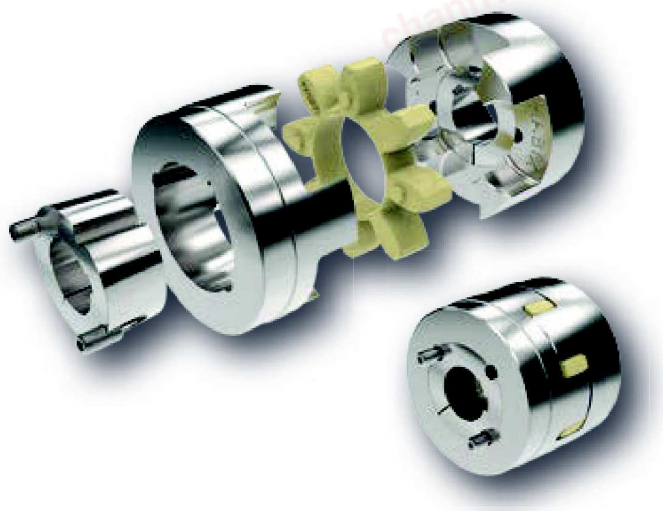
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HABIX®

TYPE HWN

The flexible Habix® coupling, type HWN, is a distorsion-free jaw coupling with flexible elements for the torsionally flexible connection of shafts. The advantage of the all-round-machined Habix® couplings is the precision of the operating characteristic as well as the increased durability. Habix® couplings are distorsion-free up to the breaking load of the cast iron transmission cam and insure a maximum of operational safety. The flexible element is available in white color with a hardness of 92 Shore A and in red color with a hardness of 98 Shore A. It is resistant against wear as well as against oil, ozone and ageing. The flexible of the couplings absorbes efficiently shockloads, torsional vibrations and noises. The flexible element of the couplings has been designed to compensate radial, axial and angular movements between the coupling halves. By the fixed position of the flexible element its deformability in axial direction is free and no harmful axial forces may disturb the machine bearing even with changing torques. The flexible element of the Habix® coup-ling allows a permanent thermal load up to 80 °C. Even low temperatures up to –20 °C are allowed. The flexible Habix® coupling can easily be connected and does not require a high accuracy of the shaft alignment.



TYPE

- Standard coupling HWN
- Taper bush type HWT
- Combined type standard / taper HWNT
- Components can be combined as needed

TYPE HWT – WITH TAPER BUSH

The Habix® coupling type HWT joins the advantages of the flexible couplings with the advantages of the taper bush system: fast and easy installation for a torsionally flexible connection between shafts and compensation of shaft misalignments. The HWT types with the taper bush system have the advantage that there is a backlash-free and at the same time axial fixing of the shaft even at bigger shaft tolerances. In addition the slide fit allows the axial alignment of the coupling. The exchange of the flexible element is possible by simply sliding the coupling halves in axial direction without removing the driving or driven machine. The field of application of the Habix® coupling is all the engineering industry wherever a safe connection between motor and driven machine is required.

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TECHNICAL DATA

TYPE HWN/HWT

Size	Max. rotation speed rpm	Torque Nm			Torque Nm		
		nominal T_{KN}	max. T_{kmax}	changing T_{KW}	nominal T_{KN}	max. T_{kmax}	changing T_{KW}
		92° Shore A color white			98° Shore A color red		
19	19000	10	20	2.6	17	34	4.4
24	14000	35	70	9	60	120	16
28	11800	95	190	25	160	320	42
38	9500	190	380	49	325	650	85
42	8000	265	530	69	450	900	117
48	7100	310	620	81	525	1050	137
55	6300	410	820	105	685	1370	178
65	5600	625	1250	163	940	1880	245
75	4750	1280	2560	333	1920	3840	499
90	3750	2400	4800	624	3600	7200	936

> Torques for shaft fit with keyway

Size Δ	Max. shaft misalignment[2]		
	radial[1] ΔK_r / mm	axial[1] ΔK_a / mm	angular[1] ΔK_w / Grad
19	0.20	1.2	1.2
24	0.22	1.4	0.9
28	0.25	1.5	0.9
38	0.28	1.8	1.0
42	0.32	2.0	1.0
48	0.36	2.1	1.1
55	0.38	2.2	1.1
65	0.42	2.6	1.2
75	0.48	3.0	1.2
90	0.50	3.4	1.2

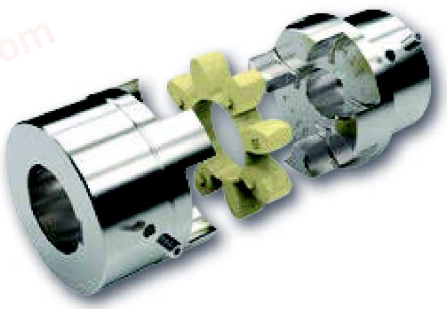
1) The values mentioned are valid for 1.500 rpm and may occur only separately. At multiple misalignments or higher speeds the values must be reduced (see page 7).

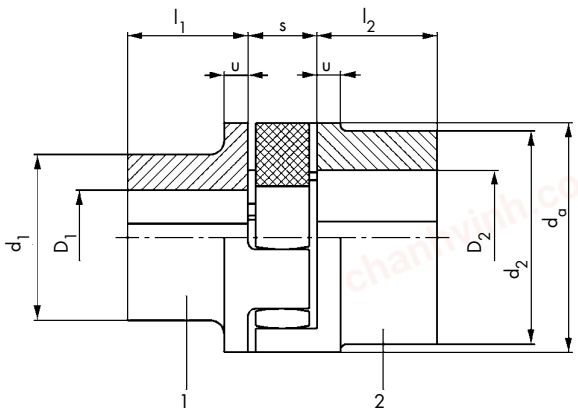
2) The values mentioned are valid for an ambient temperature of 30 °C. At higher temperatures the values must be reduced.

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TYPE HWN
WITH KEYWAY MOUNTING





Size	Part 1				Part 2				da	u	s
	D_1		d_1	l_1	D_2		d_2	l_2			
	Pre. mm	max. mm	mm	mm	Pre. mm	max. mm	mm	mm	mm	mm	mm
19	–	19	32	25	17	24	39.5	25	40	5	16
24	–	24	40	30	22	28	48	30	55	6	18
28	–	28	48	35	26	38	64.5	35	65	7	20
38	10	38	66	45	36	45	78	45	80	8	24
42	12	42	75	50	40	55	94	50	95	10	26
48	13	48	85	56	46	60	104	56	105	11	28
55	18	55	98	65	53	70	118	65	120	13	30
65	20	65	115	75	63	75	134	75	135	14	35
75	28	75	135	85	73	90	158	85	160	16	40
90	38	90	160	100	88	100	180	100	200	19	45

Size	Weight / kg		Moments of inertia kgm²	
	Part 1	Part 2	Part 1	Part 2
19	0.16	0.21	0.00003	0.00005
24	0.40	0.40	0.00011	0.00015
28	0.52	0.76	0.00024	0.00049
38	1.1	1.4	0.00087	0.0013
42	1.7	2.3	0.0018	0.0031
48	2.8	3.1	0.0031	0.0052
55	3.7	4.6	0.062	0.010
65	5.7	7.0	0.013	0.019
75	8.8	11	0.027	0.041
90	15	15	0.068	0.090

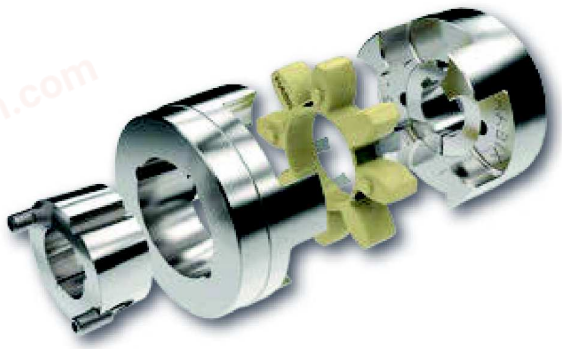
- Drill holes H7 with keyway in accordance with DIN 6885/1; tolerance zone JS9 and set screws on the keyway; weight and moments of inertia valid for medium bore diameters
- Coupling half materials:
  EN-GJL-250 (GG-25) in accordance with DIN EN 1561
- Possible combination:
  1/1
  1/2
  2/2
- Can also be combined with type HWT

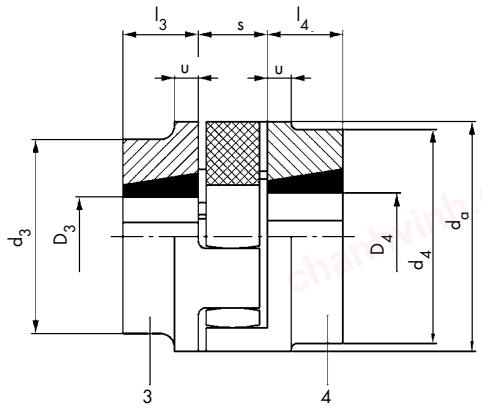
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TYPE HWT

FOR TAPER BUSH





Size	Part 3					Part 4					d_a	u	s
	D_3			d_3	l_3	D_4			d_4	l_4			
	min. mm	max. mm	Taper bush no.	mm	mm	min. mm	max. mm	Taper bush no.	mm	mm	mm	mm	mm
19	–	–	–	–	–	–	–	–	–	–	40	5	16
24	10	25	1008	54.5	22	10	25	1008	54.5	22	55	6	18
28	10	28	1108	64.5	22	10	28	1108	64.5	22	65	7	20
38	10	28	1108	78	22	10	28	1108	78	22	80	8	24
42	14	42	1610	94	25	14	42	1610	94	25	95	10	26
48	14	42	1615	104	38	14	42	1615	104	38	105	11	28
55	14	50	2012	118	32	14	50	2012	118	32	120	13	30
65	14	50	2012	126	32	16	60	2517	134	45	135	14	35
75	16	60	2517	158	45	25	75	3020	158	51	160	16	40
90	25	75	3020	160	51	35	90	3535	180	89	200	19	45

Size	Weight kg		Moments of inertia kgm^2	
	Part 3	Part 4	Part 3	Part 4
19	–	–	–	–
24	0.39	0.39	0.00017	0.00017
28	0.55	0.55	0.00032	0.00032
38	0.86	0.86	0.00074	0.00074
42	1.4	1.4	0.0017	0.0017
48	2.5	2.5	0.0037	0.0037
55	2.7	2.7	0.0054	0.0054
65	3.4	4.8	0.0082	0.0012
75	6.8	7.3	0.023	0.026
90	9.5	16	0.044	0.081

> Weight and moments of inertia valid for medium bore diameters inc. taper bushes

> Coupling half materials:
EN-GJL-250 (GG-25) in accordance with DIN EN 1561

> Possible combination:
3/3
3/4
4/4

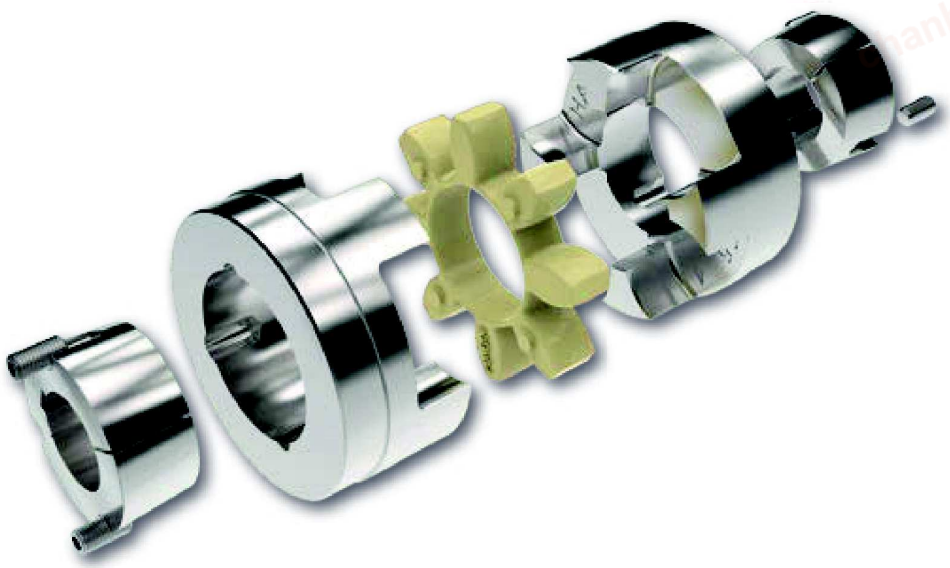
> Can also be combined with type HWN

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TAPER BUSHES
WITH KEYWAYS ACC. TO DIN 6885/1

TOLERANCE JS9



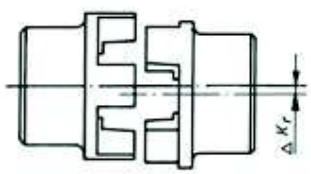
Taper bush no.	Bore ø of available taper bushes mm											
1008	10	11	12	14	16	18	19	20	22	24*	25*	
1108	10	11	12	14	16	18	19	20	22	24	25	28*
1610/ 1615	14	16	18	19	20	22	24	25	28	30	32	35
	38	40	42*									
2012	14	16	18	19	20	22	24	25	28	30	32	35
	38	40	42	45	48	50						
2517	16	18	19	20	22	24	25	28	30	32	35	38
	40	42	45	48	50	55	60					
3020	25	28	30	32	35	38	40	42	45	48	50	55
	60	65	70	75								
3535	35	38	40	42	45	48	50	55	60	65	70	75
	80	85	90									

* These bore holes are with flat keyway in accordance with DIN 6885/3.

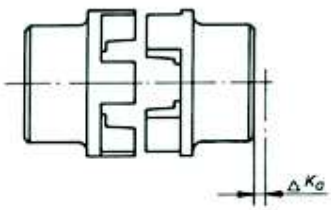
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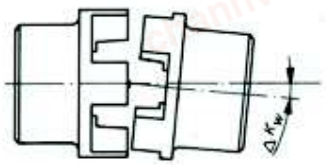
ALLOWABLE MISALIGNMENTS



Radial misalignment



Axial misalignment



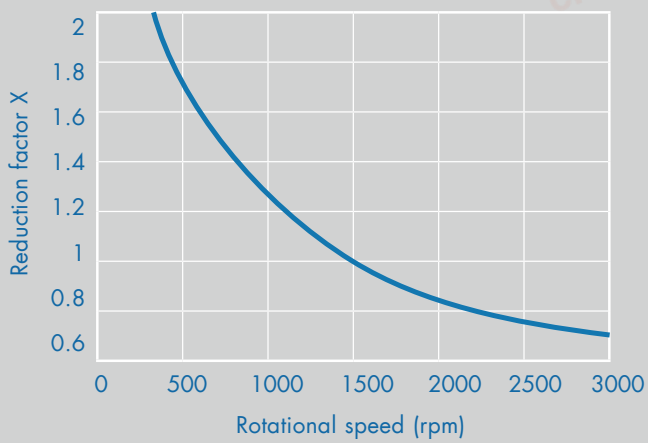
Angular misalignment

> Reduction of the allowable values of misalignment when the combination of misalignments occur or at other rotational speeds:

$$\frac{\Delta W_r}{\Delta K_r} + \frac{\Delta W_a}{\Delta K_a} + \frac{\Delta W_w}{\Delta K_w} \leq X$$

$\Delta K_{r/a/w}$ = allowable radial, axial or angular misalignment of the shafts resp. of the coupling halves

$\Delta W_{r/a/w}$ = measured radial, axial or angular misalignment of the shafts resp. of the coupling halves.



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