



STAREX® COUPLINGS

STAREX® COUPLINGS



CONTENT

Product description / Order code	169
Dimensions	170
Bore codes / Basic programme	171
Starex® FL-PA - flexible flange coupling	173

STAREX® FLEXIBLE COUPLINGS

- Double cardanic curved tooth gear coupling
- Application in mechanical engineering and hydraulics
- Compensation of misalignment of shaft axial-radial-angular
- Axially pluggable - simple mounting
- Hub material: steel
- Sleeve material: polyamide
- Finish bore with keyway, cone and toothing
- Basic programme available from stock, please see page 172



Order code STAREX® couplings			
Coupling type	Size	Bore	Bore
STAREX®	MB 38	Ø 38	N/2

STAREX® FL-PA FLEXIBLE FLANGE COUPLINGS

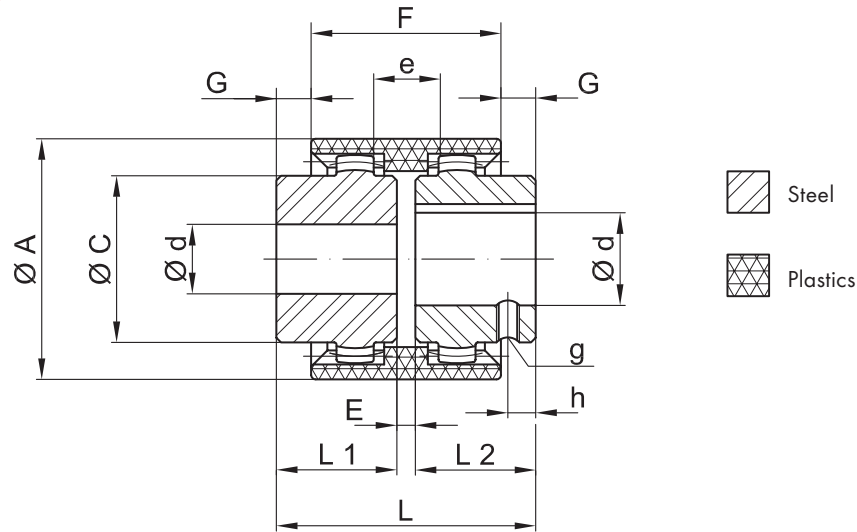
- Torsionally rigid, positive coupling for diesel engine drives of hydraulic pumps
- Short installation lengths
- Simple plug-in installation of hub and flange without aligning tools
- Maintenance free due to combination of materials plastics / steel
- High mechanical stability and temperature resistance up to +130°C due to fibre-glass reinforced polyamide flange
- For all hydrostatic drive of construction machines, harvesters and forest machineries



Order code STAREX® FL-PA couplings			
Coupling type	Size	Hub	Bore
STAREX® FL-PA	7 1/2"	48	SAE 16/32 x15Z

STAREX® FLEXIBLE COUPLINGS

DIMENSIONS



STAREX® type	Pre bore \varnothing [mm]	Finish bore ¹⁾ [mm]		Dimensions [mm]										Extended hubs L1+ L2 [mm]	Weight ²⁾ [kg]
				$\varnothing A$	$\varnothing C$	L	L1+ L2	E	G	F	g	h	e		
		min	max												
MB 14	-	6	14	40	25	50	23	4	6.5	37	M5	6	10	30	0.18
MB 24	4	10	24	52	36	56	26	4	7.5	41	M5	6	14	50	0.32
MB 28	6	12	28	66	43	84	40	4	19	46	M8	10	13	60	0.75
MB 32	8	14	32	76	50	84	40	4	18	48	M8	10	13	60	0.95
MB 38	10	18	38	83	58	84	40	4	18	48	M8	10	13	80	1.25
MB 42	-	20	42	92	65	88	42	4	19	50	M8	10	13	110	1.50
MB 48	-	20	48	100	68	104	50	4	27	50	M8	10	13	110	1.80
MB 65	-	25	65	140	96	144	55	4	36	72	M10	20	16	70/140	4.20
MB 80	-	30	80	175	124	186	90	6	46.5	93	M10	20	20	-	11.50

¹⁾ Finish bores acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1-JS99

²⁾ Weights refer to max. $\varnothing d$ without keyway.

When mounting the coupling, dimension "E" must be set exactly.

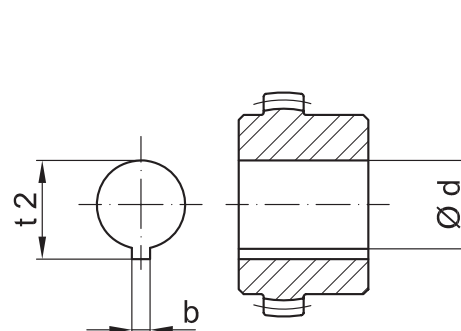
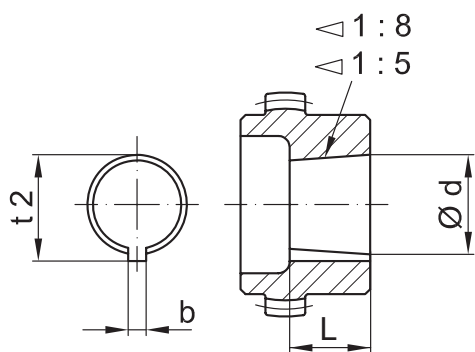
The stability of the coupling will be increased by careful alignment of the shafts.

TORQUE / MISALIGNMENT VALUES

STAREX® type	Torque [Nm]		Max. speed [1/min]	Max. misalignments		
	Nenn T_{KN}	max. $T_{Kmax.}$		Axial [mm]	Radial [mm]	Angular [°]
MB 14	10	20	14000	± 1	± 0.3	± 1° per hub
MB 24	21	42	10500		± 0.4	
MB 28	45	90	8500		± 0.4	
MB 32	60	120	7500		± 0.4	
MB 38	81	162	6700		± 0.4	
MB 42	100	200	6000		± 0.4	
MB 48	142	285	5500		± 0.4	
MB 65	380	760	4000		± 0.6	
MB 80	700	1400	3100		± 0.7	

Assembly instruction can be found in the download section of our webpage: www.hbe-hydraulics.com

BORE CODES



CONICAL (TAPER) BORES

Code	Bore details taper 1:8 [mm]			
	Ø d + 0.05	b + 0.05	t2 + 0.1	L
... N/1	9.7	2.4	10.7	16.5
... N/1c	11.6	3	12.9	16.5
... N/1e	13	2.4	13.8	21
... N/1d	14	3	15.5	17.5
... N/1b	14.3	3.2	15.7	19.5
... N/2	17.2	3.2	18.3	24
... N/2a	17.2	4	19.0	24
... N/2b	17.2	3	18.4	24
... N/3	22	4	23.5	28
... N/4	25.4	4.78	27.8	36
... N/4b	25.4	5	28.2	36
... N/4a	27	4.78	28.8	32.5
... N/4g	28.45	6	29.3	38.5
... N/5	33	6.35	35.5	44
... N/5a	33	7	35.5	44
... N/6	43.05	7.95	46.5	51
... N/6a	41.15	8	44.2	42.5

Code	Bore details taper 1:5 [mm]			
	Ø d + 0.05	JS9	t2 + 0.1	L
... A 10	9.85	2	10.85	11.5
... B 17	16.85	3	18.65	18.5
... C 20	19.85	4	22.05	21.5
... Cs 22	21.95	3	23.75	21.5
... D 25	24.85	5	27.75	26.5
... E 30	29.85	6	32.45	31.5
... F 35	34.85	6	37.45	36.5
... G 40	39.85	6	42.45	41.5

INCH BORES

Code	Metric [mm]			Inch	
	Ø d	b + 0.05	t2 + 0.1	Ø d	b
DNB	11.11 M7	2.4	12.5	7/16	3/32
V	11.11 + 0.03	3.2	12.6	7/16	1/8
Ta	12.7 + 0.03	3.2	14.3	1/2	1/8
E	15.87 + 0.03	3.2	17.5	5/8	1/8
Ed	15.87 + 0.03	4.75	18.1	5/8	3/16
ES	15.88 + 0.03	4.0	17.7	5/8	5/32
Ad	19.02 + 0.03	3.2	20.7	3/4	1/8
A	19.05 + 0.03	4.78	21.3	3/4	3/16
Gs	22.22 + 0.03	4.78	24.4	7/8	3/16
G	22.22 + 0.03	4.75	24.7	7/8	3/16
F	22.22 + 0.03	6.35	25.2	7/8	1/4
B	25.37 + 0.03	4.78	27.8	1	3/16
Bs	25.38 + 0.03	6.37	28.3	1	1/4
HS	25.4 + 0.03	6.35	28.7	1	1/4
SB	28.58 + 0.03	6.35	31.5	1 1/8	1/4
Sd	28.58 + 0.03	7.93	32.1	1 1/8	5/16
Js	31.75 + 0.03	6.35	34.6	1 1/4	1/4
J	31.75 + 0.03	7.93	34.4	1 1/4	5/16
K	31.75 M7	7.93	35.5	1 1/4	5/16
KS	31.75 + 0.03	7.93	36.6	1 1/4	5/16
M	34.92 + 0.03	7.93	38.6	1 3/8	5/16
CB	36.5 + 0.03	9.55	38.6	1 7/16	3/8
C	38.07 + 0.03	9.55	42.5	1 1/2	3/8
N	41.25 + 0.03	9.55	45.6	1 5/8	3/8
L	44.45 K7	11.11	49.4	1 3/4	7/16
NM	47.625 + 0.03	12.73	53.5	1 7/8	1/2
DS	50.77 + 0.03	12.73	56.4	2	1/2
P	53.95 + 0.03	12.73	59.6	2 1/8	1/2
U	57.1 + 0.03	12.73	62.9	2 1/4	1/2
UB	60.3 + 0.03	15.87	67.6	2 3/8	5/8
W	69.85 M7	15.875	77.3	2 3/4	5/8
WA	73.0 + 0.03	19.05	82.9	2 7/8	3/4
WD	85.725 + 0.03	22.225	95.8	3 3/8	7/8
WE	88.9 + 0.03	22.225	98.6	3 5/8	7/8
WF	92.075 M7	22.225	101.9	3 5/8	7/8

STAREX® FLEXIBLE COUPLINGS

BASIC PROGRAMME METRICAL BORES

STAREX® type	Finish bores acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 [mm]																												
	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	80
MB 14	•	•	•	•	•																								
					■																								
MB 24		•		•	•	•	•	•	•	•	•	•																	
					■				■			■																	
MB 28				•	•	•		•	•	•	•	•	•	•															
MB 32		•	•			•	•	•	•		•																		
MB 38												•	•	•	•	•	•	•											
																		■											
MB 42											•	•	•	•	•	•	•	•	•	•									
																				■									
MB 48													•	•	•	•	•	•	•	•	•	•							
																				■		■							
MB 65																			•	•	•	•	•	•	•	•	•		
MB 80																								•	•	•	•	•	•

• Standard length

■ Standard extended

Basic programme available from stock at short notice

BASIC PROGRAMME INCH BORES

STAREX® type	Inch bores					
	Ed	A	G	F	Bs	K
MB 14	•					
MB 24		•	•	•		
MB 28		•	•	•	•	
MB 32						
MB 38						•
MB 42		•	•	•	•	•

BASIC PROGRAMME CONICAL (TAPER) BORES

STAREX® type	Taper 1:5		Taper 1:8				
	A10	B17	N/1	N1d	N/2	N/2α	N/3
MB 14	•		•				
MB 24	•	•	•	•	•	•	
MB 28	•	•	•	•	•	•	
MB 32						•	
MB 38		•			•	•	•
MB 42		•					•

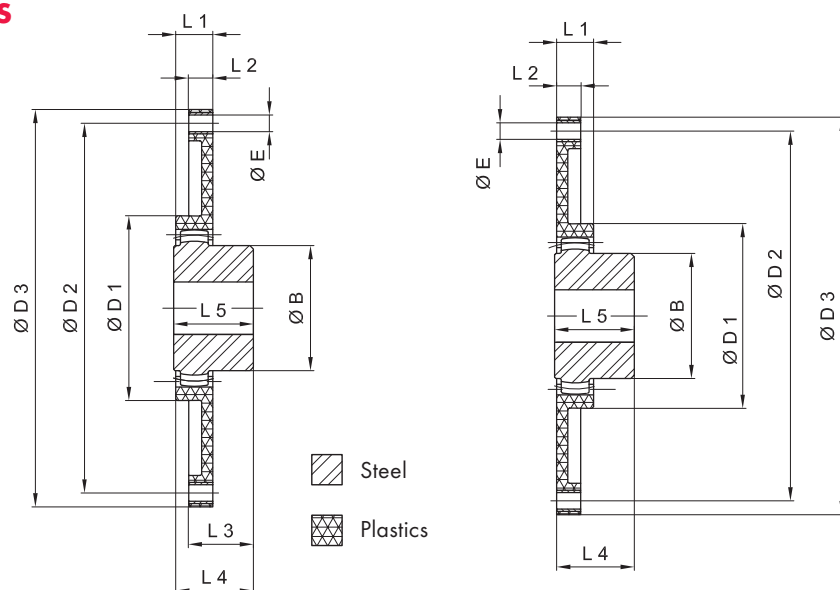
AVAILABLE INTERNAL TOOTHINGS

SAE-Profile	Profile DIN 5480	Profile DIN 5482	Profile DIN 5462
8/16 x 13Z*	N20 x 1.25	A17 x 14	B8 x 32 x 36*
8/16 x 15Z	N25 x 1.5	A22 x 19	
8/16 x 17Z	N30 x 2	A25 x 22	
12/24 x 14Z*	N35 x 2*	A28 x 25	
12/24 x 17Z*	N40 x 2	A30 x 27	
16/32 x 9Z*	N45 x 2	A35 x 31	
16/32 x 11Z	N50 x 2*	A40 x 36	
16/32 x 13Z*	N55 x 2	A45 x 41*	
16/32 x 15Z*	N60 x 2	A48 x 44	
16/32 x 21Z	N70 x 3	A50 x 45	
16/32 x 23Z	N80 x 3	A58 x 53	
16/32 x 27Z	N90 x 3		

*Basic programme

FLEXIBLE FLANGE COUPLINGS STAREX® FL-PA

DIMENSIONS



Assembly diagram 1
(short version)

Assembly diagram 2
(long version)

SAE FLANGES

FL-PA type	Dimensions [mm]			Number z	Torque [Nm]	
	Ø D2	Ø D3	Ø E		T _{KN}	T _{Kmax}
6 1/2"-48	200.02	215.90	9	6	237	599
7 1/2"-48	222.25	241.30	9	8	237	599
8"-48	244.47	263.52	11	6	237	599
10"-48	295.27	314.32	11	8	237	599
10"-65	295.27	314.32	11	8	644	1605
11 1/2"-65	333.37	352.42	11	8	644	1605
11 1/2"-80	333.37	352.42	11	8	1198	3006

METRIC FLANGES

FL-PA type	Dimensions [mm]			Number z
	Ø D2	Ø D3	Ø E	
96-48	50	96	9	4
125-48	100	125	9	3
135-48	100	135	9	3
130-48	105	130	11	4
150-48	130	150	9	5
152-48	122	152	12	3
152-48	125	152	12	3

HUB DIMENSIONS FOR SAE FLANGES

STAREX® type	Finish bore [mm]		Dimensions [mm]							Extended hub L5 [mm]	Nominal size acc. to SAE (d)				
	min.	max.	Ø B	Ø D1	L5	L3	L4	L1	L2		6 1/2"	7 1/2"	8"	10"	11 1/2"
MB 42	20	42	65	100	42	33	40	20	13	110	x	x	x	x	-
MB 48	20	48	68	100	50	41	48	20	13	110	x	x	x	x	-
MB 65	25	65	96	132	55	45	52	27	21	70/140	-	-	-	x	-
MB 65	25	65	96	170	55	45	52	31	21	70/140	-	-	-	-	x
MB 80	25	80	124	170	90	78	87	30	21	-	-	-	-	-	x

Corresponding pump mounting plates can be found in chapter "flange couplings", page 179

Online catalogue



epaper.hbe-hydraulics.com/en

HBE hydraulic
components

HBE GmbH
Hönnestraße 47
58809 Neuenrade /Germany

Phone +49 (0) 23 94 / 616-0
Fax +49 (0) 23 94 / 616-25
info@hbe-hydraulics.com
www.hbe-hydraulics.com



e.holding
FLUID TECHNOLOGY GROUP
www.e-holding.de

distributed by