TRANSFLUID

TRANSFLUID
trasmissioni industriali

KFBD - SKF
FLUID COUPLING FOR INTERNAL COMBUSTION ENGINES

drive with us

FLUID COUPLINGS FOR INTERNAL COMBUSTION ENGINES

Applying TRANSFLUID
Fluid Couplings in your Drive Line

Transfluid Fluid Couplings are used on all types of industrial equipment driven by internal combustion engines up to 2300 kW. By transmitting power through a fluid, they improve overall performance and protect both driving and driven machine.

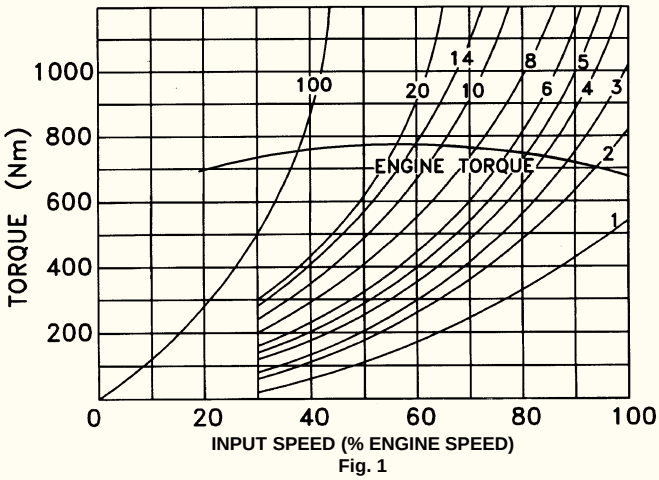


Fig. 1

Figure 1 shows the typical performance available from a Fluid Coupling when used with an internal combustion engine. The curved sloping lines represent the torque capacity of Fluid Coupling for various values of slip and input speeds. The relatively flat curve is the engine torque.

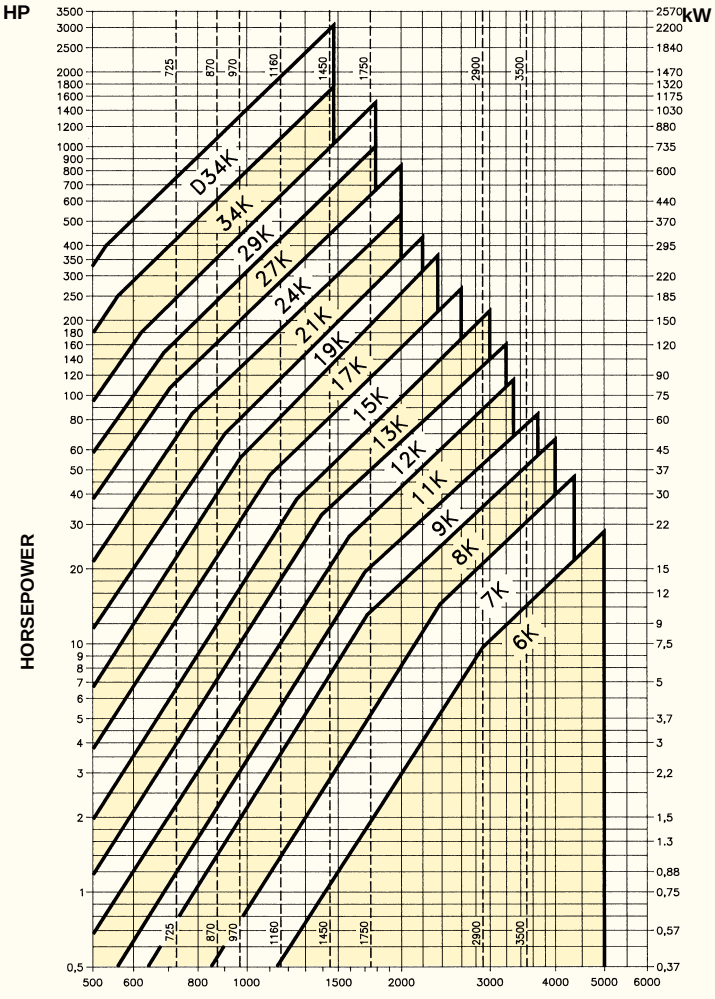
The points at which the curves intersect, indicate per cent of slip in the coupling output. Since slip represents loss of speed between input and output member and since Fluid Coupling transmits torque at a 1:1 ratio, output speed and output power can be readily calculated. Performance characteristics are easily determined by superimposing the engine torque curve on the torque capacity curve of the selected Coupling.

From the performance curve it can be noted that at 100% of governed speed, slip is 1.5% As the load on the Coupling output member increases, it demands more torque, forcing the engine to decelerate so that it can supply this extra torque. A slower input speed to the Coupling will result in a higher slip. If still greater loads are applied, the Coupling output member will eventually stall with the engine being pull down in speed until its torque curve intersects the 100% slip curve of the Coupling.

Note that 100% slip should not occur until the engine has developed peak torque. This is a highly desirable characteristics, since it permits the engine to deliver maximum torque without stalling and also permits rapid acceleration to normal load speeds. In addition to transmitting power smoothly and without shocks the Coupling has other advantages related to engine operation. Especially important is the fact that the engine can always be started under low load conditions.

Figure 2 shows the fluid couplings power capacity against input engine speed. It is a quick selection chart where slip values are not mentioned. For an application specific calculation ask Transfluid or local distributor.

GENERAL REFERENCE POWER CHART



INPUT SPEED RPM
THE CURVES SHOW LIMIT CAPACITY OF COUPLING
Fig. 2

**When you drive
through a Transfluid Coupling
you profit by these Basic Benefits**

1

Frees engine during heavy starts
During heavy starts and sudden running load increases, engine stalling is prevented. The Fluid Coupling simply “slips” while the engine smoothly picks up the load.

2

Provides cushioned drive
Mechanical connection is eliminated; power and torque are transmitted entirely by the mass and velocity of the fluid. The result is a smooth, sustained flow of power without the shocks and strains which, with mechanical drives, reduce equipment life.

3

Prevents transmission of shock loads
Fluid Couplings protect both driving and driven equipment by smoothing out shock loads and preventing them from impacting the drive line.

4

Assures damping effect
Torsional vibrations from engine are drastically dampened by Fluid Couplings allowing longer life of entire transmission line.

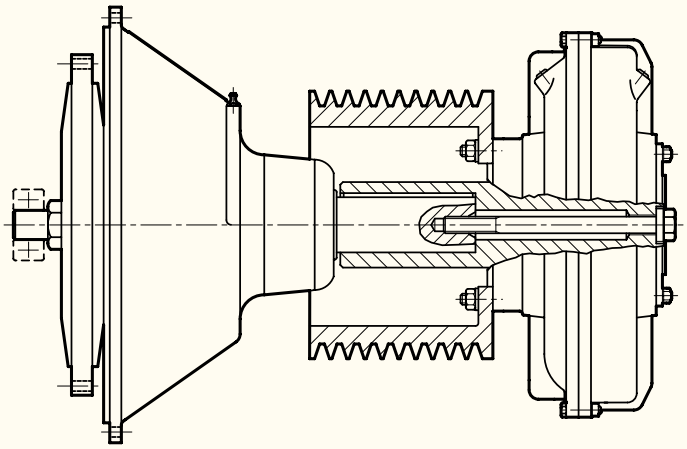
5

Transmits full input torque
The patented Transfluid Circuit design always delivers output torque equal to input torque. The engine can operate at the maximum torque-rpm, even when the driven equipment is stalled.

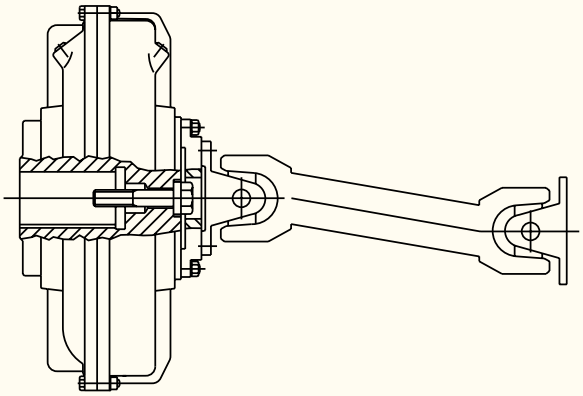
6

Improves load distribution on compounded drives
With Fluid Couplings, engines no longer “fight” each other when a common drive is driven in parallel. Each engine is free to seek its own operating speed, while the Fluid Couplings balance the load requirements at each point of operation.

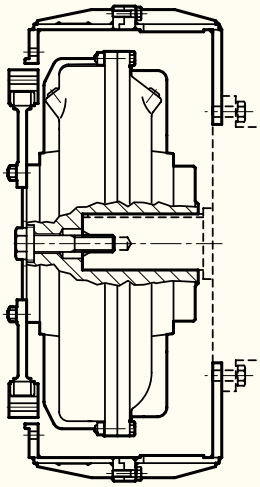
HFO or PTO CLUTCH with KSD



KRU

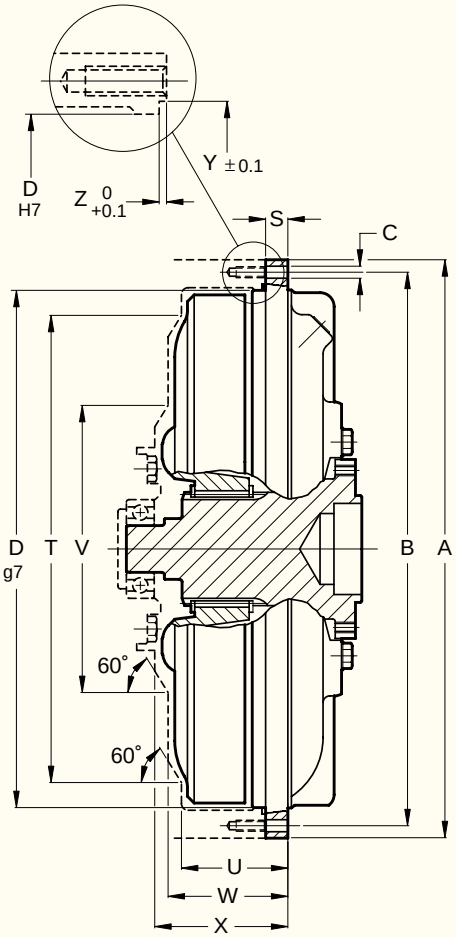


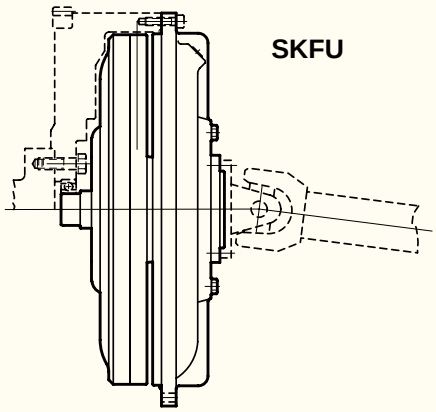
KRBD

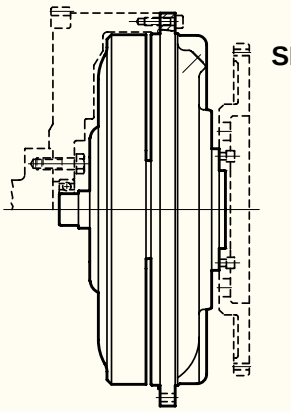


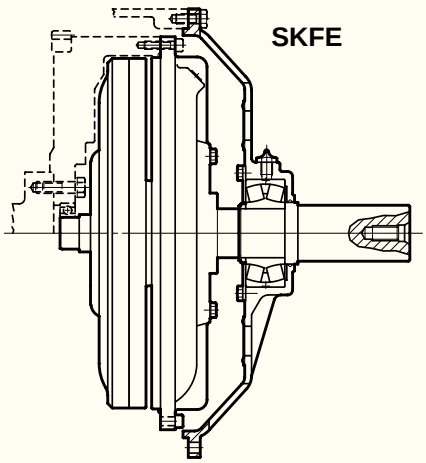
SKF SERIES
OIL TIGHT FLYWHEEL MOUNTED

SKF type installation requires specific design. Please contact our technical department for certified prints and instructions.







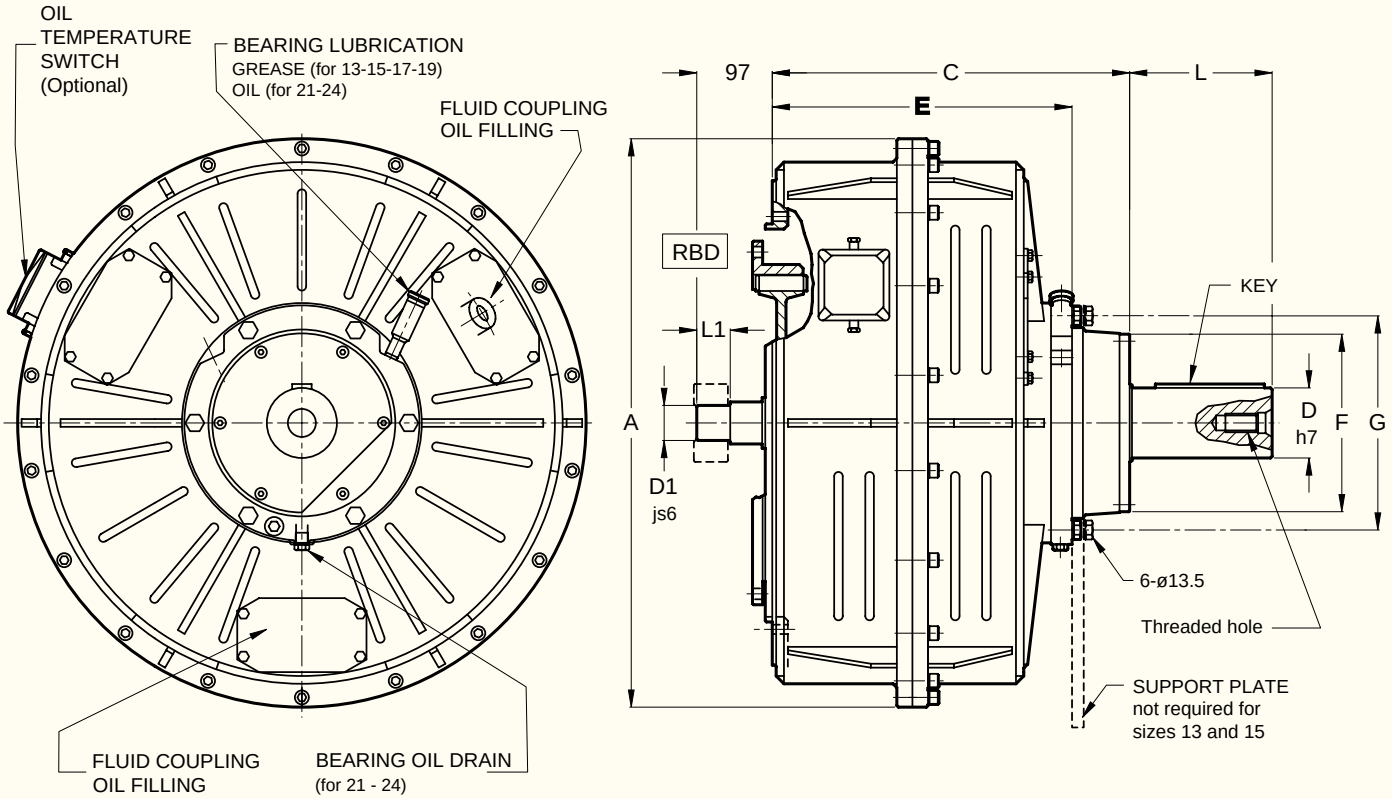


Dim. (mm)

Size

	A	B	C Nr.	C Ø	D	S	T	U	V	W	X	Y	Z
9	295	280	12	9	253	13	222	42	142	47	52,5	261	2.2
11	325	311	12	9	284	13	252	47	164	52.5	59.5	292	2.2
12	370	356	20	9	328	13	290	53	177	59	64	338	3
13	398	384	20	9	356	15	320	56	198	64	69	364	2.8
15	460	440	24	11	406	17	365	63	230	73	83	418	4.3
17	520	500	24	11	465	18	420	70	240	82	85	477	4.3

DIMENSIONS CAN BE CHANGED WITHOUT NOTICE



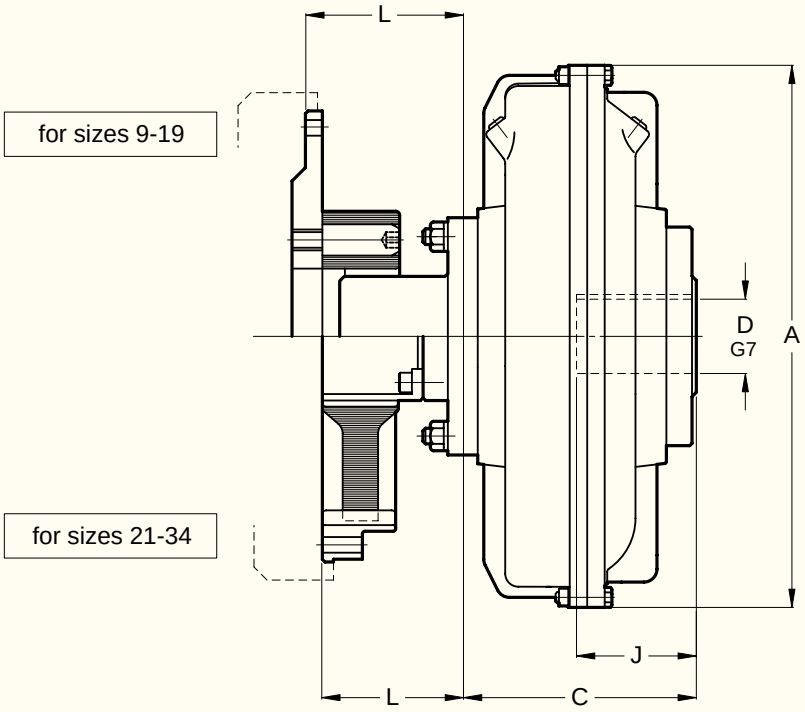
Dim. (mm)

Size

	A	C	D	D1	E	F	G	H nr	H Ø	L	L1	SAE flywheel size	SAE housing size	weight (kg)(1)	OIL (lt) max
13	451	231.3	57.15	30	-	-	-	-	-	139.7	33	$11^{1/2}$	3	62	5.2
15	545	290	63.5	30	-	-	-	-	-	165.1	33	$11^{1/2}$	3	85	7.65
17	662	389	85	30-35	304.5	190.5	225.5	6	13.5	170	38	$11^{1/2}$-14	3-2-1	176	11.7
19	662	389	85	30-35	304.5	190.5	225.5	6	13.5	170	38	$11^{1/2}$-14	3-2-1	185	14.2
21	730	462	90	45	385	245	275	6	15	180	43	14	1	313	19
24	820	462	90	45	385	245	275	6	15	180	43	14	1-0	355	28.4

FOR 13 KFBD: KEY ACCORDING TO USAS SQUARE B17.1.67; SHAFT THREADED HOLE 5/8" 11-UNC
FOR 15 KFBD: KEY ACCORDING TO USAS SQUARE B17.1.67; SHAFT THREDED HOLE 3/4" - 10-UNC.
FOR 17-19-21-24 KFBD: KEY ACCORDING TO DIN 6885; SHAFT THREADED HOLE DIN 332
(1) WEIGHT REFERS TO KFBD LARGER FLYWHEEL SIZE AND WITHOUT OIL
TEMPERATURE SWITCH IS AVAILABLE AS OPTIONAL. IT DETECTS THE SURROUNDING AIR TEMPERATURE RELATED TO THE FLUID COUPLING OIL TEMPERATURE. IT IS ADJUSTABLE ACCORDING TO AMBIENT TEMPERATURE (REFER TO TF5941-O).

DIMENSIONS CAN BE CHANGED WITHOUT NOTICE



Dim. (mm)

Size

	D max	J max	A	C	L	SAE flywheel size	SAE housing size	weight (kg)(1)	OIL (lt) max
9	42	110	295	145	93	$6^{1/2}$-$7^{1/2}$-8	5-4	16	1.95
11	□48	110	325	154		8-10	4-3	21	2.75
12			370		115	10-$11^{1/2}$	3	28	4.1
13	60	140	398	180	116	10-$11^{1/2}$	3	38	5.2
15	65	140	460	205	123	$11^{1/2}$-14	3-2-1	63	7.65
17	80	170	520	223	113	$11^{1/2}$-14	2-1	81	11.7
19			565			$11^{1/2}$-14	2-1	88	14.2
21	90-□100	170-210	620	260-295	109±5	14-16	1-0	114	19
24			710		125±6	14-16	1-0	139	28.4
27	120	210	780	297	128±6	14-16-18	-	208	42
29	135	240	860	326		14-16-18	-	261	55
34	150	265	1000	412	103±5	18-21	-	403	82.5

STANDARD KEYWAY AS PER DIN 6885/1
□ REDUCED DEPTH KEYWAY AS PER DIN 6885/2
(1) WEIGHT REFERS TO KRDA LARGER FLYWHEEL SIZE AND WITHOUT OIL

DIMENSIONS CAN BE CHANGED WITHOUT NOTIICE

PRODUCT	POWER RANGE KW	TYPE	IN LINE	SIDE LOAD	TYPICAL APPLICATIONS
SKFC -SKFU	15 - 260	F	•		farm and airport tractor, lift truck, dumper, loader, road roller, concrete mixer, fire truck, snow vehicle, road sweeping machine, centrifugal pump, gear pump vane pump, reciprocating pump, centrifugal and volumetric compressor, fan, blower, chiller, wood chipper, stone crusher, shredder, grider, mill, dredge pump, marine propeller, bow thruster, water jet, generating set drilling machine
SKFE		F		•	
KRBD - KRDA	15 - 1300	E+F	•		
KRU		F	•		
KFBD	45 - 600	E+F	•	•	
HFU	50 - 1000	C dis	•		
HFU + KR		C dis	•		
HFO		C dis		•	
HFO+KSD	50 - 700	C dis		•	
RBD	30 - 1000	E	•		
PF RBD	80 - 700	E	•	•	
KPTO	65 - 1000	E+F dis	•	•	
KPTB	65 - 1700	E+F dis	•	•	
KSL	220 - 3300	E+F dis	•		
MPD	100 - 1300	E+G	•	•	
REVERMATIC	40 - 60	P	1forw - 1rev		
RANGERMATIC	40 - 55	P	2forw - 2rev		

F	Fluid coupling	G	Gear drive
C	Clutch	P	Powershift trasmission
E	Elastic coupling	dis	Disconnectable

SALES NETWORK

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trasmissioni industriali

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