engineering cataloge 2008

HRC FLEXIBLE COUPLINGS

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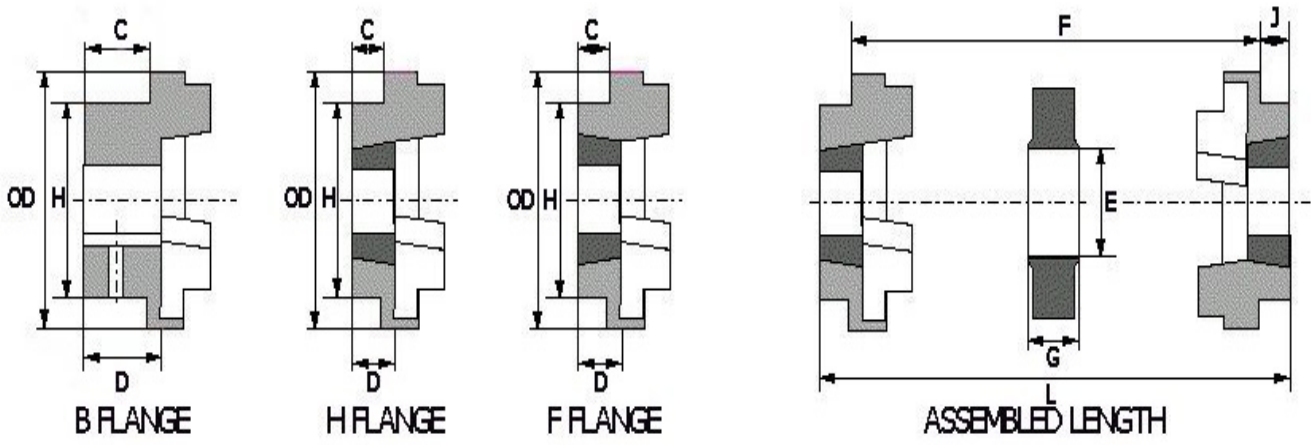
FLEXIBLE COUPLINGS
HRC TYPE

Hercus HRC Couplings are designed for general-purpose applications where the demand for a low cost, spacer type flexible coupling is required. Hercus HRC Couplings absorb shock loads, dampen small amplitude vibration and allow for incidental misalignment. Hercus HRC Couplings have integrally cast driving dogs to maintain a positive drive in the unlikely event of the flexible element being destroyed. With the addition of taper bushes Hercus HRC Couplings permit quick and easy assembly. Hercus HRC Couplings require no lubrication and are virtually maintenance free making them suitable for most environments. Hercus HRC finished bore with keyway.



DIMENSIONS

COMMON DIMENSIONS						TYPE F & H						TYPE B			
SIZE	OD	H	E	F	G	BUSH SIZE	MAX BORE		C	D	J	BORE DIA		C	D
							MM	INCHES				MAX	PILOT		
70	69	60	31	25	18	1008	25	1	20	23.5	29	32	10	20	25.8
90	85	70	32	30.5	22.5	1108	28	1.125	19.5	23.5	29	38	10	26	30
110	112	100	45	45	29	1610	42	1.625	18.5	26.5	38	55	10	37	45.3
130	130	105	50	54	36	1610	42	1.625	18	26.5	38	60	20	39	47.5
150	150	115	62	61	40	2012	50	2	23.5	33.5	42	70	28	46	60
180	180	125	77	74	49	2517	60	2.5	34.5	46.5	48	80	28	58	70
230	225	155	99	85.5	59.5	3020	75	3	39.5	52.5	55	100	45	77	90
280	275	206	119	105.5	74.5	3525	100	4	51	66.5	67	115	55	90	105.5

Dimensions in MM unless otherwise specified

ASSEMBLED DIMENSIONS AND SPECIFICATIONS

Dimensions in MM unless otherwise specified
All Hercus HRC Couplings have an angular misalignment capacity of up to 1 degree
Weight is for an FF, FH or HH coupling with mid range taper bush

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SIZE	ASSEMBLED LENGTH (L)			TORQUE Nm	MAX. MISALIGNMENT		KG
	FF, FH, HH	FB, HB	BB		PARALLEL	AXIAL	
70	65	65	65	70	0.3	+0.2	1
90	69.5	76	82.5	90	0.3	+0.5	1.17
110	82	100.5	119	110	0.3	+0.6	5
130	89	110	131	130	0.4	+0.8	5.46
150	107	129.5	152	150	0.4	+0.9	7.11
180	142	165.5	189	180	0.4	+1.1	16.6
230	164.5	202	239.5	230	0.5	+1.3	26
280	207.5	246.5	285.5	280	0.5	+1.7	50

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SELECTION CRITERIA

1) SERVICE FACTOR Determine appropriate service factor from table below.	**1) SERVICE FACTOR (EXAMPLE)** The appropriate service factor is 1.25
2) DESIGN POWER Multiply the running power of the driven machinery by the service factor. This gives the design power, which is used as a basis for the coupling selection.	**2) DESIGN POWER (EXAMPLE)** Design power 1.5 x 1.25 = 1.875 kW
3) COUPLING SIZE Refer to the power ratings table below and read across from the corresponding speed until a power greater than the design power is found. The size of the coupling is given at the head of the column.	**3) COUPLING SIZE (EXAMPLE)** Read across from 1440 RPM in the speed column of the power ratings table below, 4.75 kW is the first power to exceed the required 1.875 kW (design power). The size at the head of this column is 70.
4) BORE SIZE From the dimension table check that the required bore diameters can be accommodated.	**4) BORE SIZE (EXAMPLE)** The dimension table shows that both shaft diameters are within the bore range available.

The example shown above is based upon a requirement to transmit 1.5kw between a 1440-rpm electric motor and a dust extraction unit running at over 16 hours per day. Motor shaft is 24mm and extraction unit shaft is 25mm.

SERVICE FACTORS

	TYPE OF DRIVING UNIT					
	ELECTRIC MOTOR			INTERNAL COMBUSTION ENGINE		
	HOURS PER DAY			HOURS PER DAY		
DRIVEN MACHINE CLASS	UNDER 8	OVER 8 TO 16 INCLUSIVE	OVER 16	UNDER 8	OVER 8 TO 16 INCLUSIVE	OVER 16
UNIFORM^	1.00	1.12	1.25	1.25	1.40	1.60
MODERATE SHOCK*	1.60	1.80	2.00	2.00	2.24	2.50
HEAVY SHOCK*	2.5	2.80	3.12	3.12	3.55	4.00

*It is recommended that keys (with top clearance if in taper bushes) are fitted for applications where load fluctuations are expected.
^For centrifugal compressors multiply the service factor by an additional 1.15.

POWER RATINGS (kW)

For speeds below 100 RPM and intermediate speeds use nominal torque ratings.
Maximum coupling speeds are calculated using an allowable peripheral speed for the hub material.

SPEED RPM	**COUPLING SIZE**							
	70	**90**	**110**	**130**	**150**	**180**	**230**	**280**
100	0.33	0.84	1.68	3.30	6.28	9.95	20.90	33.00
200	0.66	1.68	3.35	6.60	12.60	19.90	41.90	65.00
400	1.32	3.36	6.70	13.20	25.10	39.80	83.80	132.00
600	1.98	5.03	10.10	19.80	37.70	59.70	126.00	198.00
720	2.37	6.03	12.10	23.80	45.20	71.60	151.00	238.00
800	2.65	6.70	13.40	26.40	50.30	79.60	168.00	264.00
960	3.17	8.04	16.10	31.70	60.30	95.50	201.00	317.00
1200	3.96	10.10	20.10	39.60	75.40	119.00	251.00	396.00
1440	4.75	12.10	24.10	47.50	90.50	143.00	302.00	475.00
1600	5.28	13.40	26.80	52.80	101.00	159.00	335.00	528.00
1800	5.94	15.10	30.20	59.40	113.00	179.00	377.00	594.00
2000	6.60	16.80	33.50	66.00	126.00	199.00	419.00	660.00
2200	7.26	18.40	36.90	72.60	138.00	219.00	461.00	726.00
2400	7.92	20.10	40.20	79.20	151.00	239.00	503.00	
2600	8.58	21.80	43.60	85.80	163.00	259.00	545.00	
2880	9.50	24.10	48.30	95.00	181.00	286.00		
3000	9.90	25.10	50.30	99.00	188.00	298.00		
3600	11.90	30.10	60.30	118.00	226.00			
NOMINAL TORQUE (NM)	31.50	80.00	160.00	315.00	600.00	950.00	2000.00	3150.00
MAX TORQUE (NM)	72.00	180.00	360.00	720.00	1500.00	2350.00	5000.00	7200.00

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FLEXIBLE COUPLINGS
HRC TYPE

CATALOGUE CODES

HRC COUPLINGS

SIZE	TYPE F	TYPE H	TYPE B (PILOT BORE)	ELEMENTS
70	HRC-70F	HRC-70H	HRC-70B	HRC-70SE
90	HRC-90F	HRC-90H	HRC-90B	HRC-90SE
110	HRC-110F	HRC-110H	HRC-110B	HRC-110SE
130	HRC-130F	HRC-130H	HRC-130B	HRC-130SE
150	HRC-150F	HRC-150H	HRC-150B	HRC-150SE
180	HRC-180F	HRC-180H	HRC-180B	HRC-180SE
230	HRC-230F	HRC-230H	HRC-230B	HRC-230SE
280	HRC-280F	HRC-280H	HRC-280B	HRC-280SE.

TAPER BUSHES METRIC

BORE	W X H KEWAY		CAT. CODE 1008	CAT. CODE 1108	CAT. CODE 1610	CAT. CODE 2012	CAT CODE 2517	CAT. CODE 3020	CAT. CODE 3525
10	3	1.4	TB1008 - 10MM	TB1108 - 10MM	xxx	xxx	Xxx	xxx	xxx
11	4	1.8	TB1008 - 11MM	TB1108 - 11MM	xxx	xxx	Xxx	xxx	xxx
12	4	1.8	TB1008 - 12MM	TB1108 - 12MM	xxx	xxx	Xxx	xxx	xxx
14	5	2.3	TB1008 - 14MM	TB1108 - 14MM	TB1610 - 14MM	TB2012 - 14MM	Xxx	xxx	xxx
15	5	2.3	xxx	xxx	TB1610 - 15MM	TB2012 - 15MM	Xxx	xxx	xxx
16	5	2.3	TB1008 - 16MM	TB1108 - 16MM	TB1610 - 16MM	TB2012 - 16MM	TB2517 – 16MM	xxx	xxx
17	5	2.3	TB1008 - 17MM	xxx	TB1610 - 17MM	TB2012 - 17MM	TB2517 – 17MM	xxx	xxx
18	6	2.8	TB1008 - 18MM	TB1108 - 18MM	TB1610 - 18MM	TB2012 - 18MM	TB2517 – 18MM	xxx	xxx
19	6	2.8	TB1008 - 19MM	TB1108 - 19MM	TB1610 - 19MM	TB2012 - 19MM	TB2517 – 19MM	xxx	xxx
20	6	2.8	TB1008 - 20MM	TB1108 - 20MM	TB1610 - 20MM	TB2012 - 20MM	TB2517 – 20MM	xxx	xxx
22	6	2.8	TB1008 - 22MM	TB1108 - 22MM	TB1610 - 22MM	TB2012 - 22MM	TB2517 – 22MM	xxx	xxx
23	6	2.8	xxx	TB1108 - 23MM	TB1610 - 23MM	TB2012 - 23MM	TB2517 – 23MM	xxx	xxx
24	8	3.3	TB1008 - 24MM	TB1108 - 24MM	TB1610 - 24MM	TB2012 - 24MM	TB2517 – 24MM	xxx	xxx
25	8	3.3	TB1008 - 25MM	TB1108 - 25MM	TB1610 - 25MM	TB2012 - 25MM	TB2517 – 25MM	TB3020 - 25MM	xxx
28	8	3.3	xxx	TB1108 - 28MM	TB1610 - 28MM	TB2012 - 28MM	TB2517 – 28MM	TB3020 - 28MM	xxx
30	8	3.3	xxx	xxx	TB1610 - 30MM	TB2012 - 30MM	TB2517 – 30MM	TB3020 - 30MM	xxx
32	10	3.3	xxx	xxx	TB1610 - 32MM	TB2012 - 32MM	TB2517 – 32MM	TB3020 - 32MM	xxx
35	10	3.3	xxx	xxx	TB1610 - 35MM	TB2012 - 35MM	TB2517 – 35MM	TB3020 - 35MM	TB3525 - 35MM
38	10	3.3	xxx	xxx	TB1610 - 38MM	TB2012 - 38MM	TB2517 – 38MM	TB3020 - 38MM	TB3525 - 38MM
40	12	3.3	xxx	xxx	TB1610 - 40MM	TB2012 - 40MM	TB2517 – 40MM	TB3020 - 40MM	TB3525 - 40MM
42	12	3.3	xxx	xxx	TB1610 - 42MM	TB2012 - 42MM	TB2517 – 42MM	TB3020 - 42MM	TB3525 - 42MM
45	14	3.8	xxx	xxx	xxx	TB2012 - 45MM	TB2517 – 45MM	TB3020 - 45MM	TB3525 - 45MM
48	14	3.8	xxx	xxx	xxx	TB2012 - 48MM	TB2517 – 48MM	TB3020 - 48MM	TB3525 - 48MM
50	14	3.8	xxx	xxx	xxx	TB2012 - 50MM	TB2517 – 50MM	TB3020 - 50MM	TB3525 - 50MM
55	16	4.3	xxx	xxx	xxx	xxx	TB2517 – 55MM	TB3020 - 55MM	TB3525 - 55MM
60	18	4.4	xxx	xxx	xxx	xxx	TB2517 – 60MM	TB3020 - 60MM	TB3525 - 60MM
65	18	4.4	xxx	xxx	xxx	xxx	Xxx	TB3020 - 65MM	TB3525 - 65MM
70	20	4.9	xxx	xxx	xxx	xxx	Xxx	TB3020 - 70MM	TB3525 - 70MM
75	20	4.9	xxx	xxx	xxx	xxx	Xxx	TB3020 - 75MM	TB3525 - 75MM
80	22	5.4	xxx	xxx	xxx	xxx	Xxx	xxx	TB3525 - 80MM
85	22	5.4	xxx	xxx	xxx	xxx	Xxx	xxx	TB3525 - 85MM
90	25	5.4	xxx	xxx	xxx	xxx	Xxx	xxx	TB3525 - 90MM
95	25	5.4	xxx	xxx	xxx	xxx	Xxx	xxx	TB3525 - 95MM
100	28	6.4	xxx	xxx	xxx	xxx	Xxx	xxx	TB3525 - 100MM

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TAPER BUSHES IMPERIAL

BORE	W X H KEYWAY		CAT. CODE 1008	CAT. CODE 1108	CAT. CODE 1610	CAT. CODE 2012	CAT. CODE 2517	CAT. CODE 3020	CAT. CODE 3525
0.375	0.125	0.062	TB1008 - 3/8"	TB1108 - 3/8"	xxx	xxx	xxx	xxx	xxx
0.5	0.125	0.062	TB1008 - 1/2"	TB1108 - 1/2"	TB1610 - 1/2"	xxx	xxx	xxx	xxx
0.625	0.187	0.093	TB1008 - 5/8"	TB1108 - 5/8"	TB1610 - 5/8"	TB2012 - 5/8"	xxx	xxx	xxx
0.75	0.187	0.093	TB1008 - 3/4"	TB1108 - 3/4"	TB1610 - 3/4"	TB2012 - 3/4"	TB2517 - 3/4"	xxx	xxx
0.875	0.25	0.125	TB1008 - 7/8"	TB1108 - 7/8"	TB1610 - 7/8"	TB2012 - 7/8"	TB2517 - 7/8"	xxx	xxx
1	0.25	0.125	TB1008 - 1"	TB1108 - 1"	TB1610 - 1"	TB2012 - 1"	TB2517 - 1"	xxx	xxx
1.125	0.312	0.125	xxx	TB1108 - 1-1/8"	TB1610 - 1-1/8"	TB2012 - 1-1/8"	TB2517 - 1-1/8"	xxx	xxx
1.25	0.312	0.125	xxx	xxx	TB1610 - 1-1/4"	TB2012 - 1-1/4"	TB2517 - 1-1/4"	TB3020 - 1-1/4"	xxx
1.375	0.375	0.125	xxx	xxx	TB1610 - 1-3/8"	TB2012 - 1-3/8"	TB2517 - 1-3/8"	TB3020 - 1-3/8"	xxx
1.5	0.375	0.125	xxx	xxx	TB1610 - 1-1/2"	TB2012 - 1-1/2"	TB2517 - 1-1/2"	TB3020 - 1-1/2"	TB3525 - 1-1/2"
1.625	0.437	0.156	xxx	xxx	TB1610 - 1-5/8"	TB2012 - 1-5/8"	TB2517 - 1-5/8"	TB3020 - 1-5/8"	TB3525 - 1-5/8"
1.75	0.437	0.156	xxx	xxx	xxx	TB2012 - 1-3/4"	TB2517 - 1-3/4"	TB3020 - 1-3/4"	TB3525 - 1-3/4"
1.875	0.5	0.156	xxx	xxx	xxx	TB2012 - 1-7/8"	TB2517 - 1-7/8"	TB3020 - 1-7/8"	TB3525 - 1-7/8"
2	0.5	0.156	xxx	xxx	xxx	TB2012 - 2"	TB2517 - 2"	TB3020 - 2"	TB3525 - 2"
2.125	0.625	0.218	xxx	xxx	xxx	xxx	TB2517 - 2-1/8"	TB3020 - 2-1/8"	TB3525 - 2-1/8"
2.25	0.625	0.218	xxx	xxx	xxx	xxx	TB2517 - 2-1/4"	TB3020 - 2-1/4"	TB3525 - 2-1/4"
2.375	0.625	0.218	xxx	xxx	xxx	xxx	TB2517 - 1-3/8"	TB3020 - 2-3/8"	TB3525 - 2-3/8"
2.5	0.625	0.218	xxx	xxx	xxx	xxx	TB2517 - 2-1/2"	TB3020 - 2-1/2"	TB3525 - 2-1/2"
2.625	0.75	0.25	xxx	xxx	xxx	xxx	xxx	TB3020 - 2-5/8"	TB3525 - 2-5/8"
2.75	0.75	0.25	xxx	xxx	xxx	xxx	xxx	TB3020 - 2-3/4"	TB3020 - 2-3/4"
2.875	0.75	0.25	xxx	xxx	xxx	xxx	xxx	TB3020 - 2-7/8"	TB3525 - 2-7/8'
3	0.75	0.25	xxx	xxx	xxx	xxx	xxx	TB3020 - 3"	TB3525 - 3"
3.125	0.875	0.312	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 3-1/8"
3.25	0.875	0.312	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 3-1/4'
3.375	0.875	0.312	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 3-3/8'
3.5	0.875	0.312	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 3-1/2"
3.75	1	0.375	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 3-3/4"
4	1	0.375	xxx	xxx	xxx	xxx	xxx	xxx	TB3525 - 4"

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