

MRT-20004 RACE front control arm kit, BMW E30 / E36 / E46

Kit content:

- 2x Track arm (pre-assembled)
- 2x Radius arm (pre-assembled)
- 2x Subframe bracket
- 2x Rear bracket
- Mounting hardware (as in the picture)
- Spindle mounting stud -kit or roll-center / bump steer / quick steering -kit or roll-center / bump steer correction -kit



Disclaimer:

- *Racing part with NO warranty, not for use on public roads*
- *Manufacturer disclaims all liability for direct, indirect, incidental or consequential damages, including damage or loss of equipment, cost of purchase or replacement of goods, accident or injuries, or claims of the purchaser that result from the use of the part*

Tools / equipment required for installation:

- 8mm / 10mm hex key
- 17mm / 19mm / 22mm / 24mm wrenches or sockets
- Torque wrench
- Wire brush / abrasives for paint removal / cleaning of the parts
- Welding machine for subframe bracket / rear bracket extra weld bung installation

Torque rates for the bolts / screws / nuts:

- | | |
|-------------------------------|-------|
| • M10 bolts | 47Nm |
| • M12 nyloc nuts / hex bolts | 100Nm |
| • M14x1.5 titanium fasteners | 100Nm |
| • M14x1.5 / M16x1.5 lock nuts | 100Nm |

Important notes:

- No sway bar mounts, E30 M3 / E36 M3 / E46 -type strut mounting must be used, [Sway bar strut mount weld brackets](#) available separately
- Steering angle reducers may need to be used depending of wheel specs / offset
- Rerouting of original fuel lines may be required on E30 chassis
- **Welding required**

Installation:

1. Install rear bracket into chassis

- a. Prepare and clean the area for welding
- b. After welding / painting install brackets and tighten up the bolts (*M10 47Nm*)

E30 chassis:

- a. Fit weld bung in the bracket with M10 bolt
- b. Bolt up the bracket into chassis



- c. Tag weld, no pilot hole required
- d. Remove bracket and weld around the perimeter



E36 / E46 chassis:

- a. Bolt up the bracket into chassis
- b. Mark the hole center



- c. Remove bracket and drill a 12.5mm hole to countersink the weld bung
- d. Weld around the perimeter



2. Assemble control arms

- a. Set desired track arm width, base length as below:

E30 / E30 M3: 330mm (std. arms) / 360mm (+30mm arms)

E36 / E36 M3: 330mm (std. arms) / 360mm (+30mm arms)

E46 non-M: 360mm (std. arms)

E46 M3: 375mm (std. arms)

- b. Install radius arm into the track arm, do not tighten the titanium bolt / nut



- c. Radius arm length can be adjusted while in the car by loosening the lock nuts and titanium bolt / nut, **clevis joint end is LH thread whereas M16x1.5 rod end is RH thread**

3. Install subframe brackets

- a. Prepare and clean the area for welding
- b. Place (and trim if needed) the reinforcement plates first as in the picture and weld around the perimeter
- c. Place the bracket on top of the reinforcement plate, it is recommended to use the control arm for proper alignment
- d. Tighten up the bolt (*M12 100Nm*) and weld around the bracket perimeter



4. Install mounting stud -kit or roll-center / bump steer / quick steering -kit or roll-center / bump steer correction -kit into the spindle / knuckle

Please see instructions here:

[Roll-center / bump steer / quick steering -kit](#)

[Roll-center / bump steer correction -kit](#)

(same installation procedure and torque values apply for [mounting stud -kit](#))

5. Install control arm kit into the chassis / spindle / knuckle

6. Adjustment

a. Track width / camber

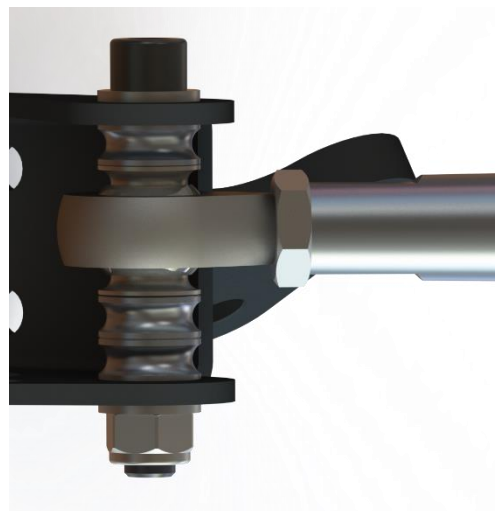
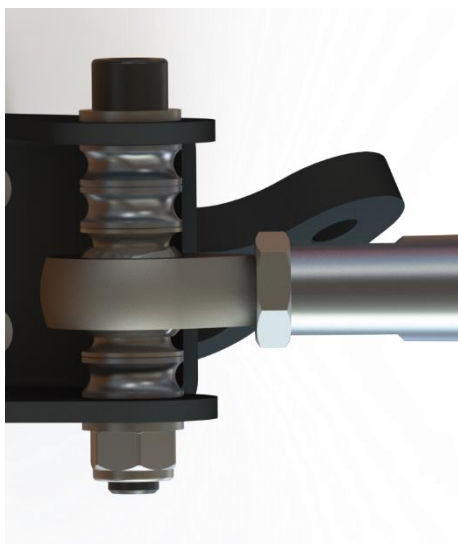
Track width can be adjusted from the M14x1.5 rod ends that connect to subframe mounts, adjustment also affects camber, **minimum thread engagement 1xD**

b. Caster / wheel position

Radius arm length can be adjusted while in the car by loosening the lock nuts and titanium bolt / nut, **clevis joint end is LH thread whereas M16x1.5 rod end is RH thread, minimum thread engagement 1xD**

c. Anti-dive / weight transfer

Anti-dive / weight transfer properties can be adjusted via shims on the rear bracket, Lower rod end setting gives more weight transfer / dive
Higher rod end setting gives less weight transfer / dive



7. After alignment check and measure whether steering rack stops are required

In simplest form steering rack stop is a sleeve made out of Delrin / plastic / soft material which slides on top of the steering rack shaft and stops against the steering rack oil seal. Approximate length for the sleeve is 15 – 30mm (general rule)

8. After all adjustments torque all fasteners

See torque values on Page 2 and on additional kit instructions

9. Remember to check and inspect all fasteners after first 100km and occasionally after every 500km until the fasteners have set properly. Repeat inspection before and after every trackday

If you have any questions, feedback or other comments regarding the kit please reach us via email / WhatsApp or social media direct message:



MRT Engineering



mrtengineering



+358 45 783 636 66



info@mrtengineering.fi

If you have problems / issues with the kit, please state where you have bought the kit, original Order No. and / or exact model of the kit you have / you supposed to have to ensure we can give you an accurate response.

All spare parts are available on our webshop and dealerships around the world:

<https://mrtengineering.fi/collections/spare-parts>

<https://mrtengineering.fi/pages/dealers>



MRT
Engineering

MRT Engineering Oy, FI31033454
Kuukuja 12
33420 Ylöjärvi, Finland
info@mrtengineering.fi
+358 45 783 636 66