

### **Quick Details**

- Gearing Arrangement : Harmonic
- Output Torque : 35-1200 N.m
- Input Speed : 2000-5000 r/min (customized)
- Place Of Origin : Shanghai China (Mainland)
- Model Number: CSF
- Brand Name : HSC OEM
- Material : Stainless Steel , Carbon Steel
- Application : Industrial , Robotics , Medical etc
- Certification : ISO9001
- Ratio : 50-160

### **Packaging & Delivery**

- Packaging Details : Cartons or wooden case
- Delivery Time : According to the order

### **Product Description**

The CSF series High Transmission Efficiency harmonic drive is of high precision , low noise and high transmission efficiency for robot .In this our engineer team have been researched and developed this product for six years to run it stably with more outstanding advantages on both performance and cost. This CSF harmonic drive special for robot . Pls give us one chance to work with you.

### **1.Picture of CSF Series Harmonic Reducer**



## **2.Merits of HSC Series Harmonic Reducer**

- Wide range of reduction ratio

Ratio 50-160

- Zero backlash and high precision

Gear teeth mostly mesh each other at the same time and small index tolerance.

- Fewer components for easy installation.

Three main components can perform efficiently with high ratio.

- Small volume and low weight .

They are only half the weight of other suppliers' similar products and 1/3 the volume less than others .

- Large torque capacity

More than 30% of all gear teeth can mesh with each other when working

- Perform efficiently

Small sliding happen when gear meshing so keep friction loss low

- Low noise

### 3. Model Number Chart And Quick Choose

Performance Parameters

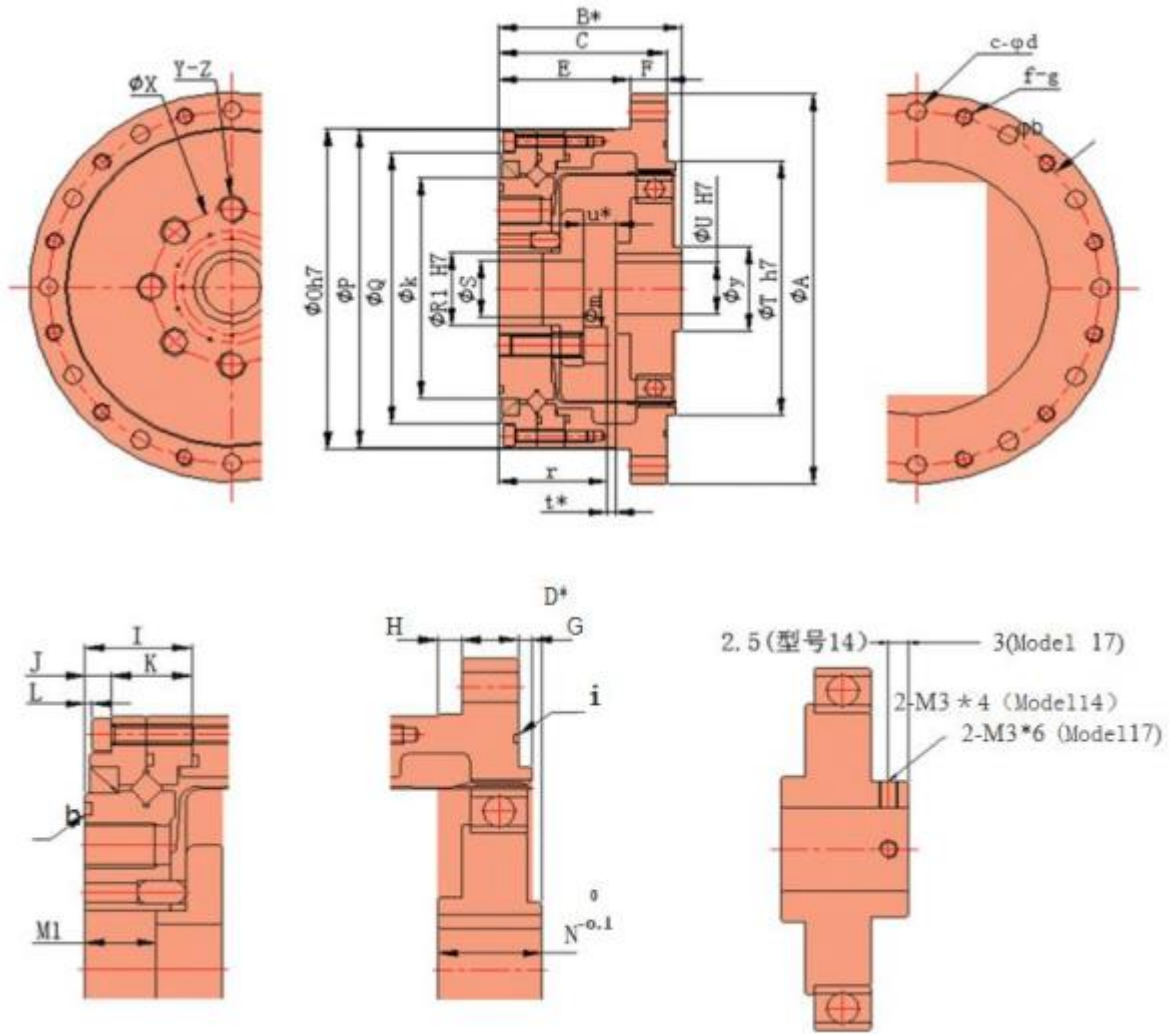
Model NO	Ratio	Input 2000r/min Rated Torque	Start/Stop Allowable Max Torque	Instantaneous Max Torque Allowed	Allowable Max Input Speed	Allowable Average Input Speed	Rotary Inertia
		Nm	Nm	Nm	r/min	r/min	x10kgm
14	50	5.4	18	35	5000	2500	0.033
	80	7.8	23	47			
	100	7.8	28	54			
17	50	16	34	70	4500	2000	0.079
	80	22	43	87			
	100	24	54	108			
20	50	25	56	98	4500	2000	0.193
	80	34	74	127			
	100	40	82	147			
25	50	39	98	186	4500	2000	0.413
	80	63	137	255			
	100	67	157	284			
	120	67	167	304			
32	50	76	216	382	3000	1800	1.69

	80	118	304	568			
	100	137	333	647			
	120	137	353	686			
40	50	137	402	686	3000	1800	4.5
	80	206	519	980			
	100	265	568	1080			
	120	294	617	1180			

### Product Coding & Interface Size

Product Type	Model Size	Input Type	Output Type	Ratio	Distinct Mark
CSF	14	G	M	050	a

### Interface Sizes



### Model Size

SIZE \ MOD	14	17	20	25	32	40
EL	14	17	20	25	32	40
$\phi A$	73	79	93	107	138	160
$B^*$	$41 \pm 0.05$	$45 \pm 0.05$	$45.5 \pm 0.1$	$52 \pm 0.1$	$62 \pm 0.15$	$72.5 \pm 0.15$
c	34	37	38	46	57	66.5
$D^*$	7	8	7.5	6	5	6
E	27	29	28	36	45	5.5
F	7	8	10	10	12	16
G	2	2	3	3	3	4
H	3.5	4	5	5	5	5
I	16.5	16.5	16.5	18.5	22.5	24

J	4.5	4.5	4	4.5	5.5	7.5
K	12	12	12.5	14	17	16.5
L	0.5	0.5	0.5	0.5	1	1.5
M1	9.4	9.5	9	12	15	5
N	17.6	20.7	20.1	20.2	22	27.5
ØOh7	56	63	72	86	113	1
∅P	55	62	70	85	112	126
ØQ	42.5	49.5	58	73	96	109
ØR1H7	11	10	14	20	26	32
ØS	8	7	10	15	20	24
ØTh7	38	48	56	67	90	110
ØUH7	6	8	12	14	14	14
V			13.8	16.3	16.3	16.3
WJs9			4	5	5	5
ØX	23	27	32	42	55	68
Y	6	6	8	8	8	8
z	M4 * 8	M5 * 10	M6 * 9	M8 * 2	M10 * 5	M10 * 5
Øb	65	71	82	96	125	144
c	6	6	6	8	12	8
Ød	4.5	4.5	5.5	5.5	6.6	9
f	6	6	6	8	12	8
g	M4	M4	M5	M5	M6	M8
h	29.0 * 0.50	34.5 * 0.80	40.64 * 1.14	53.28 * 0.99	S71	AS566-042
i	S50	S56	S67	S84	S107	S128
Øk	31	38	45	58	78	90
Øm	10	10.5	15.5	20	27	34
r	21.4	23.5	23	29	37	39.5

t*	2	2	2.4	2.8	3	5.5
U*	6	7	7.4	8.8	11	15.5
øy	14	18	21	26	26	32
Weight(kg)	0.5	0.7	1	1.5	3.5	5

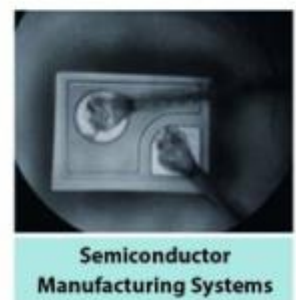
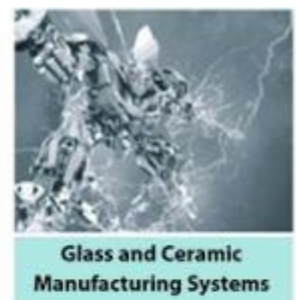
#### 4. Company Introduction

Our company holds strong technical force with completely independence development and the in our company. In the domain of harmonic gear drive, our engineer team has acquired a number invention patents and new national practical patents

Our factory is a professional and productive one which is engaged in research, design and production of harmonic gear drive device in China.

Harmonic gear reducer made by our company has the characteristics of high stability, high precision, long life, large ratio, small size, etc., , especially meet special requirements in robot industrial world advantages . We takes great pride in our history of steady growth and record for maintaining long customer relations .So pls let us work together for the coming era ...

#### 5. Application of CSF Series Harmonic Drive



#### FAQ

**Q: Do you make customized products based on our design drawings?**

A: Yes, we are a professional metal fabrication supplier with experienced engineering team to make custom products according to clients' drawings.

**Q: Will my drawing be safe after you get it?**

A: Yes, we won't release your design to any third parties unless having your permission. And we can sign the NDA before you send the drawing.

**Q: What is the MOQ?**

A: We don't set MOQ, but the price will be better for the larger quantity. Besides, we are happy to make prototype or sample for clients to ensure quality standard.

**Q: Whether some samples can be provided?**

A: Yes, just need sample cost but we will return it back when proceeding into mass production

**Q: How to deal with the parts received when they are found to be in poor quality?**

A: Please rest assured that all our products are QC inspected and accepted with inspection report before delivery and generally there will be no non-conformance: in case of non-conformance, please contact us immediately, take some pictures and we will check on the problems and have them reworked or redo at the first time. Also the relevant transportation costs will be our side.

hanghai Guiyao Machinery has been one of the reliable producers of various gear reducers and transmission parts such as CSF series harmonic drive, cycloidal pinwheel gear reducer, worm gear reducer, spur gear, spiral bevel gear, worm wheel, worm shaft, gearbox shaft, spline shaft etc.

More information on Stainless Steel Components

Machining: <http://www.robotawakens.com>