TYPES OF COUPLINGS

Usage / Type of hub and spacer \ Number of bolts		4	6	8	10	12	10～20
Single flexing		A 3	E 3	G 3	S 3	U 3	W 3
Double flexing	With minimum length spacer	A X	——	——	——	——	——
	With standard length spacer	A 4	E 4	G 4	S 4	U 4	W 4
	With custom length spacer	A B	E B	G B	S B	U B	W B
Floating shaft	Horizontal use	A 5	E 5	G 5	S 5	U 5	W 5
	Vertical use	A 6	E 6	G 6	S 6	U 6	W 6
Semi-floating shaft		A 7	E 7	G 7	S 7	U 7	W 7
Range of torque (N·m)		33～6,370	569～128,000	3,840～178,000	13,500～256,000	16,400～313,000	Max. $1{,}962\times10^3$

AB—45—ZN—100K／60S68—275

- AB — Type symbol (refer to above table)
- 45 — Size
- ZN — Type of hub
  - N: Standard P: Elongated boss
  - Z: Enlarged boss diameter
  - K: Combination of P and Z
  - S: Specially designed
  - The above items are indicated in order of driving side followed by driven side.
- 100K／60S68 — State of shaft bore
  - Numbers denote shaft bore diameter (mm)
  - K: With key groove
  - S: Spannelement used
  - The above items are indicated in order of driving side followed by driven side.
  - When the rough bore is of the standard size shown in the brochure, this item is omitted.
- 275 — Distance between shaft ends (mm)

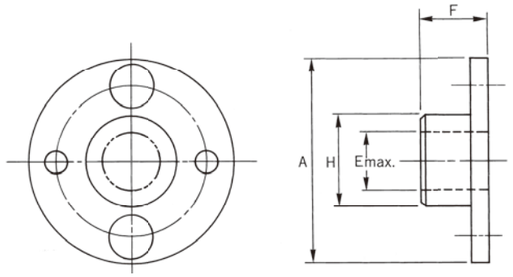
DIMENSIONS OF HUB TYPE A

Hubs are available in several different types for various applications. Hub designations are indicated as “H”(hub), “Z”, “P”, “K”, or “Y” (denoting hub type), and part number (i.e. HY04, HK10).

Features:

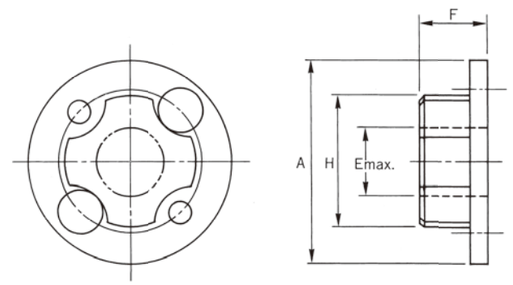
HN: standard hub
HZ: enlarged boss diameter H for enlarged shaft bore
HP: longer boss length F
HK: combination of HP and HZ
HY: enlarged shaft bore and particularly large hub clearance angle for easy handling; convenient for installation in small spaces.

Dimensions of HN and HP



Size No.	Part No.	A (mm)	F (mm) HN	F (mm) HP	H (mm)	E max. (mm)	Rough Bore Size (mm)
05	01	67	25.4	40	33	23	8
10	02	81	25.4	40	46	32	10
15	03	93	28.7	45	51	35	10
20	04	104	33.5	50	61	42	10
25	05	126	41.1	60	71	50	16
30	06	143	47.8	70	84	58	16
35	07	168	57.2	85	106	74	25
40	08	194	63.5	100	119	83	25
45	09	214	76.2	115	137	95	45
50	10	246	88.9	135	157	109	50
55	11	276	101.6	150	170	118	50

Dimensions of HZ, HK, and HY



Size No.	Part No.	A (mm)	F (mm) HZ	F (mm) HK	H (mm) HZ, HK	H (mm) HY	E max. (mm) HZ, HK	E max. (mm) HY	Rough Bore Size (mm)
05	01	67	25.4	40	47		28		10
10	02	81	25.4	40	58		40		10
15	03	93	28.7	45	66	66	HK-42	40	13
20	04	104	33.5	50	77	73	48	44	16
25	05	126	41.1	60	92		60		16
30	06	143	47.8	70	104		70		16
35	07	168	57.2	85	129		85		25
40	08	194	63.5	100	147		95		25
45	09	214	76.2	115	166		110		50
50	10	246	88.9	135	191		120		50
55	11	276	101.6	150	209		130		50

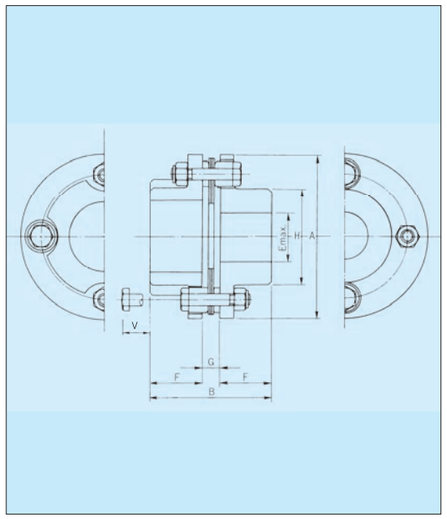
Notes) 1. HY is available in sizes 15 and 20 only.
2. HZ size 15 is out of production; it has been superseded by HY size 15.

TYPE A
4-Bolt

SINGLE FLEXING COUPLING

A3

The single flexing coupling is designed to compensate for an angular misalignment of up to 1° maximum. It can operate at high speeds and under heavy loads while supporting radial loads. Typical installations include coupling of shafts, one of which is supported by bearings at two points and the other supported by only one bearing, as seen in motor generator sets.



Size (standard hub)

Size No.	Part No.	A (mm)	B (mm)	Emax (mm)	F (mm)	G (mm)	H (mm)	V (mm)	Rough Bore Size (mm)
05	01	67	56.9	23	25.4	6.1	33	13	8
10	02	81	57.4	32	25.4	6.6	46	16	10
15	03	93	65.8	35	28.7	8.4	51	22	10
20	04	104	78.2	42	33.5	11.2	61	20	10
25	05	126	93.9	50	41.1	11.7	71	25	16
30	06	143	107.3	58	47.8	11.7	84	28	16
35	07	168	131.2	74	57.2	16.8	106	23	25
40	08	194	144.0	83	63.5	17.0	119	30	25
45	09	214	174.0	95	76.2	21.6	137	22	45
50	10	246	201.7	109	88.9	23.9	157	23	50
55	11	276	230.4	118	101.6	27.2	170	40	50

Specifications (standard hub)

Size No.	Allowable Torque (N·m)				Maximum Allowable Radial Load (N)	(1) Maximum Rotation (min^{-1})	Mass (kg)	Morment of Inertia J ($kg·m^2$)	Torsional Stiffness (N·m/rad)	(2) Axial Spring Constant (N/mm)
	No Radial Load	1/2 Radial Load	2/2 Radial Load	Maximum Radial Load						
05	33	15	12	8	147	47,000	0.6	0.0002	2.2×10^4	40
10	90	40	31	23	245	39,000	1.1	0.0006	6.2×10^4	59
15	177	79	62	44	549	34,000	1.7	0.0012	14.7×10^4	141
20	245	111	85	59	814	30,000	2.5	0.0020	23.5×10^4	168
25	422	189	157	108	1180	25,000	4.3	0.0056	42.2×10^4	219
30	775	348	271	196	1770	22,000	6.9	0.0110	68.6×10^4	307
35	1270	574	446	319	2650	19,000	11.3	0.0270	127.5×10^4	355
40	2060	927	720	515	3730	16,000	16.7	0.0520	205.9×10^4	440
45	3330	1500	1170	834	4410	15,000	22.7	0.0880	294.2×10^4	470
50	4900	2210	1680	1230	5980	13,000	35.4	0.1800	431.5×10^4	537
55	6370	2860	2230	1600	7550	11,000	52.0	0.3200	578.6×10^4	561

(1) Maximum rotation speeds are based on rim stress with no consideration given to requirements for dynamic balancing.
(2) Values become linear when torque changes while within the zone of maximum allowable torque specified in this catalogue.

Bolt fastening torque

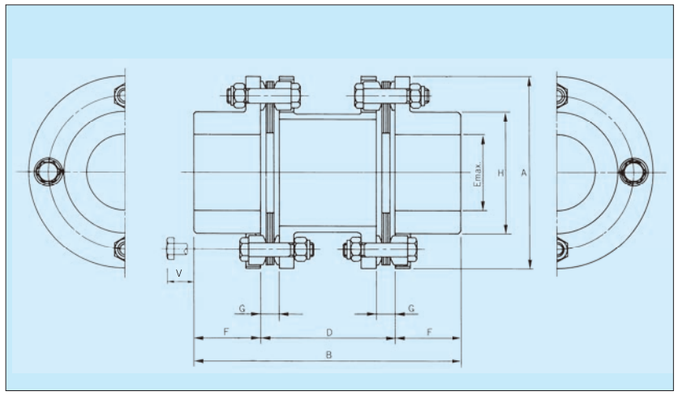
Size No.	05	10	15	20	25	30	35	40	45	50	55
Bolt Head Diameter (mm)	10	10	13	13	17	19	19	24	24	27	36
Fastening Torque (N·m)	9	9	22	22	41	72	72	160	160	220	570

TYPE A
4-Bolt

DOUBLE FLEXING COUPLING

AX (with minimum length spacer)
A4 (with standard length spacer)
AB (with custom length spacer)

Angular misalignment of up to 1° on one side is allowable.



The standard dynamic balance of this coupling is in accordance with JIS G-6.3 (1,800 rpm).

Size

Sizes are the same as those shown on the previous page.

Specifications

Common Factors AX, A4, AB				AX				A4				AB		
Size No.	Torque (N·m)	(1) Maximum Rotation (min^{-1})	(2) Axial Spring Constant (N/mm)	D (mm)	Mass (kg)	Morment of Inertia J ($kg·m^2$)	Torsional Stiffness (N·m/rad)	D (mm)	Mass (kg)	Morment of Inertia J ($kg·m^2$)	Torsional Stiffness (N·m/rad)	B (mm)	(3) D (mm)	D max (mm)
05	33	47,000	21	36	1.1	0.00045	1.1×10^4	88.9	1.2	0.00045	0.9			200
10	90	39,000	29	39	1.7	0.00103	3.0×10^4	88.9	1.9	0.00110	2.7			200
15	177	34,000	71	47	2.7	0.00198	7.1×10^4	101.6	2.9	0.00210	6.1			250
20	245	30,000	83	53	3.7	0.00340	11.4×10^4	127.0	4.1	0.00370	9.3			250
25	422	25,000	109	62	6.6	0.00943	20.2×10^4	127.0	7.1	0.00990	17.1			250
30	775	22,000	153	69	10.3	0.01938	32.5×10^4	127.0	10.8	0.02000	27.7			300
35	1270	19,000	178	78	15.6	0.04070	61.4×10^4	127.0	16.3	0.04200	55.1			300
40	2060	16,000	220	89	24.0	0.08293	97.7×10^4	139.7	24.7	0.08500	87.2			350
45	3330	15,000	234	97	31.5	0.13570	141.6×10^4	152.4	32.5	0.14000	128.8			350
50	4900	13,000	269	109	48.4	0.27163	207.5×10^4	177.8	50.0	0.28000	185.9			350
55	6370	11,000	280	134	73.9	0.50318	274.9×10^4	177.8	75.0	0.51000	255.5			400

2F+D

Desired Distance between shaft ends

(1) Maximum rotation speeds are based on rim stress.
(2) Values become linear when torque changes while within the zone of maximum allowable torque specified in this catalog.
(3) Spacers in accordance with ISO standards are available; extra-short spacers under the minimum length spacer are also available.

AB-type spacer availability

	ISO Type Spacer D (mm)					Special Stock D (mm)			
Size No.	100	140	180	200	250	80	110	127	130
10	○	○				○		○	
15	○	○							
20	○	○						●	
25	○	○	○	○	○		○	●	
30		○	○	○	○		○	●	
35		○	○	○	○			●	○
40		○	○	○					○
45			○	○					

○: standard stock