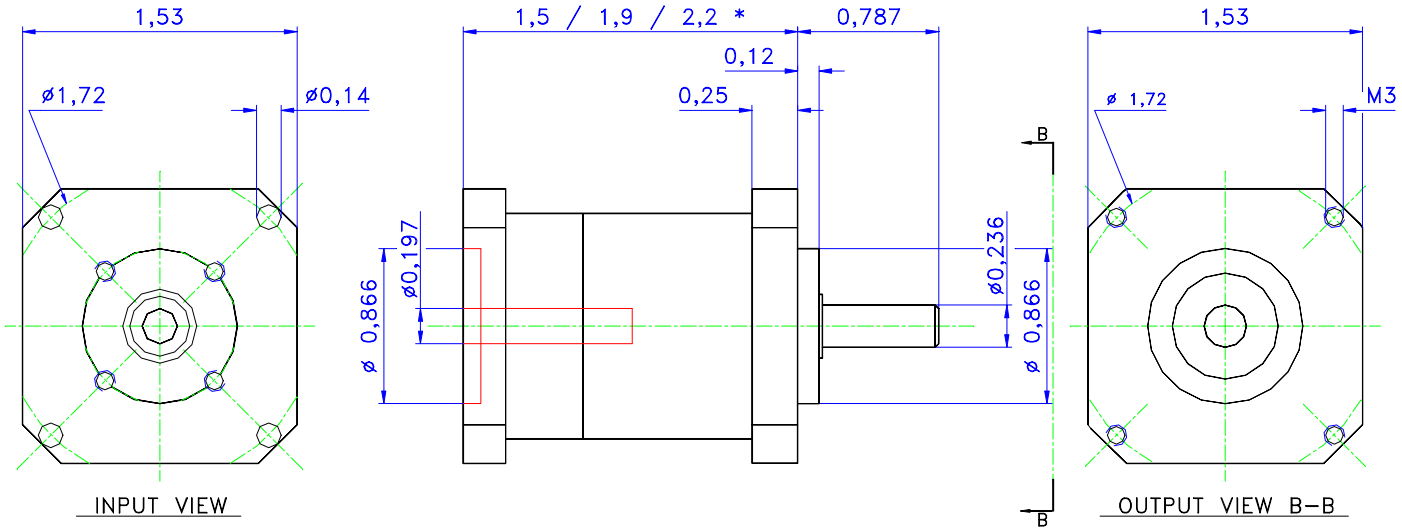
MEDIUM BACKLASH PLANETARY GEARHEADS — MNA 017

Characteristics

No. of Stages		1-stage	2-stages		3-stages		
Ratio (1)		4	14	25	51	93	169
INPUT							
Rated speed / Max. speed	Rpm	3 000 / 4000					
Power in @ T1 & N1 rated	W	72,3	66	37,7	40,8	22	12,6
Rated torque (T1)	**Nm (2)**	**0,23**	**0,21**	**0,12**	**0,13**	**0,07**	**0,04**
OUTPUT							
Rated speed	Rpm	750	215	120	59	32	18
Rated torque (T2)	**Nm (2)**	**0,75**	**2,25**	**2,25**	**4,50**	**4,50**	**4,50**
GENERAL DATA							
Inertia	g-cm^2 (3)	1,54	1,49	0,96	1,49	0,96	0,97
Max. backlash	arc-mins	90	120		150		
Efficiency	% (4)	80	75		70		
Life time	H	3 000					
Weight	Kg	0,16	0,21		0,26		
Radial Load	N (5)	40	70		100		
Axial Load	N	10	20		30		

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motorside.
(4) Gear efficiency at rated load.
(5) Load applied in the middle of the output shaft at 300rpm.

Dimensions [inch]



M103 - 07/99

* Depends on gear ratio and on the motor dimensions.

Specifications are subject to change without notice.

MIJNO PRECISION GEARING
406 NO. PROSPECT AVE.
PARK RIDGE, IL 60068-3463 U.S.A.
TEL. 847 698 9041 - FAX. 847 698 9040
SITE : WWW.MIJNO.COM. - E-MAIL : MIJNO@AOL.COM

LOW BACKLASH PLANETARY GEARHEADS

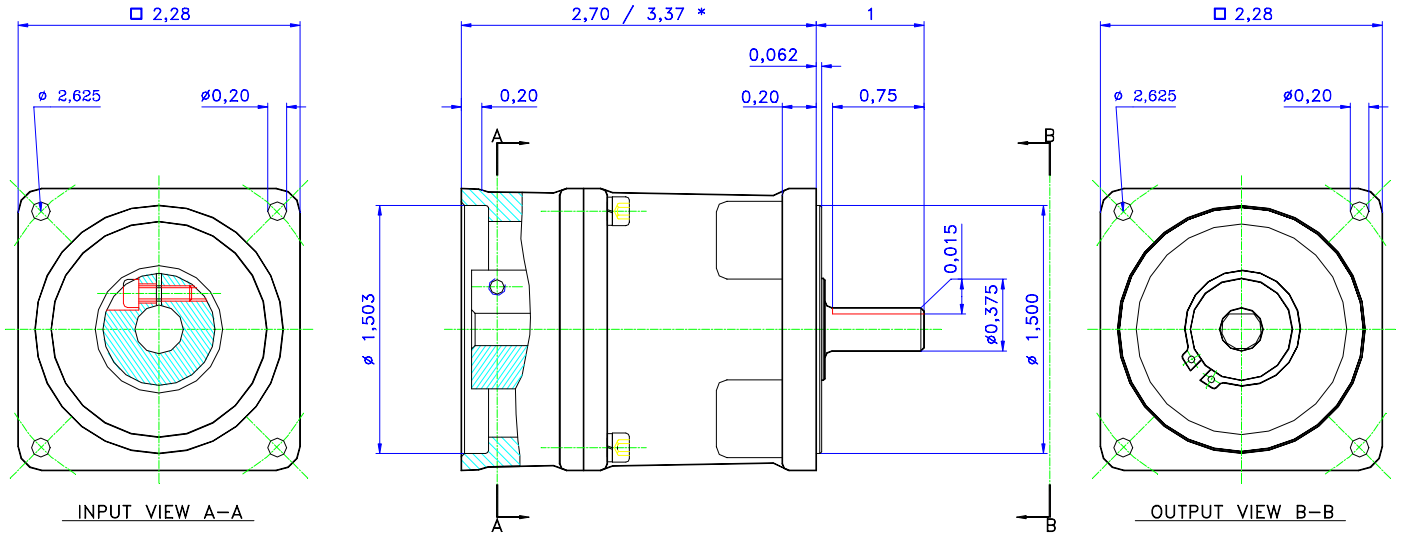
MNA 023

Characteristics

No of Stages		1-stage				2-stages						
Ratio (1)		4	5	7	10	16	20	25	35	50	70	100
INPUT												
Rated speed / Max. speed	rpm	4 000 / 6 000										
Power in @ T1 & N1 rated	Kw	0,76	0,61	0,44	0,30	0,20	0,16	0,13	0,09	0,06	0,05	0,03
Rated torque (T1)	Nm	**1,82**	**1,45**	**1,04**	**0,72**	**0,48**	**0,38**	**0,31**	**0,22**	**0,15**	**0,11**	**0,08**
Accel torque	**Nm** (2)	**2,60**	**2,08**	**1,48**	**1,04**	**0,69**	**0,55**	**0,44**	**0,31**	**0,22**	**0,16**	**0,11**
OUTPUT												
Rated speed	rpm	1000	800	571	400	250	200	160	114	80	57	40
Rated torque (T2)	Nm	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Accel torque	**Nm** (2)	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
GENERAL DATA												
Inertia	Kg-m^{2}x10 $^{-5}$ (3)	0,75	0,60	0,48	0,42	0,76	0,75	0,61	0,48	0,42	0,42	0,42
Max. backlash	arc-mins	20										
Efficiency	% (4)	96				91						
Life time	H	10 000										
Weight	Kg	0,85				1,2						
Radial Load	N (5)	250										
Axial Load	N	100										

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motorside.
(4) Gear efficiency at rated load.
(5) Load applied in the middle of the output shaft at 300 rpm.

Dimensions [inch]



M106 - 07/99

* Depends on gear ratio and on the motor dimensions.

Specifications are subject to change without notice.

MIJNO PRECISION GEARING

MIJNO PRECISION GEARING
406 NO. PROSPECT AVE.
PARK RIDGE, IL 60068-3463 U.S.A.
TEL. 847 698 9041 - FAX. 847 698 9040
SITE : WWW.MIJNO.COM. - E-MAIL : MIJNO@AOL.COM

LOW BACKLASH PLANETARY GEARHEADS

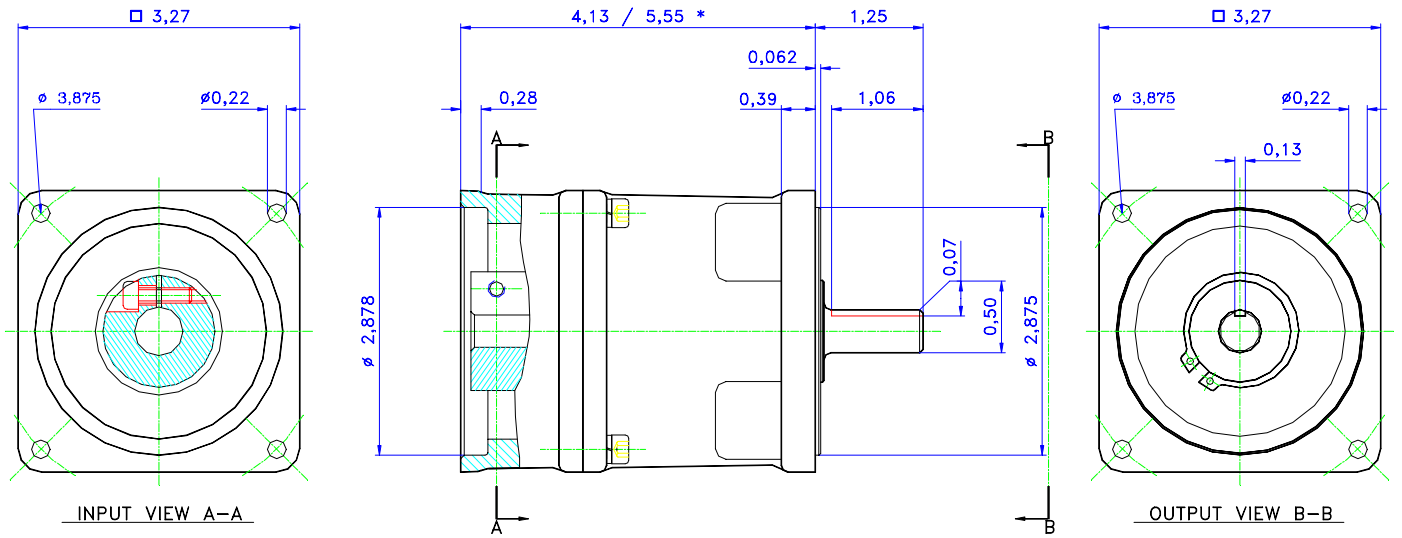
MNA 034

Characteristics

No of Stages		1-stage					2-stages						
Ratio (1)		3	4	5	7	10	16	20	25	35	50	70	100
INPUT													
Rated speed / Max. speed	rpm	4 000 / 6 000											
Power in @ T1 & N1 rated	Kw	3,27	3,27	2,62	1,87	1,31	0,86	0,69	0,55	0,39	0,28	0,20	0,14
Rated torque (T1)	Nm	**7,81**	**7,81**	**6,25**	**4,46**	**3,12**	**2,06**	**1,64**	**1,32**	**0,94**	**0,66**	**0,47**	**0,33**
Accel torque	**Nm** (2)	**15,62**	**15,62**	**12,5**	**8,92**	**6,25**	**4,15**	**3,31**	**2,65**	**1,89**	**1,33**	**0,95**	**0,66**
OUTPUT													
Rated speed	rpm	1333	1000	800	571	400	250	200	160	114	80	57	40
Rated torque (T2)	Nm	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**
Accel torque	**Nm** (2)	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**59**
GENERAL DATA													
Inertia	Kg-m^{2}x10 $^{-5}$ (3)	2.38											
Max. backlash	arc-mins	20 or 10											
Efficiency	% (4)	96					91						
Life time	H	10 000											
Weight	Kg	2					3						
Radial Load	N (5)	550											
Axial Load	N	220											

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motorside.
(4) Gear efficiency at rated load.
(5) Load applied in the middle of the output shaft at 300 rpm.

Dimensions [inch]



104 - 07/99

* Depends on gear ratio and on the motor dimensions.

Specifications are subject to change without notice.

MIJNO PRECISION GEARING

MIJNO PRECISION GEARING
406 NO. PROSPECT AVE.
PARK RIDGE, IL 60068-3463 U.S.A.
TEL. 847 698 9041 - FAX. 847 698 9040
SITE : WWW.MIJNO.COM. - E-MAIL : MIJNO@AOL.COM

LOW BACKLASH PLANETARY GEARHEADS

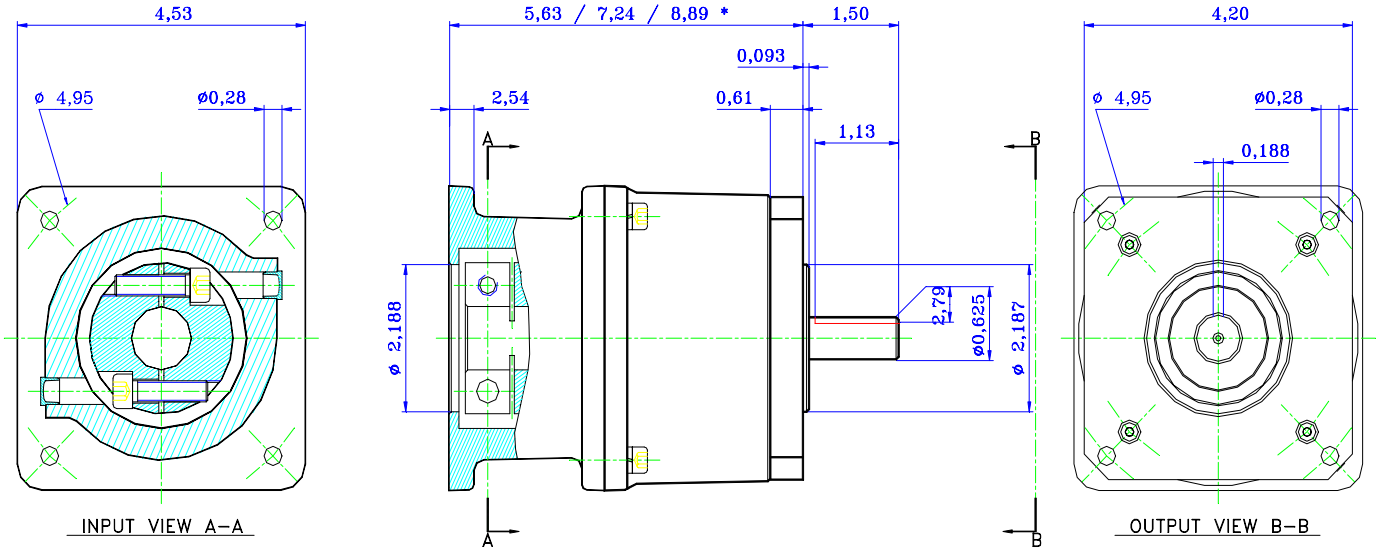
MNA 042

Characteristics

No of Stages		1 - stage					2 - stages					3 - stages				
Ratio (1)		3	4	5	7	10	16	20	25	35	50	64	80	100	125	175
INPUT																
Rated speed / Max. speed	rpm	4 000 / 6 000														
Power in @ T1 & N1 rated	Kw	6,53	6,53	5,23	3,74	5,61	1,72	1,38	1,10	0,78	0,55	0,45	0,36	0,29	0,23	0,16
Rated torque (T1)	Nm	**15,6**	**15,6**	**12,5**	**8,93**	**6,25**	**4,12**	**3,30**	**2,64**	**1,88**	**1,32**	**1,09**	**0,87**	**0,70**	**0,56**	**0,40**
Accel torque	**Nm** (2)	**31,3**	**31,3**	**25**	**17,9**	**12,5**	**8,24**	**6,59**	**5,27**	**3,76**	**2,64**	**2,18**	**1,74**	**1,40**	**1,12**	**0,80**
OUTPUT																
Rated speed	rpm	1333	1000	800	571	400	250	200	160	114	80	63	50	40	32	23
Rated torque (T2)	Nm	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**60**
Accel torque	**Nm** (2)	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**
GENERAL DATA																
Inertia	Kg-m^{2}x10 $^{-5}$ (3)															
Max. backlash	Arc-mins	20 or 10														
Efficiency	% (4)	96					91					86				
Life time	H	10 000														
Weight	Kg	6,5					8					9,5				
Radial Load	N (5)	1 000														
Axial Load	N	400														

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motorside.
(4) Gear efficiency at rated load.
(5) Load applied in the middle of the output shaft at 300 rpm.

Dimensions [inch]



* Depends on gear ratio and on the motor dimensions.

Specifications are subject to change without notice.

MIJNO PRECISION GEARING

MIJNO PRECISION GEARING
406 NO. PROSPECT AVE.
PARK RIDGE, IL 60068-3463 U.S.A.
TEL. 847 698 9041 - FAX. 847 698 9040
SITE : WWW.MIJNO.COM. - E-MAIL : MIJNO@AOL.COM

ASSEMBLY INSTRUCTIONS: MNA-023 & 034

(For MNA-042, see MNT Instructions)

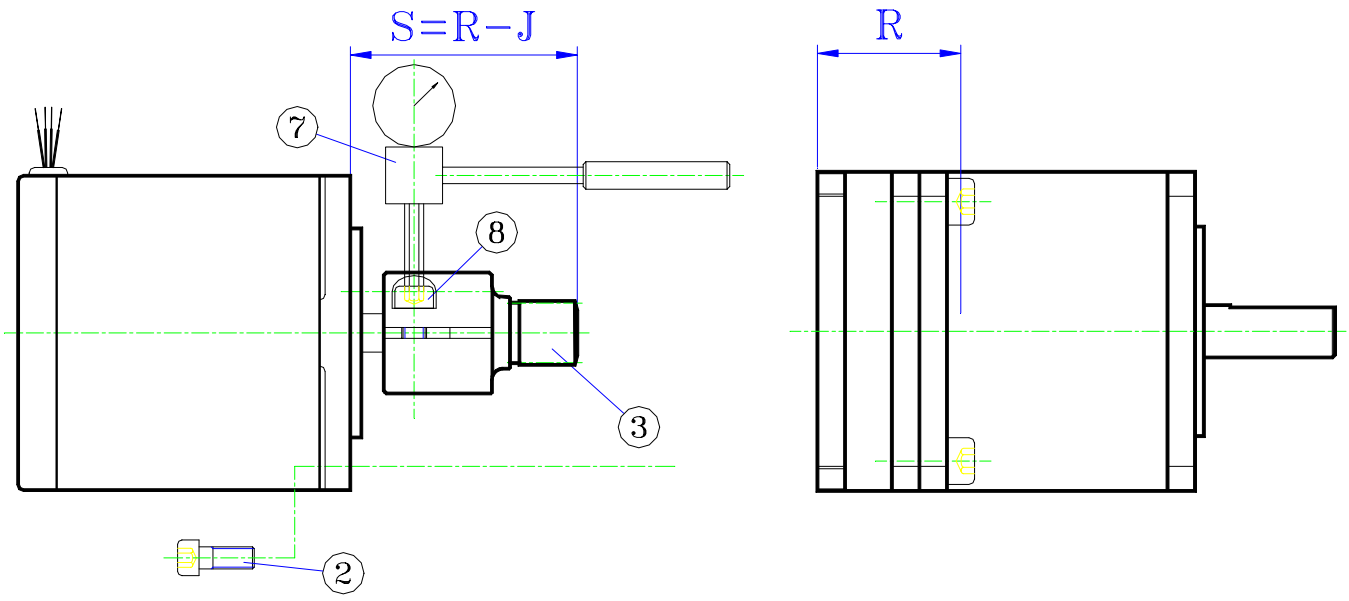
1. Measure dimension (R). NOTE--this is an internal dimension of the gearhead, adjacent to the centerline, measuring the distance to the first planet gear carrier. The objective is that the input pinion meshes with the planet gears, but not contact the carrier.
2. Degrease the motor shaft and input pinion bore with an appropriate solvent.
3. Slide the input pinion onto the motor shaft as shown in the drawing below. (If the motor shaft has a flat, position the flat opposite the slot in the pinion's clamp.) Position the front face of the pinion at dimension S (S=R-J): Dimension J is a clearance.

   J = 0.50 mm or 0.020 inch for a 1 stage gearhead

   J = 0.75 mm or 0.030 inch for a 2 stage gearhead
4. By means of a torque wrench (item 7), tighten the clamping screw (8), with a torque of:

   5.0 Nm or 45 Lb-in for MNA-023

   9.5 Nm or 84 Lb-in for MNA-034
5. Fit the gearhead onto the motor and fasten using 2 or 4 fasteners (item 2). Screws and nuts are not provided. Use #10-32 or M5-20 fasteners with hex socket head.



MIJNO PRECISION GEARING
406 N. Prospect Ave.
Park Ridge, IL 60068-3463 U.S.A.
Tel. 847-698-9041 - Fax. 847-698-9040
Toll Free : 866-262-9562
Site : www.mijno.com. - E-mail :
mijno@aol.com