



**WESTCAR** s.r.l.

# **ROTOFLUID**

## Fluid Couplings







## INDEX

	page
Operating principles and features of ROTOFLUID couplings.....	5
Installation options: standard and reverse mounting.....	6
Characteristic curves of motors with or without fluid couplings.....	7
Fluid couplings with delay fill chamber.....	8
Characteristic starting curves .....	9
ROTOFLUID coupling versions: ALFA and BETA.....	10
ROTOFLUID coupling versions for ALFA - for in-line mounting and BETA - with pulley.....	11
ROTOFLUID coupling selection diagram.....	12
ROTOFLUID coupling selection table for 50 Hz, 60 Hz UNEL MEC electric motors.....	13

### Tables for ROTOFLUID ALFA couplings

ROTOFLUID ALFA for metric shaft K, SCF K, DCF K.....	14
ROTOFLUID ALFA for inches shaft KA, SCF KA, DCF KA .....	15
ROTOFLUID ALFA with flanged shaft K-S, SCF K-S, DCF K-S .....	16
ROTOFLUID ALFA with elastic couplings K, SCF K, DCF K with RNV/FRNV and AB .....	17
ROTOFLUID ALFA with elastic couplings and brake disc K, SCF K, DCF K with RNPAV/FRNPAV and ADB .....	18
ROTOFLUID ALFA with elastic couplings and brake drum K, SCF K, DCF K with RND/FRND and AFF .....	19
ROTOFLUID ALFA with gear couplings RE / REU WAG-G/GU, SCF WAG-G/GU, DCF WAG-G/GU .....	20
ROTOFLUID ALFA with brake drum FPU / brake disc DPU WAG-GPU/GPUU, SCF WAG-GPU/GPUU, DCF WAG-GPU/GPUU .....	21
ROTOFLUID ALFA with disc coupling HBSX KLM-RH, KLM-L .....	22
ROTOFLUID ALFA with brake drum FFL / brake disc DFL KLM-LF/LLF, SCF KLM-LF/LLF, DCF KLM-LF/LLF .....	23
ROTOFLUID ALFA for reverse mounting NY-FB, NY-SCF-FB, NY DCF-FB .....	24
ROTOFLUID ALFA with bell housing CKS .....	25

### Tables couplings ROTOFLUID BETA

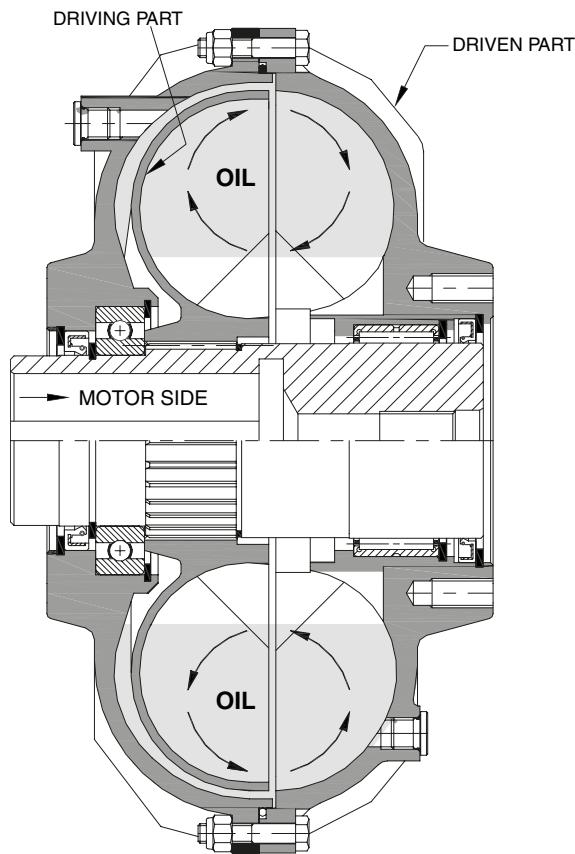
ROTOFLUID BETA with and without delay fill chamber J, X, Z - SCF J, X, Z - DCF J, X, Z .....	26
--	----

### COMPLEMENTS

Bores and keyways table for fluid coupling shaft .....	27
Protection Plugs .....	28
Electric-Thermal switch equipment type ET .....	29
Device for speed and temperature control T09 .....	30
Electronic device for overload control SCD .....	31
ITC Infrared Temperature Controller .....	32
Screw puller VE type - pulling off system SE type .....	33
ROTOFLUID couplings Moment of inertia .....	34
Instructions for filling and replacement of oil in ROTOFLUID coupling .....	35
ROTOFLUID coupling special versions .....	36
Fields of application .....	37
Technical sheet for coupling selection .....	38

**INDEX OF TECHNICAL SHEETS**

	<b>page</b>
10-002* EN ROTOFLUID coupling selection table for 50 Hz, 60 Hz UNEL MEC electric motors .....	13
10-019* EN Bores and keyways table for fluid coupling shaft.....	27
10-035* EN ROTOFLUID couplings Moment of inertia.....	34
10-037* EN Operating principles and features of ROTOFLUID couplings.....	5
10-038* EN Installation options: standard and reverse mounting.....	6
10-052* EN Fields of application.....	37
10-057* EN ROTOFLUID coupling versions for ALFA - for in-line mounting and BETA - with pulley.....	11
10-059* EN Technical sheet for coupling selection.....	38
10-061* EN Characteristic curves of motors with or without fluid couplings.....	7
10-080* EN Characteristic starting curves.....	9
10-100* EN ROTOFLUID coupling selection diagram.....	12
10-141* EN Fluid couplings with delay fill chamber.....	8
10-180* EN ROTOFLUID coupling versions: ALFA and BETA.....	10
10-190* EN Instructions for replacement and variation of oil quantity.....	35
10-195* EN ROTOFLUID coupling special versions.....	36
45-015* EN ROTOFLUID ALFA for metric shaft K, SCF K, DCF K.....	14
45-017* EN ROTOFLUID ALFA for inches shaft KA, SCF KA, DCF KA.....	15
45-020* EN ROTOFLUID ALFA with flanged hub K-S, SCF K-S, DCF K-S.....	16
45-090* EN ROTOFLUID ALFA with elastic coupling K, SCF K, DCF K with RNV/FRNV e AB.....	17
45-091* EN ROTOFLUID ALFA with elastic element and brake disc K, SCF K, DCF K with RNPAV/FRNPAV e ADB.....	18
45-093* EN ROTOFLUID ALFA with elastic element and brake drum K, SCF K, DCF K with RND/FRND e AFF.....	19
45-113* EN ROTOFLUID ALFA with gear couplings RE / REU WAG-G/GU, SCF WAG-G/GU, DCF WAG-G/GU.....	20
45-120* EN ROTOFLUID ALFA with brake drum FPU / brake disc DPU WAG-GPU/GPUU, SCF WAG-GPU/GPUU, DCF WAG-GPU/GPUU.....	21
45-215* EN ROTOFLUID BETA with and without delay fill chamber J, X, Z - SCF J, X, Z - DCF J, X, Z.....	26
45-281* EN ROTOFLUID ALFA with bell housing CKS.....	25
45-300* EN ROTOFLUID ALFA with disc coupling HBSX KLM-RH, KLM-L.....	22
45-305* EN ROTOFLUID ALFA with brake drum FFL / brake disc DFL KLM-LF/LLF, SCF KLM-LF/LLF, DCF KLM-LF/LLF.....	23
45-400* EN ROTOFLUID ALFA for reverse mounting NY-FB, NY-SCF-FB, NY DCF-FB.....	24
80-004* EN Electric-Thermal switch equipment type ET .....	29
80-022* EN Electronic device for overload control SCD .....	31
80-035* EN Protection Plugs.....	28
80-062* EN Device for speed and temperature control T09.....	30
80-065* EN ITC: Infrared Temperature Controller.....	32
90-005* EN Screw puller VE type - pulling off system SE type .....	33



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).

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. 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 losses according to the following formula:

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

where:

$n_m$ = motor speed (rpm)

$n_u$ = output speed from the fluid coupling (rpm)

The elasticity of the fluid coupling solves problems of power peaks between electric motors and driven machines.

#### ADVANTAGES OF USING FLUID COUPLINGS

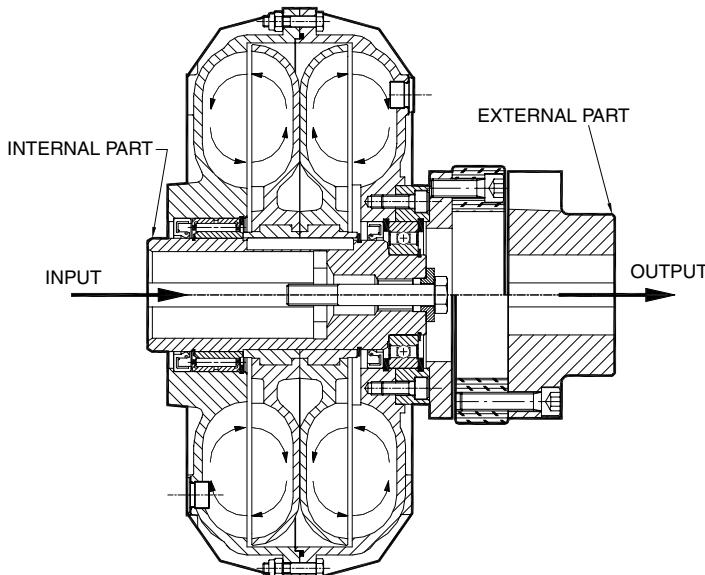
- easy start-up with gradual acceleration of the driven component
- automatic load speed adjustement on the basis of the synchronous speed of two ore more motors
- the drive train is protected againts overloads
- torsional vibrations are damped
- the tourque transmitted complies with pre-set values
-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

#### ADVANTAGES OF USING ROTOFLUID FLUID COUPLINGS

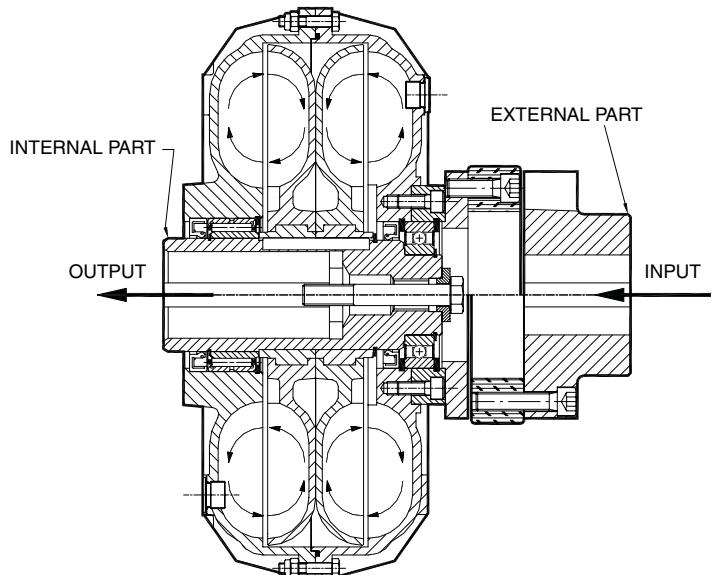
- a large range of accessories
- interchangeable accessories on the basic cell
- the dimensions of the shaft-pulley system are perfectly suited to the needs of the drive train
- all fluid couplings that utilise a belt drive are fitted with ball bearings to guarantee above- standard radial loads
- all the fluid couplings used for horizontal applications are fitted with a elastic flexible coupling, which gives the advantage to 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.



### STANDARD MOUNTING



### REVERSE MOUNTING



### ADVANTAGES OF STANDARD MOUNTING

In STANDARD assemblies, the fluid coupling is mounted with the inner part connected to the motor shaft.

This is common for couplings with pulleys and in line application, providing the following benefits:

- standardisation of bores in compliance with UNEL MEC motors
- during start-up motor is less loaded due the low inertia of the inner part, operating speed is reach with reduced current peak
- in inline applications, where a brake is required, disc/drum is mounted directly on the reduction gear shaft without increasing the axial length of the coupling
- in couplings with delay fill chambers, start-up is smoother because the oil pass from the delay fill chamber into the circuit due to centrifugal force reducing the pick torque
- flexible element mounted on the fluid coupling is less stressed, because the torque is transmitted by the fluid and not with a direct connection to the motor.

### ADVANTAGES OF REVERSE MOUNTING

In a REVERSE assembly, the fluid coupling is mounted with the outer part connected to the motor shaft.

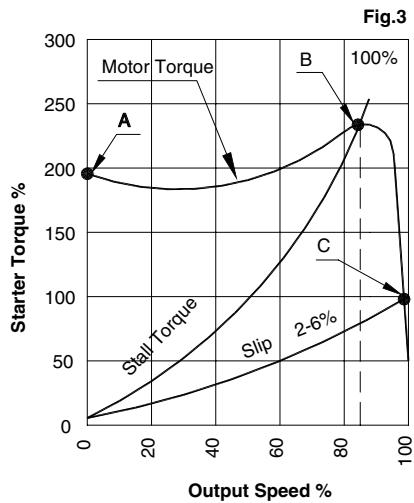
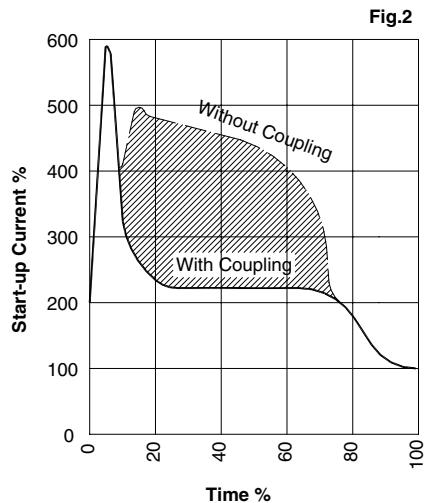
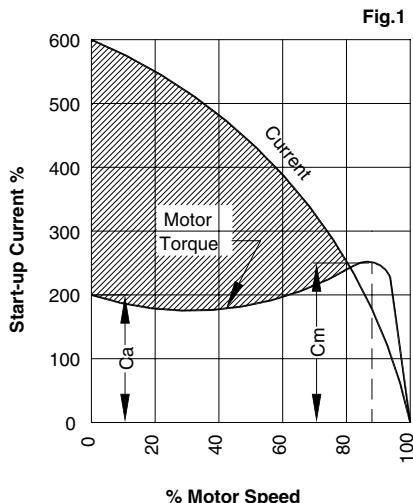
This type of assembly is possible whenever the fluid coupling is mounted between motor and gear box.

For couplings with a V Pulley, the unit must be fitted to the driving shaft, pay attention between the driving and driven pulley ratio. In case of need consult WESTCAR srl.

This type of assembly has the following important advantages:

- higher heat dissipation, recommended in case of extended and frequent motor start-ups
- easier regulation and filling of the oil level in the coupling, since the external part can be rotated without moving the driven machine
- **IMPORTANT!** When the coupling is mounted with THERMAL SWITCHING PIN, even in case of stop of the driven side the function of the safety device is guarantee.

**In the absence of special needs or requests, the coupling will be supplied in its STANDARD configuration.**



### START-UP WITHOUT FLUID COUPLING

**Figure 1** represents the typical start-up of an electric motor directly connected 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.
- difficulty of application when a high starting torque is required.

### START-UP WITH ROTOFUID FLUID COUPLING

**Figure 2** compares the current absorbed by the electric motor starter with and without hydrodynamic coupling.

The first curve "Without coupling" is a start-up with direct connection in short-circuit. The second curve "With coupling" is the same start-up interposed with the hydrodynamic coupling. The crossed-out part represents the difference in energy used for the same start-up with and without hydrodynamic coupling.

In the first curve "Without coupling" the current reaches a peak of about six times the nominal and persists with high values up to the rated engine speed.

In the second curve "With coupling" the peak current remains high for only a few seconds (energy required to accelerate the motor rotor only) and goes down to acceptable values for the time necessary to bring the machine to scheme.

When the hydrodynamic coupling ROTOFUID is interposed between the electric motor and the driven machine, the motor can start-up in short circuit.

### 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).

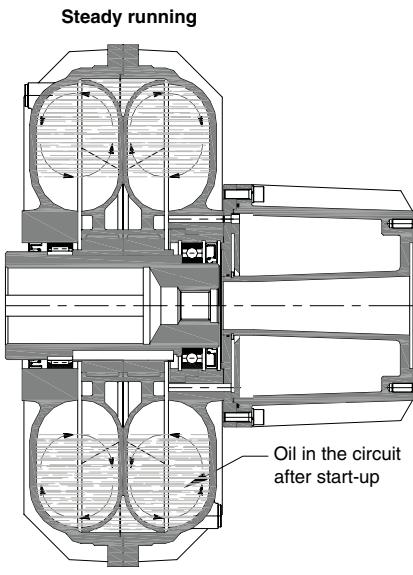
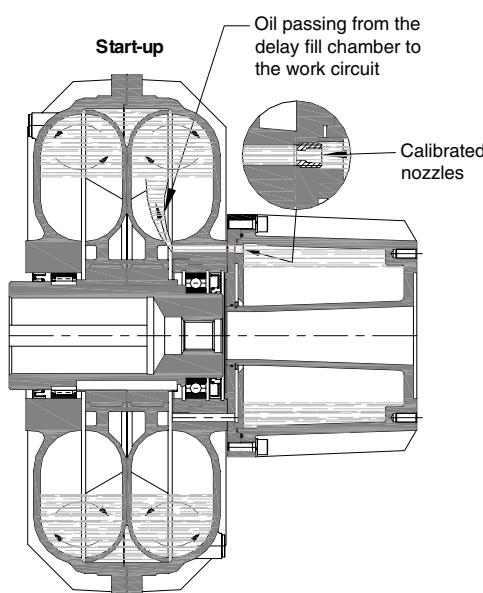
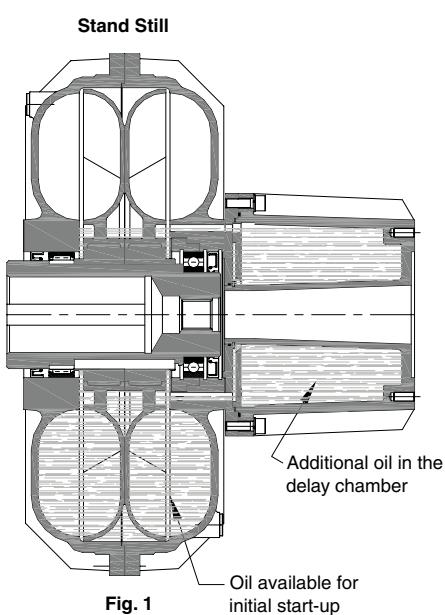
Fluid couplings may be fitted with either a single or double delay fill chamber.

With a single delay fill chamber, Ca/Cn torque limitation varies from 180% to 150%, adjusting the quantity of oil.

With a double 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.

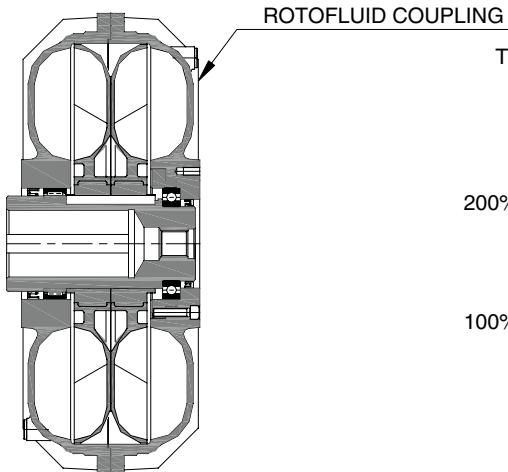


## ADVANTAGES

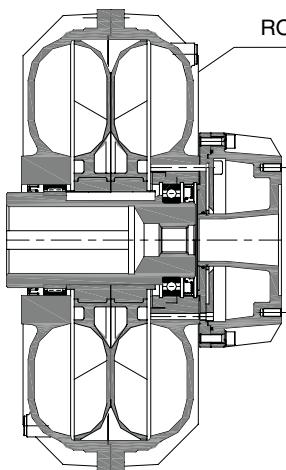
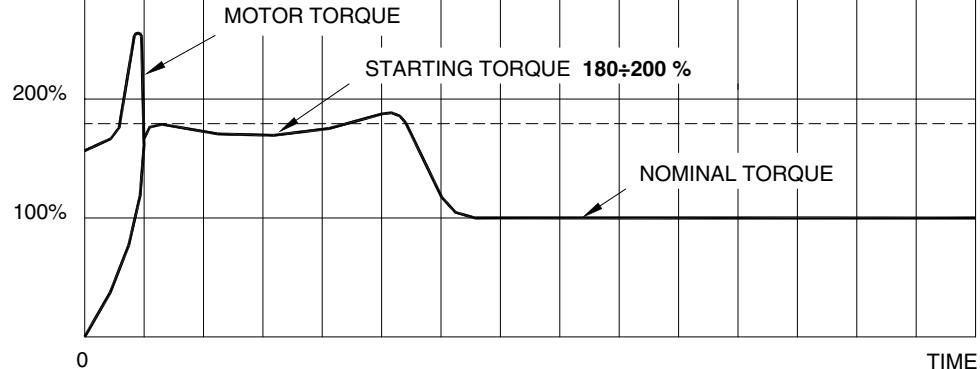
- Low energy loss even where inertia is high
- Start-up time can be adjusted
- Start-up torque is limited to pre-set values without affecting slip
- Limitation of start-up current prolongs the life of the motor
- For controls with several drives the coupling automatically adjusts the load speed on the basis of synchronous speed
- More start-ups per hour



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

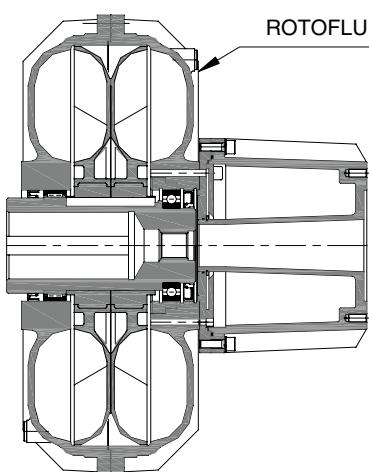
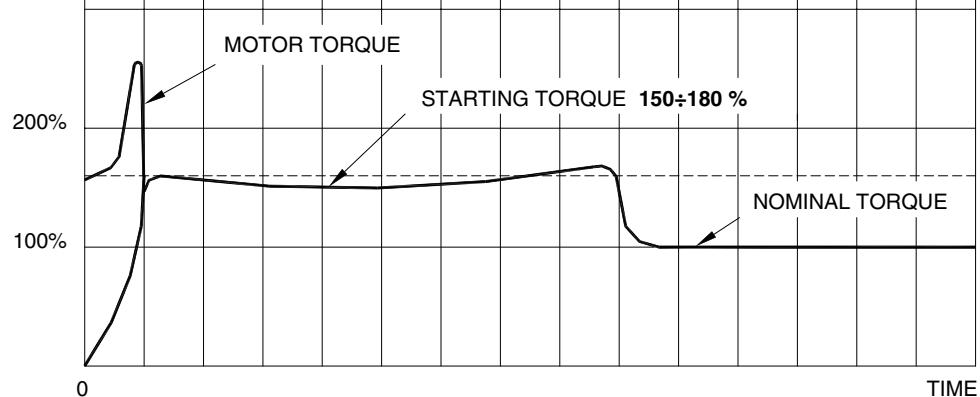


TORQUE



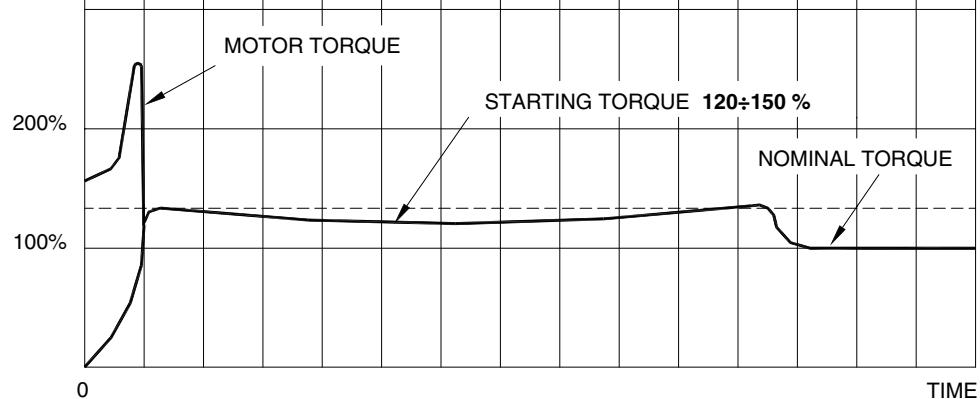
ROTOFLUID COUPLING-SCF (with single delay chamber)

TORQUE



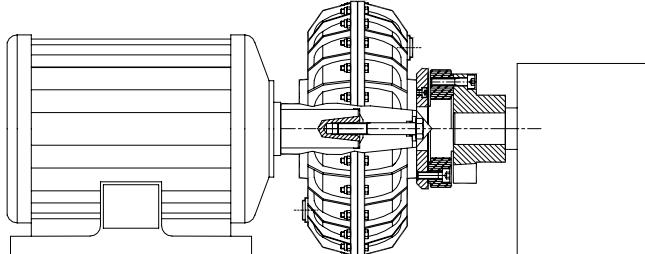
ROTOFLUID COUPLING -DCF (with double delay chamber)

TORQUE





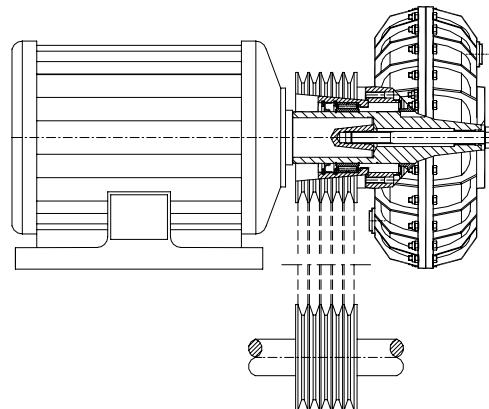
### ROTOFLUID COUPLING ALFA



ROTOFLUID COUPLINGS **ALFA** are used for in-line transmission between equipment.

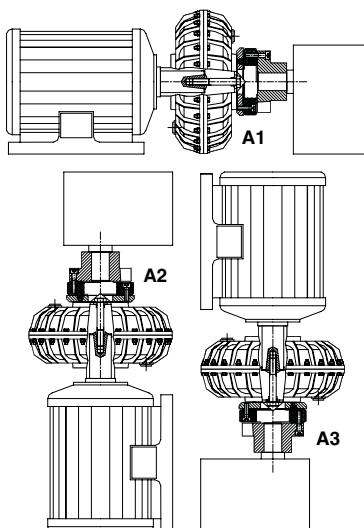
**ALFA** couplings can be supplied with several accessories that allow easy installations and maintenance.

### ROTOFLUID COUPLING BETA



ROTOFLUID COUPLINGS **BETA** are used for pulleys transmission equipment between parallel shafts.

These couplings are available also with Delay Fill Chambers.

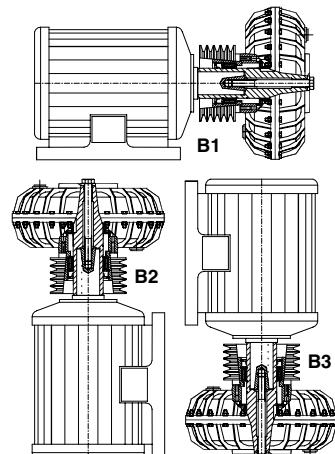


#### INSTALLATION OPTIONS

ROTOFLUID couplings **ALFA** and **BETA** can be horizontally or vertically mounted, as per examples showed for installation A2 – A3 – B2 – B3.

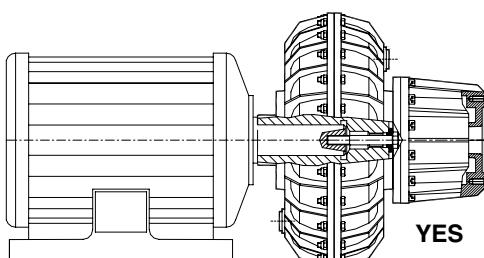
For more details or specific request, please contact WESTCAR srl.

**ALFA** and **BETA** couplings are supplied with fixing screw.

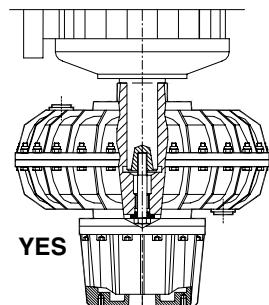


## IMPORTANT COUPLING WITH DELAY CHAMBER CORRECT INSTALLATION

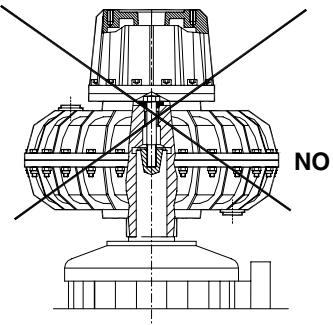
HORIZONTAL SHAFT



VERTICAL SHAFT WITH  
DOWNWARD DELAY CHAMBER

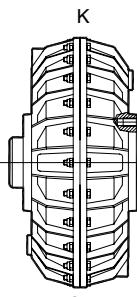


VERTICAL SHAFT WITH UPWARD  
DELAY CHAMBER

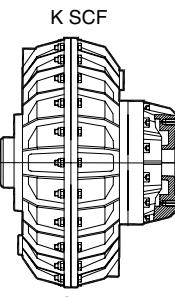




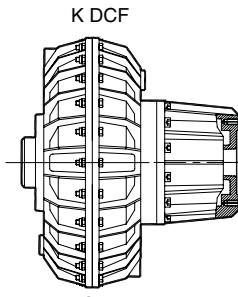
ROTOFLUID ALFA without accessories



PAG. 14

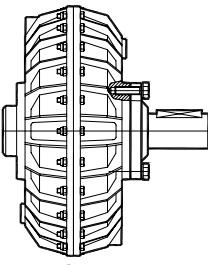


PAG. 14

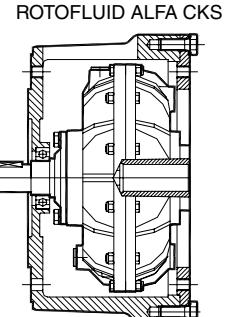


PAG. 14

ROTOFLUID ALFA K-S

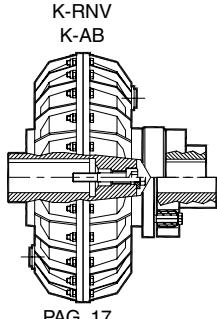


PAG. 16



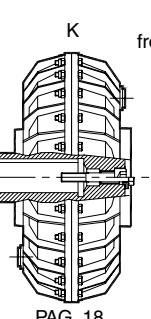
PAG. 25

ROTOFLUID ALFA K  
with elastic coupling

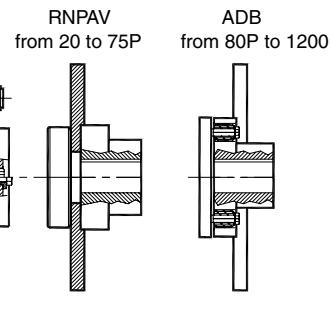


PAG. 17

ROTOFLUID ALFA K  
with elastic coupling and Brake Disc



PAG. 18

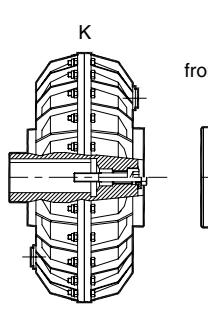


ADB from 80P to 1200



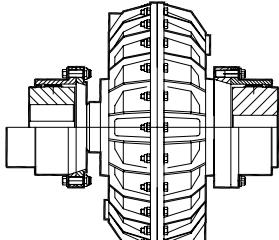
PAG. 18

ROTOFLUID ALFA K  
with elastic coupling and Brake Drum



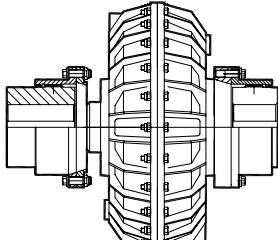
PAG. 19

ALFA WAG-G



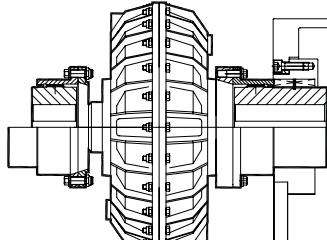
PAG. 20

ALFA WAG-GU

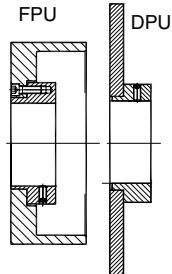


PAG. 20

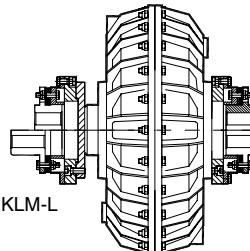
ALFA WAG-GPU



ALFA WAG-GPUU  
PAG. 21

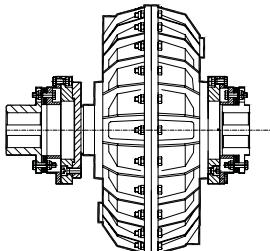


ALFA KLM-RH



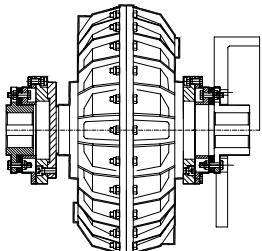
PAG. 22

ALFA KLM-L



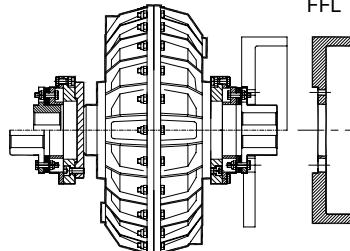
PAG. 22

ALFA KLM-LF



PAG. 23

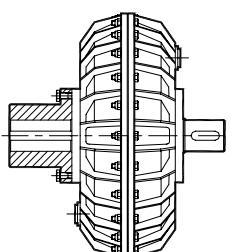
ALFA KLM-LLF



PAG. 23

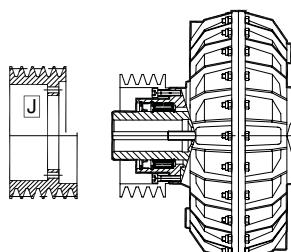


ALFA NY-FB



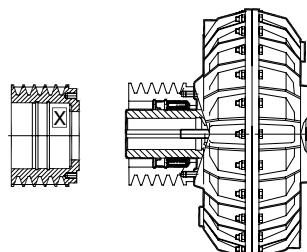
PAG. 24

BETA J



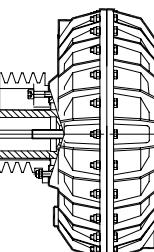
PAG. 26

BETA X



PAG. 26

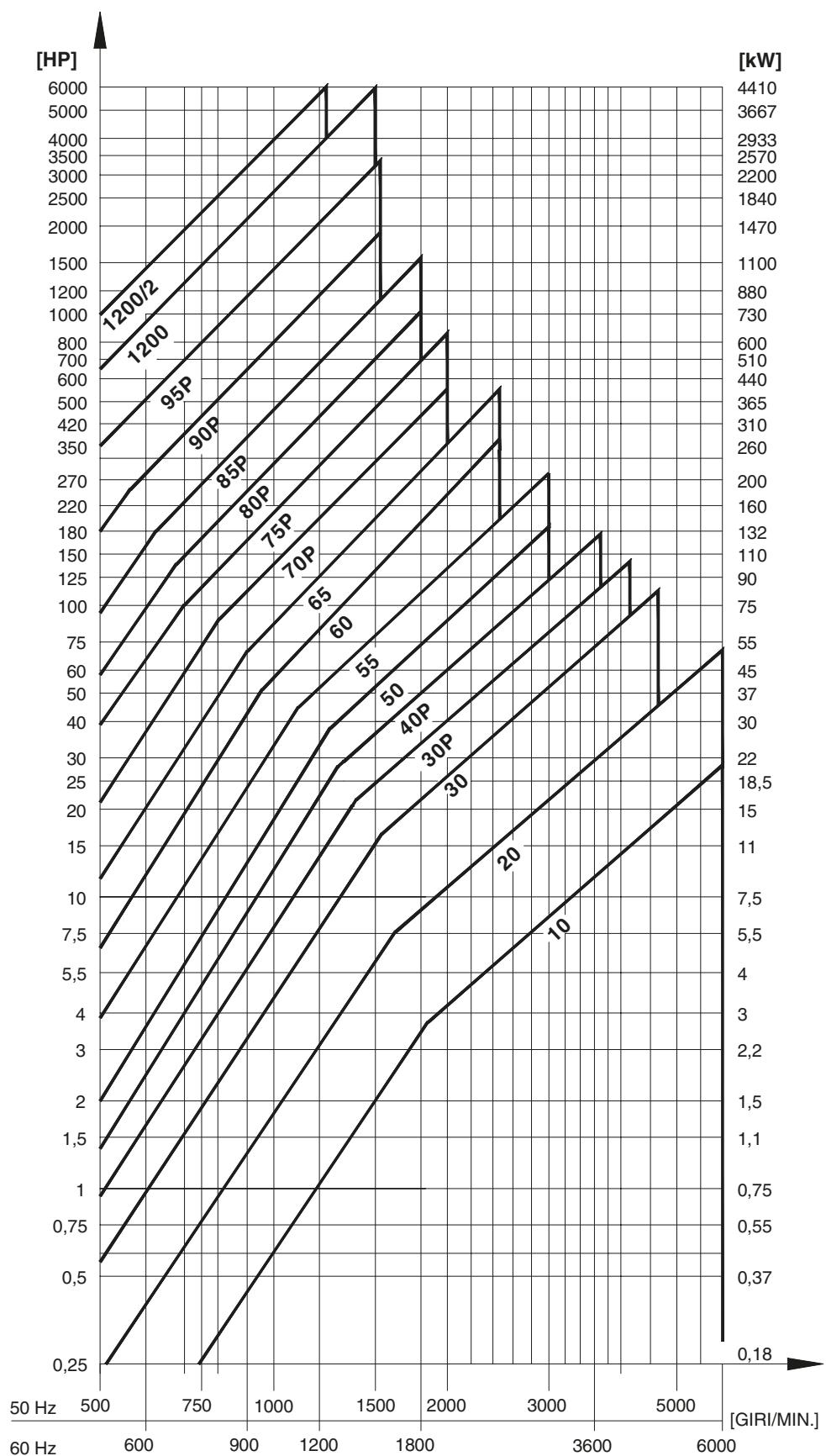
BETA Z



PAG. 26



## ROTOFLUID COUPLING SELECTION DIAGRAM



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, please contact WESTCAR

STANDARD ELECTRIC MOTORS		Motor speed 50 Hz												Motor speed 60 Hz					
		8 poles 750 rpm			6 poles 1000 rpm			4 poles 1500 rpm			2 poles 3000 rpm			6 poles 1200 rpm			4 poles 1800 rpm		
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	0,35	10
80	19	-	-	-	0,37	0,5		0,37	0,5		0,55	0,75		0,37	0,5		0,37	0,5	
90S	24	-	-	-	0,75	1		0,75	1		1,1	1,5		1,1	1,5		1,1	1,5	
90L	24	0,55	0,75	20	1,1	1,5	20	1,1	1,5	20	1,5	2	20	1,5	2	20	1,5	2	20
100L	28	1,1	1,5	30	1,5	2		2,2	3		3	4		2,2	3		2,2	3	
112M	28	1,5	2	30P	2,2	3		3	4		4	5,5		3	4		3	4	
132	38	-	-		3	4	30P	5,5	7,5		5,5	7,5	30	5,5	7,5	30	5,5	7,5	30
132M	38	3	4	40P	4	5,5		7,5	10		-	-		7,5	10		7,5	10	
160M	42	4	5,5		5,5	7,5		11	15	40P	11	15	30P	11	15	30	11	15	30
160L	42	7,5	10	55	11	15		15	20		15	20	40P	15	20	40P	15	20	40P
180M	48	-	-		-	-		18,5	25		22	30		22	30		22	30	
180L	48	11	15	60	15	20		22	30	55	-	-	50	-	-	50	18,5	25	50
200L	55	15	20		18,5	25		30	40		30	40		37	50		37	50	
225S	60	18,5	25	65	22	30		37	50		-	-	55	-	-	55	-	-	55
225M	55	22	30		-	-		60	45	65	45	60		45	60		45	60	
250M	60	30	40		30	40		55	75		55	75		55	75		55	75	
280S	65	37	50	70P	45	60		75	100	60	75	100	65	110	150	65	110	150	60
280M	65	45	60		55	75		90	125		90	125		132	180		132	180	
315S	65	55	75		75	100		110	150		110	150		160	220		160	220	
315M	65	-	-	75P	-	-		-	-	75P	-	-	70P	-	-	70P	90	125	65
	-	-	-		-	-		-	-		-	-		-	-		110	150	
	75	100	-		90	125		132	180		132	180		160	220		160	220	
	90	125	-	80P	110	150		160	220	75P	-	-	75P	-	-	75P	132	180	65
355S	80	-	-	85P	-	-		200	270		-	-	75P	-	-	75P	160	220	70P
	100	132	180		160	220		250	340		-	-		-	-		250	340	
	80	-	-	85P	-	-		-	-		-	-		-	-		200	270	
	160	220	-		200	270		315	430		-	-		-	-		315	430	
355M	100	270	90P	250	340	85P	330	450	1200D	3300	4500	1200D	3850	5250	1200D	310	420	80P	
	200	270	90P	250	340		3300	4500		3850	5250		3100	4300		440	600		
	200	270	90P	250	340		3300	4500		3850	5250		3100	4300		440	600		
	250	340	80P	315	430		3300	4500		3850	5250		3100	4300		310	420		
NON STANDARD ELECTRIC MOTORS  For max. power transmitted		330	450	90P	370	500	85P	510	700	80P	3300	4500	95P	3850	5250	1200D	310	420	80P
		600	800	95P	600	800	90P	810	1100	85P	600	800	95P	810	1100	1200D	440	600	85P
		800	1100	1200	1000	1360	95P	1300	1740	90P	800	1100	1200	1300	1740	1200D	440	600	80P
		1000	1360	1200D	2000	2720	1200	2300	3100	95P	1000	1360	1200	1300	1740	1200D	440	600	85P
		3300	4500	1200D	3850	5250	1200D	3100	4300	1200D	3300	4500	1200D	3850	5250	1200D	310	420	80P

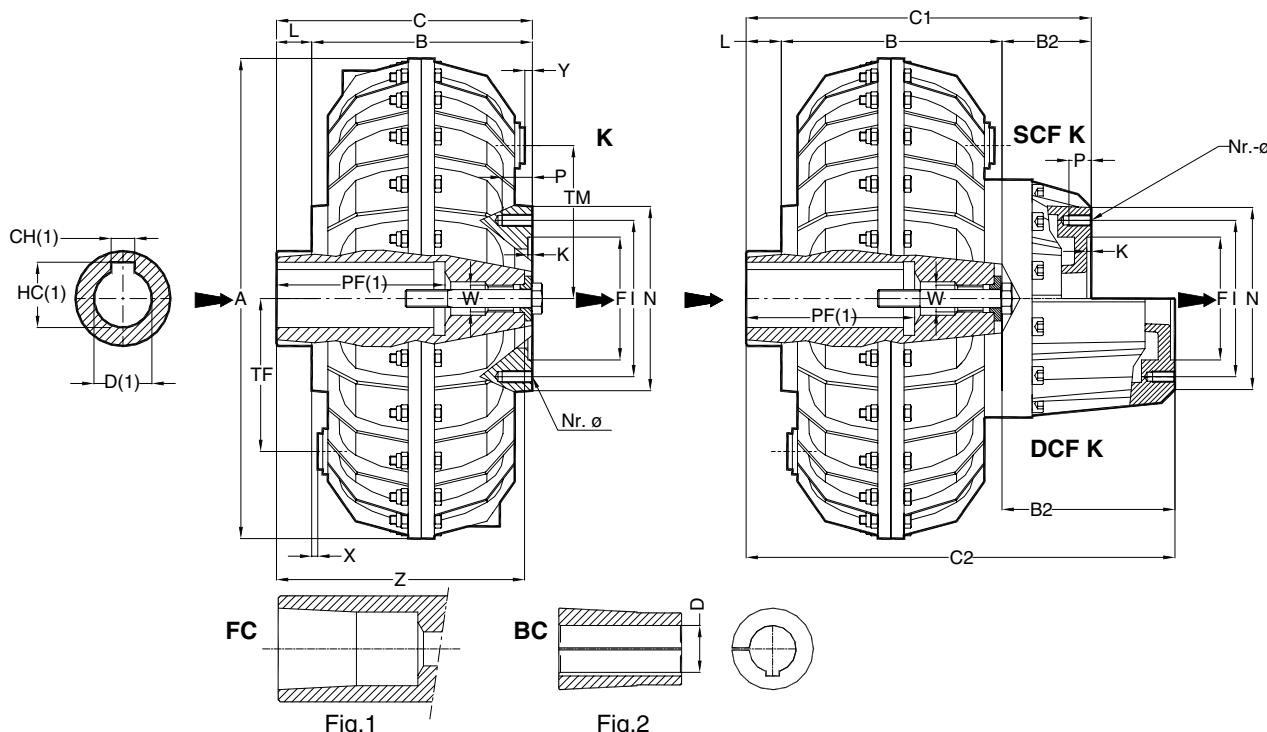
• For couplings at 3000 rpm, ask for balancing required



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA  
K, SCF K, DCF K  
FOR METRIC SHAFT**

Sheet  
45-015E EN  
Date  
03-2018



**NOTES:** (1) for bore and keyway dimensions see sheet 10-019E / (2) the arrows ➡ indicate input and output

ROTOFLUID SIZE	Dimensions in mm													K			SCF K			DCF K											
	Bore D	A	B	K	I	L	N	Nr.-ø	P	TF TM	W	X	Y	Z	Type	mm	kg*	Type	mm	kg*	Type	mm	kg*								
														C	F <sup>H7</sup>	W.	B2	C1	F <sup>H7</sup>	W.	B2	C2	F <sup>H7</sup>	W.							
10	19-24	193	88		60	10	75	6-M6	12	66	M10	0,5	0	94	K1	98	47	4	--	--	--	--	--	--	--						
20	24-28	230	115		78		94	6-M8		80	M14	2	7	120	K1	125	62	6	--	--	--	--	--	--	--						
30	□FC	290	150		4	100	12	114	8-M8	16	110	9	9	157,5	K2	162	72	13,2	K2	55	217	72	15,6	K2	95	257	72	16,2			
30P	□FC	327									130	6	6		K2	162	72	21	K2	55	217	72	23,4	K2	95	257	72	24			
40P	□FC	338	183			125	15	145				29	16	194	K2	198	90	22	K2	58	256	90	25,7	K2	130	328	90	27,2			
50	□FC	154				140	25	165				20	176,5	K2	179		110	30	K2	80	259	90	35,8	K2	155	334	90	38			
55	□FC	430	196			140	15					6	208,5	K2	211			40	K2	291	110	45,8	K2	366	110	48					
60	□FC 75				4,5	172						20	192	K2	192			46	K2	90	282	125	54,4	K2	170	362	125	58			
65	□FC 75-80					520	20	185				6	240	K2	240			66	K2	330	125	74,4	K2	410	125	410	78				
70P	80-90 100					190	50					15	234 274	K2N K3N	240 280			86	K2N K3N	110	350 390	99	K2N K3N	225	465 505	150	106				
•75P	80-90 100					640	90	225	8-M16	24	265	0	254 269	K2N K3N	265 280			117	K2N K3N	110	375 390	135	K2N K3N	225	490 505	150	147				
80P	Max.110 Max.125**					810	44	226				15	264 280	K2N K3N	270 286			180	K2N K3N	118	388 404	196	K2N K3N	218	488 504	160	208				
•85P	Max.125 Max.130					300	60	270	8-M18	28	325	0	334	K2N K3N	340			252	K2N K3N	118	458	280	K2N K3N	218	558	160	300				
90P	Max.130 Max.140** Max.160***				5	344	20					343 443 483	K2 K3 K5	364 464 504			350 390 410	K2 K3 K5	120	424 524 564	445	K2 K3 K5	200	302 342 362	200	504 604 644	445	317 357 377			
95P	Max.130 Max.140** Max.160***					1000	120	550	16-M20	32	416	13	420 520 560	K2 K3 K5	479 586 626			505 555 575	K2 K3 K5	120	599 706 746	445	K2 K3 K5	200	545 595 615	679 786 826	560 610 630	445	317 357 377		
1200	Max.190	1300	449	7	310	7	570				36	430					30	419	K2	456	220	1800	--	--	--	--	--	220	--	--	--

\* Weight with oil - \*\* Bore depth PF=210 - \*\*\* Bore depth PF=250

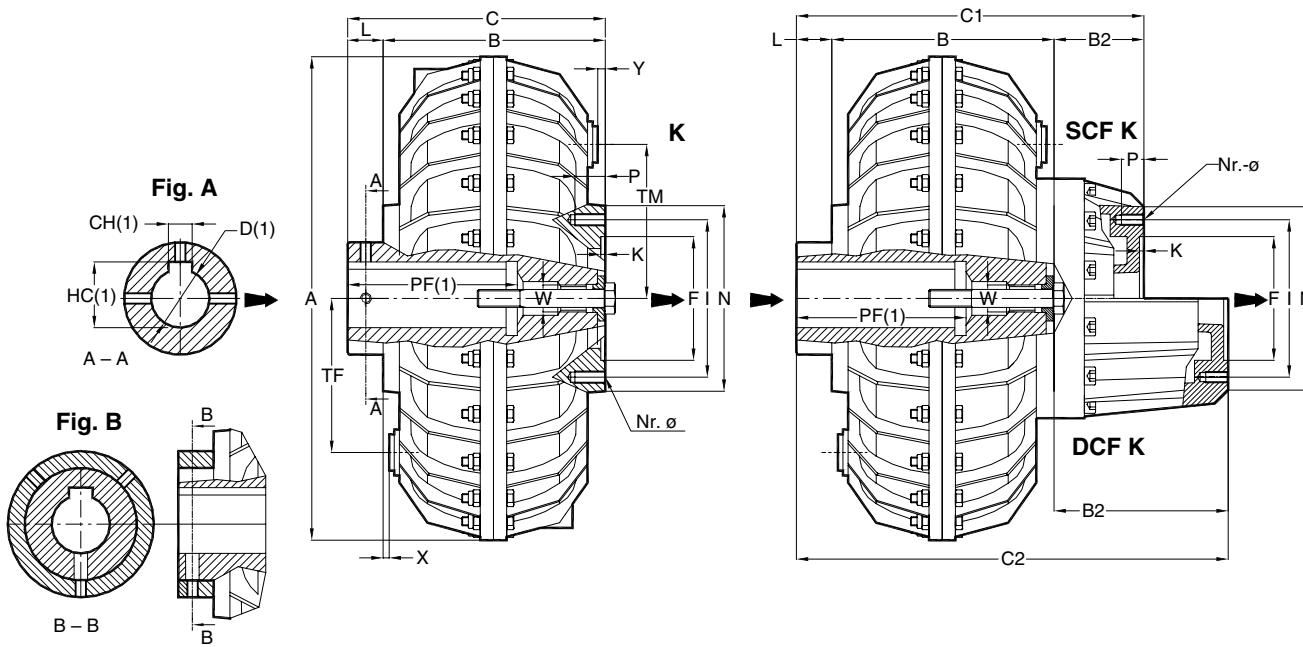
DIMENSIONS ARE NOT BINDING

- Supplied with OVERSIZED CHAMBER SCFM or DCFM
- Couplings with conical bore **FC** are supplied with Taper Bush **BC** and fixing screw (Fig. 1 and 2)  
In case of mounting on shafts without shoulder contact WESTCAR

Example of order of a coupling with taper bush: ALFA 55 K2 FC + 55BC L15 D=60

COUPLING SIZE	Type	Standard D Bore				Max D Bore
		38	■ 42	■ 48	-	
30/30P	3BC	38	■ 42	■ 48	-	-
40P	4BC	38	42	■ 48	■ 50	-
50 - 55	5BC	-	42	48	■ 55	■ 60
60 - 65	6BC	-	-	48	55	■ 65

■ Taper Bushes are supplied without keyway



NOTES: (1) the arrows ➡ indicate input and output

ROTOFLUID SIZE	inches	Dimensions in mm												K			SCF K			DCF K							
		Cyl. bore D	Fig.	A	B	F <sup>H7</sup>	K	I	L	N	Nr.ø	P	TF TM	W	X	Y	PF	Type	mm	kg*	Type	mm	kg*	Type	mm	kg*	
														C	W.	C	B2	C1	W.	C	B2	C2	W.				
10 KA	0,875 1,125	A B	193	88	47	4	60	10 25,4	75	6-M6	12	66	M10	0,5	0	57,15 69,85	KA	98 113,4	4	--	--	--	--	--	--		
20 KA	1,125 ■1,375	A B	230	115	52		78	10 25,4	94		80	M14	2	7	69,85 85,72	KA	125 140,4	6	--	--	--	--	--	--			
30 KA	1,625 ■1,875	A B	290	150	72		100	12 40	114	8-M8	110	16	9	9	101,6 117,47	KA	162 190	13,2	KA	55	217 245	15,6	KA	95	257 285	16,2	
30P KA	1,625 ■1,875	A B	327				100	12 40			6		6	6	85,72	KA	162 190	21	KA		217 245	23,4	KA		257 285	24	
40P KA	1,625 1,875 2,125	A	338	183	90		125	15	145	M24	29	16	101,6 117,47 133,35	KA	198	22	KA	58	256	25,7	KA	130	328	27,2			
50 KA	1,875 2,125 2,375	A B B	430	154	110	4,5	140	25 25 32	20		117,47 133,35 149,22	KA	179 179 186	30	KA	80	259 259 266	35,8	KA	155	334 334 341	38					
55 KA	2,125 2,375 ■2,875	A B B		196			140	15 20 54	140		133,35 149,22 184,15	KA	211 216 250	40	KA		291 296 330	45,8	KA		366 371 405	48					
60 KA	2,375 2,875 ■3,375	A A B	520	172			160	20 57 108	6	M30	20	149,22 184,15 215,9	KA	192 229 280	46,5 46,5 50,5	KA	90	282 319 370	54,4 56 66	KA	170	362 399 450	57,5 58,5 68,5				
65 KA	2,375 2,875 ■3,375	A A B		220			160	20 20 61			6	149,22 184,15 215,9	KA	240 240 281	66	KA		330 330 371	74,4	KA		410 410 451	78				
70P KA	2,875 3,375 ■3,875	A	640	190	4	5	195	50 90 126			15	184,15 215,9 250,82	KA	240 280 316	86	KA	110	350 390 426	99	KA	225	465 505 541	106				
•75P KA	3,375 ■3,875	A B	245	195			40 76	0			215,9 250,82	KA	285 321	117	KA	395 431		135	KA	510 546		147					
80P KA	3,375 3,875 4,750	A	226	810	160	5	230	44 44 76	M36	0	15	215,9 250,82 250,82	KA	270 270 302	180	KA	118	388 388 420	196	KA	218	488 488 520	208				
•85P KA	3,875 4,750	A	300				230	40			0	250,82	KA	340	252	KA		458	280	KA		558	300				
90P KA	3,875 4,750 5,250	A	344	1000	445		506				35	250,82	KA	384	350	KA	120	504	302	KA	200	584	317				
95P KA	3,875 4,750 5,250	A	466				466				35	250,82	KA	506	505	KA		626	545	KA		706	560				

\* Weight with oil

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

■ Reduced Dimension HC

DIMENSIONS ARE NOT BINDING

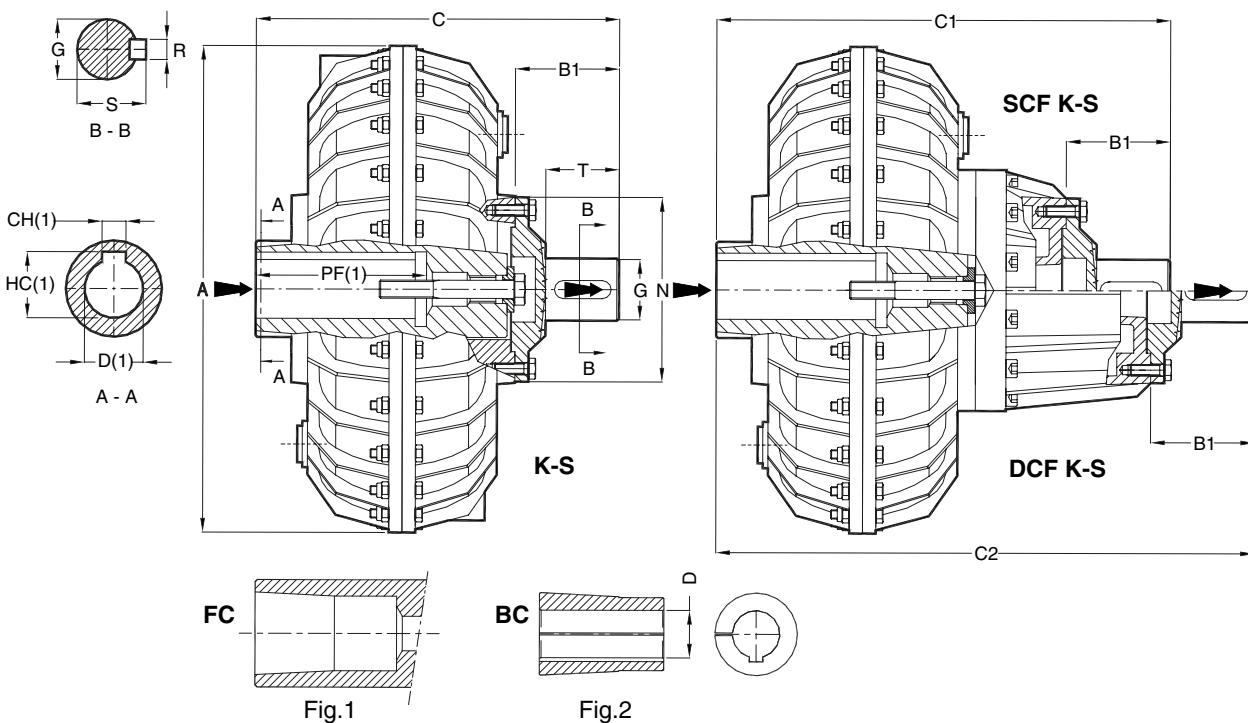


**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA  
K-S, SCF K-S, DCF K-S  
WITH FLANGED SHAFT**

Sheet  
45-020E EN

Date  
03-2018



NOTES: (1) for bore and keyway dimensions see sheet 10-019E / (2) the arrows ➡ indicate input and output

ROTOFLUID SIZE	Dimensions in mm									K-S		SCF K-S		DCF K-S			
	Foro D	A	B1	G <sup>h7</sup>	N	R	S	T	Type	mm	kg*	Type	mm	kg*	Type	mm	kg*
10	19-24	193	35	19	75	6	21,5	25	K1-S1	133	4,3	--	--	--	--	--	--
20	24-28	230	44	24	94	8	27	32	K1-S2	169	6,6	--	--	--	--	--	--
30	□FC	290										14,3	K2-S3	280	16,7	K2-S3	17,3
30P	□FC	327	63	38	114	10	41	45	K2-S3	225	22,1	K2-S3	24,5	K2-S3	320	25,1	
40P	□FC	338	76	48	145	14	51,5	55	K2-S4	274	24,2	K2-S4	332	27,9	K2-S4	404	29,4
50	□FC		430	92	55	165	16	59	K2-S5	271	33,2	K2-S5	351	39	K2-S5	426	41,2
55	□FC								K2-S5	303	43,2	K2-S5	383	49	K2-S6	458	51,2
60	□FC 75		520	110	60	185	18	64	K2-S6	302	50,6	K2-S5	392	59	K2-S6	472	62,6
65	□FC 75-80								K2-S6	350	70,6	K2-S6	440	79	K2-S6	520	82,6
70P	80-90 100		640	122	70	225	20	74,5	K2N-S7 K3N-S7	362	95	K2N-S6	472	108	K2N-S7	587	115
•75P	80-90 100								K2N-S7 K3N-S7	387	126	K2N-S7 K3N-S7	497	144	K2N-S7 K3N-S7	612	156
80P	Max.110 Max.125**		810	145	80	270	22	85	K2N-S8 K3N-S8	415	198	K2N-S8 K3N-S8	533	214	K2N-S8 K3N-S8	633	226
•85P	Max.125 Max.130								K2N-S8 K3N-S8	485	270	K2N-S8 K3N-S8	603	298	K2N-S8 K3N-S8	703	318
90P	Max.130 Max.140** Max.160***		1000	220	110		28	116	K2-S9 K3-S9 K5-S9	584	416	K2-S9 K3-S9 K5-S9	644	368	K2-S9 K3-S9 K5-S9	724	383
95P	Max.130 Max.140** Max.160***				160	550			K2-S9 K3-S9 K5-S9	684	456	K2-S9 K3-S9 K5-S9	744	408	K2-S9 K3-S9 K5-S9	824	423
1200	Max.190	1300	290	180			45	190	K2-S9 K3-S9 K5-S9	724	476	K2-S9 K3-S9 K5-S9	784	428	K2-S9 K3-S9 K5-S9	864	443
									K2-S9 K3-S9 K5-S9	669	586	K2-S9 K3-S9 K5-S9	819	626	K2-S9 K3-S9 K5-S9	899	641
									K2-S9 K3-S9 K5-S9	806	636	K2-S9 K3-S9 K5-S9	926	676	K2-S9 K3-S9 K5-S9	1006	691
									K2-S9 K3-S9 K5-S9	846	656	K2-S9 K3-S9 K5-S9	966	696	K2-S9 K3-S9 K5-S9	1046	711
									K2-S12	746	1900	--	--	--	--	--	--

\* Weight with oil - \*\* Bore depth PF=210 - \*\*\* Bore depth PF=250

DIMENSIONS ARE NOT BINDING

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

□ Couplings with conical bore **FC** are supplied with Taper Bush **BC** and fixing screw (Fig. 1 and 2)

In case of mounting on shafts without shoulder contact WESTCAR

Example of order of a coupling with taper bush: ALFA 55 K2 FC + 55BC L15 D=60 + S5

TAPER BUSH BC WITH FIXING SCREW								
COUPLING SIZE	Type	Standard D Bore					Max D Bore	
30/30P	3BC	38	■42	■48	-	-	-	48
40P	4BC	38	42	■48	■50	-	-	50
50 - 55	5BC	-	42	48	■55	■60	■65	65
60 - 65	6BC	-	-	48	55	■60	■65	70

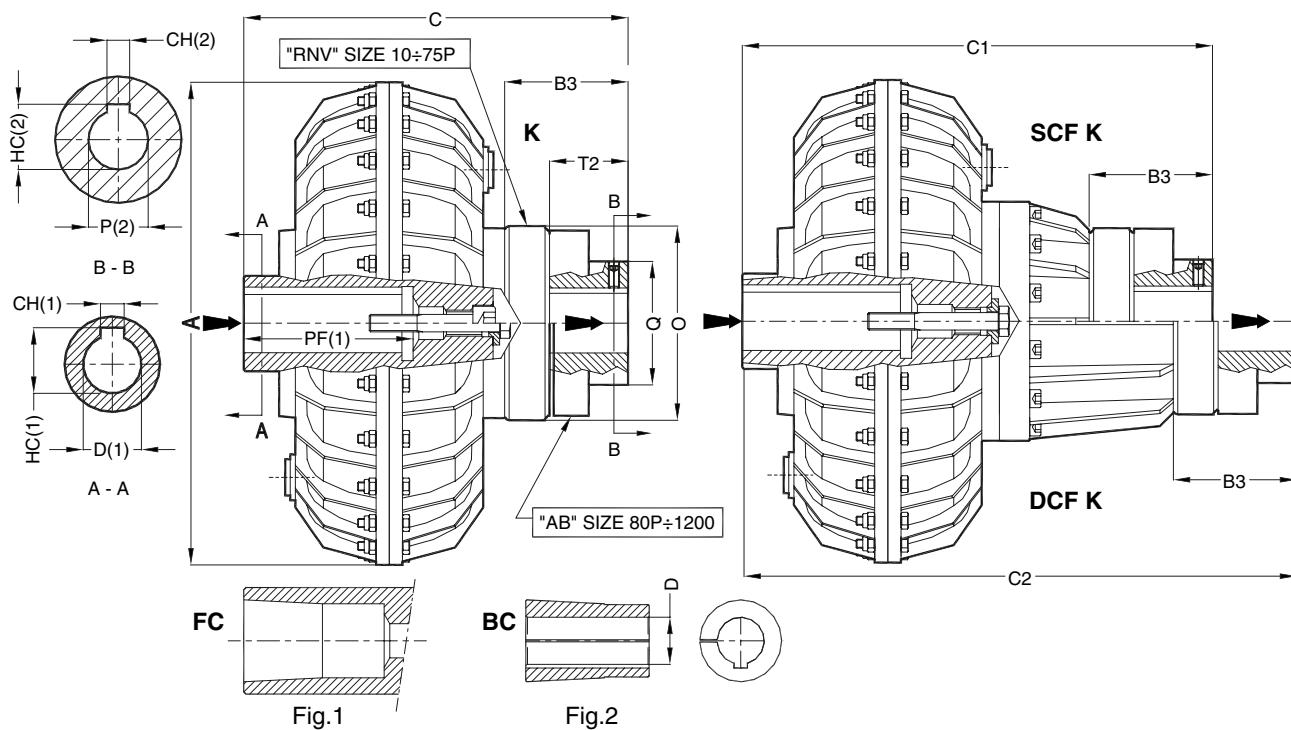
■ Taper Bushes are supplied without keyway



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA  
K, SCF K, DCF K  
WITH ELASTIC COUPLING**

Sheet  
45-090A EN  
Date  
03-2018



NOTES: (1) for bore and keyway dimensions see sheet 10-019E / (2) upon request: bore P finished / (3) the arrows ➡ indicate input and output

ROTOFLUID SIZE	Dimensions in mm							K with EL. Coupling			SCF K with EL. Coupling			DCF K with EL. Coupling			ELASTIC COUPLING					
								Type	mm	kg*	Type	mm	kg*	Type	mm	kg*						
	Bore D	A	B3	O	P Max.	Q	T2	C	Weight	C1	Weight	C2	Weight	C2	Weight							
10	19-24	193	48	88	28	45	30	K1	146	4,7	--	--	--	--	--	--	RNV-1					
20	24-28	230	67	110	38	56	45	K1	192	7,6	--	--	--	--	--	--	RNV-2					
30	□FC	290	85	140	48	68	55	K02	16,2	K02	18,6	K02	19,2	RNV-3	RNV-3	RNV-3						
30P	□FC	327		327	48	68	55	K02	247	K02	302	K02	342	26,4	342	27						
40P	□FC	338	94	176	60	91	60	K02	292	26,6	K02	350	30,3	K02	422	31,8	RNV-4					
50	□FC	430	108	194	70	106	70	K02	287	37	K02	367	42,8	K02	442	45	RNV-5					
55	□FC		327	140	70	106	70	K02	319	47	K02	399	52,8	K02	474	55						
60	□FC 75	520	122	216	80	121	80	K02	314	56,3	K02	404	64,7	K02	484	68,3	RNV-6					
65	□FC 75-80		430	166		166		K02	362	76,3	K02	452	84,7	K02	532	88,3						
70P	80-90 100	640	138	266	100	146	90	K2N K3N	378 418	101,5	K2N K3N	488 528	114,5	K02 K3N	603 643	121,5	RNV-7					
•75P	80-90 100	640	194	309	110	156	110	K2N K3N	459 474	154	--	--	--	--	--	--	FRNV-8					
	80-90 100		166					--	--	--	K2M K3M	541 556	163,7	K2M K3M	656 671	175,7	RNV-8					
80P	Max.110 Max.125**	810	196	330	110	170	140	K2N K3N	466 482	238,5	K2N K3N	584 600	254,5	K2N K3N	684 700	266,5	AB-8					
•85P	Max.125 Max.130		226	400	155	236	170	K2N K3N	566	363	K2N K3N	684	391	K2N K3N	784	411	AB-8M					
90P	Max.130 Max.140** Max.160***	1000	318	550	180	290	250	K2	682	604	K2	742	556	K2	882	571	AB-9					
	Max.130 Max.140** Max.160***							K3	782	644	K3	842	596	K3	982	611						
95P	Max.130 Max.140** Max.160***	1000						K5	822	664	K5	882	616	K5	1022	631	AB-9					
	Max.130 Max.140** Max.160***							K2	797	759	K2	917	799	K2	997	814						
1200	Max. 190	1300	318	550	180	290	250	K2	774	2050	--	--	--	--	--	--	AB-9/12					

\* Weight with oil - \*\* Bore depth PF=210 - \*\*\* Bore depth PF=250

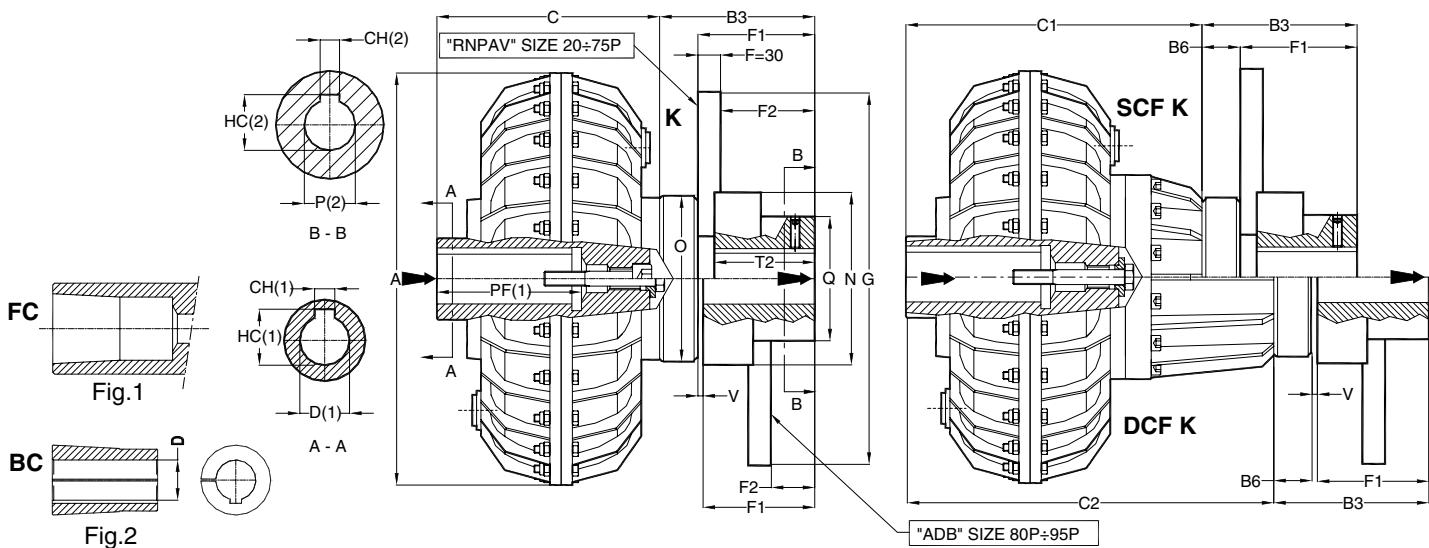
DIMENSIONS ARE NOT BINDING

- Supplied with OVERSIZED CHAMBER SCFM or DCFM
- Couplings with conical bore **FC** are supplied with Taper Bush **BC** and fixing screw (Fig. 1 and 2)  
In case of mounting on shafts without shoulder contact WESTCAR

Example of order of a coupling with taper bush: ALFA 55 K02 FC + 55BC L15 D=60 + RNV5 P=48

TAPER BUSH BC WITH FIXING SCREW							
COUPLING SIZE	Type	Standard D Bore				Max D Bore	
30/30P	3BC	38	■42	■48	-	-	-
40P	4BC	38	42	■48	■50	-	-
50 - 55	5BC	-	42	48	■55	■60	■65
60 - 65	6BC	-	-	48	55	■60	■65
							70

■ Taper Bushes are supplied without keyway



NOTES: (1) for bore and keyway dimensions see sheet 10-019E / (2) upon request: bore P finished / (3) the arrows → indicate input and output

ROTOFLUID SIZE	Dimensions in mm									K			SCF K			DCF K			ELASTIC ELEMENT WITH BRAKE DISC
	Foro D	A	B3	B6	O	P Max	Q	N	V	Type	C	kg*	Type	C1	kg*	Type	C2	kg*	
20	24-28	230	93	22	110	38	56	94	--	K1	125	6	--	--	--	--	--	--	RNPAY2
30	□FC	290	111	30	140	48	68	118	--	K02	13,2	K02	217	15,6	K02	257	16,2	RNPAY3	
30P	□FC	327								K02	162	21	K02	23,4	K02	24			
40P	□FC	338	120	34	176	60	91	147	--	K02	198	22	K02	256	25,7	K02	328	27,2	RNPAY4
50	□FC	430	134	38	194	70	106	165	--	K02	179	30	K02	259	35,8	K02	334	38	RNPAY5
55	□FC									K02	211	40	K02	291	45,8	K02	366	48	
60	□FC 75	520	148	42	216	80	121	185	--	K02	192	46	K02	282	54,4	K02	362	58	RNPAY6
65	□FC 75-80									K02	240	66	K02	330	74,4	K02	410	78	
70P	80-90 100	640	164	48	266	100	146	226	--	K2N K3N	240	86	K2N K3N	350	99	K2N K3N	465	106	RNPAY7
•75P	80-90 100	640	220	84	309	110	156	270	--	K2N K3N	265	117	--	--	--	--	--	--	FRNPAY8
	80-90 100									--	--	--	K2M K3M	347	135	K2M K3M	462	147	RNPAY8
80P	Max.110 Max.125**	810	196	50	330	110	170	330	6	K2N K3N	270	180	K2N K3N	388	196	K2N K3N	488	208	ADB8
•85P	Max.125 Max.130									K2N K3N	286	404	K2N K3N	404	196	K2N K3N	504	208	ADB8M
90P	Max.130 Max.140** Max.160***	1000	318	62	550	180	290	550	6	K2 K3 K5	364	350	K2 K3 K5	424	302	K2 K3 K5	504	317	ADB9
95P	Max.130 Max.140** Max.160***									K2 K3 K5	464	390	K2 K3 K5	524	342	K2 K3 K5	604	357	
										K2 K3 K5	504	410	K2 K3 K5	564	362	K2 K3 K5	644	377	
										K2 K3 K5	479	505	K2 K3 K5	599	545	K2 K3 K5	679	560	ADB9
										K2 K3 K5	586	555	K2 K3 K5	706	595	K2 K3 K5	786	610	
										K2 K3 K5	626	575	K2 K3 K5	746	615	K2 K3 K5	826	630	

\* Weight with oil and without Brake Disc RNPAY o ADB - \*\* Bore depth PF=210 - \*\*\* Bore depth PF=250

DIMENSIONS ARE NOT BINDING

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

□ Couplings with conical bore FC are supplied with Taper Bush BC and fixing screw (Fig. 1 and 2) - see page 14

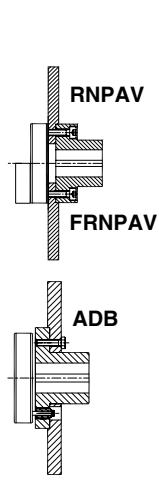
#### BRAKE DISC RNPAY / FRNPAY with elastic coupling

ROTOFLUID	20	30/30P	40P	50/55	60/65	70P	75P
	Brake Disc	RNPAY2	RNPAY3	RNPAY4	RNPAY5	RNPAY6	FRNPAY8
øG	200	200	250	315	250	315	355
F1	71	81	86	96		106	
F2	41	51	56	66		76	
T2	45	55	60	70		80	
Weight kg	7,3	8,6	13,7	21,1	16,1	22,6	27,6
						25,2	30,1
						36,3	43,6
						40,5	48,4
						57,2	68,6
						76,4	88,2
						103,5	121,5
						146,5	

#### BRAKE DISC ADB with elastic coupling

ROTOFLUID	80P				85P				90P/95P			
	Brake Disc	ADB8				ADB8M				ADB9		
øG		560	630	710	800	900	630	710	800	900	1000	1250
F1		140					170			250		
F2		50					80			143		
Weight kg		107	122	142	167	234	172	192	215	248	283	325
												350
												382
												417
												520

Example of order of a coupling with taper bush: ALFA 55 K02 FC + 55BC L15 D=60 + RNPAY5 315x30 P=48



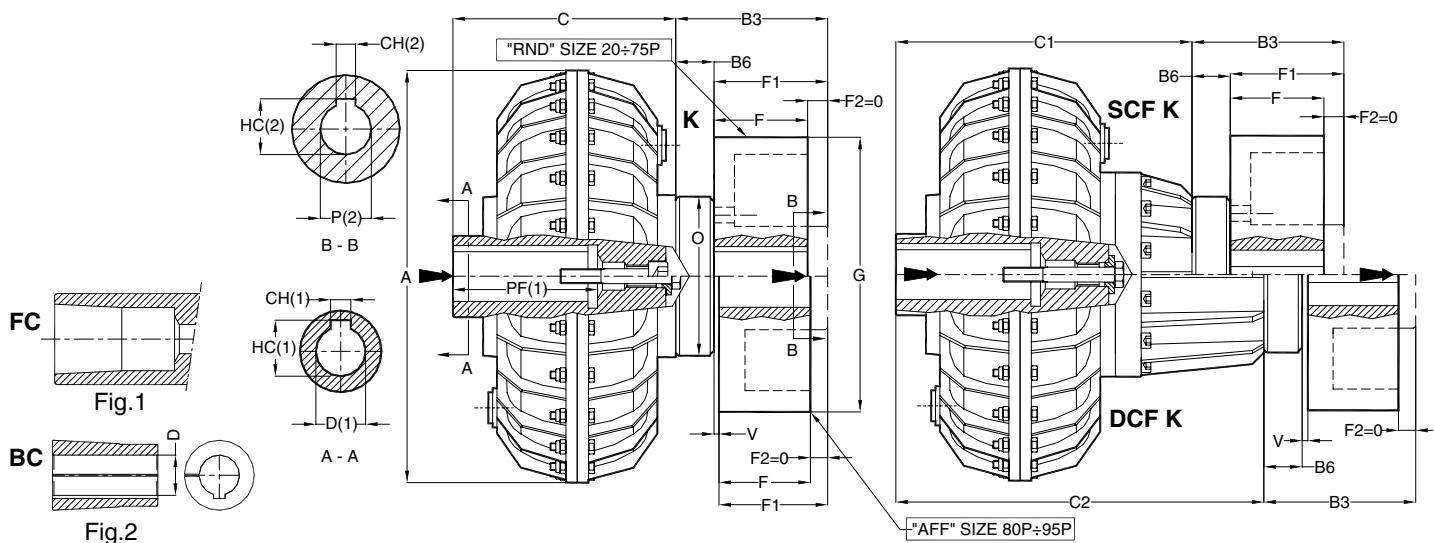


**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA  
K, SCF K, DCF K  
WITH ELASTIC COUPLING AND BRAKE DRUM**

Sheet  
45-093B EN

Date  
03-2018



**NOTES:** (1) for bore and keyway dimensions see sheet 10-019E / (2) upon request: bore P finished / (3) the arrows ➡ indicate input and output

ROTOFLUID SIZE	Dimensions in mm				K			SCF K			DCF K			ELASTIC ELEMENT WITH BRAKE DRUM
					Type	mm		kg*	Type	mm		kg*	Type	
	Bore D	A	O	V	B6	C	Weight	B6	C1	Weight	B6	C2	Weight	
30	□FC	290			K02			13,2	K02				K02	
30P	□FC	327	140	--	K02	30	162	21	K02	30	217	15,6	K02	30
40P	□FC	338	176	--	K02	34	198	22	K02	34	256	25,7	K02	34
50	□FC				K02		179	30	K02		259	35,8	K02	334
55	□FC	430	194	--	K02	38	211	40	K02	38	291	45,8	K02	366
60	□FC				K02		192	46	K02		282	54,4	K02	362
75		520	216	--	K02	42	240	66	K02	42	330	74,4	K02	410
65	□FC	75-80			K02				K02				K02	78
70P	80-90 100	640	266	--	K2N K3N	48	240 280	86	K2N K3N	48	350 390	99	K2N K3N	48
• 75P	80-90 100				K2N K3N	84	265 280	117	--	--	--	--	--	--
	80-90 100	640	309	--	--	--	--	--	K2M K3M	56	375 390	135	K2M K3M	56
80P	Max.110 Max.125**		330	6	K2N		270	180	K2N		388	196	K2N	488
• 85P	Max.125 Max.130		400	6	K2N K3N	50	340	252	K2N K3N	50	458 458	280	K2N K3N	50
90P	Max.130 Max.140** Max.160***		1000	550	K2 K3 K5		364 464 504	350 390 410	K2 K3 K5		424 524 564	302 342 362	K2 K3 K5	504 604 664
95P	Max.130 Max.140** Max.160***			6	K2 K3 K5	62	479 586 626	505 555 575	K2 K3 K5	62	599 706 746	545 595 615	K2 K3 K5	504 604 664
														AFF9

\* Weight with oil and without Brake Drum - \*\* Bore depth PF=210 - \*\*\* Bore depth PF=250

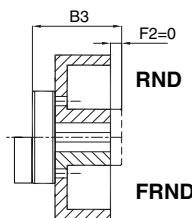
DIMENSIONS ARE NOT BINDING

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

□ Couplings with conical bore FC are supplied with Taper Bush BC and fixing screw (Fig. 1 and 2) - see page 14

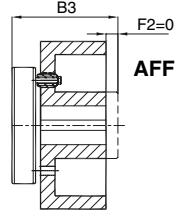
**BRAKE DRUM RND with elastic coupling**

ROTOFLUID	30/30P		40P		50/55		60/65		70P		75P-K		75P SCF K/DCF K	
	Brake Drum	RND3	RND4	RND5	RND6	RND7	FRND8	RND8	RND8	FRND8	FRND8	FRND8	FRND8	FRND8
øG	160	200	250	160	200	250	315	200	250	315	400	500	315	400
F=F1	60	75	95	60	75	95	118	75	95	118	150	190	118	150
B3	90	105	125	94	109	129	152	113	133	156	188	217	137	160
P max	48	48	48	60	60	60	70	70	70	80	80	80	100	100
Weight kg	4,4	6,6	14	5	7,8	14,6	25,8	8,5	15,6	27,4	46,3	9,6	17,6	30,3

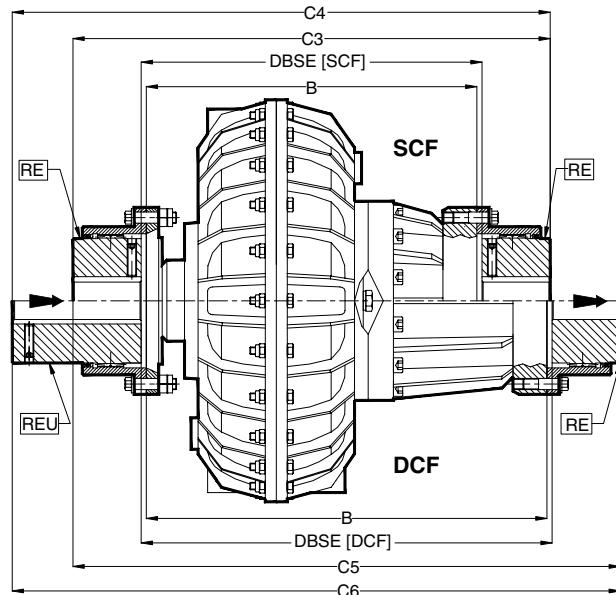
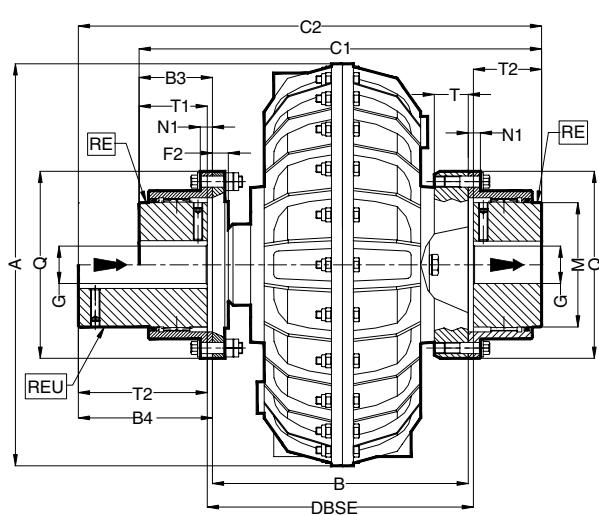


**BRAKE DRUM AFF with elastic coupling**

ROTOFLUID	80P		85P		90P/95P		Brake Drum	AFF8		AFF8M		AFF9		
	øG	400	500	630	500	630		F=F1	150	190	236	190	236	265
F=F1														
B3														
P max														
Weight kg														



Example of order of a coupling with taper bush: ALFA 55 K02 FC + 55BC L15 D=60 + RND5 315x118 P=48



NOTES: (1) upon request: bore G finished / (2) the arrows → indicate input and output / (3) reverse mounting is possible upon request

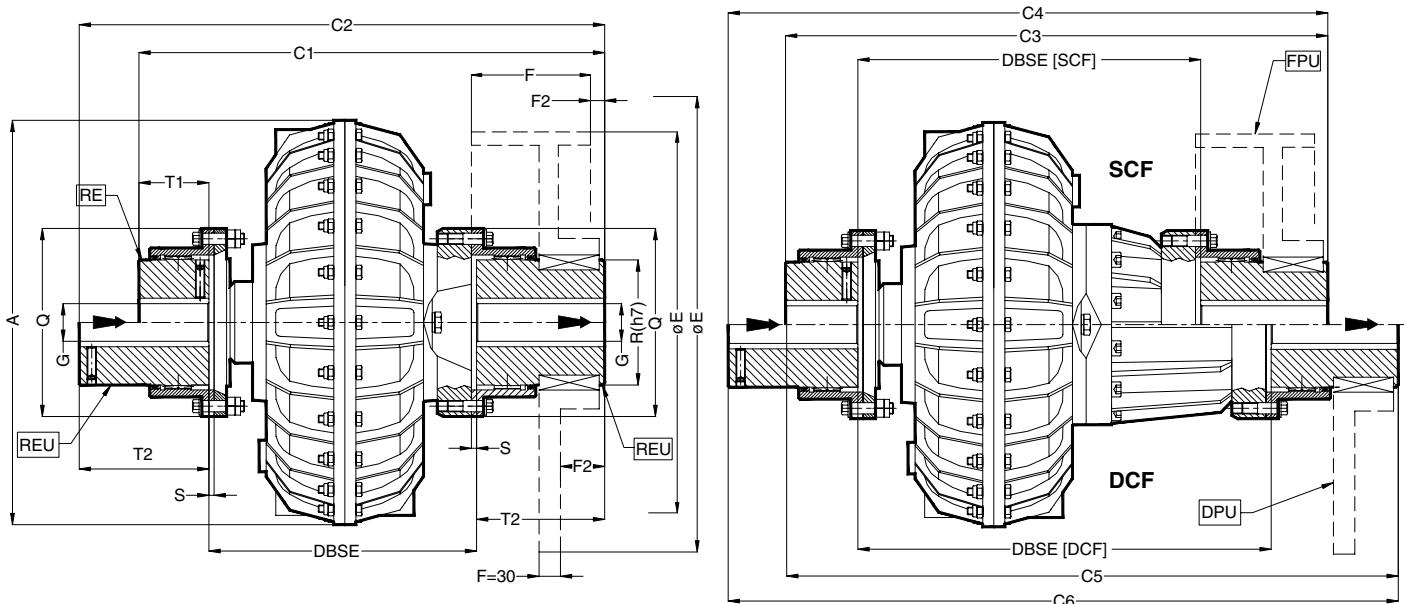
ROTOFLUID SIZE	Dimensions in mm									WAG-G						WAG-GU								
										GEAR COUPLING	Dimensions in mm				kg*	GEAR COUPLING	Dimensions in mm				kg*			
	A	B	F2	M	N1	Q	T	DBSE	C1	Raw	Max	B3	T1	C2			Raw	Max	B4	T2				
20	230	162	14	69	12	111	23	165	RE40	251	10	45	44,5	43	13	RE40U	313	10	45	106,5	105	15		
30	290	197						200	RE55	300					26,5	RE55U	365					29,5		
30P	327	197	12	85	10	142	23			18	60	51,5	50		34,5		18	60	116,5	115		37,5		
40P	338	233						236		336					36,2		401					39,5		
50	430	214						217		317					44,2		382					47,5		
55	430	256,5						28	RE85	261,5					79,3	RE85U	487,5					85		
60	520	265	17,5	133	13	200		55,5		413,5	40	95	78,5	76	86		496	40	95	152,2	150	92		
65		313						318		422					107,2		544					113		
70P	640	293,5	23	152	13	225	60,5	298,5	RE100	478,5	50	110	92,5	90	146,7	RE100U	558,5	50	110	172,5	170	156		
75P		348,5						353,5		533,5					187,5		613,5					197		
80P	810	370	28	178	22	265	72	376	RE120	586	60	130	108	105	262	RE120U	666	60	130	188	185	274		
85P		440						446		656					324		736					349		
90P	1000	440	34	254	24	370	42	448	RE180	748	95	190	154	150	550	RE180U	893	95	190	299	295	595		
95P		555						563		863					710		1008					800		
1200	1300	512	50	305	25	438	49	520	RE220	900	120	230	194	190	2200	RE220U	1015	120	230	309	305	2245		
1200/2			UPON REQUEST						RE250		UPON REQUEST						RE250U		UPON REQUEST					

ROTOFLUID SIZE	Dimensions in mm		SCF						Dimensions in mm		DCF											
			WAG-G			WAG-GU					WAG-G			WAG-GU								
	B	DBSE	GEAR COUPLING	C3	T1	Weight	GEAR COUPLING	C4	T2	Weight	GEAR COUPLING	C5	T1	Weight	GEAR COUPLING	C6	T2	Weight				
30	252	255	RE55	355		28,5	RE55U	420		31	RE55	292	295		RE55U	29,5						
30P					50	36,5			115	39,5						37						
40P	291	294		394		40		459		43		363	366			41						
50	294	297		397		50		462		53		369	372			52						
55	336,5	341,5	RE85	493,5		85	RE85U	567,5		91	RE85	411,5	416,5		RE85U	568,5		87	RE85U	642,5		93
60	355	360		512	76	94,5		586	150	100,5		435	440			592	76	98		666	150	104
65	403	408		560		115,5		634		121,5		483	488			640		119		714		125
70P	403,5	408,5	RE100	588,5	90	160	RE100U	668,5	170	169	RE100	518,5	523,5		RE100U	703,5	90	166,5	RE100U	783,5	170	179
•75P	458,5	463,5		643,5		200,5		723,5		209,5		573,5	578,5			758,5		207,5		838,5	170	216,5
80P	488	494	RE120	704	105	278	RE120U	784	185	280,5	RE120U	588	594		RE120U	804	105	290	RE120U	884	185	302,5
•85P	558	564		774		374		854		398		658	664			874		392		954		416
90P	500	508	RE180	808	150	542	RE180U	953	295	587	RE180U	580	588		RE180U	888	150	557	RE180U	1033	295	602
95P	675	683		983	150	750		1128		840		755	763			1063	150	855		1208	295	945

\* Weight with oil

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

DIMENSIONS ARE NOT BINDING



NOTES: (1) upon request: bore G finished / (2) the arrows → indicate input and output

ROTOFLUID SIZE	GEAR COUPLINGS		Dimensions in mm								SCF						DCF										
	Standard Hub	Long Hub	A	G min	G max	Q	R (h7)	S	T1 RE		T2 RE U		WAG-GPU		WAG-GPUU		WAG-GPU		WAG-GPUU								
									mm	mm	kg*	mm	kg*	mm	mm	kg*	mm	mm	kg*	mm	mm						
									DBSE	C1	W.	C2	W.	DBSE	C3	W.	C4	W.	DBSE	C5	W.	C6					
30	RE55	RE55U	290	18	60	142	80	1,5	50	115	200	365	28,9	31,3	255	420	30,9	33,3	295	460	31,9	34,3					
30P			327										36,9	39,3			38,9	41,3			39,4	41,8					
40P			338										236	401	38,6	466	41	294	459	42,4	524	44,8	366	531	43,4	596	45,8
50			430										217	382	46,6	447	49	297	462	52	527	54,5	372	537	54,4	602	56,8
55	RE85	RE85U	430	40	95	200	125	2,5	76	150	261,5	487,5	85,3	561,5	91	341,5	567,5	91	641,5	97	416,5	642,5	93	716,5	99		
60			520										270	496	92	570	98	360	586	101	660	107	440	666	104	740	110
65			520										318	544	113	618	119	408	634	122	708	128	488	714	125	788	131
70P			640										298,5	558,5	156	638,5	165	408,5	668,5	169	748,5	178	523,5	783,5	176	863,5	185
•75P	RE100	RE100U	640	50	110	225	145	2,5	90	170	353,5	613,5	196	693,5	206	463,5	723,5	210	803,5	219	578,5	838,5	217	918,5	226		
80P			810										376	666	275	746	287	494	784	291	864	303	594	884	303	964	315
•85P	RE120	RE120U	810	60	130	265	175	3	105	185	416	736	378	816	399	534	854	428	934	449	634	954	447	1034	469		
90P			1000										448	893	595	1038	640	508	953	587	1098	632	588	1033	602	1178	647
95P	RE180	RE180U	1000										563	1008	755	1153	800	683	1128	795	1273	840	763	1208	810	1353	855
1200			1300	120	230	438	290	5	190	305	520	900	2200	1015	2245	UPON REQUEST						UPON REQUEST					

\* Weight with oil • Supplied with OVERSIZED CHAMBER SCFM or DCFM

Example of order with standard hub: ALFA 80P SCF WAG-G RE120PU G(m)= 100 G(r)=90

Example of order with long hub: ALFA 80P SCF WAG-G RE120PUU G(m)= 100 G(r)=90

#### BRAKE DRUM FPU

ROTOFLUID	30-30P-40P-50				55-60-65				70P-75P				80P-85P				90P-95P				1200					
Type FPU	FPU-55				FPU-85				FPU-100				FPU-120				FPU-180				FPU-220					
Ø E	160	200	250	315	400	355	400	450	500	500	560	630	710	500	560	630	710	800	1000	710	800	1000	1250	800	1000	1200
F2	60	75	95	118	150	95	118	150	118	150	190	150	190	236	190	236	265	236	265	265	300	265	265	300	300	300
UPON REQUEST																										
Z	0	0	0	3	35	0	0	0	0	0	0	20	0	5	51	0	0	0	0	0	0	0	0	0	0	0
Weight kg	5,4	9,2	14,5	29	50,8	19,5	30,8	52,8	35,9	58,3	96,8	57	95,6	134	105	142	178	145	180	254						

DIMENSIONS ARE NOT BINDING

Example of order:  
Brake Drum FPU 120 Ø500x190 For 80P-85P

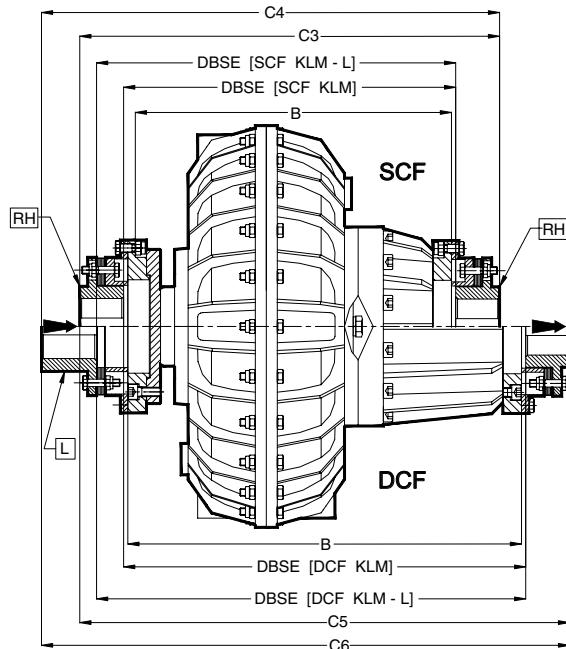
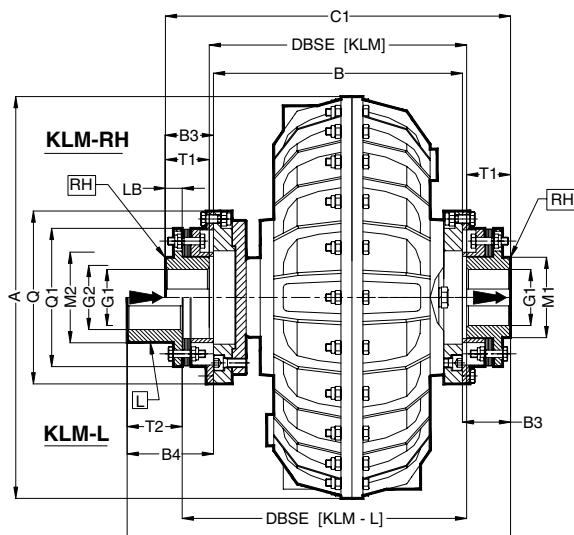
Example of order:  
Brake Disc DPU 100 Ø500x30 For 70P-75P



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA**  
**KLM-RH, KLM-L**  
**WITH DISC COUPLING HBSX**

Sheet  
45-300F EN  
Date  
03-2018



NOTES: (1) upon request: bore G finished / (2) the arrows → indicate input and output / (3) reverse mounting is possible upon request

ROTOFLUID SIZE	DISC COUPLING HBSX	KLM-RH											KLM-L							
		Dimensions in mm											kg*	Dimensions in mm					kg*	
		A	B	C1	G1 max	DBSE	B3	LB	M1	Q	Q1	T1		Weight	C2	G2 max	DBSE	B4	M2	T2
30	170	290	214	303	48	217	44,5	16,3	64	155	119	43	26,4	346,7	55	243,7	88,2	75	60	27,2
30P		327				44,5							34,2			243,7				35
40P		338	250	339		253							37	382,7		279,7				37,8
50	330	234	337	65	237	51,5	18	86	185	148	50		51,6	389	65	269	103,5	92	70	52,9
55		266	369		269		18						61,6	421		301				62,9
60	650	256	383	85	259	63,5	25	120	260	214	62		94,5	468	95	296	148,5	135	110	101,5
65		304	431		307		25						114,5	516		344				121,5
70P	1260	276	433	100	281	78,5	28	138	295	246	76		161	525	110	329	170,5	155	120	169,4
75P		331	488		336		28						192	580		384				200,4
80P	2700	576	105	105	366	108	35	150	330	275	105		322	666	120	436	198	165	125	328,9
3160		606	125		366		123	41	175	365	308	120	357	710		135	445			366,7
85P	3160	430	676	125	436	123	41	175	365	308	120	429	780	135	515	227	190	145	438,7	
90P	3160	1000	461	707	125	467	123	41	175	365	308	120	530	811	135	546	227	190	145	545,3
95P	4630		576	854	140	584	139	46	195	415	346	135	740	973	150	673	258	215	165	755,3
1200													UPON REQUEST							

\* Weight with oil

DIMENSIONS ARE NOT BINDING

ROTOFLUID SIZE	DISC COUPLING HBSX	SCF KLM-RH				SCF KLM-L				ROTOFLUID SIZE	DISC COUPLING HBSX	DCF KLM-RH				DCF KLM-L				
		mm			kg*	mm			kg*			mm			kg*	mm			kg*	
		B	DBSE	C3	T1	Weight	DBSE	C4	T2	Weight		B	DBSE	C5	T1	Weight	DBSE	C6	T2	Weight
30	170	269	272	358	43	28,8	298,7	401,7	60	29,6	30	170	309	312	398	43	29,4	338,7	441,7	30,2
30P		308	311	397		36,6				37,4	30P		380	383	469		37,2			38,2
40P		314	317	417		41,4	337,7	440,7		42,2	40P		42,2	409,7	512,7		43			43
50	330	314	317	417	50	57,4	349	469	70	58,7	50	330	389	392	492	50	59,6	424	544	60,9
55		346	349	449		67,4	381	501		68,7	55		421	424	524		69,6	456	576	70,9
60	650	346	349	473	62	102,9	386	558	110	109,9	60	650	426	429	553	62	106,5	466	638	113,8
65		394	397	521		122,9	434	606		129,9	65		474	477	601		126,5	514	686	133,5
70P	1260	386	391	543	76	174	439	635	120	182,4	70P	1260	501	506	658	76	181	554	750	189,4
•75P	441	446	598	205	494	690		213,4	•75P	441	556	561	713	212	609	805	120	220,4		
80P	2700	478	484	694	105	338	554	784	125	344,9	80P	2700	578	584	794	105	350	654	884	125
3160		478	484	724	120	373	563	828	145	382,7		3160	578	584	824	120	385	663	928	145
•85P	3160	548	554	794	120	457	633	898	145	466,7	•85P	3160	648	654	894	120	477	733	998	145
90P	3160	521	527	767	120	482	606	871	145	497,3	90P	4630	601	607	847	135	497	686	951	145
95P	4630	696	704	974	135	780	793	1093	165	795,3	95P	4630	776	784	1054	135	795	873	1173	165
																			810,3	

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

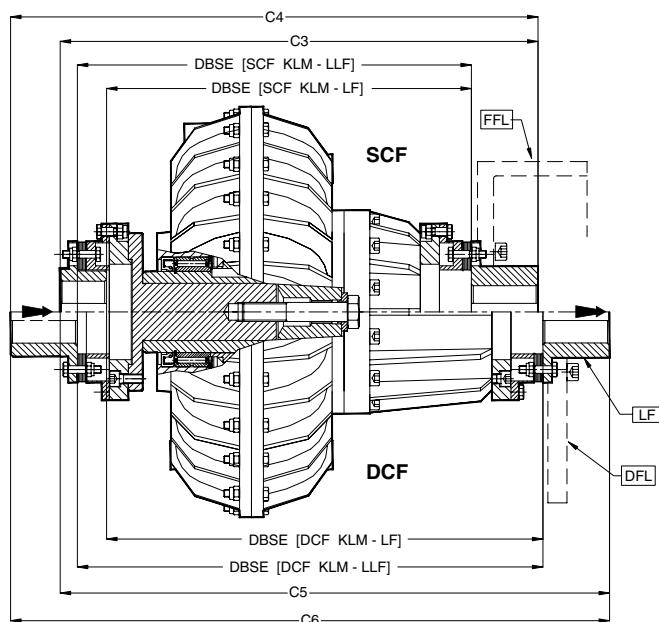
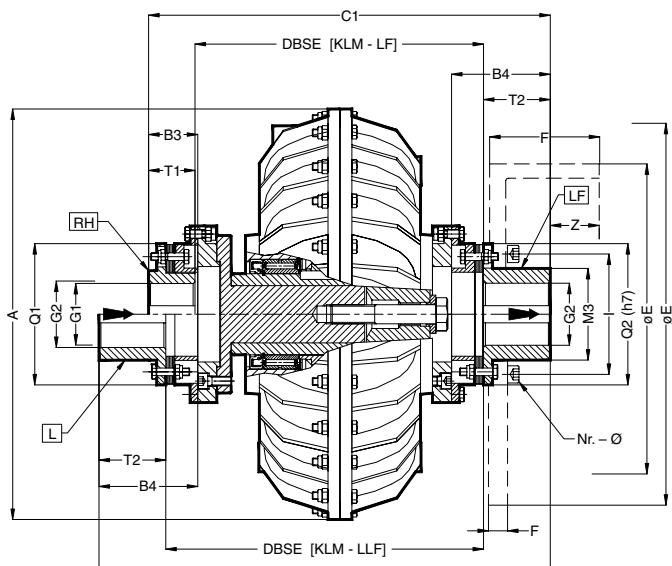
Example of order : ALFA 55KLM-L 330 RH (with 1 RH hub and 1 L hub)



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA**  
KLM-LF/LLF, SCF KLM-LF/LLF, DCF KLM-LF/LLF  
WITH BRAKE DRUM FFL / BRAKE DISC DFL

Sheet  
45-305D EN  
Date  
03-2018



**NOTES:** (1) upon request: bore G finished / (2) the arrows → indicate input and output

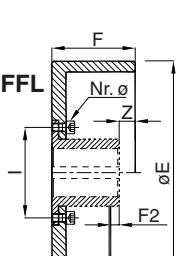
ROTOFLUID SIZE	DISC COUPLING HBSX	mm								KLM						SCF KLM						DCF KLM								
						LF		LLF		LF			LLF			LF			LLF			LF			LLF					
		A	B3	B4	ØG1 max	ØG2 max	M3	Q1	Q2	DBSE	C1	T1	W.	DBSE	C2	T2	W.	DBSE	C3	W.	DBSE	C4	W.	DBSE	C5	W.	DBSE	C6	W.	
<b>30</b>		290								243,7	346,7	43	27,2	270,4	390,4	60	28	298,7	401,7	29,6	325,4	445,4	30,4	338,7	441,7	30,2	365,4	485,4	31	
<b>30P</b>	170	327	44,5	88,2	48	55	75	119	118,5				35				35,8			37,4			38,2			38,2	365,4		39	
<b>40P</b>		338								279,7	382,7	43	37,8	306,4	426,4	60	38,6	337,7	440,7	42,2	364,4	484,4	43	409,7	512,7	43	436,4	556,4	43,8	
<b>50</b>		430								269	389	50	52,9	301	441		54,2	349	469	58,7	381	521	60	424	544	60,9	456	596	62,2	
<b>55</b>		430	51,5	103,5	65	65	92	148	147,5	301	421		62,9	333	473	70	64,2	381	501	68,7	413	553	70	456	576	70,9	488	628	72,2	
<b>60</b>		520								296	468	62	101,5	333	553		108,5	386	558	109,9	423	643	116,9	466	638	113,8	503	723	123	
<b>65</b>	650	520	63,5	148,5	85	95	135	214	213	344	516		121,5	381	601	110	128,5	434	606	129,9	471	691	136,9	514	686	133,5	551	771	140,5	
<b>70P</b>		640								329	525	76	169,4	377	617		177,8	439	635	182,4	487	727	190,8	554	750	189,4	602	842	197,8	
<b>•75P</b>	1260	640	78,5	170,5	100	110	155	246	245	384	580		200,4	432	672	120	208,8	494	690	213,4	542	782	221,8	609	805	220,4	657	897	228,8	
<b>80P</b>		2700	810	108	198	105	120	165	275	274	436	666	105	328,9	506	756	125	335,8	554	784	344,9	624	874	351,8	654	884	356,9	724	974	363,8
3160			123	227	125	135	190	308	307	445	710	120	366,7	524	814	145	377,4	563	828	382,7	642	932	392,4	663	928	394,7	742	1032	404,4	
<b>•85P</b>	3160	810	123	227	125	135	190	308	307	515	780	120	438,7	594	884	145	448,4	633	898	466,7	712	1002	476,4	733	998	486,7	812	1102	496,4	
<b>90P</b>	3160	1000	123	227	125	135	190	308	307	546	811	120	545,3	625	915	145	560,6	606	871	497,3	685	975	512,6	686	951	512,3	765	1055	527,6	
<b>95P</b>	4630	1000	139	258	140	150	215	346	346	673	973	135	755,3	762	1092	165	770,6	793	1093	795,3	882	1212	810,6	873	1173	810,3	962	1292	825,6	
<b>1200</b>		UPON REQUEST																												

\* Weight with oil

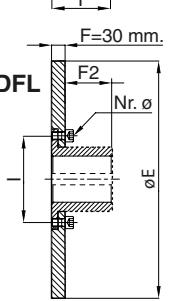
DIMENSIONS ARE NOT BINDING

#### BRAKE DRUM FFL

ROTOFLUID	30-30P-40P				50-55				60-65				70P-75P				80P				85P-90P				95P			
	FFL 170				FFL 330				FFL 650				FFL 1260				FFL 2700				FFL 3160				FFL 4630			
<b>Ø E</b>	160	200	250	315	200	250	315	400	250	315	400	400	315	400	500	400	500	500	630	630	710							
<b>F</b>	60	75	95	118	75	95	118	150	95	118	150	150	118	150	190	150	190	190	236	236	265							
<b>F2</b>	0	-	-	-	-	-	-	-	15	-	-	2	-	-	-	-	-	-	-	-	-							
<b>Z</b>	0	15	35	58	5	25	48	80	-	8	40	-	30	70	25	65	45	91	71	100								
<b>I</b>	100				128				195				224				216				282				314			
<b>Nr.-Ø</b>	8 M10				8 M12				16 M12				16 M14				8 M20				16 M20				16 M20			
<b>Weight kg</b>	4	6,8	11,5	28	6,5	11,1	27,7	49,1	9,9	25	47,5	24	46	85	46,1	84,7	83,3	121	119	154,8								



ROTOFLUID	30-30P-40P				50-55				60-65				70P-75P				80P				85P-90P				95P				
	DFL 170				DFL 330				DFL 650				DFL 1260				DFL 2700				DFL 3160				DFL 4630				
<b>Ø E</b>	250	315	355	315	355	400	450	400	450	500	500	560	630	710	800	500	630	710	800	630	710	800	710	800	1000	1250			
<b>F</b>	30	30	30							30						30		30											
<b>F2</b>	27,5				34,5					70						79		81											
<b>I</b>	100				128					195						224		216											
<b>Nr.-Ø</b>	8 M10				8 M12					16 M12						16 M14		8 M20											
<b>Weight kg</b>	10,5	17	22,3	16	21,8	28	35,9	26,2	34	42,8	41,7	53,5	70	88,8	114	41,2	53	68,4	88,2	66,7	86,5	112	84,7	109,8	176,3	280,3			



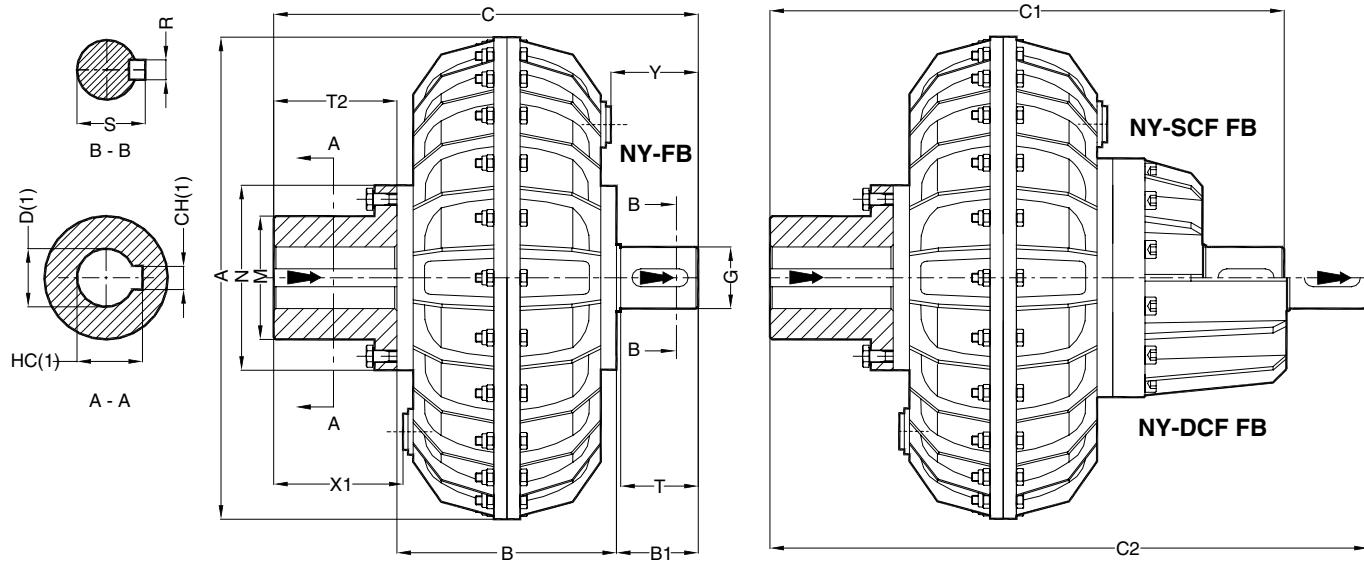
• Supplied with OVERSIZED CHAMBER SCFM or DCFM  
Example of order: ALFA 55 SCF KLM 330 LF G(m)=60 G(r)=40 with Brake Drum FFL 330 ØE 315x118



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING**  
**NY-FB, NY-SCF FB, NY-DCF FB**  
**REVERSE MOUNTING [RM]**

Sheet  
45-400B EN  
Date  
03-2018



**NOTES:** (1) for bore and keyway dimensions see sheet 10-019E / (2) the arrows ➡ indicate input and output

ROTOFLUID SIZE	NY-FB														NY-SCF FB		NY-DCF FB					
	Dimensions in mm													kg*	mm	kg*	mm	kg*				
	D <sup>g7</sup>	A	B	B1	C	G <sup>h7</sup>	N	M	R	S	T	T2	X1	Y								
30	28														69			19	316	21,5		
	38															55			356		22,1	
30P	28														64			28	316	30,5		
	38																		31,1			
40P	38																		454		37	
50	42-48-55																		405		52	
55	60-65-75														65	100	106	91	44	50	480	
	42-48-55															77	54	447	60	522	62	
60	48-55														80			106	71	458	79	
	60-65-75															110	116		111	129	538	
65	80														80			92	91	506	99	
	55																		586		103	
70P	65-75														190	426				142		
	80-90															96	70	225	160	129	149	
•75P	100															245	481					
	65-75																96	170	591	183	706	190
80P	80-90														226	482						
	100-110															810	116	80	270	170	238	254
•85P	60-65-75															300	556					
	80-90																		116	310	674	336
90P	100-110														1000	344	186	700	110	345	250	28
	120-140																		116	180	170	170
																		240	470	760	510	
																		840		840	530	

\* Weight with oil

DIMENSIONS ARE NOT BINDING

• Supplied with OVERSIZED CHAMBER SCFM or DCFM

Example of order: ALFA 55 NY-FB D=65

ALFA 55 NY-SCF FB D=65

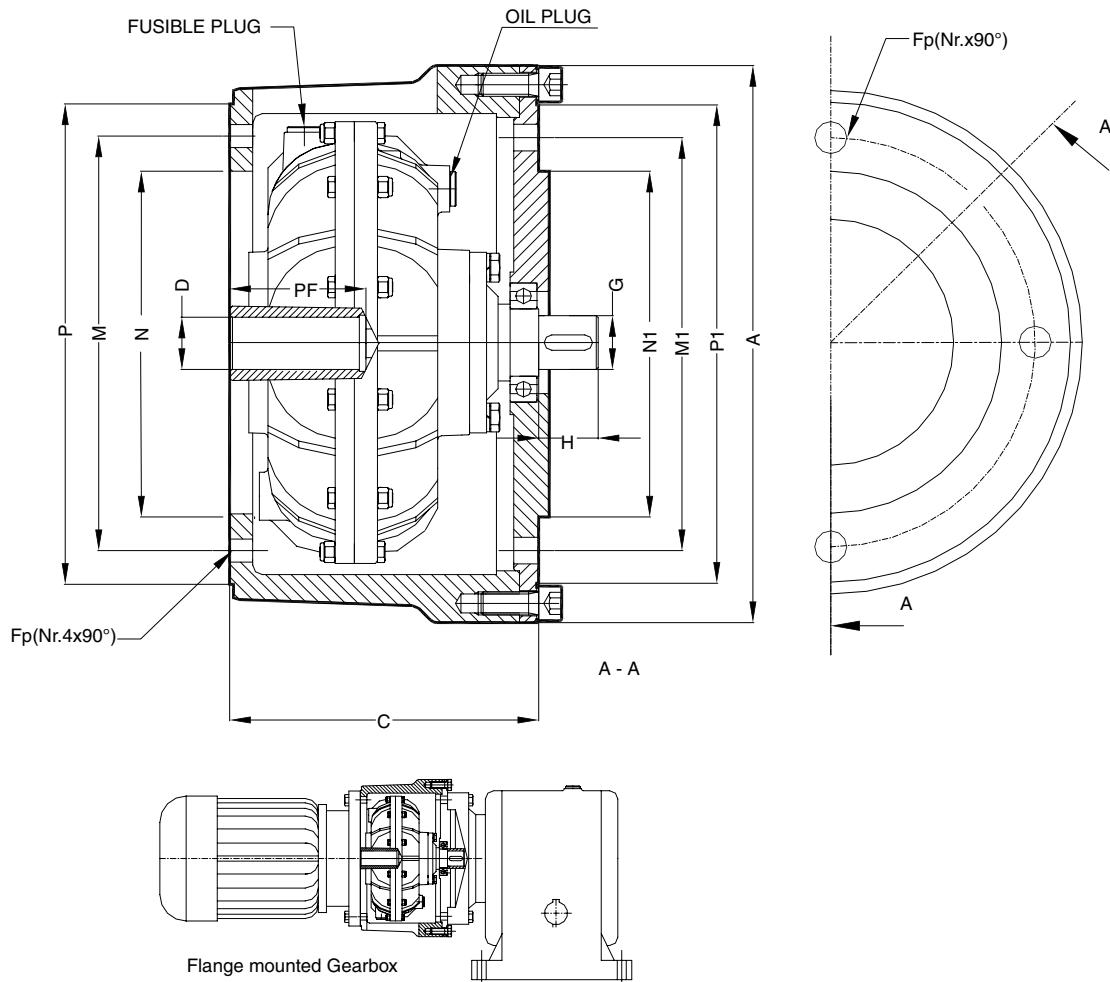
ALFA 55 NY-DCF FB D=65



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING ALFA  
CKS  
WITH BELL HOUSING**

Sheet  
40-281B EN  
Date  
03-2018



COUPLING		MOTOR		Dimensions in mm													kg*								
Grand.	Tipo	Tipo	kW	A	C	D	Fp	G h7	H	M	M1	N f7	N1 h7	P	P1	PF	Weight								
10	CKS-19-19	80	0,55	240	128	19 G7	ø11	19	25	165	165	130	130	200	200	40	8,5								
			0,75																						
	CKS-24-24	90 S	1,1			24 G7		24									50								
			90 L																						
20	CKS-28-28	100	2,2	292	161	28 G7	ø13	28	32	215	215	180	180	250	250	60	24								
			3																						
		112 M	4																						
30	CKS-38-38	132S 132M	5,5 7,5	350	210	38 F7	ø17	38	45	265	265	230	230	300	300	80	36,5								
30P	CKS-42-42	160 M	11	40																					
		160 L	15																						
40P	CKS-48.48	180 M	18,5	400	255	48 F7	ø17	48	55	300	300	250	250	350	350	110	42								
		180 L	22																						

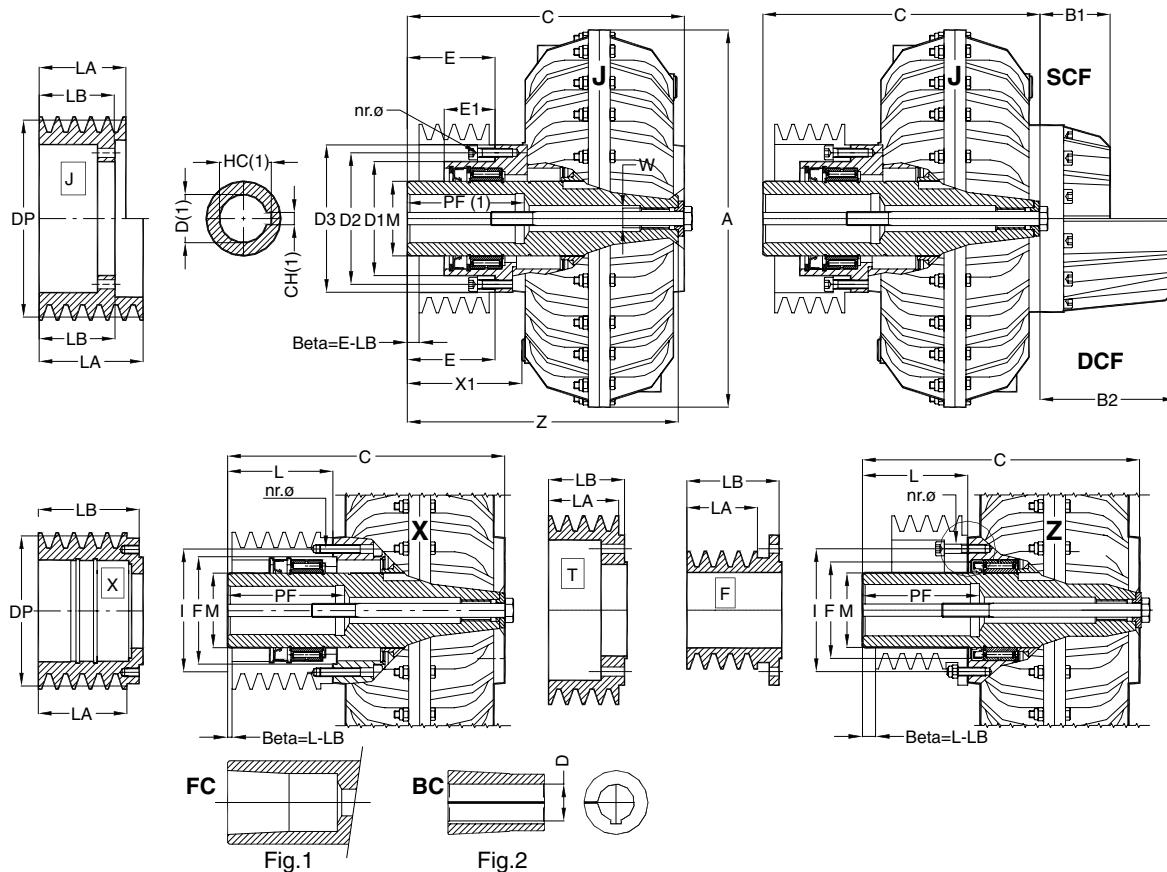
\* Weight with oil



**WESTCAR**  
MILANO - ITALY

**ROTOFLUID COUPLING**  
**BETA J, X, Z**  
**SCF J / X / Z DCF J / X / Z**

Sheet  
45-215B EN  
Date  
03-2018



**NOTES:** (1) for bore and keyway dimensions see sheet 10-019E / (2) for the choice of the assembly coupling-pulley, LA - LB quotes, see WESTCAR Pulley  
(3) X couplings are supplied with X type pulleys for pitch diameters less than the minimum diameters of the J type pulleys

ROTOFLUID SIZE	Type	Dimensions in mm															J	X / Z	SCF		DCF				
		Bore D	A	C	D1 <sup>H7</sup>	D2	D3	E	E1	F <sup>H7</sup>	I	L	M	Nr.-Ø	X1	Z	W	Weight kg*	Weight kg*	B1	Weight kg*	B2	Weight kg*		
10	Z 55	24	192	143	-	-	-	-	-	47	60	55	35	6-M6	57	140	M10	-	4,2	-	-	-	-		
20	Z 70	28	229	185	-	-	-	-	-	62	78	70	45	6-M8	76	180	M14	-	6,5	-	-	-	-		
30	J / X / Z 88	□FC	290															97	16,3	14,8					
30P	J / X / Z 88	□FC	327	238	85	100	114	70	45	75	100	88	60	8-M8	94	233,5	M24	24,3	22,8	55	2,4	95	3		
40P	J / X / Z 90	□FC	338	273	112	130	145	89			60	100	125	90				28	25						
	J / X / Z 118	□FC	301					117			80		142		8-M8	114	268	M24	29	26	58	4	130	5	
50	J / X 90	□FC		244				70			58	110	140	90				95	241,5						
	J / X 120	□FC		430	274	130	150	170	100						85	8-M10	125	271,5	M24	35,5	32,5	80	6	155	8
55	J / X 155	□FC			351													160	348,5						
	J / X 130	□FC				302				110								95	241,5						
60	J / X 170	75-80				342				150								135	302						
	J / X 130	□FC				350				184								175	342						
65	J / X 170	75-80				390				110								135	350						
	J / X 170	75-80								150								175	390						
70P	J / X 170	80		380				140			100	150	195	170				169	369						
	J / X 210	80-90-100		640	420	188	210	230	170						120**	8-M12	409	409	M36	120,5	111	110	13	225	20
•75P	J / X 210	80-90-100				470				180								209	459						
	J / X 255A	80-90-100-110				810	481	214	240	270	225	130	190	230	255	140	8-M14	475	549	M36	123,5	114	110	18	218
80P	J / X 255A	80-90-100-110					555											475	549						
	J / X 255A	80-90-100-110																303,5	290	118	16	218	28	48	

\* Weight with oil

DIMENSIONS ARE NOT BINDING

• Supplied with OVERRSIZED CHAMBER SCFM or DCFM

□ Couplings with conical bore **FC** are supplied with Taper Bush **BC** and fixing screw (Fig. 1 and 2)

In case of mounting on shafts without shoulder contact WESTCAR

Example of order of a coupling for taper bush: BETA 55 J155 FC

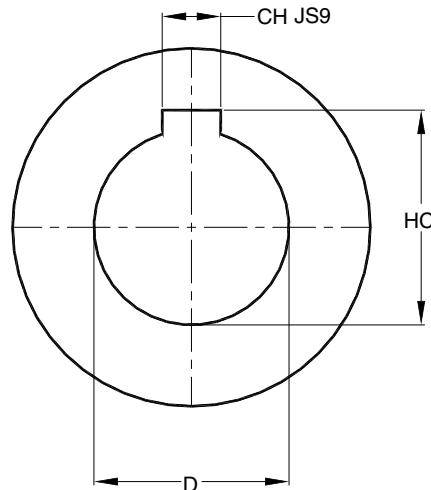
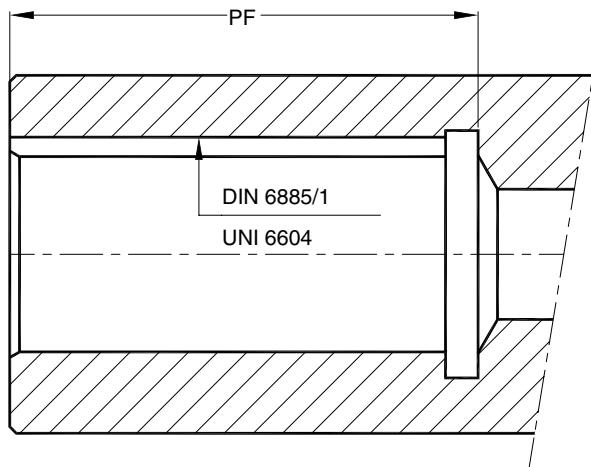
Example of order of a coupling with taper bush: BETA 55 J155 FC + 55BC L155 D=60

TAPER BUSH BC WITH FIXING SCREW							
COUPLING SIZE	Type	Standard D Bore				Max D Bore	
30/30P	3BC	38	■ 42	■ 48	-	-	-
40P	4BC	38	42	■ 48	■ 50	-	-
50 - 55	5BC	-	42	48	■ 55	■ 60	■ 65
60 - 65	6BC	-	-	48	55	■ 60	■ 65

■ Taper Bushes are supplied without keyway



**BORES AND KEYWAYS TABLE  
FOR FLUID COUPLING SHAFT**



D	Tolerance	PF	CH	HC	Tolerance
10	H7	25	3	11,4	+ 0,1 0
11 *		25	4	12,8	
12		25	4	13,8	
13		30	5	15,3	
14 *		30	5	16,3	
15		30	5	17,3	
16		30	5	18,3	
17		40	5	19,3	
18		40	6	20,8	
19 *		40	6	21,8	
20		40	6	22,8	
21		40	6	23,8	
22		50	6	24,8	
23		50	8	26,3	
24 *		50	8	27,3	
25		50	8	28,3	
26		50	8	29,3	
27		50	8	30,3	
28 *	G7	60	8	31,3	+ 0,2 0
30		60	8	33,3	
32		60	10	35,3	
33		80	10	36,3	
34		80	10	37,3	
35		80	10	38,3	
38 *		80	10	41,3	

D	Tolerance	PF	CH	HC	Tolerance
40	G7	110	12	43,3	+ 0,2 0
42 *		110	12	45,3	
45		110	14	48,8	
48 *		110	14	51,8	
50		110	14	53,8	
55 *		110	16	59,3	
60 *		140	18	64,4	
65 *		140	18	69,4	
70 *		140	20	74,9	
75 *		140	20	79,9	
80 *		170	22	85,4	
85 *		170	22	90,4	
90 *		170	25	95,4	
95		170	25	100,4	
100 *		210	28	106,4	
105		210	28	111,4	
110 *		210	28	116,4	
115		210	32	122,4	
120		250	32	127,4	
125 *		250	32	132,4	
130		250	32	137,4	
135 *		250	36	143,4	
140		250	36	148,4	
160		250	40	169,4	
180		250	45	190,4	

\* STANDARD BORES FOR UNEL MEC ELECTRIC MOTORS



### FUSIBLE PLUG TF

In case of overheating, the fusible plug allows the oil out and thereby disconnects the power transmitted to the output shaft. Fusible plugs are available for four different melting temperatures: 96°C, 120°C, 145°C and 180°C.

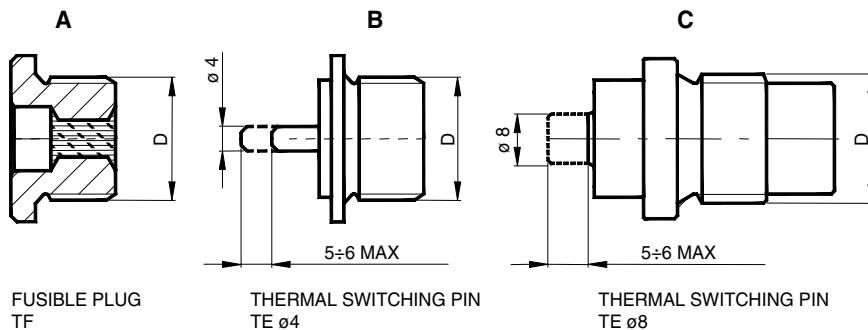
WESTCAR standard couplings are supplied with fusible plug at 145° C.

### THERMAL SWITCHING PIN TE

In case of coupling overheating with a thermal switching pin, a pin is released and collide against a limit switch which activates an alarm or shuts off the electric motor. This method avoids the oil leakage from the coupling.

Fusible switching pins are available for four different temperatures: 96°C, 120°C, 145°C and 180°C.

In case of stall conditions, motor running and machine locked, the coupling housing must be driving to guarantee the signal survey.

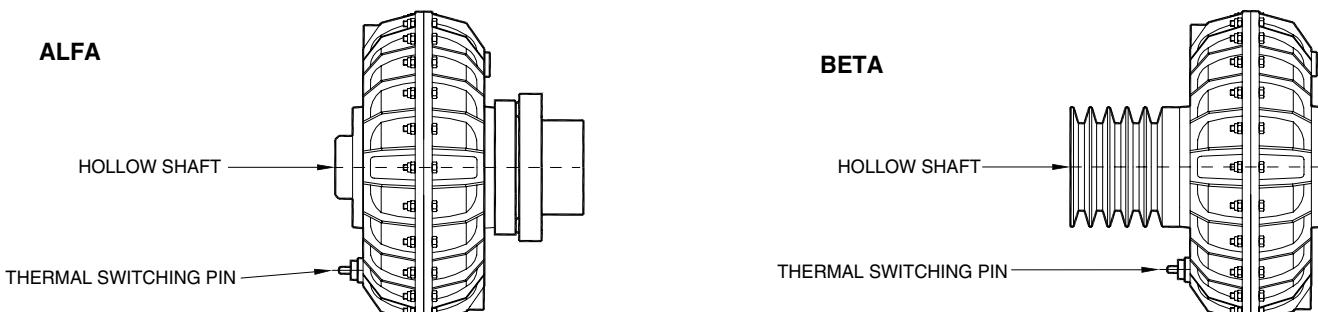


ROTOFLUID SIZE	DIMENSIONS				TEMPERATURE			
	D	A	B	C	96 °C BLUE	120 °C WHITE	145 °C RED	180 °C GREEN
10 20 30-30P 40P	1/4 GAS	X	X	-	●	●	●	●
50-55 60-65	1/2 GAS	X	X	-	●	●	●	●
70P-75P 80P-85P	1/2 GAS	X	-	X	●	●	●	●
90P-95P	3/4 GAS	X	-	X	●	●	●	●

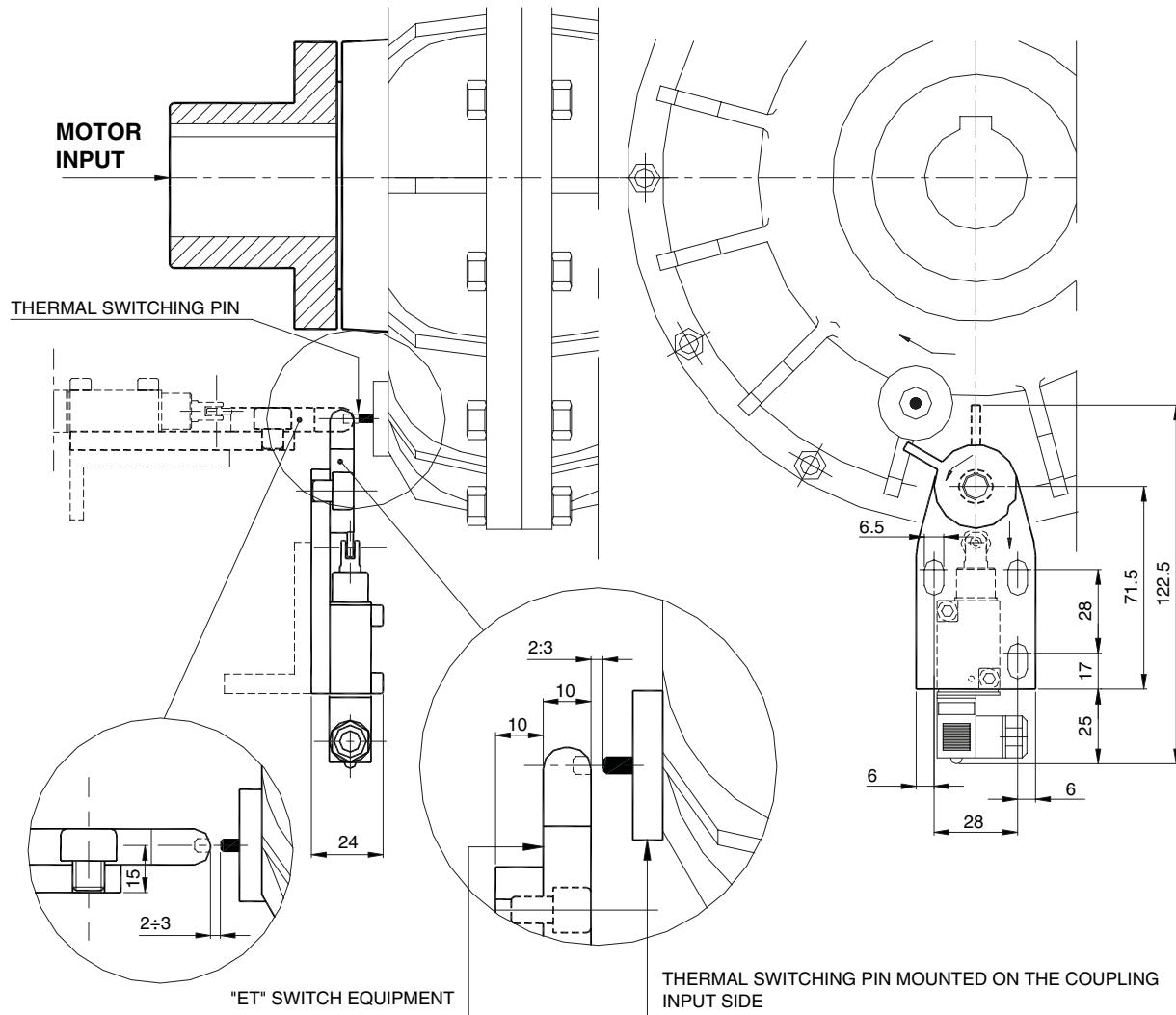
When ordering specify: dimension D, safety plug melting temperature and colour.

Example of order: **Thermal switching pin TE 1/4 GAS 145°C RED.**

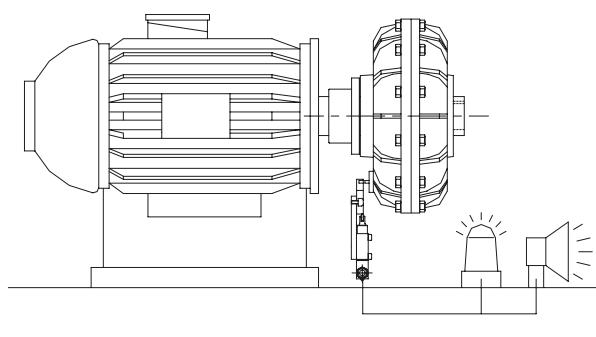
### THERMAL SWITCHING PIN STANDARD POSITION



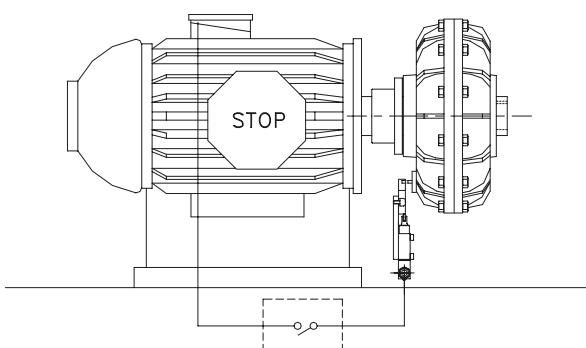
The thermal switching pin is normally mounted by the hollow shaft side but in case of need can be located in the opposite side.



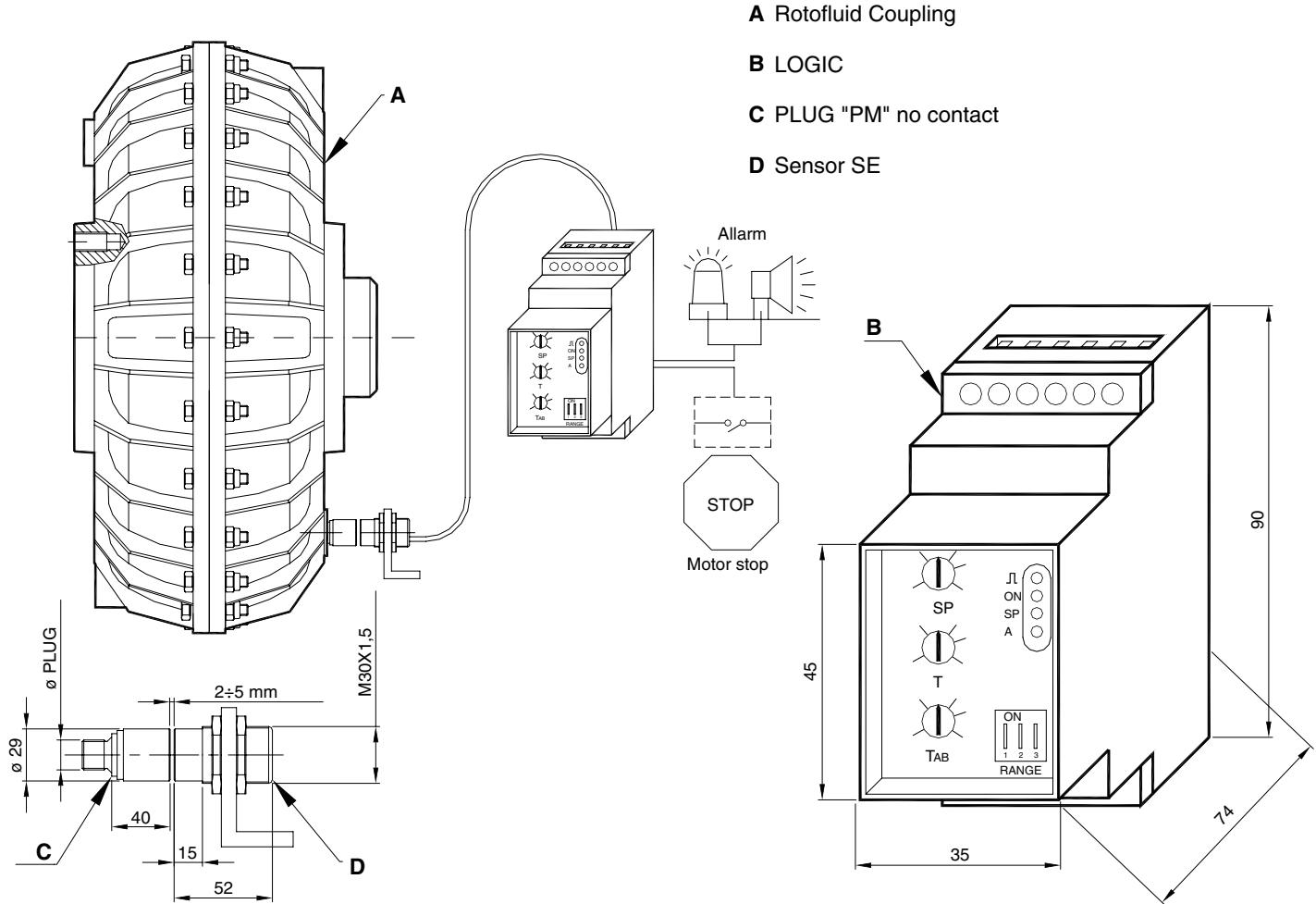
"ET" CONNECTED TO A LIGHT SOUND SIGNAL



"ET" CONNECTED TO SWITCH OFF THE DRIVE



The ET safety device consists of a microswitch and a cam mounted on a base and operates in combination with a thermal switching pin fitted on the fluid coupling housing. In case of coupling overheating due to overloads and machine jams or reduced oil filling, the oil temperature can exceed the melting temperature set for the thermal switching pin. The pin then extends and makes contact with the cam of the microswitch sounding an alarm or shutting down the drive.



#### DEVICE T09 WITH PM

The Plug PM is fitted on the outer impeller, in contact with the oil inside the coupling.

The outer wheel of the coupling (A) can be connected to the machine (driven side) or connected to the motor (drive side).

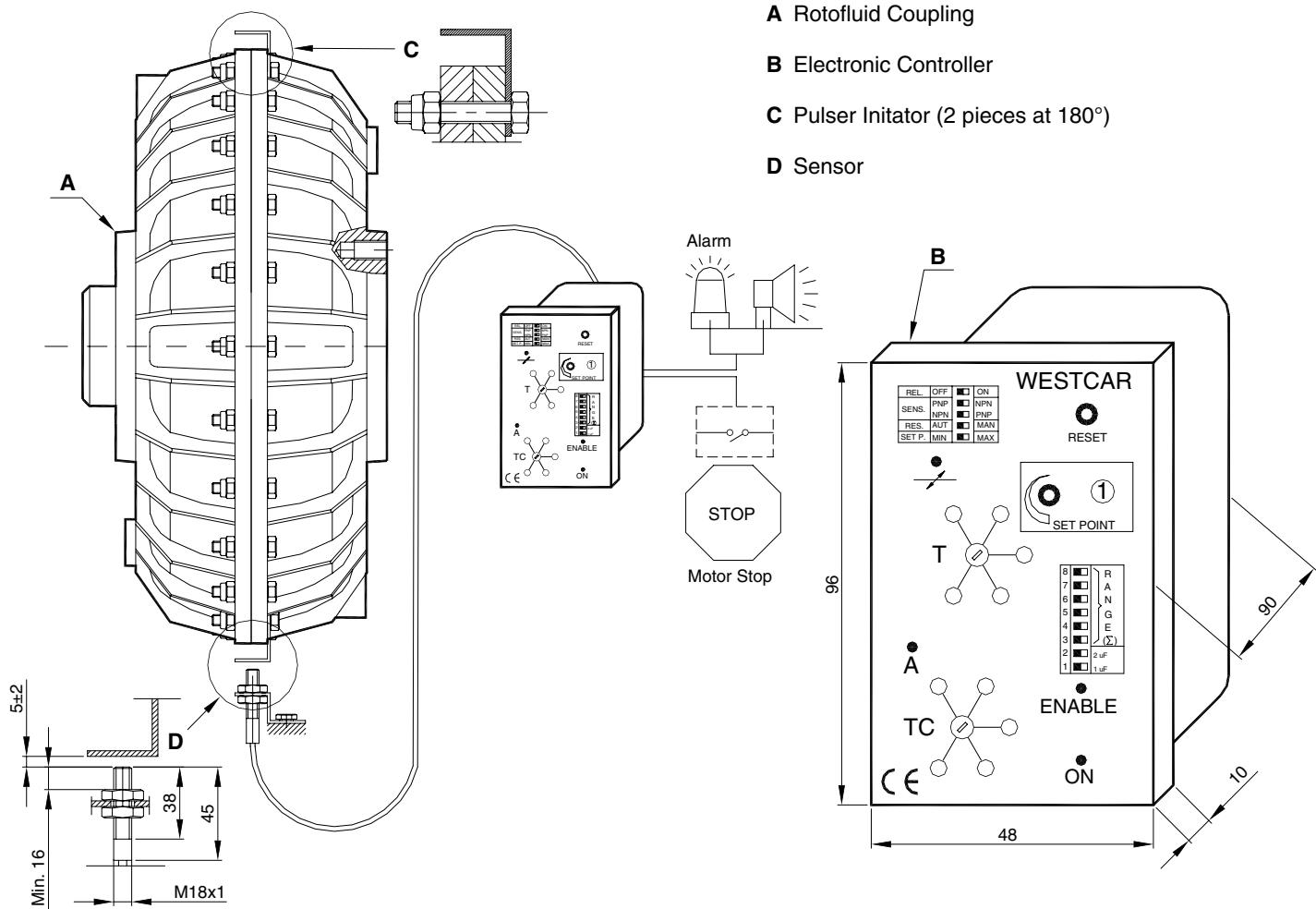
If the Plug PM is mounted on the driven side the system detects the variation of temperature and speed. If it is mounted on the drive side the system detects only the temperature.

#### WORKING PRINCIPLE

The Plug PM contains a thermal element that changes its status at the temperature of 120°C (or upon request: 80°C, 100°C, 140°C or 160°C). The plug PM, normally closed, crossing the SE sensor acts as a pulse generator, consequently the SE sensor sends impulses to the device LOGIC T09.

Once the temperature limit is reached the thermal element opens and the plug PM and the sensor SE no longer generate impulses. The device LOGIC T09 not receiving more signals, will switch the inner relay, providing an alarm signal or stopping the motor.

**POWER SUPPLY:** Standard tension 24Vac (upon request: 115 Vac, 230 Vac or 24Vdc).



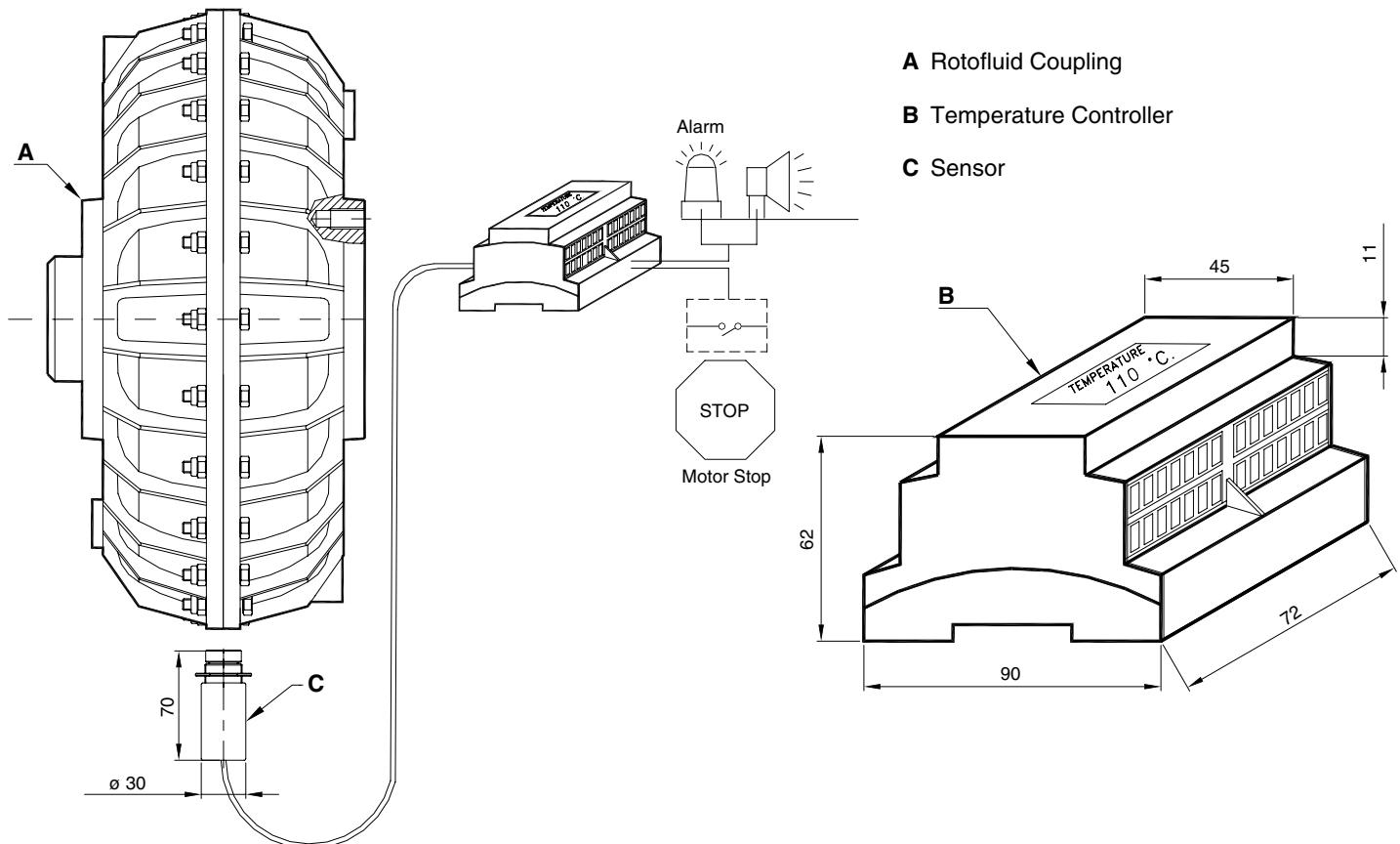
### DEVICE SCD

The **SCD** Device can be applied to guarantee the safety of coupling the machine and the product quality. The **SCD** device is an electronic controller which receives a train of pulses by a sensor. The pulses are converted into a proportional voltage to the pulses frequency. This voltage is compared with a variable reference voltage (SET POINT). The internal relay changes over when the input speed is faster or lower than the fixed (SET POINT). It is used to control the shaft revolution speed. In case of speed decrease, the device gives a signal to the operator.

### WORKING PRINCIPLE

As the transmitted torque is increased, this gives rise to an increased slip of the fluid coupling. Possible overload can be detected by measuring the resulting speed reduction in the driven half coupling by means of overload **SCD**. This with change-over contact at the output may either emit an alarm signal or switch off the main motor. A delaying action (max 120 sec) prevents the unnecessary triggering of the relay, when the motor is started. It only occurs once when the operating voltage is applied. False alarms are prevented arising from very short torque fluctuations, by the introduction of a preset time lag (max 30 seconds).

**POWER SUPPLY:** Standard tension 24 Vac (upon request: 115 Vac, 230 Vac or 24 Vdc).



The **continuous monitoring** of the components substantially contributes to preserve the performance of a system itself, while assuring, in the meantime, a considerable **increase in reliability**.

The **ITC (Infrared Temperature Controller)** infrared device allows the monitoring of the fluid coupling temperature, contactless, in real time and in a temperature range between -20° C and +250° C, thus providing the ability to regulate workloads or possible intervention. This is an advantage which increases the effectiveness of the whole system and reduces downtime.

Moreover, through the **sensor control interface**, integrated in the DIN rail mounted control system, it is possible to **set two limit temperatures** (Low and High level) to get a signal when such temperatures are reached.

Finally, if the **integration of the device in existing control systems is desired**, ITC is able to provide the current temperature value through a 0-10 V analog output, which can be useful for data transmission to other equipment or for automatic setup of the monitored system parameters.

#### ITC Device Characteristics

Continuous monitoring

Real time temperature acquisition

Current temperature visualization on the LCD display

2 programmable digital output – limit temperatures

Evaluation of temperature gradient

Easy and quick installation with standard DIN rail mounting

Wide spectrum of application

0-10 V analog output



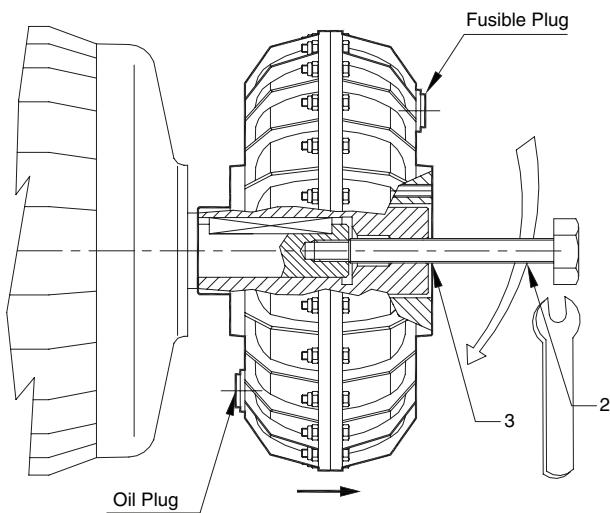
**WESTCAR**  
MILANO - ITALY

## SCREW PULLER VE TYPE PULLING OFF SYSTEM SE TYPE

Sheet  
90-005B EN

Date  
01-2017

### SCREW PULLER "VE" TYPE

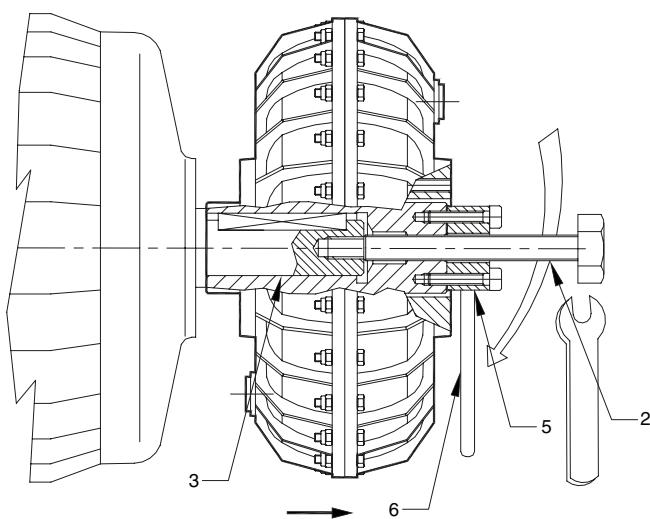


VE SYSTEM	ROTOFLUID COUPLING				
	SIZE	VERSIONS			
Type		K	Z	J	H
VE M14	20	K1	Z70	J70	H55
VE M16		K3	Z69	-	-
VE M20				J103	H85
	30				X103
VE M24	30P				ALL VERSIONS
	40P				
	50				
	55				UP TO Ø 65
VE M30	55				FOR Ø75 Ø 80
	60				
	65				
VE M36	70P				ALL VERSIONS
	75P				
	80P				
	85P				
	90P				
	95P				

To pull off the ROTOFLUID coupling proceed as follows:

- 1) Remove tightening screw
- 2) Tighten the screw (2) into the threaded hole of the coupling shaft (3), taking care to lock the rotation of the drive shaft.

### PULLING OFF SYSTEM "SE" TYPE



SE SYSTEM	ROTOFLUID COUPLING				
	SIZE	VERSIONS			
Type		K	Z	J	H
SE M20	20	-	-	J 103	H 85
SE M24/35		30			
		30P			
SE M24/40	40P				ALL VERSIONS
	50				
	55				UP TO Ø 65
SE M30	55				FOR Ø75 Ø 80
	60				
	65				
SE M36	70P				ALL VERSIONS
	75P				
	80P				
	85P				
	90P				
	95P				

To pull off the ROTOFLUID coupling proceed as follows:

- 1) Remove tightening screw
- 2) Lock the bush (5) to the shaft end (3) with 2 securing screws. Tight the screw puller (2) in the shaft threaded hole keeping locked the rod (6) to avoid the motor shaft rotation.

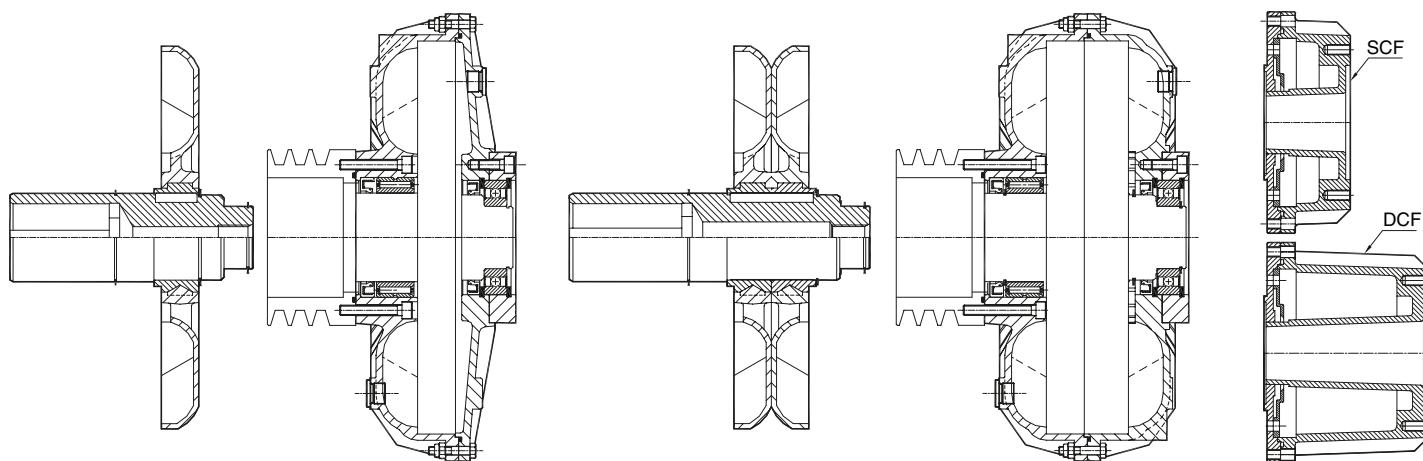
The mass moment of inertia values listed in the table below are referred to inner part, outer part and oil where:

- **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.

For couplings with delay fill chamber SCF/DCF, add their values to the correspondant of the outer part of the couplings.

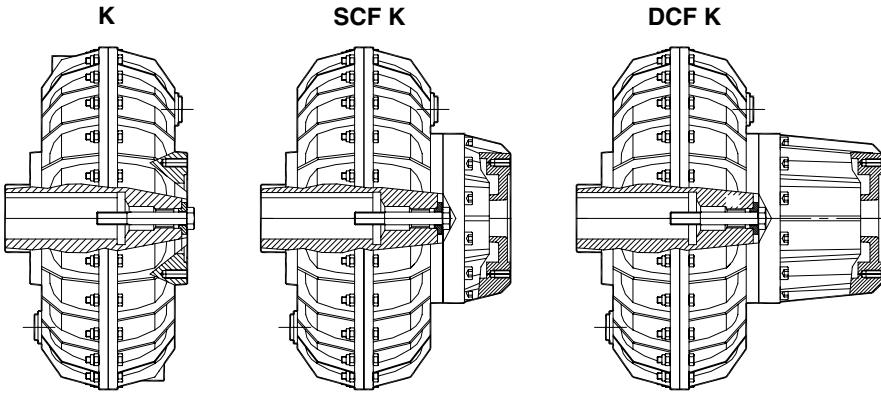
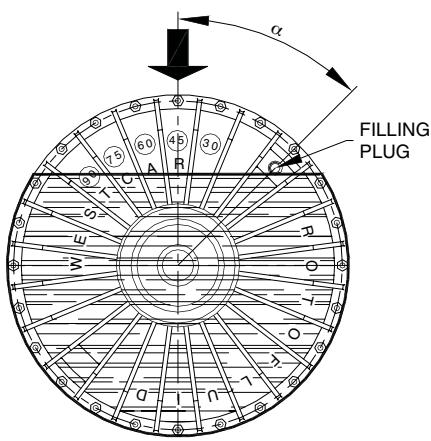
INNER PART	OUTER PART	INNER PART	OUTER PART	DELAY CHAMBER
SIZES: 10, 20, 30, 30P, 40P, 50, 60, 70P, 80P, 90P		SIZES: 55, 65, 75P, 85P, 95P		



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

ROTOFLUID COUPLING SIZE	ALFA VERSION		BETA VERSION						DELAY CHAMBER	
	Tipo K		Tipo Z, X		Tipo J		Tipo H		SCF	DCF
	J INNER kgm²	J OUTER kgm²	J kgm²	J kgm²						
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	0,678	2,386	0,740	2,386	0,740	2,473	0,740	2,551	0,160	0,200
75P	1,236	2,782	1,260	2,782	1,260	2,869	1,260	2,947	• 0,350	• 0,550
80P	2,389	7,276	2,499	7,276	2,499	7,393	--	--	0,350	0,550
85P	4,668	9,977	4,792	9,977	4,792	10,094	--	--	• 0,900	• 1,400
90P	8,372	23,200	--	--	--	--	--	--	1,200	1,600
95P	15,613	28,855	--	--	--	--	--	--	1,200	1,600
1200	54,000	260,000	--	--	--	--	--	--	--	--
1200D	104,000	320,000	--	--	--	--	--	--	--	--

• OVERSIZED CHAMBER SCFM / DCFM



### OIL REPLACEMENT

The oil in the coupling must be changed for the first time after 2000 working hours and subsequently after each 4000 working hours. To change the oil, proceed as follows:

- 1) Rotate the coupling to bring the filling plug to its highest position
- 2) Unscrew and remove the filling plug
- 3) Determine the correct filling level by rotating the coupling until the filling hole corresponds to the current oil level
- 4) Completely drain the oil in the coupling by bringing the filling hole to its lowest point
- 5) Rotate the coupling again to bring the filling hole to correspond to the filling level determined at point 3
- 6) Pour in the new oil until the oil filling level is reached.

The quantity and type of oil recommended is listed in Table 1.

### Results achieved by decreasing the oil quantity:

- Slower and more gradual startings
- Less absorption of starting current
- Better protection to the transmission elements in the event of overload
- Higher slip value at running.

### IMPORTANT:

An excessive decrease in the oil quantity can cause the following problems:

- The impossibility of rapidly accelerating the machine due to insufficient torque.
- The overheating of the coupling, with consequent damage to the oil seals.

### Results achieved by increasing the oil quantity:

- Faster startings
- Lower slip value at running
- Higher absorption of starting current during acceleration phases
- Greater strain on transmission elements.

### IMPORTANT:

An excessive oil quantity can cause the following problems:

- The overloading of the electric motor
- The cracking of the coupling housing due to the internal overpressure caused by the lack of internal space for sufficient oil expansion

### TYPES OF OIL RECOMMENDED FOR STANDARD WORKING TEMPERATURE

Working Temperature from -20°C to +180°C

- BP	ENERGOL HPL 22÷32
- CASTROL	HYSPIN AWS 22÷32
- ESSO	SPINESSO 22÷32
- MOBIL	VELOCITE OIL D
- Q8	VERDI 22÷32
- SHELL	MORLINA 22÷32

Tab. 1

COUPLING SIZE	OIL QUANTITY FOR STANDARD FILLING					
	K		SCF K		DCF K	
	$\alpha$	Liter	$\alpha$	Liter	$\alpha$	Liter
10	45°	0,55	--	--	--	--
20	45°	1,20	--	--	--	--
30	45°	2,39	55°	2,43	65°	2,42
30P	45°	4,05	55°	3,94	65°	3,78
40P	45°	4,07	55°	4,06	70°	4,09
50	45°	4,39	65°	4,37	75°	4,59
55	45°	7,19	60°	7,04	70°	7,17
60	45°	8,61	65°	8,23	75°	8,41
65	45°	13,48	60°	12,80	70°	12,77
70P	45°	18,05	65°	16,89	75°	17,64
•75P	45°	30,14	65°	29,36	75°	29,68
80P	45°	35,53	65°	35,21	75°	35,27
•85P	45°	60,64	65°	57,79	75°	56,28
90P	45°	91,92	60°	81,70	70°	90,62
95P	45°	153,3	60°	154,9	70°	146,7
1200	45°	200	--	--	--	--
1200D	45°	400	--	--	--	--

• OVERSIZED CHAMBERS SCFM, DCFM

For more information, consult WESTCAR.  
Do not exceed Quantity of oil indicated in Table 1.

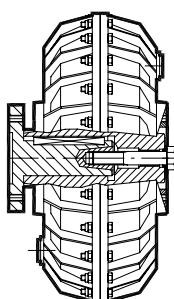


Fig. 1

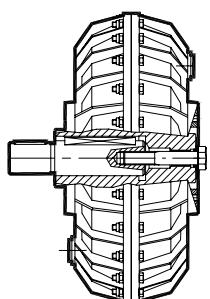


Fig. 2

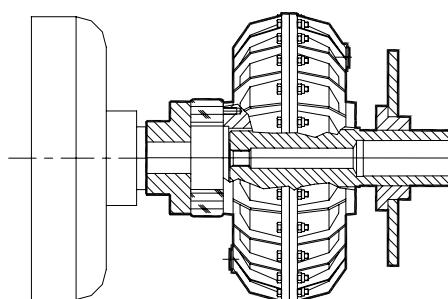


Fig. 3

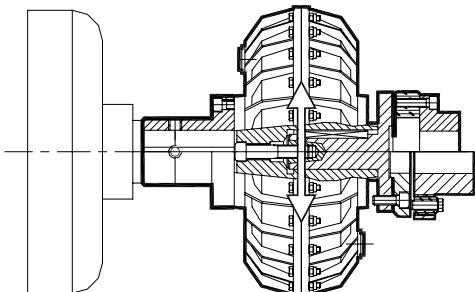


Fig. 4

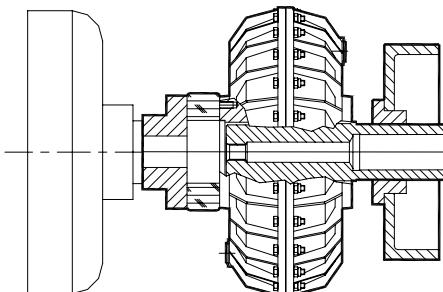


Fig. 5

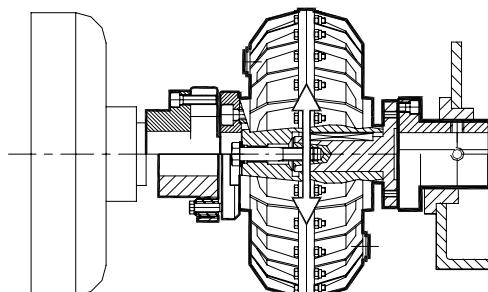


Fig. 6

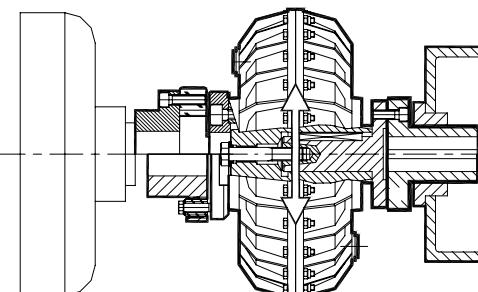


Fig. 7

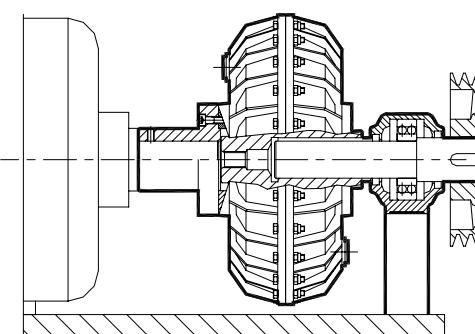


Fig. 8

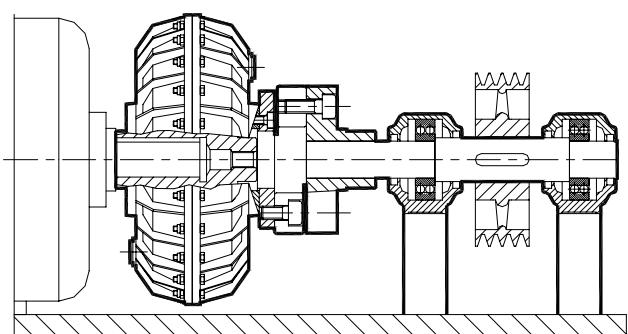


Fig. 9

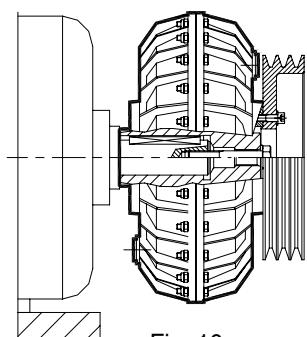


Fig. 10

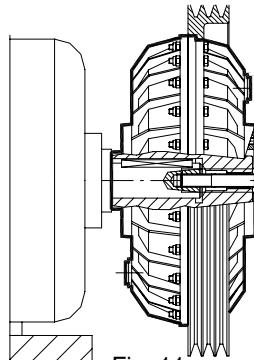


Fig. 11

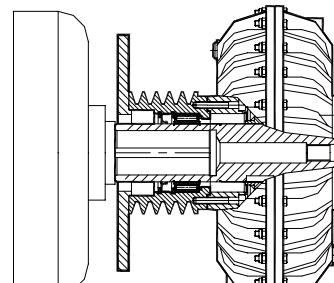


Fig. 12



#### BUILDING - CONSTRUCTION - MINING - BRICKS

- Tower Cranes
- Belt Conveyors
- Rotary kilns
- Crushers
- Rolling Mills
- Bucket elevators
- Rotating screens
- Rotary arrow
- Brick Moulders
- Kiln cars

#### TEXTILE

- Drum Tumblers
- Centrifuges
- Carding machines
- Industrial Washing machines
- Dryers

#### CHEMICAL - FOOD - CANNING

- Stirrers
- Dryers
- Decanters
- Rotating filters
- Soap cutters
- Calanders and gum mixers
- Palletizers
- Labelling Machine
- Bottling Plants
- Centrifugal separators

#### MECHANICAL ENGINEERING

- Twisting machines for rope and wire
- Rod iron straighteners
- Presses
- Profiling machines
- Drawbenches
- Cutters

#### AUTOMOTIVE INDUSTRY

- Balancing machines
- Gates open/closing drive

#### PAPER PROCESSING

- Winders
- Pulpers
- Mixers

#### TIMBER PROCESSING

- Drum barkers
- Hardboard presses
- Shredders

#### MARBLE PROCESSING

- Gantry cranes
- Multi-blade frames

#### ECOLOGY

- Blenders
- Sludge purification plant

#### CERAMICS

- Continuos and intermittent ball mills
- Mixers
- Presses

#### OTHERS

- Winches
- Windlasses
- Centrifugal and alternative compressors
- Suction and centrifugal fans
- Centrifugal pumps
- Fire pumps
- Elevators
- Cable cars
- Amusements park rides
- Haulage wagons in steelworks and mines
- Stack-up coating plants
- Sprayers
- Refineries
- Ski lift
- Sand mixers
- Fan & Blowers
- Refiners





**ROTOFLUID**



**ROTOFLEXI**



**ROTOFLUID CA**



**ROTOGEAR RE**



**ROTOMECA**



**ROTOGEAR AR**



**DRUM BRAKES BD**



**STEELFLEX**



**DRUM BRAKES CD**



**ROTOPIN**

**Discover more**



## Products

ON REQUEST,  
ATEX CERTIFIED PRODUCTS  
CAN BE SUPPLIED.



# WESTCAR WORLDWIDE



Albania	Finland	Peru
Australia	France	Poland
Belarus	Germany	Portugal
Belgium	Great Britain	Romania
Bosnia and Herzegovina	Greece	Russia
Brazil	Holland	Serbia
Canada	Iran	Singapore
Chile	Korea	Slovak Republic
China	Latvia	Slovenia
Colombia	Lithuania	South Africa
Croatia	Macedonia	Spain
Czech Republic	Morocco	Sweden
Denmark	New Zealand	Thailand
Egypt	Norway	Turkey
Estonia	Pakistan	USA

Distributor



**WESTCAR s.r.l.**

**Headquarter**

Via Monte Rosa, 14 - 20149 Milano (ITALY)  
Ph. +39 02 761 10 319 - Fax +39 02 761 10 041

**Production Plant**

Via Venezia, 31 - 21058 Solbiate Olona (VA - ITALY)  
[info@westcar.it](mailto:info@westcar.it) - [www.westcar.it](http://www.westcar.it)