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Pipeline Gas In. Hydraulic Force Out



Hydraulic Power. Electric Precision

GREATORK Gearbox Product Series

BA Multi Turn Gearbox

ZJ Quarter Turn Gearbox



GREATORK BA Multi Turn Gearbox Product Overview

BA Multi Turn Gearbox Description

BA Series Bevel Gearbox Is Client Focused Design, It Has Removable Drive Bush Which Is Easily Processed To Connect With Valve Stems.

The Operation Temperature of BA Series Bevel Gearbox Is $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$, for Temperature Out of This Scope, Please Contact Tefulong for Detail. The Input Flange(for Actuator) and Output Flange Is Processed According ISO5210, It Can Also Be Processed Separately According Clients Special Requirement or Drawing.

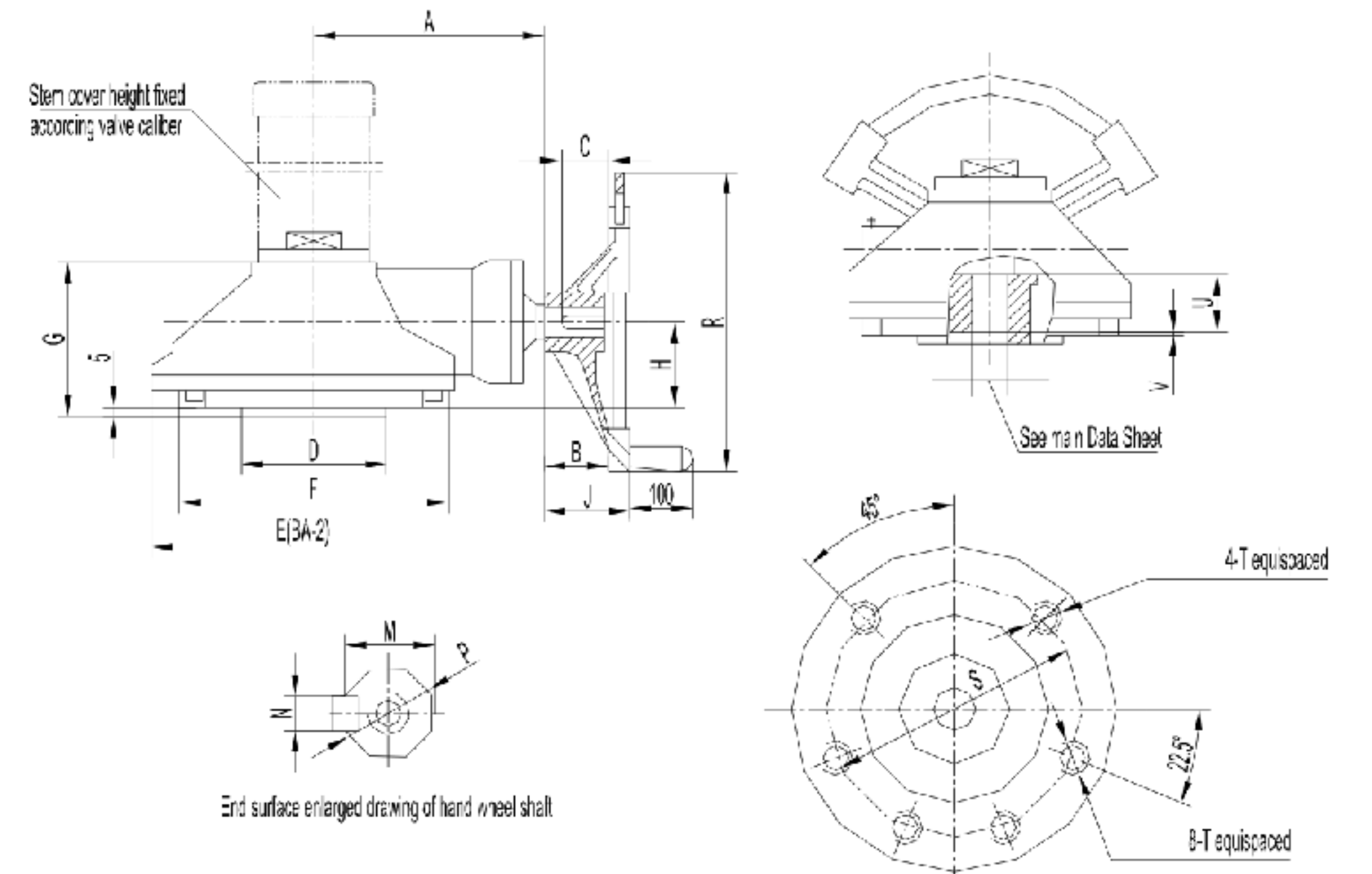
Application

BA Series Multi Turn Bevel Gearbox Can Be Driven by Hand Wheel or Actuator, It Is Used To Operate Gate Valve, Globe Valve, Sluice and So on.

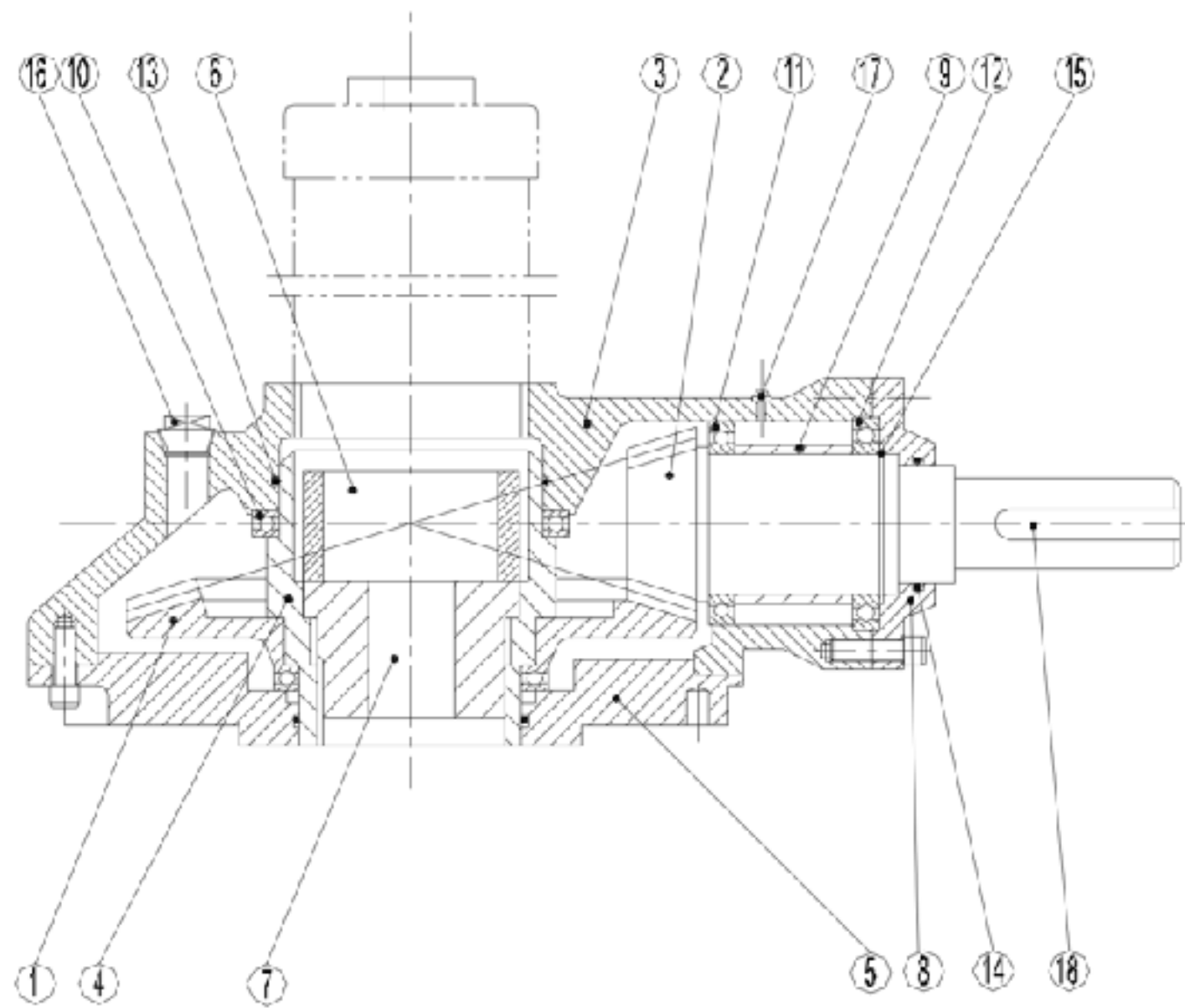
Working Environment

Enclosure Protection: IP67

Ambient Temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$



Basic Drive Structures and Parts Name



Item No.	Name	Material
1	Arc Gear	45# Steel
2	Small Arc Gear	45# Steel
3	Shell	HT200 Cast iron
4	Drive hollow shaft	30# Steel
5	Flange	HT200 Cast iron
6	Locking Nut	A3 Steel
7	Valve Stem nut	66-6-6-2 Brass
8	End Cap	HT200 Cast iron
9	Lining	A3 Steel
10	Thrust Bearing	Bearing Steel
11-12	Bearing	Bearing Steel
13-14	O-ring	Spring Steel
15	Scheibe (Washer)	Spring Steel
16	Casing Cap	T400 Cast iron
17	Oil Cup	599# Copper
18	Bond (Key)	Steel

Note: For special requirement on materials, please contact us.

BA Series Bevel Gearbox Performance Data

Type	BA-00	BA-0	BA-1	BA-2	BA-3	BAA-3		BAA-4		BA-5
Ratio	2.5:1	3:1	4:1	5:1	6:1	6:1	18:1	6:1	18:1	8:1
Output Flange (ISO5210)	F14	F16	F25	F30	F35	F35	F35	F40	F40	F40
Max Torque (Nm)	480	735	1470	2940	4000	6000	6000	7500	7500	9500
Max Thrust (N)	61,000	98,000	196,000	340,000	490,000	630,000	630,000	850,000	850,000	1,000,000
Max Stem Diameter (mm)	Copper Nut	30	35	52	70	90	115	115	130	130
	Bore Key	Motor operated or Manually optional								
Input Flange (ISO5210)	F10	F10	F10/F14	F14/F16	F16/F25	F25/F30	F25/F30	F25/F30	F25/F30	F25/F30
Theoretical Weight (kg)	20	28	52	110	230	370	370	480	480	480

GREATORK ZJ Quarter Turn Gearbox Product Overview

ZJ Quarter Turn Gearbox Description

ZJ Series Worm Gearbox Is Client Focused Design, It Has Removable Drive Bush Which Is Easily Processed To Connect With Valve Stems.

The Operation Temperature of ZJ Series Worm Gearbox Is $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$, for Temperature Out of This Scope, Please Contact Tefulong for Detail. The Input Flange(for Actuator) and Output Flange Is Processed According ISO52211, It Can Also Be Processed Separately According Clients Special Requirement or Drawing.

Application

ZJ Series Quarter Turn Worm Can Be Driven by Hand Wheel or Actuator, It Is Used To Operate Ball Valve, Plug Valve, Butterfly Valve, Damper, Door and So on.

Feature

Totally Sealed Gear Drive Unit

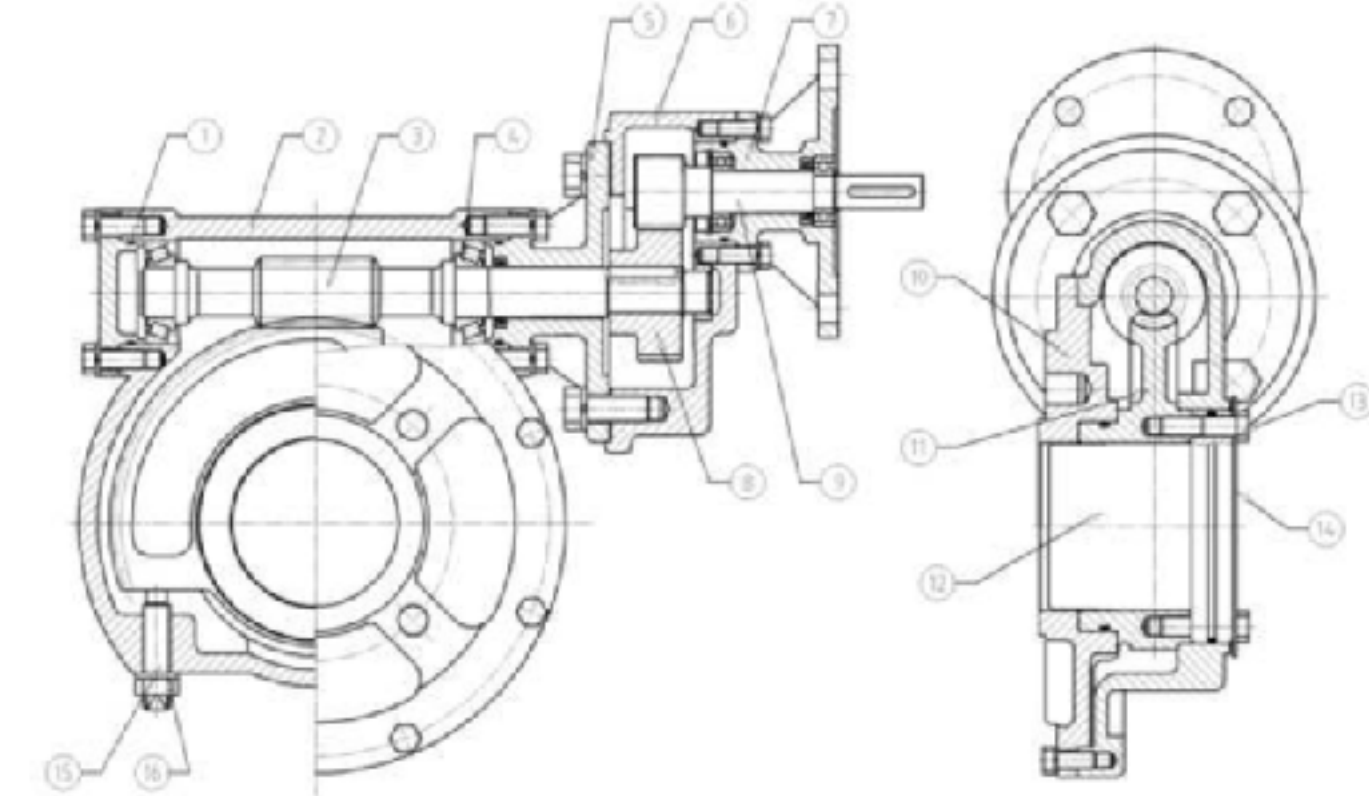
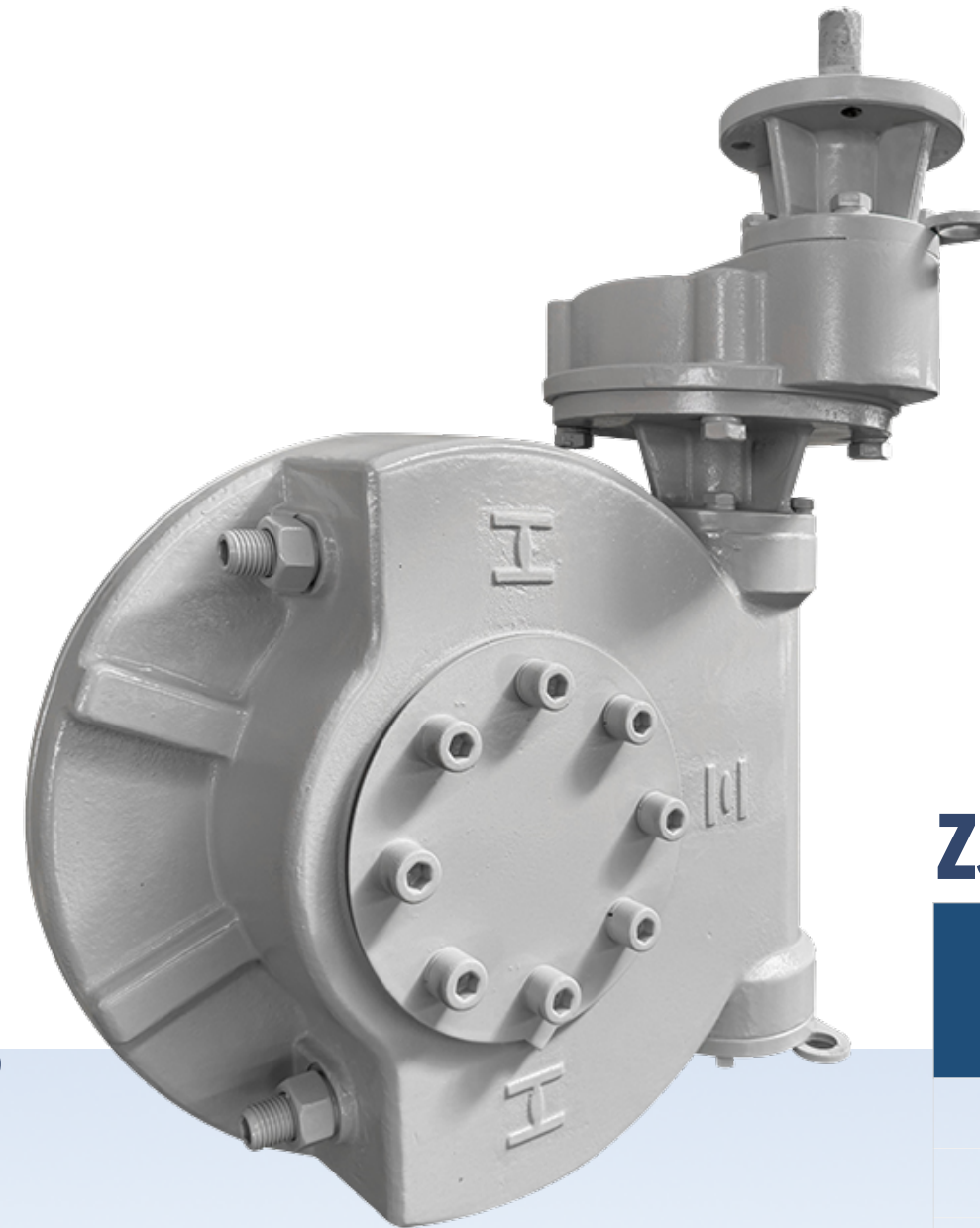
Cast Iron Gearcase Sealed and Grease Lubricant Filled To Extend the Service Life.

Complete With Various Auxiliary Reduction Gear Operator for Various Reducing Ratio.

Tapered Roller Bearing Combined With Worm

Removable Output Bush

Adjustable Mechanical Limit Is $0^{\circ} \sim 90^{\circ}$ Position ($\pm 5^{\circ}$ Adjustable)



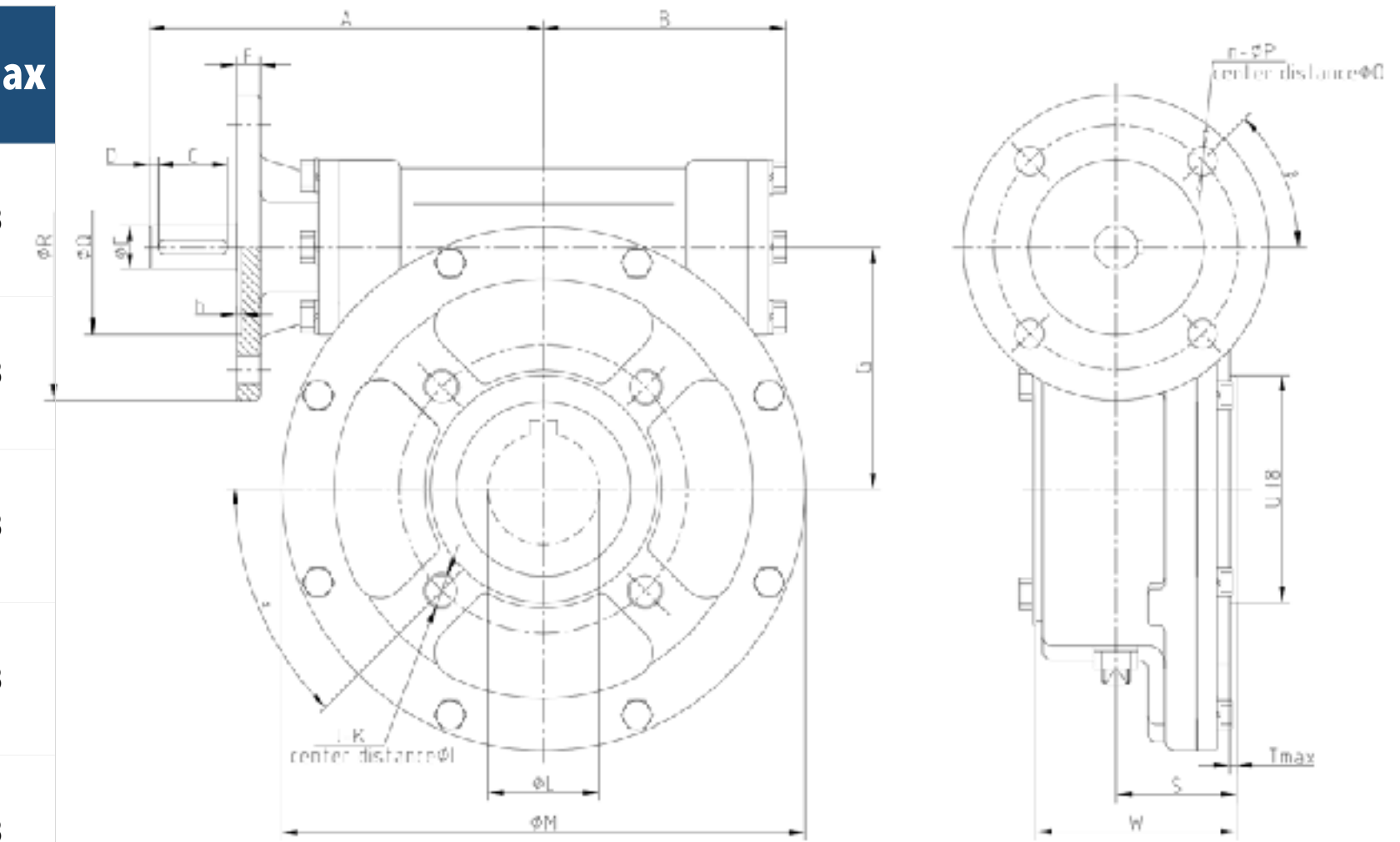
ZJ Series Structure and Material

Item	Name	Material	National Standard	UK Standard	US Standard	German Standard
1	Sealing Ring			Nitrile Rubber		
2	Gearcase	Cast iron	QT400-18	Cr.370-17	60-40-18	GGG40
3	Worm	Steel	40Cr	530A40	5140	38Cr4
4			Tapered Roller Bearing			
5	Flange	Cast Iron	QT400-18	Cr.370-17	60-40-18	GGG40
6	Gearcase	Cast Iron	QT400-18	Cr.370-17	60-40-18	GGG40
7	Input Flange	Cast Iron	QT400-18	Cr.370-17	60-40-18	GGG40
8	Gear	Steel	45	060A42	1045	C45
9	Input Shaft	Steel	40Cr	530A40	5140	38Cr4
10	Base	Cast iron	QT400-18	Cr.370-17	60-40-18	GGG40
11	WormGear	Cast iron	QT400-18	Cr.370-17	60-40-18	GGG40
12	Drive unit	Steel	45	060A42	1045	C45
13	Drive Screw	Steel	45	060A42	1045	C45
14	Indication Plate	Steel	Q235-A	-	A283GRC	RSt37-2
15	Stop Screw	Steel	45	060A42	1045	C45
16				Washer		



ZJ Series Primary/Second/Third reduction ratio gearbox Dimension

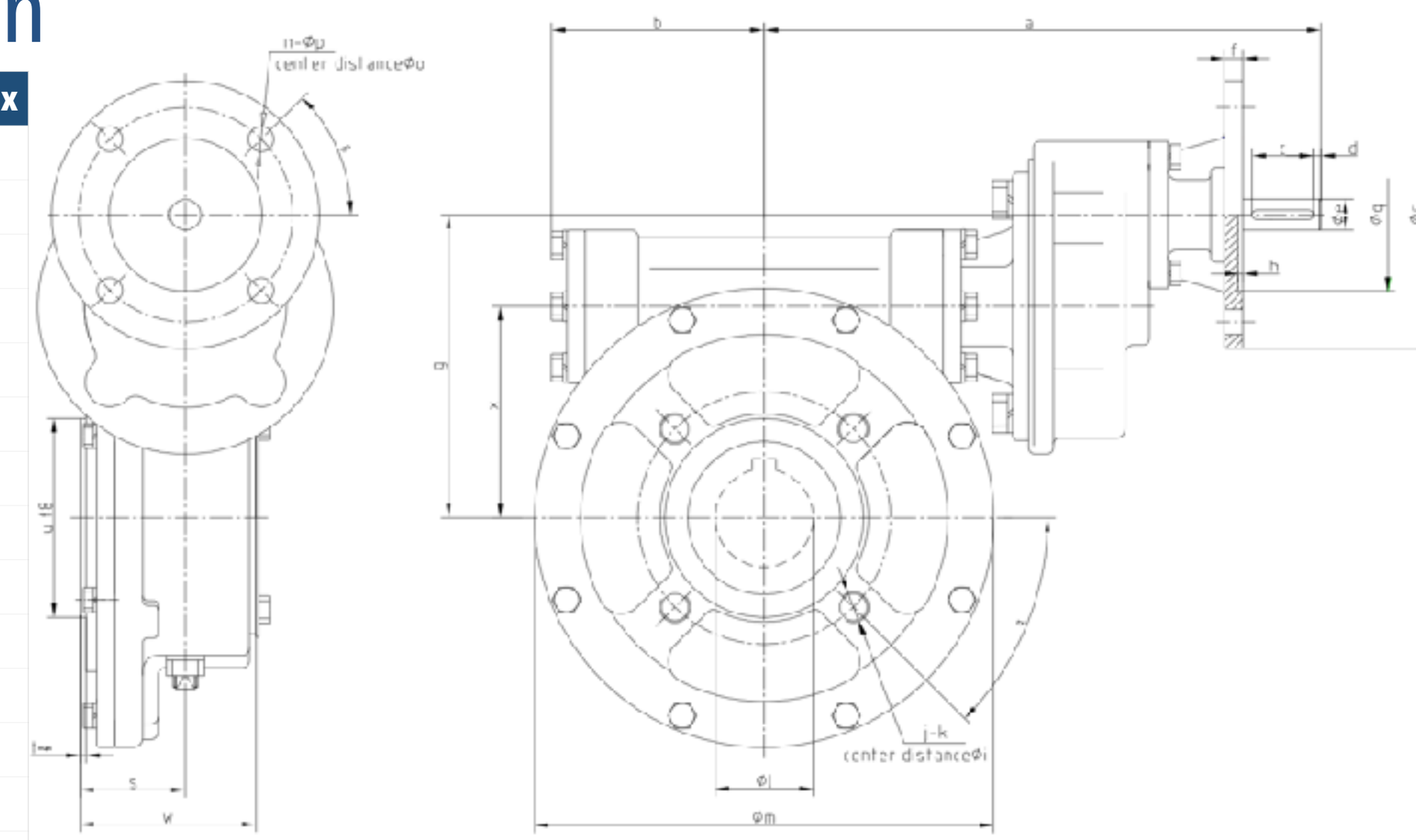
Model	A	B	C	D	E	F	G	α	I	J-K	Lmax	M	h	β	N-P	Q	R	S	O	W	U	Tmax
ZJ3-40	158	87	30	5	15	12	76	45°	102	4-M10	45	170	3	45°	4- Φ 10.5	70	125	42	102	65	70	3
ZJ4-40	182	107	32	6	17	12	105	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-60	182	107	32	6	17	12	105	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-70	182	107	32	6	17	12	105	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ5-40	228	138	40	5	25	15	138	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-70	228	138	40	5	25	15	138	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ6-40	236	149	40	5	30	15	178	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-70	236	149	40	5	30	15	178	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-80	236	149	40	5	30	15	178	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ7-40	329	199	50	5	40	20	210	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	83	165	140	200	4
ZJ7-60	329	199	50	5	40	20	210	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	83	165	140	200	4
ZJ7-70	329	199	50	5	40	20	210	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	83	165	140	200	4
ZJ8-60	365	230	50	5	50	20	249	22.5°	254	8-M16	120	520	3	45°	4- Φ 20.5	130	210	95	165	155	-	-



Primary Reduction Ratio Worm Gearbox

ZJ Series Primary/Second/Third reduction ratio gearbox Dimension

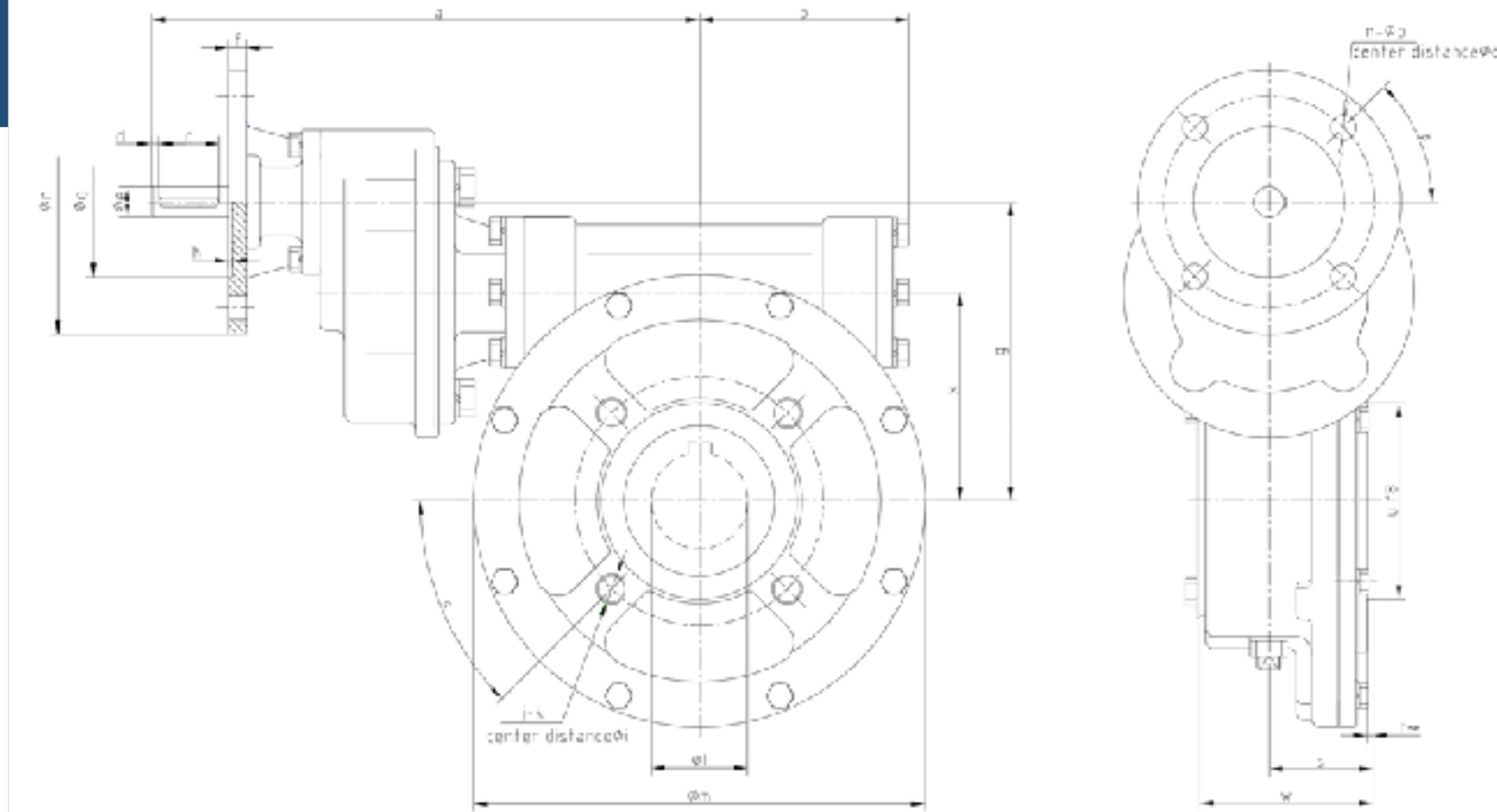
Model	a	b	c	d	e	f	x	g	α	i	j-k	lmax	m	h	β	n-p	q	r	s	o	w	u	tmax
ZJ4-80	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-120	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-140	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-160	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-180	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-210	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-240	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ4-280	310	109	40	5	20	12	105	165	45°	140	4-M16	64	222	3	45°	4- Φ 10.5	70	125	52	102	85	100	3
ZJ5-80	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-120	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-140	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-160	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-200	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-210	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-280	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ5-350	364	138	40	5	20	12	138	198	45°	165	4-M20	76	300	3	45°	4- Φ 10.5	70	125	66	102	110	130	3
ZJ6-120	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-140	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-160	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-210	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-240	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-280	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ6-320	364	149	40	5	20	15	178	242	22.5°	254	8-M16	90	375	3	45°	4- Φ 16.5	100	175	66	140	115	200	4
ZJ7-80	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-120	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-140	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-160	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-180	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-210	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-240	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ7-280	520	199	55	5	30	18	210	340	22.5°	254	8-M16	100	450	3	45°	4- Φ 20.5	130	210	84	165	140	200	4
ZJ8-120	556	230	55	5	30	18	249	369	22.5°	254	8-M16	120	520	3	45°	4- Φ 20.5	130	210	95	165	155	-	-
ZJ8-180	556	230	55	5	30	18	249	369	22.5°	254	8-M16	120	520	3	45°	4- Φ 20.5	130	210	95	165	155	-	-
ZJ8-240	556	230	55	5	30	18	249	369	22.5°	254	8-M16	120	520	3	45°	4- Φ 20.5	130	210	95	165	155	-	-



Secondary Reduction Ratio Worm Gearbox

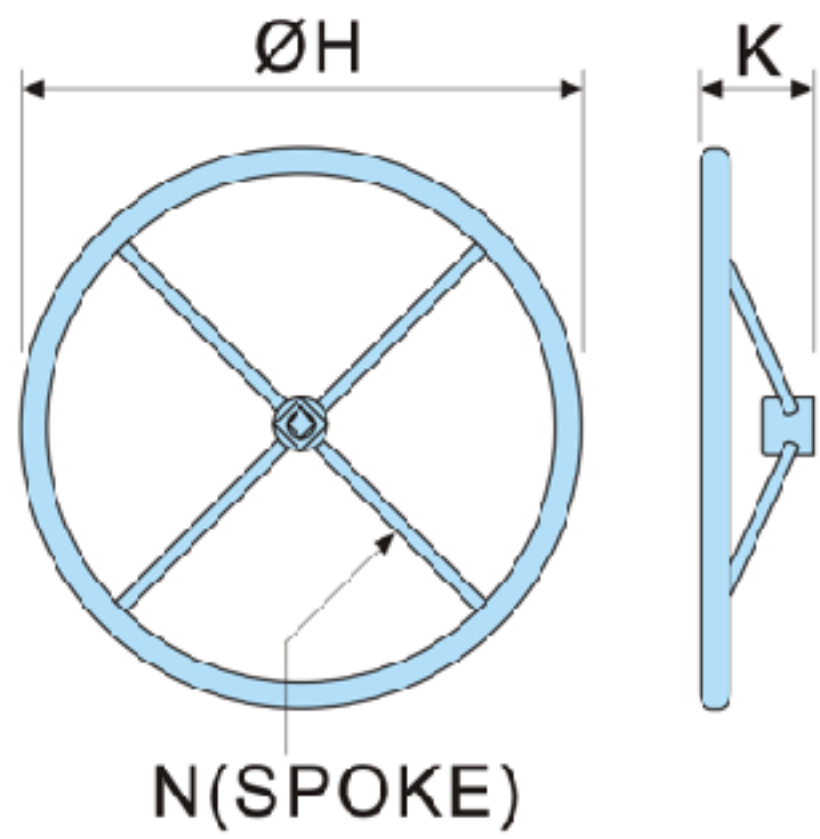
ZJ Series Primary/Second/Third reduction ratio gearbox Dimension

Model	a	b	c	d	e	f	x	g	α	i	j-k	lmax	m	h	β	n-p	q	r	s	o	w	u	tmax
ZJ9-80																							
ZJ9-120																							
ZJ9-140																							
ZJ9-160																							
ZJ9-180										298	8-M20	160	590						116		165	230	4
ZJ9-210																							
ZJ9-240																							
ZJ9-280						20		380															
ZJ9-360	712	333			40		380																
ZJ9-420																							
ZJ10-120			55	5					22.5°					3	22.5°	8-Φ16.5	200	300		254			
ZJ10-180																							
ZJ10-240										356	8-M30	185	735						115		180	260	
ZJ10-360																							
ZJ10-540																							
ZJ11-180																							
ZJ11-240						30		500		406	8-M36	185	795						114		200	300	5
ZJ11-360																							
ZJ12-126																							
ZJ12-179	735	350			50	22	450	570		406	8-M36	230	972						157		225	300	
ZJ12-164																							
ZJ12-233																							

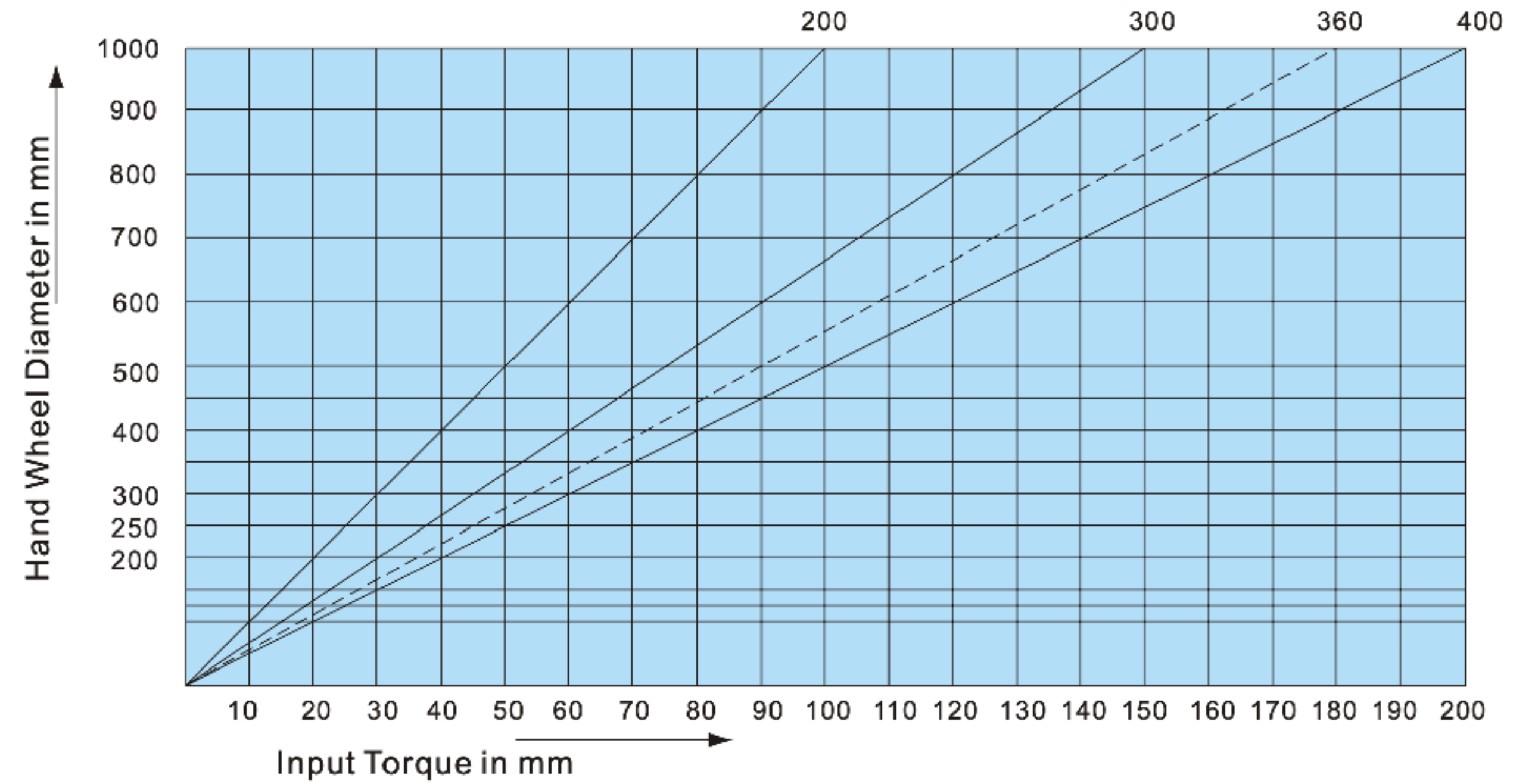


Third Reduction Ratio Worm Gearbox

Hand Wheel Dimension



Hand Wheel Dimension			
Type	ØH	K	N
F200	200	76	3
F300	300	100	3
F400	400	100	4
F500	500	100	4
F600	600	100	4
F700	700	100	6
F800	800	100	6
F900	900	100	6
F1000	1000	100	6
F1100	1100	100	6
F1200	1200	100	8



GP

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