Leader Harmonious Drive Systems Co.,Ltd
TEL :0086- 512-66362298/66560692
FAX :0086- 512-66362325
E-mail : sales@leaderdrive.com
Add : No. 19 Muxu west Road,Mudu,Suzhou,P.R.China
Postal Code : 215101
http://www.leaderdrive.com

NO. LD2019-1 Y

leaderdrive®

leaderdrive®

苏州绿的谐波传动科技股份有限公司

Leader Harmonious Drive Systems Co.,Ltd

LHS Standard Hollow-Shaft Flexspline Strain Wave Gear

Product Introduction Manual

LHS-I series

LHS-I series, which have a standard hollow and flange-shaped tube structure, are tight in structure. Their input shaft matches with the inner hole of wave transformer directly and are connected by flat key. Alternatively, they can be used with the rigid gear end fixed and the flexible gear end outputting, or with the flexible gear end fixed and the rigid gear end outputting.

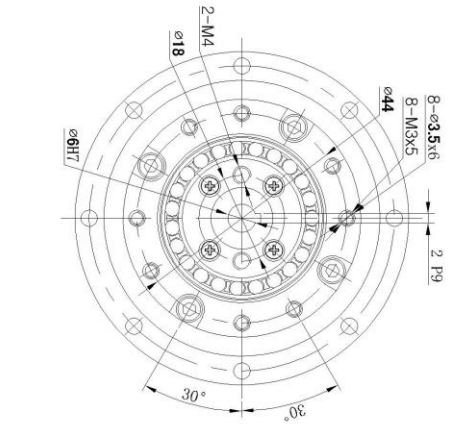
Parameter Table

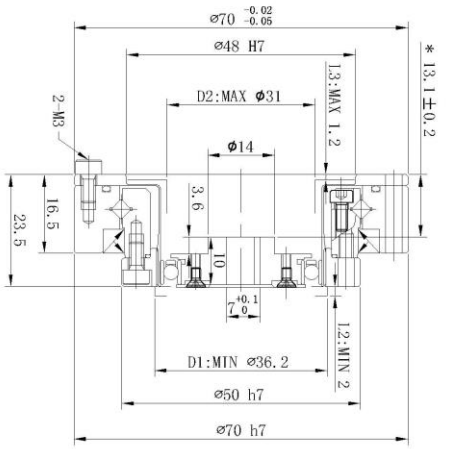
Item / Model No	Reduction Ratio	Rated Torque at 2000r/min	Allowable Peak Torque at Start and Stop	Allowable Average Torque	Allowable Maxmum Momentary Torque	Maximum Input Speed	Allowable Average Input Speed	Back lash	Weight	Design Life
		Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	Kg	Hour
14	30	3.8	8.6	7.8	16	8000	3500	≤20	0.38	10000
	50	5.1	17	6.6	33			≤20		10000
	80	7.4	22	10.5	45			≤10		15000
	100	7.4	27	10.5	51			≤10		15000
17	30	8.4	15.2	11.5	29	7000	3500	≤20	0.56	10000
	50	15.2	32	25	66			≤20		10000
	80	21	41	26	83			≤10		15000
	100	23	51	37	104			≤10		15000
	120	23	51	37	82			≤10		15000
20	30	14	26	19	48	6000	3500	≤20	0.76	10000
	50	24	53	32	93			≤20		10000
	80	32	70	45	121			≤10		15000
	100	38	78	47	140			≤10		15000
	120	38	83	47	140			≤10		15000
	160	38	87	47	140			≤10		15000
25	30	26	48	36	90	5500	3500	≤20	1.24	10000
	50	37	93	52	177			≤20		10000
	80	60	130	83	242			≤10		15000
	100	64	149	103	270			≤10		15000
	120	64	159	103	289			≤10		15000
	160	64	167	103	298			≤10		15000
32	30	51	95	71	190	4500	3500	≤20	2.6	10000
	50	72	205	103	363			≤20		10000
	80	112	289	159	540			≤10		15000
	100	130	316	205	615			≤10		15000
	120	130	335	205	652			≤10		15000
	160	130	353	205	652			≤10		15000
40	50	130	382	186	652	4000	3000	≤20	5.0	10000
	80	196	493	270	931			≤10		15000
	100	252	540	353	1026			≤10		15000
	120	279	586	428	1121			≤10		15000
	160	279	615	428	1121			≤10		15000
50*	50	233	679	333	1358	3000	2500	≤20	9.5	10000
	80	353	894	493	1767			≤10		15000
	100	446	931	633	1957			≤10		15000
	120	502	1026	772	1957			≤10		15000
	160	502	1121	801	2328			≤10		15000
58*	80	522	1406	732	2328	3000	2200	≤10	13.6	15000
	100	661	1511	1007	3021			≤10		15000
	120	708	1634	1131	3164			≤10		15000
	160	708	1748	1150	3259			≤10		15000

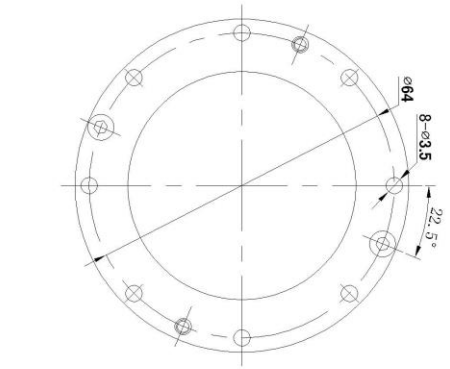
* Consult factory

LHS-I Series Drawings

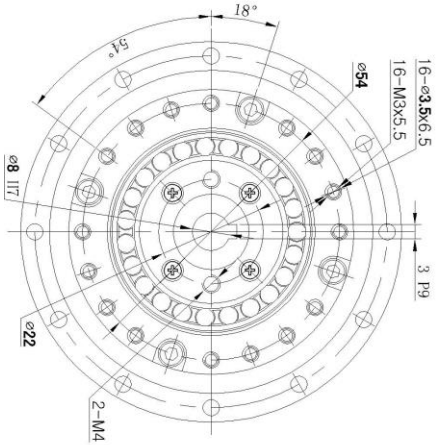
LHS-14-XXX-C-I

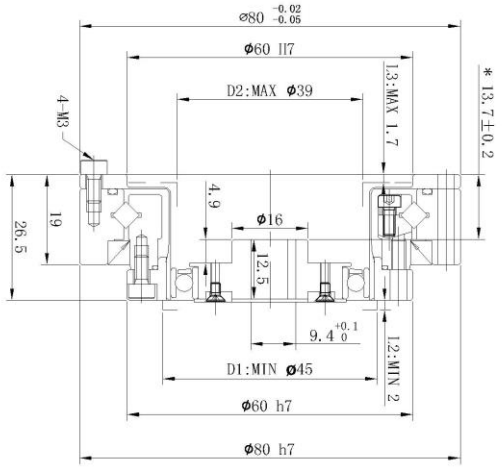


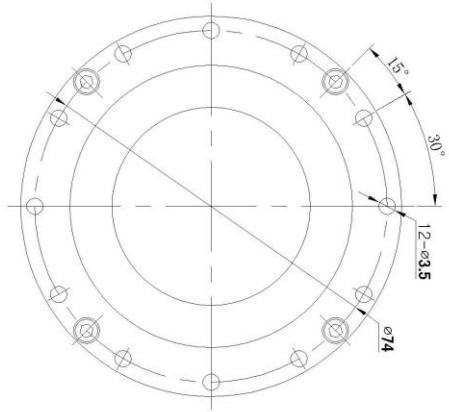




LHS-17-XXX-C-I

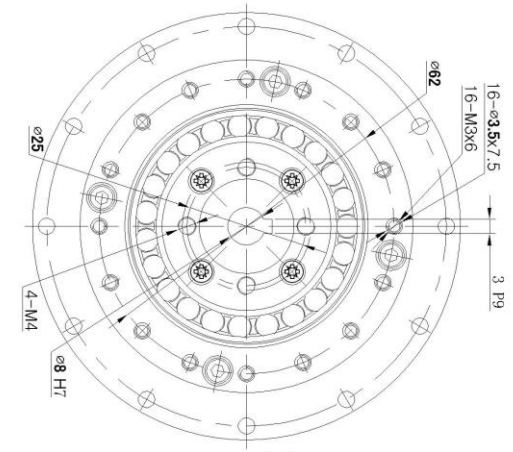


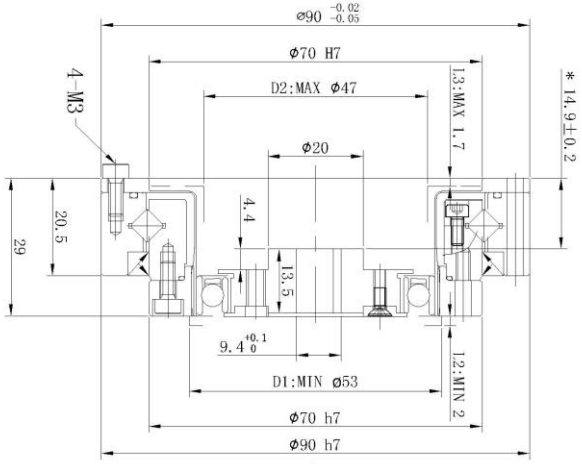


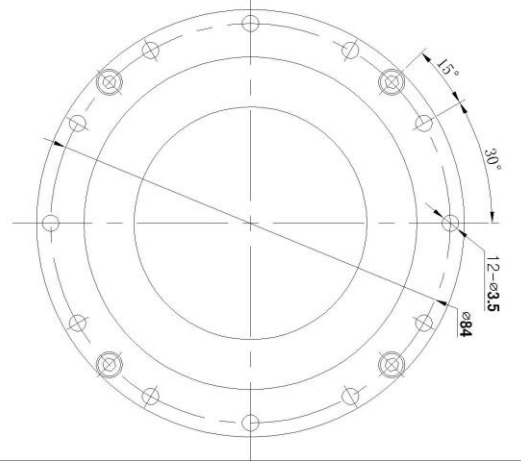


LHS-I Series Drawings

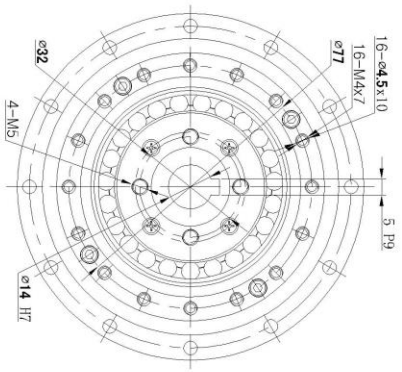
LHS-20-XXX-C-I

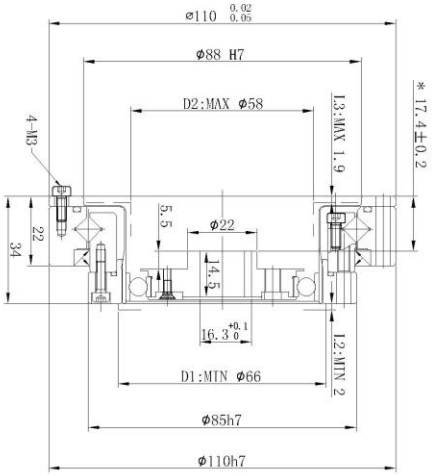


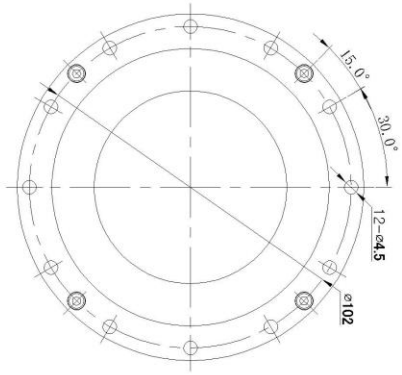




LHS-25-XXX-C-I

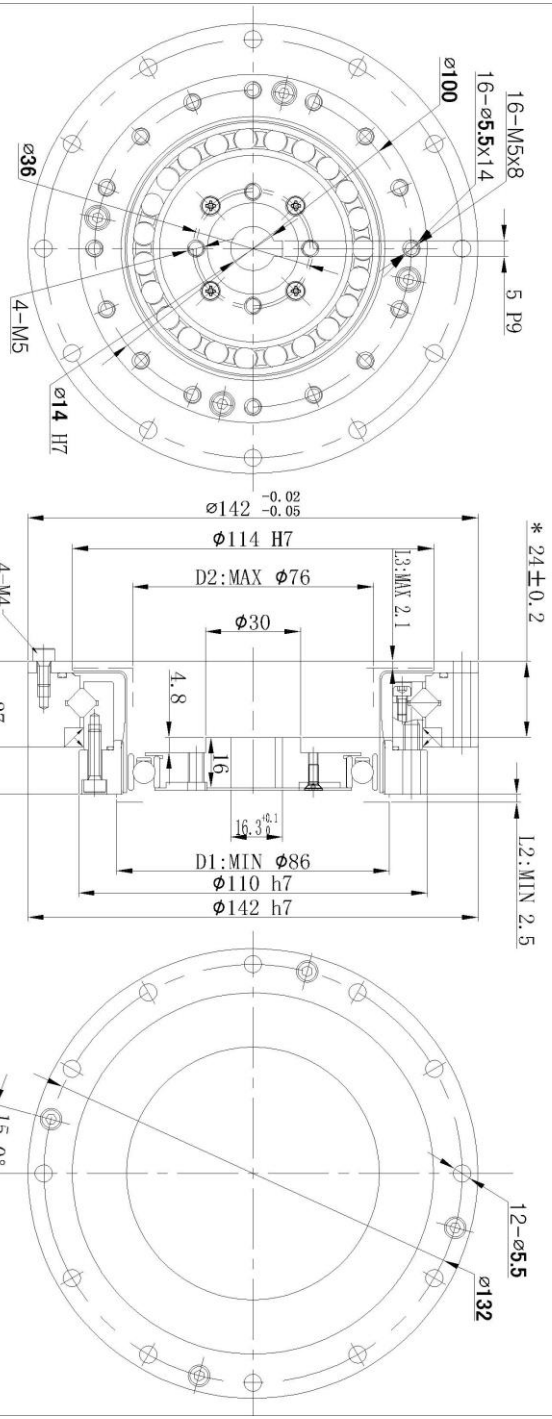




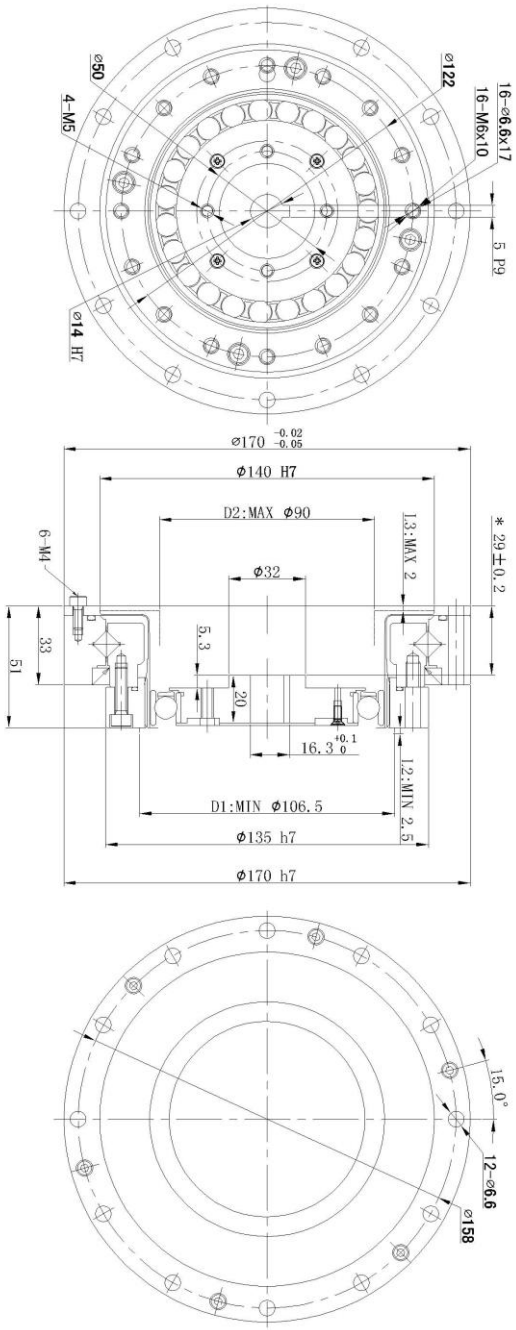


LHS-I Series Drawings

LHS-32-XXX-C-I



LHS-40-XXX-C-I



LHS-II series

For LHS-II, their input shaft is connected with the inner hole of wave transformer through a double slider coupling.

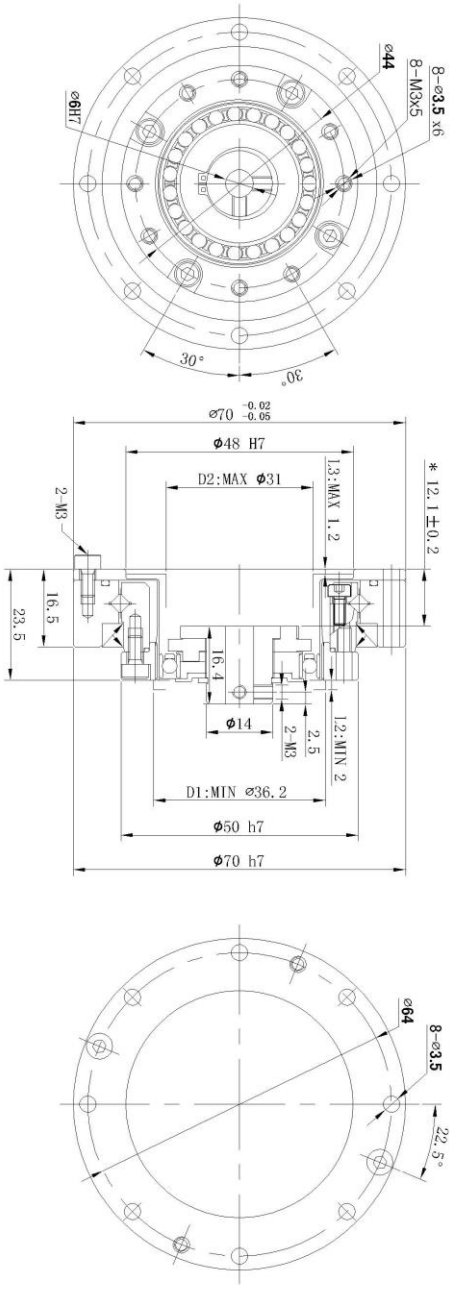
Parameter Table

Item / Model No	Reduction Ratio	Rated Torque at 2000r/min	Allowable Peak Torque at Start and Stop	Allowable Average Torque	Allowable Maximum Momentary Torque	Maximum Input Speed	Allowable Average Input Speed	Back lash	Weight	Design Life
		Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	Kg	Hour
14	30	3.8	8.6	7.8	16	8000	3500	≤20	0.38	10000
	50	5.1	17	6.6	33			≤20		10000
	80	7.4	22	10.5	45			≤20		15000
	100	7.4	27	10.5	51			≤20		15000
17	30	8.4	15.2	11.5	29	7000	3500	≤20	0.56	10000
	50	15.2	32	25	66			≤20		10000
	80	21	41	26	83			≤20		15000
	100	23	51	37	104			≤20		15000
	120	23	51	37	82			≤20		15000
20	30	14	26	19	48	6000	3500	≤20	0.76	10000
	50	24	53	32	93			≤20		10000
	80	32	70	45	121			≤20		15000
	100	38	78	47	140			≤20		15000
	120	38	83	47	140			≤20		15000
	160	38	87	47	140			≤20		15000
25	30	26	48	36	90	5500	3500	≤20	1.24	10000
	50	37	93	52	177			≤20		10000
	80	60	130	83	242			≤20		15000
	100	64	149	103	270			≤20		15000
	120	64	159	103	289			≤20		15000
	160	64	167	103	298			≤20		15000
32	30	51	95	71	190	4500	3500	≤20	2.6	10000
	50	72	205	103	363			≤20		10000
	80	112	289	159	540			≤20		15000
	100	130	316	205	615			≤20		15000
	120	130	335	205	652			≤20		15000
	160	130	353	205	652			≤20		15000
40	50	130	382	186	652	4000	3000	≤20	5.0	10000
	80	196	493	270	931			≤20		15000
	100	252	540	353	1026			≤20		15000
	120	279	586	428	1121			≤20		15000
	160	279	615	428	1121			≤20		15000
50*	50	233	679	333	1358	3000	2500	≤20	9.5	10000
	80	353	894	493	1767			≤20		15000
	100	446	931	633	1957			≤20		15000
	120	502	1026	772	1957			≤20		15000
	160	502	1121	801	2328			≤20		15000
58*	80	522	1406	732	2328	3000	2200	≤10	13.6	15000
	100	661	1511	1007	3021			≤10		15000
	120	708	1634	1131	3164			≤10		15000
	160	708	1748	1150	3259			≤10		15000

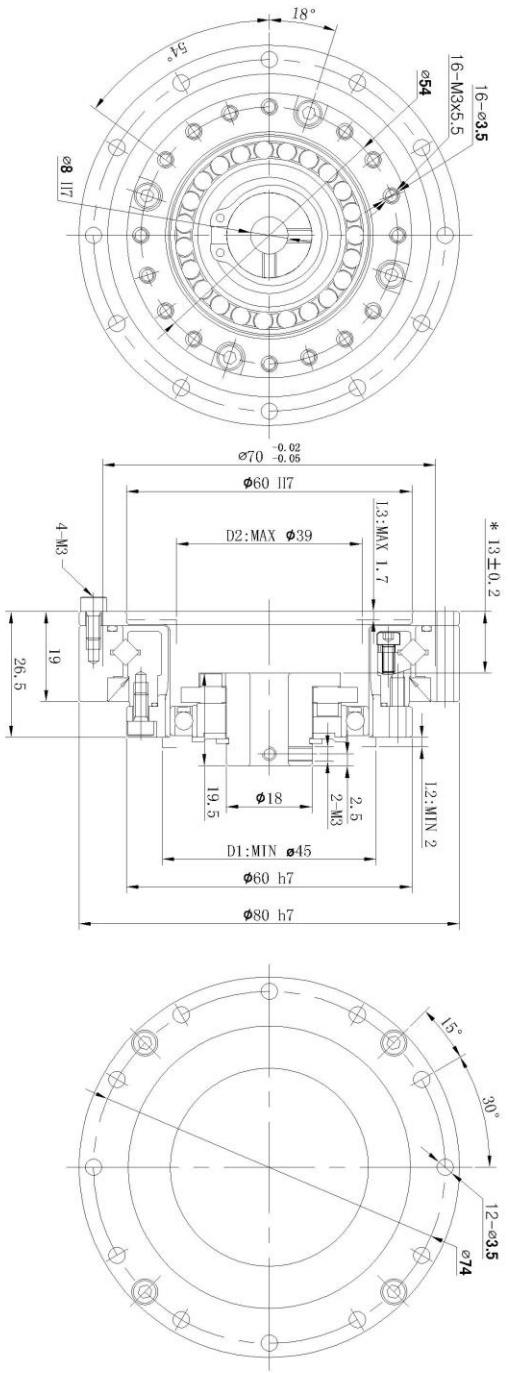
*Consult factory

LHS-II Series Drawings

LHS-14-XXX-C-II

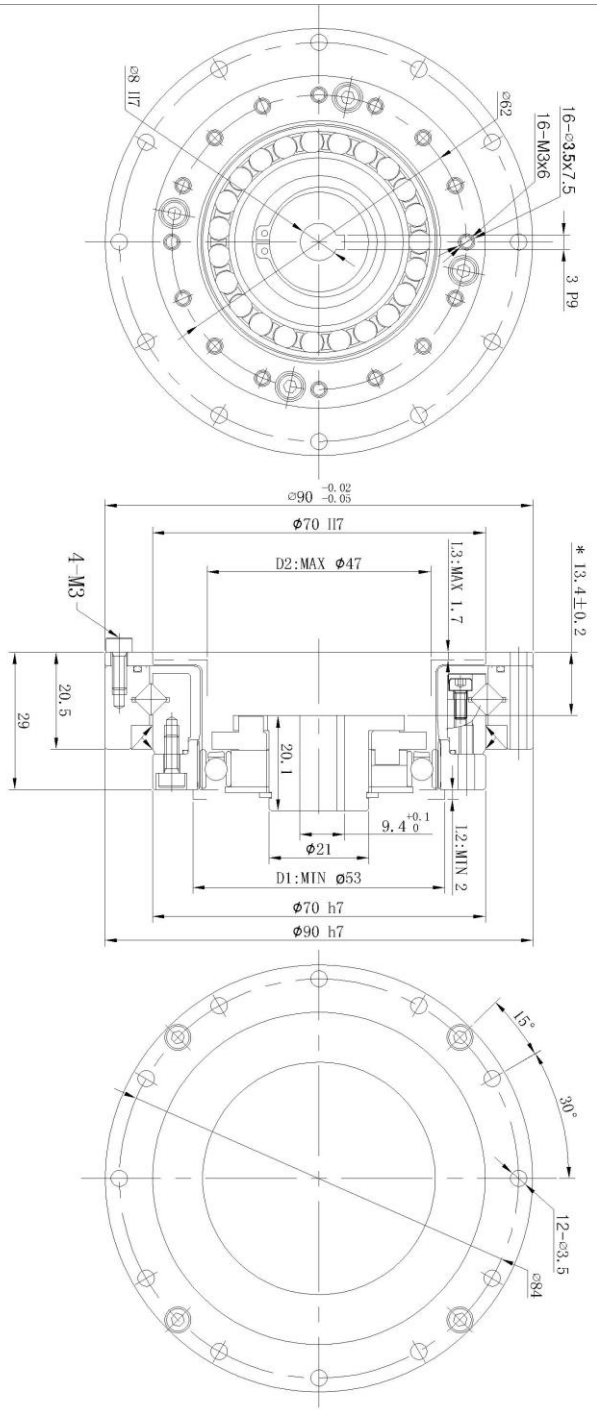


LHS-17-XXX-C-II

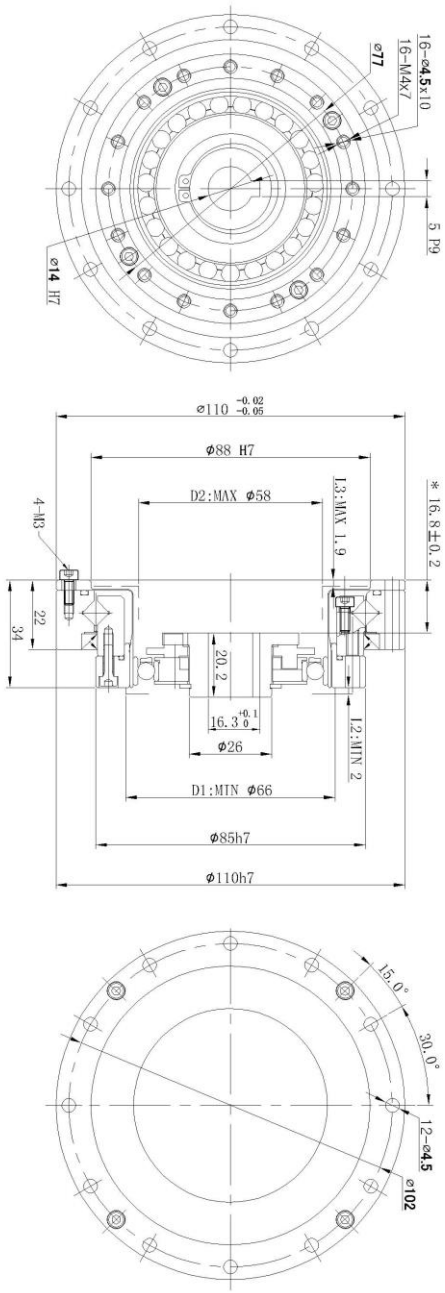


LHS-II Series Drawings

LHS-20-XXX-C-II

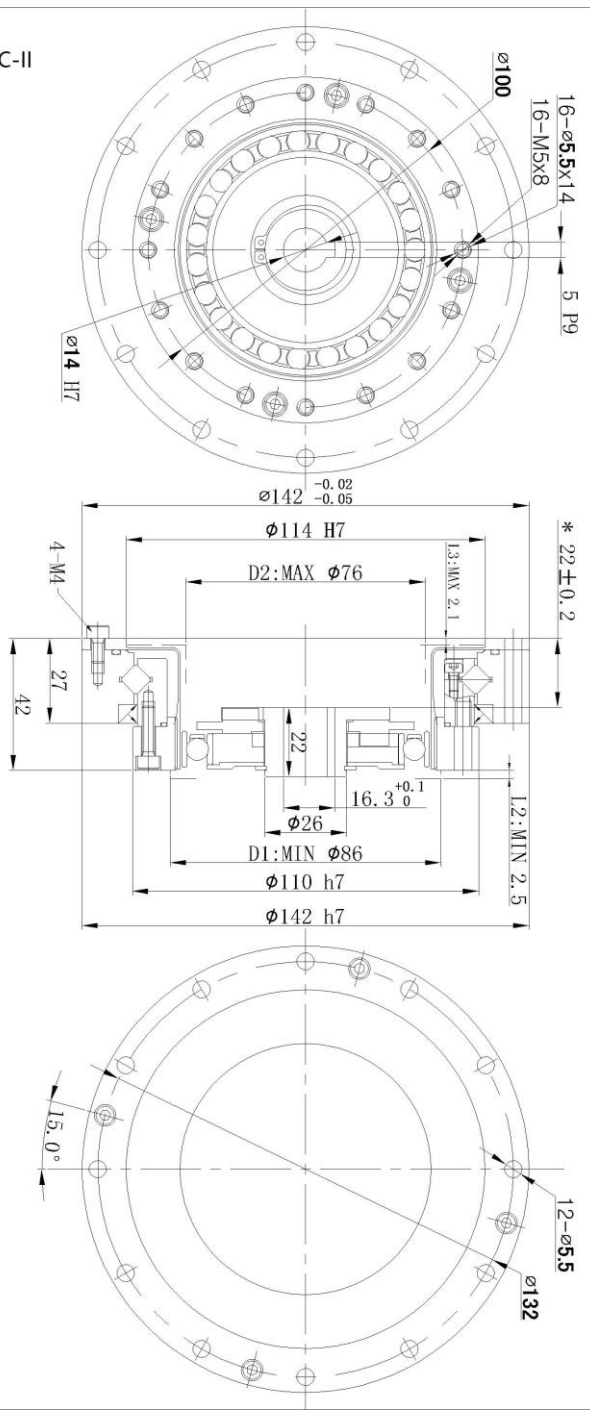


LHS-25-XXX-C-II

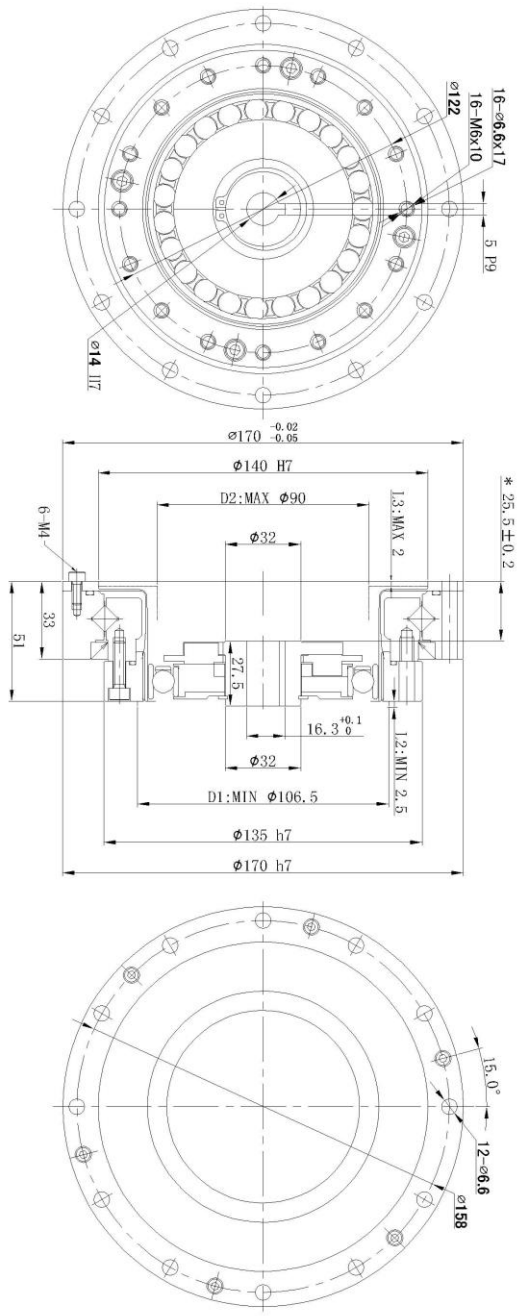


LHS-II Series Drawings

LHS-32-XXX-C-II



LHS-40-XXX-C-II



LHS-III series

For LHS-III series, there is a large-aperture hollow shaft hole in the middle of the cam of their wave generator, and a supporting bearing designed inside reducer. Characterized by full-sealing structure and easy installation, the series are very suitable for the occasions where threading needs running through the center of reducer.

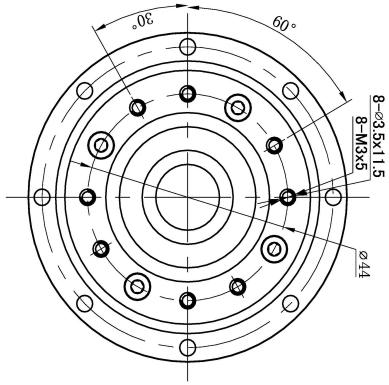
Parameter Table

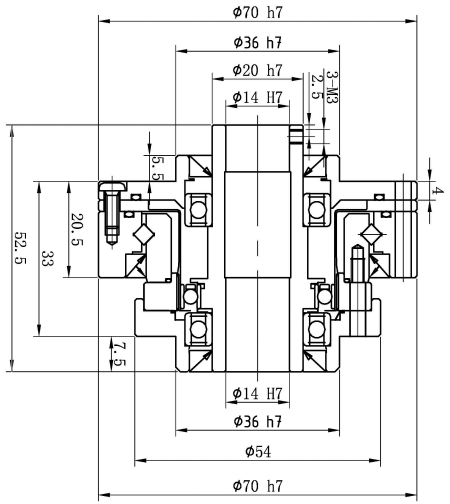
Item / Model No	Reduction Ratio	Rated Torque at 2000r/min	Allowable Peak Torque at Start and Stop	Allowable Average Torque	Allowable Maximum Momentary Torque	Maximum Input Speed	Allowable Average Input Speed	Back lash	With Maximum Tension	Weight	Design Life
		Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	N	Kg	Hour
14	30	3.8	8.6	7.8	16	8000	3500	≤20	≤77	0.72	10000
	50	5.1	17	6.6	33			≤20			10000
	80	7.4	22	10.5	45			≤10			15000
	100	7.4	27	10.5	51			≤10			15000
17	30	8.4	15.2	11.5	29	7000	3500	≤20	≤92	1.0	10000
	50	15.2	32	25	66			≤20			10000
	80	21	41	26	83			≤10			15000
	100	23	51	37	104			≤10			15000
	120	23	51	37	82			≤10			15000
20	30	14	26	19	48	6000	3500	≤20	≤136	1.38	10000
	50	24	53	32	93			≤20			10000
	80	32	70	45	121			≤10			15000
	100	38	78	47	140			≤10			15000
	120	38	83	47	140			≤10			15000
	160	38	87	47	140			≤10			15000
25	30	26	48	36	90	5500	3500	≤20	≤147	2.15	10000
	50	37	93	52	177			≤20			10000
	80	60	130	83	242			≤10			15000
	100	64	149	103	270			≤10			15000
	120	64	159	103	289			≤10			15000
	160	64	167	103	298			≤10			15000
32	30	51	95	71	190	4500	3500	≤20	≤154	4.3	10000
	50	72	205	103	363			≤20			10000
	80	112	289	159	540			≤10			15000
	100	130	316	205	615			≤10			15000
	120	130	335	205	652			≤10			15000
	160	130	353	205	652			≤10			15000
40	50	130	382	186	652	4000	3000	≤20	≤294	7.8	10000
	80	196	493	270	931			≤10			15000
	100	252	540	353	1026			≤10			15000
	120	279	586	428	1121			≤10			15000
	160	279	615	428	1121			≤10			15000
50*	50	233	679	333	1358	3000	2500	≤20	≤373	14.5	10000
	80	353	894	493	1767			≤10			15000
	100	446	931	633	1957			≤10			15000
	120	502	1026	772	1957			≤10			15000
	160	502	1121	801	2328			≤10			15000
58*	80	678	1828	951	3026	3000	2200	≤10	≤1300	20.0	15000
	100	860	1964	1309	3927			≤10			15000
	120	921	2124	1470	4113			≤10			15000
	160	921	2272	1494	4236			≤10			15000

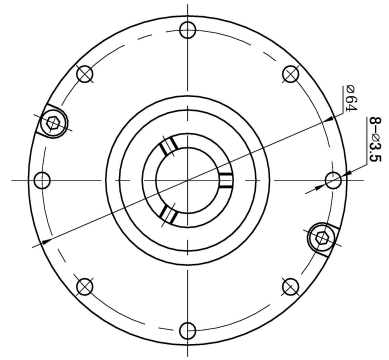
* Consult factory

LHS-III Series Drawings

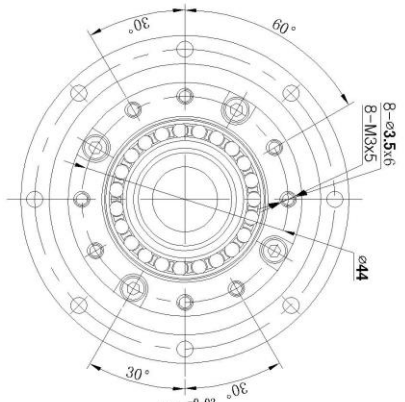
LHS-14-XXX-C-III

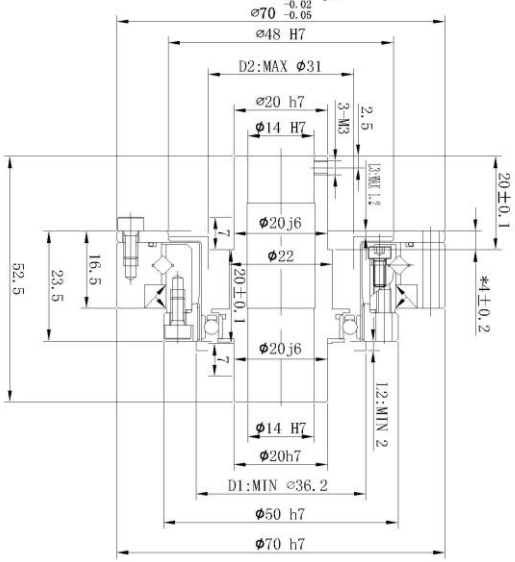


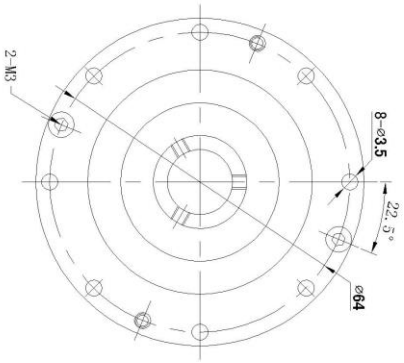




LHS-14-XXX-C-III-ST

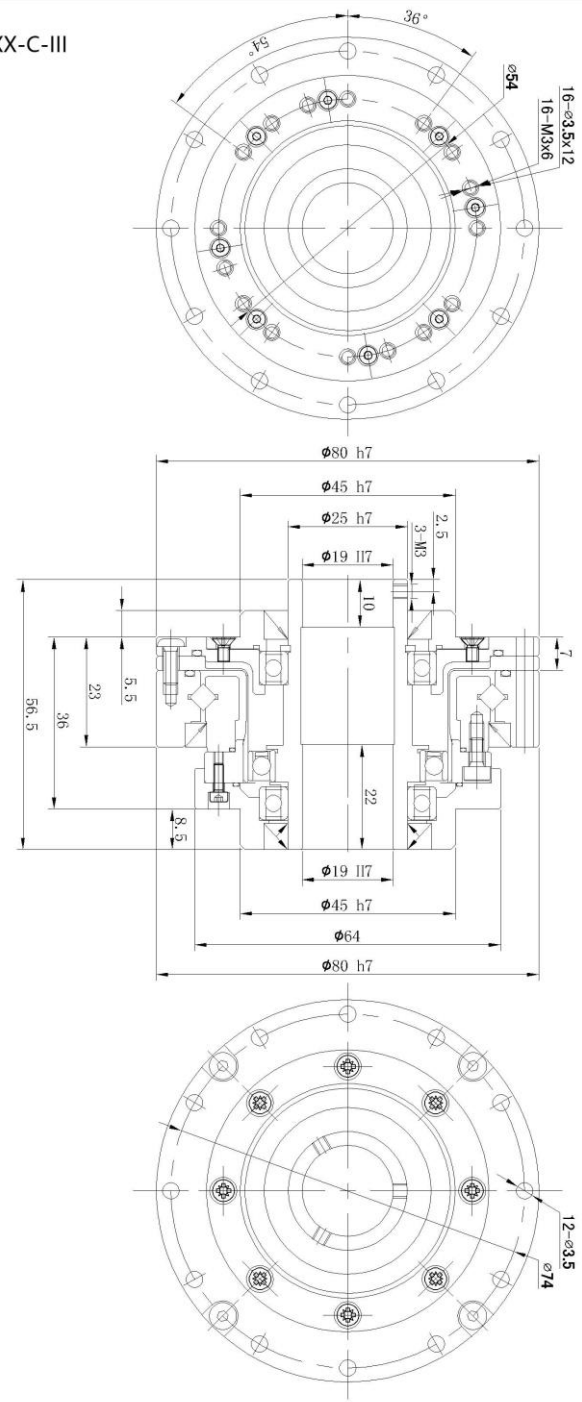




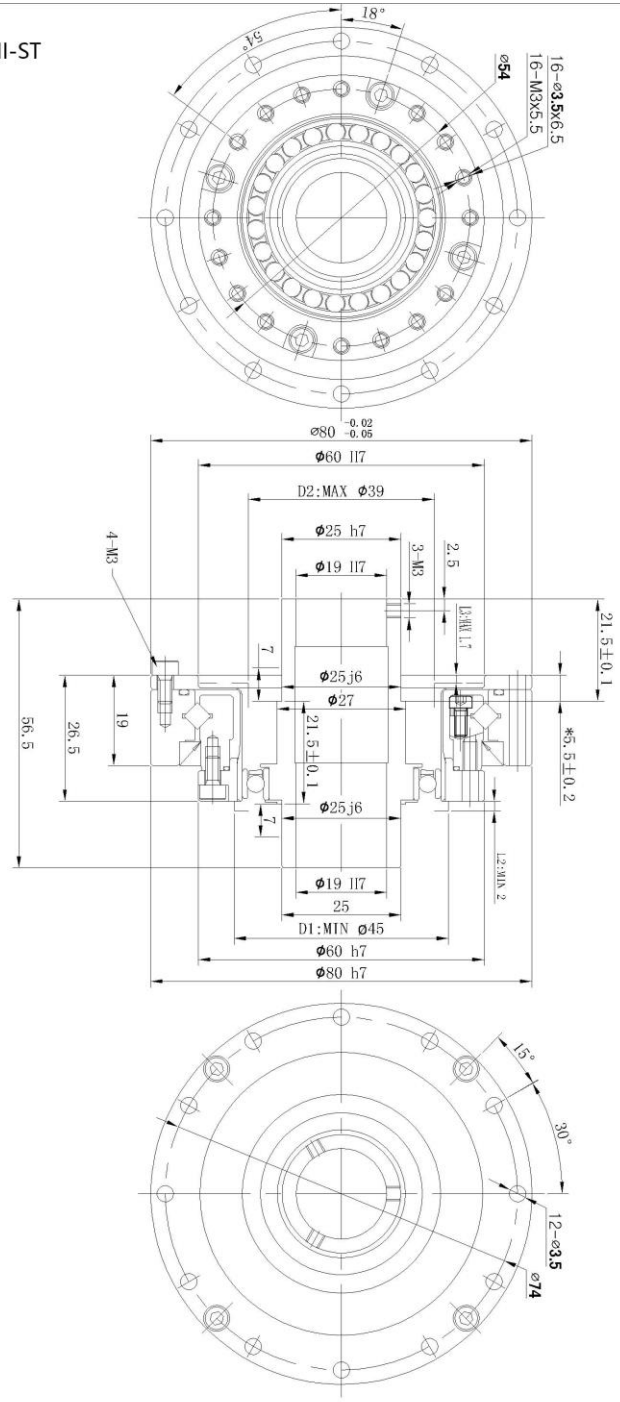


LHS-III Series Drawings

LHS-17-XXX-C-III

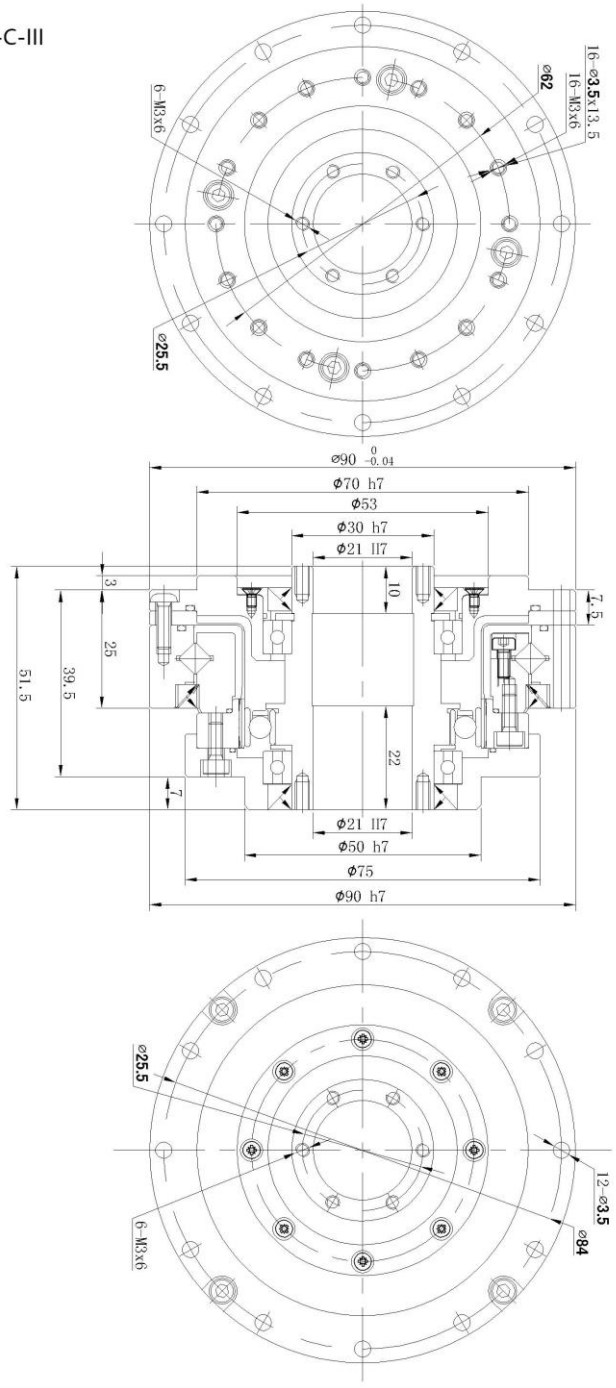


LHS-17-XXX-C-III-ST

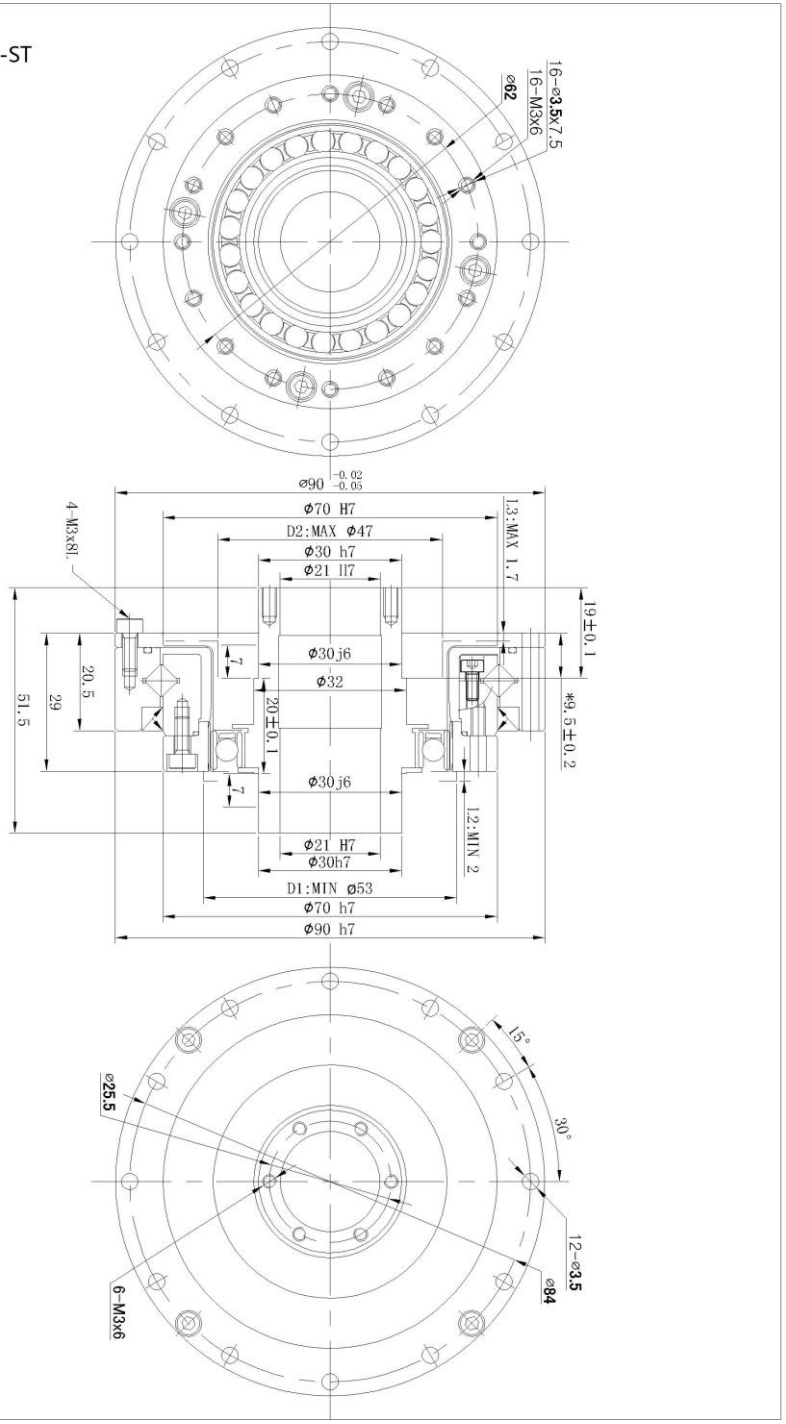


LHS-III Series Drawings

LHS-20-XXX-C-III

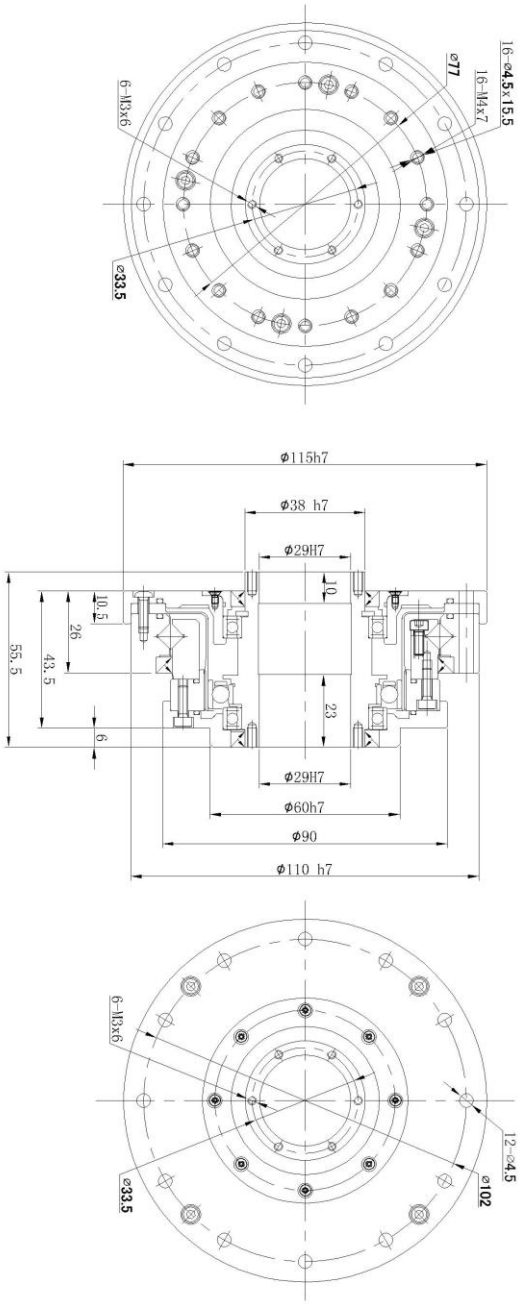


LHS-20-XXX-C-III-ST

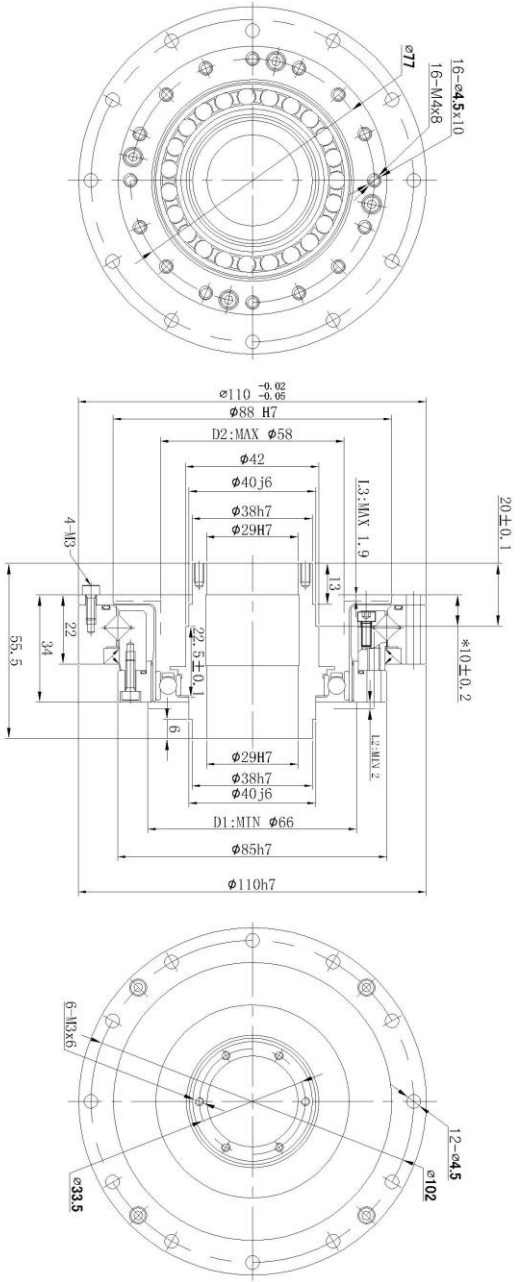


LHS-III Series Drawings

LHS-25-XXX-C-III

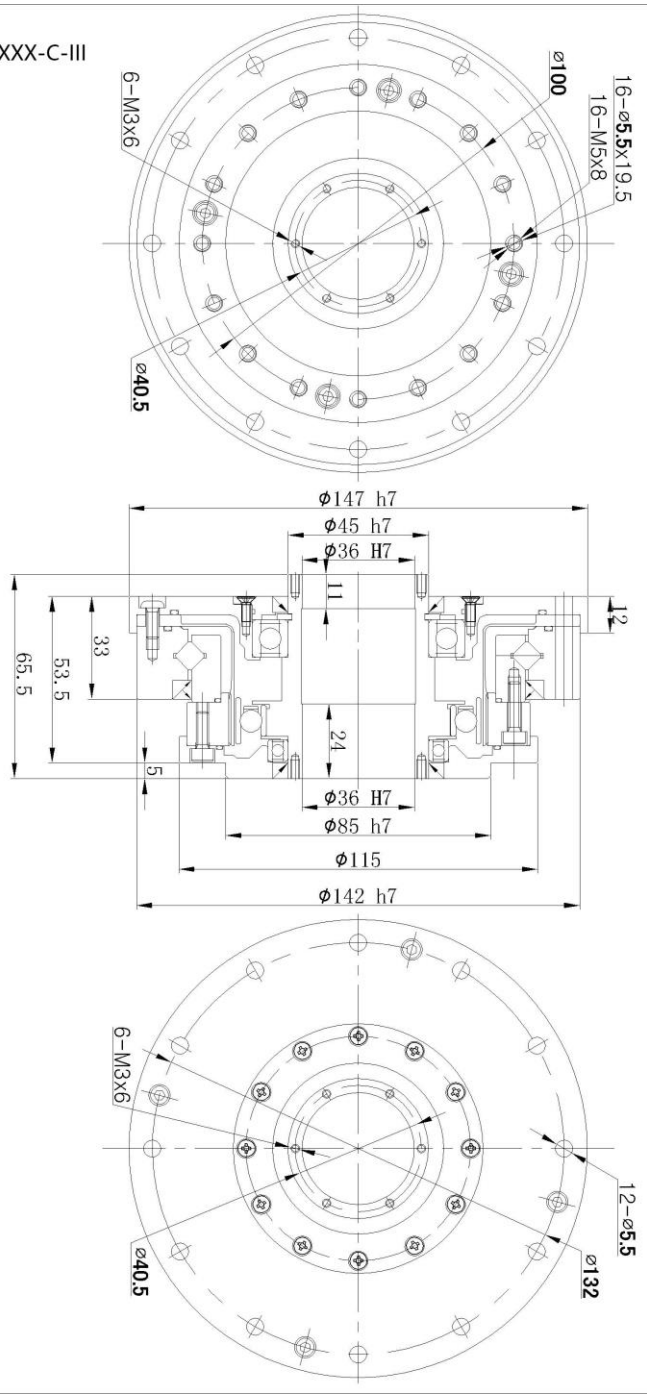


LHS-25-XXX-C-III-ST

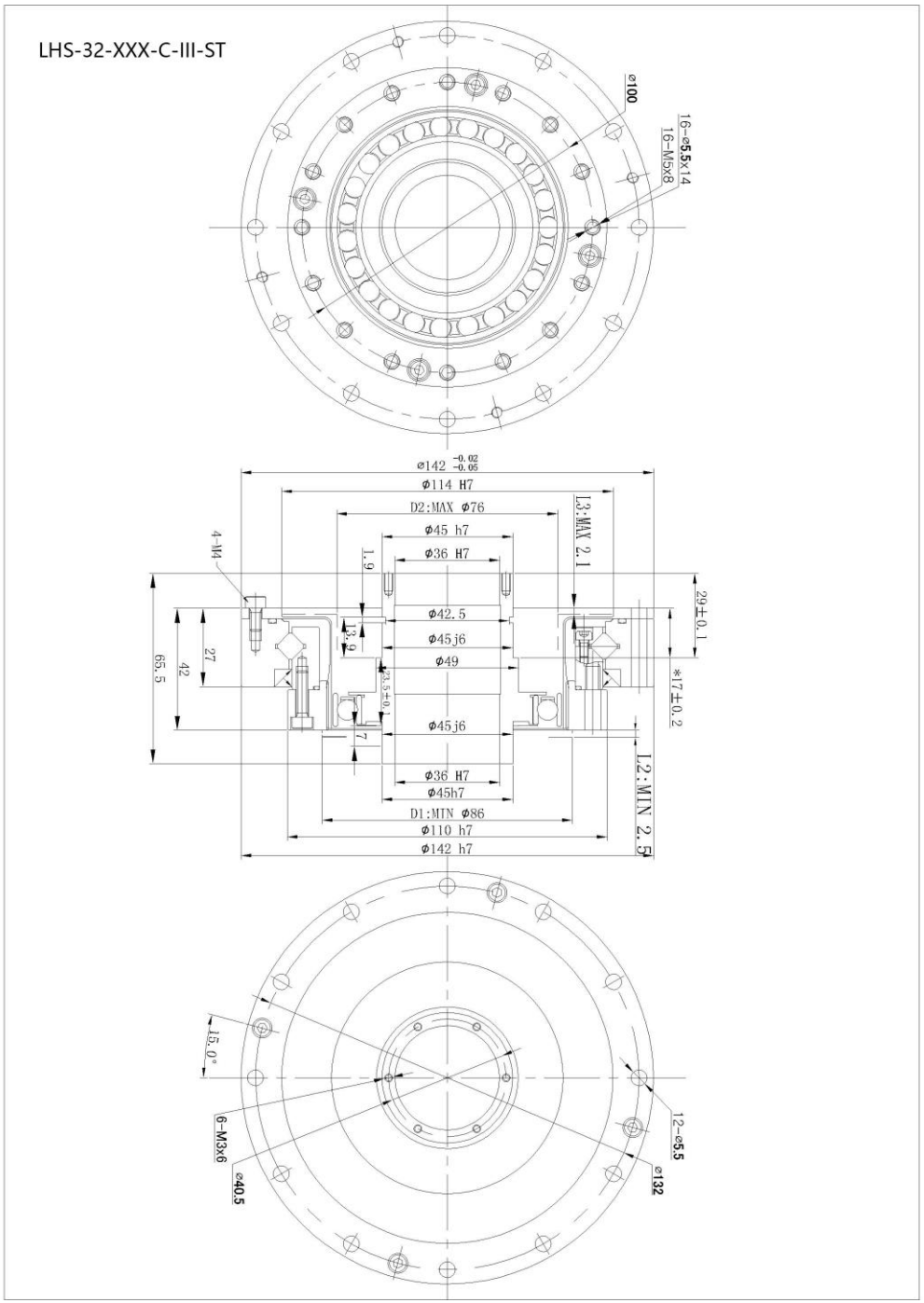


LHS-III Series Drawings

LHS-32-XXX-C-III

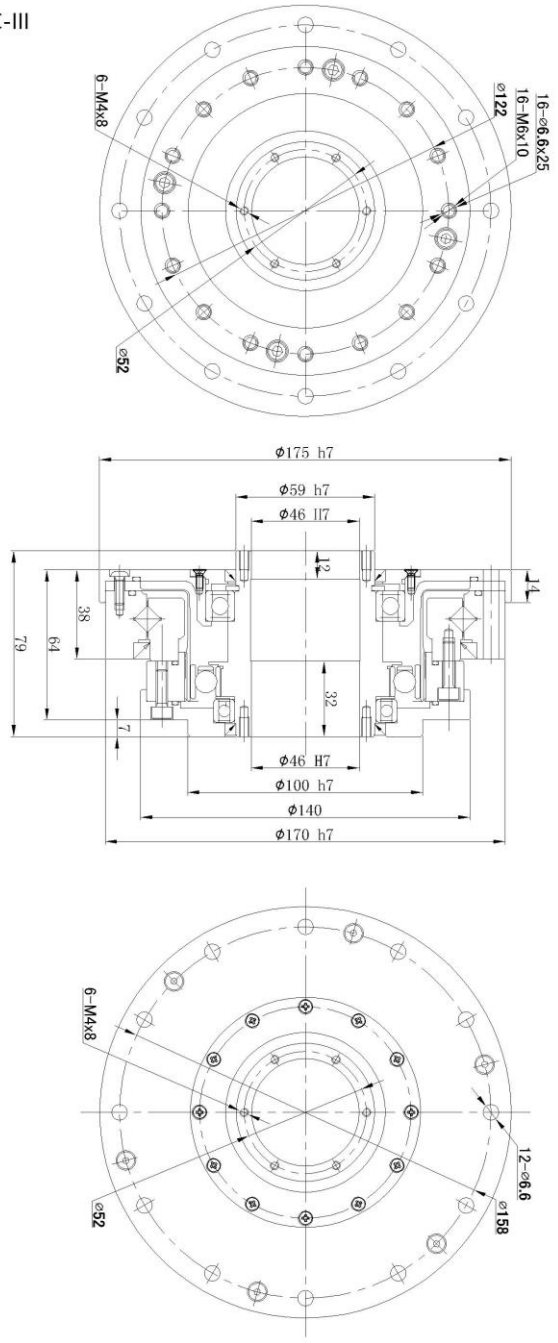


LHS-32-XXX-C-III-ST

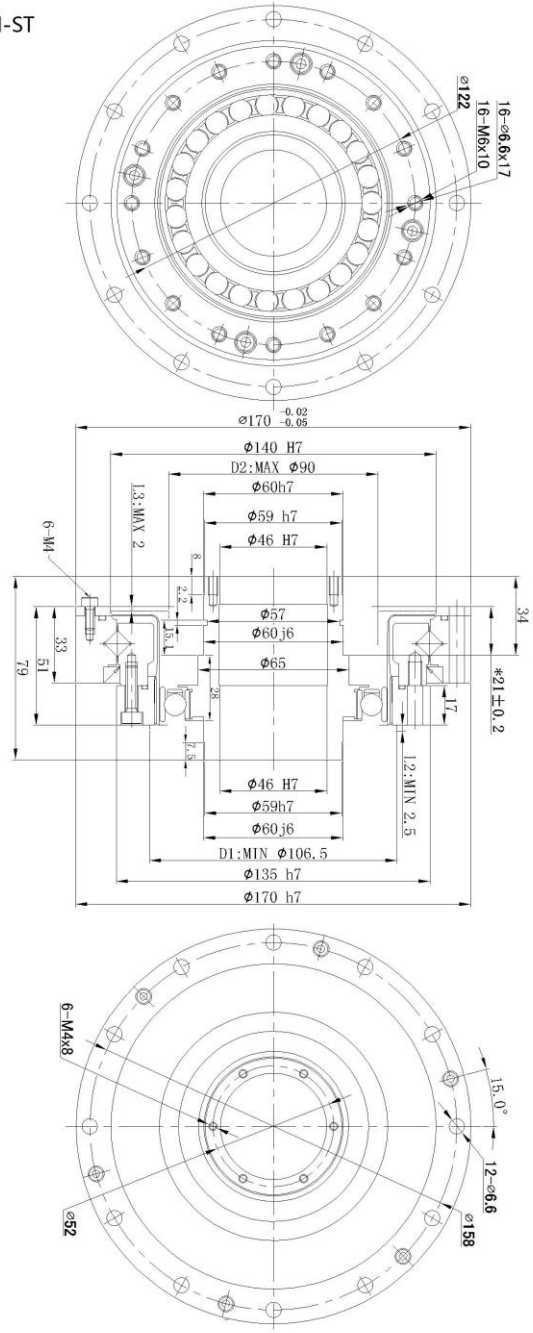


LHS-III Series Drawings

LHS-40-XXX-C-III



LHS-40-XXX-C-III-ST



LHS-CL-III series

For LHS-CL-III series, there is a large-aperture hollow shaft hole in the middle of the cam of their wave generator, and a supporting bearing designed inside reducer. Characterized by full-sealing structure and easy installation, the series are very suitable for the occasions where threading needs running through the center of reducer.

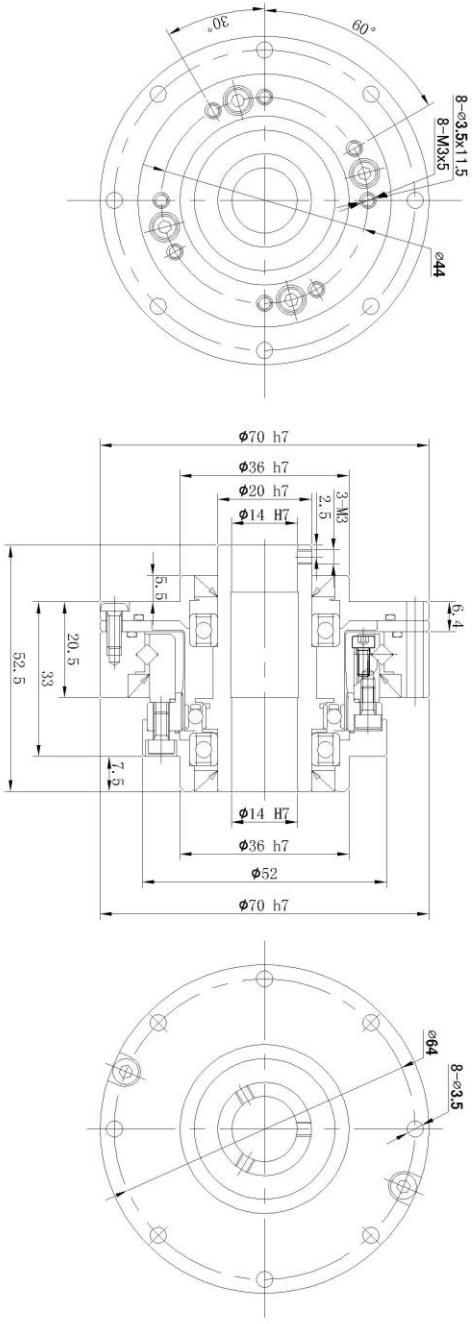
Parameter Table

Item / Model No	Reduction Ratio	Rated Torque at 2000r/min	Allowable Peak Torque at Start and Stop	Allowable Average Torque	Allowable Maximum Momentary Torque	Maximum Input Speed	Allowable Average Input Speed	Back lash	With Maximum Tension	Weight	Design Life
		Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	N	Kg	Hour
14	30	3.8	8.6	7.8	16	8000	3500	≤20	≤77	0.56	10000
	50	5.1	17	6.6	33			≤20			10000
	80	7.4	22	10.5	45			≤10			15000
	100	7.4	27	10.5	51			≤10			15000
17	30	8.4	15.2	11.5	29	7000	3500	≤20	≤92	0.80	10000
	50	15.2	32	25	66			≤20			10000
	80	21	41	26	83			≤10			15000
	100	23	51	37	104			≤10			15000
	120	23	51	37	82			≤10			15000
20	30	14	26	19	48	6000	3500	≤20	≤136	1.09	10000
	50	24	53	32	93			≤20			10000
	80	32	70	45	121			≤10			15000
	100	38	78	47	140			≤10			15000
	120	38	83	47	140			≤10			15000
	160	38	87	47	140			≤10			15000
25	30	26	48	36	90	5500	3500	≤20	≤147	1.70	10000
	50	37	93	52	177			≤20			10000
	80	60	130	83	242			≤10			15000
	100	64	149	103	270			≤10			15000
	120	64	159	103	289			≤10			15000
	160	64	167	103	298			≤10			15000
32	30	51	95	71	190	4500	3500	≤20	≤154	3.50	10000
	50	72	205	103	363			≤20			10000
	80	112	289	159	540			≤10			15000
	100	130	316	205	615			≤10			15000
	120	130	335	205	652			≤10			15000
	160	130	353	205	652			≤10			15000
40	50	130	382	186	652	4000	3000	≤20	≤294	6.35	10000
	80	196	493	270	931			≤10			15000
	100	252	540	353	1026			≤10			15000
	120	279	586	428	1121			≤10			15000
	160	279	615	428	1121			≤10			15000
50*	50	233	679	333	1358	3000	2500	≤20	≤373	12.0	10000
	80	353	894	493	1767			≤10			15000
	100	446	931	633	1957			≤10			15000
	120	502	1026	772	1957			≤10			15000
	160	502	1121	801	2328			≤10			15000
58*	80	678	1828	951	3026	3000	2200	≤10	≤1300	16.5	15000
	100	860	1964	1309	3927			≤10			15000
	120	921	2124	1470	4113			≤10			15000
	160	921	2272	1494	4236			≤10			15000

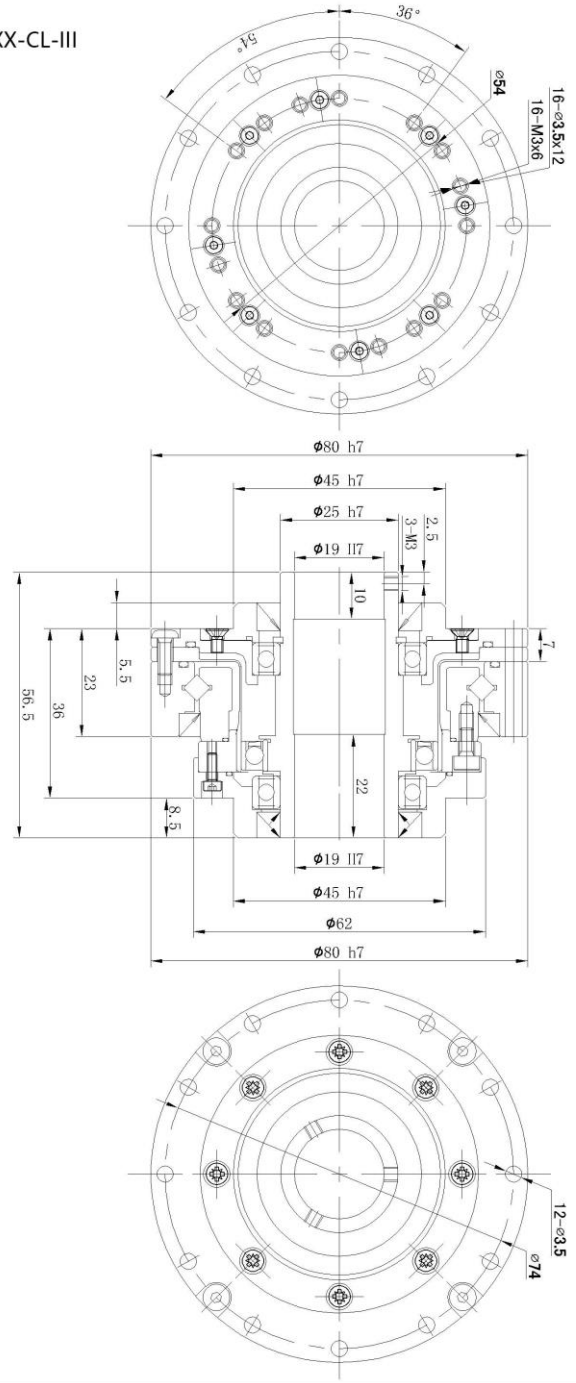
* Consult factory

LHS-CL-III Series Drawings

LHS-14-XXX-CL-III

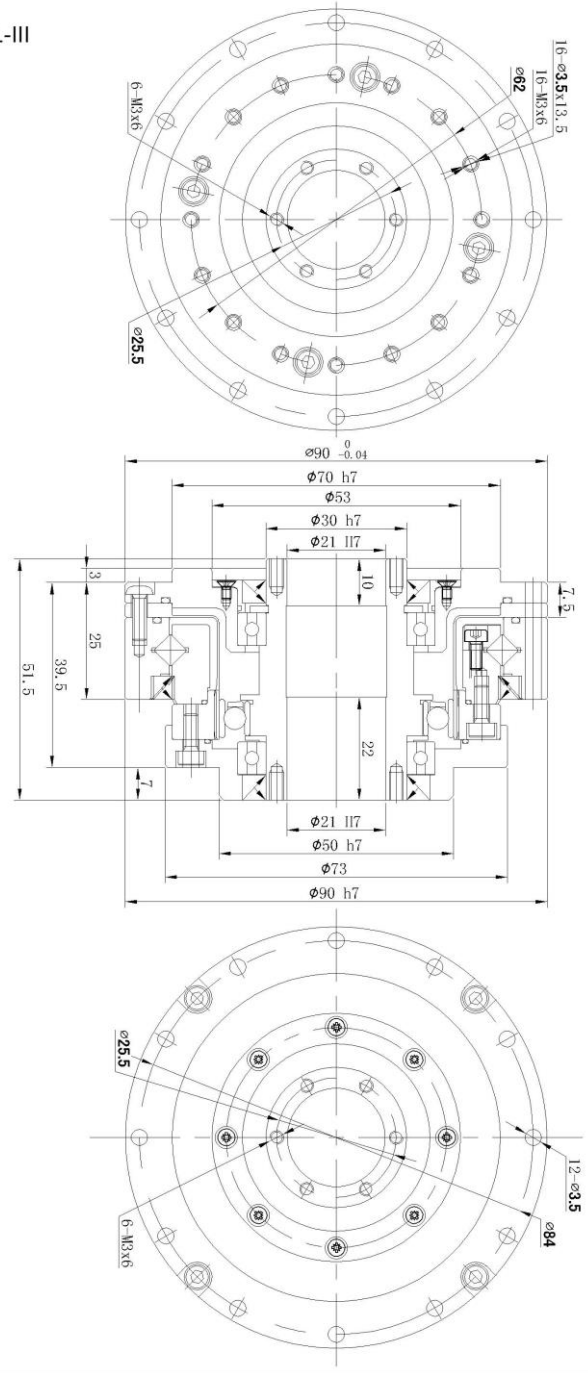


LHS-17-XXX-CL-III

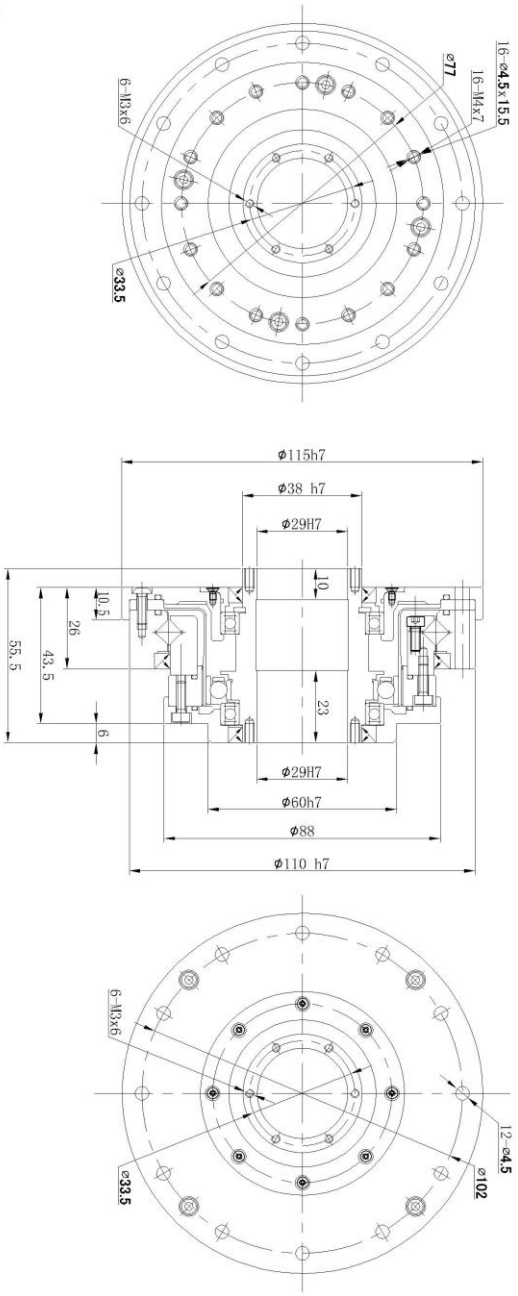


LHS-CL-III Series Drawings

LHS-20-XXX-CL-III

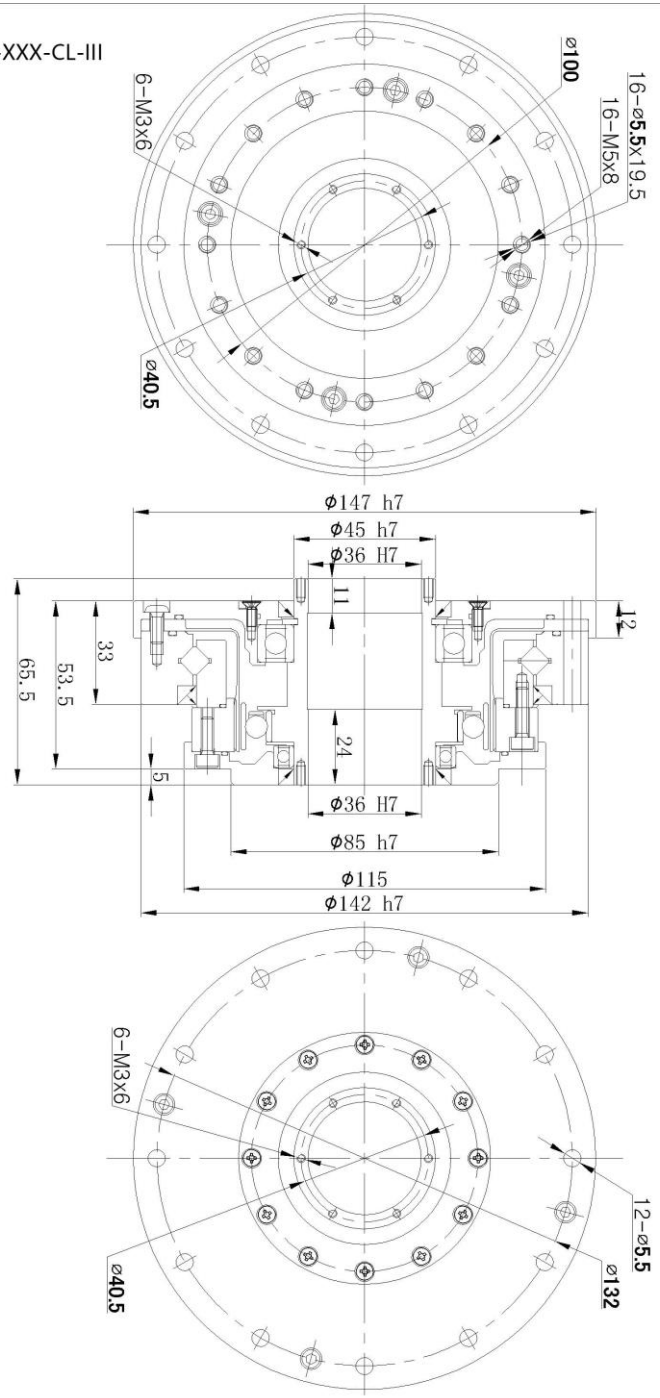


LHS-25-XXX-CL-III

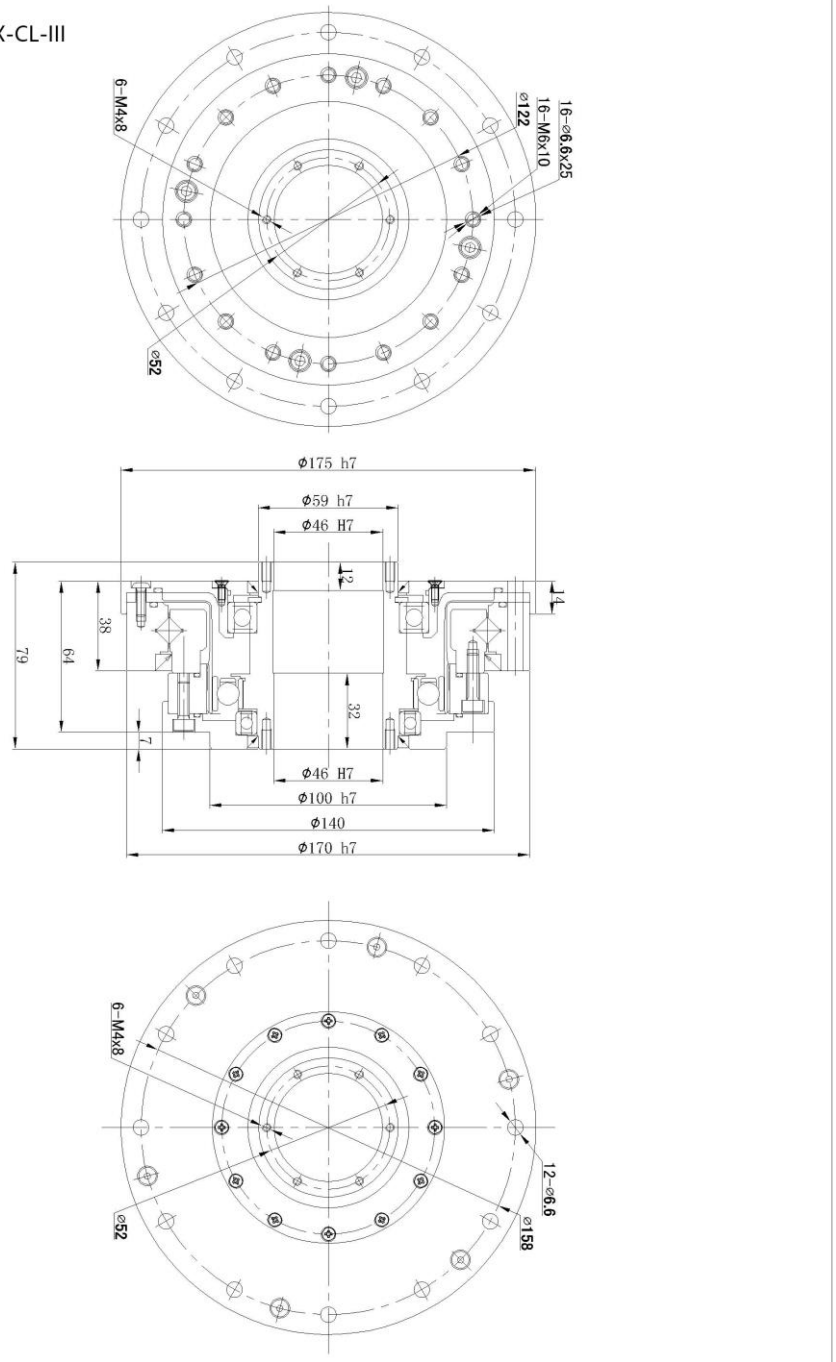


LHS-CL-III Series Drawings

LHS-32-XXX-CL-III



LHS-40-XXX-CL-III



LHS-IV series

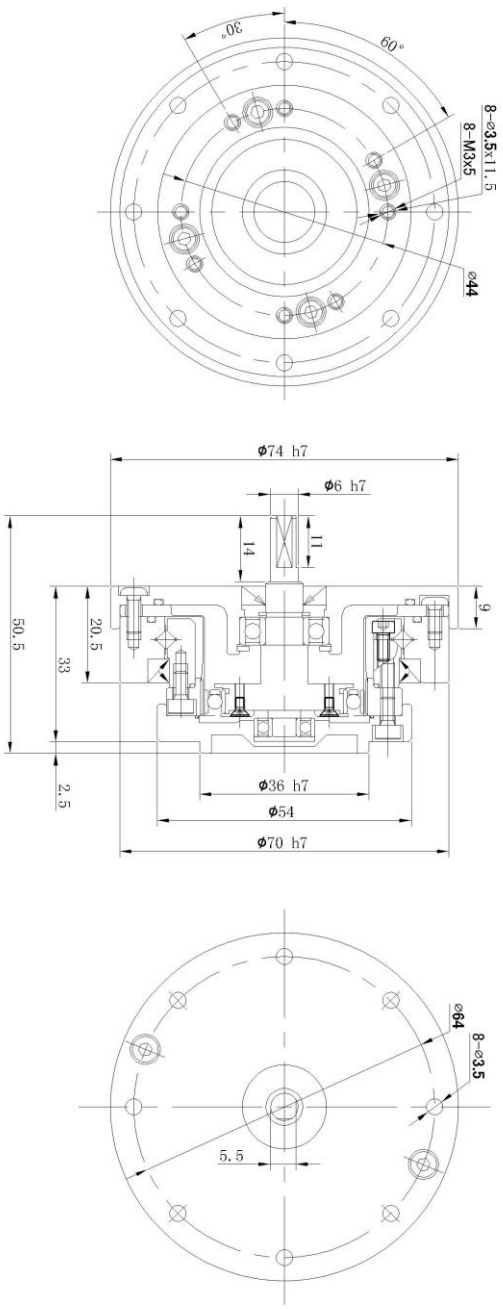
For LHS-IV series, the cam of their wave generator is provided with an input shaft; therefore, the series are very suitable for occasions where bevel gear or synchronous belt drive is needed at the input end.

Parameter Table

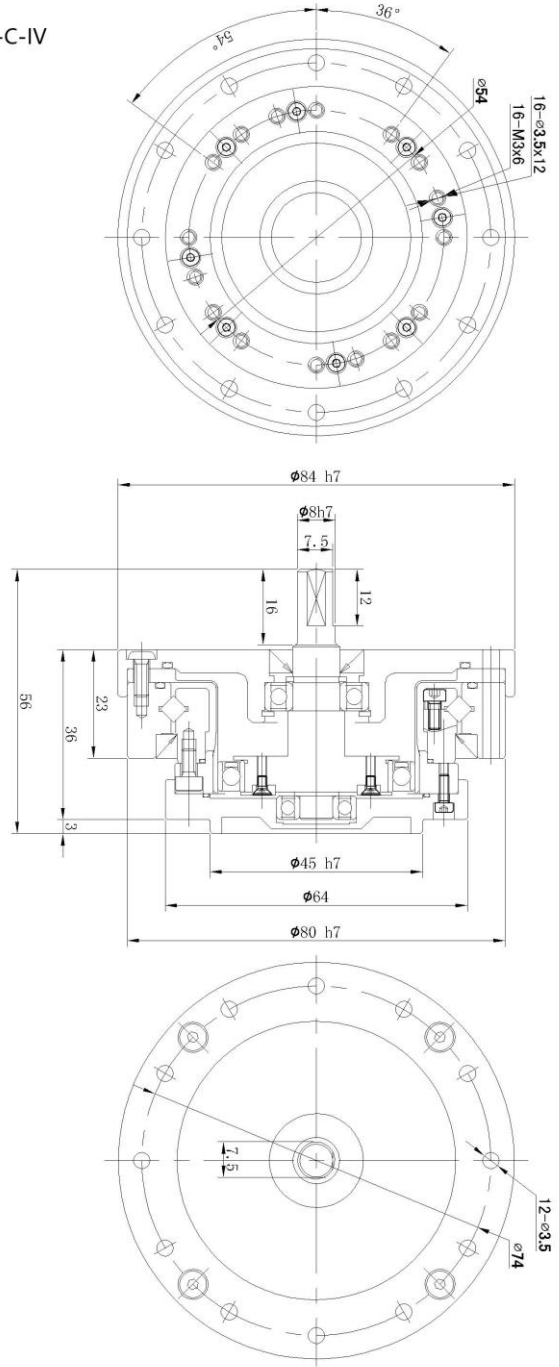
Item / Model No	Reduction Ratio	Rated Torque at 2000r/min	Allowable Peak Torque at Start and Stop	Allowable Average Torque	Allowable Maximum Momentary Torque	Maximum Input Speed	Allowable Average Input Speed	Back lash	With Maximum Tension	Weight	Design Life
		Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	N	Kg	Hour
14	30	3.8	8.6	7.8	16	8000	3500	≤20	≤26	0.65	10000
	50	5.1	17	6.6	33			≤20			10000
	80	7.4	22	10.5	45			≤10			15000
	100	7.4	27	10.5	51			≤10			15000
17	30	8.4	15.2	11.5	29	7000	3500	≤20	≤32	0.92	10000
	50	15.2	32	25	66			≤20			10000
	80	21	41	26	83			≤10			15000
	100	23	51	37	104			≤10			15000
	120	23	51	37	82			≤10			15000
20	30	14	26	19	48	6000	3500	≤20	≤58	1.36	10000
	50	24	53	32	93			≤20			10000
	80	32	70	45	121			≤10			15000
	100	38	78	47	140			≤10			15000
	120	38	83	47	140			≤10			15000
	160	38	87	47	140			≤10			15000
25	30	26	48	36	90	5500	3500	≤20	≤71	2.05	10000
	50	37	93	52	177			≤20			10000
	80	60	130	83	242			≤10			15000
	100	64	149	103	270			≤10			15000
	120	64	159	103	289			≤10			15000
	160	64	167	103	298			≤10			15000
32	30	51	95	71	190	4500	3500	≤20	≤114	4.35	10000
	50	72	205	103	363			≤20			10000
	80	112	289	159	540			≤10			15000
	100	130	316	205	615			≤10			15000
	120	130	335	205	652			≤10			15000
	160	130	353	205	652			≤10			15000
40	50	130	382	186	652	4000	3000	≤20	≤294	6.45	10000
	80	196	493	270	931			≤10			15000
	100	252	540	353	1026			≤10			15000
	120	279	586	428	1121			≤10			15000
	160	279	615	428	1121			≤10			15000

LHS-IV Series Drawings

LHS-14-XXX-C-IV

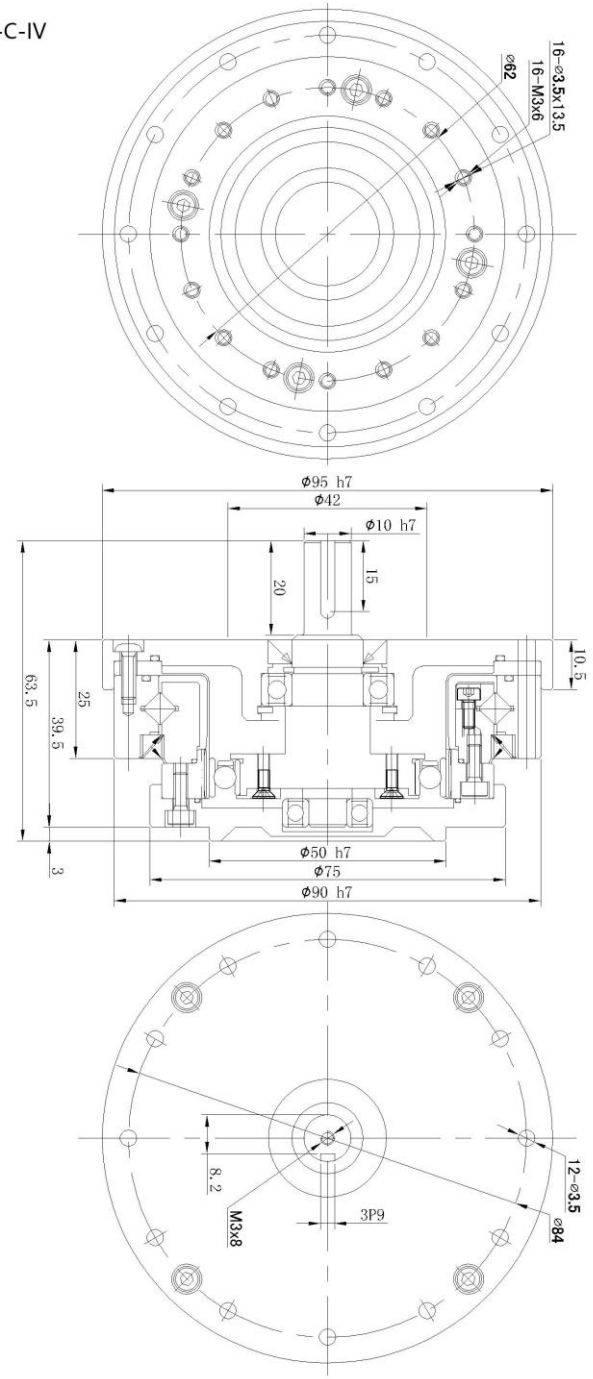


LHS-17-XXX-C-IV

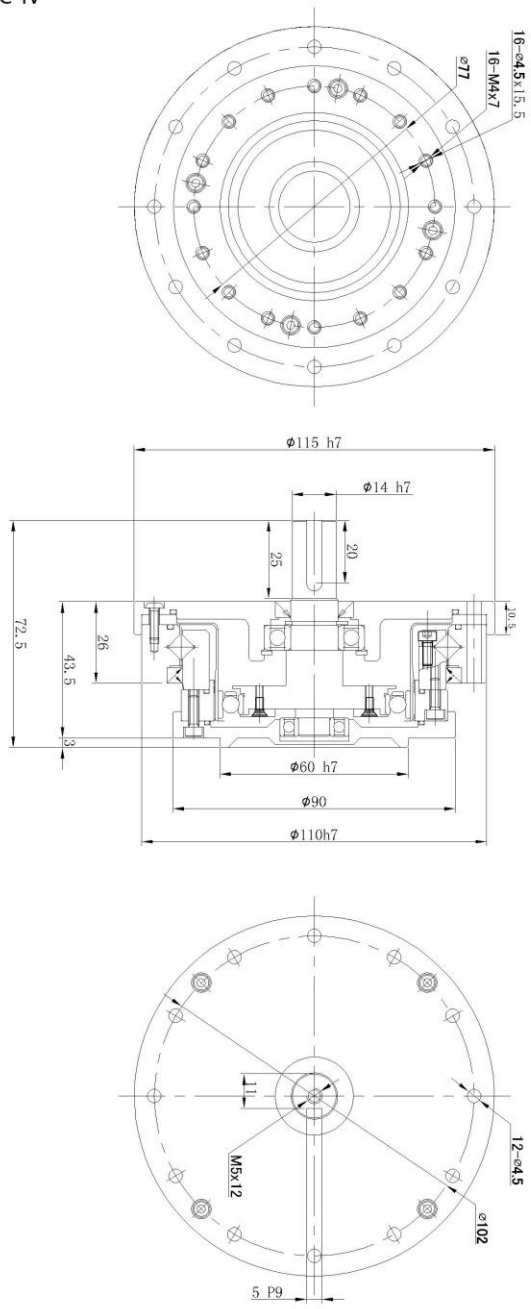


LHS-IV Series Drawings

LHS-20-XXX-C-IV

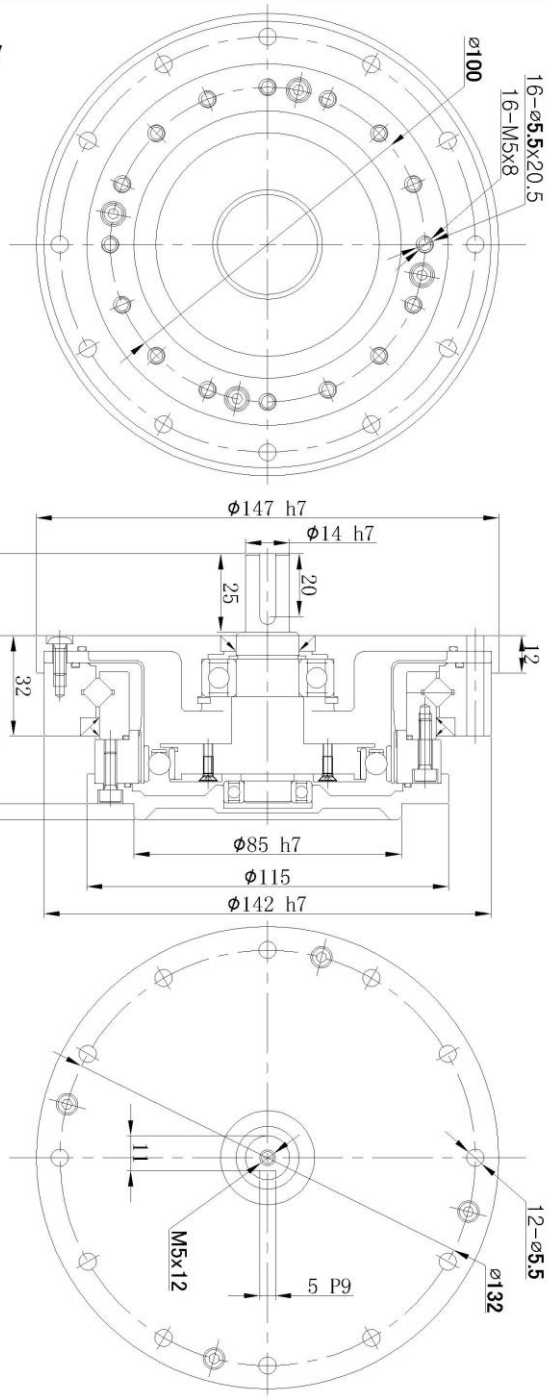


LHS-25-XXX-C-IV



LHS-IV Series Drawings

LHS-32-XXX-C-IV



LHS-40-XXX-C-IV