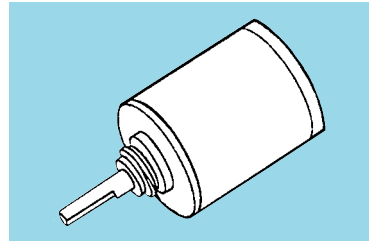
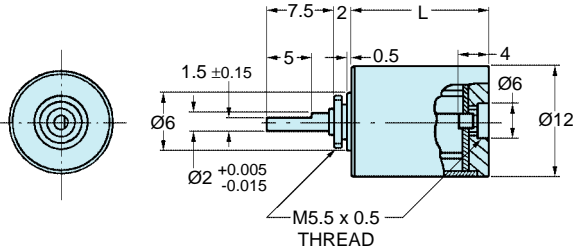




### ■ 12 mm DIAMETER



These gearheads can be used as replacements for **D33S12M...** & **D33S57M28F...** Series gearmotors.

#### FEATURES:

- Small size, lightweight and compact design
- The input and output shafts have the same center line
- Decreased noise and smooth rotation due to the use of high-precision gears

#### SPECIFICATIONS:

- Radial Play of Shaft** – ≤ 0.07 mm
- Thrust Play of Shaft** – ≤ 0.2 mm
- Shaft Rotation** – Same direction relative to input
- Operating Temperature** – -10°C to +60°C

#### GEARHEADS

**MATERIAL:** Housing – Stainless Steel

Catalog Number	Ratio to 1	Input Pinion Code	L Length	Efficiency %	Maximum Torque N • mm (oz. in.)	
					Continuous	Momentary
A 2G12M0015	15	1	12	73	9.8 (1.4)	29.4 (4.2)
A 2G12M0032	32		14.2	66		
A 2G12M0052	52		14.2	66		
A 2G12M0070	70					
A 2G12M0103	103	2	15.6	60	19.6 (2.8)	39.2 (5.5)
A 2G12M0144	144					
A 2G12M0209	209					

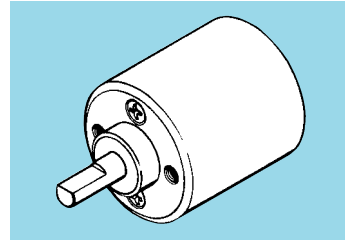
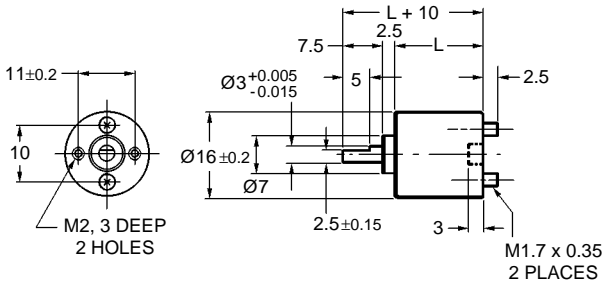
#### MATING MOTOR PINION FOR GEARHEADS

**MATERIAL:** Brass

Pinion Code	Catalog Number	Number of Teeth	Module	P.D.	O.D.	Bore + 0.012 + 0.004	Face Width
1	A 1B 8MYSH1012	12	0.15	1.905	2.205	1	4
2	A 1B 8MYSH1013	13		2.055	2.355		2.5



### ■ 16 mm DIAMETER



These gearheads can be used as replacements for D33S16M..., D33S57M25H..., & D33S57M35H... Series gearmotors.

#### FEATURES:

- Small size, lightweight and compact design
- The input and output shafts have the same center line
- Decreased noise and smooth rotation due to the use of high-precision gears
- Stable quality

#### SPECIFICATIONS:

- Radial Play of Shaft** –  $\leq 0.07$  mm
- Thrust Play of Shaft** –  $\leq 0.25$  mm
- Shaft Rotation** – Same direction relative to input
- Operating Temperature** –  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$

#### GEARHEADS

**MATERIAL:** Housing – Stainless Steel

Catalog Number	Ratio to 1	L Length	Efficiency %	Maximum Torque N • mm (oz. in.)	
				Continuous	Momentary
A 2G16M0010 A 2G16M0019	10.24 19.36	14.75	66	9.8 (1.4)	29 (4.1)
A 2G16M0030 A 2G16M0042	29.9 41.53			20 (2.8)	59 (8.4)
A 2G16M0050 A 2G16M0063	50.32 62.66			29 (4.1)	88 (12.5)
A 2G16M0103 A 2G16M0157	102.59 156.52			17.05	53
A 2G16M0208 A 2G16M0258	208.03 257.57				
A 2G16M0366 A 2G16M0540	365.94 539.82				

#### MATING MOTOR PINION FOR GEARHEADS

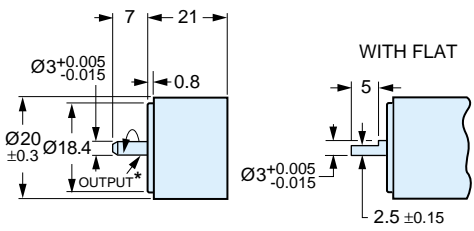
**MATERIAL:** Brass

Catalog Number	Number of Teeth	Module	P.D.	O.D.	Bore + 0.012 + 0.004	Face Width
A 1B 8MYSH1015	15	0.15	2.31	2.61	1.5	3.2

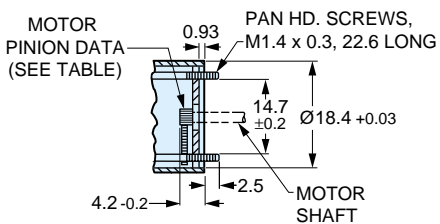


**Gearheads - Size 20**

**20 mm DIAMETER**



**GEARHEAD**  
(Mounting Screws supplied) These Gearheads can be used as replacements for **D33S20ME20....D & D33S57M20K...** Series Gearmotors.



**MATERIAL:**  
Housing – Zinc Die Cast  
Shaft – Steel  
Gears – Steel  
Bearings – Bronze

**SPECIFICATIONS:**  
Radial Play of Shaft – ≤ 0.1 mm  
Thrust Play of Shaft – ≤ 0.18 mm  
Operating Temperature – -10°C to +60°C  
Backlash – 2° at output shaft  
Weight – 17 g

Catalog Number		Gear Ratio to 1	Input Pinion Code	Eff. %	Maximum Torque N • mm (oz. in.)	
Gearheads Without Flat	Gearheads With Flat				Continuous	Momentary
A 2G10M0005	A 2G10M0005F	5	2	81	9.8 (1.4)	49 (6.9)
A 2G10M0010	A 2G10M0010F	10	1			
A 2G10M0015	A 2G10M0015F	15	3			
A 2G10M0020	A 2G10M0020F	20	2	66	15 (2.1)	74 (10.5)
A 2G10M0025	A 2G10M0025F	25	2			
A 2G10M0030	A 2G10M0030F	30	3			
A 2G10M0040	A 2G10M0040F	40	3	68	20 (2.8)	98 (13.9)
A 2G10M0045	A 2G10M0045F	45	3			
A 2G10M0050	A 2G10M0050F	50	2			
A 2G10M0060	A 2G10M0060F	60	2	66	29 (4.1)	147 (20.8)
A 2G10M0075	A 2G10M0075F	75	1			
A 2G10M100	A 2G10M100F	100	2			
A 2G10M120	A 2G10M120F	120	3	53		
A 2G10M150	A 2G10M150F	150	3			

\*Input and output rotation direction is the same.

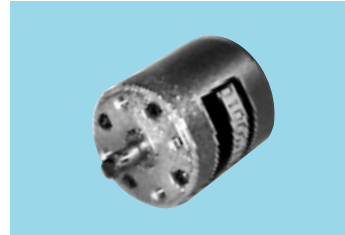
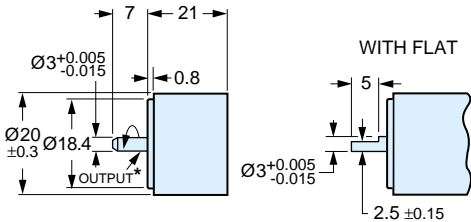
**MATING MOTOR PINION FOR GEARHEADS**

**MATERIAL:** Brass

Pinion Code	Catalog Number	No. of Teeth	Module	P.D.	O.D.	Bore -0.01 -0.03	Face Width
1	A 1B 8MYS02014	14	0.2	2.9	3.3	2	2.8
2	A 1B 8MYSH2015	15	0.25	3.75	4.25		
3	A 1B 8MYS02020	20	0.2	4.1	4.5		

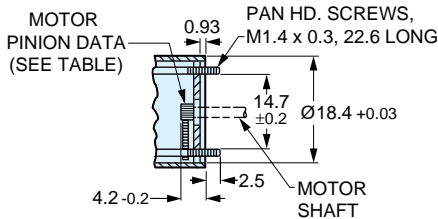


■ 20 mm DIAMETER



**GEARHEAD**

(Mounting Screws supplied) These Gearheads can be used as replacements for **D33S20ME20....D** & **D33S57M20K...** Series Gearmotors.



**MATERIAL:**

- Housing** – Zinc Die Cast
- Shaft** – Steel
- Gears** – Steel
- Bearings** – Bronze

**SPECIFICATIONS:**

- Radial Play of Shaft** – ≤ 0.1 mm
- Thrust Play of Shaft** – ≤ 0.18 mm
- Operating Temperature** – -10°C to +60°C
- Backlash** – 2° at output shaft
- Weight** – 17 g

Catalog Number		Gear Ratio to 1	Input Pinion Code	Eff. %	Maximum Torque N • mm (oz. in.)	
Gearheads Without Flat	Gearheads With Flat				Continuous	Momentary
A 2G10M0180	A 2G10M0180F	180	3	53	29 (4.1)	147 (20.8)
A 2G10M0200	A 2G10M0200F	200				
A 2G10M0250	A 2G10M0250F	250				
A 2G10M0300	A 2G10M0300F	300	2	53	29 (4.1)	147 (20.8)
A 2G10M0360	A 2G10M0360F	360				
A 2G10M0450	A 2G10M0450F	450				
A 2G10M0500	A 2G10M0500F	500	1	53	49 (6.9)	245 (34.7)
A 2G10M0750	A 2G10M0750F	750				
A 2G10M1000	A 2G10M1000F	1000				
A 2G10M1500	A 2G10M1500F	1500	3	48	49 (6.9)	245 (34.7)
A 2G10M1800	A 2G10M1800F	1800				
A 2G10M3000	A 2G10M3000F	3000				
A 2G10M4000	A 2G10M4000F	4000	2	48	49 (6.9)	245 (34.7)
A 2G10M6000	A 2G10M6000F	6000				

\*Input and output rotation direction is the same.

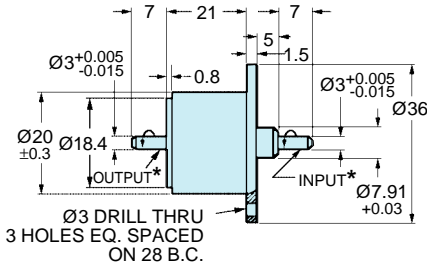
**MATING MOTOR PINION FOR GEARHEADS**

**MATERIAL:** Brass

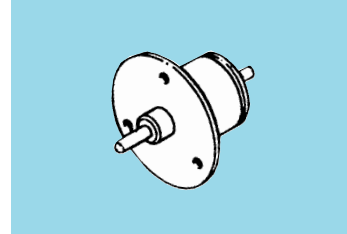
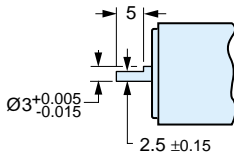
Pinion Code	Catalog Number	No. of Teeth	Module	P.D.	O.D.	Bore -0.01 -0.03	Face Width
1	A 1B 8MYS02014	14	0.2	2.9	3.3	2	2.8
2	A 1B 8MYSH2015	15	0.25	3.75	4.25		
3	A 1B 8MYS02020	20	0.2	4.1	4.5		



■ 20 mm DIAMETER



WITH FLAT



**MATERIAL:**

- Housing** – Zinc Die Cast
- Flange** – Machined Aluminum
- Shafts** – Steel
- Gears** – Steel
- Bearings** – Bronze

**SPECIFICATIONS:**

- Radial Play of Shaft** – ≤ 0.1 mm
- Thrust Play of Shaft** – ≤ 0.18 mm
- Operating Temperature** – -10°C to +60°C
- Backlash** – 2° at output shaft
- Weight** – 20 g

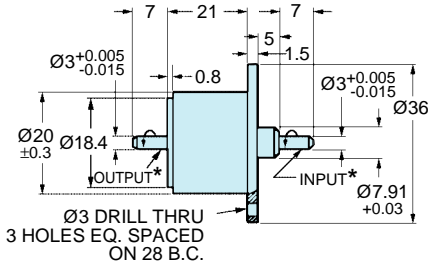
Catalog Number		Gear Ratio to 1	Input Pinion Code	Eff. %	Maximum Torque N • mm (oz. in.)	
Speed Reducers Without Flat	Speed Reducers With Flat				Continuous	Momentary
A 2Z10M0005	A 2Z10M0005F	5	2	81	9.8 (1.4)	49 (6.9)
A 2Z10M0010	A 2Z10M0010F	10	1			
A 2Z10M0015	A 2Z10M0015F	15	3	66	15 (2.1)	74 (10.5)
A 2Z10M0020	A 2Z10M0020F	20	2			
A 2Z10M0025	A 2Z10M0025F	25	2	68	20 (2.8)	98 (13.9)
A 2Z10M0030	A 2Z10M0030F	30	3			
A 2Z10M0040	A 2Z10M0040F	40	3	66	29 (4.1)	147 (20.8)
A 2Z10M0045	A 2Z10M0045F	45	3			
A 2Z10M0050	A 2Z10M0050F	50	2	53	147 (20.8)	147 (20.8)
A 2Z10M0060	A 2Z10M0060F	60	2			
A 2Z10M0075	A 2Z10M0075F	75	1	53	147 (20.8)	147 (20.8)
A 2Z10M0100	A 2Z10M0100F	100	2			
A 2Z10M0120	A 2Z10M0120F	120	3	53	147 (20.8)	147 (20.8)
A 2Z10M0150	A 2Z10M0150F	150	3			

\*Shaft rotation is the same on input and output shafts.

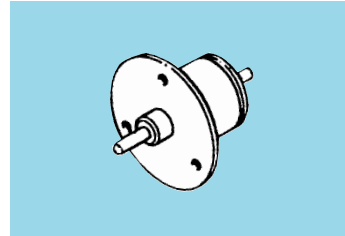
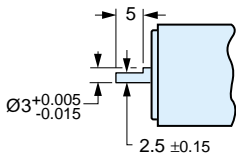
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**■ 20 mm DIAMETER**



WITH FLAT



**MATERIAL:**

- Housing** – Zinc Die Cast
- Flange** – Machined Aluminum
- Shafts** – Steel
- Gears** – Steel
- Bearings** – Bronze

**SPECIFICATIONS:**

- Radial Play of Shaft** – ≤ 0.1 mm
- Thrust Play of Shaft** – ≤ 0.18 mm
- Operating Temperature** – -10°C to +60°C
- Backlash** – 2° at output shaft
- Weight** – 20 g

Catalog Number		Gear Ratio to 1	Input Pinion Code	Eff. %	Maximum Torque N • mm (oz. in.)	
Speed Reducers Without Flat	Speed Reducers With Flat				Continuous	Momentary
A 2Z10M0180	A 2Z10M0180F	180	3	53	29 (4.1)	147 (20.8)
A 2Z10M0200	A 2Z10M0200F	200				
A 2Z10M0250	A 2Z10M0250F	250	2	53	29 (4.1)	147 (20.8)
A 2Z10M0300	A 2Z10M0300F	300				
A 2Z10M0360	A 2Z10M0360F	360				
A 2Z10M0450	A 2Z10M0450F	450	1	53	49 (6.9)	245 (34.7)
A 2Z10M0500	A 2Z10M0500F	500				
A 2Z10M0750	A 2Z10M0750F	750				
A 2Z10M1000	A 2Z10M1000F	1000	3	48	49 (6.9)	245 (34.7)
A 2Z10M1500	A 2Z10M1500F	1500				
A 2Z10M1800	A 2Z10M1800F	1800				
A 2Z10M3000	A 2Z10M3000F	3000	2	48	49 (6.9)	245 (34.7)
A 2Z10M4000	A 2Z10M4000F	4000				
A 2Z10M6000	A 2Z10M6000F	6000	3	48	49 (6.9)	245 (34.7)

\*Shaft rotation is the same on input and output shafts.