

There has been a lot of talk on the topic of brakes lately (circa 1999) so I dug around last night for my old EC's that had the brake upgrade articles. Here are some specs:

MASTER CYLINDER DIAMETERS:

1600/2002 - 20.64mm
2002tii/turbo - 23.81mm

REAR WHEEL CYLINDER SIZE

2002 - 15.87mm
1600/tii - 17.46mm
320i - 19.05mm
2002 turbo - 22.2mm – Use with proportioning valve
2800 CS – 22 mm – Use with proportioning valve

BRAKE DISC SIZE

1600/2002 - 10mm wide, 240mm diameter
2002tii - 13mm wide, 256mm diameter
turbo (vented) - 22mm wide, 256mm diameter
320i (vented) - 22mm wide, 256mm diameter

BRAKE DRUM SIZE

1600/2002 (up to #1660621) - 40mm wide, 200mm diameter
2002/tii - 40mm wide, 230mm diameter
turbo - 40mm wide, 250mm diameter

REAR BRAKES

So from this kludge it seems that the best bang for your buck would be to have 320i rear brakes (the same size braking surface as the VERY EXPENSIVE TURBO brakes with a bit smaller cylinder. The bigger cylinder is available from Ireland Engineering for around \$50 each and you will need a to run a brake proportioner in line to the rear brakes. Ireland also has these for around \$70). If you didn't feel like you would need the turbo stuff, and many people feel this way, then you could probably get the whole 320i setup, backing plates out, for around \$100 (or less). Bolts right on. If you track your car a lot, then the turbo stuff may be what you want. its up to you.

FRONT BRAKES

The cool setup is tii struts, tii master cylinder, e12 (like an '81 528i or 633csi) vented calipers and E21 '77 320i vented rotors resting on the early 320i hubs. You will need the lug bolts from the 320i to mount your wheels.

If you don't want to use the tii stuff, then you can use the 320i vented calipers and block off one of the brakes lines (this caliper only has one line going in as opposed to the '02 and E12 calipers and their dual circuit setup). You'll have to grind the caliper in a few places to get it to fit, but from what I've heard it isn't much. You'll also need the late 320i hubs to mount the rotors on. Be aware that your master cylinder is now pretty much at it's limit.

Another upgrade you may want to do is installing the tii brake booster to match the tii master cylinder. Not necessary, but nice. Also makes mounting those huge sidedrafts a little easier (thank you SB42).

Here are the part #'s for those who want it:

REAR BRAKES (320i setup)

Description	Part #	Qty
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Bearing kit	33 41 1 108 408	2
Drums	34 21 1 158 712	2

Backing Plate LT	31 21 1 120 045	1
Backing Plate RT	31 21 1 120 046	1
Wheel Cylinders	34 21 1 117 104	2
Retaining Pins	34 21 1 116 477	4
Retaining Springs	34 21 1 116 476	4
Lower Springs	34 21 3 660 186	2
Upper Springs	34 21 3 660 185	2
Thrust Rod LT	34 21 3 660 190	1
Thrust Rod RT	34 21 3 660 191	1
Upper Clips	34 21 3 061 725	2

Brakes shoes are to fit an E21 320i

FRONT BRAKES (tii setup)

Description	Part #	Qty
tii Master Cyl	34 31 1 120 478	1
Elbow (for above)	34 32 1 102 282	2
Grommets (for above)	34 31 1 121 911	2
tii Struts	31 31 1 103 663	2
Hubs (320i)	31 21 1 116 681	2
Rotors ('77 320i)	34 11 1 119 112	2
Bearing Seals	31 21 2 634 108	2
Inner Bearing	31 21 2 634 106	2
Outer Bearing	31 21 1 634 103	2
Lobe Washer	31 21 2 634 115	2
Castle Nut	31 21 1 104 626	2
Cotter Pins	31 21 1 110 140	2
Dust Caps	31 21 2 634 120	2
320i Wheel Bolts	36 13 1 126 191	8
Hex Screws	34 11 1 123 072	2
Caliper RT (E12)	34 11 1 119 022	1
Caliper LT (E12)	34 11 1 119 021	1
tii Caliper Pins	34 11 1 113 663	1 set
E12 Caliper Pins	34 11 1 150 554	1 set
anti-squeal shims	34 11 1 116 005	4

OPTIONAL:

tii booster	34 31 1 103 347	1
Brake Line LT	34 32 1 106 981	1
Brake Line RT	34 32 1 103 054	1

Use any pads you want for an E12