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Rev. 1/2004

INSTALLATION AND REMOVAL INSTRUCTIONS FOR MAV LOCKING ASSEMBLY SERIES 4061-4061L

MAV 4061-4061L Locking Assemblies are supplied ready for installation. If the unit should be dismantled, make sure that in addition to lined-up slits in all collars, near and far-side clamp collars are not reversed. They are assembled correctly if there are no holes or threads behind taps in clamp collar item [2] and no threads behind taps in center collar item [3]. The torque capacity of this device is based on a coefficient of friction of $\mu = 0.12$ for lightly oiled screws, tapers, shaft and hub contact areas. **Therefore, it is important NOT to use Molybdenum Disulfide (e.g., Molykote, Never-Seeze or similar lubricants) in any Locking Assembly installation.**
Recommended shaft / hub bore tolerances: h8 / H8
Recommended shaft / hub bore surface roughness: Ra ≤ 3.2 µm

INSTALLATION

(Refer to fig.1)

1. Make sure that locking screws, rings, shaft and hub contact surfaces are clean and lightly oiled and that all collar slits are aligned.
2. Loosen all screws by minimum 2 turns and transfer at least 2 screws to push-off threads in clamp collar item [2] and center collar item [3] in order to disengage tapers for easy installation of locking assembly (see fig. 1).
3. After installation of locking assembly, relocate locking screws used for separation of collars.
4. Hand tighten connection and assure that collar item [2] is parallel with face of part to be attached to the shaft.
5. Use torque wrench and set it approximately 5% higher than specified tightening torque (Ma). Torque screws in a crosswise pattern, using only 1/4 turns for several passes until 1/4 turns can no longer be achieved.
6. Still apply overtorque for 1-2 more passes. This is required to compensate for a system-related relaxation of locking screws since tightening of a given screw will always relax adjacent screws. Without overtorquing an infinite number of passes would be needed to reach specified tightening torque.
7. Reset torque wrench to specified torque (Ma) and check all locking screws. No screw should turn at this point, otherwise repeat step 6 for 1 or 2 more passes. It is not necessary to re-check tightening torque after equipment has been in operation.

NOTE: for installation subjected to extreme corrosion, the slits in clamp collars item [2] and [4] as well as in center collar item [3] should be sealed with a suitable caulking compound or equivalent. Likewise, push-off threads should also be protected from corrosion.

REMOVAL

(Refer to fig.2 and 3)

Prior to initiating the following removal procedure, check to ensure that no torque or thrust loads are acting on the Locking Assembly, shaft or any mounted components.

IMPORTANT! Make sure ends of locking screws used for removal are ground flat and are slightly chamfered to prevent damage to screws and collar threads during push-off.

1. Check to ensure that axial movement of clamp collars – necessary for release of connection – is not restricted. Likewise, ensure that push-off threads are in good conditions.
2. Remove all locking screws and transfer some into all push-off threads in clamp collar item [2].
3. Release collar item [2] by tightening all push-off screws in a crosswise pattern, not exceeding 1/4 turns for several passes.
4. Transfer locking screws used for dismounting of clamp collar item [2] into all push-off threads in center collar item [3]. Release clamp collar item [4] by repeating procedure outlined in step 3.

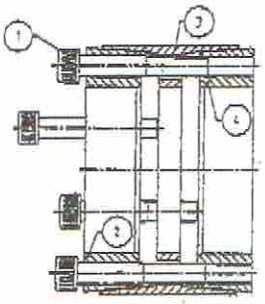


Fig. 1

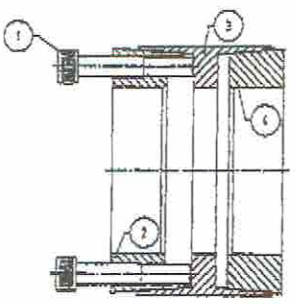


Fig. 2

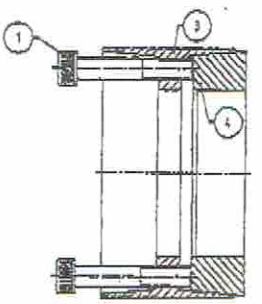
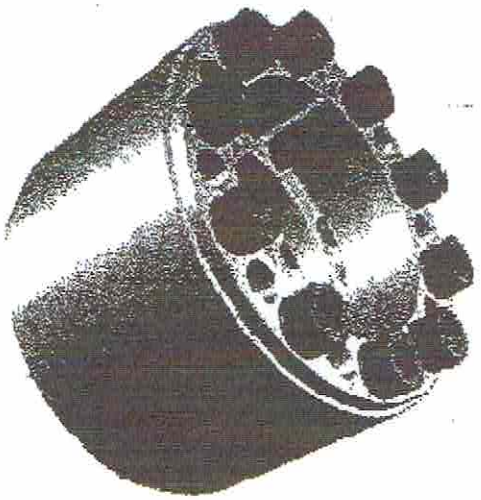
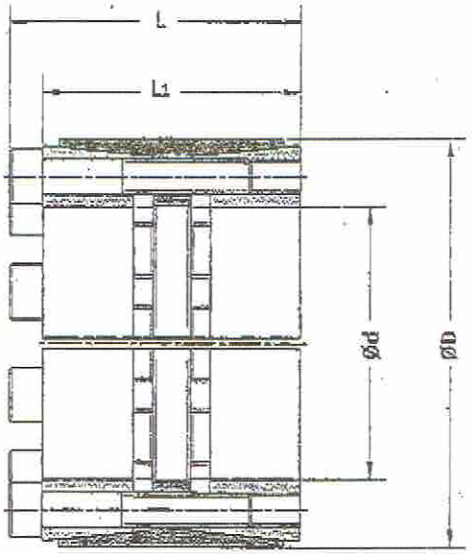


Fig. 3

MAV 4061 Standard Series





Example of order: MAV 4061 50 x 80

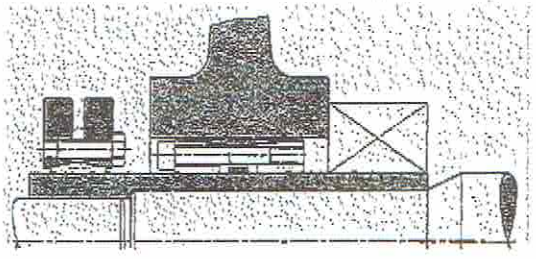
Features

- High capacity
- Self-centering, self-locking
- Two thrust rings with single taper design
- Tolerances: shaft h8; hub bore H8
- Surface finish of shaft and hub bore Ra ≤ 3.2 µm

Composition

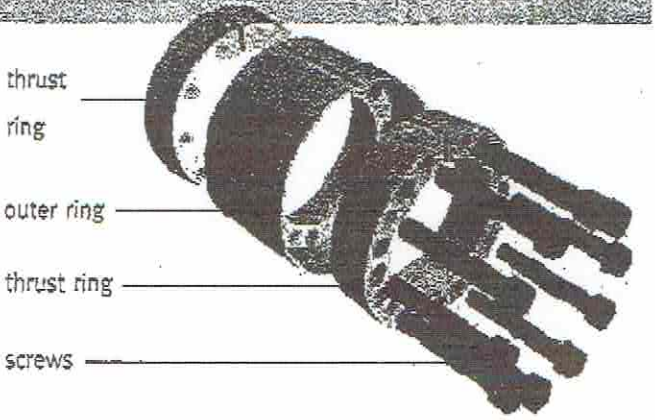
- Slotted front thrust ring, with integrated push-off holes
- Slotted rear thrust ring
- Slotted outer ring, with integrated push-off threads
- Set of socket head cap screws, grade 12.9

Application examples



Simultaneous connection of two shafts with hollow shaft and hub with MAV 4061 and shrink disc MAV 2008

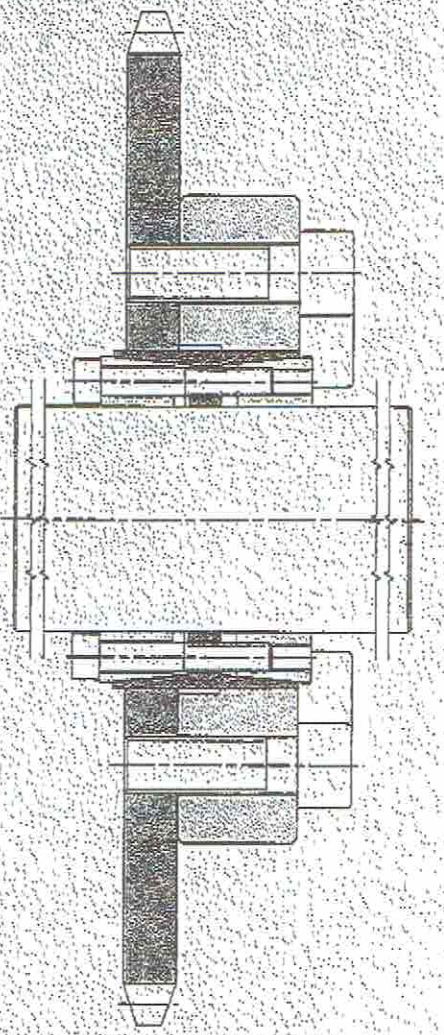
Components



Standard Series

MAV 4061

DIMENSIONS				SCREWS		PERFORMANCES				WEIGHT
d mm	D mm	L1 mm	L mm	size	Ma Nm	Mt Nm	Fax kN	Ps MPa	Ph MPa	kg
24 x 55	40	46	M 6	17	800	67	308	134	0,4
25 x 55	40	46	M 6	17	840	67	295	134	0,4
28 x 55	40	46	M 6	17	940	67	264	134	0,4
30 x 55	40	46	M 6	17	1'000	67	246	134	0,4
32 x 60	54	60	M 6	17	1'200	78	190	101	0,6
35 x 60	54	60	M 6	17	1'400	78	174	101	0,6
38 x 75	54	62	M 8	41	2'700	144	296	150	1,0
40 x 75	54	62	M 8	41	2'900	144	281	150	1,0
42 x 75	54	62	M 8	41	3'000	144	268	150	1,0
45 x 75	54	62	M 8	41	3'200	144	250	150	0,9
48 x 80	66	74	M 8	41	4'000	165	207	124	1,3
50 x 80	66	74	M 8	41	4'100	165	198	124	1,2
55 x 85	66	74	M 8	41	5'100	185	203	131	1,3
60 x 90	66	74	M 8	41	6'200	206	207	138	1,4
65 x 95	66	74	M 8	41	6'700	206	191	131	1,5
70 x 110	80	90	M 10	83	11'800	338	229	145	2,8
75 x 115	80	90	M 10	83	12'700	338	215	139	3,0
80 x 120	80	90	M 10	83	14'900	372	220	147	3,1
85 x 125	80	90	M 10	83	15'800	372	207	141	3,3
90 x 130	80	90	M 10	83	16'200	405	213	148	3,5
95 x 135	80	90	M 10	83	19'300	405	202	142	3,6
100 x 145	102	114	M 12	145	27'700	555	210	145	5,6
110 x 155	102	114	M 12	145	33'300	605	209	148	6,1
120 x 165	102	114	M 12	145	42'400	706	223	162	6,5
130 x 180	116	130	M 14	230	53'700	826	201	145	9,0
140 x 190	116	130	M 14	230	67'400	963	217	160	9,5
150 x 200	116	130	M 14	230	77'400	1'030	217	163	10,1
160 x 210	116	130	M 14	230	88'100	1'100	217	166	10,6
170 x 225	149	165	M 16	355	111'000	1'310	186	141	16,1
180 x 235	149	165	M 16	355	126'000	1'410	188	144	16,9
190 x 250	149	165	M 16	355	142'000	1'500	190	145	19,6
200 x 260	149	165	M 16	355	150'000	1'500	181	139	20,5
220 x 285	150	166	M 16	355	185'000	1'690	185	143	24,5
240 x 305	150	166	M 16	355	225'000	1'870	188	148	26,5
260 x 325	150	166	M 16	355	256'000	1'970	182	146	28,5
280 x 355	177	197	M 20	690	370'000	2'640	190	150	42,5
300 x 375	177	197	M 20	690	440'000	2'940	197	157	46,5
320 x 405	177	197	M 20	690	493'000	3'080	194	153	56,0
340 x 425	177	197	M 20	690	549'000	3'230	191	153	59,5
360 x 455	203	225	M 22	930	680'000	3'780	189	145	80,0
380 x 475	203	225	M 22	930	752'000	3'960	182	145	84,5
400 x 495	203	225	M 22	930	864'000	4'320	188	152	88,0
420 x 515	203	225	M 22	930	907'000	4'320	179	146	92,0
440 x 535	203	225	M 22	930	950'000	4'320	171	141	96,0
460 x 555	203	225	M 22	930	993'000	4'320	164	136	100,5
480 x 575	203	225	M 22	930	1'209'000	5'040	183	153	103,0
500 x 595	203	225	M 22	930	1'266'000	5'040	176	148	107,5
520 x 615	203	225	M 22	930	1'404'000	5'400	181	153	111,0
540 x 635	203	225	M 22	930	1'458'000	5'400	174	148	114,0
560 x 655	203	225	M 22	930	1'613'000	5'760	179	153	118,5
580 x 675	203	225	M 22	930	1'670'000	5'760	173	149	123,0
600 x 695	203	225	M 22	930	1'782'000	5'940	173	149	128,0



Pinion gear connected with MAV 4061. The resisting ring is used to compensate the pressure generated by the locking assembly in the zone adjacent to the pinion gear.

Code:

Ma: screws tightening torque

Mt: transmissible torque with Fax=0 kN

Fax: transmissible axial load with Mt=0 Nm

Ps: contact pressure on shaft

Ph: contact pressure in hub bore