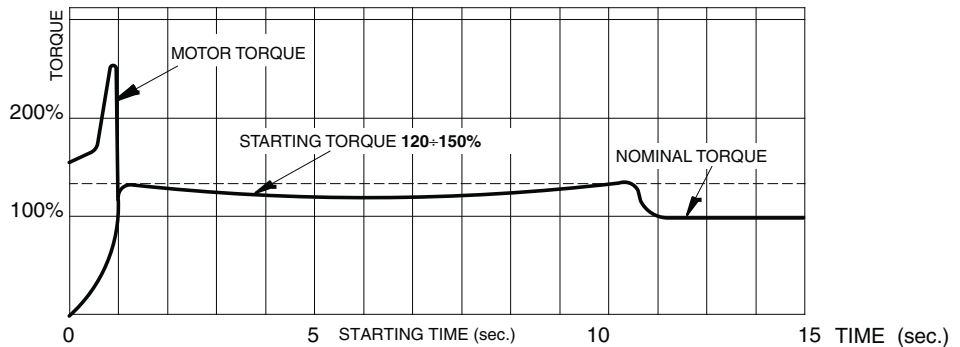
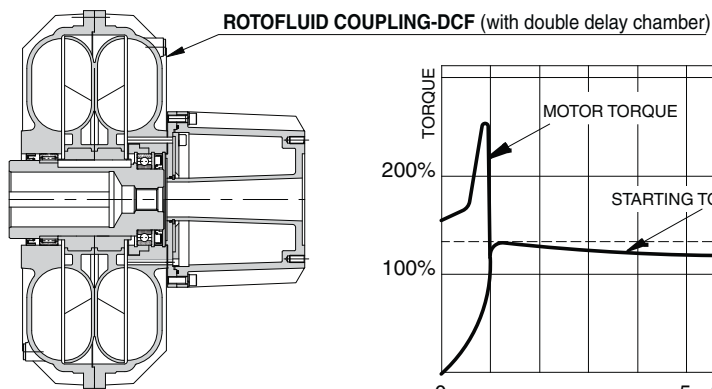
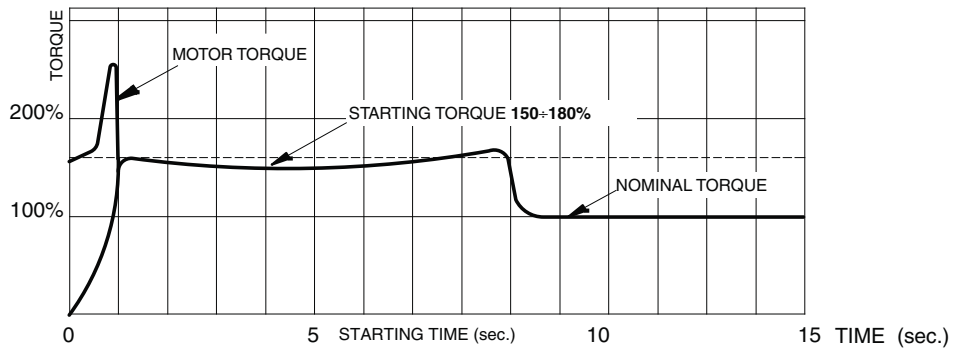
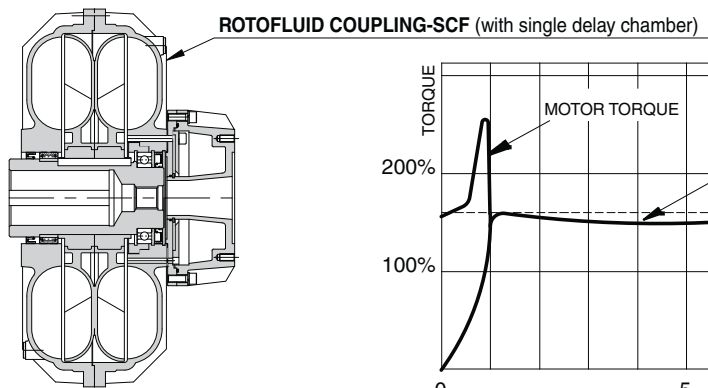
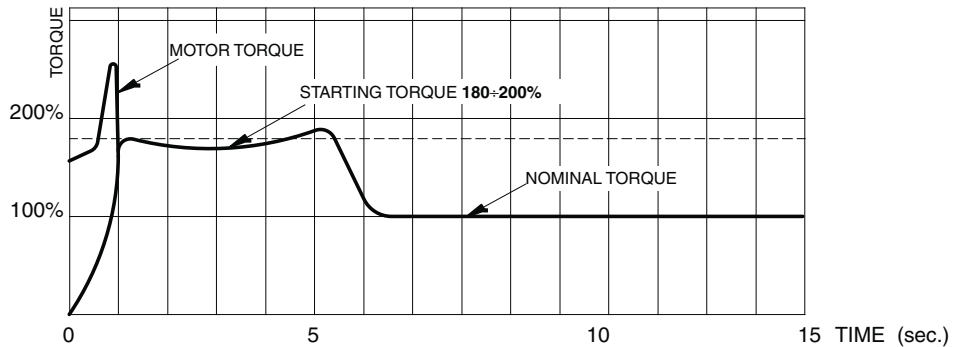
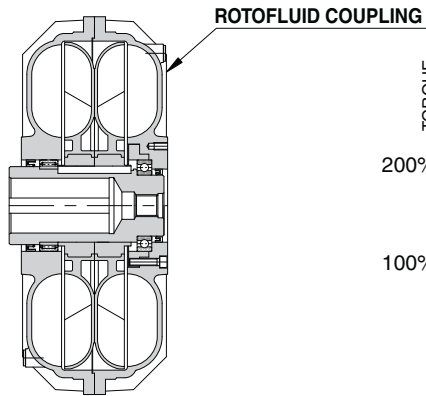
The use of a fluid coupling with a delay fill chamber limits maximum torque during start-up, without prejudicing slipping in normal functioning. This allows the motor to quickly increase speed [revs] without hitting the resistant torque (as if it started unloaded). A Fluid coupling with a delay fill feature is fitted with additional chamber in order to reduce the quantity of oil in the working circuit (see Fig. 1). The chamber is in contact with the circuit via calibrated nozzles, which can be set as required (see Fig. 2). The variation in the calibrated nozzle holes changes the time it takes for the oil in the chamber to reach the working circuit, thereby, increasing or decreasing start-up time for the driven machine. When all the oil has flowed from the chamber into the circuit, the fluid coupling reaches the rated speed, transmitting the required torque with minimum slippage (see Fig. 3). Fluid couplings may be fitted with either a single or dual delay fill chamber. With a single delay fill chamber, Ca/Cn torque limitation varies from 180% to 150%, adjusting the quantity of oil. With a dual delay fill chamber Ca/Cn torque limitation varies from 150% to 120%, adjusting the quantity of oil. The advantages of delay fill chambers are enhanced as the power requirement rises. SCF and DCF delay fill chambers are available from size 30 to size 95P.



ADVANTAGES

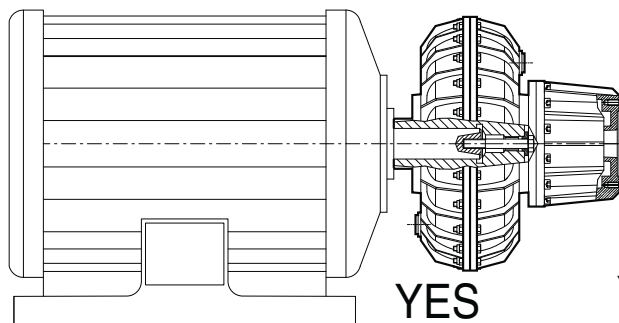
- Low energy loss even where inertia is high
- Start-up time can be adjusted
- Start-up torque is limited to pre-set values without affecting slip
- Limitation of start-up current prolongs the life of the motor
- For controls with several drives the coupling automatically adjusts the load speed on the basis of synchronous speed
- More start-ups per hour
- The direction of rotation can be reversed
- Asynchronous squirrel cage motors can be used instead of electric motors or special starting devices (Inductors, autotransformers, star-delta, etc.)
- If the load is blocked, both the motor and load are protected.

The **ROTOFLUID SCF/DCF** peculiarities are more evident comparing the curve of the ROTOFLUID coupling without delay chamber.

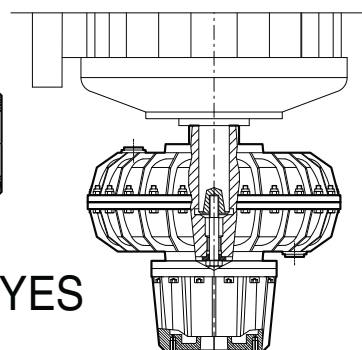


CORRECT MOUNTING OF THE COUPLING WITH DELAY CHAMBER

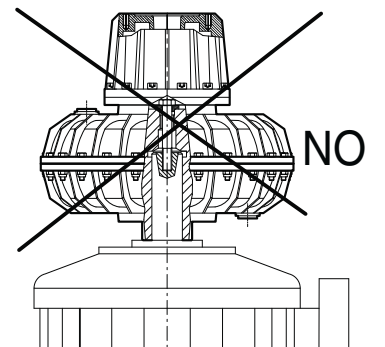
HORIZONTAL SHAFT

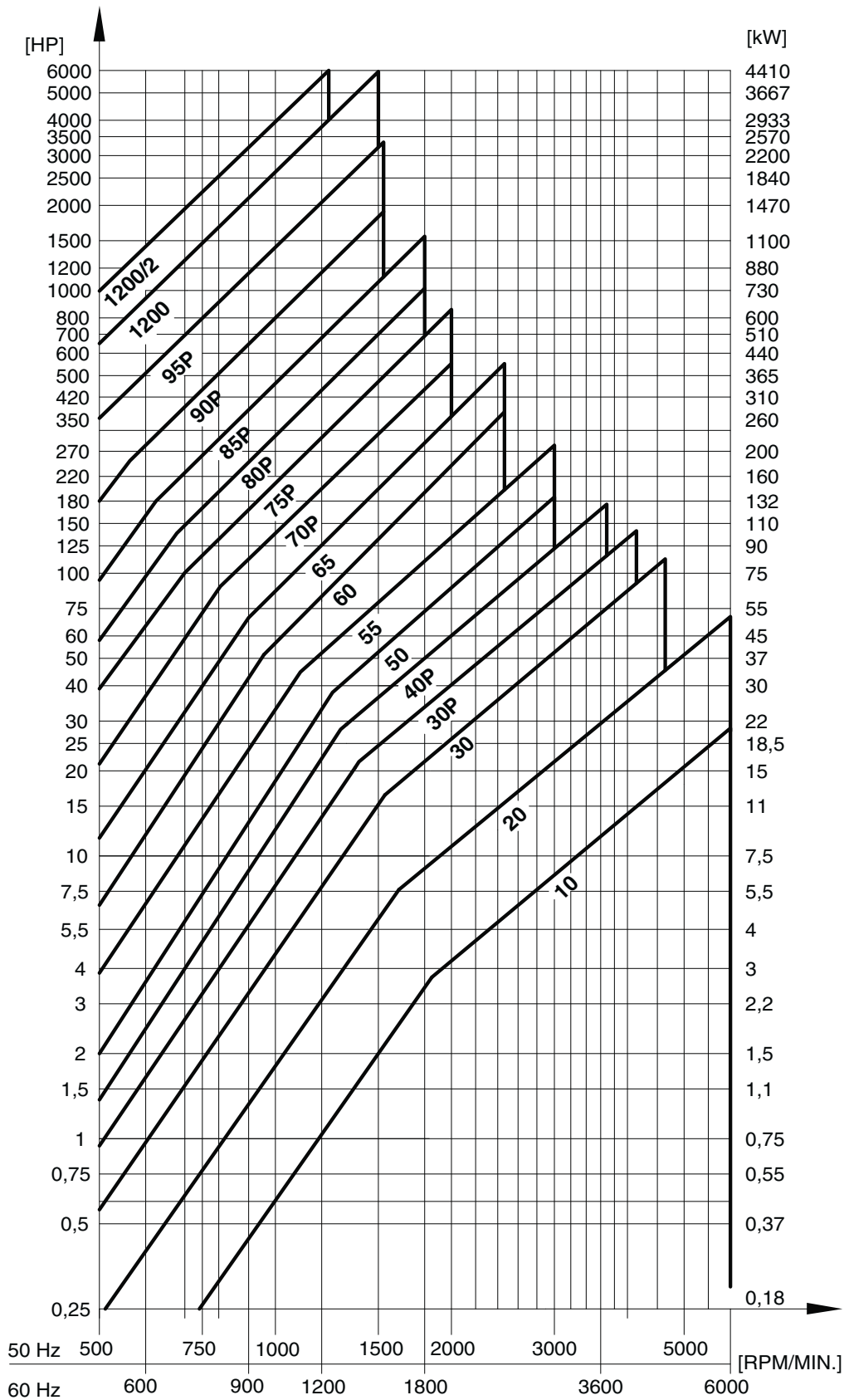


VERTICAL SHAFT WITH
DOWNWARD DELAY CHAMBER



VERTICAL SHAFT WITH UPWARD
DELAY CHAMBER





- Select coupling size on input power and speed.
- The curves show limit capacity of couplings.
- If the selection point falls on or close to the max capacity limit line of a given coupling size then it is advisable to check with the starting time and the maximum allowable temperature calculations.

MOTORS		Motor speed 50 Hz												Motor speed 60 Hz								
		8 poles			6 poles			4 poles			2 poles			6 poles			4 poles					
		750 R.P.M.			1000 R.P.M.			1500 R.P.M.			3000 R.P.M.			1200 R.P.M.			1800 R.P.M.					
TYPE	Ø SHAFT	kW	HP	Coupling	kW	HP	Coupling	kW	HP	Coupling	kW	HP	Coupling	kW	HP	Coupling	kW	HP	Coupling			
71	14				0,25	0,33	10	0,25	0,33	10	0,37	0,5	10	0,25	0,33	10	0,25	0,33	10			
80	19				0,37	0,5		0,37	0,5		0,55	0,75		0,75	1		0,37	0,5		0,55	0,75	0,37
90S	24				0,55	0,75	20	0,75	1	20	1,1	1,5	20	1,1	1,5	20	0,75	1	20	0,75	1	
90L	24	0,55	0,75	20	1,1	1,5		1,5	2		2,2	3		1,5	2		2,2	3		1,5	2	1,1
100L	28	1,1	1,5	30	1,5	2	30	2,2	3	30	2,2	3	30	3	4	30	1,5	2	30	2,2	3	
112M	28	1,5	2		2,2	3		3	4		4	5,5		4	5,5		4	5,5		3	4	2,2
132	38	-	-	30P	3	4	30P	5,5	7,5	30	5,5	7,5	30	5,5	7,5	30	3	4	30	5,5	7,5	
132M	38	3	4	40P	4	5,5		7,5	10		7,5	10		-	-		7,5	10		5,5	7,5	4
160M	42	4	5,5	50	7,5	10	40P	11	15	30P	11	15	30P	11	15	30P	7,5	10	30P	11	15	
160L	42	7,5	10	55	11	15		15	20		18,5	25		15	20		18,5	25		11	15	11
180M	48	-	-		-	-	50	-	-	40P	-	-	30	-	-	40P	-	-	30P	-	-	
180L	48	11	15		15	20		18,5	25		22	30		-	-		30	40		37	50	15
200L	55	15	20	60	18,5	25	55	22	30	50	30	40	50	30	40	50	18,5	25	50	30	40	
225S	60	18,5	25		22	30		37	50		37	50		-	-		37	50		-	-	22
225M	55	-	-	65	-	-	60	-	-	55	-	-	40P	45	60	30P	-	-	55	-	-	
250M	60	-	-		30	40		45	60		45	60		55	75		55	75		45	60	30
280S	65	-	-	70P	-	-	65	-	-	60	-	-	50	75	100	60	-	-	65	-	-	
280M	75	37	50		45	60		55	75		55	75		75	100		75	100		75	100	45
315S	65	-	-	75P	-	-	70P	-	-	65	-	-	55	110	150	70P	-	-	65	-	-	
315M	80	45	60		55	75		90	125		90	125		110	150		132	180		110	150	132
355S	80	-	-	80P	-	-	80P	-	-	75P	-	-	75P	160	220	80P	-	-	75P	-	-	
355M	100	132	180		160	220		200	270		200	270		160	220		200	270		160	220	200
				85P	-	-	85P	-	-	75P	-	-	75P	-	-	80P	-	-	75P	-	-	
				90P	200	270	85P	315	430					200	270	80P	315	430	75P			
					250	340								250	340							
NON STANDARD MOTORS		330	450	90P	370	500	85P	510	700	80P				310	420	80P	440	600	75P			
		600	800	95P	600	800	90P	810	1100	85P				440	600	85P	700	950	80P			
		1000	1360	1200	1000	1360	95P	1300	1740	90P				800	1100	90P	1000	1360	85P			
		1550	2100	1200/2	2000	2720	1200	2300	3100	95P				1380	1880	95P						
					3200	4350	1200/2	3850	5250	1200				2580	3500	1200						
													4200	5710	1200/2							

- For Couplings at 3000 RPM, ask for balancing required
- Slip curves with Couplings efficiency are available on request

The preliminary selection of ROTOFUID coupling, will be made on the selection diagram sheet 10 - 100A depending upon input power and speed. For frequent starts or high inertia acceleration, it is necessary first to carry out the following calculations:

- 1 Acceleration time (ta)
- 2 Max allowable temperature (Ta)
- 3 Max working cycles for hours (H)

For this purpose it is necessary to know:

DATA

Pm = INPUT POWER KW
Nm = INPUT SPEED RPM
(*) Nu = COUPLING OUTPUT SPEED RPM
PI = POWER ABSORBED BY THE LOAD AT RATED SPEED KW
NI = SPEED OF DRIVEN MACHINE RPM
T = AMBIENT TEMPERATURE °C

$J = \text{INERTIA OF DRIVEN MACHINE} \left(\frac{PD^2}{4} \right) \text{ kgm}^2$

$J_r = \text{INERTIA OF DRIVEN MACHINE REFERED TO COUPLING SHAFT} \text{ (kgm}^2\text{)} \quad J_r = J \left(\frac{NI}{Nu} \right)^2$

(*) $Nu = Nm \left(\frac{100 - S}{100} \right)$ WHERE: S = Percent slip of the ROTOFUID coupling

The following assumptions may be made for initial calculations: S = 4

1 ACCELERATION TIME

For the calculation of the acceleration time apply the following formula:
The outcome time is worded in seconds

$$ta = \frac{Nu \times Jr}{9,55 \times Ma} = \dots\dots\dots \text{ (sec)}$$

WHERE:

Ma = ACCELERATING TORQUE (Nm)

$$Ma = 1,65 \times Mm - MI = \dots\dots\dots \text{ (Nm)}$$

Mm = NOMINAL TORQUE (Nm)

$$Mm = \frac{9550 \times Pm}{Nm} = \dots\dots\dots \text{ (Nm)}$$

MI = ABSORBED TORQUE (Nm)

$$MI = \frac{9550 \times PI}{Nu} = \dots\dots\dots \text{ (Nm)}$$

2 MAX ALLOWABLE TEMPERATURE

For simplicity of calculation, ignore the heat dissipated during acceleration. Coupling temperature rise:

$$Ta = \frac{Q}{C} = \dots\dots\dots \text{ (}^\circ\text{C)}$$

WHERE:

Q = HEAT GENERATED DURING ACCELERATION (Kcal)
C = TOTAL THERMAL CAPACITY OF COUPLING SELECTED FROM TABLE BESIDE

$$Q = \frac{Nu}{10^4} \left(\frac{J_r \times Nu}{76,5} + \frac{MI \times ta}{8} \right) = \dots\dots\dots \text{ (Kcal)}$$

The final coupling temperature reached at the end of the acceleration cycle will be:

$$Tf = T + Ta + TL \text{ (}^\circ\text{C)}$$

where: Tf = Final temperature (°C)
T = Ambient temperature (°C)
Ta = Temperature rise during acceleration (°C)
TL = Temperature increase during steady running (°C)

$$TL = 2,4 \frac{PI \times S}{K} \text{ (}^\circ\text{C)}$$

where: K = factor from TAB. D

THERMAL CAPACITY OF ROTOFUID COUPLINGS			TABLE C
Size	Without SCF/DCF Kcal / °C	With SCF Kcal / °C	With DCF Kcal / °C
10	0,73	-	-
20	1,2	-	-
30	2,8	3,1	3,3
30P	3,5	3,8	4
40P	4	4,7	5
50	6,1	6,9	7,4
55	8,8	9,6	10,1
60	13	14,8	16
65	15,2	17	18,2
70P	22	25,6	27,8
75P	28,6	32,2	34,4
80P	44	50	55
85P	55	61	66
90P	98	100	104
95P	133	138	142
1200	180	-	-
1200/2	250	-	-

3 MAX WORKING CYCLES FOR HOUR H

In addition to the heat generated in the coupling by slip during steady running, heat is also generated (as calculated above) during the acceleration period. To allow time for this heat to be dissipated, one must not exceed the max allowable number of acceleration cycles for hour. This is calculated as follows:

$$H_{max} = \frac{3600}{t_a + t_L}$$

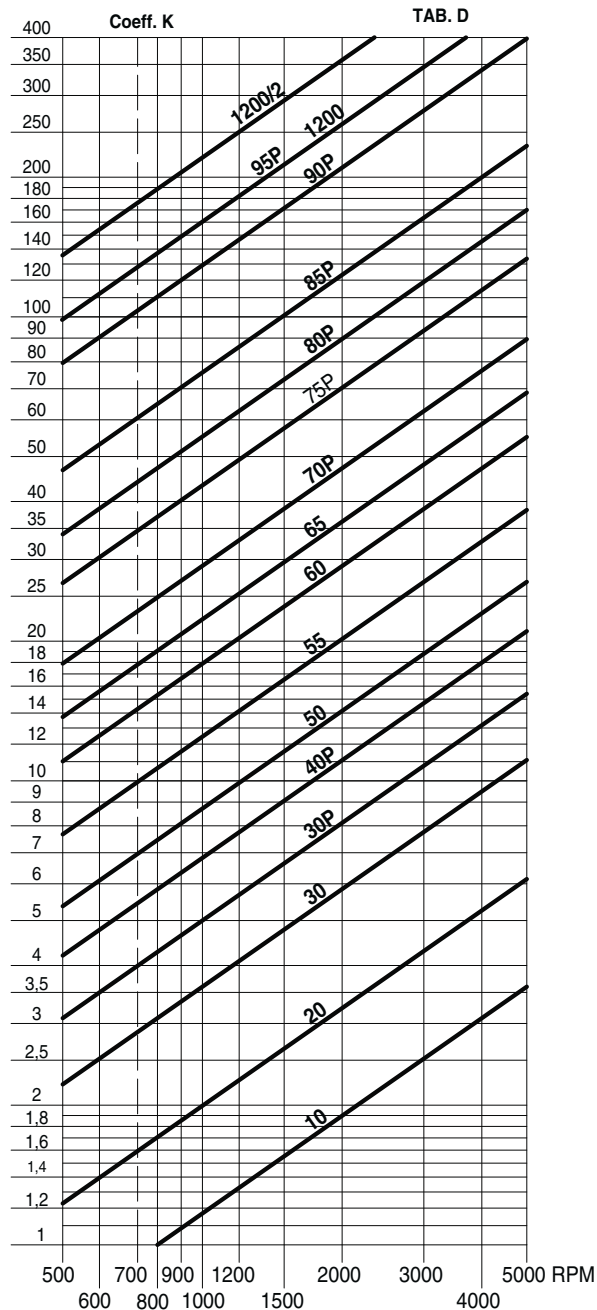
where t_L = minimum working time

$$t_L = 10^3 \frac{Q}{\left(\frac{T_a}{2} + T_L\right) \cdot K} \text{ (sec)}$$

WARNING:

**ROTOFLUID couplings equipped with standard (NBR) oil seals must not exceed the maximum value T120°C.
In the version with Viton seals the maximum value Tf = 180°C.**

In case the above performance calculations result shows unsuitable values, check again with a larger ROTOFLUID size or consult with Westcar technical office.



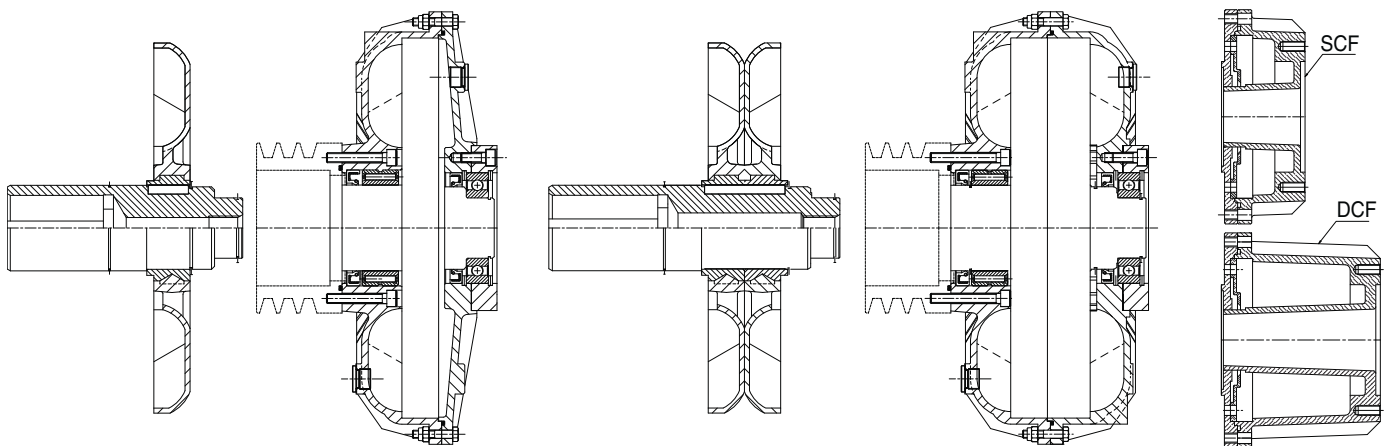
The mass moment of inertia values listed in the table below are referred to inner part, outer part and oil where:

INNER PART = hollow shaft, impeller pump, half oil

OUTER PART = turbine and cover housing, half oil

values valid for ROTOFLUID couplings with oil level at 45° off center pulleys, flexible couplings and other accessories are not included.

INNER PART	OUTER PART	INNER PART	OUTER PART	DELAY CHAMBER
SIZE: 10, 20, 30, 30P, 40P, 50, 60, 70P, 80P, 90P.		SIZE: 55, 65, 75P, 85P, 95P.		

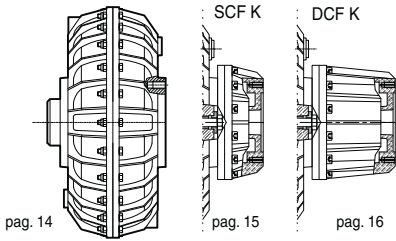


$$\text{MOMENT OF INERTIA } I = \frac{m \times R^2}{2} \text{ (Kgm}^2\text{)}$$

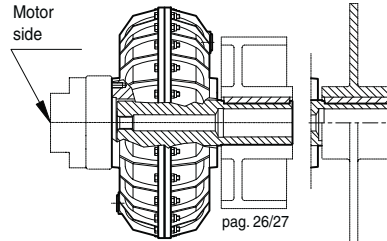
ROTOFLUID COUPLING SIZE	VERSION ALFA		VERSION BETA						DELAY CHAMBER	
	Type K		Type Z, X, I		Type J		Type H		SCF	DCF
	I INNER Kgm ²	I OUTER Kgm ²	I INNER Kgm ²	I OUTER Kgm ²	I INNER Kgm ²	I OUTER Kgm ²	I INNER Kgm ²	I OUTER Kgm ²	I Kgm ²	I Kgm ²
10	0,003	0,011	0,003	0,011	--	--	0,003	0,012	--	--
20	0,006	0,024	0,006	0,024	0,006	0,026	0,006	0,027	--	--
30	0,021	0,081	0,022	0,081	0,022	0,084	0,022	0,086	0,006	0,007
30P	0,040	0,140	0,045	0,140	0,045	0,144	0,045	0,147	0,006	0,007
40P	0,060	0,179	0,065	0,179	0,065	0,190	0,065	0,197	0,013	0,016
50	0,105	0,363	0,109	0,363	0,109	0,376	0,109	0,385	0,026	0,032
55	0,208	0,474	0,214	0,474	0,214	0,487	0,214	0,496	0,026	0,032
60	0,311	0,795	0,326	0,795	0,326	0,823	0,326	0,842	0,053	0,062
65	0,564	1,040	0,583	1,040	0,583	1,068	0,583	1,087	0,053	0,062
70P	0,710	2,230	0,780	2,230	0,780	2,307	0,780	2,357	0,11	0,140
75P	1,426	2,834	1,462	2,834	1,462	2,911	1,462	2,961	0,11	0,140
80P	2,389	7,276	2,499	7,276	2,499	7,393	--	--	0,215	0,254
85P	4,668	8,977	4,792	8,977	4,792	9,094	--	--	0,215	0,254
90P	8,372	23,200	--	--	--	--	--	--	0,490	0,550
95P	15,613	28,855	--	--	--	--	--	--	0,490	0,550
1200	54,000	260,000	--	--	--	--	--	--	--	--
1200/2	104,000	320,000	--	--	--	--	--	--	--	--

**ALL THE ACCESSORIES CAN BE FITTED TO THE COUPLINGS ALFA WITH DELAY
FILL CHAMBERS "SCF AND DCF"**

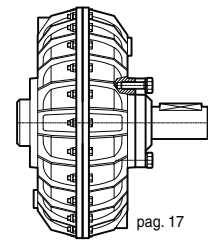
**ROTOFLUID ALFA without accessories
K**



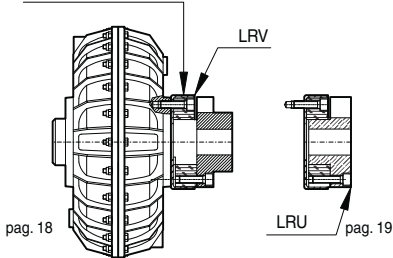
**ROTOFLUID ALFA KK reverse assembly
with disc or brake drum**



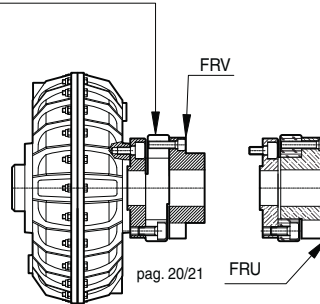
ROTOFLUID ALFA KS with rigid stub shaft



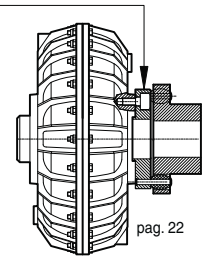
**ROTOFLUID ALFA K-LRV/LRU
with standard ROTOFLEXI
flexible coupling**



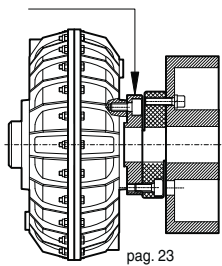
**ROTOFLUID ALFA K-FRV/FRU with
ROTOFLEXI oversized flexible coupling**



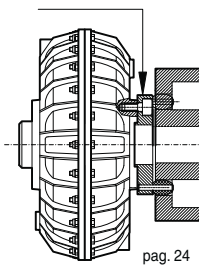
**ROTOFLUID ALFA K-AB with
ROTOPIN flexible coupling**



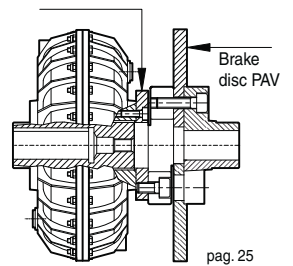
**ROTOFLUID ALFA K-FRD with ROTOFLEXI
oversized flexible coupling and brake drum**



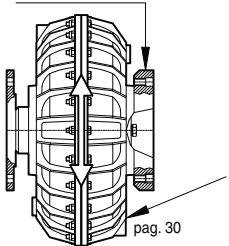
**ROTOFLUID ALFA K-AFF with ROTOPIN
flexible coupling and brake drum**



**ROTOFLUID ALFA K-FR-PAV/PBV
with flexible coupling and brake disc**

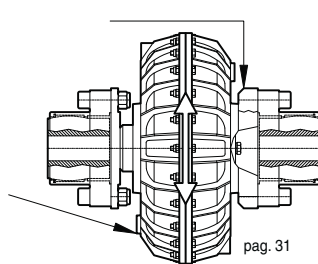


**ROTOFLUID ALFA WAG
with flanges for the mounting of half
gear couplings in inches**

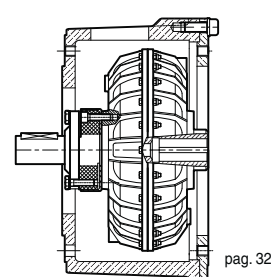


Fluid couplings radially
demountable without
moving the machines

**ROTOFLUID ALFA WAG-G with
ROTOGEAR coupling**

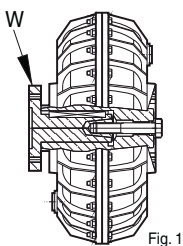


ROTOFLUID ALFA CK-LRS

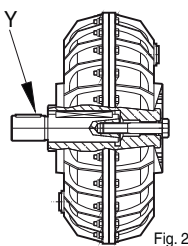


SPECIAL CONFIGURATIONS EXAMPLES FOR COUPLING ROTOFLUID ALFA

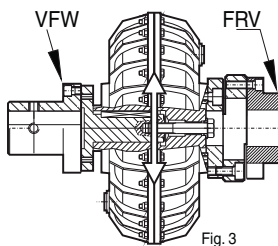
**ROTOFLUID ALFA K-W
with flange shaft**



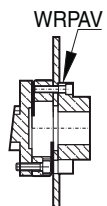
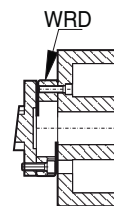
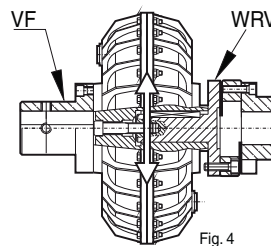
**ROTOFLUID ALFA K-Y
with pin shaft**



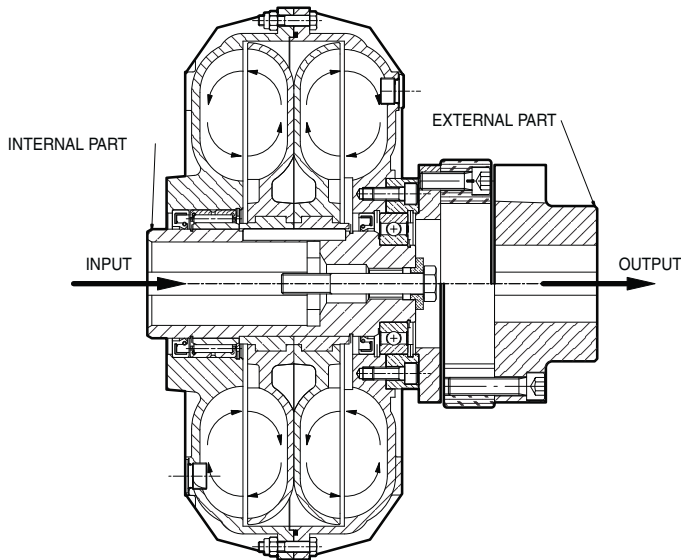
**ROTOFLUID ALFA K-VFW
with rigid hub**



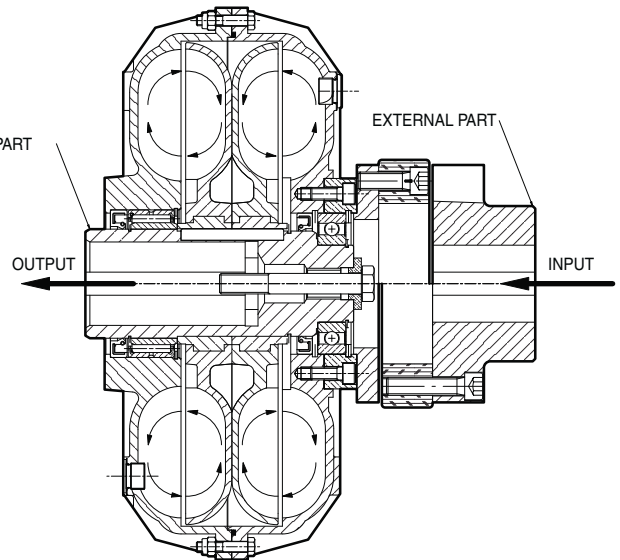
**ROTOFLUID ALFA K-VF
for "reverse mounting"**



STANDARD ASSEMBLY



REVERSE ASSEMBLY



ADVANTAGES OF STANDARD ASSEMBLY

In STANDARD assemblies, the fluid coupling is fitted with the internal part keyed to the motor.

This is common for couplings with pulleys and linear couplings, and provides the following benefits:

- A) – Standardisation of bores in compliance with unified electric motor shafts;
- B) – During start-up the inertia of the coupling affects the motor less, so the motor can reach operating speed with less peak current;
- C) – In linear applications, where a brake disc/drum are required, they are keyed directly onto the reduction gear shaft without increasing the axial length of the coupling.
- D) – In couplings with delay fill chambers, start-up is more gradual because the oil passing from the delay fill chamber is subjected to centrifugal forces in the work chamber as revs rise;
- E) – The flexible coupling fitted to the fluid coupling is subject to less stress, because it receives motion from the fluid coupling not directly from the motor.

ADVANTAGES OF REVERSE ASSEMBLY

In a REVERSE assembly, the fluid coupling is fitted with the external part keyed to the motor.

This type of assembly is possible whenever the fluid coupling is fitted between the motor and the reduction gear.

For couplings with a Vee Pulley, the coupling must be fitted to the driving shaft and attention needs to be paid to the ratio between the Driving pulley and Driven pulley. (In this case consult WESTCAR S.R.L.)

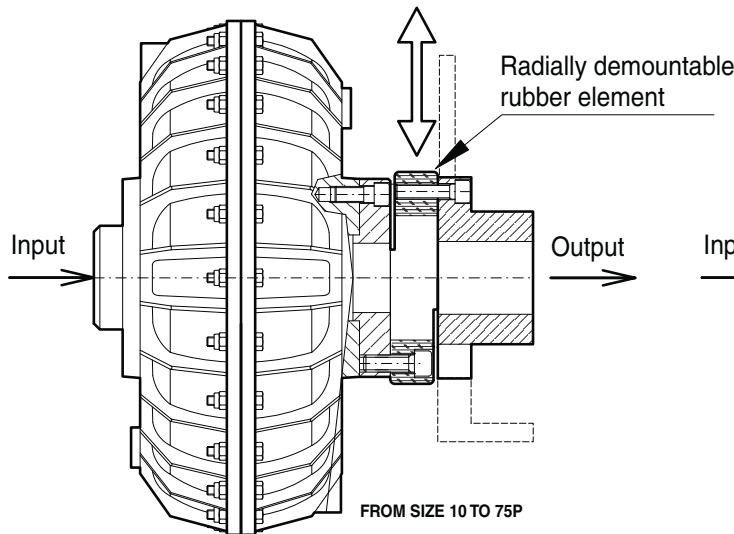
This type of assembly has the following important benefits:

- F) - Greater dissipation of heat, above all during start-up, recommended where start-ups are frequent or lengthy;
- G) - Control is easier and the regulation of the oil level in the coupling is simplified, since the external part can be rotated without moving the Driven Equipment or Machine;
- H) - IMPORTANT! Where the coupling is fitted with THERMAL TRIP PIN, it continues to function even when the Driven Equipment or Machine comes to rest and the motor is rotating.

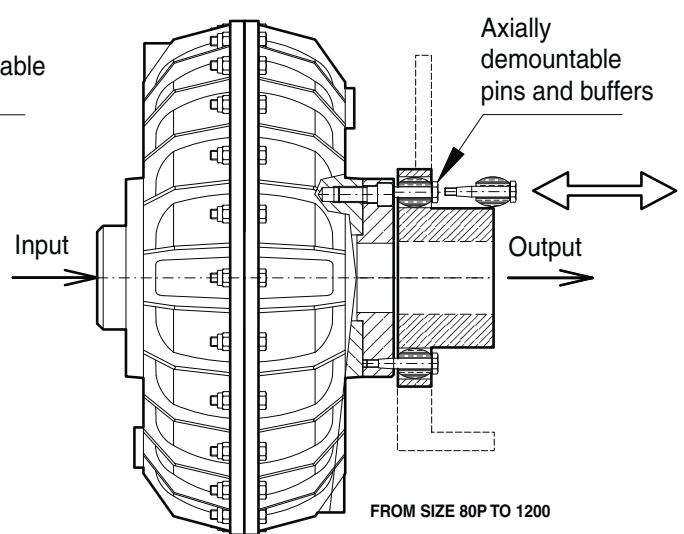
In the absence of special needs or requests, the coupling is supplied for the Standard configuration.

Please advise **WESTCAR S.R.L.** if you require, the selected Fluid Coupling to be quoted for Reverse Assembly.

ROTOFLEXI flexible coupling



ROTOPIN flexible coupling



Rubber elements type « R » available also with reinforced fabric for higher torque applications' « BR ».

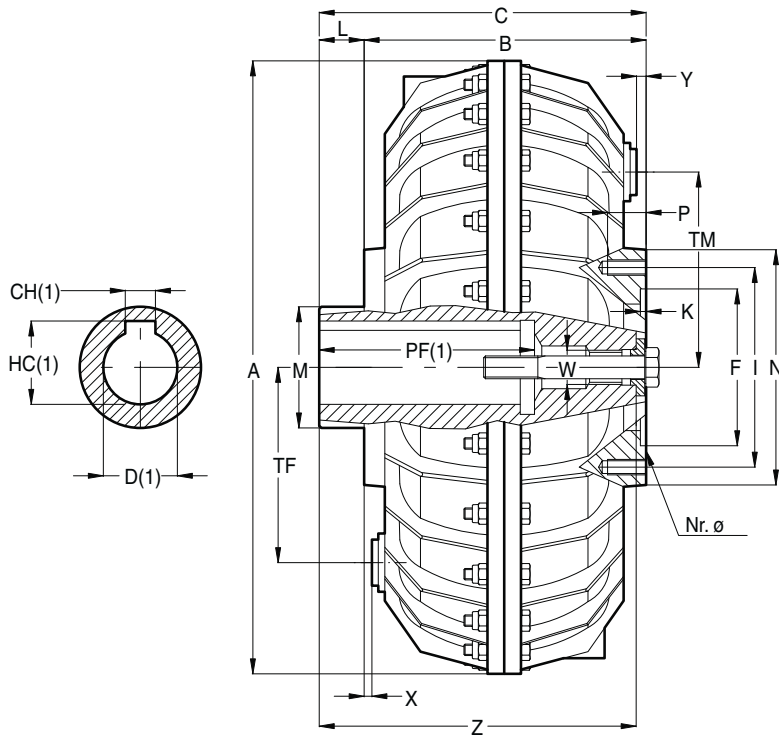
COUPLING	750 R.P.M.		COUPLING	1000 R.P.M.		COUPLING	1500 R.P.M.		COUPLING	3000 R.P.M.				
	HP	KW		HP	KW		HP	KW		CV/HP	KW			
20 K-LR...-2	0,75	0,55	10 K-LR...-1	0,33	0,25	10 K-LR...-1	0,33	0,25	10 K-LR...-1	1	0,75			
30 K-LR...-3	1,5	1,1		0,5	0,37		0,5	0,37		1,5	1,1			
30P K-LR...-3	2	1,5	20 K-LR...-2	0,75	0,55	0,75	0,55	2		1,5				
40P K-LR...-4	4	3		1	0,75	1	0,75	3		2,2				
50 K-LR...-5	5,5	4	30 K-LR...-3	1,5	1,1	1,5	1,1	4		3				
55 K-LR...-5	10	7,5		2	1,5	2	1,5	5,5	4					
60 K-LR...-6	15	11	30P K-LR...-3	3	2,2	20 K-LR...-2	3	2,2	20 K-LR...-2	7,5	5,5			
	20	15		4	3		4	3		10	7,5			
65 K-LR...-6	25	18,5	40P K-LR...-4	5,5	4		5,5	4	30 K-LR...-3	15	11			
	30	22		7,5	5,5	30 K-LR...-3	7,5	5,5		20	15			
65 K-FR...-7	40	30	50 K-LR...-5	10	7,5			10	7,5	25	18,5			
70P K-LR...-7	50	37	55 K-LR...-5	15	11	30P K-FR...-4	15	11	30 K-FR...-4	30	22			
	60	45		20	15		20	15		40	30			
75P K-FR...-8	75	55	60 K-LR...-6	25	18,5	40P K-FR...-5	25	18,5	30P K-FR...-4	50	37			
	100	75		30	22		30	22		60	45			
80P K-AB-8	125	90	65 K-FR...-7	40	30	50 K-FR...-6	40	30	40P K-FR...-5	75	55			
80P K-AB-8	150	110		50	37	50	37	100		75				
85P AB-8M	180	132	70P K-LR...-7	60	45	55 K-FR...-6	60	45	50 K-FR...-6	125	90			
	85P K-AB-8M	220	160		75		55	75		55	150	110		
90P K-AB-9		270	200	70P K-FR...-8	100	75	60 K-FR...-7	100	75	50 K-FR...-6x2	180	132		
	90P K-AB-9	450	330 ★		125	90		125	90		180	132		
95P K-AB-9		800	600 ★	75P K-FR...-8	150	110	65 K-FR...-7	150	110	55 K-FR...-6x2	220	160		
	1200 K-AB-9	1600	1200 ★		180	132		180	132		270	200		
For higher power contact WESTCAR Technical Dept.				75P KFR...-8x2	180	132	70P K-FR...-8	220	160	For higher power contact WESTCAR Technical Dept.				
	80P K-AB-8			220	160			270	200					
	85P K-AB-8M			270	200	75P K-FR...-8	340	255	75P K-FR...-8x2				430	315
	85P K-AB-8M			340	250			500					365 ★	
	85P K-AB-8M			500	370	80P K-AB-8	270	200					600	450 ★
	90P K-AB-9			800	600 ★		700	525 ★	80P K-AB-8				700	525 ★
	95P K-AB-9			1360	1000 ★	85P K-AB-8M	1100	810 ★						1100
	1200 K-AB-9 (1)			2720	2000 ★	90P K-AB-9	1740	1300 ★	90P K-AB-9				1740	1300 ★
									95P K-AB-9				3100	2300 ★

★ Maximum power transmitted by the fluid coupling for no standard motors.

(1) Check flexible coupling duty factor with the rated motor power

NOTE - For REVERSE MOUNTING advise WESTCAR

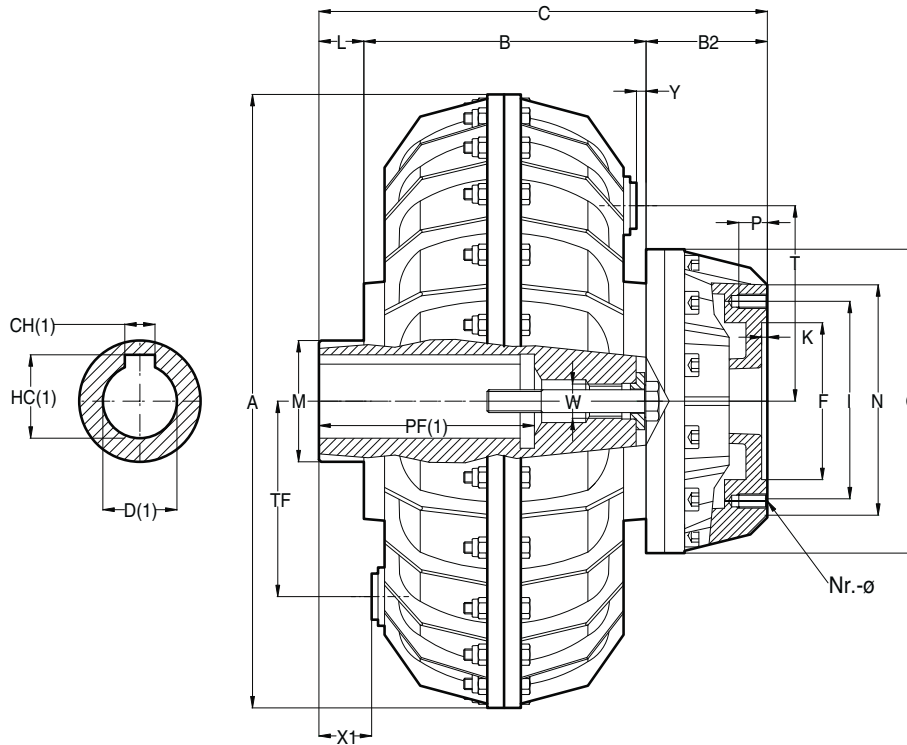
NOTE - For couplings running at 3000 R.P.M. contact WESTCAR Technical Dept.



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	Type	Dimensions in mm																	Weight									
		D	A	B	C	F ^{H7}	K	I	L	M	N	Nr.Ø	P	TF	TM	W	X	Y	Z	Kg.*								
10	K-1	14-19-24 28	193	88	98	47	4	60	10	35	75	6-M6	12	66	66	ø8,5	0,5	0	94	4								
	K-3																				28	114	26	40	9	0,5	112	
20	K-1	19-24-28 38	230	115	125	62	4	78	10	40	94	6-M8	16	80	80	M14 M16	2	7	120	6								
	K-3																				38	135	20	53	14	80	7	2
30	K-1	28-38-42 48 **	290	150	162	75	4	100	12	55	114	8-M8	16	110	110	M24	9	9	157,5	13,2								
	K-3																		48 **	190	72	40	60	110	9	9	185,5	13,2
	K-4																		55	219	72	69	70	110	9	9	214,5	14
30P	K-1	28-38-42 48 **	327	150	162	75	4	100	12	55	114	8-M8	16	130	130	M24	4	4	157,5	21								
	K-3																		48 **	190	72	40	60	130	4	4	185,5	21
	K-4																		55	219	72	69	70	130	4	4	214,5	22
40P	K-1	38-42-48-55 60	338	183	198	100	4	125	15	70	145	8-M10	22	130	130	M24	11	24	194	22								
	K-2																		60	90	80	20	24	11	193			
50	K-2	42-48-55-60-65	430	154	179	110	4,5	140	25	85	165	8-M10	22	150	150	M24	6	20	176,5	30								
55	K-2	42-48-55-60-65 75	430	196	211	110	4,5	140	15	85	165	8-M10	22	150	150	M24 M30	6	6	208,5	40								
	K-3																		75	210	14	100	6	6	207,5			
60	K-2	48-55-60-65-75 80	520	172	192	125	8	160	20	110	185	8-M10	22	205	192	M30	6	20	192	46								
	K-3																		80	222	50	110	185	22	205	192	222	
65	K-2	55-60-65-75-80	520	220	240	125	8	160	20	110	185	8-M10	22	205	205	M30	6	6	240	66								
70P	K-2N	75-80-90 100	640	190	240	150	4	195	50	128	225	8-M16	30	265	265	M36	0	15	234	86								
	K-3N																		100	280	90	128	225	265	15	274		
75P	K-2N	80-90 100	640	245	265	150	4	195	20	128	225	8-M16	30	265	265	M36	0	0	254	127								
	K-3N																		100	280	35	128	225	265	0	269		
80P	K-2N	max. 110 max. 125***	810	226	270	160	5	230	44	160	270	8-M18	28	325	325	M36	0	15	264	180								
	K-3N																		max. 125***	286	60	160	270	325	325	15	280	
85P	K-2N	max. 125 max. 135	810	300	340	160	5	230	40	160	270	8-M18	28	325	325	M36	0	0	334	252								
	K-3N																		max. 135	340	170	270	325	325	0	334		
90P	K-2	max. 130 max. 140***	1000	344	364	445	5	506	20	170	550	16-M20	32	416	416	M36	0	35	343	350								
	K-3																		max. 140***	464	120	170	550	416	416	35	390	
95P	K-2	max. 130 max. 140***	1000	466	479	445	5	506	13	170	550	16-M20	32	416	416	M36	0	35	420	505								
	K-3																		max. 140***	586	120	170	550	416	416	35	555	
1200	K-2	max. 190	1300	425	462	220	7	310	7	240	570	16-M20	36	430	430	M36	0	30	419	1800								

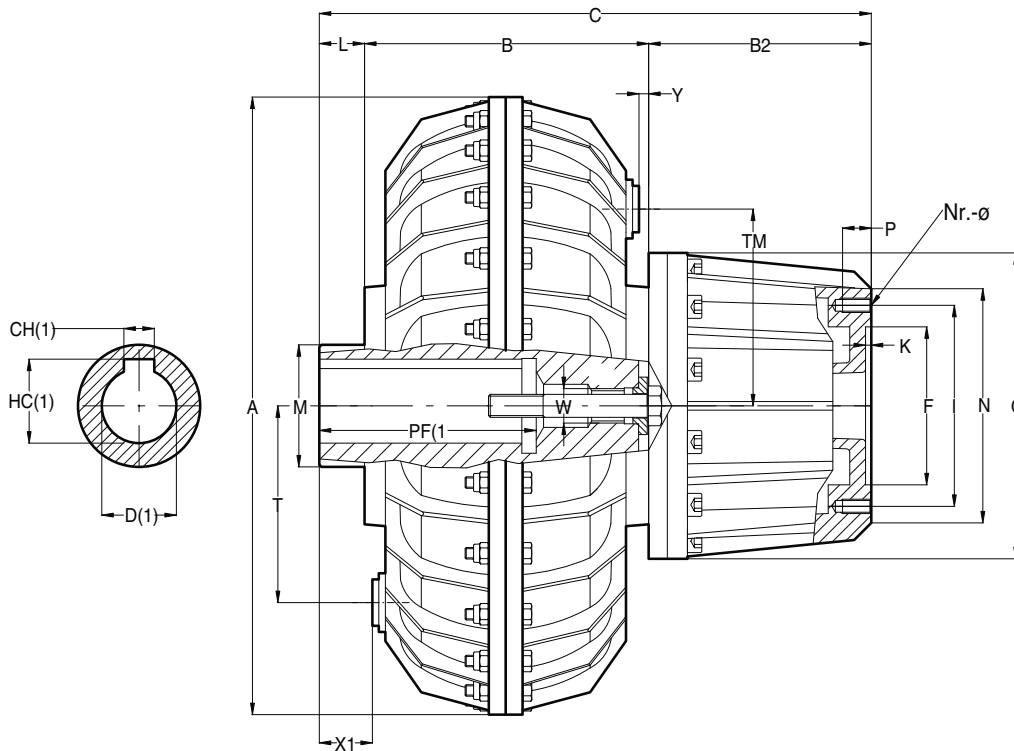
* Weight with oil - ** Reduced keyway - *** Depth of bore PF = 210 (for larger bores consult WESTCAR) - Standard bores in heavy type



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	Dimensions mm																			Weight Kg.*	
	Type	D	A	B	C	B2	F ^{H7}	K	I	L	M	N	Nr.Ø	O	P	TF	TM	W	X1		Y
30 SCF	K-2	28-38-42			217		72			12	60								21	15,6	
	K-3	48 **	290	150	245	55	72	4	100	40	60	114	8-M8	156	16	110	110	M24	49	9	15,6
	K-4	55			274		72			69	70								78		16,4
30P SCF	K-2	28-38-42			217		72			12	60								16	23,4	
	K-3	48 **	327	150	245	55	72	4	100	40	60	114	8-M8	156	16	110	110	M24	44	4	23,4
	K-4	55			274		72			69	70								73		24,4
40P SCF	K-2	38-42-48-55-60	338	183	256	58	90	4	125	15	80	145	8-M10	185	20	130	130	M24	39	11	25,7
50 SCF	K-2	42-48-55-60-65	430	154	259	80	110	4,5	140	25	85	165	8-M10	213	22	150	150	M24	31	20	35,8
55 SCF	K-2	42-48-55-60-65	430	196	291	80	110	4,5	140	15	85	165	8-M10	213	22	150	150	M24	21	6	45,8
	K-3	75			290					14	100										
60 SCF	K-2	48-55-60-65-75	520	172	282	90	125	8	160	20	110	185	8-M10	245	22	205	192	M30	26	20	54,4
	K-3	80			312					50											
65 SCF	K-2	55-60-65-75-80	520	220	330	90	125	8	160	20	110	185	8-M10	245	22	205	205	M30	26	6	74,4
70P SCF	K-2N	75-80-90	640	190	350	110	150	4	195	50	128	225	8-M16	288	30	265	265	M36	50	15	99
	K-3N	100			390					90											
75P SCF	K-2N	80-90	640	245	375	110	150	4	195	20	128	225	8-M16	288	30	265	265	M36	20	0	140
	K-3N	100			390					35											
80P SCF	K-2N	max. 110	810	226	388	118	160	5	230	44	160	270	8-M18	375	28	325	325	M36	44	15	196
	K-3N	max. 125***			404					60											
85P SCF	K-2N	max. 125	810	300	458	118	160	5	230	40	160	270	8-M18	375	28	325	325	M36	40	0	268
	K-3N	max. 135			170																
90P SCF	K-2	max. 130	1000	344	424	120	445	5	506	20	170	550	16-M20	630	32	416	416	M36	20	35	390
	K-3	max. 140***			524					120											
95P SCF	K-2	max. 130	1000	466	599	120	445	5	506	13	170	550	16-M20	630	32	416	416	M36	13	35	545
	K-3	max. 140***			706					120											

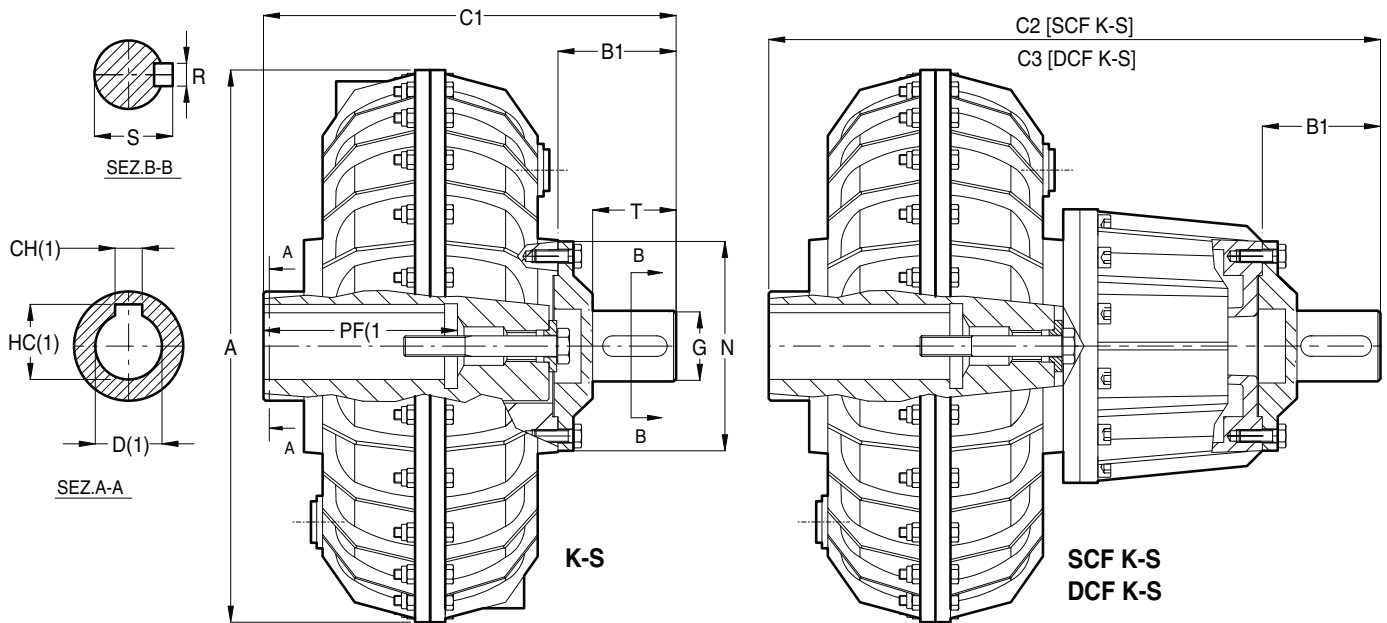
* Weight with oil - ** Reduced keyway - *** Depth of bore PF = 210 (for larger bores consult WESTCAR) - Standard bores in heavy type



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	Dimensions mm																			Weight Kg.*	
	Type	D	A	B	C	B2	F ^{H7}	K	I	L	M	N	Nr.Ø	O	P	TF	TM	W	X1		Y
30 DCF	K-2	28-38-42	290	150	257	95	72	4	100	12	60	114	8-M8	156	16	110	110	M24	21	9	16,2
	K-3	48 **			285		72			40	60								78		16,2
	K-4	55			314		72			69	70								78		17,2
30P DCF	K-2	28-38-42	327	150	257	95	72	4	100	12	60	114	8-M8	156	16	110	110	M24	16	4	24
	K-3	48 **			285		72			40	60								44		24
	K-4	55			314		72			69	70								73		25
40P DCF	K-2	38-42-48-55-60	338	183	328	130	90	4	125	15	80	145	8-M10	185	20	130	130	M24	39	11	27,2
50 DCF	K-2	42-48-55-60-65	430	154	334	155	110	4,5	140	25	85	165	8-M10	213	22	150	150	M24	31	20	38
55 DCF	K-2	42-48-55-60-65	430	196	366	155	110	4,5	140	15	85	165	8-M10	213	22	150	150	M24	21	6	48
	K-3	75			365					14	100							20	56		
60 DCF	K-2	48-55-60-65-75	520	172	362	170	125	8	160	20	110	185	8-M10	245	22	205	192	M30	26	20	58
	K-3	80			392					50	110							56			
65 DCF	K-2	55-60-65-75-80	520	220	410	170	125	8	160	20	110	185	8-M10	245	22	205	205	M30	26	6	78
70P DCF	K-2N	75-80-90	640	190	465	225	150	4	195	50	128	225	8-M16	288	30	265	265	M36	50	15	106
	K-3N	100			505					90	128							90			
75P DCF	K-2N	80-90	640	245	490	225	150	4	195	20	128	225	8-M16	288	30	265	265	M36	20	0	147
	K-3N	100			505					35	128							35			
80P DCF	K-2N	max. 110	810	226	488	218	160	5	230	44	160	270	8-M18	375	28	325	325	M36	44	15	208
	K-3N	max. 125***			504					60	160							60			
85P DCF	K-2N	max. 125	810	300	558	218	160	5	230	40	160	270	8-M18	375	28	325	325	M36	40	0	280
	K-3N	max. 135			170					170											
90P DCF	K-2	max. 130	1000	344	504	200	445	5	506	20	170	550	16-M20	630	32	416	416	M36	20	35	405
	K-3	max. 140***			604					120	170							120			
95P DCF	K-2	max. 130	1000	466	679	200	445	5	506	13	170	550	16-M20	630	32	416	416	M36	13	35	560
	K-3	max. 140***			786					120	170							120			

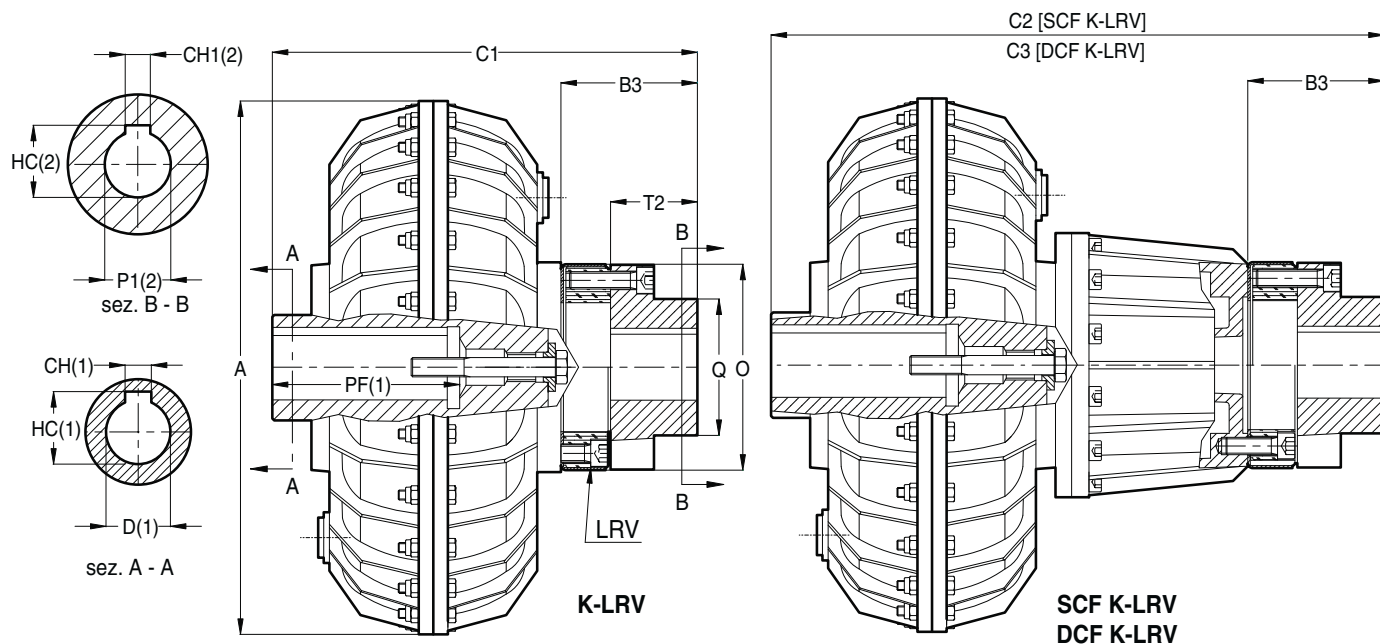
* Weight with oil - ** Reduced keyway - *** Depth of bore PF = 210 (for larger bores consult WESTCAR) - Standard bores in heavy type



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	K-S											SCF K-S			DCF K-S		
	Dimensions mm.										Weight Kg. *	Dimensions mm.		Weight Kg. *	Dimensions mm.		Weight Kg. *
	Type	D	A	B1	C1	G h6	N	R	S	T		Type	C2		Type	C3	
10	K-1-S K-3-S	14-19-24 28	193	35	133 149	19	75	6	21,5	25	4,4	-	-	-	-	-	-
20	K-1-S K-3-S	19-24-28 38	230	44	169 179	24	94	8	27	32	6,7	-	-	-	-	-	-
30	K-1-S K-3-S K-4-S	28-38-42 48** 55	290	63	225 253 282	38	114	10	41	45	14,5	SCF K-2-S SCF K-3-S SCF K-4-S	280 308 337	16,9	DCF K-2-S DCF K-3-S DCF K-4-S	320 348 377	17,5 17,5 18,5
30P	K-1-S K-3-S K-4-S	28-38-42 48** 55	327	63	225 253 282	38	114	10	41	45	22,3	SCF K-2-S SCF K-3-S SCF K-4-S	280 308 337	24,7	DCF K-2-S DCF K-3-S DCF K-4-S	320 348 377	25,3 25,3 26,3
40P	K-1-S K-2-S	38-42-48-55 60	338	76	274	48	145	14	51,5	55	24,5	SCF K-2-S SCF K-2-S	332	28,2	DCF K-2-S DCF K-2-S	404	29,7
50	K-2-S	42-48-55-60-65	430	92	271	55	165	16	59	65	34	SCF K-2-S	351	39,8	DCF K-2-S	426	42
55	K-2-S K-3-S	42-48-55-60-65 75	430	92	303 302	55	165	16	59	65	44	SCF K-2-S SCF K-3-S	383 382	49,8	DCF K-2-S DCF K-3-S	458 457	52
60	K-2-S K-3-S	48-55-60-65-75 80	520	110	302 332	60	185	18	64	80	52	SCF K-2-S SCF K-3-S	392 422	60,4	DCF K-2-S DCF K-3-S	472 502	64
65	K-2-S	55-60-65-75-80	520	110	350	60	185	18	64	80	72	SCF K-2-S	440	80,4	DCF K-2-S	520	84
70P	K-2N-S K-3N-S	65-75-80-90 100	640	122	362 402	70	225	20	74,5	90	96	SCF K-2N-S SCF K-3N-S	472 512	109	DCF K-2N-S DCF K-3N-S	587 627	116
75P	K-2N-S K-3N-S	75-80-90 100	640	122	387 402	70	225	20	74,5	90	137	SCF K-2N-S SCF K-3N-S	497 512	150	DCF K-2N-S DCF K-3N-S	612 627	157
80P	K-2N-S K-3N-S	max. 110 max. 125***	810	145	415 431	80	270	22	85	110	197	SCF K-2N-S SCF K-3N-S	533 549	213	DCF K-2N-S DCF K-3N-S	633 649	225
85P	K-2N-S K-3N-S	max. 125 max. 135	810	145	485	80	270	22	85	110	269	SCF K-2N-S SCF K-3N-S	603	285	DCF K-2N-S DCF K-3N-S	703	297
90P	K-2-S K-3-S	max. 130 max. 140***	1000	220	584 684	110	550	28	116	180	418	SCF K-2-S SCF K-3-S	704 804	458	DCF K-2-S DCF K-3-S	784 884	473 513
95P	K-2-S K-3-S	max. 130 max. 140***	1000	220	699 806	160	550	40	169	180	595	SCF K-2-S SCF K-3-S	819 926	635	DCF K-2-S DCF K-3-S	899 1006	650 700
1200	K-2-S	max. 190	1300	290	752	180	550	45	190	250	1900	-	-	-	-	-	-

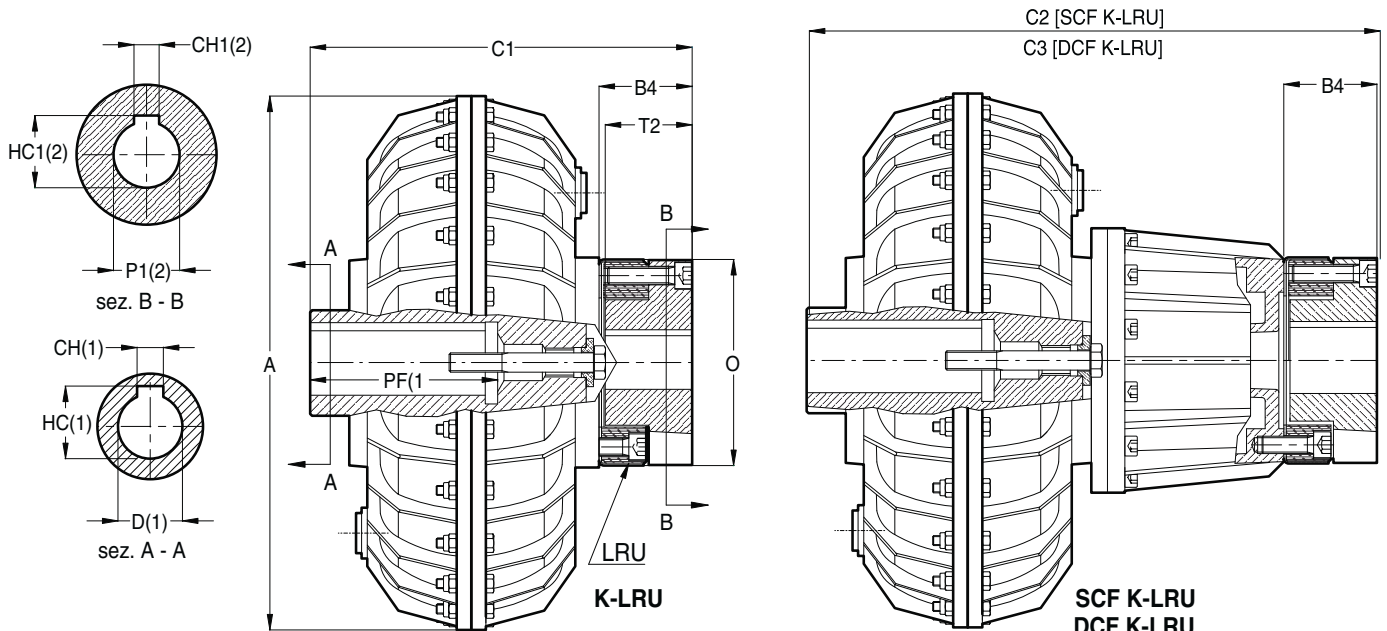
* Weight with oil - ** Reduced keyway - *** Depth of bore PF = 210 (for larger bores consult WESTCAR) - Standard bores in heavy type



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D
(2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

Size.	K-LRV										SCF K-LRV			DCF K-LRV		
	Type	D	A	B3	C1	O	P1 Max.	Q	T2	Weight Kg.*	Type	C2	Weight Kg.*	Type	C3	Weight Kg.*
10	K-1-LRV-1 K-3-LRV-1	14-19-24 28	193	50	148 164	84	28	45	30	4,7	-	-	-	-	-	-
20	K-1-LRV-2 K-3-LRV-2	19-24-28 38	230	69	194 204	104	38	56	45	7,6	-	-	-	-	-	-
30	K-01-LRV-3	28-38-42	290	87	249	130	48	68	55	16,2	SCF K-02-LRV-3	304	18,6	DCF K-02-LRV-3	344	19,2
	K-03-LRV-3	48 **			277					16,2	SCF K-03-LRV-3	332	18,6	DCF K-03-LRV-3	372	19,2
	K-04-LRV-3	55			306					17,2	SCF K-04-LRV-3	361	19,6	DCF K-04-LRV-3	401	20,2
30P	K-01-LRV-3	28-38-42	327	87	249	130	48	68	55	24	SCF K-02-LRV-3	304	26,4	DCF K-02-LRV-3	344	27
	K-03-LRV-3	48 **			277					24	SCF K-03-LRV-3	332	26,4	DCF K-03-LRV-3	372	27
	K-04-LRV-3	55			306					25	SCF K-04-LRV-3	361	27,4	DCF K-04-LRV-3	401	28
40P	K-01-LRV-4 K-02-LRV-4	38-42-48-55 60	338	96	294	158	60	91	60	27,2	SCF K-02-LRV-4 SCF K-02-LRV-4	352 352	30,9	DCF K-02-LRV-4 DCF K-02-LRV-4	424 424	32,4
50	K-02-LRV-5	42-48-55-60-65	430	110	289	176	70	106	70	37,6	SCF K-02-LRV-5	369	43,4	DCF K-02-LRV-5	444	45,6
55	K-02-LRV-5	42-48-55-60-65	430	110	321	176	70	106	70	47,6	SCF K-02-LRV-5	401	53,4	DCF K-02-LRV-5	476	55,6
	K-03-LRV-5	75			320						SCF K-03-LRV-5	400		475		
60	K-02-LRV-6	48-55-60-65-75	520	124	316	195	80	121	80	59	SCF K-02-LRV-6	406	65,3	DCF K-02-LRV-6	486	69,7
	K-03-LRV-6	80			346						SCF K-03-LRV-6	436		516		
65	K-02-LRV-6	55-60-65-75-80	520	124	364	195	80	121	80	76,9	SCF K-02-LRV-6	454	85,3	DCF K-02-LRV-6	534	89,7
	K-03-LRV-6	80			364						SCF K-03-LRV-6	454		534		
70P	K-2N-LRV-7	65-75-80-90	640	140	380	236	100	146	90	104,3	SCF K-2N-LRV-7	490	117,3	DCF K-2N-LRV-7	605	124,3
	K-3N-LRV-7	100			420						SCF K-3N-LRV-7	530		645		
75P	See type "K-FRV"										See type "SCF K-FRV"			See type "DCF K-FRV"		
80P	Available with flexible coupling ROTOPIN AB - See type "K-AB"										See type "SCF K-AB"			See type "DCF K-AB"		
85P																
90P																
95P																

* Weight with oil - ** Reduced keyway - Standard bores in heavy type

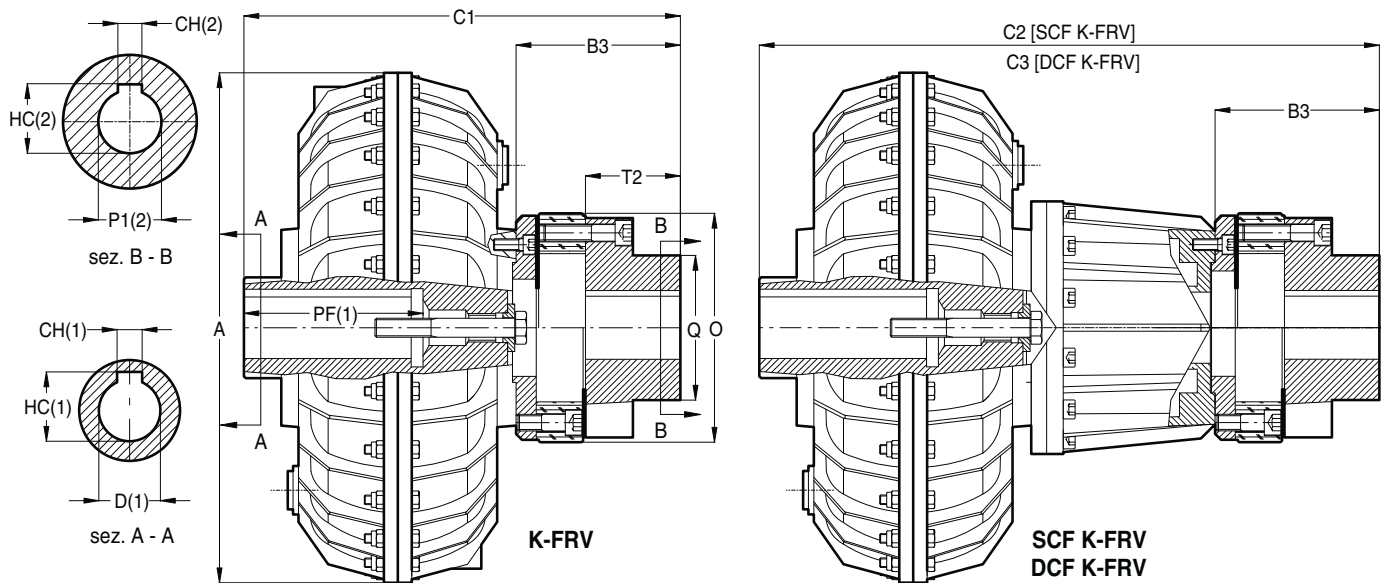


The rubber elements is not radially removable

NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D
(2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

Size	K-LRU									SCF K-LRU			DCF K-LRU		
	Type	D	A	B4	C1	O	P1 Max.	T2	Kg. *	Type	C2	Kg. *	Type	C3	Kg. *
10	K-1-LRU-1 K-3-LRU-1	14-19-24 28	193	35	133 149	84	28	30	4,7	-	-	-	-	-	-
20	K-1-LRU-2 K-3-LRU-2	19-24-28 38	230	49	174 184	104	32	45	7,6	-	-	-	-	-	-
30	K-01-LRU-3 K-03-LRU-3 K-04-LRU-3	28-38-42 48 ** 55	290	62	224 252 281	130	48	55	16,2 16,2 17,2	SCF K-02-LRU-3 SCF K-03-LRU-3 SCF K-04-LRU-3	279 307 336	18,6 18,6 19,6	DCF K-02-LRU-3 DCF K-03-LRU-3 DCF K-04-LRU-3	319 347 376	19,2 19,2 20,2
30P	K-01-LRU-3 K-03-LRU-3 K-04-LRU-3	28-38-42 48 ** 55	327	62	224 252 281	130	48	55	24 24 25	SCF K-02-LRU-3 SCF K-03-LRU-3 SCF K-04-LRU-3	279 307 336	26,4 26,4 27,4	DCF K-02-LRU-3 DCF K-03-LRU-3 DCF K-04-LRU-3	319 347 376	27 27 28
40P	K-01-LRU-4 K-02-LRU-4	38-42-48-55 60	338	66	264	158	60	60	27,2	SCF K-02-LRU-4 SCF K-02-LRU-4	322 322	30,9 30,9	DCF K-02-LRU-4 DCF K-02-LRU-4	394 394	32,4 32,4
50	K-02-LRU-5	42-48-55-60-65	430	75	254	176	70	70	37,6	SCF K-02-LRU-5	334	43,4	DCF K-02-LRU-5	409	45,6
55	K-02-LRU-5 K-03-LRU-5	42-48-55-60-65 75	430	75	286 285	176	70	70	47,6	SCF K-02-LRU-5 SCF K-03-LRU-5	366 365	53,4	DCF K-02-LRU-5 DCF K-03-LRU-5	441 440	55,6
60	K-02-LRU-6 K-03-LRU-6	48-55-60-65-75 80	520	84	276 306	195	80	80	5,9	SCF K-02-LRU-6 SCF K-03-LRU-6	366 396	65,3	DCF K-02-LRU-6 DCF K-03-LRU-6	446 476	69,7
65	K-02-LRU-6	55-60-65-75-80	520	84	324	195	80	80	76,9	SCF K-02-LRU-6	414	85,3	DCF K-02-LRU-6	494	89,7
70P	K-2N-LRU-7 K-3N-LRU-7	65-75-80-90 100	640	95	335 375	236	100	90	104,3	SCF K-2N-LRU-7 SCF K-3N-LRU-7	445 485	117,3	DCF K-2N-LRU-7 DCF K-3N-LRU-7	560 600	124,3
75P	See type "K-FRV"									See type "SCF K-FRV"			See type "DCF K-FRV"		
80P	Available with flexible coupling ROTOPIN AB - See type "K-AB"									See type "SCF K-AB"			See type "DCF K-AB"		
85P															
90P															
95P															

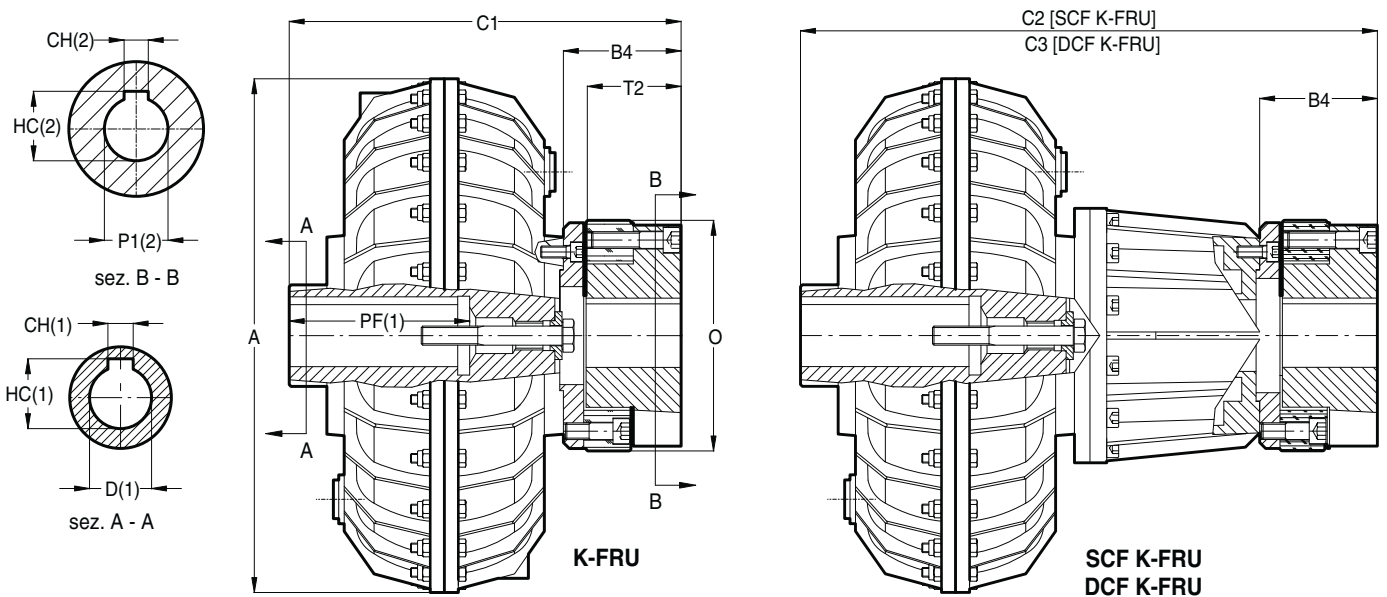
* Weight with oil - ** Reduced keyway - Standard bores in heavy type



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D (2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

Size	K-FRV										SCF K-FRV			DCF K-FRV		
	Type	D	A	B3	C1	O	P1 Max.	Q	T2	Weight Kg*	Type	C2	Weight Kg*	Type	C3	Weight Kg*
10	K-1-FRV-2 K-3-FRV-2	14-19-24 28	193	77	175 191	100	38	56	45	5,8	-	-	-	-	-	-
20	K-1-FRV-3 K-3-FRV-3	19-24-28 38	230	98	223 233	126	48	68	55	9,6	-	-	-	-	-	-
30	K-1-FRV-4 K-3-FRV-4 K-4-FRV-4	28-38-42 48 ** 55	290	111	273 301 330	153	60	91	60	19,5 19,5 20,5	SCF K-2-FRV-4 SCF K-3-FRV-4 SCF K-4-FRV-4	328 356 385	21,9 21,9 22,9	DCF K-2-FRV-4 DCF K-3-FRV-4 DCF K-4-FRV-4	368 396 425	22,5 22,5 23,5
30P	K-1-FRV-4 K-3-FRV-4 K-4-FRV-4	28-38-42 48 ** 55	327	111	273 301 330	153	60	91	60	27,3 27,3 28,3	SCF K-2-FRV-4 SCF K-3-FRV-4 SCF K-4-FRV-4	328 356 385	29,7 29,7 30,7	DCF K-2-FRV-4 DCF K-3-FRV-4 DCF K-4-FRV-4	368 396 425	30,3 30,3 31,3
40P	K-1-FRV-5 K-2-FRV-5	38-42-48-55 60	338	125	323	170	70	106	70	31	SCF K-2-FRV-5 SCF K-2-FRV-5	381	34,7	DCF K-2-FRV-5 DCF K-2-FRV-5	453	36,2
50	K-2-FRV-6	42-48-55-60-65	430	139	318	190	80	121	80	42,5	SCF K-2-FRV-6	398	48,3	DCF K-2-FRV-6	473	50,5
55	K-2-FRV-6 K-3-FRV-6	42-48-55-60-65 75	430	139	350 349	190	80	121	80	52,5	SCF K-2-FRV-6 SCF K-3-FRV-6	430 429	58,3	DCF K-2-FRV-6 DCF K-3-FRV-6	505 504	60,5
60	K-2-FRV-7 K-3-FRV-7	48-55-60-65-75 80	520	163	355 385	232	100	146	90	69	SCF K-2-FRV-7 SCF K-3-FRV-7	445 475	77,4	DCF K-2-FRV-7 DCF K-3-FRV-7	525 555	81
65	K-2-FRV-7	55-60-65-75-80	520	163	403	232	100	146	90	89	SCF K-2-FRV-7	493	97,4	DCF K-2-FRV-7	573	101
70P	K-2N-FRV-8 K-3N-FRV-8	65-75-80-90 100	640	194	434 474	271	110	156	110	123	SCF K-2N-FRV-8 SCF K-3N-FRV-8	544 584	136	DCF K-2N-FRV-8 DCF K-3N-FRV-8	659 699	143
75P	K-2N-FRV-8 K-3N-FRV-8	75-80-90 100	640	194	459 474	271	110	156	110	164	SCF K-2N-FRV-8 SCF K-3N-FRV-8	569 584	177	DCF K-2N-FRV-8 DCF K-3N-FRV-8	684 699	184
75P	K-2N-FRV-8x2 K-3N-FRV-8x2	75-80-90 100	640	246	511 526	271	110	156	110	174	SCF K-2N-FRV-8x2 SCF K-3N-FRV-8x2	621 636	187	DCF K-2N-FRV-8x2 DCF K-3N-FRV-8x2	736 751	194
80P	Available with flexible coupling ROTOPIN AB - See type "K-AB"										See type "SCF K-AB"			See type "DCF K-AB"		
85P																
90P																
95P																

* Weight with oil - ** Reduced keyway - Standard bores in heavy type

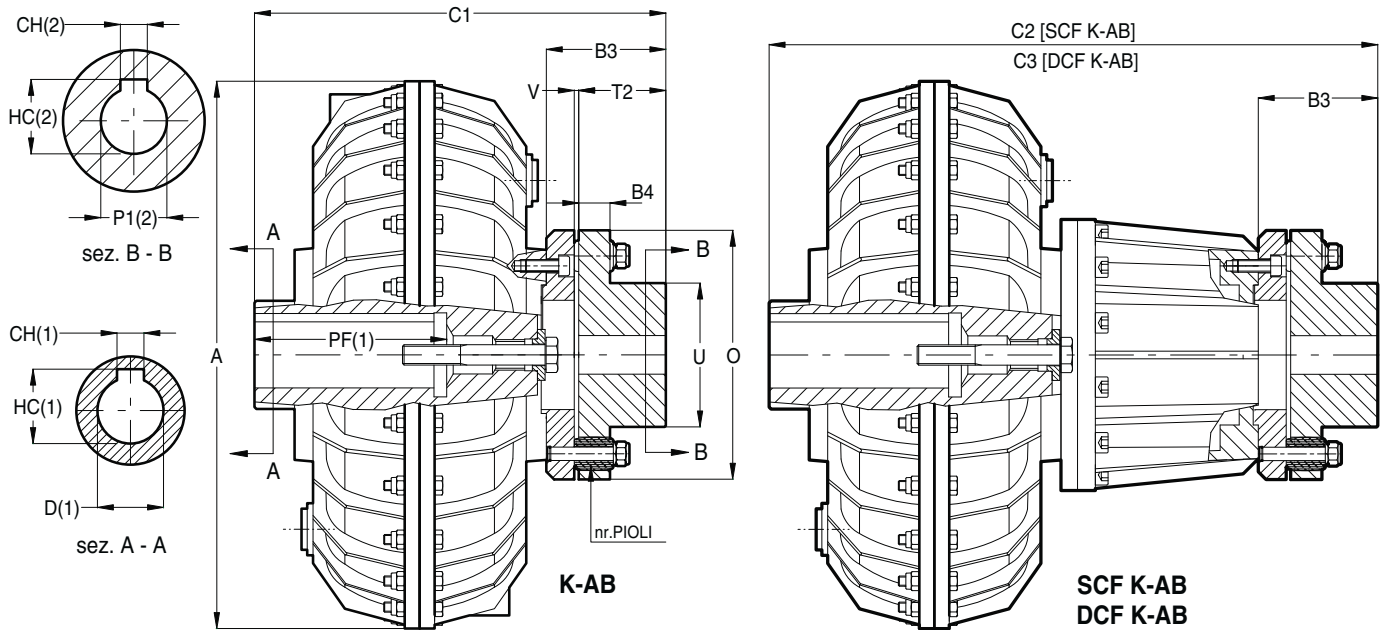


The rubber element is not radially removable

NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D (2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

Size	K-FRU									SCF K-FRU			DCF K-FRU		
	Type	Dimensions mm.							Weight	Dimensions mm.		Weight	Dimensions mm.		Weight
		D	A	B4	C1	O	P1 Max.	T2	Kg *	Type	C2	Kg. *	Type	C3	Kg. *
10	K-1-FRU-2 K-3-FRU-2	14-19-24 28	193	60	158 174	100	38	45	5,8	-	-	-	-	-	-
20	K-1-FRU-3 K-3-FRU-3	19-24-28 38	230	73	198 208	126	48	55	9,6	-	-	-	-	-	-
30	K-1-FRU-4 K-3-FRU-4 K-4-FRU-4	28-38-42 48 ** 55	290	81	245 273 302	153	60	60	19,5 19,5 20,5	SCF K-2-FRU-4 SCF K-3-FRU-4 SCF K-4-FRU-4	300 328 357	21,9 21,9 22,9	DCF K-2-FRU-4 DCF K-3-FRU-4 DCF K-4-FRU-4	340 368 397	22,5 22,5 23,5
30P	K-1-FRU-4 K-3-FRU-4 K-4-FRU-4	28-38-42 48 ** 55	327	81	245 273 302	153	60	60	27,3 27,3 28,3	SCF K-2-FRU-4 SCF K-3-FRU-4 SCF K-4-FRU-4	300 328 357	29,7 29,7 30,7	DCF K-2-FRU-4 DCF K-3-FRU-4 DCF K-4-FRU-4	340 368 397	30,3 30,3 31,3
40P	K-1-FRU-5 K-2-FRU-5	38-42-48-55 60	338	90	288	170	70	70	31	SCF K-2-FRU-5 SCF K-2-FRU-5	346	34,7	DCF K-2-FRU-5 DCF K-2-FRU-5	418	36,2
50	K-2-FRU-6	42-48-55-60-65	430	99	278	190	80	80	42,5	SCF K-2-FRU-6	358	48,3	DCF K-2-FRU-6	433	50,5
55	K-2-FRU-6 K-3-FRU-6	42-48-55-60-65 75	430	99	310 309	190	80	80	52,5	SCF K-2-FRU-6 SCF K-3-FRU-6	390 389	58,3	DCF K-2-FRU-6 DCF K-3-FRU-6	465 464	60,5
60	K-2-FRU-7 K-3-FRU-7	48-55-60-65-75 80	520	118	310 340	232	100	90	69	SCF K-2-FRU-7 SCF K-3-FRU-7	400 430	77,4	DCF K-2-FRU-7 DCF K-3-FRU-7	480 510	81
65	K-2-FRU-7	55-60-65-75-80	520	118	358	232	100	90	89	SCF K-2-FRU-7	448	97,4	DCF K-2-FRU-7	528	101
70P	K-2N-FRU-8 K-3N-FRU-8	65-75-80-90 100	640	139	379 419	271	110	110	123	SCF K-2N-FRU-8 SCF K-3N-FRU-8	489 529	136	DCF K-2N-FRU-8 DCF K-3N-FRU-8	604 644	143
75P	K-2N-FRU-8 K-3N-FRU-8	75-80-90 100	640	139	404 419	271	110	110	164	SCF K-2N-FRU-8 SCF K-3N-FRU-8	514 529	177	DCFK-2N-FRU-8 DCF K-3N-FRU-8	629 644	184
75P	K-2N-FRU-8x2 K-3N-FRU-8x2	75-80-90 100	640	191	456 471	271	110	110	174	SCF K-2N-FRU-8x2 SCF K-3N-FRU-8x2	566 581	187	DCFK-2N-FRU-8x2 DCF K-3N-FRU-8x2	681 696	194
80P	Available with flexible coupling ROTOPIN AB - See type "K-AB"									See type "SCF K-AB"			See type "DCF K-AB"		
85P															
90P															
95P															

* Weight with oil - ** Reduced keyway - Standard bores in heavy type

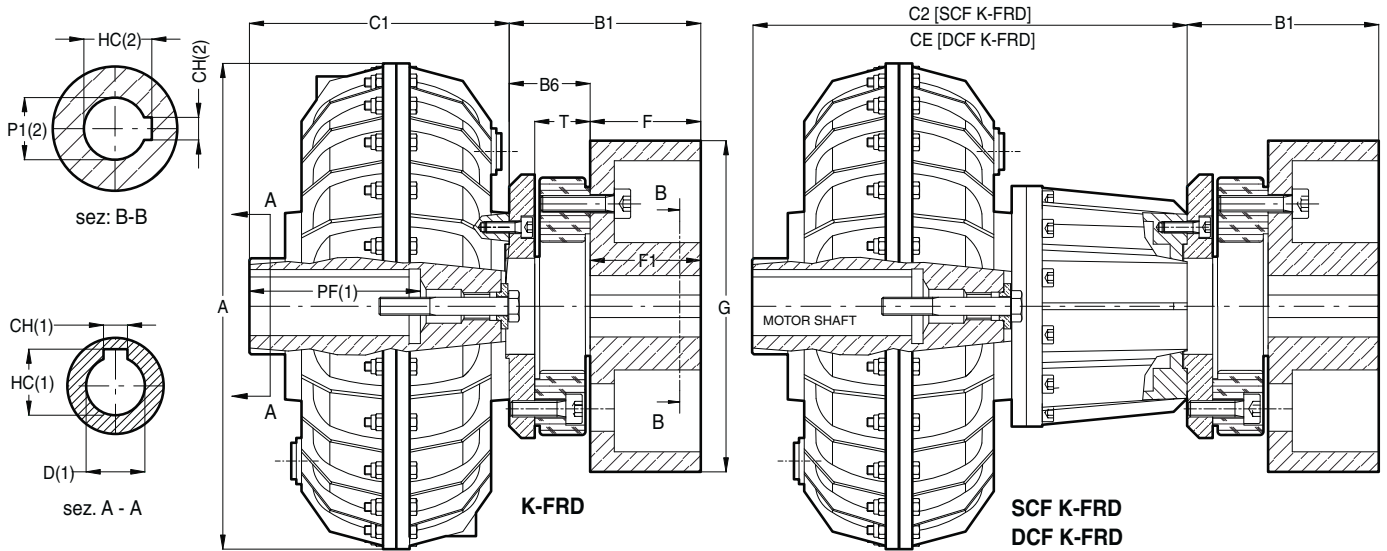


NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D (2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

Size	K-AB												SCF K-AB			DCF K-AB			
	Dimensions mm.											Weight	Dimensions mm.		Weight	Dimensions mm.		Weight	
	D	A	B3	B4	C1	nr.	O	P1 Max.	T2	U	V	Kg *	Type	C2	Kg *	Type	C3	Kg *	
80P	K-2N-AB-8	max. 110	810	196	65	466	8	330	110	140	170	6	240	SCF K-2N-AB-8	584	256	DCF K-2N-AB-8	684	268
	K-3N-AB-8	max. 125***												SCF K-3N-AB-8	600		DCF K-3N-AB-8	700	
85P	K-2N-AB-8M	max. 125	810	226	65	566	12	400	155	170	236	6	367	SCF K-2N-AB-8M	684	383	DCF K-2N-AB-8M	784	395
	K-3N-AB-8M	max. 135												SCF K-3N-AB-8M	684		DCF K-3N-AB-8M	784	
90P	K-2-AB-9	max. 130	1000	318	82	682	14	550	180	250	290	6	600	SCF K-2-AB-9	742	640	DCF K-2-AB-9	822	655
	K-3-AB-9	max. 140***												SCF K-3-AB-9	842		DCF K-3-AB-9	922	
95P	K-2-AB-9	max. 130	1000	318	82	797	14	550	180	250	290	6	755	SCF K-2-AB-9	917	795	DCF K-2-AB-9	997	810
	K-3-AB-9	max. 140***												SCF K-3-AB-9	1024		DCF K-3-AB-9	1104	
1200	K-2-AB-9	max. 190	1300	318	82	780	14	550	180	250	290	6	2050	-	-	-	-	-	-

* Weight with oil - *** Depth of bore PF = 210 (for larger bores consult WESTCAR)

For “REVERSE MOUNTING” see type “KK”



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

(2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

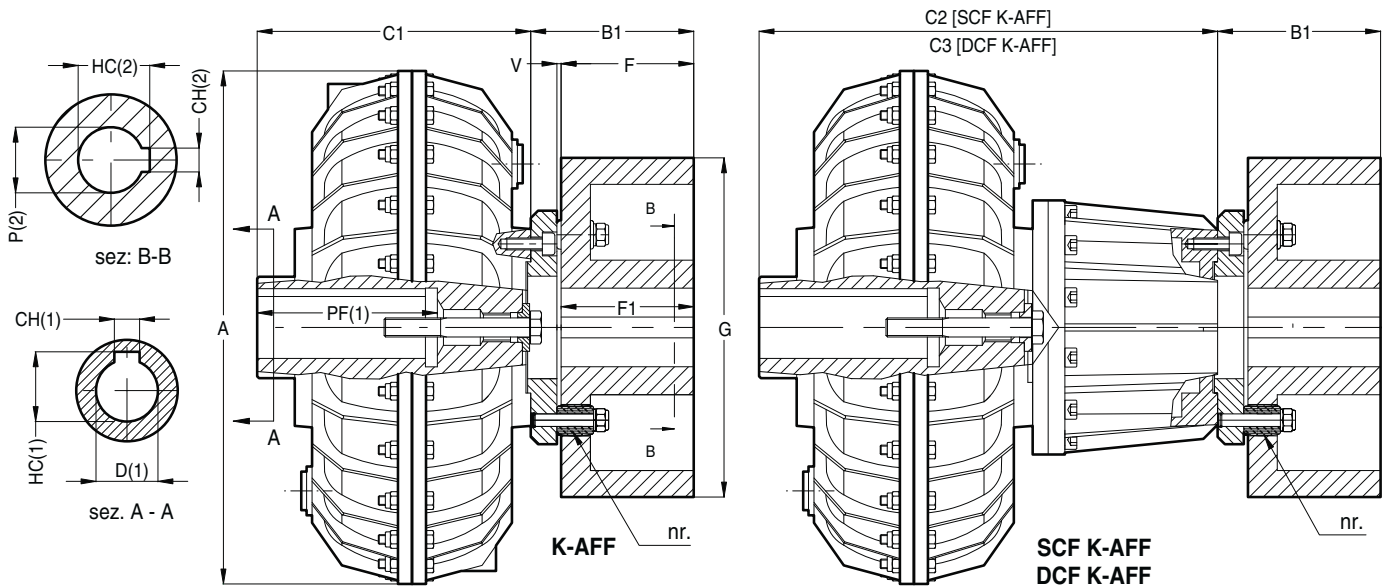
Size	K-FRD								SCF K-FRD			DCF K-FRD		
	Dimensions mm							Weight Kg.*	Dimensions mm		Weight Kg.*	Dimensions mm		Weight Kg.*
	Type	D	A	B6	C1	P1 Max.	T		Type	C2		Type	C3	
20	K-1-FRD-3 K-3-FRD-3	19-24-28 38	230	43	125 135	48	28	7,6	-	-	-	-	-	-
30	K-1-FRD-4 K-3-FRD-4 K-4-FRD-4	28-38-42 48 ** 55	290	51	162 190 219	60	34	15,8	SCF K-2-FRD-4 SCF K-3-FRD-4 SCF K-4-FRD-4	217 245 274	18,2	DCF K-2-FRD-4 DCF K-3-FRD-4 DCF K-4-FRD-4	257 285 314	18,8
30P	K-1-FRD-4 K-3-FRD-4 K-4-FRD-4	28-38-42 48 ** 55	327	51	162 190 219	60	34	23,6	SCF K-2-FRD-4 SCF K-3-FRD-4 SCF K-4-FRD-4	217 245 274	26	DCF K-2-FRD-4 DCF K-3-FRD-4 DCF K-4-FRD-4	257 285 314	26,6
40P	K-1-FRD-5 K-2-FRD-5	38-42-48-55 60	338	55	198	70	38	25,3	SCF K-2-FRD-5 SCF K-2-FRD-5	256 256	29	DCF K-2-FRD-5 DCF K-2-FRD-5	328	30,5
50	K-2-FRD-6	42-48-55-60-65	430	59	179	80	42	34	SCF K-2-FRD-6	259	39,8	DCF K-2-FRD-6	334	42
55	K-2-FRD-6 K-3-FRD-6	42-48-55-60-65 75	430	59	211 210	80	42	44	SCF K-2-FRD-5 SCF K-3-FRD-6	291 290	49,8	DCF K-2-FRD-6 DCF K-3-FRD-6	366 365	52
60	K-2-FRD-7 K-3-FRD-7	48-55-60-65-75 80	520	73	192 222	100	48	54,9	SCF K-2-FRD-7 SCF K-3-FRD-7	282 312	63,3	DCF K-2-FRD-7 DCF K-3-FRD-7	362 392	66,9
65	K-2-FRD-7	55-60-65-75-80	520	73	240	100	48	74,9	SCF K-2-FRD-7	330	83,3	DCF K-2-FRD-7	410	86,9
70P	K-2N-FRD-8 K-3N-FRD-8	65-75-80-90 100	640	84	240 280	110	56	91	SCF K-2N-FRD-8 SCF K-3N-FRD-8	350 390	114	DCF K-2N-FRD-8 DCF K-3N-FRD-8	465 505	121
75P	K-2N-FRD-8 K-3N-FRD-8	75-80-90 100	640	84	265 280	110	56	142	SCF K-2N-FRD-8 SCF K-3N-FRD-8	375 390	155	DCF K-2N-FRD-8 DCF K-3N-FRD-8	490 505	162
75P	K-2N-FRD-8x2 K-3N-FRD-8x2	75-80-90 100	640	136	317 332	110	56	152	SCF K-2N-FRD-8x2 SCF K-3N-FRD-8x2	427 442	165	DCF K-2N-FRD-8x2 DCF K-3N-FRD-8x2	542 557	172
80P	Available with flexible coupling ROTOPIN AB - See type “K-AFF”								See type “SCF K-AFF”			See type “DCF K-AFF”		
85P														
90P														
95P														

BRAKE DRUMS “D” DIMENSIONS

Size	D-3				D-4				D-5				D-6				D-7				D-8			
B1	103	118	138	161	126	146	169	130	150	173	205	245	134	154	177	209	249	191	223	263	234	274		
Ø G	160	200	250	315	200	250	315	200	250	315	400	500	200	250	315	400	500	315	400	500	400	500		
F=F1	60	75	95	118	75	95	118	75	95	118	150	190	75	95	118	150	190	118	150	190	150	190		
Kg.	4,7	7,2	13,1	22,8	8,6	14,8	25	9,3	15,8	26,2	45,1	76,2	10,8	17,8	28,7	48,4	80,5	32,6	53,5	87	55,7	90		

* Weight with oil without Brake Drum - ** Reduced keyway - Standard bores in **heavy** type

For “REVERSE MOUNTING” see type “KK”



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

(2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

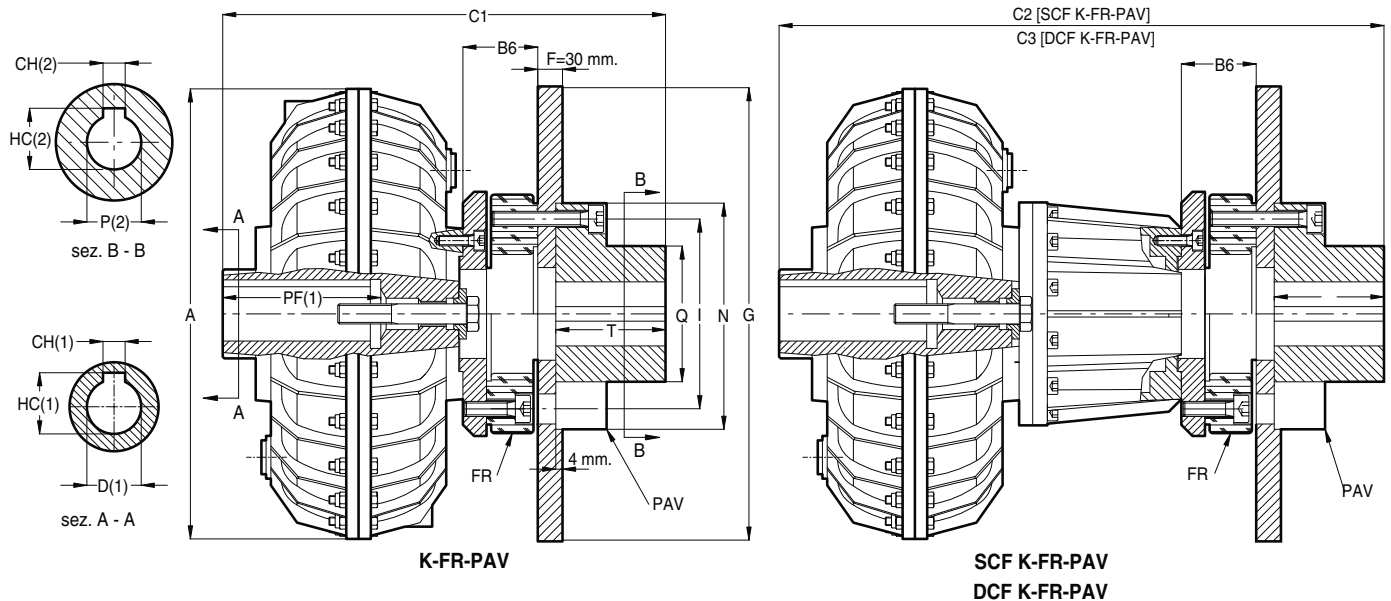
Size	K-AFF								SCF K-AFF			DCF K-AFF		
	Type	Dimensions mm				Weight	Dimensions mm		Weight	Dimensions mm		Weight		
		D	A	C1	nr.	P1 Max.	V	Kg *	Type	C2	Kg *	Type	C3	Kg *
50	K-2-AFF-5	42-48-55-60-65	430	179	8	70	4	35	SCF K-2-AFF-5	259	40,8	DCF K-2-AFF-5	334	43
55	K-2-AFF-5	42-48-55-60-65	430	211	8	70	4	45	SCF K-2-AFF-5	291	50,8	DCF K-2-AFF-5	366	53
	K-3-AFF-5	75	210						SCF K-3-AFF-5	290		DCF K-3-AFF-5	365	
60	K-2-AFF-6	48-55-60-65-75	520	192	8	85	4	54	SCF K-2-AFF-6	282	62,4	DCF K-2-AFF-6	362	66
	K-3-AFF-6	80	222						SCF K-3-AFF-6	312		DCF K-3-AFF-6	392	
65	K-2-AFF-6	55-60-65-75-80	520	240	8	85	4	74	SCF K-2-AFF-6	330	82,4	DCF K-2-AFF-6	410	86
70P	K-2N-AFF-8/7	75-80-90	640	240	8	105	5	101	SCF K-2N-AFF-7	350	114	DCF K-2N-AFF-7	465	121
	K-3N-AFF-8/7	100	280						SCF K-3N-AFF-7	390		DCF K-3N-AFF-7	505	
75P	K-2N-AFF-8/7	80-90	640	265	8	105	5	142	SCF K-2N-AFF-7	375	155	DCF K-2N-AFF-7	490	162
	K-3N-AFF-8/7	100	280						SCF K-3N-AFF-7	390		DCF K-3N-AFF-7	505	
80P	K-2N-AFF-8	max. 110	810	270	8	110	6	210	SCF K-2N-AFF-8	388	226	DCF K-2N-AFF-8	488	238
	K-3N-AFF-8	max. 125***	286						SCF K-3N-AFF-8	404		DCF K-3N-AFF-8	504	
85P	K-2N-AFF-8M	max. 125	810	340	12	160	6	302	SCF K-2N-AFF-8M	458	318	DCF K-2N-AFF-8M	558	330
	K-3N-AFF-8M	max. 135							SCF K-3N-AFF-8M			DCF K-3N-AFF-8M		
90P	K-2-AFF-9	max. 130	1000	364	14	180	6	450	SCF K-2-AFF-9	424	490	DCF K-2-AFF-9	504	505
	K-3-AFF-9	max. 140***	764						SCF K-3-AFF-9	524		DCF K-3-AFF-9	604	545
95P	K-2-AFF-9	max. 130	1000	479	14	180	6	605	SCF K-2-AFF-9	599	645	DCF K-2-AFF-9	679	660
	K-3-AFF-9	max. 140***	586						SCF K-3-AFF-9	706		DCF K-3-AFF-9	786	710

BRAKE DRUMS “D” DIMENSIONS

Size	FF-5			FF-6			FF-8/7 FF-8			FF-8M			FF-9		
B1	124	147	179	156	188	228	206	246	292	206	246	292	255	304	333
Ø G	250	315	400	315	400	500	400	500	630	400	500	630	500	630	710
F=F1	95	118	150	118	150	190	150	190	236	150	190	236	190	236	265
Kg.	20	33	50	38	56	89	75	108	168	85	118	178	236	296	365

* Weight with oil - ** Reduced keyway - *** Depth of bore PF = 210 (for larger bores consult WESTCAR) - Standard bores in heavy type

For “REVERSE MOUNTING” see type “KK”



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D (2) UPON REQUEST: BORE P1 MACHINED SEE SHEET 10-023A

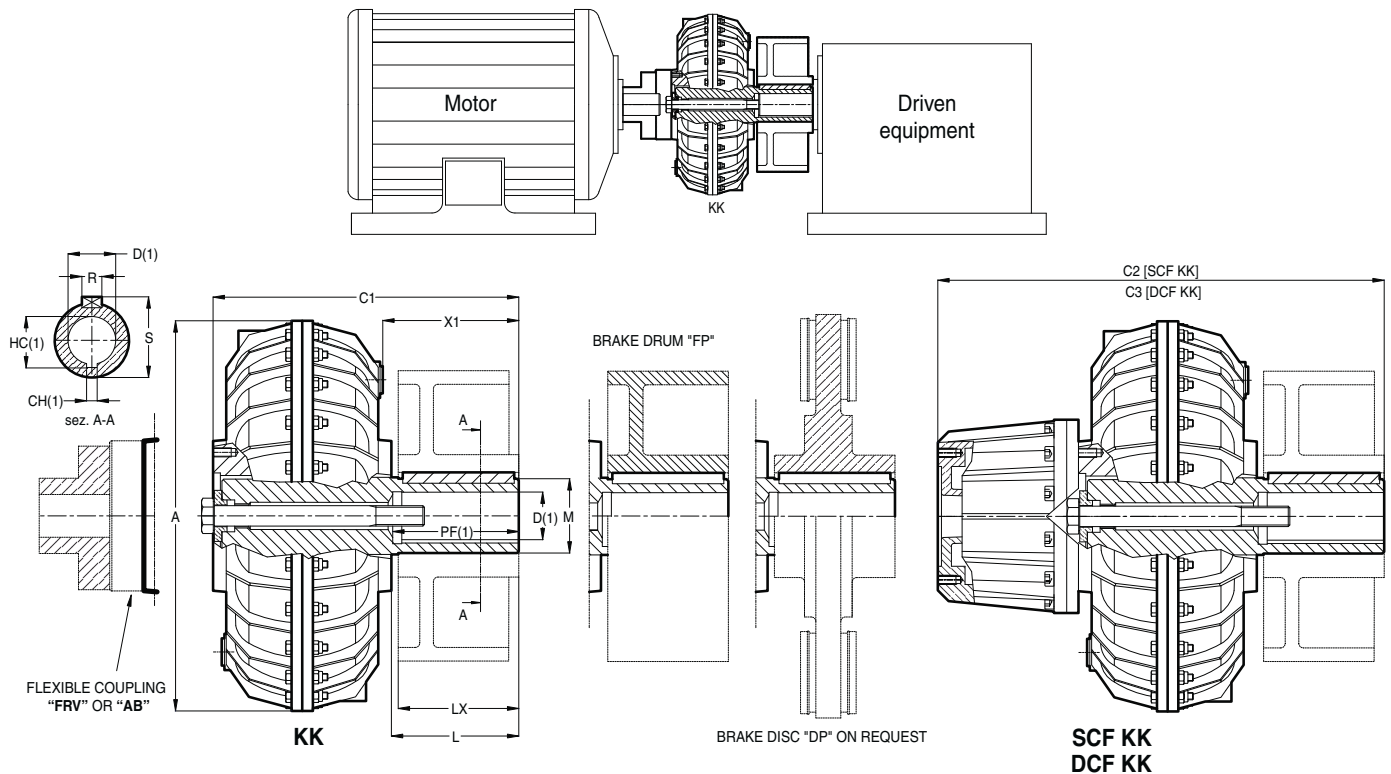
Size	K-FR-PAV											Weight Kg.*	SCF K-FR-PAV			DCF K-FR-PAV		
	Dimensions mm												Dimensions mm			Dimensions mm		
	Type	D	A	B6	C1	P1 Max.	T	Q	I	N	Ø G		Type	C2	Weight Kg.*	Type	C3	Weight Kg.*
10	K-1-FR-PAV-2	14-19-24	193	35	204	38	45	55	78	94	200	5,8	-	-	-	-	-	
	K-3-FR-PAV-2	28																220
20	K-1-FR-PAV-3	19-24-28	230	43	249	48	55	69	100	118	250-315	9,6	-	-	-	-	-	
	K-3-FR-PAV-3	38																259
30	K-1-FR-PAV-4	28-38-42	290	51	299	60	60	91	125	145	250-315	19,5	SCF K-1-FR-PAV-4	354	DCF K-1-FR-PAV-4	394		
	K-3-FR-PAV-4	48 **											327	382			DCF K-3-FR-PAV-4	422
	K-4-FR-PAV-4	55											356	411			DCF K-4-FR-PAV-4	451
30P	K-1-FR-PAV-4	28-38-42	327	51	299	60	60	91	125	145	250-315	27,3	SCF K-1-FR-PAV-4	354	DCF K-1-FR-PAV-4	394		
	K-3-FR-PAV-4	48 **											327	382			DCF K-3-FR-PAV-4	422
	K-4-FR-PAV-4	55											356	411			DCF K-4-FR-PAV-4	451
40P	K-1-FR-PAV-5	42-48-55	338	55	349	70	70	106	140	165	315-355-400	31	SCF K-2-FR-PAV-5	407	DCF K-2-FR-PAV-5	479		
	K-2-FR-PAV-5	60											356					
50	K-2-FR-PAV-6	42-48-55-60-65	430	59	344	80	80	121	160	185	315-355-400	42,5	SCF K-2-FR-PAV-6	424	DCF K-2-FR-PAV-6	499		
	K-3-FR-PAV-6	55-60-65-75											376	456			DCF K-2-FR-PAV-6	531
55	K-2-FR-PAV-6	55-60-65-75	430	59	375	80	80	121	160	185	315-355-400	52,5	SCF K-3-FR-PAV-6	455	DCF K-3-FR-PAV-6	530		
	K-3-FR-PAV-6	375											455	DCF K-3-FR-PAV-6	530			
	K-2-FR-PAV-7	60-65-75-80											381	471	DCF K-2-FR-PAV-7	551		
60	K-2-FR-PAV-7	60-65-75-80	520	73	411	100	90	146	195	225	400-450-500	69	SCF K-3-FR-PAV-7	501	DCF K-3-FR-PAV-7	581		
	K-3-FR-PAV-7	411											501	DCF K-3-FR-PAV-7	581			
65	K-2-FR-PAV-7	55-60-65-75-80	520	73	429	100	90	146	195	225	400-450-500	89	SCF K-2N-FR-PAV-7	519	DCF K-2N-FR-PAV-7	599		
	K-2N-FR-PAV-7	429											519	DCF K-2N-FR-PAV-7	599			
70P	K-2N-FR-PAV-8	75-80-90	640	84	460	110	110	156	225	270	500-560-630	123	SCF K-2N-FR-PAV-8	570	DCF K-2N-FR-PAV-8	685		
	K-3N-FR-PAV-8	100											500	610	DCF K-3N-FR-PAV-8	725		
75P	K-2N-FR-PAV-8	75-80-90	640	84	485	110	110	156	225	270	500-560-630	164	SCF K-2N-FR-PAV-8	595	DCF K-2N-FR-PAV-8	710		
	K-3N-FR-PAV-8	100											500	610	DCF K-3N-FR-PAV-8	725		
	K-2N-FR-PAV-8x2	75-80-90											537	647	DCF K-2N-FR-PAV-8x2	762		
75P	K-2N-FR-PAV-8x2	75-80-90	640	136	552	110	110	156	225	270	500-560-630	174	SCF K-3N-FR-PAV-8x2	662	DCF K-3N-FR-PAV-8x2	777		
	K-3N-FR-PAV-8x2	100											552	662	DCF K-3N-FR-PAV-8x2	777		

BRAKE DISC “PA”

Ø G	200	250	315	355	400	450	500	560	630	710
F	30	30	30	30	30	30	30	30	30	30
Weight Kg.	3,7	5,7	9,1	12,5	14,7	18	23	28	36	45

Different disc thickness “F” is available on request – * Weight with oil without brake disc “PA” – ** Reduced keyway – Standard bores in heavy type

REVERSE ASSEMBLY

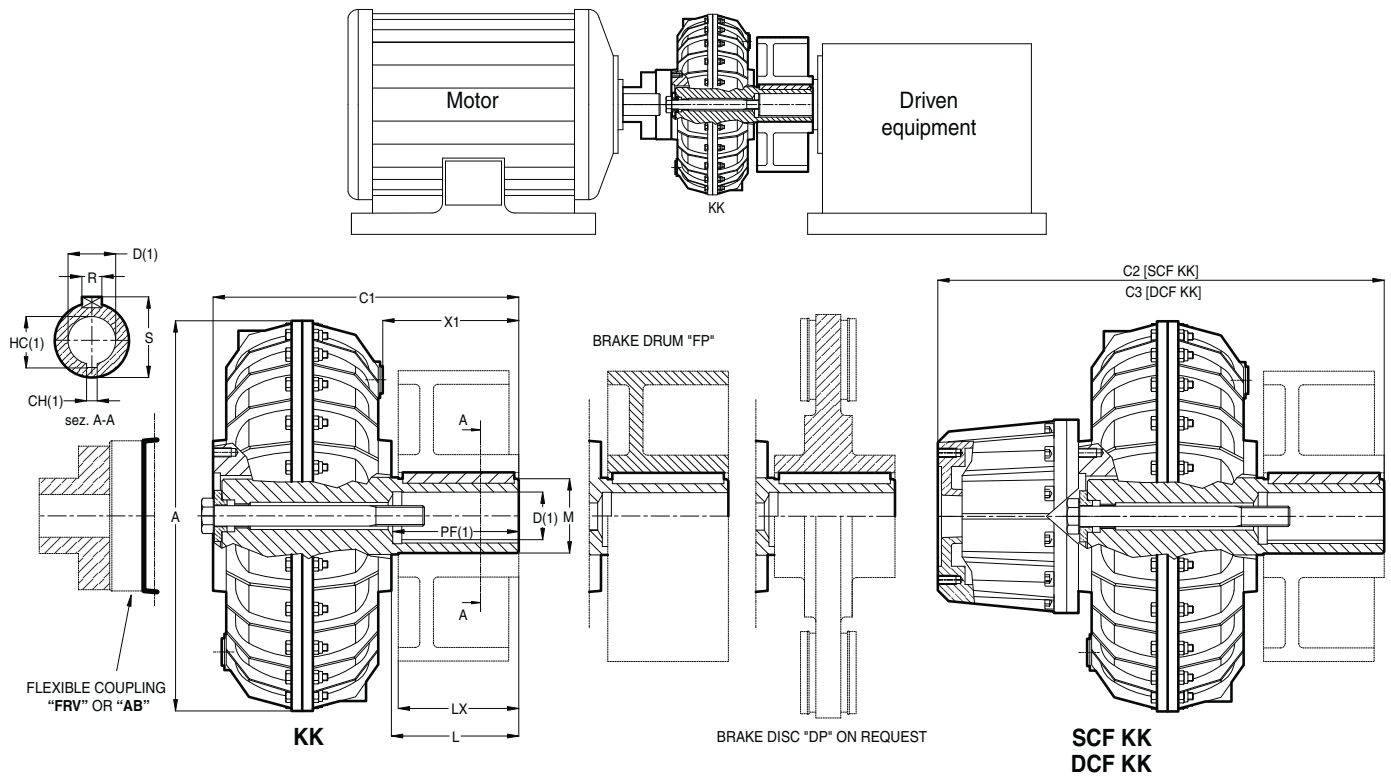


NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	KK											SCF KK			DCF KK		
	Type	D Max.	A	C1	L	LX	M	R	S	X1	Weight Kg.*	Type	C2	Weight Kg.*	Type	C3	Weight Kg.*
20	K-2 K 70	28	230	185	70	60	44	10	47,3	77	6,2	..	--	--	--	--	--
30	K-2 K 68	42	290	218	68	60	57	12	60,3	77	13,6	SCF K-2 K 68	273	16	DCF K-2 K 68	313	16,6
	K-2 K 88			238	88	75				97	13,8	SCF K-2 K 88	293	16,2	DCF K-2 K 88	333	16,8
	K-2 K 112			262	112	95				121	14	SCF K-2 K 112	317	16,4	DCF K-2 K 112	356	17
30P	K-2 K 68	42	327	218	68	60	57	12	60,3	77	21,4	SCF K-2 K 68	273	23,8	DCF K-2 K 68	313	24,4
	K-2 K 88			238	88	75				97	21,6	SCF K-2 K 88	293	24	DCF K-2 K 88	333	24,6
	K-2 K 112			262	112	95				121	21,8	SCF K-2 K 112	317	24,2	DCF K-2 K 112	356	24,8
40P	K-2 K 90	60	338	273	90	75	77	16	81,3	114	23	SCF K-2 K 90	331	26,7	DCF K-2 K 90	403	28,2
	K-2 K 118			301	118	115				142	23,5	SCF K-2 K 118	359	27,2	DCF K-2 K 118	431	28,7
50	K-2 K 90	65	430	234	90	86	85	18	89,3	97	32,5	SCF K-2 K 90	314	38,3	DCF K-2 K 90	389	40,5
	K-2 K 120			264	120	118				127	33,5	SCF K-2 K 120	344	39,3	DCF K-2 K 120	419	41,5
	K-2 K 155			299	155	150				162	34,5	SCF K-2 K 155	379	40,3	DCF K-2 K 155	454	42,5
55	K-2 K 90	65	430	286	90	86	85	18	89,3	97	42	SCF K-2 K 90	366	47,8	DCF K-2 K 90	441	50
	K-2 K 120			316	120	118				127	43	SCF K-2 K 120	396	48,8	DCF K-2 K 120	471	51
	K-2 K 155			351	155	150				162	44	SCF K-2 K 155	431	49,8	DCF K-2 K 155	506	52
60	K-2 K 130	80	520	302	130	118	107	20	111,9	136	50	SCF K-2 K 130	392	58,4	DCF K-2 K 130	472	62
	K-2 K 170			342	170	150				176	53	SCF K-2 K 170	432	61,4	DCF K-2 K 170	512	65
	K-2 K 230			402	230	190				236	56	SCF K-2 K 230	492	64,4	DCF K-2 K 230	572	68
65	K-2 K 130	80	520	350	130	118	107	20	111,9	136	69	SCF K-2 K 130	440	77,4	DCF K-2 K 130	520	71
	K-2 K 170			390	170	150				176	72	SCF K-2 K 170	480	80,4	DCF K-2 K 170	560	74
	K-2 K 220			440	220	190				226	76	SCF K-2 K 220	530	84,4	DCF K-2 K 220	610	78
	K-2 K 255			475	255	236				261	79	SCF K-2 K 255	565	87,4	DCF K-2 K 255	645	81

* Weight with oil

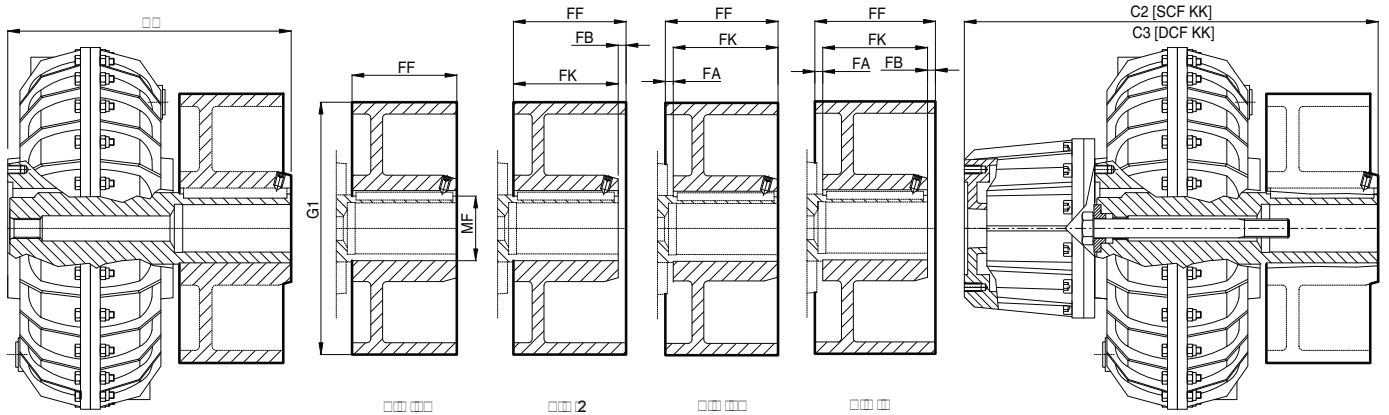
REVERSE ASSEMBLY



NOTE: (1) FOR BORE AND KEYWAY DIMENSIONS SEE SHEET 10-019D

Size	KK										SCF KK			DCF KK			
	Dimensions mm										Weight	Dimensions mm		Weight	Dimensions mm		Weight
	Type	D Max.	A	C1	L	LX	M	R	S	X1	Kg. *	Type	C2	Kg. *	Type	C3	Kg. *
70P	K-2N K 155	90	640	345	155	150	128	25	133,4	159	105	SCF K-2N K 155	455	118	DCF K-2N K 155	570	125
	K-2N K 195			385	195	190				199	108	SCF K-2N K 195	495	121	DCF K-2N K 195	610	128
	K-2N K 240			430	240	236				244	112	SCF K-2N K 240	540	125	DCF K-2N K 240	655	132
	K-2N K 270			460	270	265				274	115	SCF K-2N K 270	570	128	DCF K-2N K 270	685	135
	K-2N K 305			495	305	300				309	118	SCF K-2N K 305	605	131	DCF K-2N K 305	720	138
75P	K-2N K 155	90	640	400	155	150	128	25	133,4	159	130	SCF K-2N K 155	510	143	DCF K-2N K 155	625	150
	K-2N K 195			440	195	190				199	134	SCF K-2N K 195	550	147	DCF K-2N K 195	665	154
	K-2N K 240			485	240	236				244	139	SCF K-2N K 240	595	152	DCF K-2N K 240	710	159
	K-2N K 270			515	270	265				274	141	SCF K-2N K 270	625	154	DCF K-2N K 270	740	161
	K-2N K 305			550	305	300				309	145	SCF K-2N K 305	660	158	DCF K-2N K 305	775	165
80P	K-2N K 195	125	810	421	195	190	160	28	166,4	193	190	SCF K-2N K 195	539	206	DCF K-2N K 195	639	218
	K-2N K 240			466	240	236				238	200	SCF K-2N K 240	584	216	DCF K-2N K 240	684	228
	K-2N K 270			496	270	265				268	208	SCF K-2N K 270	614	224	DCF K-2N K 270	714	236
	K-2N K 305			531	305	300				303	215	SCF K-2N K 305	649	231	DCF K-2N K 305	749	243
85P	K-2N K 195	125	810	495	195	190	160	28	166,4	193	260	SCF K-2N K 195	613	276	DCF K-2N K 195	713	288
	K-2N K 240			540	240	236				270	270	SCF K-2N K 240	658	286	DCF K-2N K 240	758	298
	K-2N K 270			570	270	265				268	278	SCF K-2N K 270	688	294	DCF K-2N K 270	788	306
	K-2N K 305			605	305	300				303	285	SCF K-2N K 305	723	301	DCF K-2N K 305	823	313
90P	K-2 K 240	135	1000	584	240	236	170	32	177,4	240	370	SCF K-2 K 240	604	410	DCF K-2 K 240	784	525
	K-2 K 270			614	270	265				270	380	SCF K-2 K 270	634	420	DCF K-2 K 270	814	535
	K-2 K 305			649	305	300				305	390	SCF K-2 K 305	669	430	DCF K-2 K 305	849	545
95P	K-2 K 240	135	1000	706	240	236	170	32	177,4	240	520	SCF K-2 K 240	826	560	DCF K-2 K 240	906	575
	K-2 K 270			736	270	265				270	530	SCF K-2 K 270	856	570	DCF K-2 K 270	936	585
	K-2 K 305			771	305	300				305	540	SCF K-2 K 305	891	580	DCF K-2 K 305	971	595

* Weight with oil



20 0 0 0 0 0 0 60 6

KK		SCF KK		DCF KK											
Size	Type	C1	Type	C2	Type	C3	Drum "FP"	Fig.	G1	FF	MF _{H7}	FK	FA	FB	Kg.*
20	270						FP-44-160		60	60		60	0	0	
	270						FP-44-200		200	70		60			7
30	260	200	260	270	260		FP-57-160		60	60		60	0	0	6
	200	200	200	200	200		FP-57-200		200	70	7	70	0	0	
	202	262	202	207	202	207	FP-57-250		200				0	0	
30P	260	200	260	270	260		FP-57-160		60	60		60	0	0	6
	200	200	200	200	200		FP-57-200		200	70	7	70	0	0	
	202	262	202	207	202	207	FP-57-250		200				0	0	
40P	200	270	200		200	00	FP-77-200		200	70		70	0	0	
	200	270	200		200	00	FP-77-250		200		77	70	20	0	6
	200	00	200		200		FP-77-315						0	0	2
	200	00	200		200		FP-77-400		000	000			20	0	
50	200	200	200	200	200		FP-85-250		200			60	0	0	7
	220	260	220		220		FP-85-315						0	0	2
	200	200	200		200		FP-85-400		000	000		00	0	0	
55	200	260	200	66	200		FP-85-250		200			60	0	0	7
	220	66	220	66	220	70	FP-85-315						0	0	2
	200		200		200	06	FP-85-400		000	000		00	0	0	
60	200	02	200	02	200	72	FP-107-315						0	0	2
	270	02	270	02	270	02	FP-107-400		000	000	07	00	0	0	0
	220	02	220	02	220	72	FP-107-500		000	000		00	0	0	0
65	200	00	200	00	200	20	FP-107-315						0	0	2
	270	00	270	00	270	60	FP-107-400		000	000		00	0	0	0
	220	00	220	00	220	60	FP-107-500		000	000	07	00	0	0	0
	200	70	200	60	200	60	FP-107-630		600	260		260	0	0	
	200	70	200	60	200	60	FP-107-710		700	260		260	22	7	00

