



FORKARDT HARDINGE



Rim-Lok Collet Chucks

Collet Chucks

The collet chuck is a workholding device that uses mechanical force to hold the part being turned. A collet chuck offers advantages related to speed, accuracy and productivity over a jaw chuck. Where there is a danger of exceeding the maximum allowable weight on the machine spindle, the collet chuck becomes a much better choice than a jaw chuck due to their light weight design.

Advantages

- Accelerates up to speed more quickly, reducing cycle times and increasing productivity
- Effect of centrifugal force is less significant, allowing for a more constant clamping force across range of speed
- 360 degree support of the part, tightening concentricity and reducing chance of part slippage, also ensures barstock remains on centerline for concentric re-gripping as it is advanced by bar feeder
- Additional grip coverage reduces risk of deformation for tubes and thin-walled parts
- Reduction in vibration
- Faster clamping and unclamping times
- Faster set up time
- Higher accuracy

Rim-Lok Collet Chucks

The Rim-Lok line of standard collet chucks provides a quick, flexible, and affordable solution to your workholding needs. Designed primarily for second and final turning operations, the Rim-Lok delivers repeatability and durability in a pull-back style chuck. The compact, lightweight design fits most standard CNC lathes and can be actuated by the machine's standard cylinder.

Forkardt Hardinge collets are manufactured to high quality standards using a proprietary process from the material used to the heat treat process. The result is a high quality product with a long life, which reduces collet changeover and downtime. Forkardt Hardinge collets will run with repeatability of 0.0005" TIR or better, assuring that the collet will hold your part consistently throughout your machining operation.

The Rim-Lok offers both an ID and OD grip option, and these chucks can be designed to fit nearly any application, from roughing to grinding to stationary machine center work.

ID Grip collet chucks are recommended for applications where increased side cutting forces are encountered, such as heavy turning or grooving on the OD of the part. Forkardt Hardinge's ID grip collet chuck features positive pull back action and adapt very well to high speed turning applications.

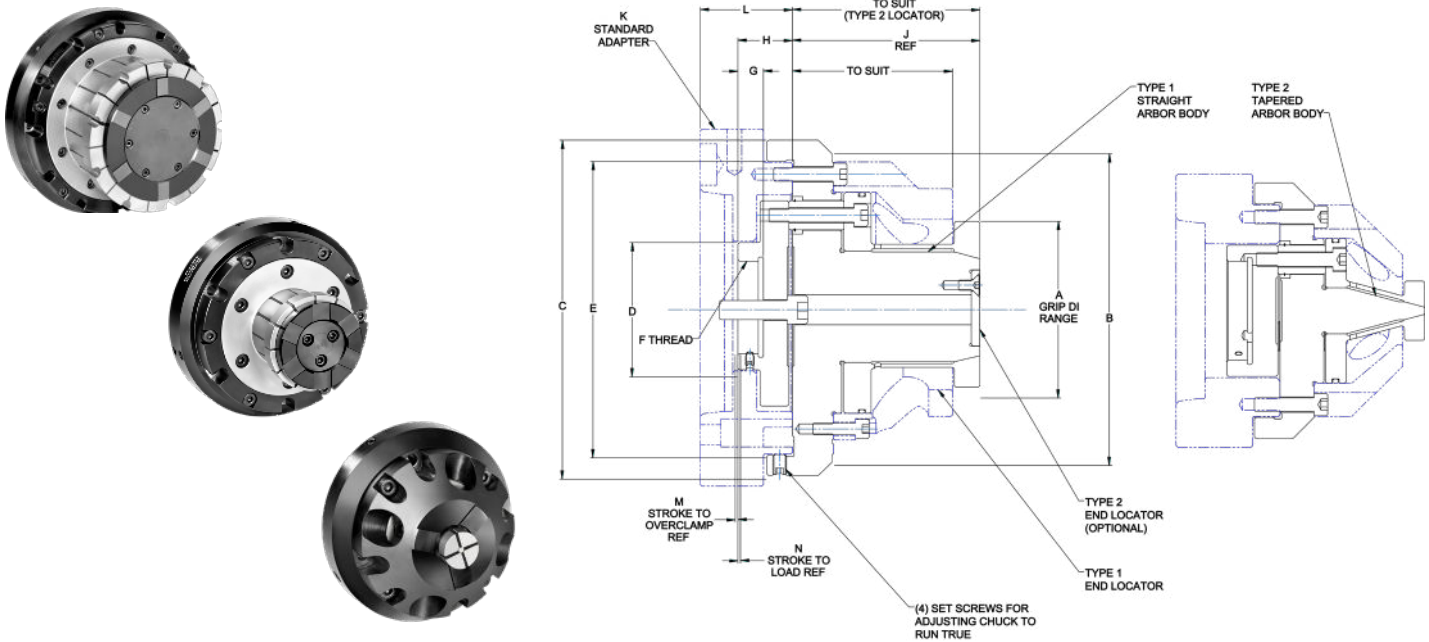
OD Grip collet chucks are one of the most universally used of all rotating workholding devices. Forkardt Hardinge can furnish collets for a nearly limitless range of machining operations from roughing to grinding. OD grip collet chucks adapt very well to high speed turning applications.

Features

- Available in ID and OD Grip
- Sealed design
- High RPM capability
- High grip force
- Repeatability within 0.013mm, 0.0005"
- Suitable for auto-load
- Pull-back actuation for lateral location
- Fixed end-wise location
- Drawbar/tube actuated
- Easily modified for special applications
- Modular design allows interchangeability
- Multiple machine mounts available
- Standard machinable part stops available

As we are constantly striving to improve our products, the dimensions and specifications in this catalog cannot always represent the latest state of our products; they are, therefore, given as an indication only and are not binding.

ID GRIP COLLET CHUCK MODEL IRL



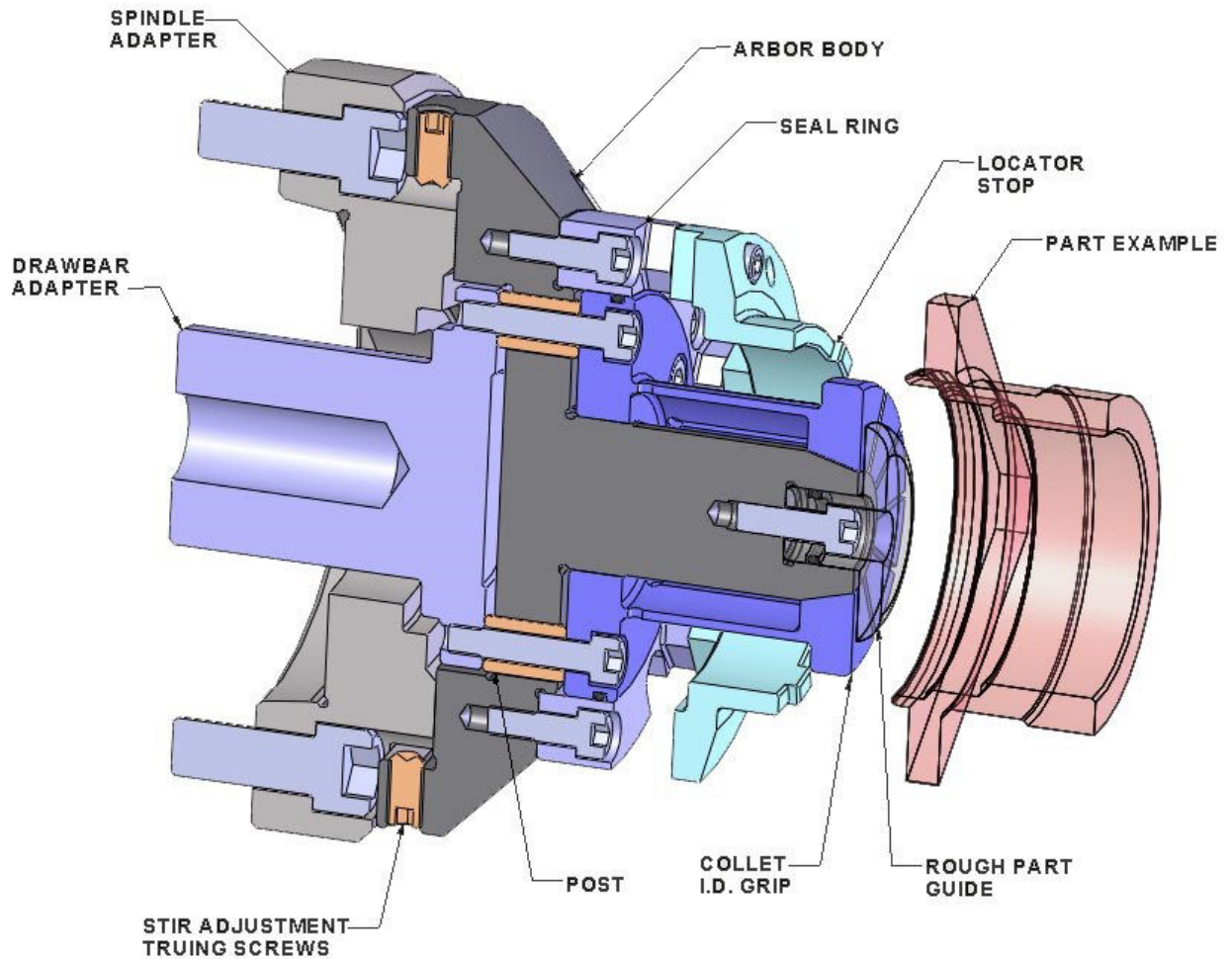
ITEM	A*	B	C	D	E	F	G	H	J
IRL020A	20.00 - 35.50	125.0	150.0	77.0	125.00	M60 X 2.0P	15.0	31.40	85.00
IRL030A	30.00 - 45.00	125.0	150.0	77.0	125.00	M60 X 2.0P	15.0	31.25	96.00
IRL040A	40.00 - 61.00	125.0	150.0	77.0	125.00	M60 X 2.0P	15.0	32.00	96.00
IRL055A	55.00 - 75.25	125.0	150.0	77.0	125.00	M60 X 2.0P	15.0	32.00	96.00
IRL070A	70.00 - 90.25	150.0	175.0	80.0	150.00	M60 X 2.0P	15.0	32.00	101.00
IRL085A	85.00 - 105.25	175.0	200.0	80.0	175.0	M60 X 2.0P	15.0	32.00	110.00
IRL100A	100.00 - 120.25	175.0	200.0	80.0	175.00	M60 X 2.0P	15.0	32.00	120.00
IRL115A	115.00 - 140.50	225.0	250.0	80.0	225.00	M60 X 2.0P	15.0	32.00	127.00
IRL135A	135.00 - 160.50	225.0	250.0	80.0	225.00	M60 X 2.0P	15.0	32.00	132.00
IRL155A	155.00 - 180.50	250.0	275.0	80.0	250.00	M60 X 2.0P	15.0	30.00	142.00
IRL175A	175.00 - 200.50	275.0	300.0	116.0	275.00	M60 X 2.0P	15.0	30.00	157.00
IRL195A	195.00 - 220.50	275.0	300.0	116.0	275.00	M60 X 2.0P	15.0	30.00	162.00

ITEM	K/L	K/L	K/L	K/L	M	N	END LOCATOR STYLE	ARBOR BODY TYPE	MAX. DRAWBAR FORCE LBS **
IRL020A	A2-4 / 54.0	A2-5 / 54.0	A2-6 / 61.0		1.40	0.85	1 ONLY	2	5,000
IRL030A	A2-4 / 54.0	A2-5 / 54.0	A2-6 / 61.0		1.25	0.85	1 ONLY	2	5,000
IRL040A	A2-4 / 54.0	A2-5 / 54.0	A2-6 / 61.0		2.00	1.20	1 ONLY	2	6,000
IRL055A	A2-4 / 54.0	A2-5 / 54.0	A2-6 / 61.0	A2-8 / 54.0	2.00	1.20	1 ONLY	1	9,000
IRL070A	A2-5 / 54.0	A2-6 / 61.0	A2-8 / 54.0		2.00	1.20	1 OR 2	1	12,000
IRL085A	A2-6 / 61.0	A2-8 / 54.0			2.00	1.20	1 OR 2	1	12,000
IRL100A	A2-6 / 61.0	A2-8 / 54.0			2.00	1.20	1 OR 2	1	12,000
IRL115A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0		2.00	1.20	1 OR 2	1	15,000
IRL135A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0		2.00	1.20	1 OR 2	1	15,000
IRL155A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0		2.00	1.20	1 OR 2	1	15,000
IRL175A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0		2.00	1.20	1 OR 2	1	15,000
IRL195A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0		2.00	1.20	1 OR 2	1	22,000

Replacement Parts for ID Grip Collet Chuck Model IRL

Chuck Assembly	Machine Adapters	Collet	Drawbar Adapter	Actuator Post	Cover	Seal Ring
IRL020A	IRL020-A4 IRL020-A5 IRL020-A6	IRL020-(101-130)	IRL020-21	IRL020-32	NONE	IRL020-65
IRL030A	IRL020-A4 IRL020-A5 IRL020-A6	IRL030-(101-130)	IRL020-21	IRL020-32	NONE	IRL030-65
IRL040A	IRL020-A4 IRL020-A5 IRL020-A6	IRL040-(101-127)	IRL020-21	IRL040-32	NONE	IRL030-65
IRL055A	IRL020-A4 IRL020-A5 IRL020-A6 IRL055-A8	IRL055-(101-127)	IRL055-21	IRL040-32	NONE	IRL030-65
IRL070A	IRL070-A5 IRL070-A6 IRL070-A8	IRL070-(101-127)	IRL070-21	IRL040-32	IRL070-54	IRL070-65
IRL085A	IRL085-A6 IRL085-A8	IRL085-(101-127)	IRL085-21	IRL085-32	IRL085-54	IRL085-65
IRL100A	IRL085-A6 IRL085-A8	IRL100-(101-127)	IRL085-21	IRL085-32	IRL100-54	IRL085-65
IRL115A	IRL115-A6 IRL115-A8 IRL115-A11	IRL115-(101-134)	IRL115-21	IRL085-32	IRL115-54	IRL115-65
IRL135A	IRL115-A6 IRL115-A8 IRL115-A11	IRL135-(101-134)	IRL115-21	IRL085-32	IRL135-54	IRL115-65
IRL155A	IRL155-A6 IRL155-A8 IRL155-A11	IRL155-(101-134)	IRL155-21	IRL155-32	IRL135-54	IRL155-65
IRL175A	IRL175-A6 IRL175-A8 IRL175-A11	IRL175-(101-134)	IRL175-21	IRL155-32	IRL175-54	IRL175-65
IRL195A	IRL175-A6 IRL175-A8 IRL175-A11	IRL195-(101-134)	IRL175-21	IRL155-32	IRL175-54	IRL175-65

Sectional and Exploded View for ID Grip Collet Chuck Model IRL



STANDARD PART STOPS

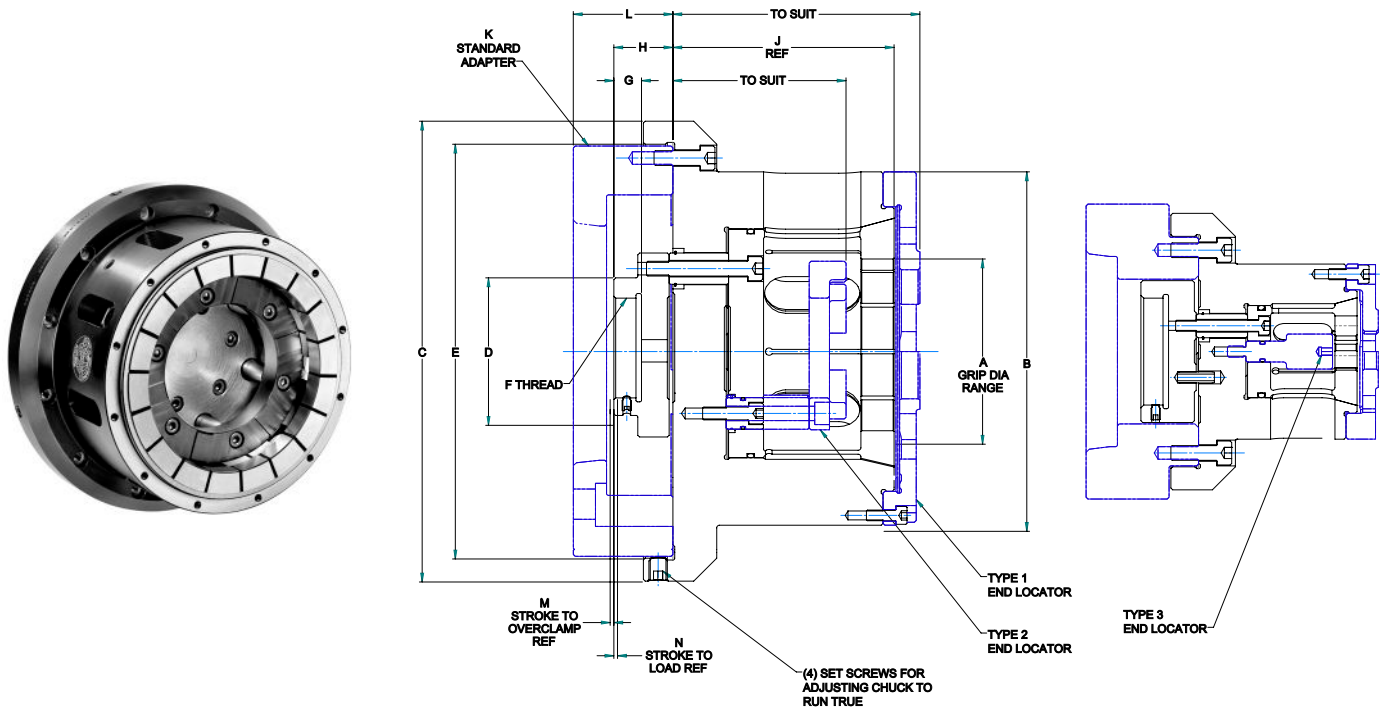


Standard ID Grip Collets



COLLET NUMBER	DIAMETER RANGE (mm)	GRIND DIAMETER (mm)
IRL115-101	115.00-115.75	115.40-115.35
IRL115-102	115.75-116.50	116.15-116.10
IRL115-103	116.50-117.25	116.90-116.85
IRL115-104	117.25-118.00	117.65-117.60
IRL115-105	118.00-118.75	118.40-118.35
IRL115-106	118.75-119.50	119.15-119.10
IRL115-107	119.50-120.25	119.90-119.85
IRL115-108	120.25-121.00	120.65-120.60
IRL115-109	121.00-121.75	121.40-121.35
IRL115-110	121.75-122.50	122.15-122.10
IRL115-111	122.50-123.25	122.90-122.85
IRL115-112	123.25-124.00	123.65-123.60
IRL115-113	124.00-124.75	124.40-124.35
IRL115-114	124.75-125.50	125.15-125.10
IRL115-115	125.50-126.25	125.90-125.85
IRL115-116	126.25-127.00	126.65-126.60
IRL115-117	127.00-127.75	127.40-127.35
IRL115-118	127.75-128.50	128.15-128.10
IRL115-119	128.50-129.25	128.90-128.85
IRL115-120	129.25-130.00	129.65-129.60
IRL115-121	130.00-130.75	130.40-130.35
IRL115-122	130.75-131.50	131.15-131.10
IRL115-123	131.50-132.25	131.90-131.85
IRL115-124	132.25-133.00	132.65-132.60
IRL115-125	133.00-133.75	133.40-133.35
IRL115-126	133.75-134.50	134.15-134.10
IRL115-127	134.50-135.25	134.90-134.85
IRL115-128	135.25-136.00	135.65-135.60
IRL115-129	136.00-136.75	136.40-136.35
IRL115-130	136.75-137.50	137.15-137.10
IRL115-131	137.50-138.25	137.90-137.85
IRL115-132	138.25-139.00	138.65-138.60
IRL115-133	139.00-139.75	139.40-139.35
IRL115-134	139.75-140.50	140.15-140.10

OD Grip Collet Chuck Model ERL



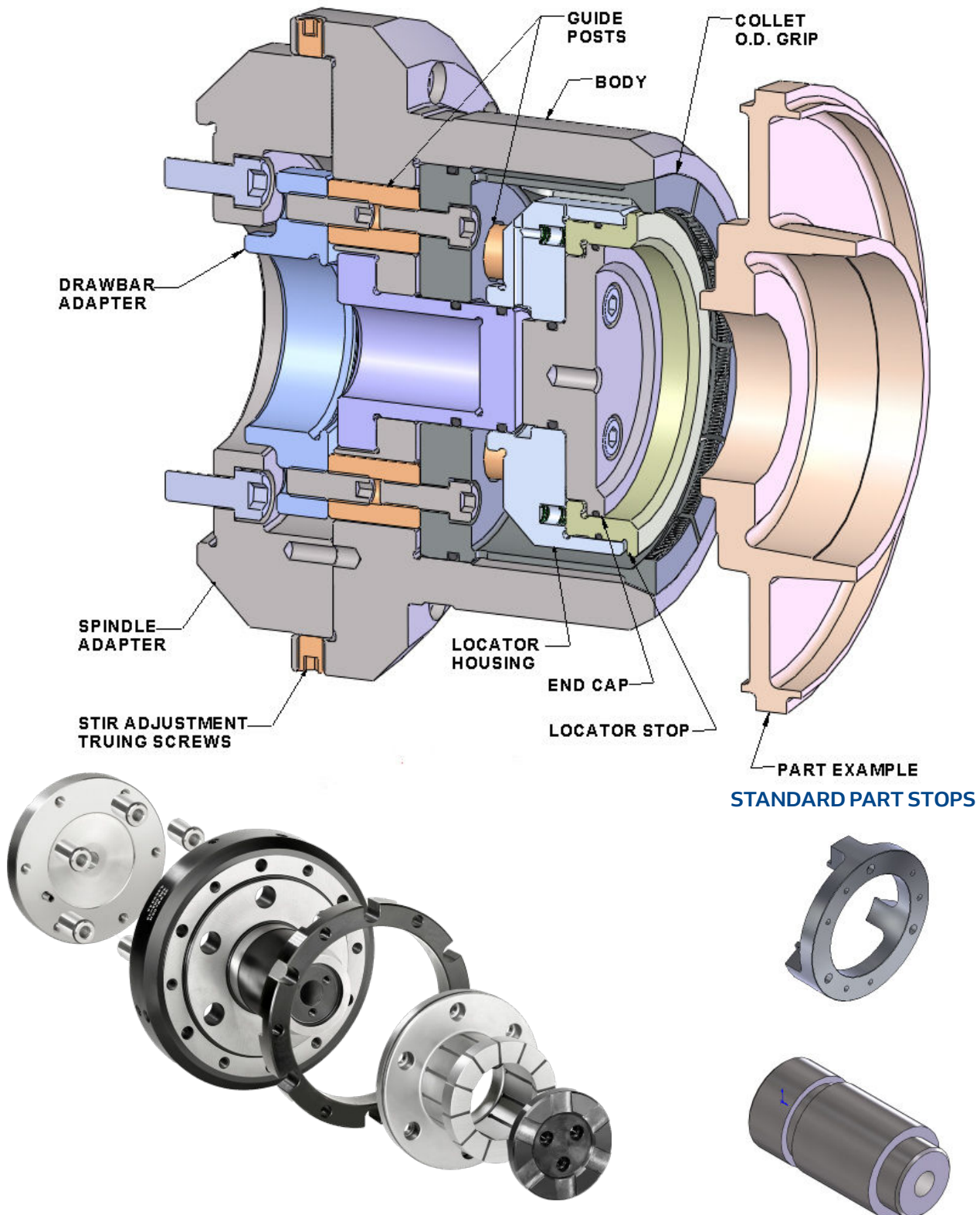
ITEM	A*	B	C	D	E	F	G	H	J
ERL020A	20.00 - 35.50	95.0	150.0	77.0	125.00	M60 X 2.0P	15.0	31.25	86.00
ERL030A	30.00 - 45.50	120.0	175.0	80.0	150.00	M60 X 2.0P	15.0	31.25	93.00
ERL040A	40.00 - 61.00	120.0	175.0	80.0	150.00	M60 X 2.0P	15.0	32.00	96.00
ERL055A	55.00 - 76.00	145.0	200.0	77.0	175.00	M60 X 2.0P	15.0	32.00	98.00
ERL070A	70.00 - 90.00	170.0	225.0	82.0	200.00	M60 X 2.0P	15.0	32.00	102.00
ERL085A	85.00 - 105.00	170.0	225.0	82.0	200.00	M60 X 2.0P	15.0	32.00	106.00
ERL100A	100.00 - 120.00	195.0	250.0	80.0	225.00	M60 X 2.0P	15.0	32.00	120.00
ERL115A	115.00 - 140.00	220.0	275.0	80.0	250.00	M60 X 2.0P	15.0	32.00	125.00
ERL135A	135.00 - 160.00	220.0	275.0	80.0	250.00	M60 X 2.0P	15.0	32.00	132.00
ERL155A	155.00 - 180.00	245.0	300.0	80.0	275.00	M60 X 2.0P	15.0	32.00	137.00

ITEM	K/L	K/L	K/L	K/L	M	N	END LOCATOR STYLE	ARBOR BODY TYPE	MAX. DRAWBAR FORCE LBS **
ERL020A	A2-4 / 50.0	A2-5 / 54.0	A2-6 / 61.0	1.25	0.85	1 OR 3	5,000	2	5,000
ERL030A	A2-5 / 54.0	A2-6 / 61.0	A2-8 / 54.0	1.25	0.85	1 OR 3	5,000	2	5,000
ERL040A	A2-5 / 54.0	A2-6 / 61.0	A2-8 / 54.0	2.00	1.20	1 OR 3	6,000	2	6,000
ERL055A	A2-6 / 61.0	A2-8 / 54.0		2.00	1.20	1 OR 2	8,000	1	9,000
ERL070A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 54.0	2.00	1.20	1 OR 2	8,000	1	12,000
ERL085A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 54.0	2.00	1.20	1 OR 2	8,000	1	12,000
ERL100A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0	2.00	1.20	1 OR 2	10,000	1	12,000
ERL115A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0	2.00	1.20	1 OR 2	10,000	1	15,000
ERL135A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0	2.00	1.20	1 OR 2	10,000	1	15,000
ERL155A	A2-6 / 61.0	A2-8 / 54.0	A2-11 / 64.0	2.00	1.20	1 OR 2	10,000	1	15,000

Replacement Parts for OD Grip Collet Chuck Model ERL

Chuck Assembly	Machine Adapters	Collet	Drawbar Adapter	Actuator Post	Plug	Locator Post
ERL020A	IRL020-A4 IRL020-A5 IRL020-A6	ERL020 - (101-130)	ERL020-21	ERL020-32	ERL020-65	NONE
ERL030A	IRL070-A5 IRL070-A6 IRL070-A8	ERL030 - (101-130)	ERL020-21	ERL020-32	ERL030-65	ERL030-(651-655)
ERL040A	IRL070-A5 IRL070-A6 IRL070-A8	ERL040 - (101-127)	ERL030-21	ERL020-32	ERL030-65	ERL030-(651-655)
ERL055A	IRL085-A6 IRL085-A8	ERL055 - (101-127)	IRL055-21	IRL040-32	ERL055-65	ERL055-(651-655)
ERL070A	ERL070-A6 ERL070-A8 ERL070-A11	ERL070 - (101-127)	ERL070-21	IRL040-32	ERL055-65	ERL055-(651-655)
ERL085A	ERL070-A6 ERL070-A8 ERL070-A11	ERL085 - (101-127)	ERL070-21	IRL040-32	ERL055-65	ERL055-(651-655)
ERL100A	IRL115-A6 IRL115-A8 IRL115-A11	ERL100 - (101-127)	IRL70-21	IRL085-32	ERL100-65	ERL100-(651-655)
ERL115A	IRL155-A6 IRL155-A8 IRL155-A11	ERL115 - (101-134)	IRL70-21	IRL085-32	ERL100-65	ERL100-(651-655)
ERL135A	IRL155-A6 IRL155-A8 IRL155-A11	ERL135 - (101-134)	IRL70-21	IRL085-32	ERL100-65	ERL100-(651-655)
ERL155A	IRL175-A6 IRL175-A8 IRL175-A11	ERL155 - (101-134)	IRL70-21	IRL085-32	ERL100-65	ERL100-(651-655)

Sectional and Exploded View for OD Grip Collet Chuck Model ERL



Standard ID Grip Collets



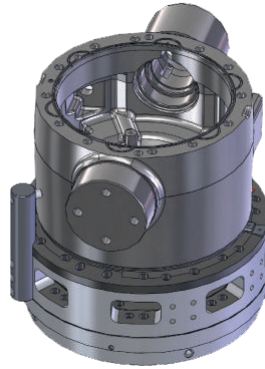
COLLET NUMBER	DIAMETER RANGE (mm)	GRIND DIAMETER (mm)
ERL055-1 01	55.00-55.75	55.35-55.40
ERL055-1 02	55.75-56.50	56.10-56.15
ERL055-1 03	56.50-57.25	56.85-57.90
ERL055-1 04	57.25-58.00	57.60-57.65
ERL055-1 05	58.00-58.75	58.35-58.40
ERL055-1 06	58.75-59.50	59.10-59.15
ERL055-1 07	59.50-60.25	59.85-59.90
ERL055-1 08	60.25-61.00	60.60-60.65
ERL055-1 09	61.00-61.75	61.35-61.40
ERL055-110	61.75-62.50	62.10-62.15
ERL055-111	62.50-63.25	62.85-62.90
ERL055-112	63.25-64.00	63.60-63.65
ERL055-113	64.00-64.75	64.35-64.40
ERL055-114	64.75-65.50	65.10-65.15
ERL055-115	65.50-66.25	65.85-65.90
ERL055-116	66.25-67.00	66.60-66.65
ERL055-117	67.00-67.75	67.35-67.40
ERL055-118	67.75-68.50	68.10-68.15
ERL055-119	68.50-69.25	68.85-68.90
ERL055-120	69.25-70.00	69.60-69.65
ERL055-121	70.00-70.75	70.35-70.40
ERL055-122	70.75-71.50	71.10-71.15
ERL055-123	71.50-72.25	71.85-71.90
ERL055-124	72.25-73.00	72.60-72.65
ERL055-125	73.00-73.75	73.35-73.40
ERL055-126	73.75-74.50	74.10-74.15
ERL055-127	74.50-75.25	74.85-74.90
ERL055-128	75.25-76.00	75.60-75.65

Special Application Examples

Automotive

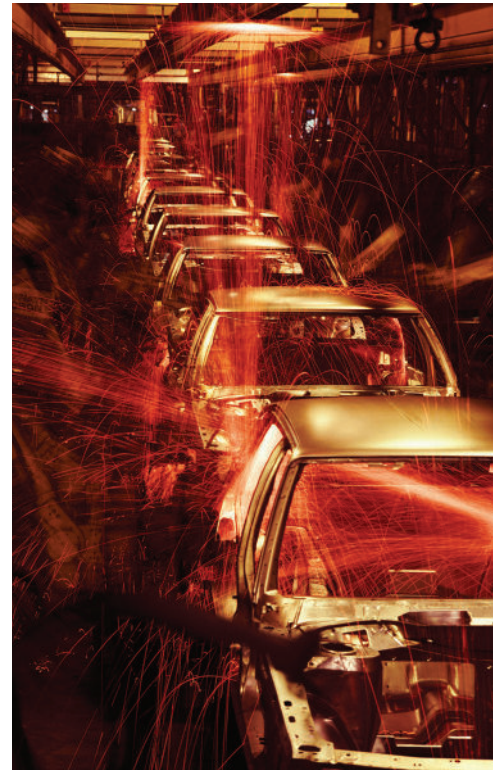
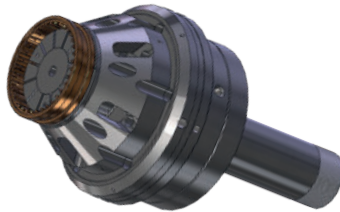
Large Diff Case

This OD Grip Collet Chuck second operation turning of the diameters and the face. Part orientation was required. The chuck is designed with pull back to allow the part to positively locate against fixed stops. Because the part is not symmetrically shaped, it was necessary for the design to account for balance issues presented by the part.



Automotive CG Joint

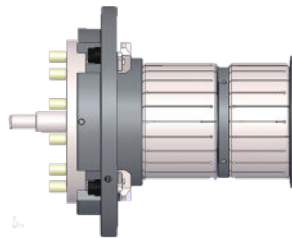
ID grip collet chuck in second operation turning application in vertical arrangement.



Aerospace

Aircraft Rotor

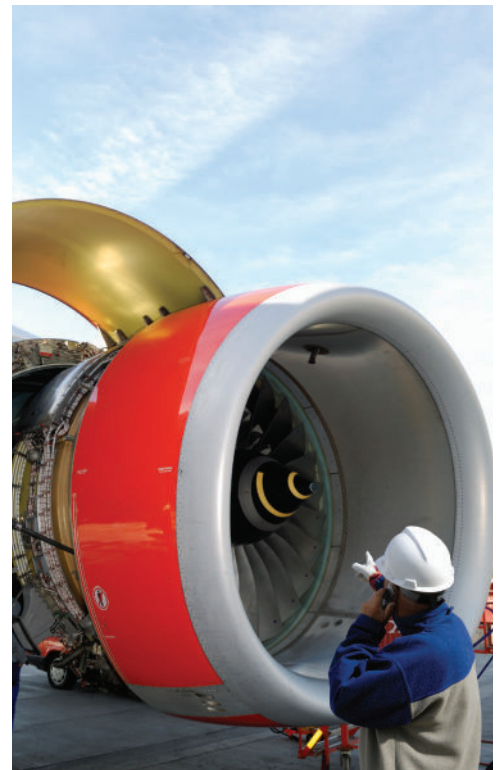
This double collet ID grip chuck is used for second operation machining. In order to meet the stringent quality requirements necessary for the aircraft industry, the chuck also utilizes manual clamps for pull down.



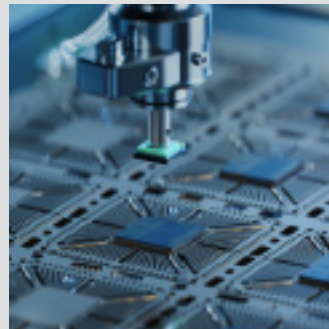
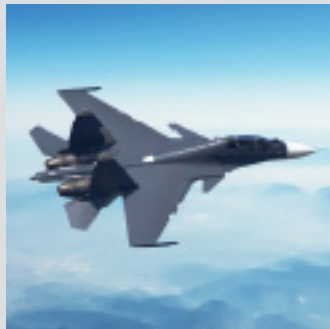
Special Aerospace

Vertical Turning Operation

This ID grip collet chuck was designed with internal finger clamps. The collet was designed with no pull back, allowing the finger clamps to pull the part down onto a fixed locator providing for minimal distortion.



Forkardt Hardinge, a solution for every industry



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HARDINGE**

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