

**HM & HF  
Features**

**BALL**

- 52100 Bearing Steel
- Heat Treated
- Hard Chrome Plated
- Precision Ground

**RACE**

- Alloy Steel

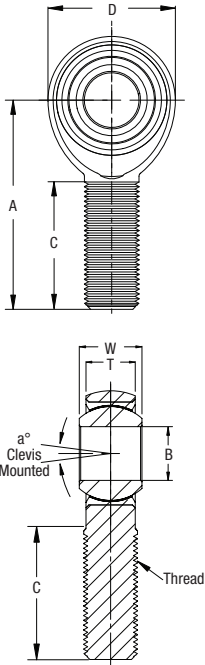
**BODY**

- Alloy Steel
- Heat Treated
- Protective Coated for Corrosion Resistance

PART NUMBER

DIMENSIONS IN INCHES

**HM Male**

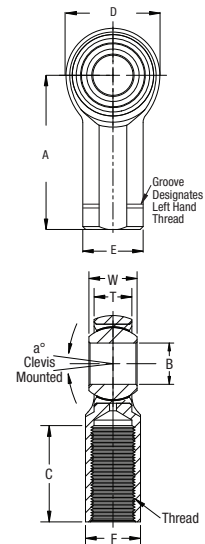


Right Hand	Left Hand	B + .0015 - .0005	W + .000 - .005	T ± .005	A ± .015	D ± .010	Ball Dia. Ref.	C + .062 - .031	Thread UNF-3A	Misalign. Angle a°	Ult. Radial Static Load Lbs.	Approx. Brg. Wgt. Lbs.
HMR3	HML3	0.1900	0.312	0.250	1.250	0.625	0.437	0.750	10-32	13	2,851	0.03
HMR3-4	HML3-4	0.1900	0.312	0.250	1.562	0.750	0.437	1.000	1/4-28	10	5,260	0.04
HMR4	HML4	0.2500	0.375	0.281	1.562	0.750	0.500	1.000	1/4-28	16	5,260	0.04
HMR4-5	HML4-5	0.2500	0.375	0.281	1.875	0.875	0.500	1.250	5/16-24	13	8,452	0.07
HMR5	HML5	0.3125	0.437	0.344	1.875	0.875	0.625	1.250	5/16-24	14	7,639	0.07
HMR5-6	HML5-6	0.3125	0.437	0.344	1.938	1.000	0.625	1.250	3/8-24	12	12,978	0.11
HMR6	HML6	0.3750	0.500	0.406	1.938	1.000	0.719	1.250	3/8-24	12	9,544	0.11
HMR6-7	HML6-7	0.3750	0.500	0.406	2.125	1.125	0.719	1.375	7/16-20	10	17,508	0.16
HMR7	HML7	0.4375	0.562	0.437	2.125	1.125	0.812	1.375	7/16-20	14	10,285	0.16
HMR7-8	HML7-8	0.4375	0.562	0.437	2.438	1.312	0.812	1.500	1/2-20	12	23,452	0.25
HMR8	HML8	0.5000	0.625	0.500	2.438	1.312	0.937	1.500	1/2-20	12	16,238	0.25
HMR8H	HML8H	0.5000	0.625	0.500	2.625	1.500	0.937	1.625	1/2-20	12	31,390	0.34
HMR8-10	HML8-10	0.5000	0.625	0.500	2.625	1.500	0.937	1.625	5/8-18	10	31,390	0.38
HMR10	HML10	0.6250	0.750	0.562	2.625	1.500	1.125	1.625	5/8-18	16	17,995	0.38
HMR10H	HML10H	0.6250	0.750	0.562	2.875	1.750	1.125	1.750	5/8-18	16	40,572	0.52
HMR10-12	HML10-12	0.6250	0.750	0.562	2.875	1.750	1.125	1.750	3/4-16	13	40,572	0.60
HMR12	HML12	0.7500	0.875	0.687	2.875	1.750	1.312	1.750	3/4-16	14	28,081	0.60
HMR12H	HML12H	0.7500	0.875	0.687	3.375	2.000	1.312	1.875	3/4-16	12	55,692	0.92
HMR12-14	HML12-14	0.7500	0.875	0.687	3.375	2.000	1.312	1.875	7/8-14	12	55,692	0.92
HMR14	HML14	0.8750	0.875	0.765	3.375	2.000	1.375	2.000	7/8-14	7	45,051	0.90
HMR16	HML16	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1 1/4-12	17	76,200	2.41
HMR16-1	HML16-1	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1-14*	17	76,200	2.13
HMR16-2	HML16-2	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1-12	17	76,200	2.13

PART NUMBER

DIMENSIONS IN INCHES

**HF Female**



Right Hand	Left Hand	B + .0015 - .0005	W + .000 - .005	T ± .005	A ± .015	D ± .010	E ± .010	F ± .010	Ball Dia. Ref.	C + .062 - .031	Thread UNF-2B	Misalign. Angle a°	Ult. Radial Static Load Lbs.	Approx. Brg. Wgt. Lbs.
HFR3	HFL3	0.1900	0.312	0.250	1.062	0.625	0.406	0.312	0.437	0.562	10-32	13	3,327	0.04
HFR4	HFL4	0.2500	0.375	0.281	1.312	0.750	0.469	0.375	0.500	0.750	1/4-28	16	6,190	0.06
HFR5	HFL5	0.3125	0.437	0.344	1.375	0.875	0.500	0.437	0.625	0.750	5/16-24	14	7,639	0.09
HFR6	HFL6	0.3750	0.500	0.406	1.625	1.000	0.687	0.562	0.719	0.937	3/8-24	12	9,544	0.15
HFR7	HFL7	0.4375	0.562	0.437	1.812	1.125	0.750	0.625	0.812	1.062	7/16-20	14	10,285	0.20
HFR8	HFL8	0.5000	0.625	0.500	2.125	1.312	0.875	0.750	0.937	1.187	1/2-20	12	15,336	0.33
HFR10	HFL10	0.6250	0.750	0.562	2.500	1.500	1.000	0.875	1.125	1.500	5/8-18	16	17,955	0.48
HFR12	HFL12	0.7500	0.875	0.687	2.875	1.750	1.125	1.000	1.312	1.750	3/4-16	14	28,081	0.72
HFR14	HFL14	0.8750	0.875	0.765	3.375	2.000	1.300	1.125	1.375	1.875	7/8-14	7	45,051	1.03
HFR16	HFL16	1.0000	1.375	1.000	4.125	2.750	1.625	1.500	1.875	2.125	1 1/4-12	17	76,200	2.28
HFR16-1	HFL16-1	1.0000	1.375	1.000	4.125	2.750	1.625	1.500	1.875	2.125	1-14*	17	76,200	2.58
HFR16-2	HFL16-2	1.0000	1.375	1.000	4.125	2.750	1.625	1.500	1.875	2.125	1-12	17	76,200	2.58

# HM-T & HF-T Alloy Steel

Alloy Race - PTFE Lined - Right & Left Hand Threads - Male & Female

P R E C I S I O N

Inch  
3-Piece  
Rod Ends



## HM-T & HF-T

### Features

#### BALL

- 52100 Bearing Steel
- Heat Treated
- Hard Chrome Plated
- Precision Ground

#### RACE

- Alloy Steel
- PTFE Lined

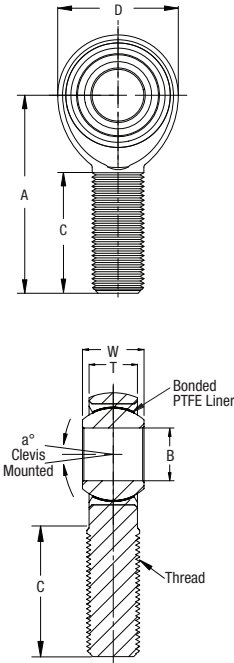
#### BODY

- Alloy Steel
- Heat Treated
- Protective Coated for Corrosion Resistance

#### PART NUMBER

#### DIMENSIONS IN INCHES

### HM-T Male



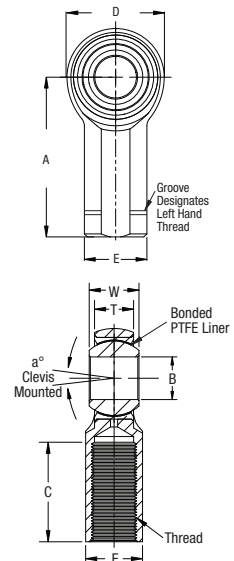
Right Hand	Left Hand	B + .0015 - .0005	W + .000 - .005	T ± .005	A ± .015	D ± .010	Ball Dia. Ref.	C + .062 - .031	Thread UNF-3A	Misalign. Angle a°	Ult. Radial Static Load Lbs.	Approx. Brg. Wgt. Lbs.
HMR3T	HML3T	0.1900	0.312	0.250	1.250	0.625	0.437	0.750	10-32	13	2,851	0.03
HMR3-4T	-	0.1900	0.312	0.250	1.562	0.750	0.437	1.000	1/4-28	10	5,260	0.04
HMR4T	HML4T	0.2500	0.375	0.281	1.562	0.750	0.500	1.000	1/4-28	16	5,260	0.04
HMR4-5T	HML4-5T	0.2500	0.375	0.281	1.875	0.875	0.500	1.250	5/16-24	13	8,452	0.07
HMR5T	HML5T	0.3125	0.437	0.344	1.875	0.875	0.625	1.250	5/16-24	14	7,639	0.07
HMR5-6T	HML5-6T	0.3125	0.437	0.344	1.938	1.000	0.625	1.250	3/8-24	12	12,978	0.11
HMR6T	HML6T	0.3750	0.500	0.406	1.938	1.000	0.719	1.250	3/8-24	12	9,544	0.11
HMR6-7T	HML6-7T	0.3750	0.500	0.406	2.125	1.125	0.719	1.375	7/16-20	10	17,508	0.16
HMR7T	HML7T	0.4375	0.562	0.437	2.125	1.125	0.812	1.375	7/16-20	14	10,285	0.16
HMR7-8T	HML7-8T	0.4375	0.562	0.437	2.438	1.312	0.812	1.500	1/2-20	12	23,452	0.25
HMR8T	HML8T	0.5000	0.625	0.500	2.438	1.312	0.937	1.500	1/2-20	12	16,238	0.25
HMR8HT	HML8HT	0.5000	0.625	0.500	2.625	1.500	0.937	1.625	1/2-20	12	31,390	0.34
HMR8-10T	HML8-10T	0.5000	0.625	0.500	2.625	1.500	0.937	1.625	5/8-18	10	31,390	0.38
HMR10T	HML10T	0.6250	0.750	0.562	2.625	1.500	1.125	1.625	5/8-18	16	17,995	0.38
HMR10HT	HML10HT	0.6250	0.750	0.562	2.875	1.750	1.125	1.750	5/8-18	16	40,572	0.52
HMR10-12T	HML10-12T	0.6250	0.750	0.562	2.875	1.750	1.125	1.750	3/4-16	13	40,572	0.60
HMR12T	HML12T	0.7500	0.875	0.687	2.875	1.750	1.312	1.750	3/4-16	14	28,081	0.60
HMR12HT	HML12HT	0.7500	0.875	0.687	3.375	2.000	1.312	1.875	3/4-16	12	55,692	0.92
HMR12-14T	HML12-14T	0.7500	0.875	0.687	3.375	2.000	1.312	1.875	7/8-14	12	55,692	0.92
HMR14T	HML14T	0.8750	0.875	0.765	3.375	2.000	1.375	2.000	7/8-14	7	45,051	0.90
HMR16T	HML16T	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1 1/4-12	17	76,200	2.41
HMR16T-1	HML16T-1	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1-14*	17	76,200	2.13
HMR16T-2	-	1.0000	1.375	1.000	4.125	2.750	1.875	2.125	1-12	17	76,200	2.13

### SELF-LUBRICATING

#### PART NUMBER

#### DIMENSIONS IN INCHES

### HF-T Female



Right Hand	Left Hand	B + .0015 - .0005	W + .000 - .005	T ± .005	A ± .015	D ± .010	E ± .010	F ± .010	Ball Dia. Ref.	C + .062 - .031	Thread UNF-2B	Misalign. Angle a°	Ult. Radial Static Load Lbs.	Approx. Brg. Wgt. Lbs.
HFR3T	HFL3T	0.1900	0.312	0.250	1.062	0.625	0.406	0.312	0.437	0.562	10-32	13	3,327	0.04
HFR4T	HFL4T	0.2500	0.375	0.281	1.312	0.750	0.469	0.375	0.500	0.750	1/4-28	16	6,190	0.06
HFR5T	HFL5T	0.3125	0.437	0.344	1.375	0.875	0.500	0.437	0.625	0.750	5/16-24	14	7,639	0.09
HFR6T	HFL6T	0.3750	0.500	0.406	1.625	1.000	0.687	0.562	0.719	0.937	3/8-24	12	9,544	0.15
HFR7T	HFL7T	0.4375	0.562	0.437	1.812	1.125	0.750	0.625	0.812	1.062	7/16-20	14	10,285	0.20
HFR8T	HFL8T	0.5000	0.625	0.500	2.125	1.312	0.875	0.750	0.937	1.187	1/2-20	12	15,336	0.33
HFR10T	HFL10T	0.6250	0.750	0.562	2.500	1.500	1.000	0.875	1.125	1.500	5/8-18	16	17,955	0.48
HFR12T	HFL12T	0.7500	0.875	0.687	2.875	1.750	1.125	1.000	1.312	1.750	3/4-16	14	28,081	0.72
HFR14T	HFL14T	0.8750	0.875	0.765	3.375	2.000	1.300	1.125	1.375	1.875	7/8-14	7	45,051	1.03
HFR16T	HFL16T	1.0000	1.375	1.000	4.125	2.750	1.625	1.500	1.875	2.125	1 1/4-12	17	76,200	2.58

### SELF-LUBRICATING

# MHM & MHF Alloy Steel

Alloy Race - Right & Left Hand Threads - Male & Female

P R E C I S I O N

Metric  
3-Piece  
Rod Ends



## MHM & MHF Features

### BALL

- 52100 Bearing Steel
- Heat Treated
- Hard Chrome Plated

### RACE

- Alloy Steel
- Heat Treated

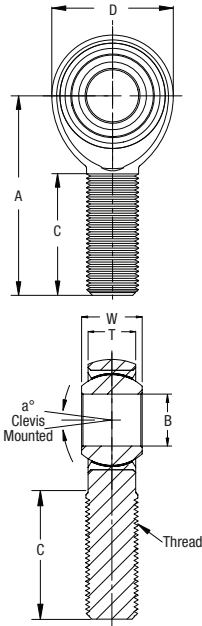
### BODY

- Alloy Steel
- Heat Treated
- Protective Coated for Corrosion Resistance

### PART NUMBER

### DIMENSIONS IN MILLIMETERS

## MHM Male

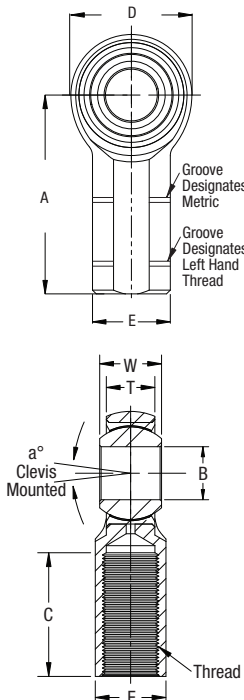


Right Hand	Left Hand	B + .065 - .012	W ± .12	T ± .12	A ± .40	D ± .38	Ball Dia. Ref.	C ± 1.0	Thread 6g	Misalign. Angle a°	Ult. Radial Static Load (Newtons)	Approx. Brg. Wgt. (Grams)
MHMR5	MHML5	5	8	6.25	33	16.00	11.10	20	M5X0.8	14	12,611	13
MHMR6	MHML6	6	9	7.00	36	19.00	12.70	22	M6X1.0	13	17,720	18
MHMR8	MHML8	8	12	8.75	42	22.25	15.88	25	M8X1.25	18	33,135	31
MHMR8-1	MHML8-1	8	12	8.75	42	22.25	15.88	25	M8X1.0	18	33,135	36
MHMR10	MHML10	10	14	10.50	48	27.00	19.05	29	M10X1.5	17	50,227	68
MHMR10-1	MHML10-1	10	14	10.50	48	27.00	19.05	29	M10X1.25	17	50,227	62
MHMR12	MHML12	12	16	12.00	54	30.00	22.23	33	M12X1.75	17	44,490	78
MHMR12-1	MHML12-1	12	16	12.00	54	30.00	22.23	33	M12X1.25	17	44,490	88
MHMR14	MHML14	14	19	13.50	60	34.75	25.40	36	M14X2.0	21	71,741	118
MHMR14-1	MHML14-1	14	19	13.50	60	34.75	25.40	36	M14X1.5	21	71,741	134
MHMR16	MHML16	16	21	14.25	66	38.00	28.58	40	M16X2.0	23	76,291	173
MHMR16-1	MHML16-1	16	21	14.25	66	38.00	28.58	40	M16X1.5	23	76,291	178
MHMR20	MHML20	20	25	18.00	78	46.00	34.93	47	M20X1.5	20	120,212	290
MHMR20-1	MHML20-1	20	25	18.00	78	46.00	34.93	47	M20X2.5	20	120,212	330

### PART NUMBER

### DIMENSIONS IN MILLIMETERS

## MHF Female



Right Hand	Left Hand	B + .065 - .012	W ± .12	T ± .12	A ± .40	D ± .38	E ± .25	F ± .25	Ball Dia. Ref.	C ± 1.0	Thread 6H	Misalign. Angle a°	Ult. Radial Static Load (Newtons)	Approx. Brg. Wgt. (Grams)
MHFR5	MHFL5	5	8	6.25	27	16.00	11	9	11.10	14	M5X0.8	14	16,396	17
MHFR6	MHFL6	6	9	7.00	30	19.00	13	11	12.70	14	M6X1.0	13	23,535	25
MHFR8	MHFL8	8	12	8.75	36	22.25	16	14	15.88	17	M8X1.25	18	33,203	40
MHFR8-1	MHFL8-1	8	12	8.75	36	22.25	16	14	15.88	17	M8X1.0	18	33,203	54
MHFR10	MHFL10	10	14	10.50	43	27.00	19	17	19.05	21	M10X1.5	17	50,227	80
MHFR10-1	MHFL10-1	10	14	10.50	43	27.00	19	17	19.05	21	M10X1.25	17	50,227	91
MHFR12	MHFL12	12	16	12.00	50	30.00	22	19	22.23	24	M12X1.75	17	44,490	95
MHFR12-1	MHFL12-1	12	16	12.00	50	30.00	22	19	22.23	24	M12X1.25	17	44,490	132
MHFR14	MHFL14	14	19	13.50	57	34.75	25	22	25.40	27	M14X2.0	21	71,741	160
MHFR14-1	MHFL14-1	14	19	13.50	57	34.75	25	22	25.40	27	M14X1.5	21	71,741	196
MHFR16	MHFL16	16	21	14.25	64	38.00	27	22	28.58	33	M16X2.0	23	76,291	215
MHFR16-1	MHFL16-1	16	21	14.25	64	38.00	27	22	28.58	33	M16X1.5	23	76,291	240
MHFR20	MHFL20	20	25	18.00	77	46.00	34	30	34.93	40	M20X1.5	20	120,212	350
MHFR20-1	MHFL20-1	20	25	18.00	77	46.00	34	30	34.93	40	M20X2.5	20	120,212	456

The MH Series consists of precision rod ends that have higher ball-to-race conformity, which creates tighter tolerances. This makes them ideal for critical applications where precision tolerances are a must.

Metric Rod Ends

### MHM-T & MHF-T Features

**BALL**

- 52100 Bearing Steel
- Heat Treated
- Hard Chrome Plated

**RACE**

- Alloy Steel
- Heat Treated
- PTFE Lined

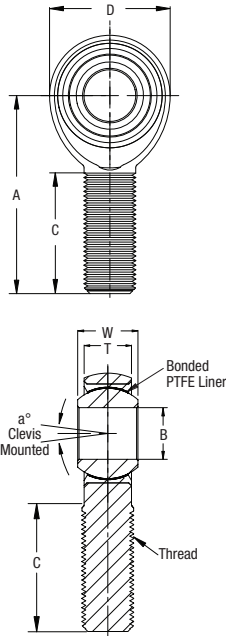
**BODY**

- Alloy Steel
- Heat Treated
- Protective Coated for Corrosion Resistance

PART NUMBER

DIMENSIONS IN MILLIMETERS

### MHM-T Male



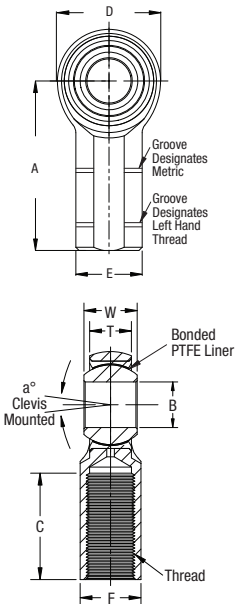
Right Hand	Left Hand	B + .065 - .012	W ± .12	T ± .12	A ± .40	D ± .38	Ball Dia. Ref.	C ± 1.0	Thread 6g	Misalign. Angle a°	Ult. Radial Static Load (Newtons)	Approx. Brg. Wgt. (Grams)
MHMR5T	MHML5T	5	8	6.25	33	16.00	11.10	20	M5X0.8	14	12,611	13
MHMR6T	MHML6T	6	9	7.00	36	19.00	12.70	22	M6X1.0	13	17,720	18
MHMR8T	MHML8T	8	12	8.75	42	22.25	15.88	25	M8X1.25	18	33,135	31
MHMR8T-1	MHML8T-1	8	12	8.75	42	22.25	15.88	25	M8X1.0	18	33,135	36
MHMR10T	MHML10T	10	14	10.50	48	27.00	19.05	29	M10X1.5	17	50,227	68
MHMR10T-1	MHML10T-1	10	14	10.50	48	27.00	19.05	29	M10X1.25	17	50,227	62
MHMR12T	MHML12T	12	16	12.00	54	30.00	22.23	33	M12X1.75	17	44,490	78
MHMR12T-1	MHML12T-1	12	16	12.00	54	30.00	22.23	33	M12X1.25	17	44,490	88
MHMR14T	MHML14T	14	19	13.50	60	34.75	25.40	36	M14X2.0	21	71,741	118
MHMR14T-1	MHML14T-1	14	19	13.50	60	34.75	25.40	36	M14X1.5	21	71,741	134
MHMR16T	MHML16T	16	21	14.25	66	38.00	28.58	40	M16X2.0	23	76,291	173
MHMR16T-1	MHML16T-1	16	21	14.25	66	38.00	28.58	40	M16X1.5	23	76,291	178
MHMR20T	MHML20T	20	25	18.00	78	46.00	34.93	47	M20X1.5	20	120,212	290
MHMR20T-1	MHML20T-1	20	25	18.00	78	46.00	34.93	47	M20X2.5	20	120,212	330

### SELF-LUBRICATING

PART NUMBER

DIMENSIONS IN MILLIMETERS

### MHF-T Female



Right Hand	Left Hand	B + .065 - .012	W ± .12	T ± .12	A ± .40	D ± .38	E ± .25	F ± .25	Ball Dia. Ref.	C ± 1.0	Thread 6H	Misalign. Angle a°	Ult. Radial Static Load (Newtons)	Approx. Brg. Wgt. (Grams)
MHFR5T	MHFL5T	5	8	6.25	27	16.00	11	9	11.10	14	M5X0.8	14	16,396	17
MHFR6T	MHFL6T	6	9	7.00	30	19.00	13	11	12.70	14	M6X1.0	13	23,535	25
MHFR8T	MHFL8T	8	12	8.75	36	22.25	16	14	15.88	17	M8X1.25	18	33,203	40
MHFR8T-1	MHFL8T-1	8	12	8.75	36	22.25	16	14	15.88	17	M8X1.0	18	33,203	54
MHFR10T	MHFL10T	10	14	10.50	43	27.00	19	17	19.05	21	M10X1.5	17	50,227	80
MHFR10T-1	MHFL10T-1	10	14	10.50	43	27.00	19	17	19.05	21	M10X1.25	17	50,227	91
MHFR12T	MHFL12T	12	16	12.00	50	30.00	22	19	22.23	24	M12X1.75	17	44,490	95
MHFR12T-1	MHFL12T-1	12	16	12.00	50	30.00	22	19	22.23	24	M12X1.25	17	44,490	132
MHFR14T	MHFL14T	14	19	13.50	57	34.75	25	22	25.40	27	M14X2.0	21	71,741	160
MHFR14T-1	MHFL14T-1	14	19	13.50	57	34.75	25	22	25.40	27	M14X1.5	21	71,741	196
MHFR16T	MHFL16T	16	21	14.25	64	38.00	27	22	28.58	33	M16X2.0	23	76,291	215
MHFR16T-1	MHFL16T-1	16	21	14.25	64	38.00	27	22	28.58	33	M16X1.5	23	76,291	240
MHFR20T	MHFL20T	20	25	18.00	77	46.00	34	30	34.93	40	M20X1.5	20	120,212	350
MHFR20T-1	MHFL20T-1	20	25	18.00	77	46.00	34	30	34.93	40	M20X2.5	20	120,212	456

### SELF-LUBRICATING