

# OKFX – friction-coated flange coupling from SKF



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Friction-coated OKFX couplings facilitate new creative solutions for the shaft line, while taking full advantage of time-saving SKF oil injection technology in areas where this was not previously possible.

The couplings are a milestone in the development of advanced technology, and have strengthened SKF Coupling Systems' position as the world leader in shaft connections based on the SKF oil injection method.

Thanks to the increased transmission capacity, it is possible to make substantial cost savings in the shaft line using OKFX couplings. Large flange couplings can be replaced. Costly reinforcement sleeves can be avoided. These are just two examples demonstrating that OKFX couplings are not merely clever connections with a quick payback.

The inner sleeve of each coupling is coated with carbides utilizing advanced plasma technology. This coating increases friction considerably and gives the OKFX couplings a number of advantages over other current techniques.

Compared with conventional OK flange couplings (OKF), OKFX couplings have an advanced flange design. Instead of having the flange on the outer sleeve, it is part of the inner sleeve. With this innovative design feature, the flanges are locked against each other during the mounting procedure, enabling less complex and more efficient mounting.

## Increased torque capacity means safer connections

Since the torque capacity is some 50% higher, these couplings can withstand heavy shock forces and fast rotation switches. It is therefore possible to take advantage of the time-saving oil injection method in transmissions where this was previously difficult, for instance in large heavily loaded shafts.

## A compact coupling that optimizes shaft design

OKFX couplings transfer higher torque, making it possible to optimize the design of shaft lines. This enables the use of smaller shaft diameter or coupling length, to transfer the required torque.

## Reduced coupling pressure creates opportunities for innovative solutions

Since the friction is higher, the surface pressure of the coupling can be reduced. This is particularly valuable when hollow shafts are connected. Reinforcement sleeves are therefore not necessary, which can result in significantly lower costs together with production savings.

### Benefits compared to conventional OKF couplings

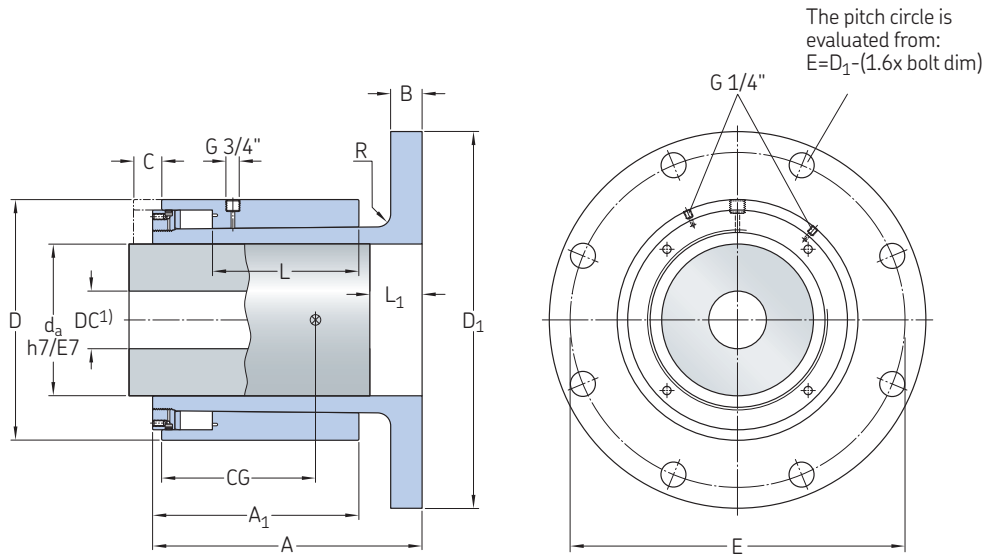
- 50% higher torque capacity
- Reduced drive shaft weight
- Smaller dimensions
- Less shaft pressure
- More space for bolt mounting

### Benefits compared to traditional flange couplings arrangements

- Savings in shaft design and preparation
- Lower cost of mounting and dismounting
- Shorter downtimes
- Ease of maintenance

# OKFX 150 – 420

The couplings can be delivered: Without flange holes, with prebored holes, or with the final dimension of holes.



Suitable Supergrip bolt size	Dimensions											Mass		Mass moment of inertia	Designation				
	$d_a$	D	$D_1$	A	$A_1$	B	R	L	$L_1$ max.	CG	C	kg	$M_t$ max.			kgm <sup>2</sup>	–		
	mm															kg	kNm	kgm <sup>2</sup>	–
–	150	260	417	316	253	30	12	195	43	189	26,9	97	132	1,5	OKFX 150				
–	160	270	427	326	259	32	13	200	46	194	28,5	105	160	1,7	OKFX 160				
–	170	285	442	341	266	34	14	205	49	203	29,6	120	192	2,1	OKFX 170				
–	180	300	457	350	276	36	14	210	52	206	29,6	136	227	2,6	OKFX 180				
–	190	310	467	376	299	38	15	230	55	221	33	151	267	3,1	OKFX 190				
–	200	320	477	387	306	40	16	235	58	228	34,9	162	312	3,6	OKFX 200				
–	210	335	492	401	312	42	17	240	61	235	36	181	361	4,3	OKFX 210				
–	220	355	512	420	327	44	18	250	64	244	40,6	215	415	5,6	OKFX 220				
–	230	365	522	431	335	46	18	255	67	257	42,7	222	474	6,1	OKFX 230				
–	240	380	537	445	345	48	19	265	70	258	43,3	252	538	7,5	OKFX 240				
<b>OKBS 40</b>	250	390	547	456	352	50	20	270	73	263	45,5	264	608	8,2	OKFX 250				
	260	400	557	477	370	52	21	285	76	277	48,2	289	684	9,6	OKFX 260				
	270	425	582	792	379	54	22	295	79	281	46,6	337	766	12,1	OKFX 270				
	280	435	592	512	399	56	22	305	82	288	51,3	384	854	14,7	OKFX 280				
	290	445	602	526	410	58	23	315	85	294	52	417	949	16,9	OKFX 290				
	300	460	617	536	417	60	24	320	88	302	54,2	439	1 050	18,8	OKFX 300				
<b>OKBS 50</b>	310	470	657	552	424	62	25	325	91	302	56,5	439	1 160	20,7	OKFX 310				
	320	480	667	577	446	64	26	345	94	327	57,6	520	1 280	25,3	OKFX 320				
	330	495	682	588	453	66	26	350	97	335	59,8	546	1 400	28	OKFX 330				
	340	530	717	605	466	68	27	360	100	348	63,5	645	1 530	36,4	OKFX 340				
	350	540	727	617	475	70	28	365	103	351	67	667	1 670	38,8	OKFX 350				
	360	550	737	634	493	72	29	375	106	360	68,9	702	1 820	42,5	OKFX 360				
<b>OKBS 60</b>	370	565	802	643	499	74	30	380	109	376	70	783	1 970	52,9	OKFX 370				
	380	575	812	659	511	76	30	390	112	384	72	816	2 140	56,9	OKFX 380				
	390	585	822	671	519	78	31	395	115	391	74,6	848	2 310	61,3	OKFX 390				
	400	600	837	683	529	80	32	405	118	398	75	905	2 490	68,5	OKFX 400				
	410	610	847	714	551	82	33	425	121	414	77,3	960	2 680	75	OKFX 410				
	420	635	872	730	561	84	34	430	124	421	82,4	1 080	2 890	89,6	OKFX 420				

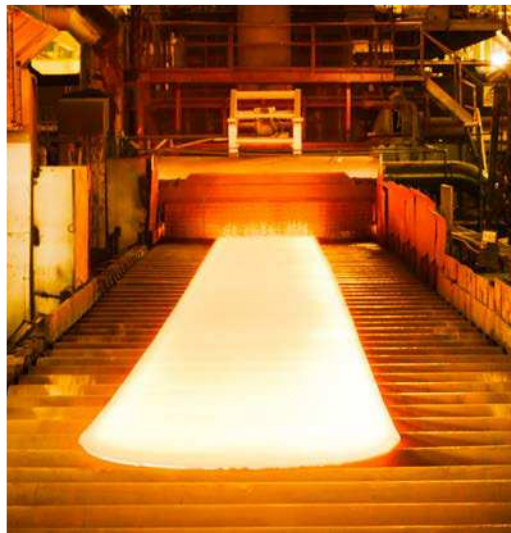
<sup>1)</sup> OKFX standard design is based on DC = 40% of  $d_a$

## Friction-coated flange couplings

## OKFX 430 – 600

Suitable Supergrip bolt size	Dimensions											Mass		Mass moment of inertia	Designation
	$d_a$	D	$D_1$	A	$A_1$	B	R	L	$L_1$ max.	CG	C		$M_t$ max.		
	mm											kg	kNm	kgm <sup>2</sup>	–
<b>OKBS 70</b>	430	645	918	751	578	86	34	445	127	440	83,7	1161	3100	102,9	<b>OKFX 430</b>
	440	665	938	758	582	88	35	450	130	442	82,6	1251	3320	116,7	<b>OKFX 440</b>
	450	680	953	768	588	90	36	455	133	448	83,8	1319	3550	128,1	<b>OKFX 450</b>
	460	690	963	779	596	92	37	460	136	454	86,4	1362	3790	136,5	<b>OKFX 460</b>
	470	700	973	795	608	94	38	470	139	464	88,4	1415	4040	146,1	<b>OKFX 470</b>
	480	725	998	808	617	96	38	475	142	469	92,3	1564	4310	170,2	<b>OKFX 480</b>
	490	735	1008	828	634	98	39	490	145	480	94,2	1630	4580	182,5	<b>OKFX 490</b>
	500	750	1023	837	640	100	40	495	148	485	95,5	1710	4870	198,7	<b>OKFX 500</b>
<b>OKBS 80</b>	510	760	1071	867	662	102	41	515	151	508	98	1835	5160	225,8	<b>OKFX 510</b>
	520	770	1081	889	679	104	42	530	154	524	99,4	1939	5470	247,7	<b>OKFX 520</b>
	530	785	1096	898	685	106	42	535	157	525	100,2	2003	5790	261,9	<b>OKFX 530</b>
	540	810	1121	916	699	108	43	545	160	532	104,4	2204	6130	301,7	<b>OKFX 540</b>
	550	820	1131	935	715	110	44	560	163	543	105,7	2284	6470	320,7	<b>OKFX 550</b>
	560	835	1146	941	717	112	45	560	166	546	107,6	2375	6830	344,9	<b>OKFX 560</b>
	570	845	1156	962	734	114	46	575	169	558	109,1	2463	7210	366,4	<b>OKFX 570</b>
<b>OKBS 90</b>	580	855	1202	985	750	116	46	590	172	578	110,5	2607	7590	407,7	<b>OKFX 580</b>
	590	870	1217	995	757	118	47	595	175	586	111,6	2736	7990	444,9	<b>OKFX 590</b>
	600	880	1227	1010	769	120	48	605	178	592	113,7	2798	8400	462,3	<b>OKFX 600</b>

OKFX – friction-coated flange coupling from SKF for optimized shaft design





SKF Coupling Systems AB was established in the early 1940s when SKF's Chief Engineer, Erland Bratt, invented the SKF oil injection method. As a result of continuous development, SKF is currently a world leader in selected market niches.

Our business concept is to develop, produce and supply products based on the SKF oil injection method. These products significantly reduce downtime and decrease maintenance costs of the capital intensive equipment in which they are used.

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PUB CS/P2 18212 EN · January 2019