



## about IAR

*"We are here to stay in the field of CNC and automation accessories. We are deeply devoted to the development of our products and services. Our aim is complete customer satisfaction."*

**- V.V. Mujumdar,**  
Founder, IAR

Institute of Applied Research (IAR), established in 1974 as a research organisation, is engaged in research activities in the areas of –

- ♦ Material Sciences
- ♦ Precision linear actuator ball screws
- ♦ Nano technology in medical sciences
- ♦ Material handling equipment

IAR has had the distinction of excelling in different areas of technology and has several national and international awards to its credit.

Situated in India at MIDC Bhosari, Pune in Maharashtra state on 18,000 sq. ft. plot with a built-up area of 8500 sq. ft., IAR not only manufactures ball screws and skid rollers but also sponsors projects for graduate and post-graduate engineering students, training them in the competitive environment of the small-scale industry sector with a view to promote entrepreneurship. Foreign students, especially from Spain and France, are regularly trained at IAR.

## IAR

### Miniature Ball Screws



#### FEATURES

- ♦ Our ball screws and nuts possess high functional reliability as they are subjected to cryogenic treatment
- ♦ After intensive development work and tests we have arrived at a special design of the **deflector** in the nut. This leads to a smoother and quicker diversion of the balls in their recirculation path. In IAR deflector the ball channels are machined cycloidal. The cycloidal path gives less frictional resistance to the ball screw drive. This can lead to higher drive efficiencies



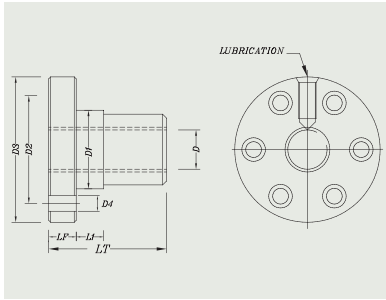


Figure1: IAR FLANGED NUT SERIES 1011

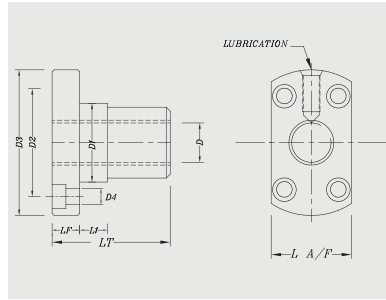


Figure2: IAR FLANGED NUT SERIES 1012

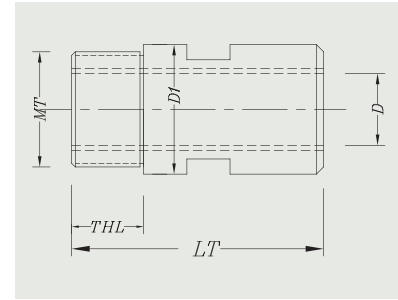


Figure3: IAR FLANGED NUT SERIES 1013

IAR FLANGED NUT SERIES 1011 AND 1012 DETAILS ARE IN FOLLOWING TABLE. AND ALSO CUSTOM DESIGNS ARE ALSO AVAILABLE.

MODEL	NUT DIMENSIONS													LOAD RATINGS N	
	NOM. DIA.	LEAD	BALL DIA.	NO. OF CIRCUITS	D	D1	D2	D3	D4	L A/F	LF	L1	LT	DYNAMIC N	STATIC N
IAR 5X0.5	5	0.5	Ø0.3	3	5	12	18	24	3.3	14	8	6	25	80	130
IAR 5X1	5	1	Ø0.6	3	5	12	18	24	3.3	14	10	6	25	170	240
IAR 8X1	8	1	Ø0.6	3	8	16	22	30	4.2	18	10	6	25	400	540
IAR 10X1	10	1	Ø0.6	3	10	18	24	32	4.2	20	12	6	28	600	940
IAR 12X1	12	1	Ø0.6	3	12	20	26	34	4.2	14	12	6	30	600	1100
IAR 5X1.5	5	1.5	Ø1	3	5	12	18	24	3.3	14	10	6	25	640	860
IAR 8X1.5	8	1.5	Ø1	4	8	16	22	30	4.2	18	12	6	30	1200	1800
IAR 10X1.5	10	1.5	Ø1	3	10	18	24	32	4.2	20	12	6	30	1600	2200
IAR 12X1.5	12	1.5	Ø1	3	12	21	26	32	4.2	22	10	6	30	2000	2800
IAR 8X2	8	2	Ø1.58	4	8	20	26	32	4.2	22	10	6	35	2000	2100
IAR 10X2	10	2	Ø1.58	4	10	22	28	34	4.2	24	10	6	35	2200	2100
IAR 12X2	12	2	Ø1.58	4	12	24	29	34	4.2	24	12	6	35	2500	3400

IAR FLANGED NUT SERIES 1013 DETAILS ARE IN FOLLOWING TABLE. AND ALSO CUSTOM DESIGN IS ALSO AVAILABLE.

MODEL	NUT DIMENSIONS							LOAD RATINGS			
	NOM. DIA.	LEAD	BALL DIA.	NO. OF CIRCUITS	D	D1	MT	TL	LT	DYNAMIC N	STATIC N
IAR 5X0.5	5	0.5	Ø0.3	3	5	15	12X1	10	36	80	130
IAR 5X1	5	1	Ø0.6	3	5	15	10x1	10	36	170	240
IAR 8X1	8	1	Ø0.6	3	8	18	15X1	12	40	400	540
IAR 10X1	10	1	Ø0.6	3	10	22	17X1	12	42	600	940
IAR 12X1	12	1	Ø0.6	3	12	25	20X1.5	15	50	600	1100
IAR 5X1.5	5	1.5	Ø1	3	5	15	10x1	10	36	640	860
IAR 8X1.5	8	1.5	Ø1	4	8	20	15X1	12	40	1200	1800
IAR 10X1.5	10	1.5	Ø1	3	10	22	17X1	12	42	1600	2200
IAR 12X1.5	12	1.5	Ø1	3	12	24	20X1.5	15	50	2000	2800
IAR 8X2	8	2	Ø1.58	4	8	20	15X1	12	40	2000	2100
IAR 10X2	10	2	Ø1.58	4	10	22	17X1	12	42	2200	2100
IAR 12X2	12	2	Ø1.58	4	12	24	20X1.5	15	50	2500	3400

All dimensions are in mm. Standard supply is RH Ball Screw. Ball Screw with LH orientation can be supplied on request. Above dimensions may change as and when decided by Institute of Applied Research



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