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# TM3D-15 BATTLEGEUS INSTRUCTION 1

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## SCAN ME



Apple Augmented Reality\*

\*iPADOS or iOS 12.0+



# TOYMAKR3D

TOY MAKER FOR 3D PRINTING



Contains small parts and requires high precision. Your printer may need to be properly calibrated for best results. (Tolerances: Peg 0.15mm, Balljoint 0mm, Slide 0.3mm, Screws 0.4mm)



### Settings:

Printer Volume: 220mmX220mmX220mm  
 Support : NO  
 Nozzle : 0.4mm  
 Layer : 0.2mm big parts, 0.15mm medium parts, head & small parts 0.1mm  
 Filament : PLA  
 Temp : 205°C (220°C High Speed)  
 Speed : 40mm/s (normal), 300mm/s(High Speed)  
 Skin/top/bott : 0.8/0.8/0.8 mm  
 Infill : 20-25% (50% for screws)

**Height** : 750mm / 29.5 inch  
**Robot Total** : 366 Parts, 4.730 gram  
 - Chocolate : 96 Parts, 1990 gram  
 - Black : 23 Parts, 400 gram  
 - Light Blue : 20 Parts, 40 gram  
 - Grey : 140 Parts, 1070 gram  
 - Dark Blue : 75 Parts, 1160 gram  
 - Green : 15 Parts, 55 gram  
 - Skin : 2 Parts, 15 gram

**Biggest Part** : 2a\_BG\_Chest1\_CHOCOLATE [152mm W X 152mm L X 110mm H]  
**Highest Part** : 7dL/R\_BG\_Foot4\_CHOCOLATE [95mm W X 108mm L X 141 mm H]

**Tools:** Cutter, Sand Paper, Super Glue, Nail Polish



### Tips & Tricks:

Print result isn't smooth enough and parts aren't fit properly:  
 - Calibrate your printer properly  
 - Make sure you print it in right temperature  
 - If you print it too fast, it may cause ghosting on the surface of the object  
 - Decrease the layer height (0.15mm for small figure and 1 mm for the head/face)

Object won't stick to the print bed:  
 - Setup your bed leveling properly  
 - Use brim for small objects which have small contact to the bed  
 - Increase first layer extrusion to 125%-150%  
 - If you are using Buildtak, sand the surface using sand paper  
 - Set the printing speed of the first layer to 20 m/s

How to fix loose ball joint?  
 - Material Shrinkage: PLA 0.2%, ABS 0.8%  
 - Use clear nail polish. Use it on both female and male ball joint section or on friction joint surfaces. Wait until it dry before put them back in place  
 - If the ball joint is loose right after printing. It may cause by under extrusion. Increase filament flow rate by 110% - 125%

Finishing touch  
 - Use cutter or sand paper for peg adjustment  
 - Use super glue to assemble the part  
 - Spray the finishing object using clear coat to protect the object from the weather for long term use.



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TM3D-15  
**BATTLEGEUS**  
 INSTRUCTION 2

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**FILES**

- |                             |                              |                             |                              |                                    |
|-----------------------------|------------------------------|-----------------------------|------------------------------|------------------------------------|
| 1. 0_BG_ScrewA_CHOCOLATE    | 41. 2q_BG_Chest17_LIGHTBLUE  | 81. 5b_BG_Hand2_DARKBLUE    | 121. 7h_BG_Foot8_BLACK       | 159. Z(resin)0_BG_Screw6_DARKBLUE  |
| 2. 0_BG_ScrewB_DARKBLUE     | 42. 2r_BG_Chest18_GREY       | 82. 5c_BG_Hand3_CHOCOLATE   | 122. 7i_BG_Foot9_LIGHTBLUE   | 160. Z(resin)0_BG_ScrewH_DARKBLUE  |
| 3. 0_BG_ScrewC_GREY         | 43. 2s_BG_Chest19_BLACK      | 83. 5d_BG_Hand4_CHOCOLATE   | 123. 7j_BG_Foot10_LIGHTBLUE  | 161. Z(resin)0_BG_ScrewI_CHOCOLATE |
| 4. 0_BG_ScrewD_GREY         | 44. 2t_BG_Chest20_LIGHTBLUE  | 84. 5e_BG_Hand5_DARKBLUE    | 124. 7k_BG_Foot11_GREY       | 162. Z(resin)9a1_BG_Blast_GREEN    |
| 5. 0_BG_ScrewE_GREY         | 45. 2u_BG_Chest21_GREY       | 85. 5f_BG_Hand6_CHOCOLATE   | 125. 7l_BG_Foot12_CHOCOLATE  |                                    |
| 6. 0_BG_ScrewF_GREY         | 46. 2v_BG_Chest22_LIGHTBLUE  | 86. 5g_BG_Hand7_GREY        | 126. 7lR_BG_Foot12_CHOCOLATE |                                    |
| 7. 0_BG_ScrewG_DARKBLUE     | 47. 2w_BG_Chest23_GREY       | 87. 5h_BG_Hand8_GREY        | 127. 7m_BG_Foot13_BLACK      |                                    |
| 8. 0_BG_ScrewH_DARKBLUE     | 48. 2x_BG_Chest24_DARKBLUE   | 88. 5i_BG_Hand9_GREY        | 128. 7n_BG_Foot14_LIGHTBLUE  |                                    |
| 9. 0_BG_ScrewI_CHOCOLATE    | 49. 2y_BG_Chest25_DARKBLUE   | 89. 5j_BG_Hand10_GREY       | 129. 7oL_BG_Foot15_CHOCOLATE |                                    |
| 10. 1a_BG_Head1_CHOCOLATE   | 50. 2z_BG_Chest26_CHOCOLATE  | 90. 5k_BG_Hand11_GREY       | 130. 7oR_BG_Foot15_CHOCOLATE |                                    |
| 11. 1b_BG_Head2_BLACK       | 51. 2za_BG_Chest27_CHOCOLATE | 91. 5l_BG_Hand12_CHOCOLATE  | 131. 7pL_BG_Foot16_BLACK     |                                    |
| 12. 1c_BG_Head3_LIGHTBLUE   | 52. 3a_BG_Abdomen1_GREY      | 92. 5m_BG_Hand13_CHOCOLATE  | 132. 7pR_BG_Foot16_BLACK     |                                    |
| 13. 1d_BG_Head4_SKIN        | 53. 3b_BG_Abdomen2_GREY      | 93. 5n_BG_Hand14_CHOCOLATE  | 133. 7q_BG_Foot17_GREY       |                                    |
| 14. 1e_BG_Head5_GREY        | 54. 3c_BG_Abdomen3_GREY      | 94. 5o_BG_Hand15_CHOCOLATE  | 134. 7r_BG_Foot18_CHOCOLATE  |                                    |
| 15. 1f_BG_Head6_CHOCOLATE   | 55. 3d_BG_Abdomen4_CHOCOLATE | 95. 5p_BG_Hand16_CHOCOLATE  | 135. 7s_BG_Foot19_BLACK      |                                    |
| 16. 1g_BG_Head7_CHOCOLATE   | 56. 3e_BG_Abdomen5_CHOCOLATE | 96. 5q_BG_Hand17_CHOCOLATE  | 136. 7t_BG_Foot20_GREY       |                                    |
| 17. 1h_BG_Head8_CHOCOLATE   | 57. 3f_BG_Abdomen6_DARKBLUE  | 97. 5r_BG_Hand18_GREY       | 137. 8a_BG_Gun1_BLACK        |                                    |
| 18. 1i_BG_Head9_SKIN        | 58. 3g_BG_Abdomen7_DARKBLUE  | 98. 5s_BG_Hand19_CHOCOLATE  | 138. 8b_BG_Gun2_BLACK        |                                    |
| 19. 1j_BG_Head10_GREY       | 59. 4a_BG_Waist1_DARKBLUE    | 99. 5t_BG_Hand20_CHOCOLATE  | 139. 8c_BG_Gun3_GREY         |                                    |
| 20. 1k_BG_Head11_CHOCOLATE  | 60. 4b_BG_Waist2_DARKBLUE    | 100. 5u_BG_Hand21_GREY      | 140. 8d_BG_Gun4_GREY         |                                    |
| 21. 1l_BG_Head12_BLACK      | 61. 4c_BG_Waist3_DARKBLUE    | 101. 5v_BG_Hand22_CHOCOLATE | 141. 8e_BG_Gun5_GREY         |                                    |
| 22. 1m_BG_Head13_BLACK      | 62. 4d_BG_Waist4_GREY        | 102. 6a_BG_Thigh1_GREY      | 142. 8f_BG_Gun6_GREY         |                                    |
| 23. 1n_BG_Head14_DARKBLUE   | 63. 4e_BG_Waist5_DARKBLUE    | 103. 6b_BG_Thigh2_GREY      | 143. 8g_BG_Gun7_GREEN        |                                    |
| 24. 1o_BG_Head15_DARKBLUE   | 64. 4f_BG_Waist6_DARKBLUE    | 104. 6c_BG_Thigh3_GREY      | 144. 8h_BG_Gun8_BLACK        |                                    |
| 25. 2a_BG_Chest1_CHOCOLATE  | 65. 4g_BG_Waist7_DARKBLUE    | 105. 6d_BG_Thigh4_DARKBLUE  | 145. 8i_BG_Gun9_GREY         |                                    |
| 26. 2b_BG_Chest2_GREY       | 66. 4h_BG_Waist8_CHOCOLATE   | 106. 6e_BG_Thigh5_DARKBLUE  | 146. 8j_BG_Gun10_GREEN       |                                    |
| 27. 2c_BG_Chest3_GREY       | 67. 4i_BG_Waist9_DARKBLUE    | 107. 6f_BG_Thigh6_BLACK     | 147. 8k_BG_Gun11_GREEN       |                                    |
| 28. 2d_BG_Chest4_CHOCOLATE  | 68. 4j_BG_Waist10_CHOCOLATE  | 108. 6g_BG_Thigh7_GREY      | 148. 8l_BG_Gun12_GREEN       |                                    |
| 29. 2e_BG_Chest5_DARKBLUE   | 69. 4k_BG_Waist11_DARKBLUE   | 109. 6h_BG_Thigh8_GREY      | 149. 8m_BG_Gun13_BLACK       |                                    |
| 30. 2f_BG_Chest6_BLACK      | 70. 4l_BG_Waist12_CHOCOLATE  | 110. 6h_BG_Thigh8_GREY      | 150. 9a1_BG_Blast_GREEN      |                                    |
| 31. 2g_BG_Chest7_DARKBLUE   | 71. 4m_BG_Waist13_DARKBLUE   | 111. 6j_BG_Thigh10_DARKBLUE | 151. ScrewDriver             |                                    |
| 32. 2h_BG_Chest8_DARKBLUE   | 72. 4n_BG_Waist14_CHOCOLATE  | 112. 7aL_BG_Foot1_DARKBLUE  | 152. Screwdriver2            |                                    |
| 33. 2i_BG_Chest9_DARKBLUE   | 73. 4o_BG_Waist15_DARKBLUE   | 113. 7aR_BG_Foot1_DARKBLUE  |                              |                                    |
| 34. 2j_BG_Chest10_LIGHTBLUE | 74. 4p_BG_Waist16_DARKBLUE   | 114. 7b_BG_Foot2_DARKBLUE   |                              |                                    |
| 35. 2k_BG_Chest11_BLACK     | 75. 4q_BG_Waist17_CHOCOLATE  | 115. 7c_BG_Foot3_DARKBLUE   |                              |                                    |
| 36. 2l_BG_Chest12_DARKBLUE  | 76. 4r_BG_Waist18_DARKBLUE   | 116. 7dL_BG_Foot4_CHOCOLATE |                              |                                    |
| 37. 2m_BG_Chest13_DARKBLUE  | 77. 4s_BG_Waist19_CHOCOLATE  | 117. 7dR_BG_Foot4_CHOCOLATE |                              |                                    |
| 38. 2n_BG_Chest14_DARKBLUE  | 78. 4t_BG_Waist20_DARKBLUE   | 118. 7e_BG_Foot5_BLACK      |                              |                                    |
| 39. 2o_BG_Chest15_GREY      | 79. 4u_BG_Waist21_CHOCOLATE  | 119. 7f_BG_Foot6_LIGHTBLUE  |                              |                                    |
| 40. 2p_BG_Chest16_LIGHTBLUE | 80. 5a_BG_Hand1_CHOCOLATE    | 120. 7g_BG_Foot7_GREY       |                              |                                    |

**Options For Resin Print:**










- 153. Z(resin)0\_BG\_ScrewA\_CHOCOLATE
- 154. Z(resin)0\_BG\_ScrewB\_DARKBLUE
- 155. Z(resin)0\_BG\_ScrewC\_GREY
- 156. Z(resin)0\_BG\_ScrewD\_GREY
- 157. Z(resin)0\_BG\_ScrewE\_GREY
- 158. Z(resin)0\_BG\_ScrewF\_GREY



Receive high tension / pressure! Print these parts at minimum 75% Infill & 1.2mm wall thickness

			
1i_BG_Head9_SKIN	2b_BG_Chest2_GREY	2c_BG_Chest3_GREY	4d_BG_Waist4_GREY
			
4b_BG_Waist2_DARKBLUE	7k_BG_Foot11_GREY	Screwdrivers	

**Screws:**

	L: 20.5mm D: 8mm		L: 32mm D: 20mm
	L: 99mm D: 15mm		L: 48.5mm D: 15mm
	L: 55mm D: 18mm		L: 74mm D: 20mm
	L: 23mm D: 30mm		L: 20mm D: 15mm
			L: 47.5mm D: 8mm



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# TM3D-15 BATTLEGEUS INSTRUCTION 3

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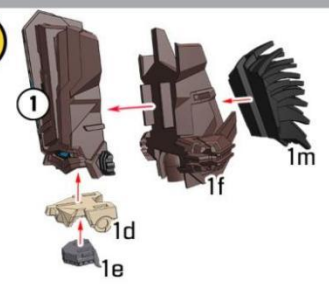
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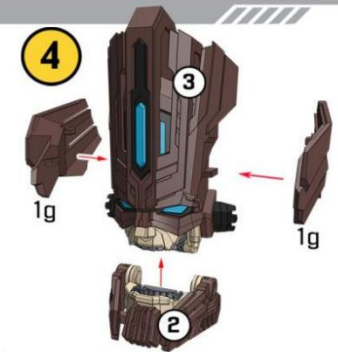
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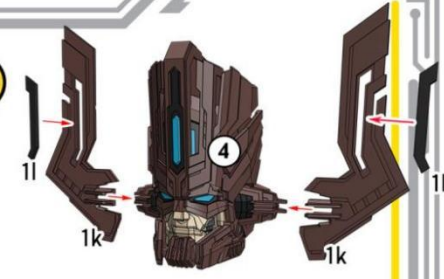
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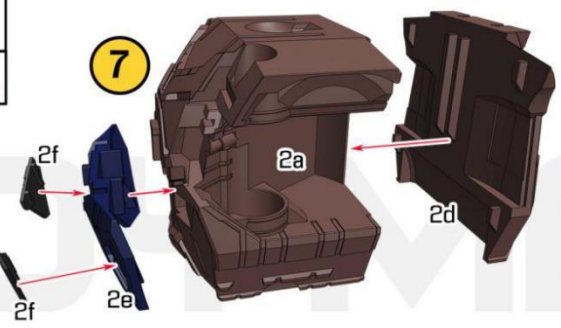
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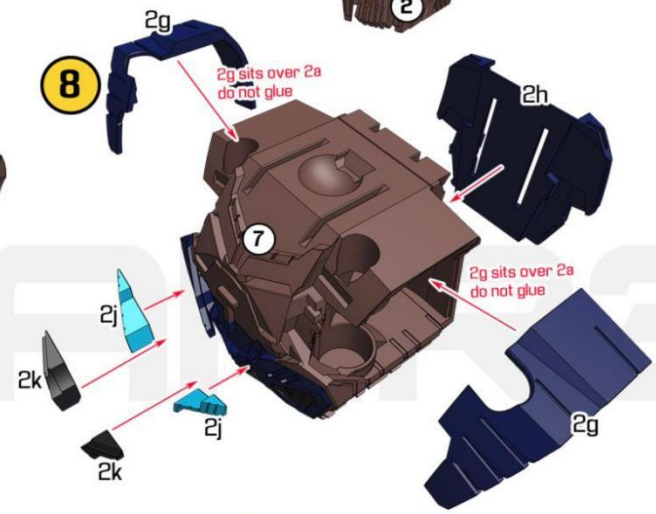
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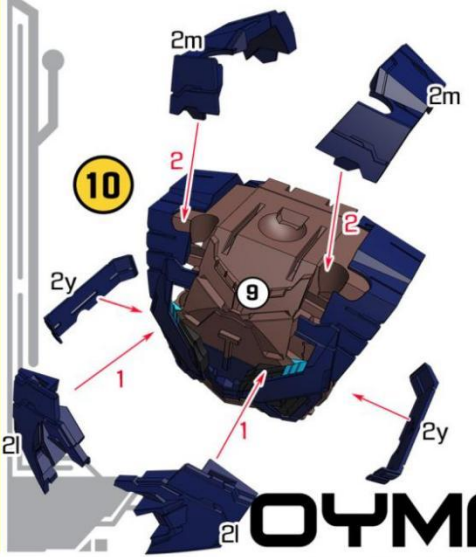
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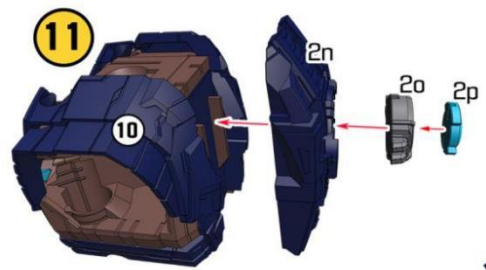
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10



11



12



13





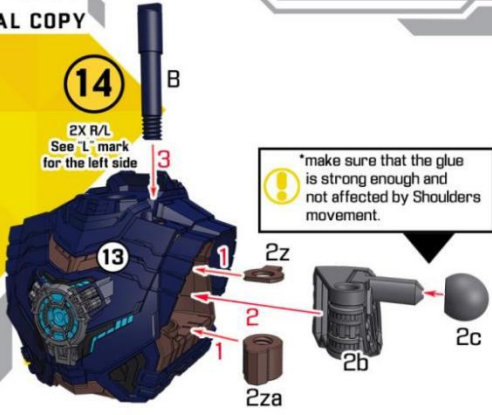
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**BATLEGEUS**  
 INSTRUCTION 4

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14

2X R/L  
 See "L" mark  
 for the left side

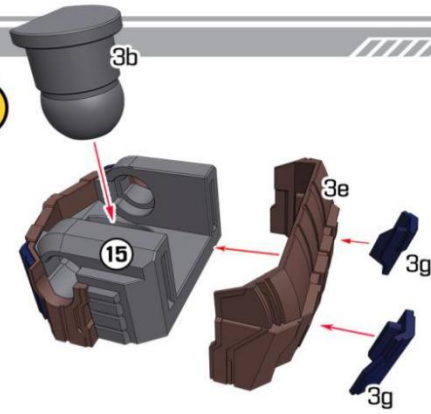


\*make sure that the glue is strong enough and not affected by Shoulders movement.

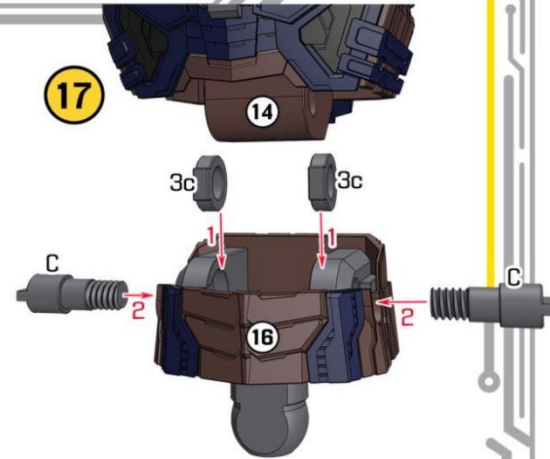
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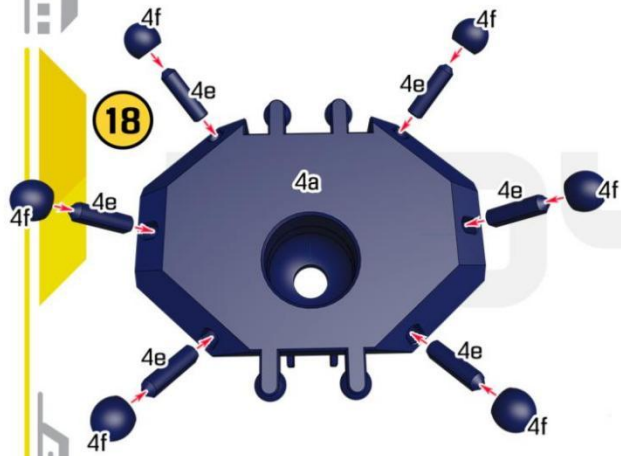
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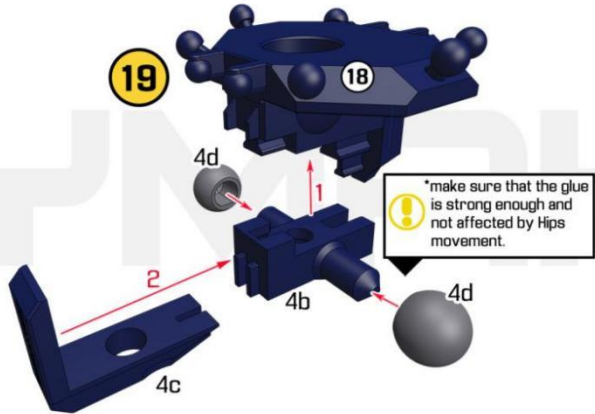
17



18



19



\*make sure that the glue is strong enough and not affected by Hips movement.

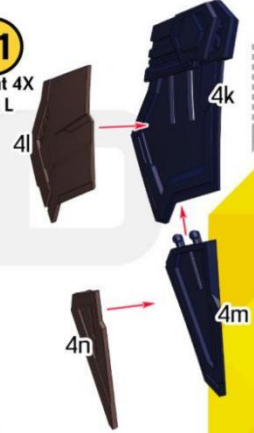
20



21

Repeat 4X  
 R & L

THESE STEPS  
 ARE FOR THE  
 LEFT HAND  
 WITH "L" MARK.  
 MIRROR THESE  
 STEPS FOR  
 RIGHT HAND



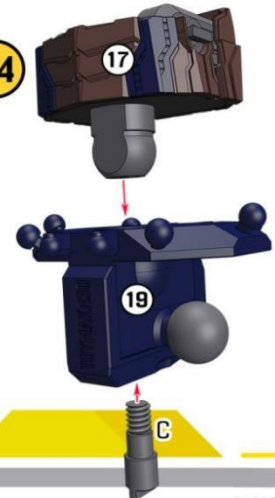
22 Repeat 2X  
 R & L



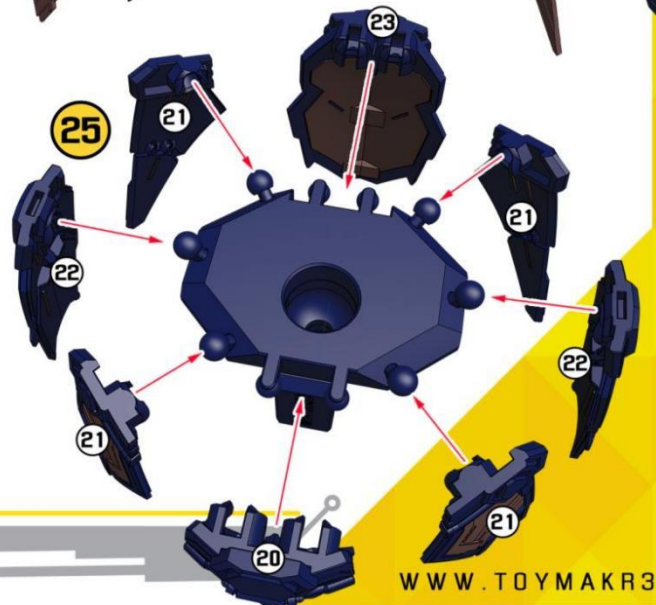
23



24



25



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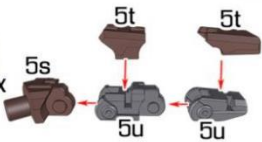
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# TM3D-15 BATTLEGEUS INSTRUCTION 6

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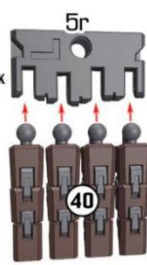
39

Repeat 2X



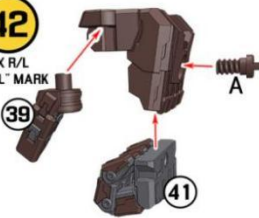
41

2X R/L  
SEE 'L' MARK



42

2X R/L  
SEE 'L' MARK



43

2X R/L  
SEE 'L' MARK



44

2X R/L  
SEE 'L' MARK



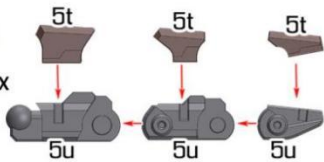
45

2X R/L  
SEE 'L' MARK



40

Repeat 8X



46



47



Screw facing  
inward of the  
hand

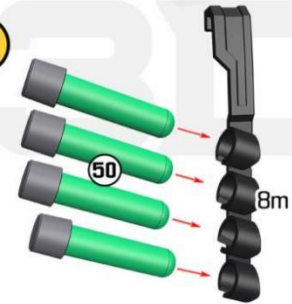
F

50

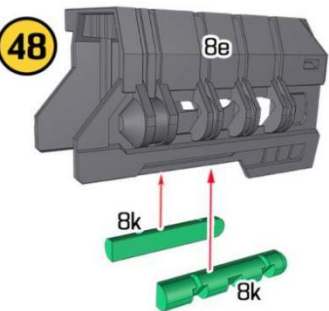
Repeat 8X



52



48



49



51



53





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