

# HRT-E

Male Self Lubricating 3 Piece

2023/03/22

## Feature of a Product

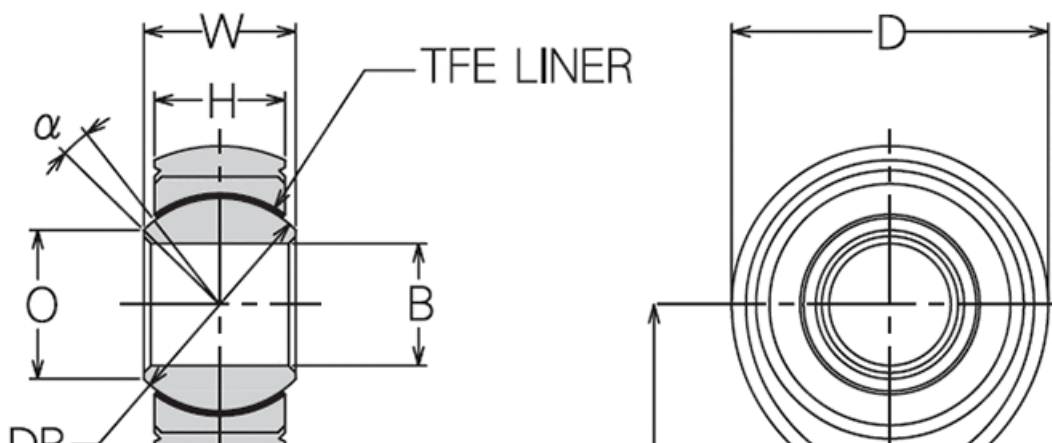
Suitable for High load application.  
Self-lubricating.

Consist of a spherical bearing staked into the Rod End body. They provide high strength, as main body material is chrome molybdenum steel (hardness 35HRC, tensile strength  $980\text{N/mm}^2\{100\text{kgf/mm}^2\}$ ). Material selection of spherical race is depending on applications and therefore, 3piece Rod End can bear sever requirements.

## Material

(P/N)	BODY	RACE	BALL	LINER
HRT-E	Chromium-Molybdenum Steel Zinc Plated	410 Stainless Steel / Heat Treated	440C Stainless Steel / Heat Treated	TFE
HRT-ECR	SUS630 Stainless Steel Passivated	410 Stainless Steel / Heat Treated	440C Stainless Steel / Heat Treated	TFE

## Overall View



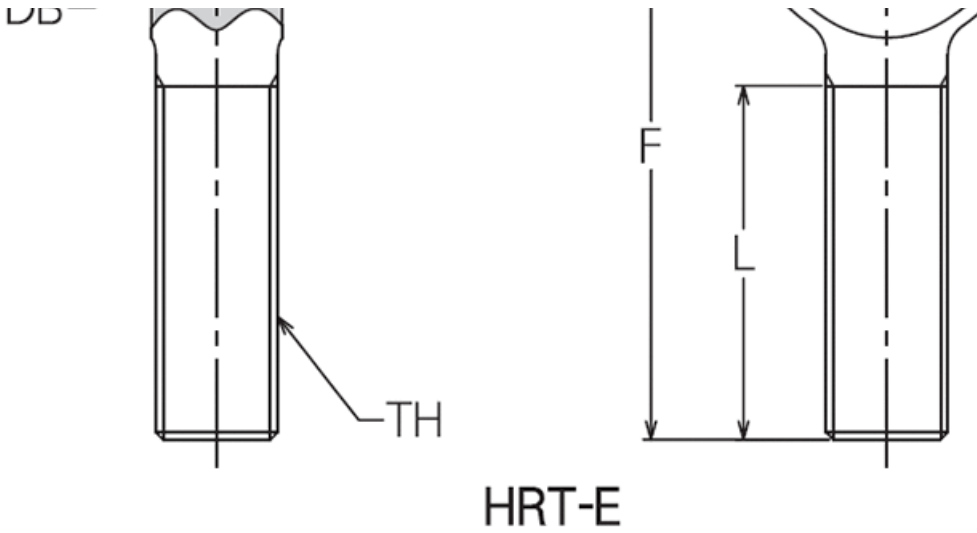
ミネベアミツミ株式会社

Copyright©MinebeaMitsumi Inc. All right reserved.

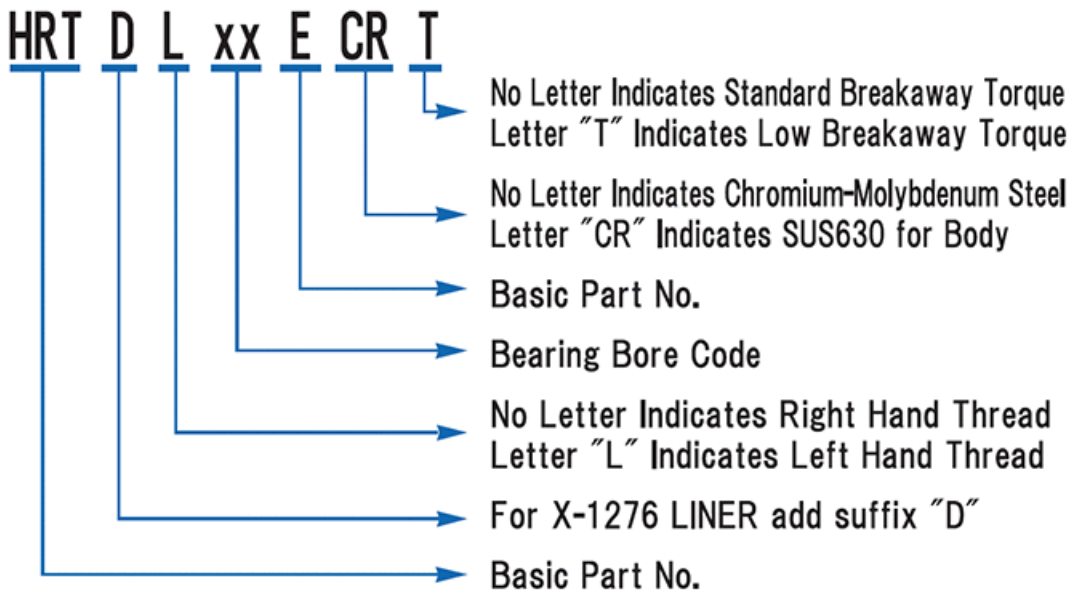
# HRT-E

Male Self Lubricating 3 Piece

2023/03/22



## Part Number



## Dimension

## HRT-E

Male Self Lubricating 3 Piece

2023/03/22

## Dimensions in mm

Part No.	øB H7	øD ±0.5	W 0-0.13	H ±0.13	F ±0.5	TH JIS CL2
HRT5E	5	20.5	11.0	8.75	39.5	M5×0.8
HRT6E	6	20.5	11.0	8.75	39.5	M6×1.0
HRT8E	8	23.0	11.0	8.25	46.0	M8×1.25
HRT10E	10	26.0	12.5	10.75	47.0	M10×1.5
HRT12E	12	34.0	16.0	13.25	62.0	M12×1.75
HRT14E	14	36.0	17.0	14.25	64.0	M14×2.0
HRT15E	15	38.0	18.0	14.25	65.0	M14×2.0
HRT16E	16	39.0	19.0	15.25	66.5	M16×2.0
HRT17E	17	41.0	20.0	15.25	72.5	M16×1.5
HRT18E	18	43.0	20.0	16.30	79.5	M18×1.5
HRT20E	20	45.0	22.0	16.30	83.0	M20×1.5
HRT22E	22	52.0	22.0	19.30	86.0	M22×1.5
HRT25E	25	70.0	35.0	25.30	105.0	M24×2.0
HRT28E	28	75.0	35.0	25.30	110.0	M27×2.0
HRT30E	30	78.0	37.0	26.30	120.0	M30×2.0
HRT5ECR	5	20.5	11.0	8.75	39.5	M5×0.8
HRT6ECR	6	20.5	11.0	8.75	39.5	M6×1.0
HRT8ECR	8	23.0	11.0	8.25	46.0	M8×1.25
HRT10ECR	10	26.0	12.5	10.75	47.0	M10×1.5
HRT12ECR	12	34.0	16.0	13.25	62.0	M12×1.75
HRT14ECR	14	36.0	17.0	14.25	64.0	M14×2.0
HRT15ECR	15	38.0	18.0	14.25	65.0	M14×2.0
HRT16ECR	16	39.0	19.0	15.25	66.5	M16×2.0
HRT17ECR	17	41.0	20.0	15.25	72.5	M16×1.5
HRT18ECR	18	43.0	20.0	16.30	79.5	M18×1.5
HRT20ECR	20	45.0	22.0	16.30	83.0	M20×1.5
HRT22ECR	22	52.0	22.0	19.30	86.0	M22×1.5
HRT25ECR	25	70.0	35.0	25.30	105.0	M24×2.0
HRT28ECR	28	75.0	35.0	25.30	110.0	M27×2.0
HRT30ECR	30	78.0	37.0	26.30	120.0	M30×2.0

Part No.	L ±0.7	α DEG	øO(REF)	SøDB(REF)	No Load Rotational Breakaway Torque - Standerd Type lower limit	No Load Rotational Breakaway Torque - Standerd Type upper limit	No Load Rotational Breakaway Torque - Standerd Type lower limit

## HRT-E

Male Self Lubricating 3 Piece

2023/03/22

					[N·m]	[N·m]	[kgf·cm]
HRT5E	22.0	15	7.8	13.49	0.06	0.68	0.6
HRT6E	22.0	15	7.8	13.49	0.06	0.68	0.6
HRT8E	29.0	14	10.9	15.48	0.12	1.13	1.2
HRT10E	29.0	8	12.2	17.46	0.12	1.13	1.2
HRT12E	37.0	10	15.4	22.22	0.12	1.13	1.2
HRT14E	38.0	8	18.9	25.40	0.12	1.13	1.2
HRT15E	38.0	11	19.0	26.19	0.12	1.13	1.2
HRT16E	39.5	10	19.2	26.99	0.12	1.13	1.2
HRT17E	42.0	12	20.4	28.58	0.12	1.13	1.2
HRT18E	46.0	10	20.4	28.58	0.12	1.13	1.2
HRT20E	50.0	13	22.9	31.75	0.12	1.13	1.2
HRT22E	51.0	6	27.1	34.92	0.23	1.80	2.3
HRT25E	59.0	15	32.3	47.62	0.23	1.80	2.3
HRT28E	62.0	14	36.8	50.80	0.23	1.80	2.3
HRT30E	65.0	14	40.4	54.77	0.23	1.80	2.3
HRT5ECR	22.0	15	7.8	13.49	0.06	0.68	0.6
HRT6ECR	22.0	15	7.8	13.49	0.06	0.68	0.6
HRT8ECR	29.0	14	10.9	15.48	0.12	1.13	1.2
HRT10ECR	29.0	8	12.2	17.46	0.12	1.13	1.2
HRT12ECR	37.0	10	15.4	22.22	0.12	1.13	1.2
HRT14ECR	38.0	8	18.9	25.40	0.12	1.13	1.2
HRT15ECR	38.0	11	19.0	26.19	0.12	1.13	1.2
HRT16ECR	39.5	10	19.2	26.99	0.12	1.13	1.2
HRT17ECR	42.0	12	20.4	28.58	0.12	1.13	1.2
HRT18ECR	46.0	10	20.4	28.58	0.12	1.13	1.2
HRT20ECR	50.0	13	22.9	31.75	0.12	1.13	1.2
HRT22ECR	51.0	6	27.1	34.92	0.23	1.80	2.3
HRT25ECR	59.0	15	32.3	47.62	0.23	1.80	2.3
HRT28ECR	62.0	14	36.8	50.80	0.23	1.80	2.3
HRT30ECR	65.0	14	40.4	54.77	0.23	1.80	2.3

Part No.	No Load Rotational Breakaway Torque - Standard Type upper limit [kgf·cm]	Static Limit load(Radial) [kN]	Static Limit load(Axial) [kN]	Static Ultimate Load [kN]	Fatigue Load [kN]	Approx. Weight [g]
HRT5E	6.9	10.29	5.09	12.84	2.10	35
HRT6E	6.9	11.51	5.09	18.14	2.00	35

## HRT-E

Male Self Lubricating 3 Piece

2023/03/22

Part No.	6.9	14.51	5.09	18.14	2.99	35
HRT8E	11.5	26.77	5.29	33.44	5.54	40
HRT10E	11.5	37.65	6.76	47.07	7.84	65
HRT12E	11.5	62.46	8.33	78.06	12.94	126
HRT14E	11.5	82.96	9.02	103.65	17.25	140
HRT15E	11.5	100.71	9.70	125.81	20.98	165
HRT16E	11.5	100.71	9.70	125.81	20.98	195
HRT17E	11.5	101.40	10.29	126.70	21.08	220
HRT18E	11.5	120.62	12.16	150.72	25.10	250
HRT20E	11.5	121.30	12.84	151.61	25.20	290
HRT22E	18.4	156.21	15.10	195.25	32.55	450
HRT25E	18.4	300.08	20.88	375.10	62.56	1150
HRT28E	18.4	283.70	23.24	354.60	59.13	1500
HRT30E	18.4	271.93	24.81	339.89	56.68	1800
HRT5ECR	6.9	10.29	5.09	12.84	2.10	35
HRT6ECR	6.9	14.51	5.09	18.14	2.99	35
HRT8ECR	11.5	26.77	5.29	33.44	5.54	40
HRT10ECR	11.5	37.65	6.76	47.07	7.84	65
HRT12ECR	11.5	62.46	8.33	78.06	12.94	126
HRT14ECR	11.5	82.96	9.02	103.65	17.25	140
HRT15ECR	11.5	100.71	9.70	125.81	20.98	165
HRT16ECR	11.5	100.71	9.70	125.81	20.98	195
HRT17ECR	11.5	101.40	10.29	126.70	21.08	220
HRT18ECR	11.5	120.62	12.16	150.72	25.10	250
HRT20ECR	11.5	121.30	12.84	151.61	25.20	290
HRT22ECR	18.4	156.21	15.10	195.25	32.55	450
HRT25ECR	18.4	300.08	20.88	375.10	62.56	1150
HRT28ECR	18.4	283.70	23.24	354.60	59.13	1500
HRT30ECR	18.4	271.93	24.81	339.89	56.68	1800

## Notes

\*1 Axial load indicates either the smaller value of static load or proof load.

\*2 Special specification can bare higher fatigue load.

1. PTFE liner permanently bonded to race I.D.

2. Made to order only.

## HRT-E

Male Self Lubricating 3 Piece

2023/03/22

3. No load rotational breakaway:Low torque type: All size: 0.02N·mMAX (Radial clearance 0.05mmMAX)

\*Please consult MinebeaMitsumi for availability of bearings in this series.