

Cup Type Harmonic Drive Rated Parameter :

Model	Reduction ratio	Rated torque at 2000r/min input		Permissible peak torque at start and stop		Permissible maximum value for average load torque		Permissible maximum momentary torque		Permissible maximum input rotational speed (Grease)	Permissible average input rotational speed (Grease)	Backlash	Desian life
		Nm	kgfm	Nm	kgfm	Nm	kgfm	Nm	kgfm	r/min	r/min	Arc Sec	Hour
14	50	5.4	0.55	18	1.8	6.9	0.70	35	3.6	8500	3500	≤20	10000
	80	7.8	0.80	23	2.4	11	1.1	47	4.8				15000
	100	7.8	0.80	28	2.9	11	1.1	54	5.5				15000
	120	7.8	0.80	28	2.9	11	1.1	54	5.5				15000
17	50	16	1.6	34	3.5	26	2.6	70	7.1	7300	3500	≤20	10000
	80	22	2.2	43	4.4	27	2.7	87	8.9				15000
	100	24	2.4	54	5.5	39	4.0	108	11				15000
	120	24	2.4	54	5.5	39	4.0	86	8.8				15000
20	50	25	2.5	56	5.7	34	3.5	98	10	6500	3500	≤20	10000
	80	34	3.5	74	7.5	47	4.8	127	13				15000
	100	40	4.1	82	8.4	49	5.0	147	15				15000
	120	40	4.1	87	8.9	49	5.0	147	15				15000
	160	40	4.1	92	9.4	49	5.0	147	15				15000
25	50	39	4.0	98	10	55	5.6	186	19	5600	3500	≤20	10000
	80	63	6.4	137	14	87	8.9	255	26				15000
	100	67	6.8	157	16	108	11	284	29				15000
	120	67	6.8	167	17	108	11	304	31				15000
32	50	76	7.8	216	22	108	11	382	39	4800	3500	≤20	10000
	80	118	12	304	31	167	17	568	58				15000
	100	137	14	333	34	216	22	647	66				15000
	120	137	14	353	36	216	22	686	70				15000
40	50	137	14	402	41	196	20	686	70	4000	3000	≤20	10000
	80	206	21	519	53	284	29	980	100				15000
	100	265	27	568	58	372	35	1080	110				15000
	120	294	30	617	63	451	46	1180	120				15000

Cup Type Harmonic Drive Specification

Each product is assembled with precise cross roller bearing for supporting external loading(Output flange).

Type	Basic rated load				Allowable static moment Mc		Weight
	Basic rated dynamic load Cr		Basic rated static load Cr				
	KN	kgf	KN	kgf	Nm	Kgfm	kg
14	4.7	480	6.07	620	41	4.2	0.22
17	5.3	540	7.55	770	64	6.5	0.3
20	5.8	590	9.0	920	91	9.3	0.38
25	9.6	980	15.1	1540	156	16	0.6
32	15	1530	25.0	2550	313	32	1.1

※Basic rated dynamic load refers to static radial load that makes dynamic rated life of bearing reach up to 1 million rotations.

※Basic rated static load refers to static load that exerts a certain level of contact stress(4K/mm²) on the central location between rotor of bearing maximum load and contact part of pathway.

※Allowable static moment refers to the value of the maximum torque exerting on output bearing, within the scope of which, it's workable and the basic performance is possible.

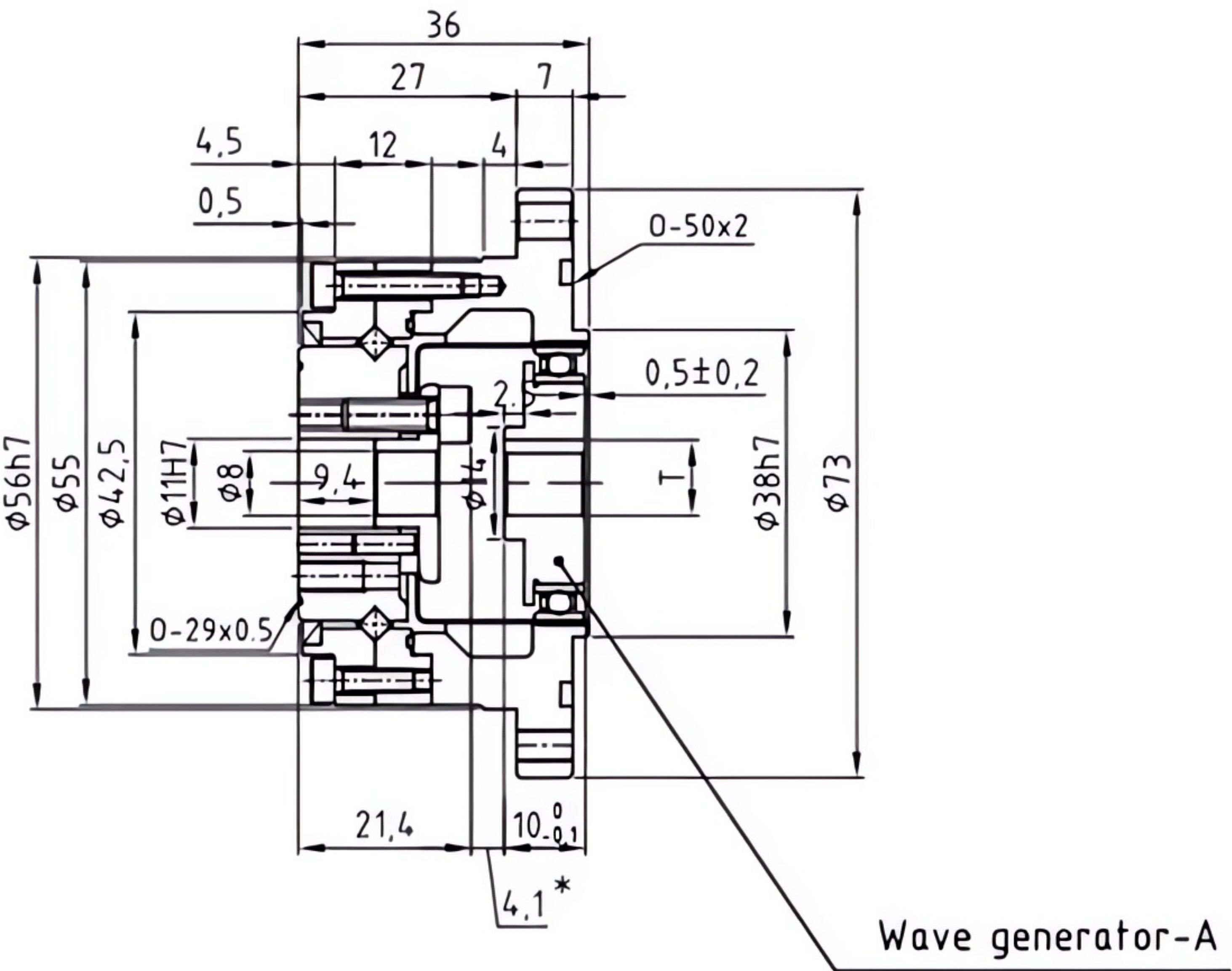
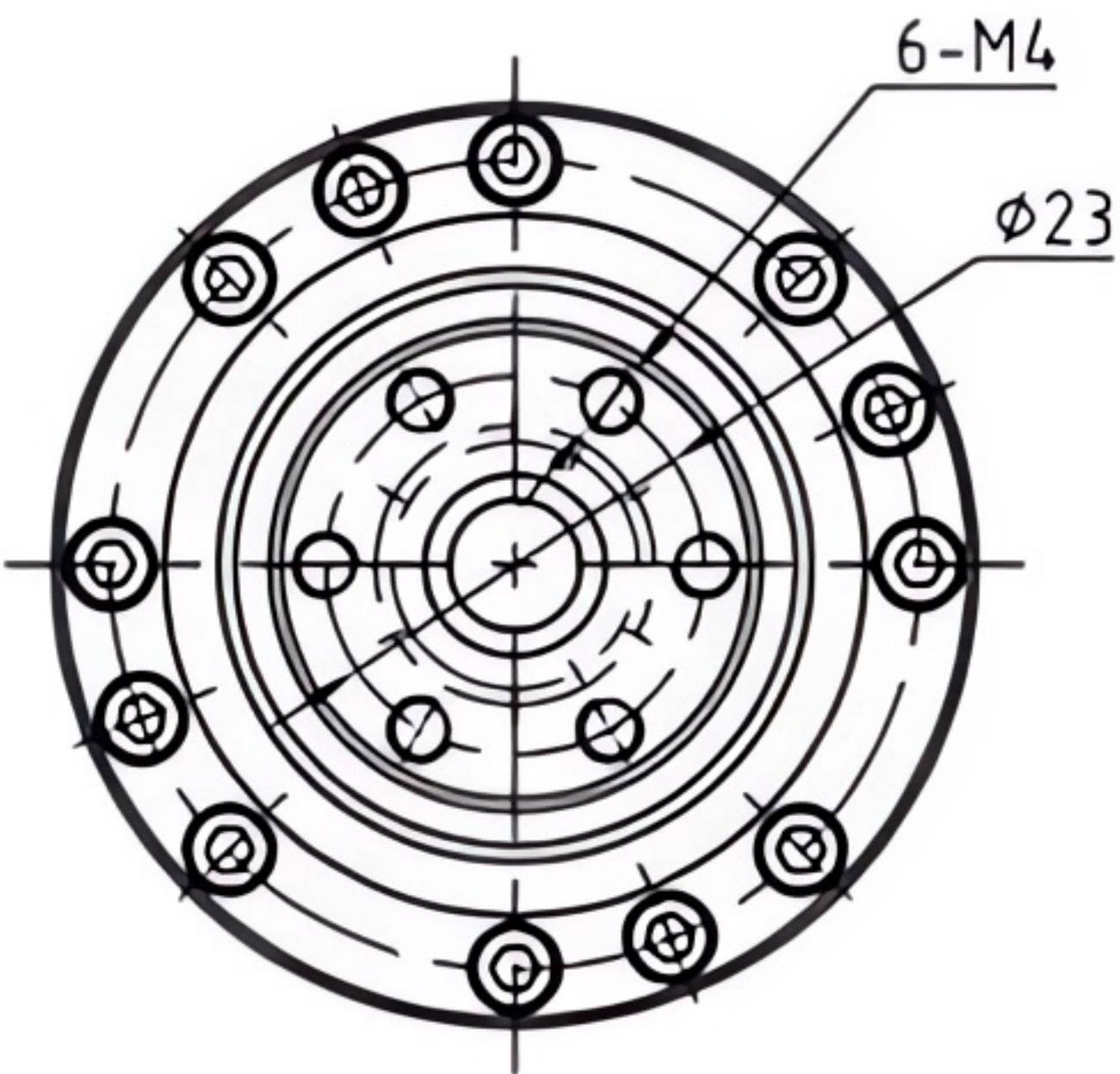
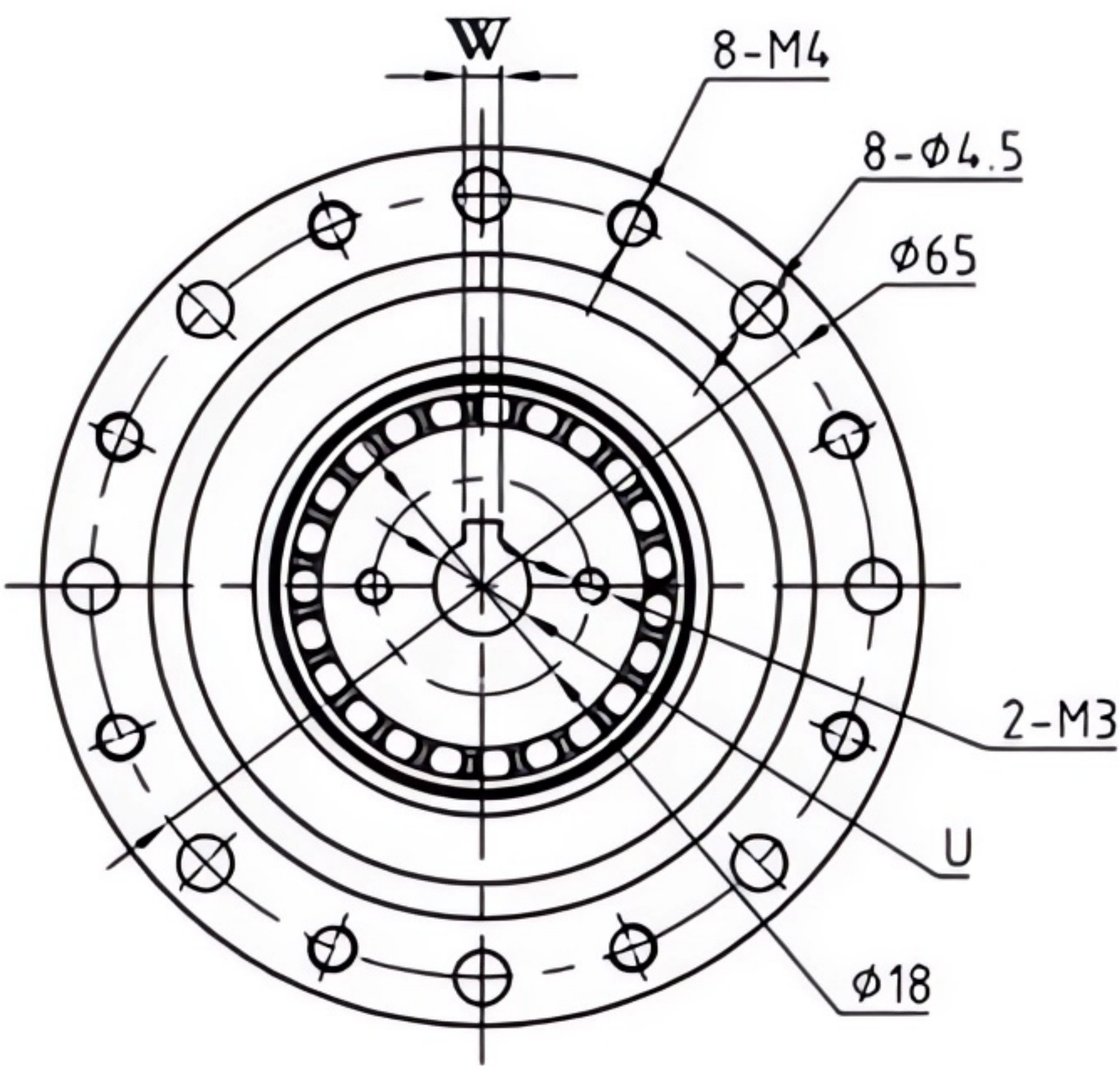
Cup Type Harmonic Drive Starting torque unit: cNm

型号 Type	11	14	17	20	25	32
减速比 Reduction ratio						
50	2.0	4.1	6.1	7.8	15	31
80	1.8	2.8	4	4.9	9.2	19
100	1.5	2.5	3.4	4.3	8	18
120	-	2.3	3.1	3.8	7.3	15
160	-	-	-	3.3	-	-

Cup Type Harmonic Drive Moment load

Model	Design value	Permissible value at start and stop	Instant permissible value
HCS/HCN/HCG-14	M b di 20Nm	M b peak 40Nm	M b max 80Nm
	F t di 180N	F t peak 320N	F t max 560N
	F a di 180N	F a peak 320N	F a max 560N
HCS/HCN/HCG-17	M b di 30Nm	M b peak 60Nm	M b max 120Nm
	F t di 230N	F t peak 400N	F t max 700N
	F a di 230N	F a peak 400N	F a max 700N
HCS/HCN/HCG-20	M b di 42Nm	M b peak 80Nm	M b max 168Nm
	F t di 270N	F t peak 480N	F t max 830N
	F a di 270N	F a peak 480N	F a max 830N
HCS/HCN/HCG-25	M b di 80Nm	M b peak 160Nm	M b max 313Nm
	F t di 440N	F t peak 770N	F t max 1320N
	F a di 440N	F a peak 770N	F a max 1320N
HCS/HCN/HCG-32	M b di 220Nm	M b peak 440Nm	M b max 890Nm
	F t di 900N	F t peak 1600N	F t max 2700N
	F a di 900N	F a peak 1600N	F a max 2700N

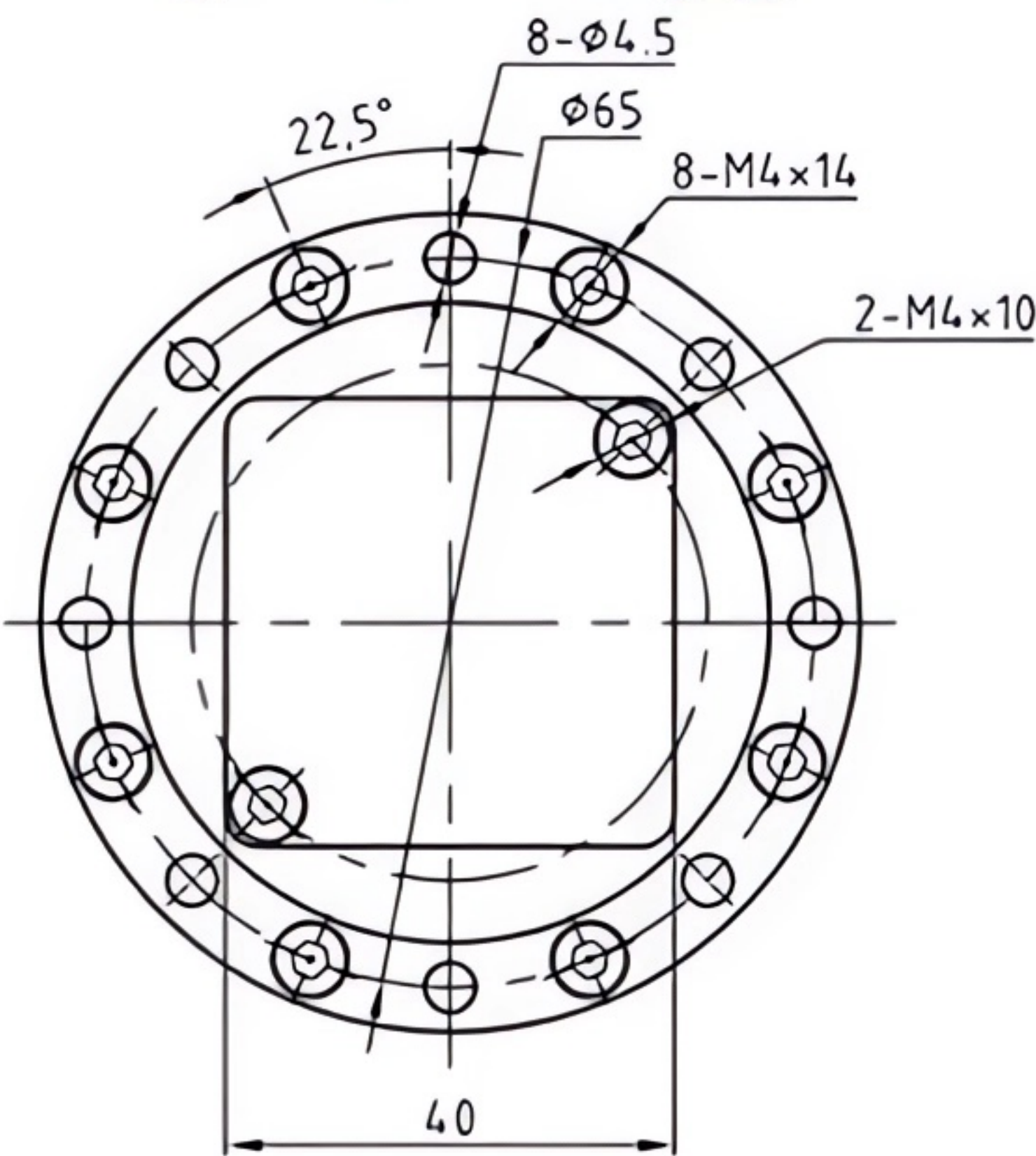
HCS14-I Harmonic Reducer



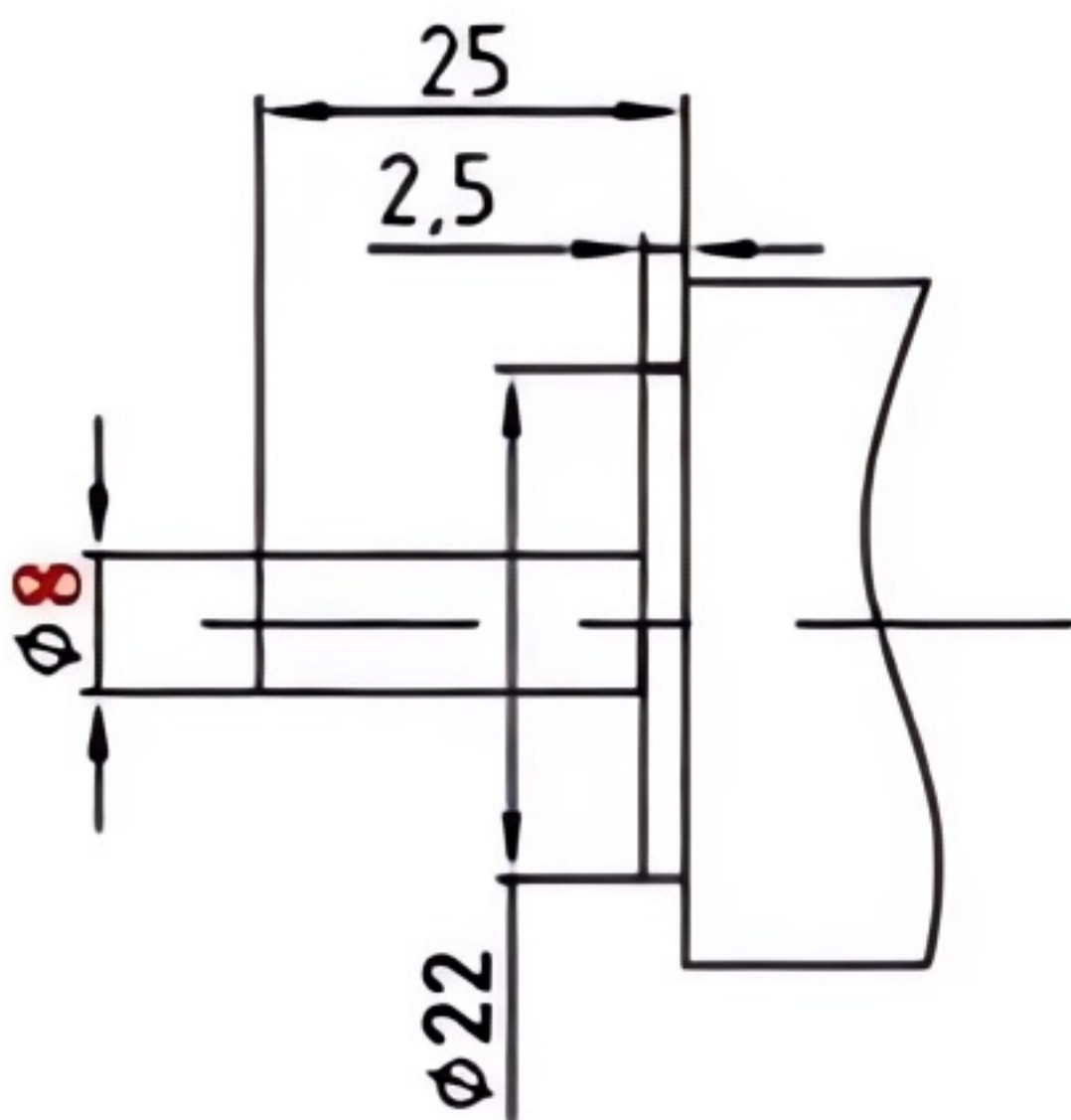
型号/MODEL	U	T	W
Wave generator-A φ8	φ8H7	9.4 ^{+0.1} / ₀	3P9/JS9

Same model as Hamonic CSG-14-2UH

Motor flange mounting plate

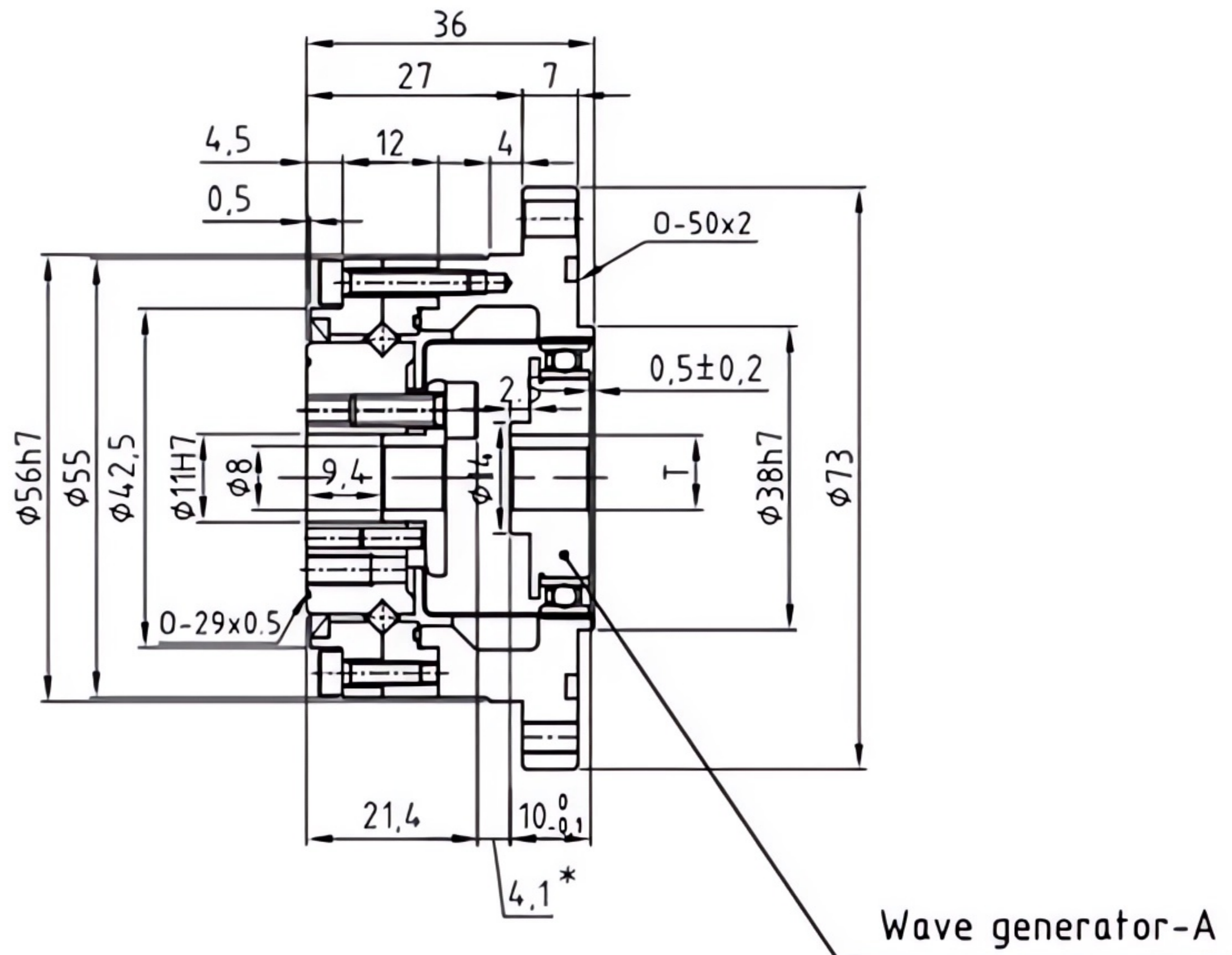
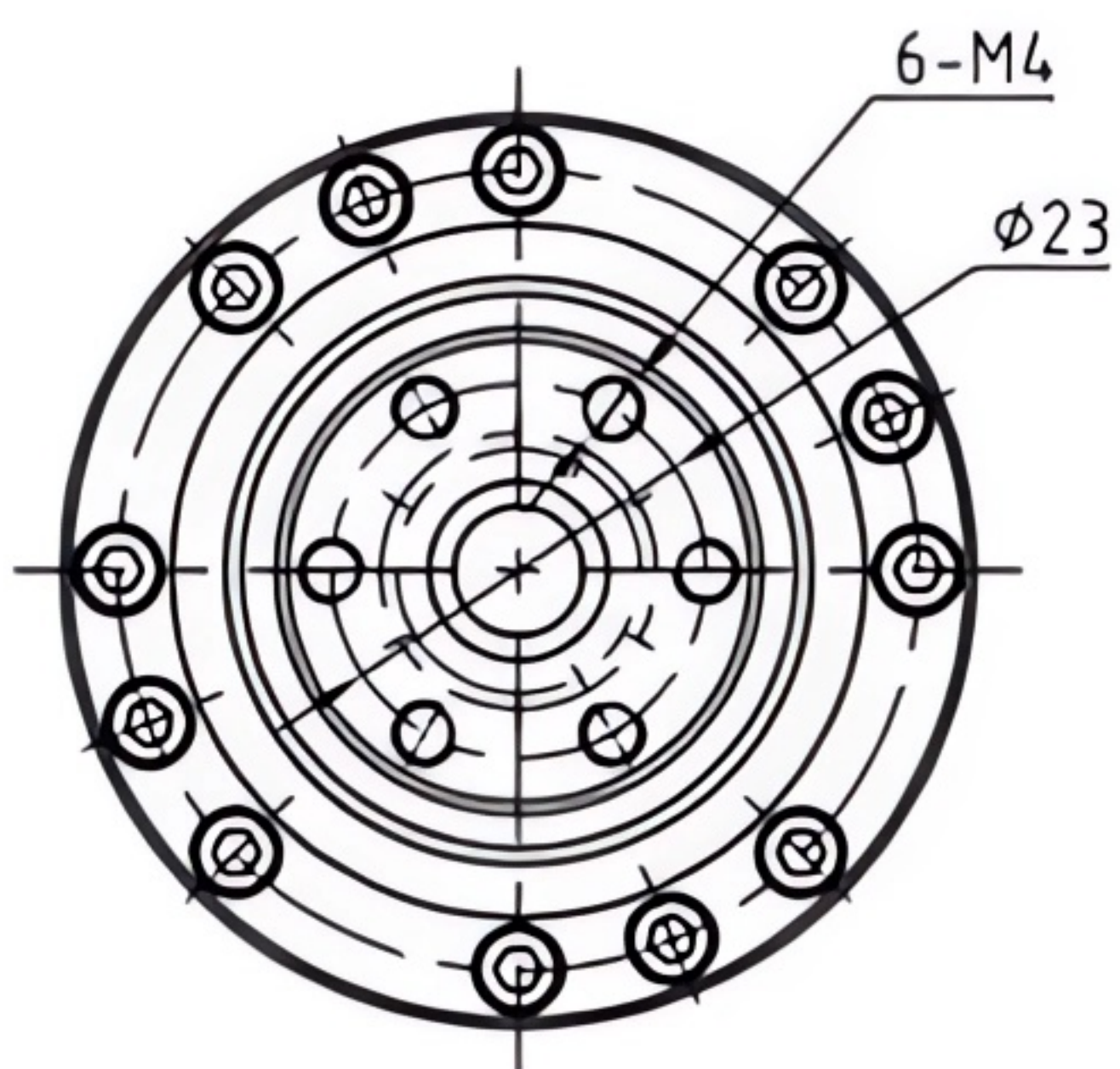
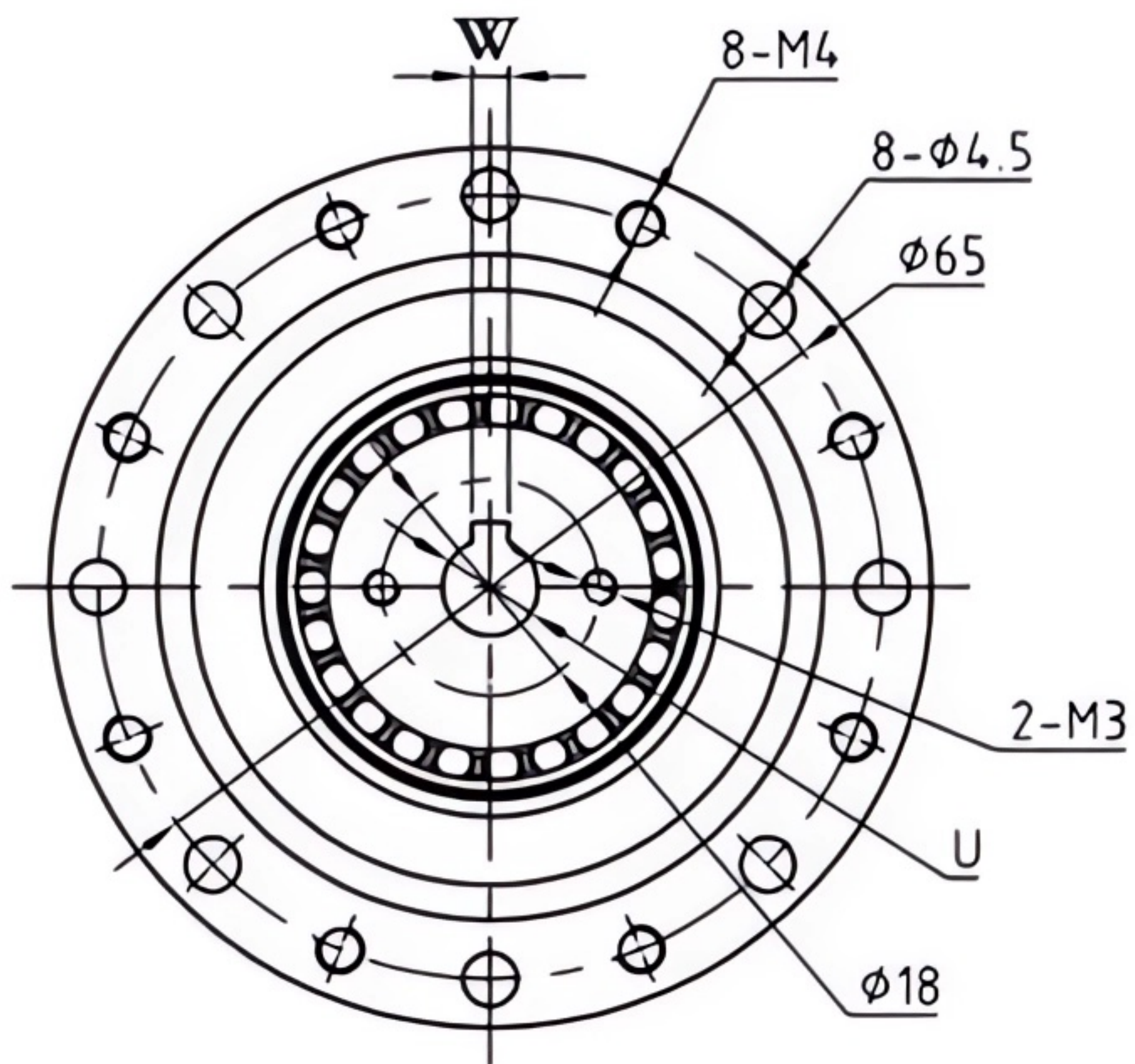


Adapted motor size



For Nema 17 42mm
Flange Stepper Motor

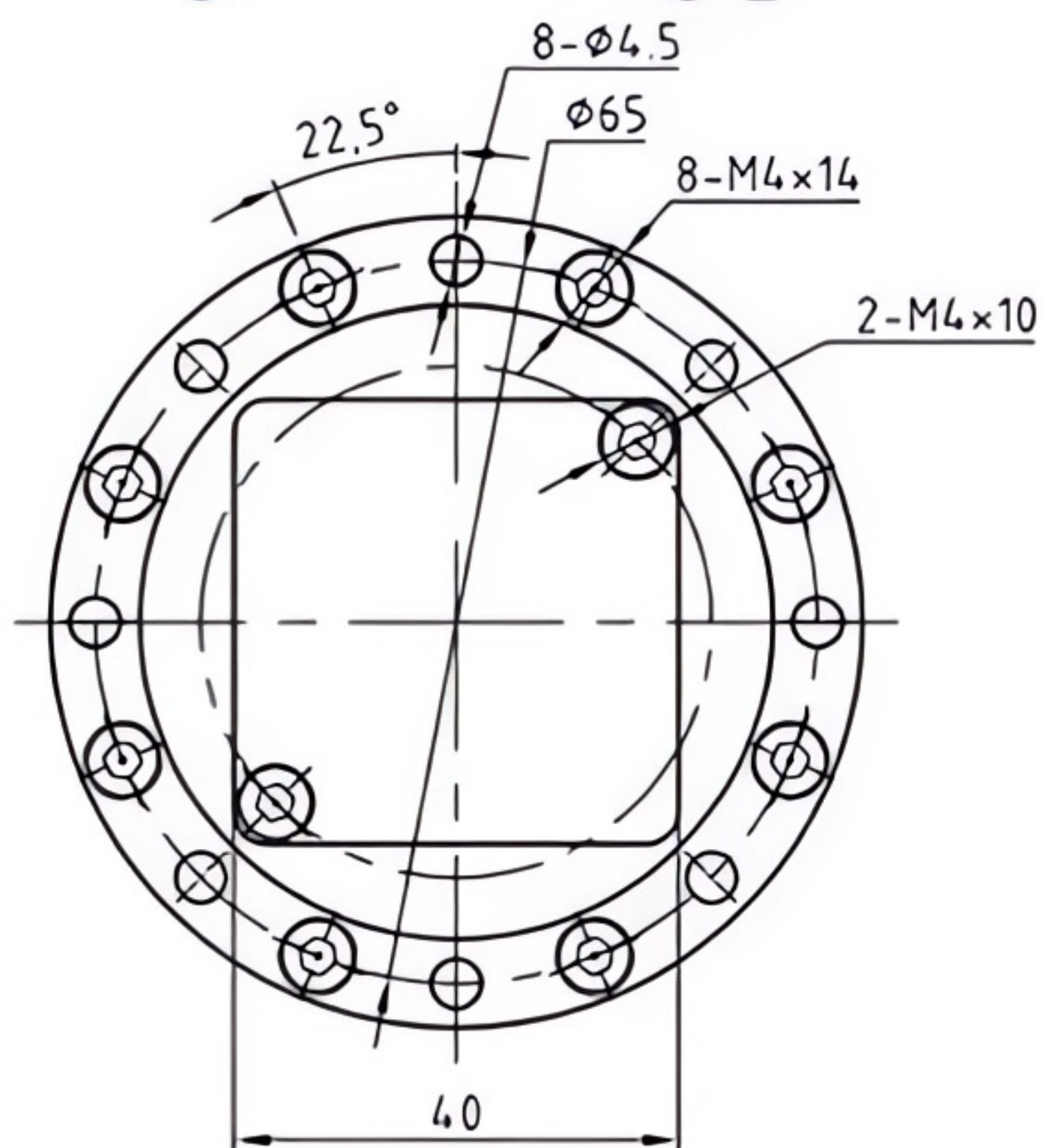
HCS14-I Harmonic Reducer



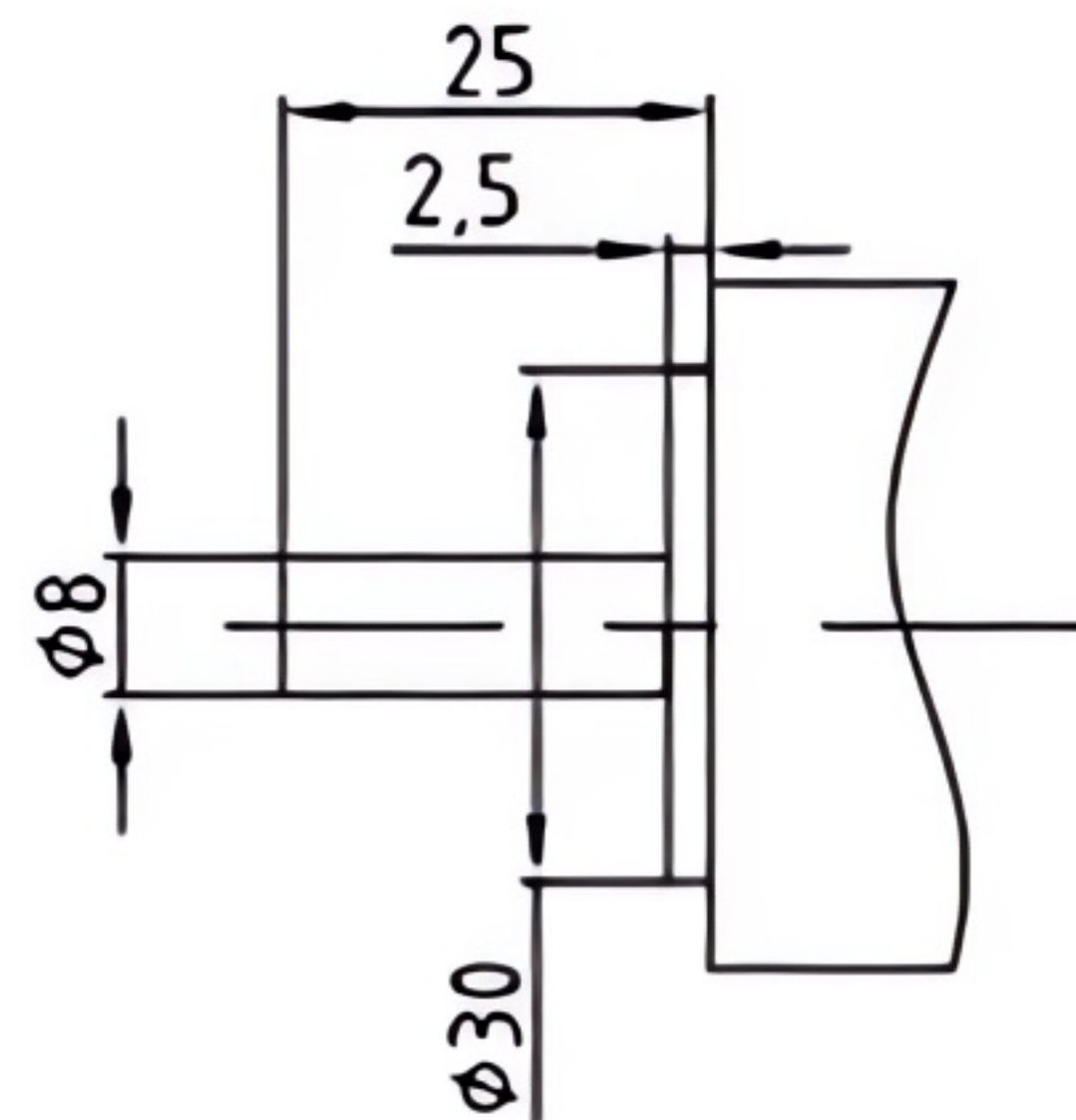
型号/MODEL	U	T	W
Wave generator-A $\phi 8$	$\phi 8H7$	$9.4^{+0.1}_0$	3P9/JS9

Same model as Hamonic CSG-14-2UH

Motor flange mounting plate

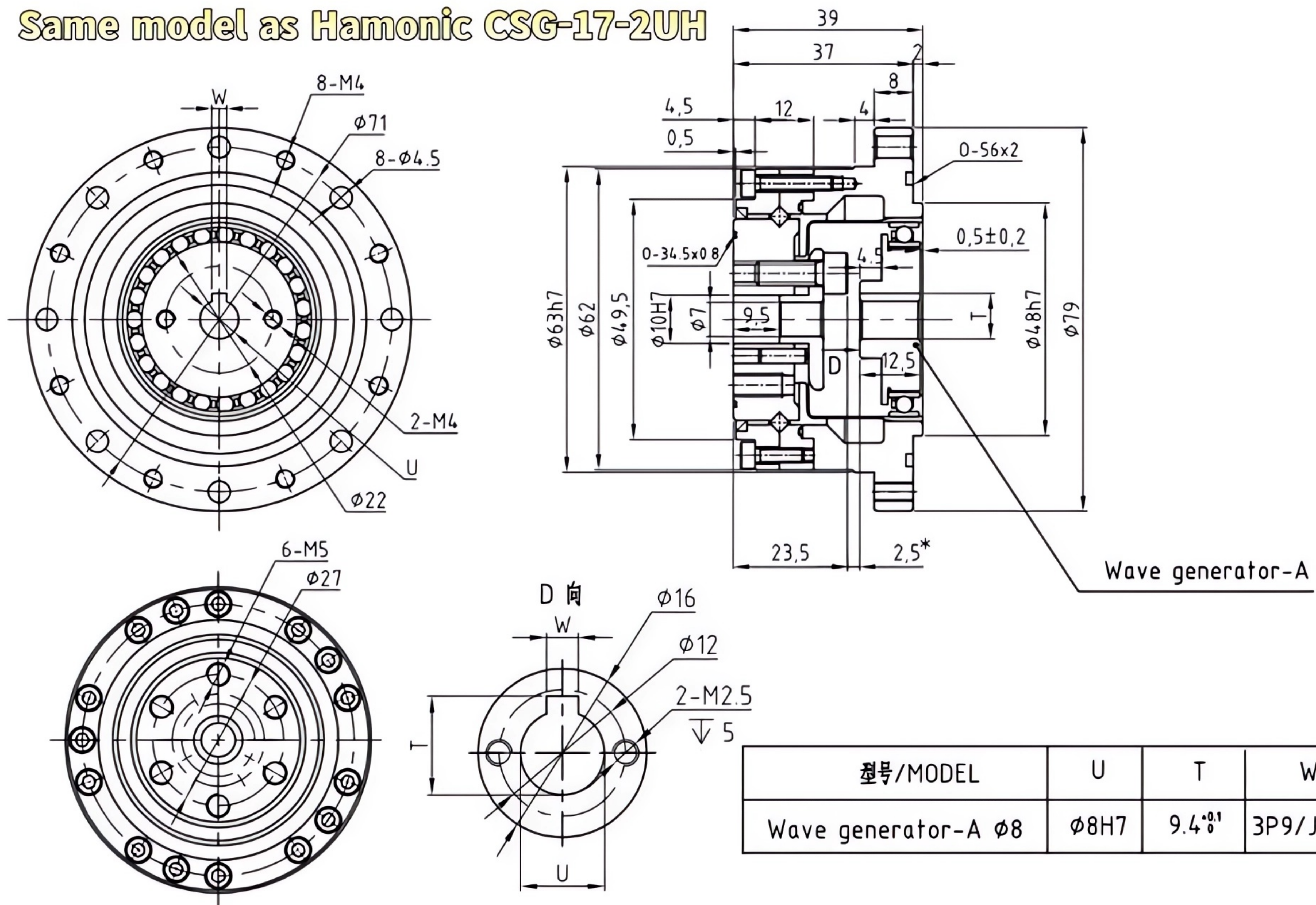


Adapted motor size

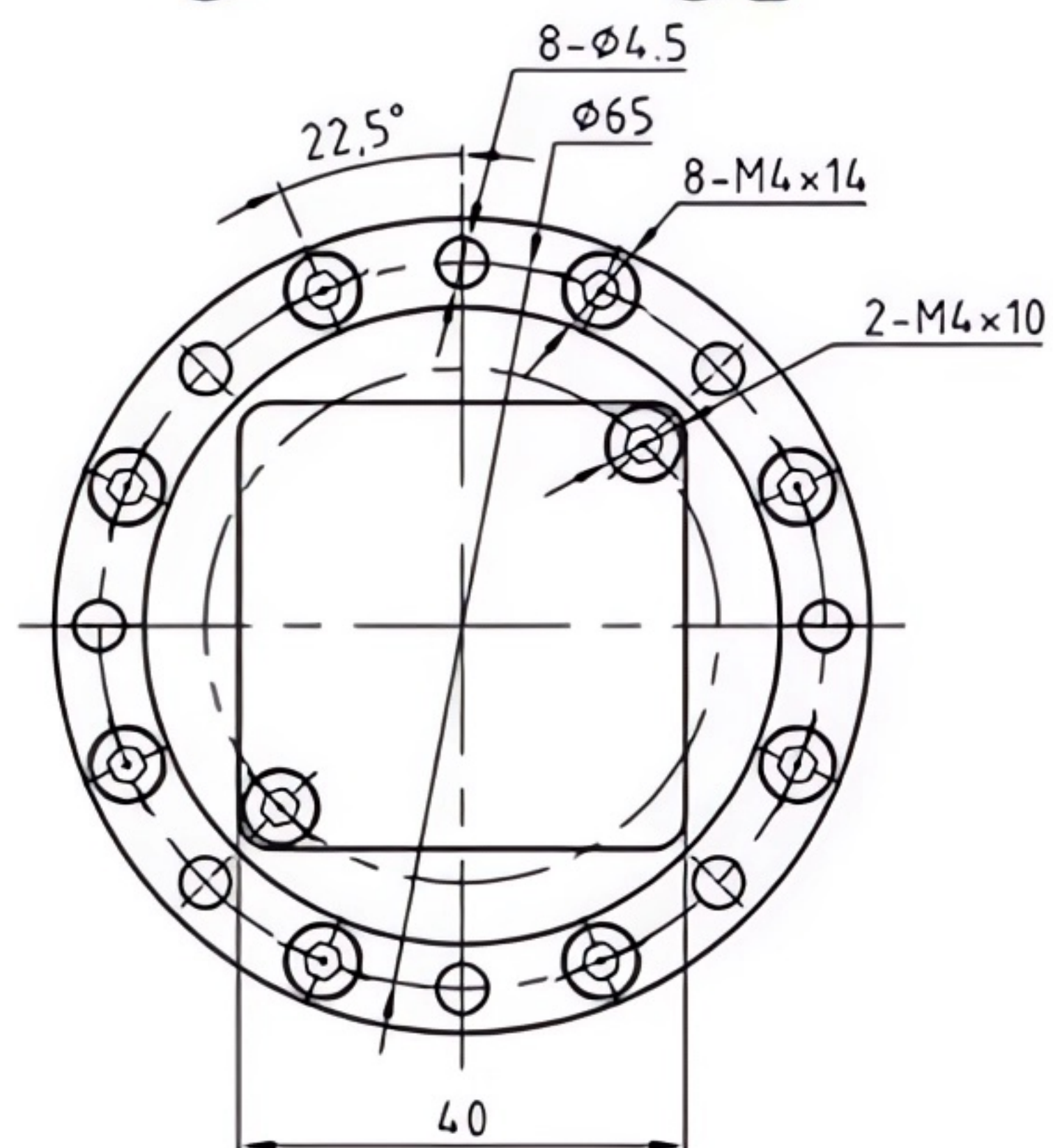


For 100W 40mm Flange Servo Motor

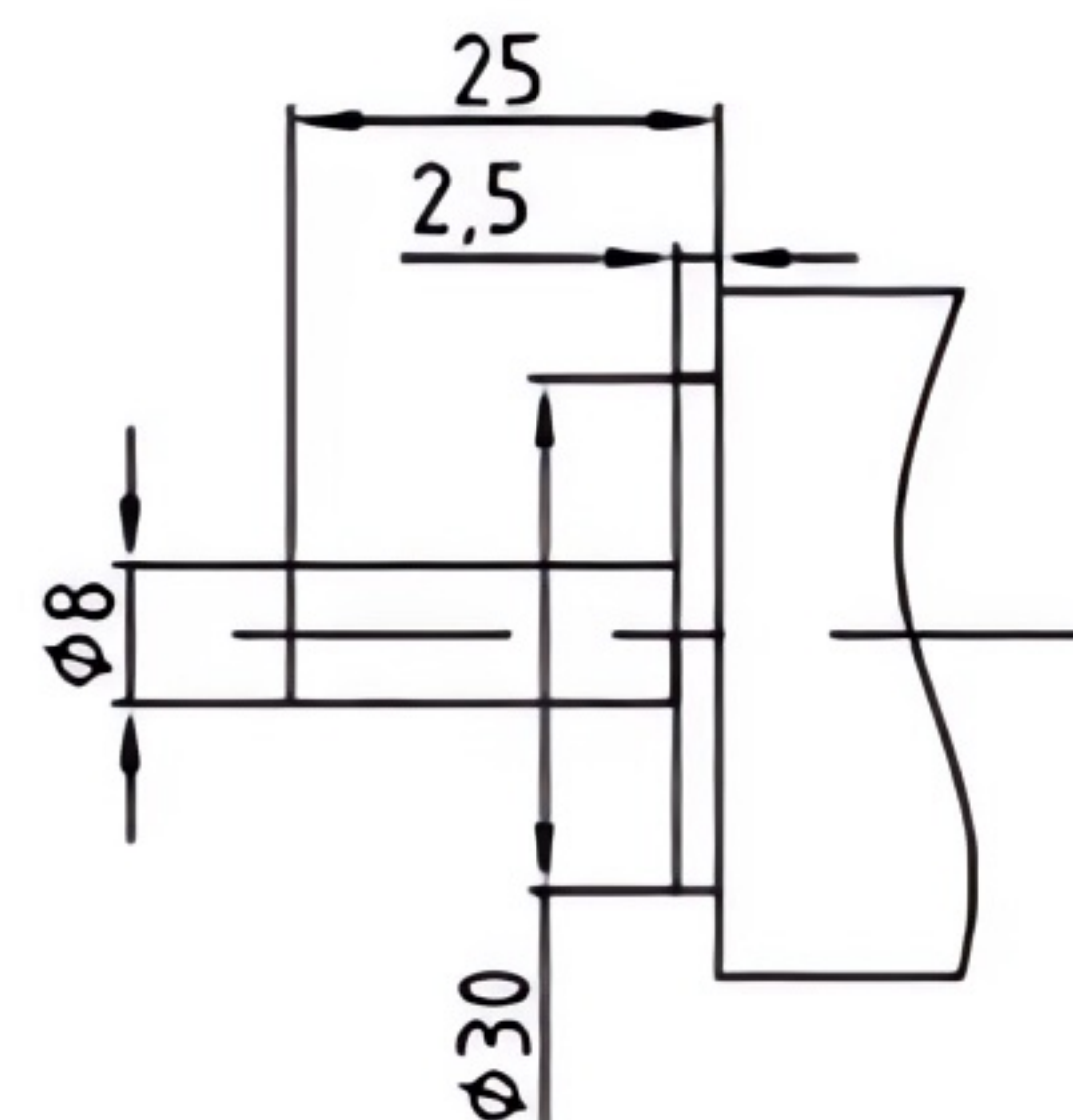
Same model as Hamonic CSG-17-2UH



Motor flange mounting plate



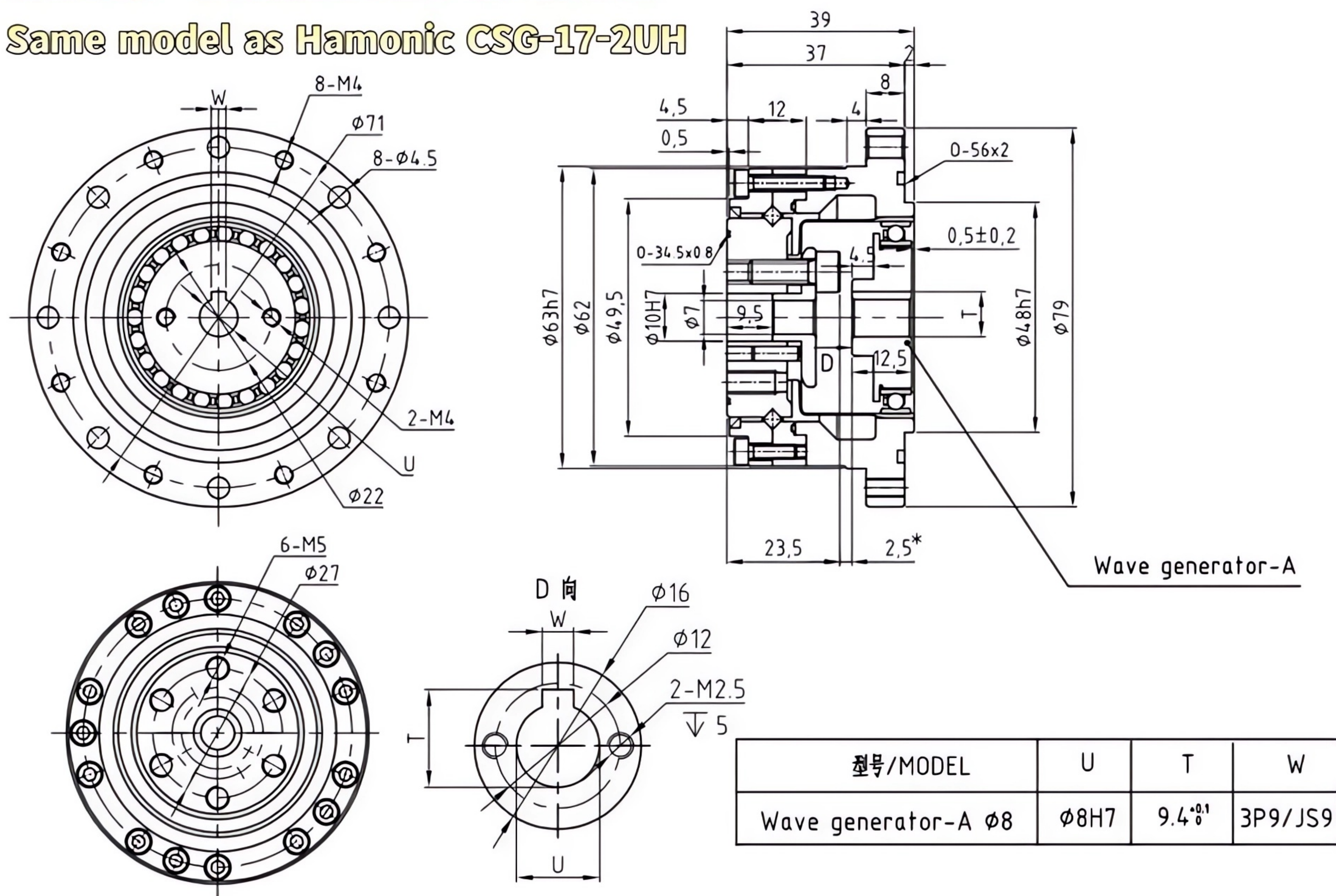
Adapted motor size



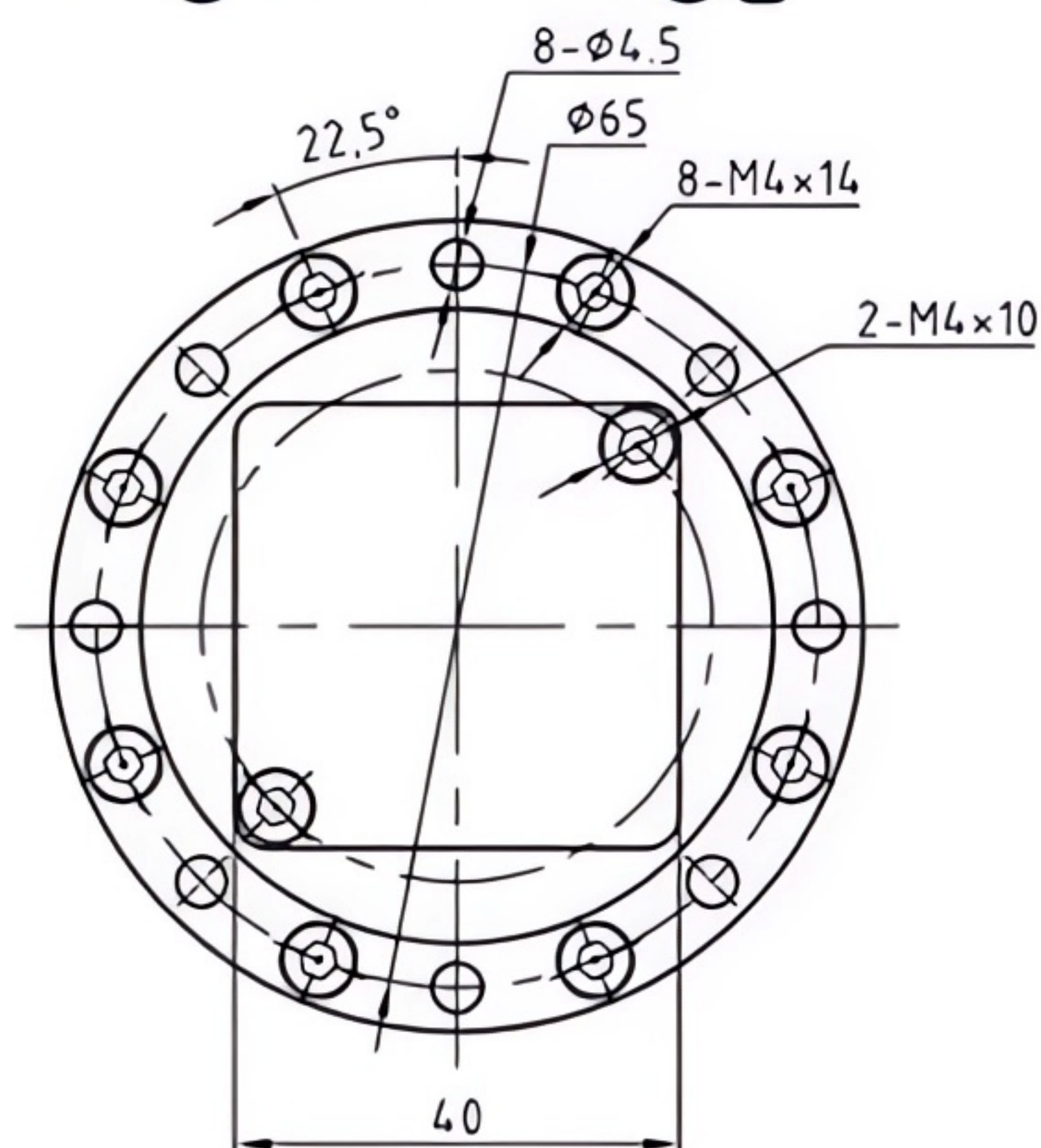
For 100W 40mm Flange Servo Motor

HCS17-I Harmonic Reducer

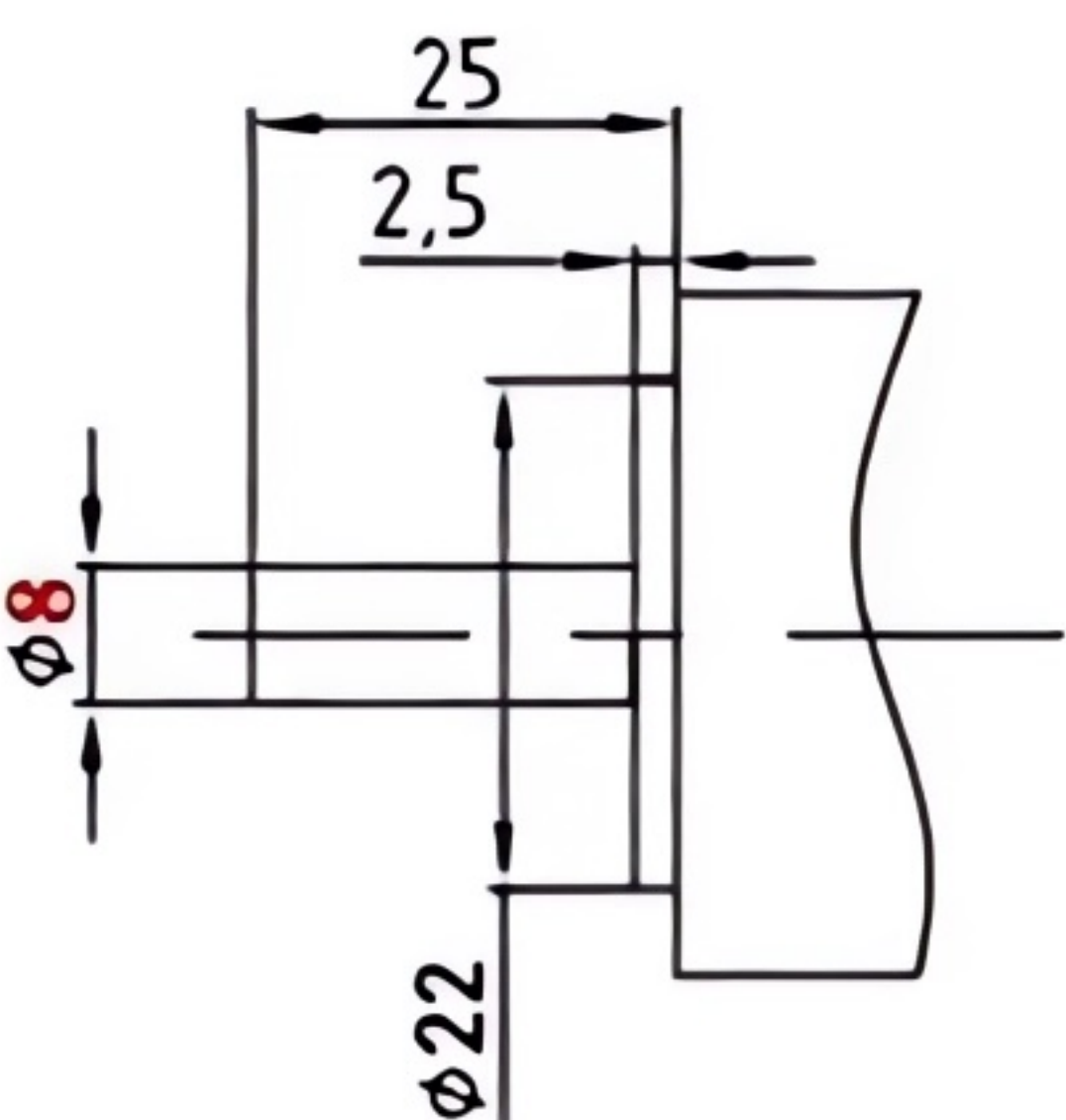
Same model as Hamonic CSG-17-2UH



Motor flange mounting plate



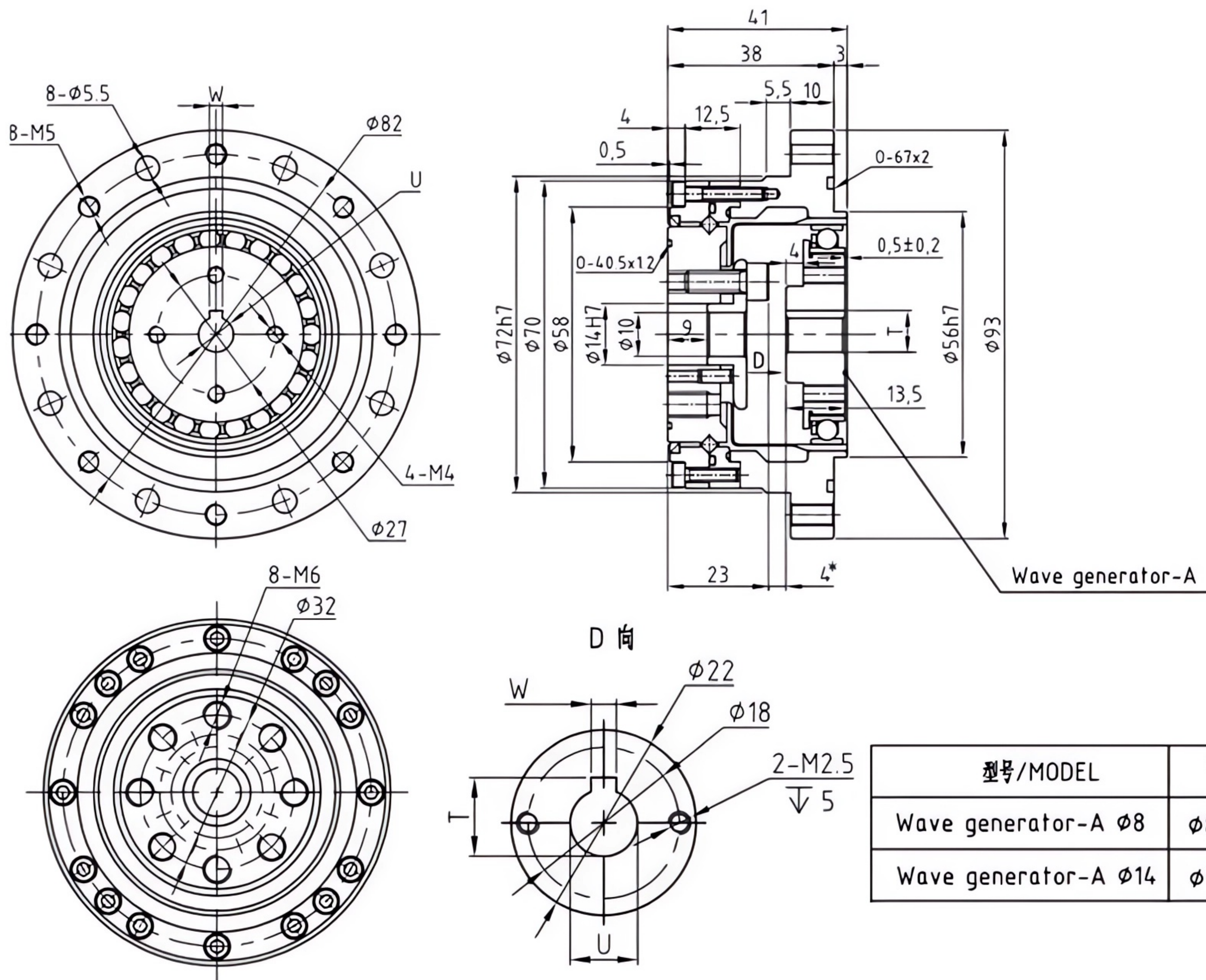
Adapted motor size



For Nema 17 42mm
Flange Stepper Motor

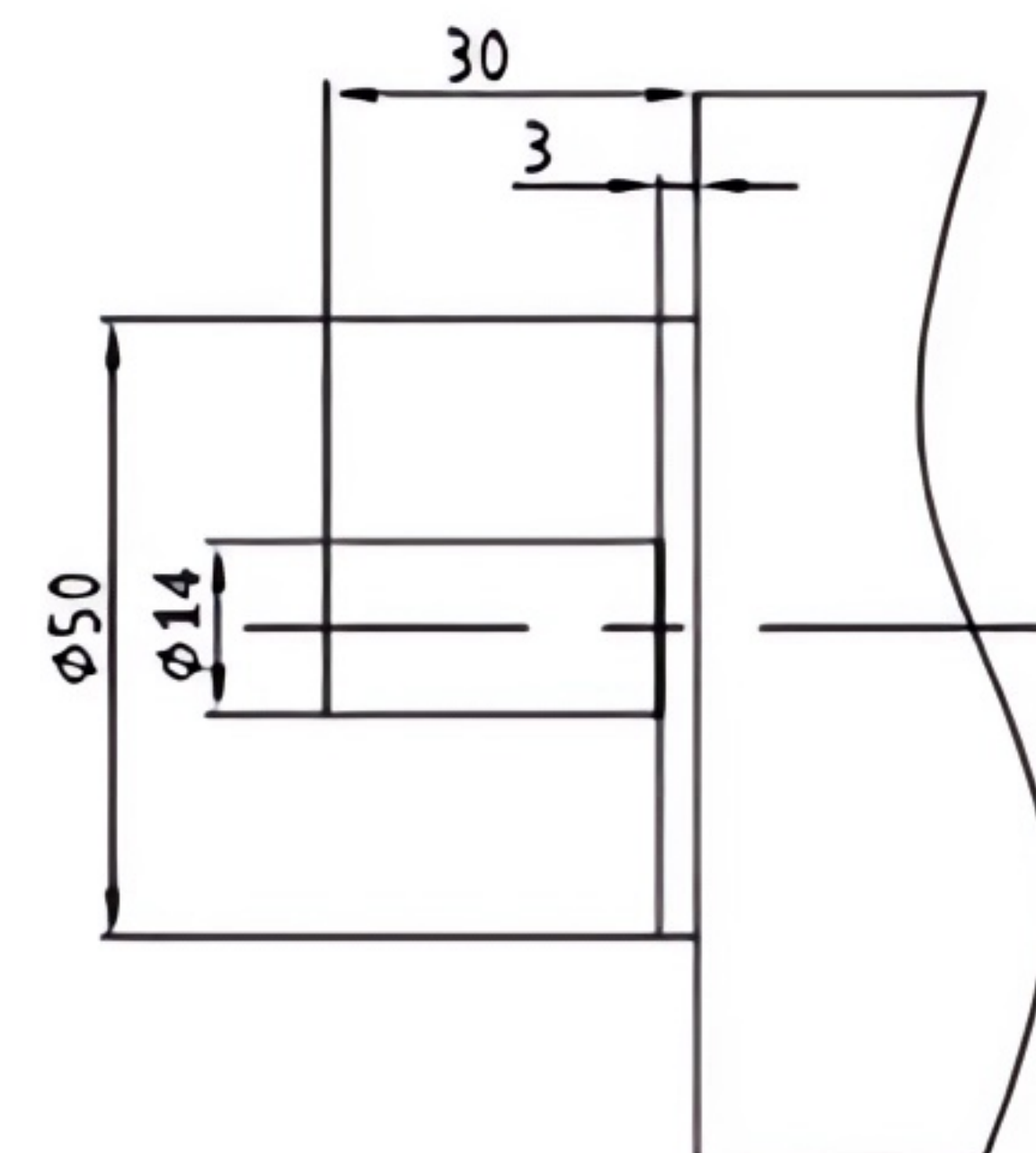
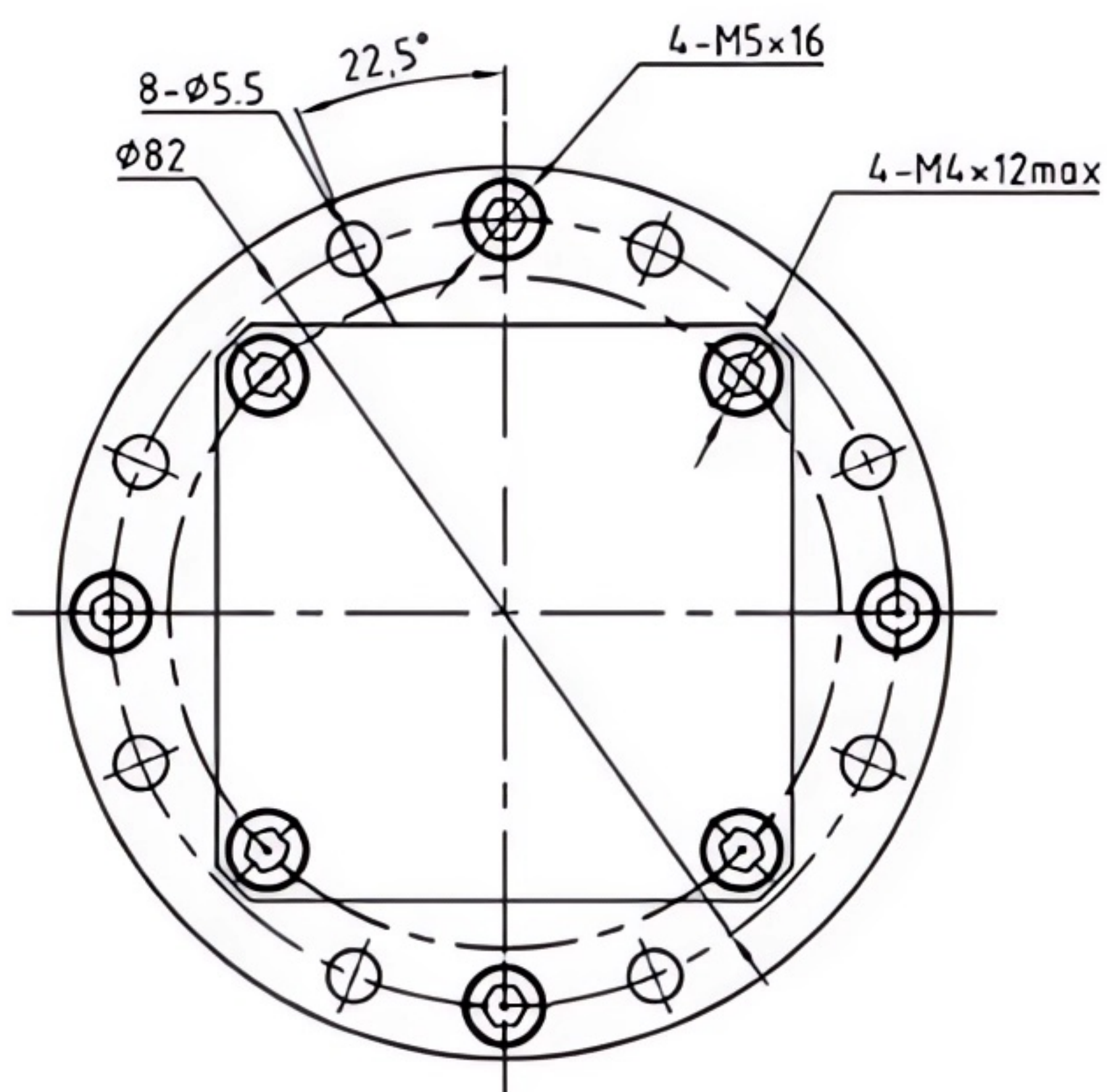
HCS20-I Harmonic Reducer

Same model as Hamonic CSG-20-2UH



Motor flange mounting plate

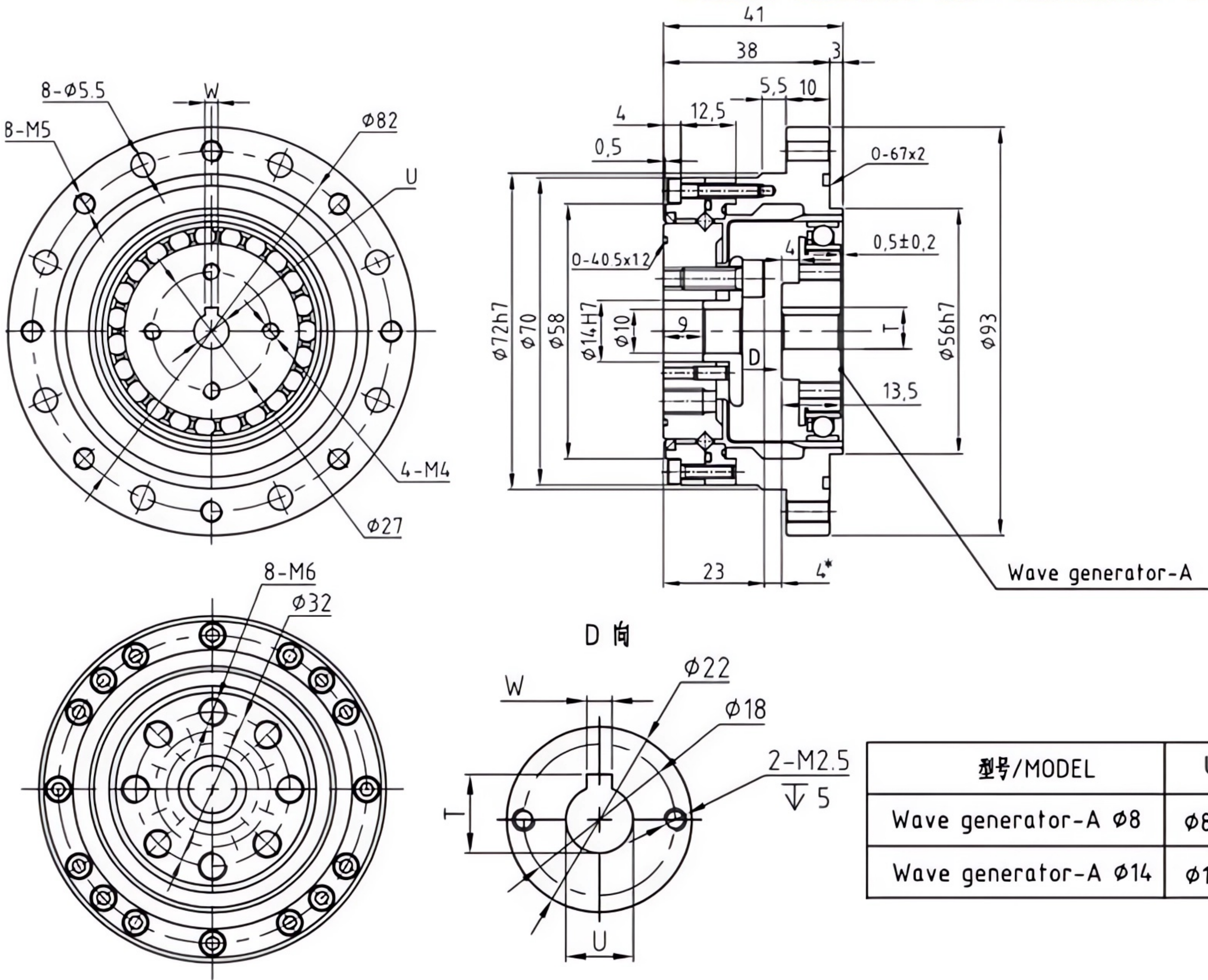
Adapted motor size



For 60mm Flange
Servo Motor

HCS20-I Harmonic Reducer

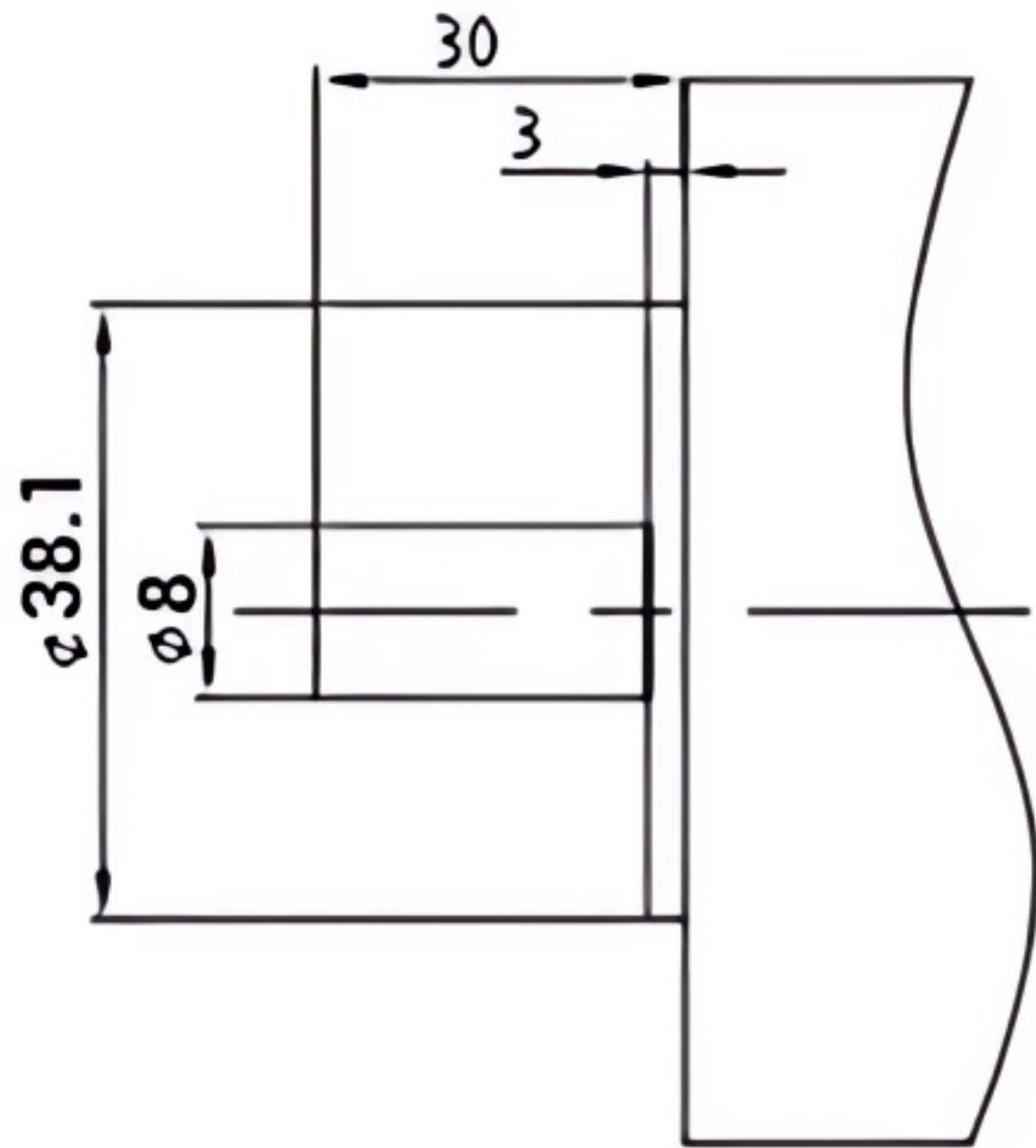
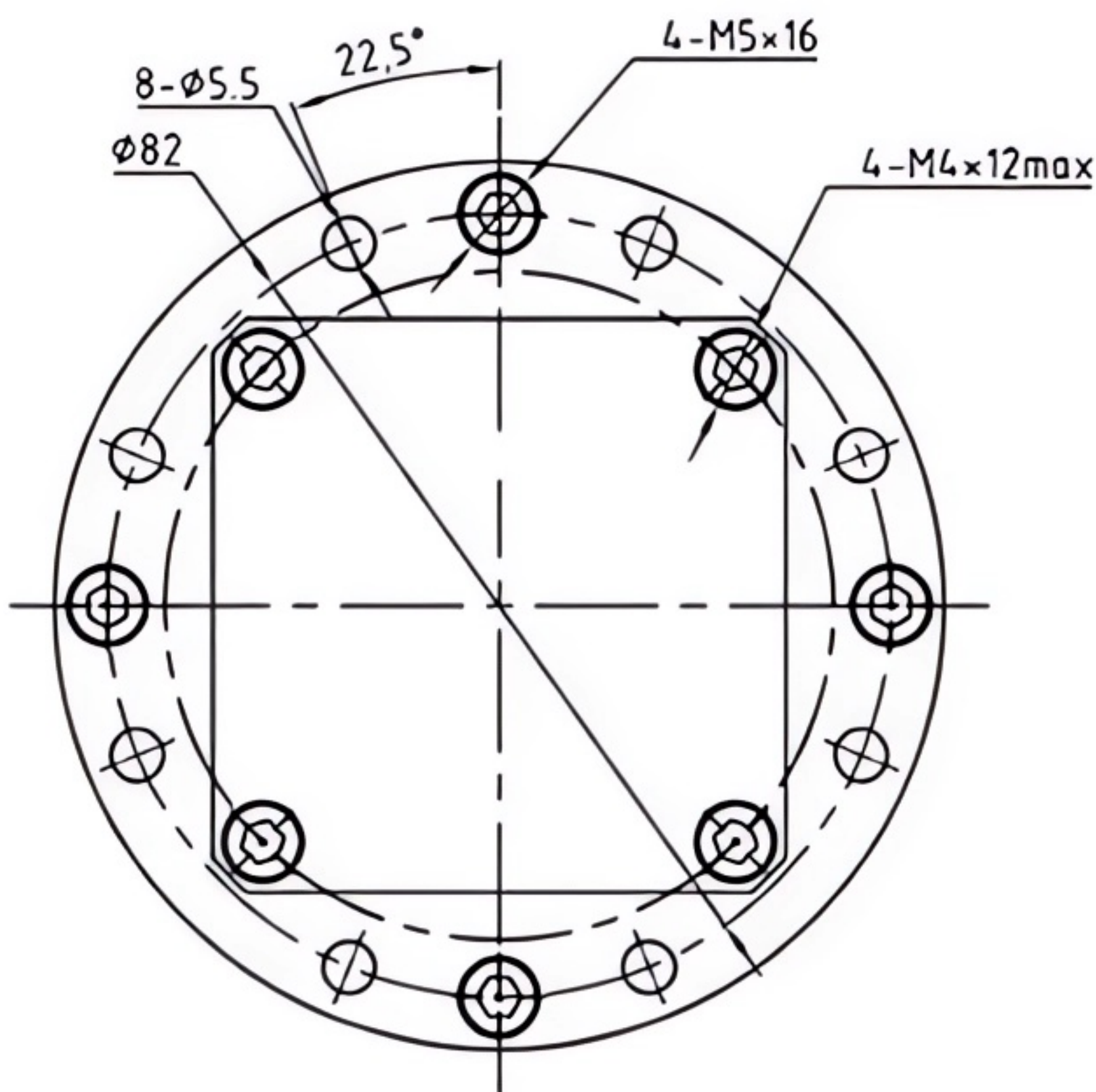
Same model as Hamonic CSG-20-2UH



型号/MODEL	U	T	W
Wave generator-A $\phi 8$	$\phi 8$ H7	9.4 $^{+0.1}_{-0}$	3P9/JS9
Wave generator-A $\phi 14$	$\phi 14$ H7	16.3 $^{+0.1}_{-0}$	5P9/JS9

Motor flange mounting plate

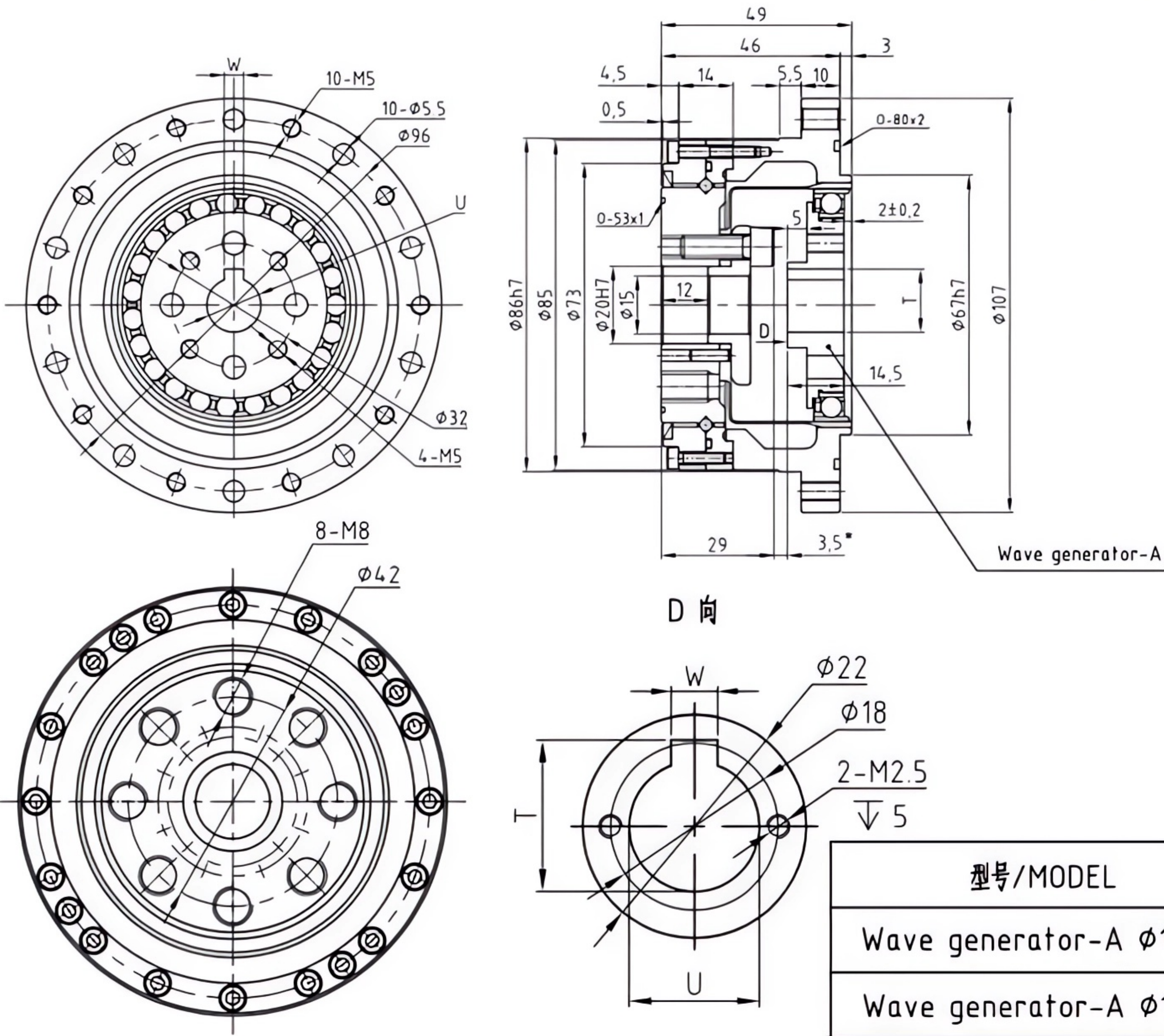
Adapted motor size



For Nema 23 57mm
Flange Stepper Motor

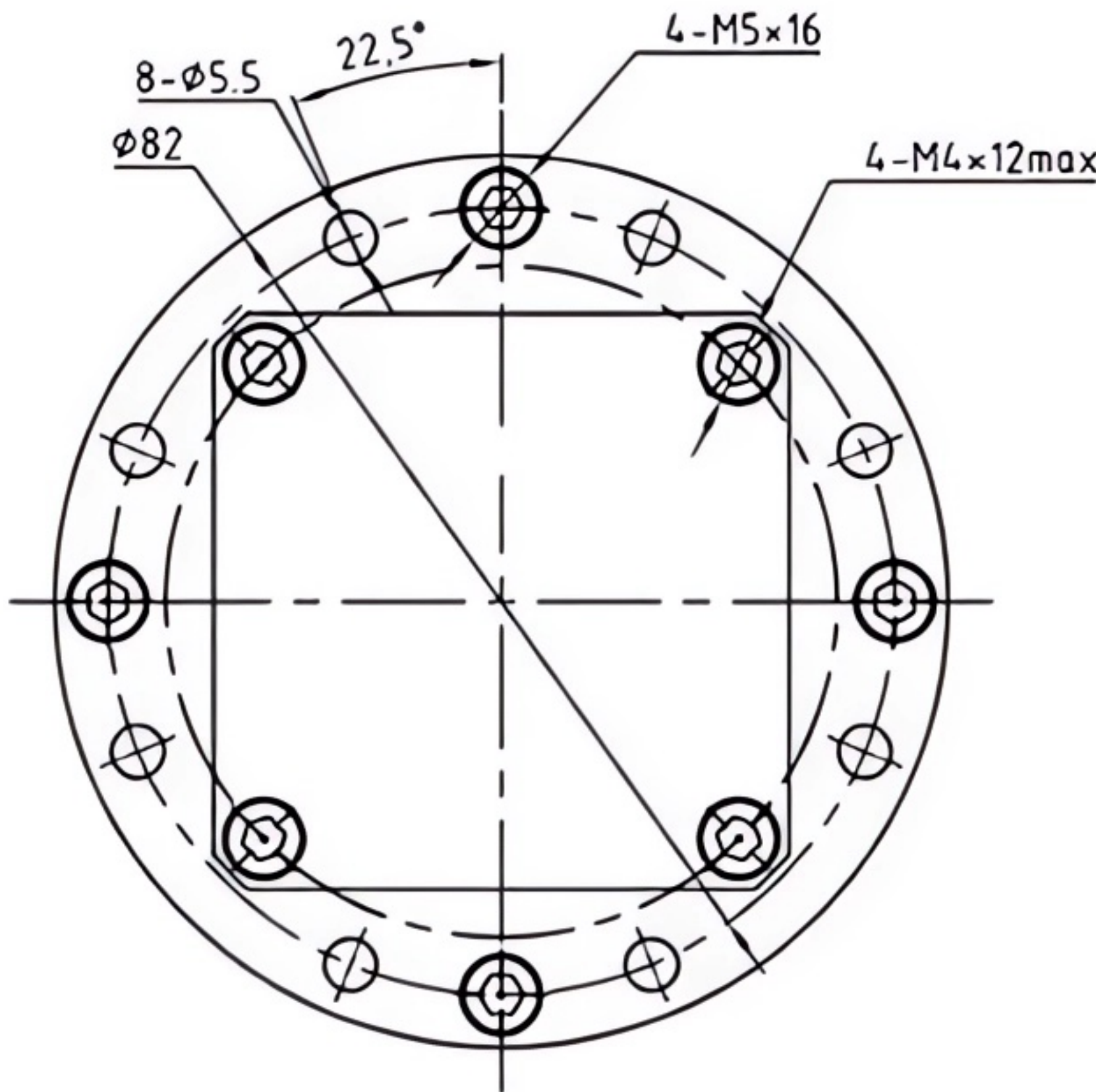
HCS25-I Harmonic Reducer

Same model as Hamonic CSG-25-2UH

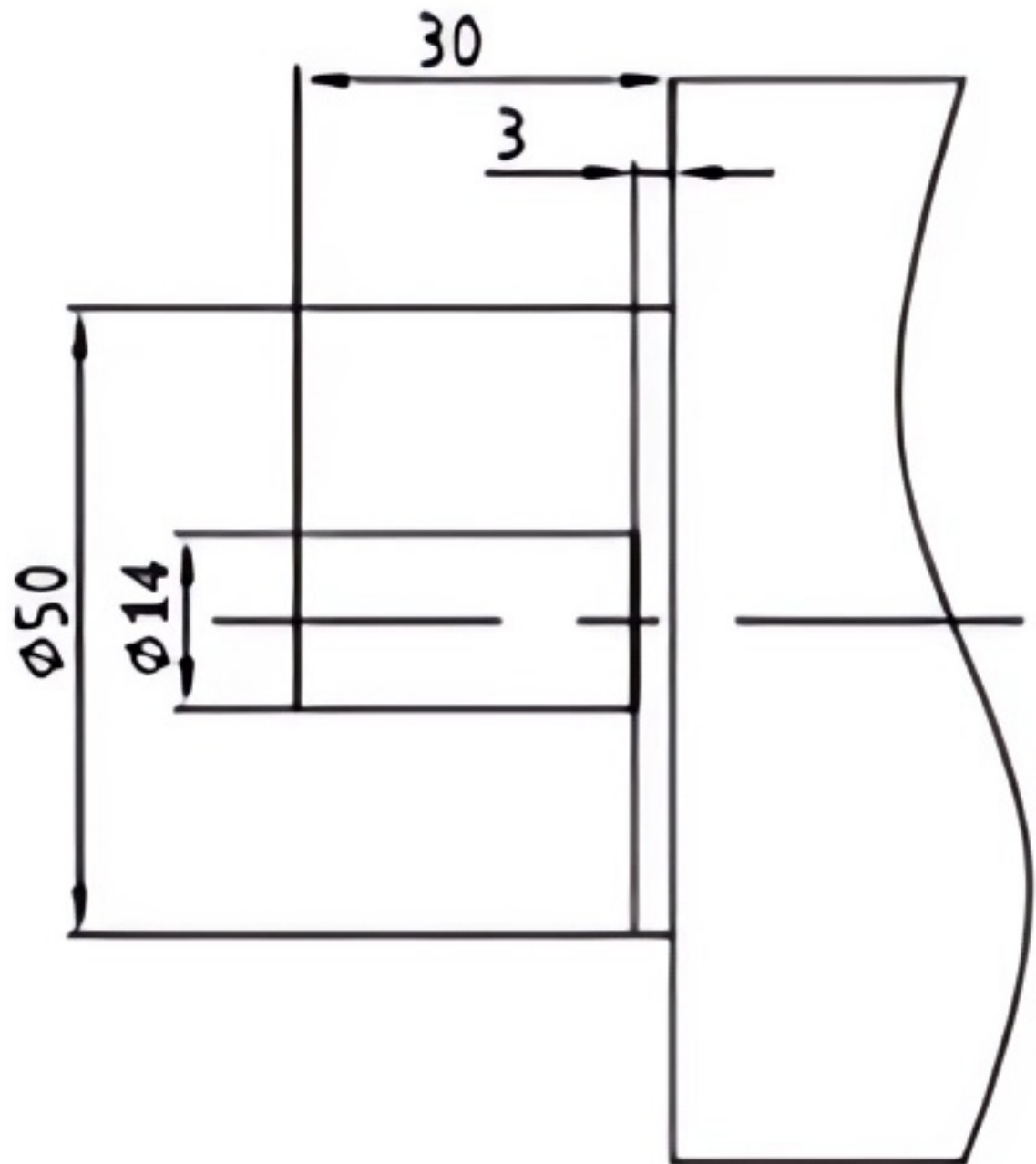


型号/MODEL	U	T	W
Wave generator-A $\phi 11$	$\phi 11H7$	$12.8^{+0.1}_{-0}$	4P9/JS9
Wave generator-A $\phi 14$	$\phi 14H7$	$16.3^{+0.1}_{-0}$	5P9/JS9

Motor flange mounting plate



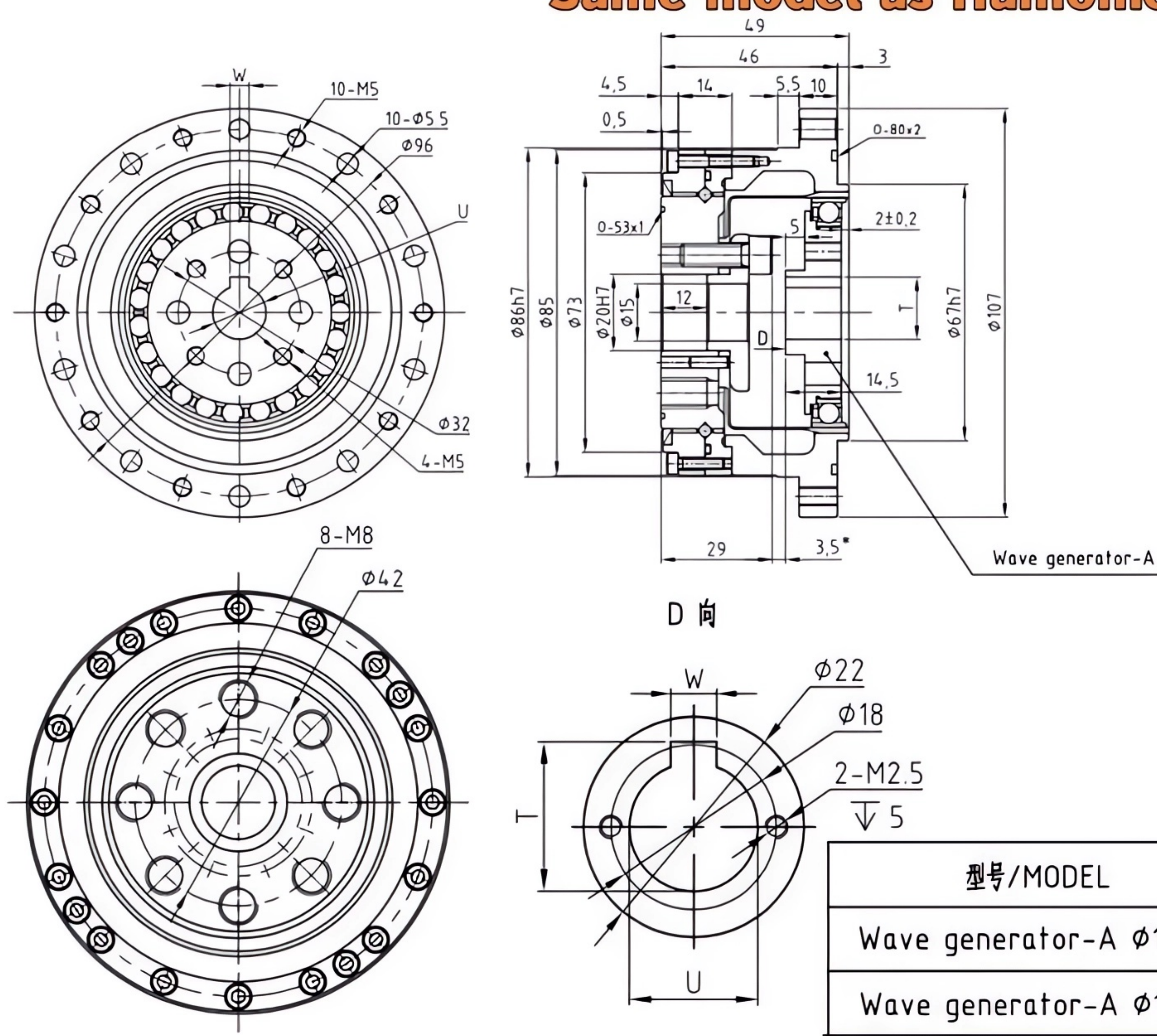
Adapted motor size



For 60mm Flange Servo Motor

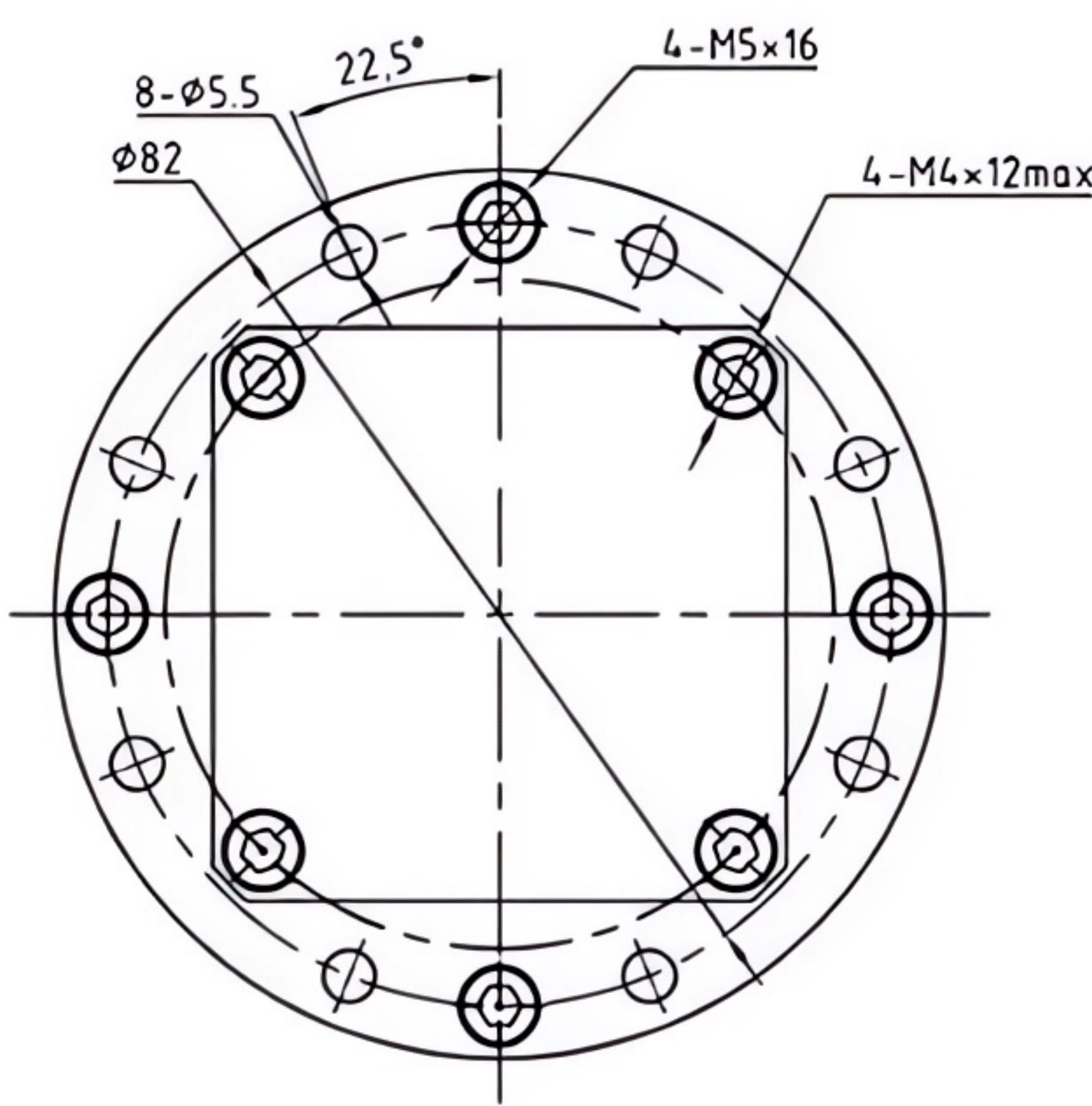
HCS25-I Harmonic Reducer

Same model as Hamonic CSG-25-2UH

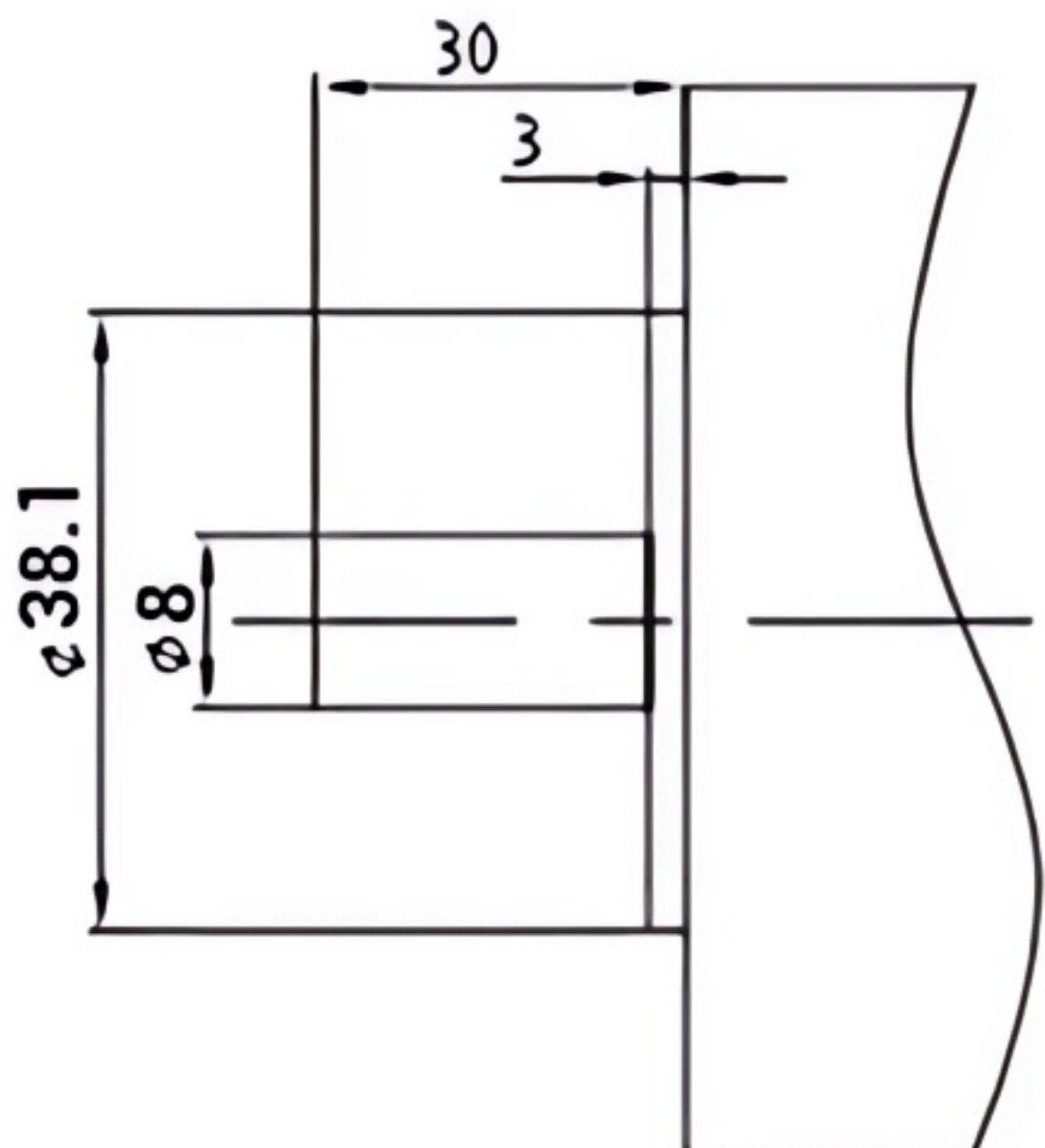


型号/MODEL	U	T	W
Wave generator-A $\phi 11$	$\phi 11H7$	$12.8^{+0.1}_{-0}$	4P9/JS9
Wave generator-A $\phi 14$	$\phi 14H7$	$16.3^{+0.1}_{-0}$	5P9/JS9

Motor flange mounting plate



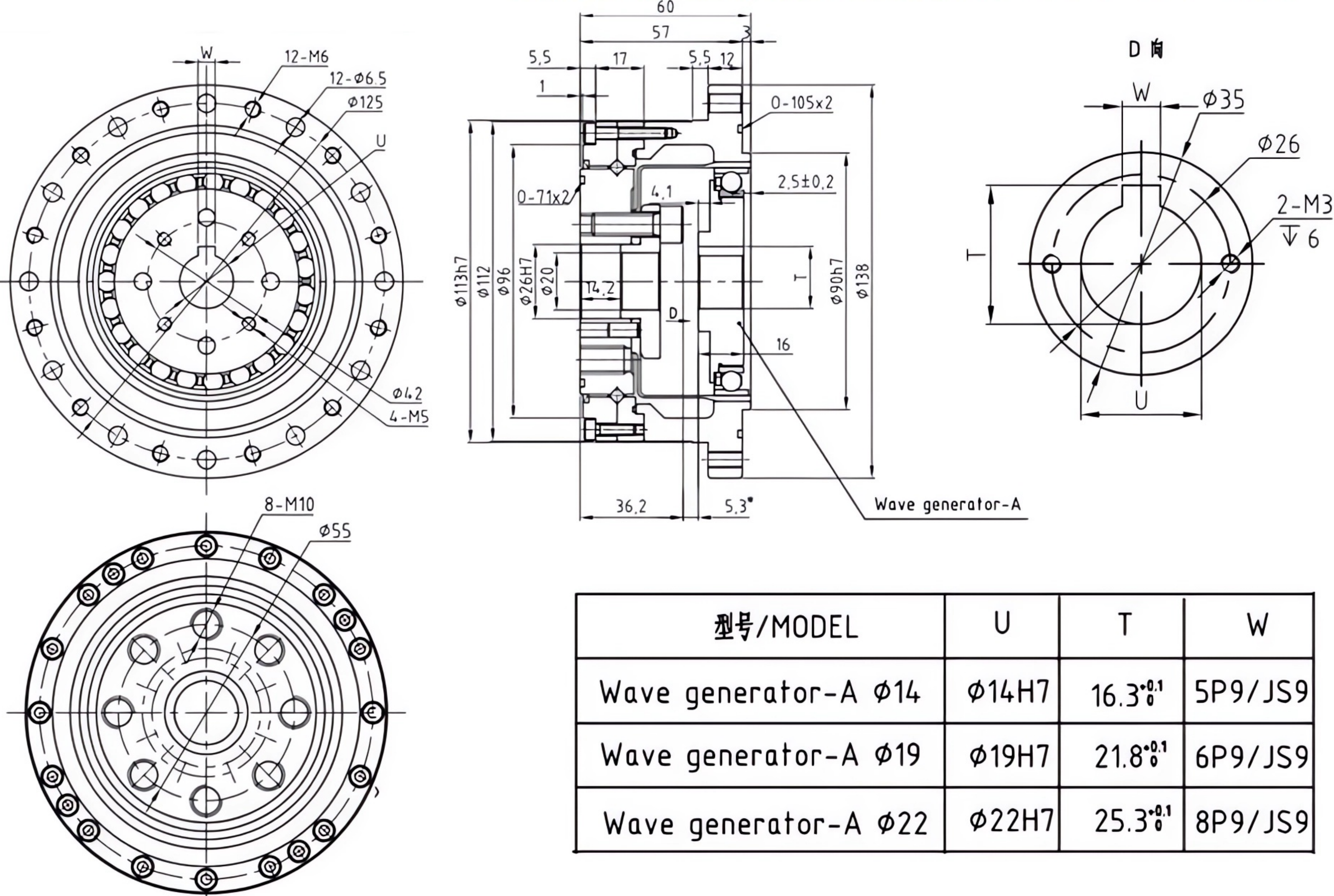
Adapted motor size



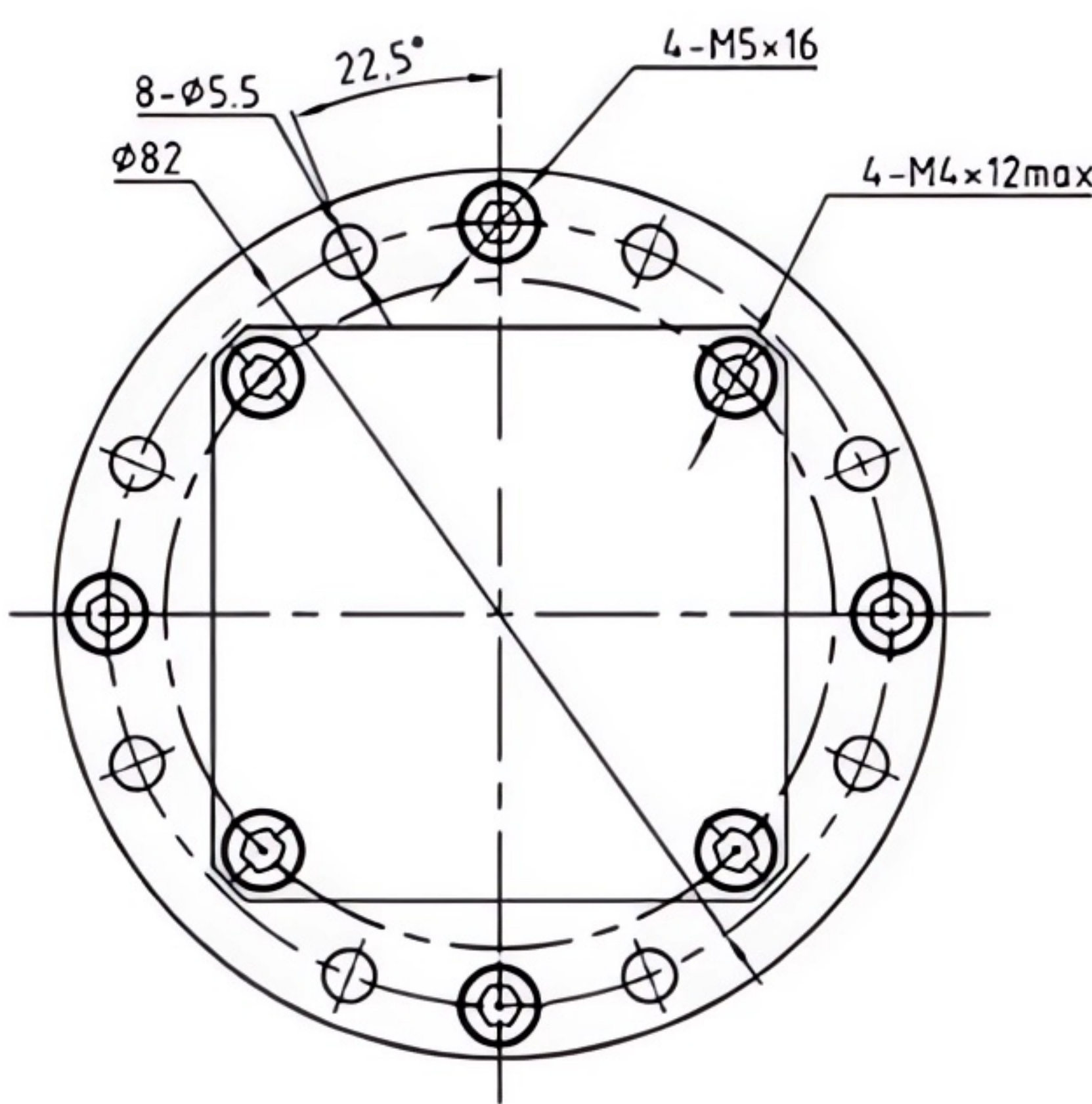
For Nema 23 57mm
Flange Stepper Motor

HCS32-I Harmonic Reducer

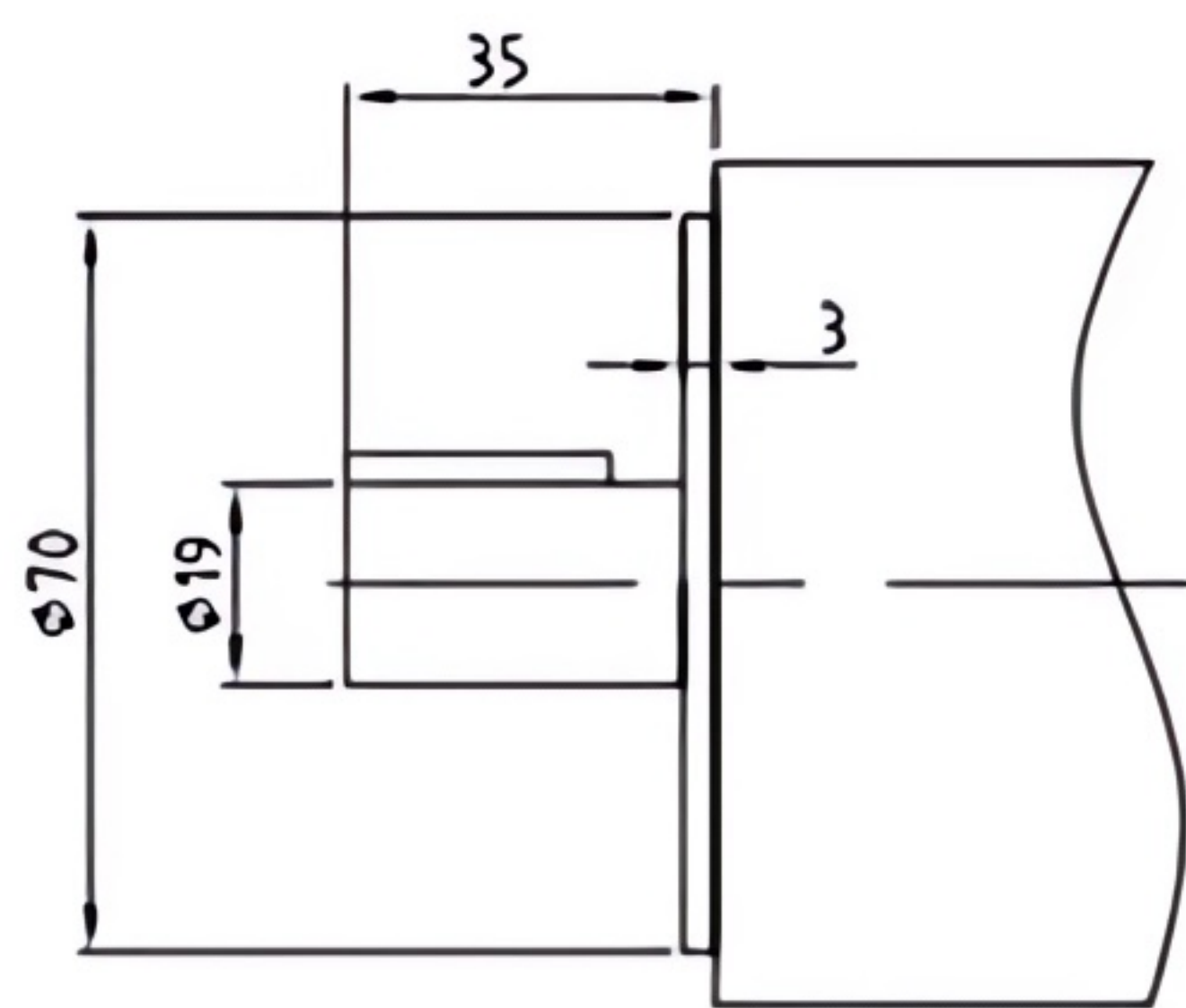
Same model as Hamonic CSG-32-2UH



Motor flange mounting plate



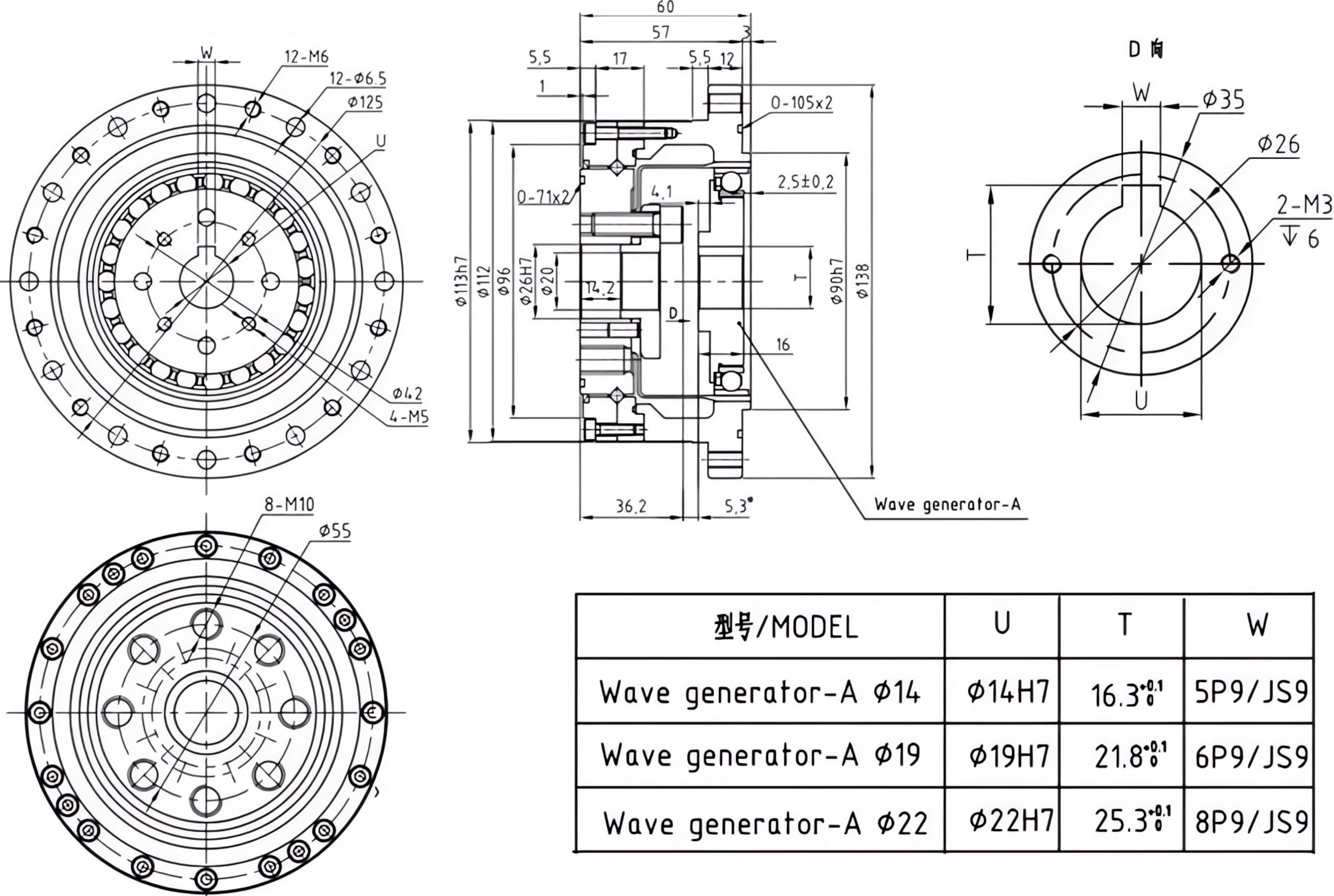
Adapted motor size



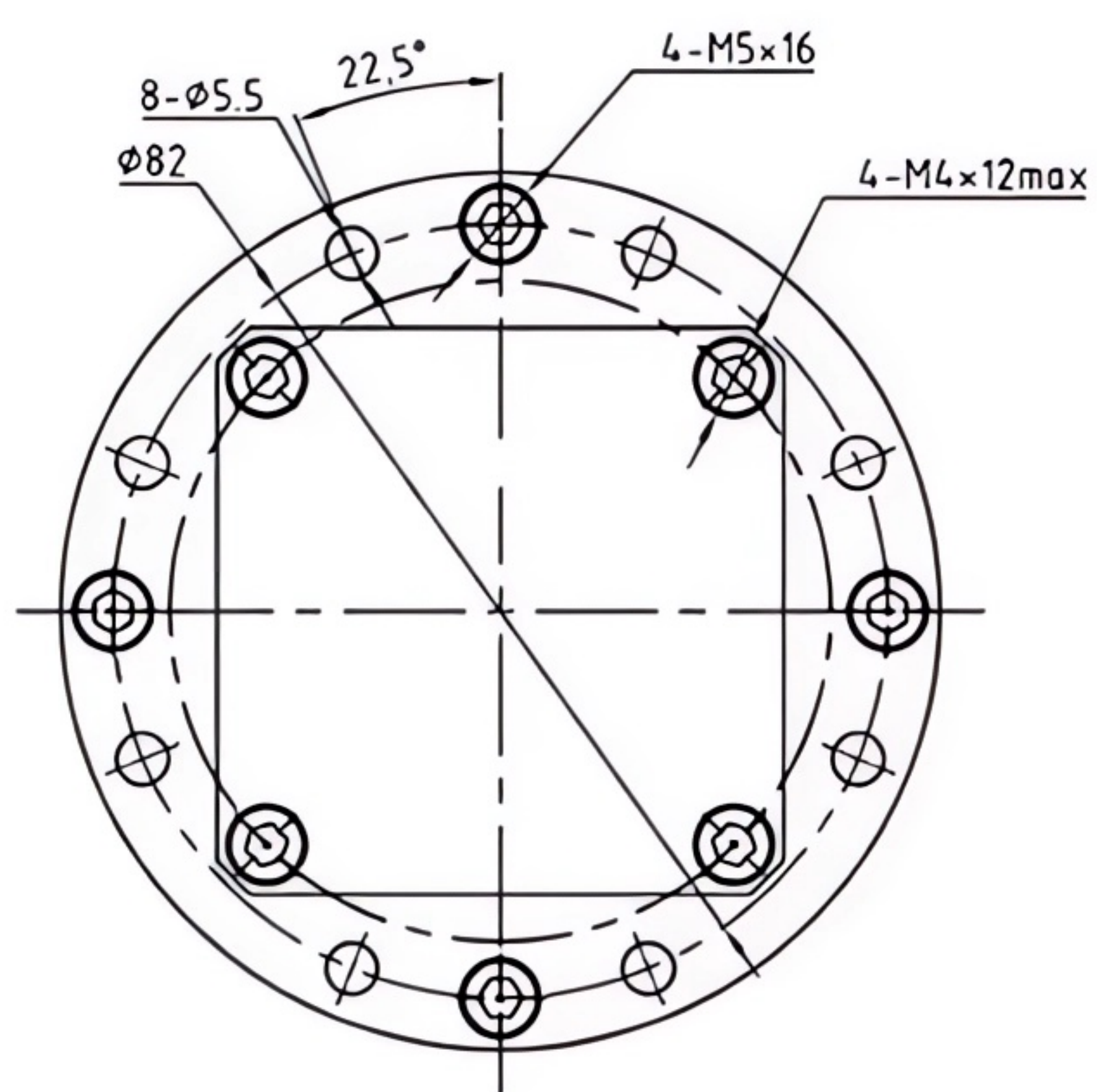
For 80mm Flange Servo Motor

HCS32-I Harmonic Reducer

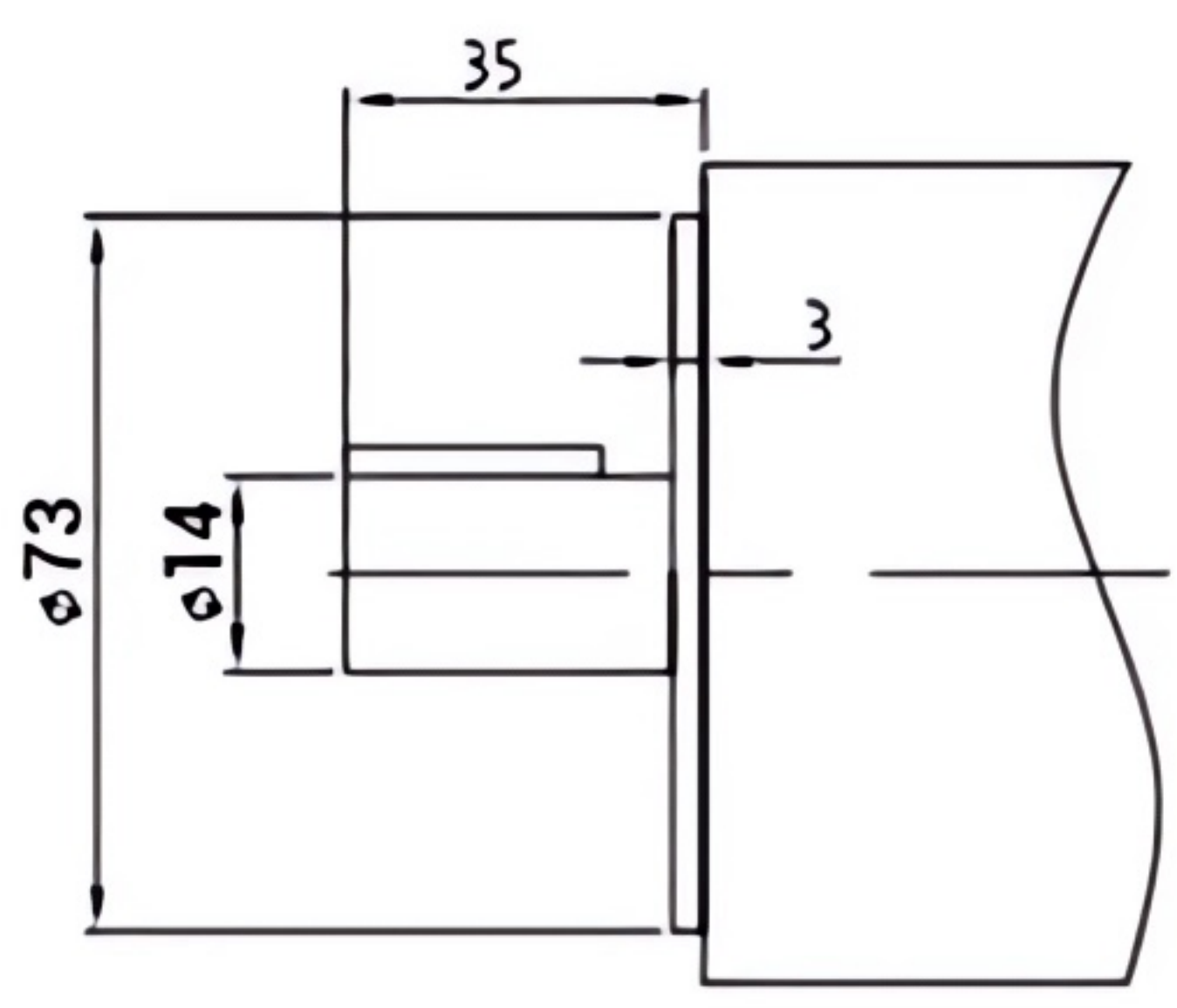
Same model as Hamonic CSG-32-2UH



Motor flange mounting plate

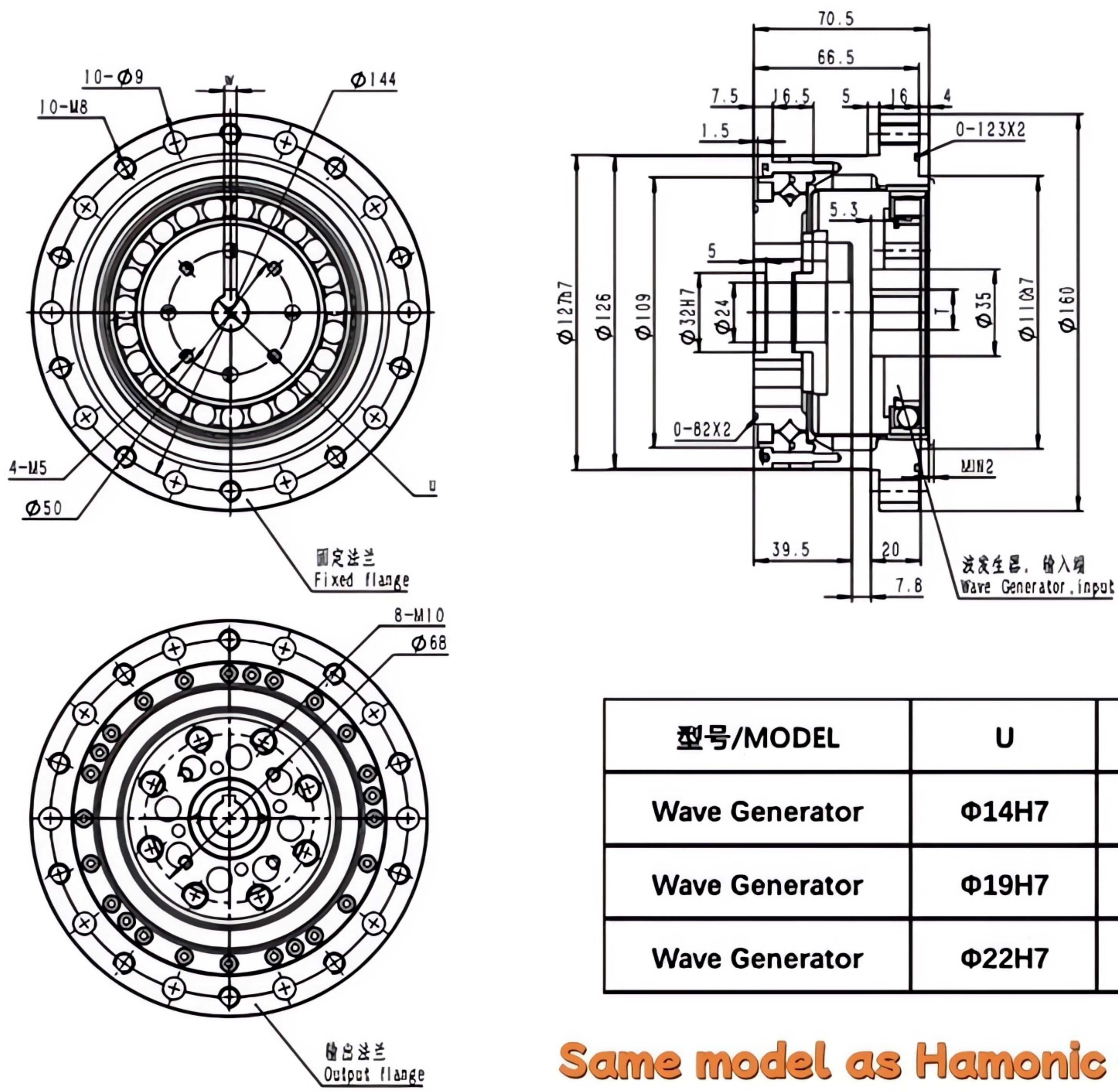


Adapted motor size



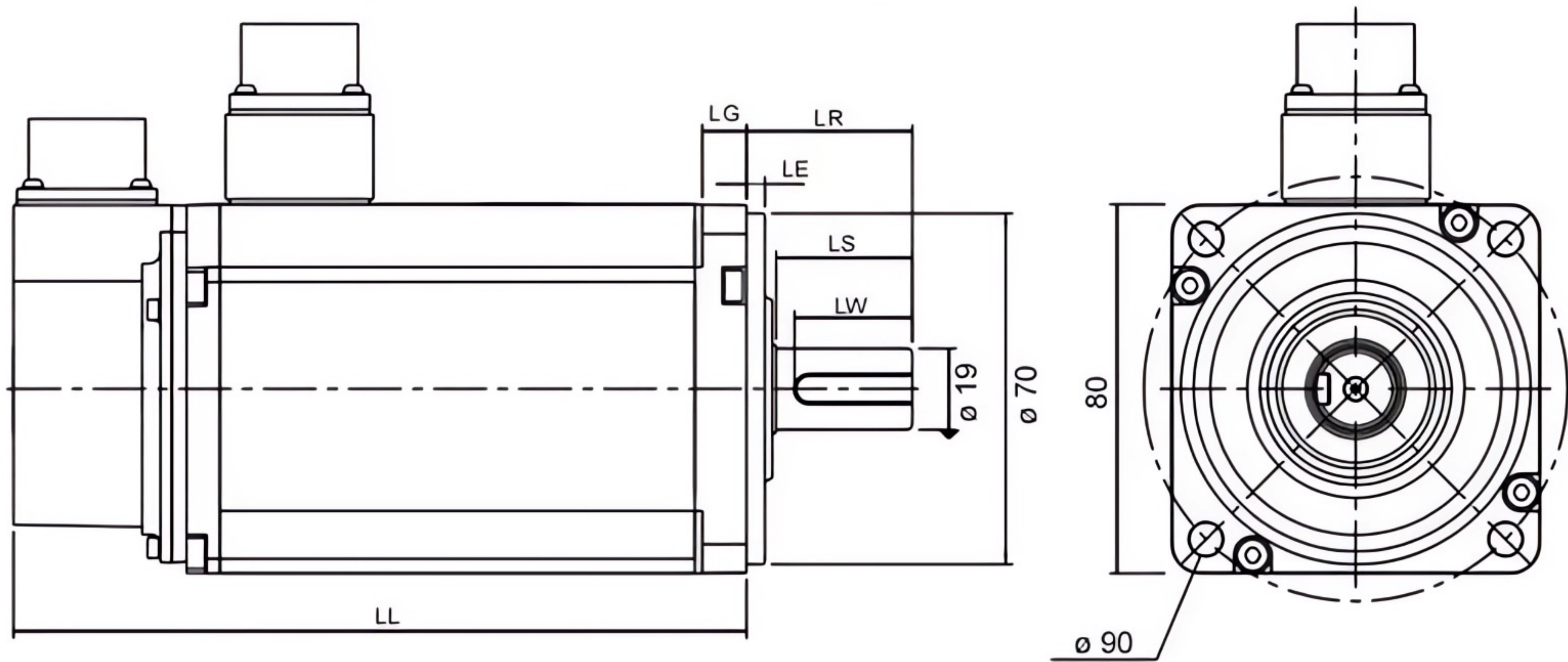
For Nema 34 86mm
Flange Stepper Motor

HCS40 Harmonic Reducer

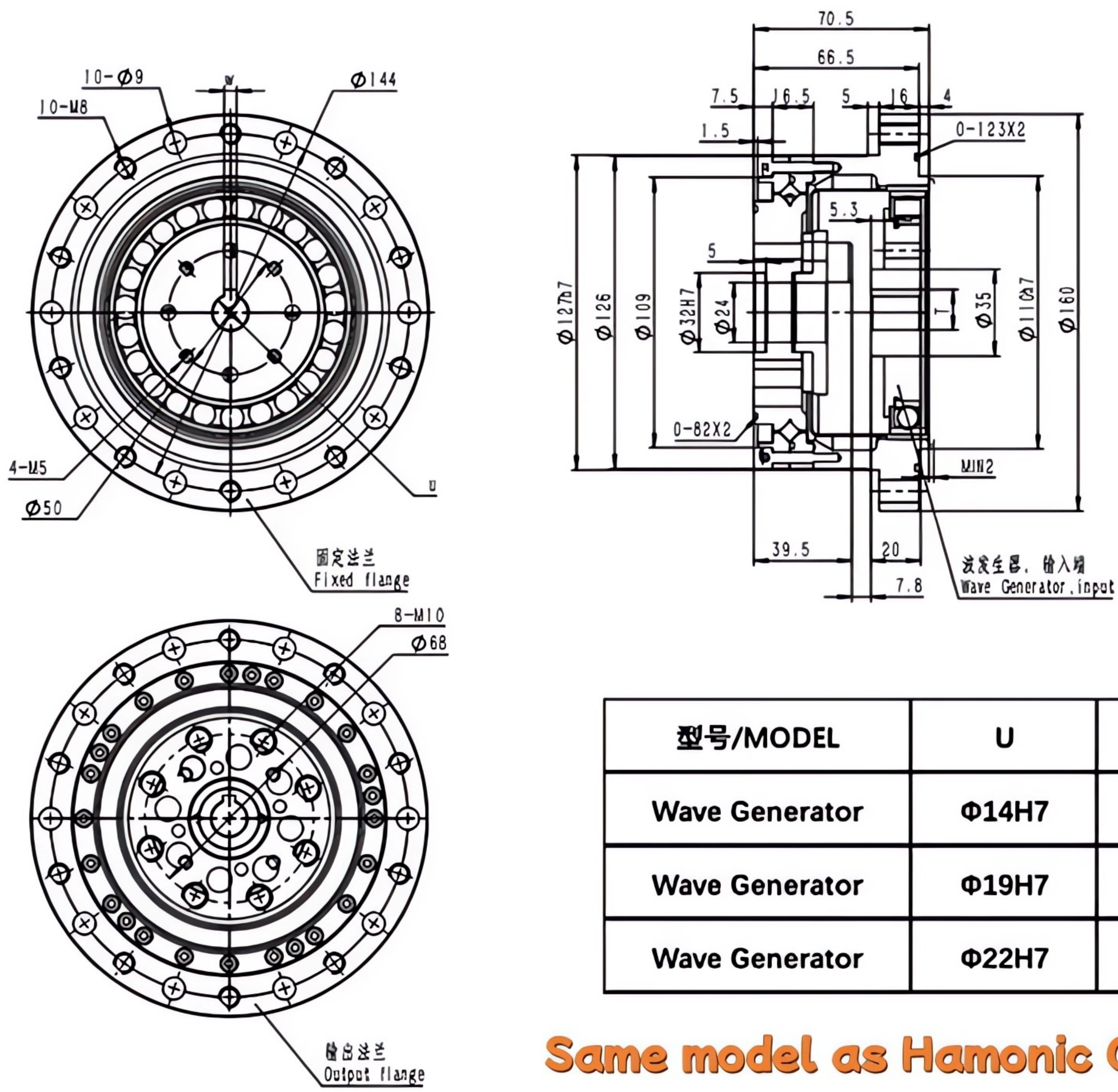


Same model as Hamonic CSG-40-2UH

Adapted motor size-19mm Shaft 80mm Flange Servo Motor



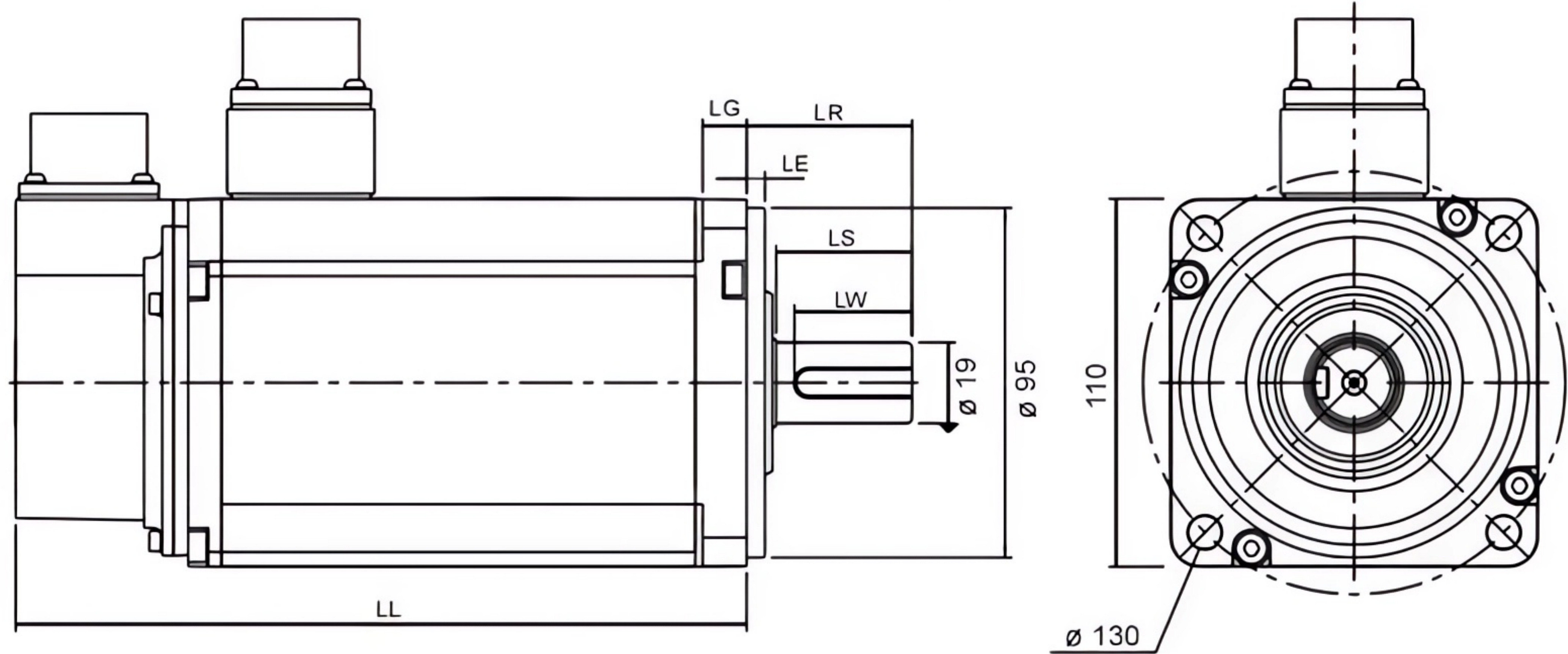
HCS40 Harmonic Reducer



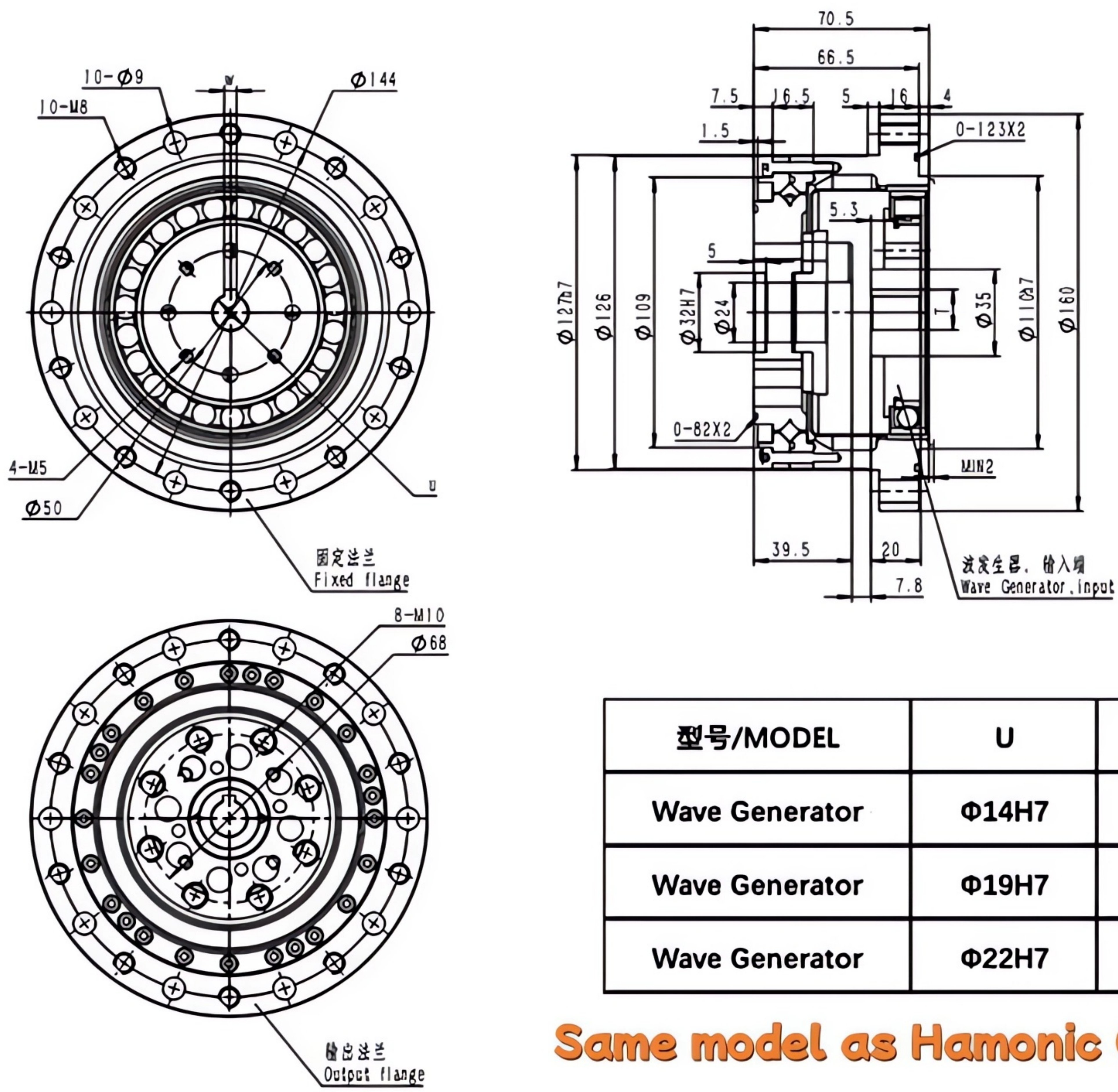
型号/MODEL	U	T	W
Wave Generator	Ø14H7	$16.3^{+0.1}_0$	5P9/JS9
Wave Generator	Ø19H7	$21.8^{+0.1}_0$	6P9/JS9
Wave Generator	Ø22H7	$25.3^{+0.1}_0$	8P9/JS9

Same model as Hamonic CSG-40-2UH

Adapted motor size-19mm Shaft 110mm Flange Servo Motor



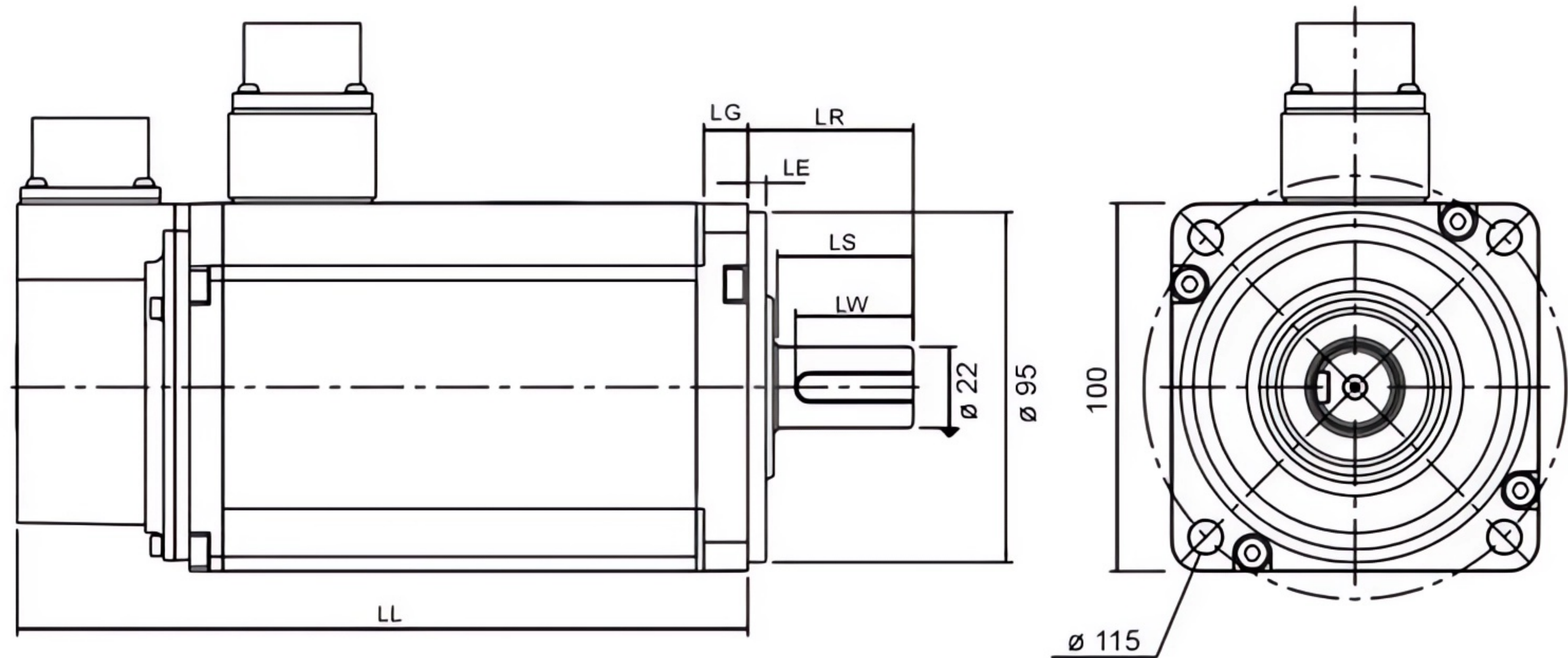
HCS40 Harmonic Reducer



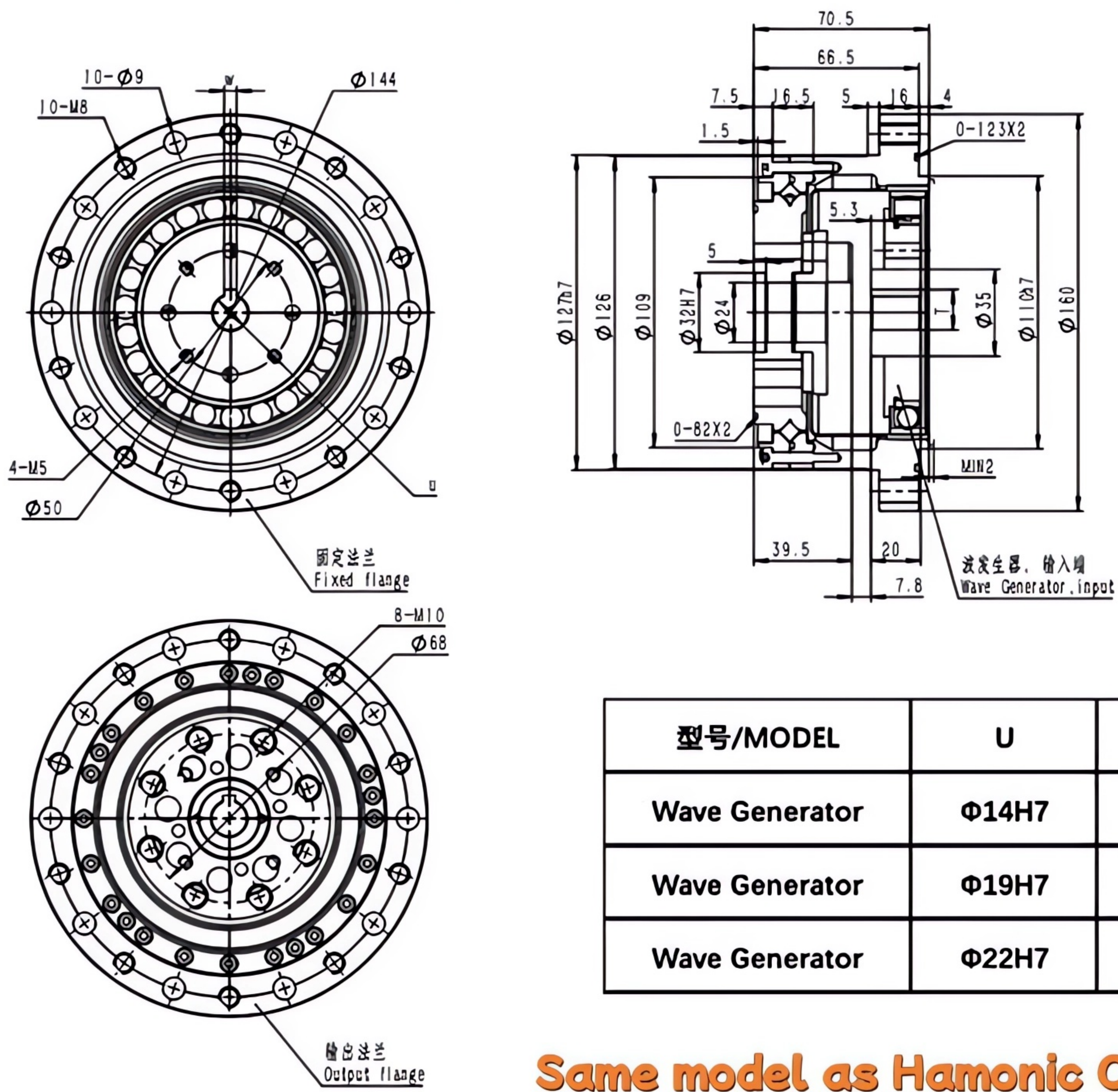
型号/MODEL	U	T	W
Wave Generator	Ø14H7	16.3 ^{+0.1} ₀	5P9/JS9
Wave Generator	Ø19H7	21.8 ^{+0.1} ₀	6P9/JS9
Wave Generator	Ø22H7	25.3 ^{+0.1} ₀	8P9/JS9

Same model as Hamonic CSG-40-2UH

Adapted motor size-22mm Shaft 100mm Flange Servo Motor



HCS40 Harmonic Reducer



Same model as Hamonic CSG-40-2UH

Adapted motor size-22mm Shaft 130mm Flange Servo Motor

