LOW BACKLASH PLANETARY GEARHEADS — MRP 050

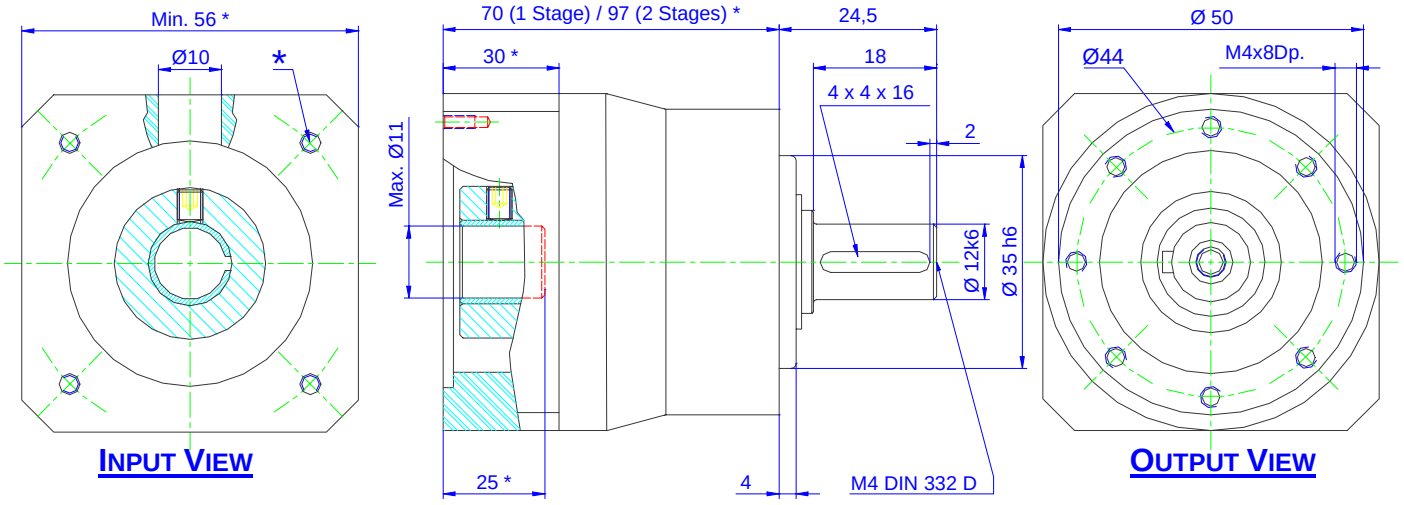
Characteristics

No of Stages		1 - Stage				2 - Stages							
Ratio (1)		4	5	7	10	16	20	25	35	40	50	70	100
INPUT													
Rated speed / Max. speed	rpm	4 000 / 6 000											
Power in @ T1 & N1 rated	Kw	0,67	0,54	0,29	0,21	0,21	0,13	0,13	0,08	0,04	0,04	0,04	0,04
Rated torque (T1)	Nm	**1,6**	**1,3**	**0,7**	**0,5**	**0,5**	**0,3**	**0,3**	**0,2**	**0,1**	**0,1**	**0,1**	**0,1**
Accel torque	**Nm** (2)	**3,1**	**2,5**	**1,5**	**1**	**0,8**	**0,6**	**0,5**	**0,3**	**0,3**	**0,2**	**0,2**	**0,1**
OUTPUT													
Rated speed	rpm	1000	800	571	400	250	200	160	114	100	80	57	57
Rated torque (T2)	Nm	**6**	**6**	**5**	**5**	**7**	**6**	**6**	**5**	**5**	**5**	**5**	**5**
Accel torque	**Nm** (2)	**12**	**12**	**10**	**10**	**12**	**12**	**12**	**10**	**10**	**10**	**10**	**10**
GENERAL DATA													
Inertia	Kg-m^{2}x10 $^{-5}$ (3)	0,74	0,74	0,70	0,70	0,65	0,65	0,65	0,63	0,60	0,60	0,60	0,60
Max. backlash	arc-mins	12				15							
Efficiency	% (4)	96				91							
Life time	H	15 000											
Weight	Kg	0,9				1,2							
Radial Load	N (5)	700											
Axial Load	N	700											

(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.

NOTE-- Emergency Stop Torque is 2.5 times Rated Output Torque for 1000 times max during the service life of the gearhead.

Dimensions [mm]



M102 - 11/2001

* Depends on gear ratio and / or on the motor dimension

Specifications are subject to change without notice

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LOW BACKLASH PLANETARY GEARHEADS — MRP 070

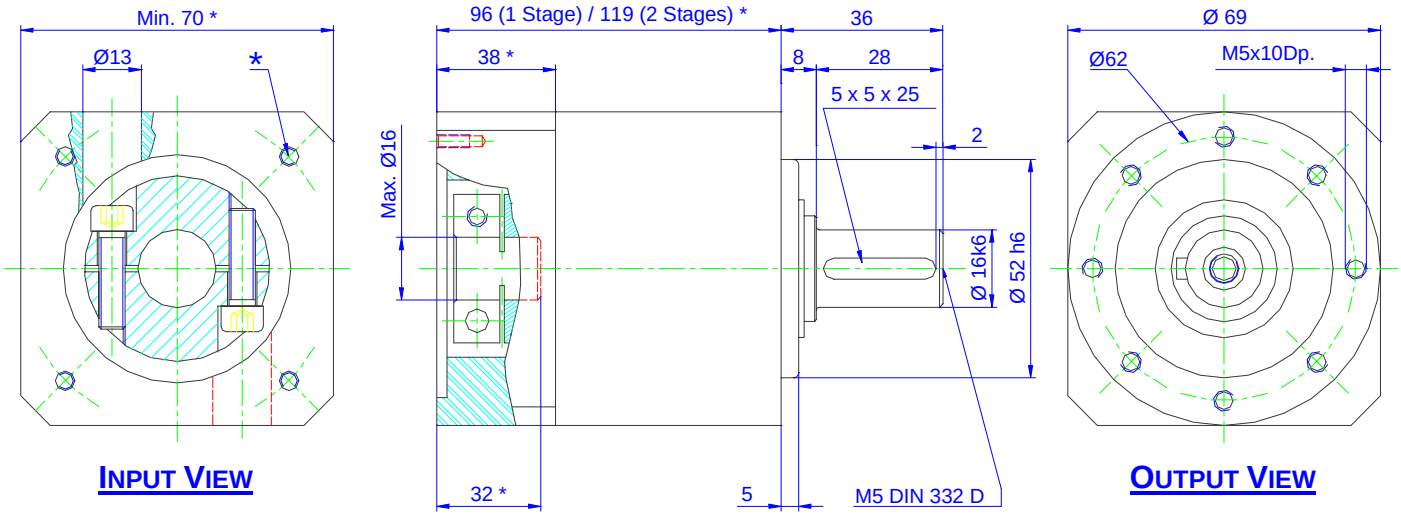
Characteristics

No of Stages		1 - Train					2 - Trains							
Ratio (1)		3	4	5	7	10	16	20	25	35	40	50	70	100
INPUT														
Rated speed / Max. speed	rpm	4 000 / 6 000												
Power in @ T1 & N1 rated	Kw	1,5	1,1	0,9	0,7	0,4	0,6	0,4	0,3	0,2	0,2	0,2	0,1	0,05
Rated torque (T1)	Nm	**5,5**	**4,2**	**3,3**	**2,2**	**1,5**	**1,3**	**0,8**	**0,7**	**0,4**	**0,4**	**0,3**	**0,2**	**0,1**
Accel torque	**Nm** (2)	**11**	**8,3**	**6,6**	**4,3**	**3**	**2,1**	**1,7**	**1,4**	**0,9**	**0,7**	**0,6**	**0,6**	**0,3**
OUTPUT														
Rated speed	rpm	1333	1000	800	571	400	250	200	160	114	100	80	57	57
Rated torque (T2)	Nm	**16**	**16**	**16**	**15**	**15**	**20**	**16**	**16**	**15**	**15**	**15**	**15**	**15**
Accel torque	**Nm** (2)	**32**	**32**	**32**	**29**	**29**	**32**	**32**	**32**	**29**	**29**	**29**	**29**	**29**
GENERAL DATA														
Inertia	Kg-m^{2}x10 $^{-5}$ (3)	1,08	1,07	0,98	0,91	0,88	1,03	1,06	0,90	0,88	0,87	0,87	0,87	0,85
Max. backlash	arc-mins	12					15							
Efficiency	% (4)	96					94							
Life time	H	15 000												
Weight	Kg	1,5					2							
Radial Load	N (5)	1 500												
Axial Load	N	1 500												

(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.

NOTE-- Emergency Stop Torque is 2.5 times Rated Output Torque for 1000 times max during the service life of the gearhead.

Dimensions [mm]



INPUT VIEW **OUTPUT VIEW**

M103 - 12/2001

* Depends on gear ratio and / or on the motor dimension

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LOW BACKLASH PLANETARY GEARHEADS — MRP 090

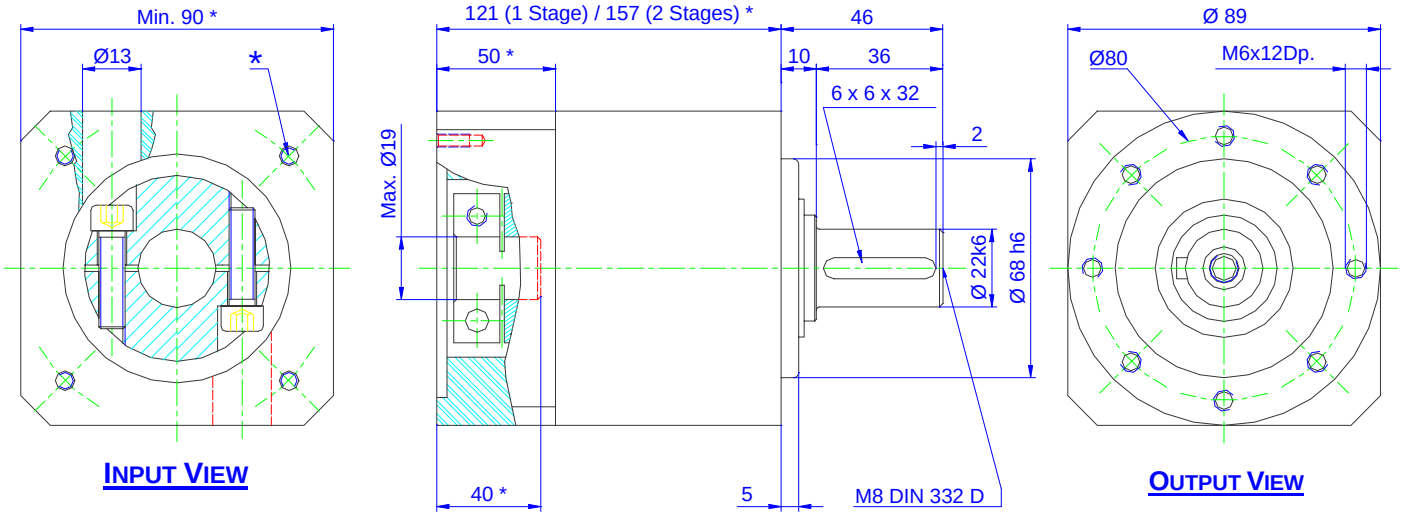
Characteristics

No. Of Stages		1 - Stage					2 - Stages							
Ratio (1)		3	4	5	7	10	16	20	25	35	40	50	70	100
INPUT														
Rated speed / Max speed	rpm	3 500 / 6 000												
Rated Power	Kw	6,2	4,7	4	2,5	1,2	1,3	1	0,7	0,5	0,5	0,4	0,3	0,1
Rated torque	Nm	**17**	**13**	**11**	**7**	**3**	**3,5**	**2,8**	**1,8**	**1,5**	**1,3**	**1**	**0,6**	**0,3**
Accel torque.	**Nm** (2)	**28**	**21**	**17**	**11**	**7,5**	**5,5**	**4,5**	**3,5**	**2,5**	**2**	**2**	**1**	**0,8**
OUTPUT														
Rated Speed	rpm	1167	875	700	500	350	219	175	140	100	87,5	70	50	35
Rated Torque	Nm	**50**	**50**	**50**	**45**	**35**	**50**	**50**	**50**	**50**	**50**	**50**	**35**	**35**
Accel Torque	**Nm** (2)	**80**	**80**	**80**	**72**	**72**	**80**	**80**	**80**	**80**	**80**	**80**	**72**	**72**
GENERAL DATA														
Inertia	$Kg\text{-}m^2 x10^{-5}$ (3)	5,2	5,2	5,1	4,8	4,6	5	5	5	4,7	4,7	4,5	4,3	4,3
Max. backlsah	arc-min.	10					12							
Efficiency	% (4)	96					91							
Life time	H	15 000												
Weight	Kg	3					4							
Radial Load	N (5)	2 500												
Axial Load	N	2 000												

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motor side.
(4) Theoritecal gear efficiency value.
(5) Load applied in the middle of the output shaft at 300 rpm.

NOTE-- Emergency Stop Torque is 2.5 times Rated Output Torque for 1000 times max during the service life of the gearhead.

Dimensions [mm]



INPUT VIEW

OUTPUT VIEW

M105 - 12/2001

* Depends on gear ratio and / or on the motor dimension

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LOW BACKLASH PLANETARY GEARHEADS — MRP 120

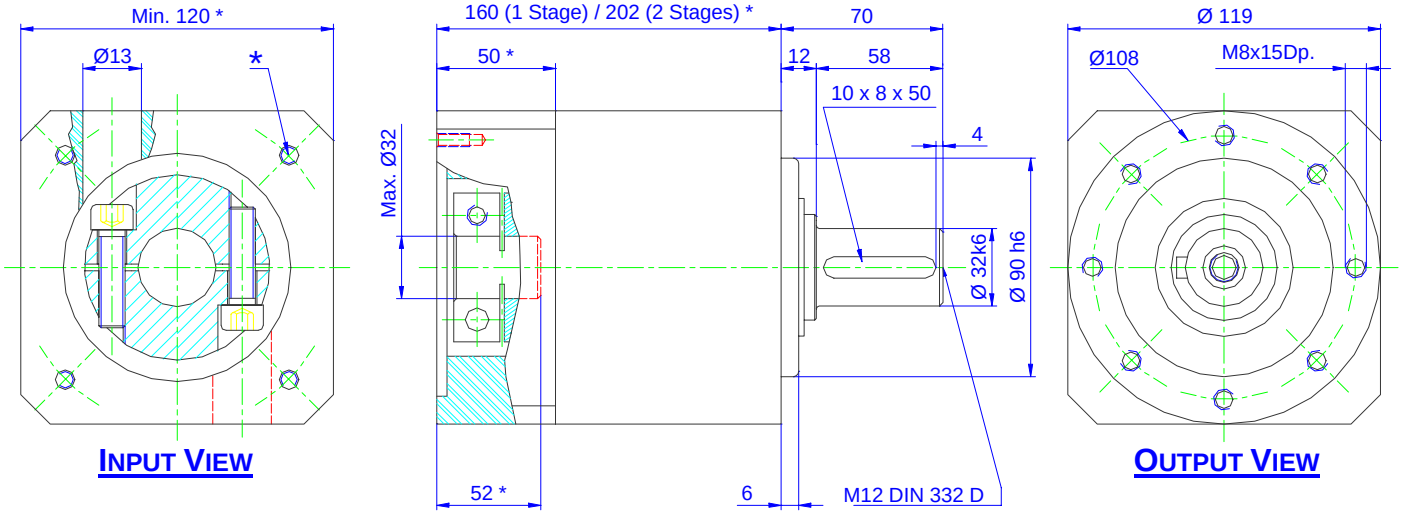
Characteristics

No. Of Stages		1 - Stage					2 - Stages							
Ratio (1)		3	4	5	7	10	16	20	25	35	40	50	70	100
INPUT														
Rated speed / Max speed	rpm	3 000 / 5 000												
Rated Power	Kw	15	12	8,5	5	3	3	2,5	2	1,5	1	0,8	0,6	0,3
Rated torque	Nm	**54**	**42**	**30**	**18**	**9**	**11**	**9**	**7**	**5**	**4**	**3**	**2**	**1**
Accel torque	**Nm** (2)	**69**	**52**	**41**	**47**	**19**	**14**	**13**	**11**	**8**	**6**	**5**	**3**	**2**
OUTPUT														
Rated speed	rpm	1333	1000	800	571	400	250	200	160	114	100	80	57	57
Rated torque	Nm	**155**	**160**	**145**	**120**	**90**	**160**	**163**	**159**	**159**	**145**	**136**	**127**	**91**
Accel torque	**Nm** (2)	**200**	**200**	**200**	**180**	**180**	**205**	**235**	**250**	**255**	**215**	**225**	**180**	**180**
GENERAL DATA														
Inertia	Kg-m^{2}x10 $^{-5}$ (3)	17,6	17,6	16,6	16,5	15,8	16,9	16,8	16,6	16,2	16,2	15,6	15,6	15,6
Max. backlsah	arc-min.	10					12							
Efficiency	% (4)	96					91							
Life time	H	15 000												
Weight	Kg	7					9							
Radial Load	N (5)	4 500												
Axial Load	N	4 000												

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motor side.
(4) Theoritecal gear efficiency value.
(5) Load applied in the middle of the output shaft at 300 rpm.

NOTE-- Emergency Stop Torque is 2.5 times Rated Output Torque for 1000 times max during the service life of the gearhead.

Dimensions [mm]



INPUT VIEW

OUTPUT VIEW

M105 - 12/2001

* Depends on gear ratio and / or on the motor dimension

Specifications are subject to change without notice

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LOW BACKLASH PLANETARY GEARHEADS

MRP 155

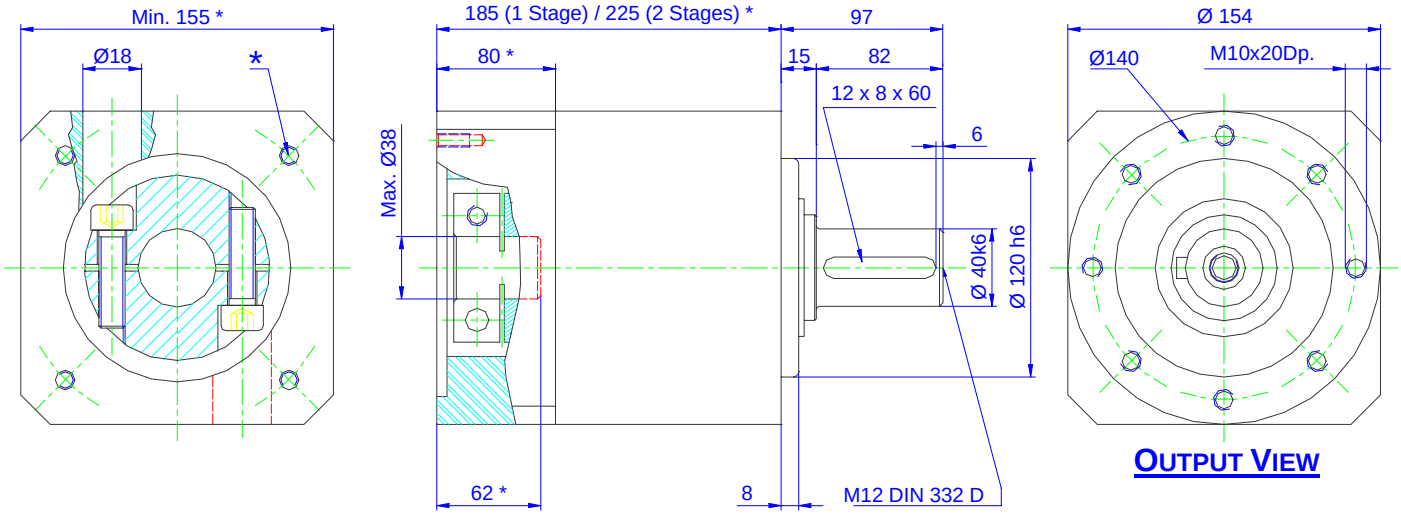
Characteristics

No. Of Stages		1 - Stage					2 - Stages							
Ratio (1)		3	4	5	7	10	16	20	25	35	40	50	70	100
INPUT														
Rated speed / Max speed	rpm	2 000 / 3 500												
Rated Power	Kw	15	16	13	8	4	4	3,5	3	2	1,5	1,5	0,8	0,4
Rated torque	Nm	**73**	**76**	**61**	**38**	**18**	**20**	**16**	**13**	**9**	**7**	**6**	**4**	**2**
Accel torque	**Nm** (2)	**139**	**104**	**83**	**52**	**33**	**27**	**22**	**17**	**12**	**11**	**8**	**5**	**3**
OUTPUT														
Rated speed	rpm	666	500	400	285	200	125	100	80	57	50	40	28	20
Rated torque	Nm	**210**	**290**	**290**	**255**	**170**	**290**	**290**	**290**	**270**	**250**	**250**	**230**	**170**
Accel torque	**Nm** (2)	**400**	**400**	**400**	**350**	**320**	**400**	**400**	**400**	**400**	**400**	**400**	**320**	**320**
GENERAL DATA														
Inertia	$Kg\text{-}m^2x10^{-5}$ (3)	38	35	35	31	29	37	37	34	32	30	28	28	28
Max. backlsah	arc-min.	10					12							
Efficiency	% (4)	96					91							
Life time	H	15 000												
Weight	Kg	10					15							
Radial Load	N (5)	7 500												
Axial Load	N	6 000												

(1) Please enquire if a desired ratio is not shown.
(2) S5 duty service.
(3) On the motor side.
(4) Theoritecal gear efficiency value.
(5) Load applied in the middle of the output shaft at 300 rpm.

NOTE-- Emergency Stop Torque is 2.5 times Rated Output Torque for 1000 times max during the service life of the gearhead.

Dimensions [mm]



M105 - 12/2001

* Depends on gear ratio and / or on the motor dimension

Specifications are subject to change without notice

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ASSEMBLY INSTRUCTIONS: TYPE MRP (ALL SIZES)

1. Remove the two access hole plugs (6) from the gearhead adaptor flange to enable insertion of a long hexagonal wrench. See the drawing below showing item 7 connecting to item 8 for location of these access plugs. Next, manually rotate the input pinion to align the clamping screws (8) such that the hexagonal wrench can fit into the screw head sockets.
2. Degrease the motor shaft (3) and input pinion (4) bore with an appropriate solvent.
3. Slip the gearhead onto the motor shaft. **(See the helpful hint below)**.
4. Fasten the gearhead to the motor using the 4 screws (2). Apply a low tightening torque for this initial fitting.
5. By means of a torque wrench (7) inserted in the flange access holes, tighten the 2 input pinion clamping screws (8) with a torque of:
   - 5 Nm for MRP 050 and 070.
   - 16 Nm for MRP 090.
   - 39 Nm for MRP 120 and 155.
6. Loosen the 4 screws (2) connecting the motor and the gearbox and then final-tighten them **(important for alignment)**.
7. Insert the 2 plugs (6) into the radial flange holes.

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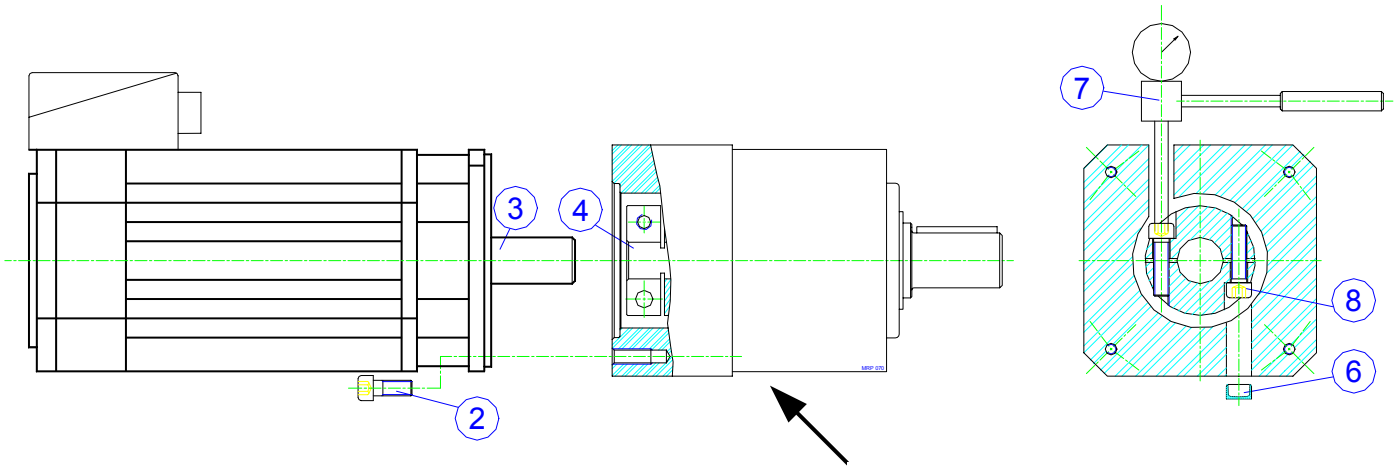

Do not remove or loosen these four screws. Gearbox lubrication will leak.

HELPFUL HINT : It may be easier to assemble with the motor and gearhead in a vertical position. A thick piece of wood with a hole for the gearhead output shaft can work well. Use caution to prevent the assembly from tipping on its side.

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