

MECCANOTM TECH

MAKER SYSTEM

16402



MECCANOTM 2.0

PERSONAL ROBOT

 10+

Instructions
Notice de montage
Instrucciones de construcción
Bauanleitung
Bouwinstructie
Istruzioni
Instruções
Инструкции

 **WARNING:** Cords could be a strangulation hazard. Not for use by children under 3 years of age.
 **ATTENTION !** Les câbles peuvent présenter un risque de strangulation. Ne pas laisser à la portée des enfants de moins de 3 ans.

4 x C/LR141-5V
BATTERIES NOT INCLUDED / PILES NON FOURNIES / PILAS NO INCLUIDAS
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EN. Content: 497 Parts, 1 Meccabrain™, 1 LED module, 3 hand tools, 4 servos, 2 rear wheel assembly, 2 motor gear box assembly, 1 USB cable
FR. Contenu : 497 pièces, 1 Meccabrain™, 1 module LED, 3 outils, 4 servomoteurs, assemblage 2 roues arrière, assemblage 2 moteurs et engrenages, 1 câble USB
ES. Contenido: 497 piezas, 1 Meccabrain™, 1 módulo LED, 3 herramientas, 4 servos, ensamblaje para 2 ruedas traseras, ensamblaje con 2 motores y caja de engranajes, 1 cable USB
DE. Inhalt: 497 Teile, 1 Meccabrain™, 1 LED-Modul, 3 Handwerkzeuge, 4 Servos, 2 Hinterräder zum Zusammenbauen, Box mit 2 Getriebenen und Motoren, 1 USB-Kabel
NL. Inhoud: 497 onderdelen, 1 Meccabrain™, 1 LED-module, 3 stuks gereedschap, 4 servo's, 2 achterwielen, tandwielkast met 2 motoren, 1 USB-kabel
IT. Contenuto: 497 pezzi, 1 Meccabrain™, 1 modulo a LED, 3 attrezzi, 4 servomotori, kit con 2 ruote posteriori, kit con 2 motori e cambi di velocità, 1 cavo USB
PT. Conteúdo: 497 partes, 1 Meccabrain™, 1 módulo de LED, 3 ferramentas manuais, 4 servomotores, 2 rodas traseiras, caixa com 2 engrenagens e motor, 1 cabo USB
RU. В коробке: 497 деталей, 1 Meccabrain™, 1 светодиодный модуль, 3 ручных инструмента, 4 сервопривода, комплект из 2 задних колес, комплект из 2 механизированных коробок передач, 1 USB-кабель.

EN. Building instructions for model#2 are available at www.meccano.com.
FR. La notice de montage du modèle 2 est disponible sur www.meccano.com
ES. Hay instrucciones de construcción disponibles para el modelo 2 en www.meccano.com.
DE. Die Bauanleitung für Modell Nr. 2 ist auf www.meccano.com zu finden.
NL. Bouwinstructies voor model#2 zijn verkrijgbaar op www.meccano.com.
IT. Le istruzioni di montaggio del modello 2 sono disponibili alla pagina www.meccano.com.
PT. As instruções de montagem para o modelo 2 estão disponíveis em www.meccano.com.
RU. Инструкции по сборке модели №2 можно найти на сайте www.meccano.com.

CAN ICES-3(B)/NMB-3(B)

CANADIAN Class B statement: This device complies with Industry Canada Licence-exempt RSS-210. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Déclaration CANADIENNE classe B : Le présent appareil est conforme au CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. L'utilisation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Only one model can be built at a time./ Les pièces fournies ne permettent de monter qu'un seul modèle à la fois./ Solo es posible construir un modelo a la vez./ Jeweils nur eins der Modelle baubar./ Er kan maar een model tegelijk worden gebouwd./ Permette di realizzare un solo modello per volta./ Só é possível montar um modelo de cada vez./ Одновременно можно построить только одну модель.

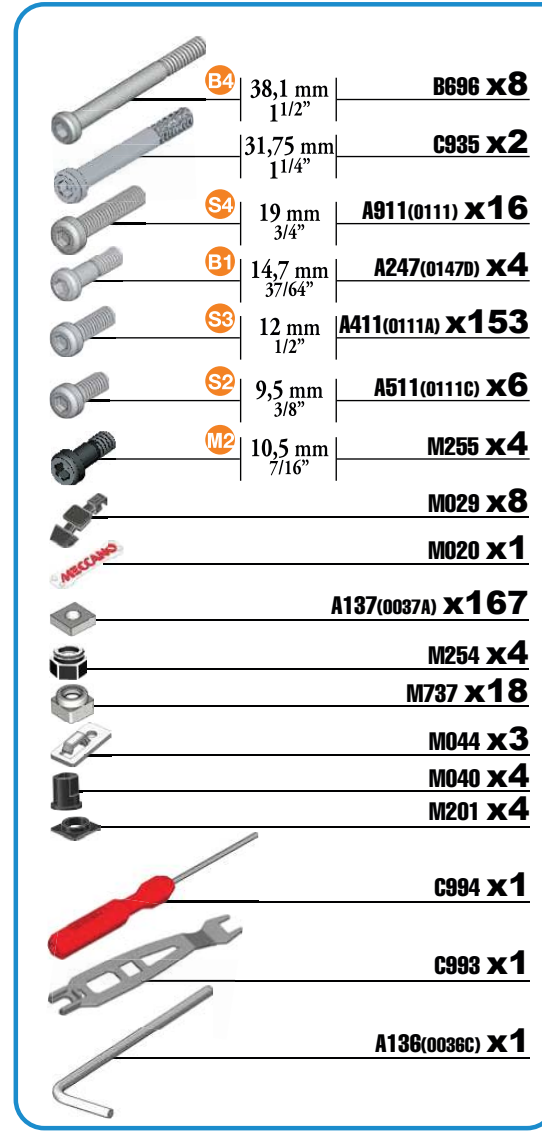
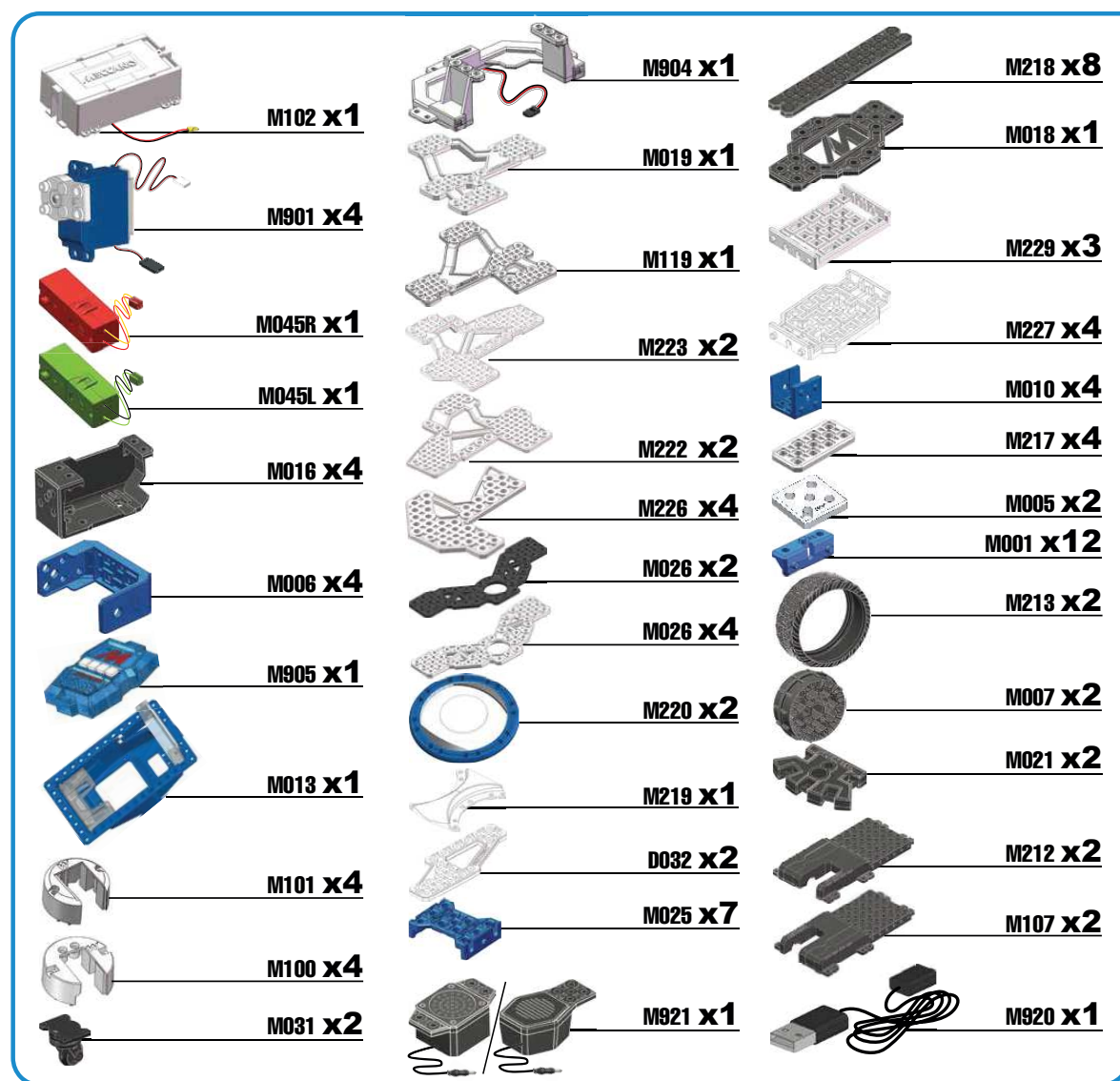
- EN** The product may have unexpected movement. User and third body should stay at least 30 cm away from the product to avoid unexpected impact. The toy is only to be connected to Class II equipment bearing the symbol: 
CAUTION Cut Hazard: Product has functional sharp points. Contact may result in injury. Always keep points away from fingers and body. Handle with care. Use with adult supervision. All the wires should be well attached in the provided wire clip #M044 to avoid hazards caused by loose wire. Extra wire clips are provided in the package. Do not put the phone into the phone tray except in motion capture mode. Activate the product only when the area is appropriate for the intended use (free area, no obstacles). The product is intended to be played on floor.
- FR** Le produit peut effectuer des mouvements brusques. L'utilisateur et toute autre personne doivent se tenir à au moins 30 cm du produit pour éviter tout choc imprévu. Le jouet ne doit être branché qu'à des équipements de classe II portant le symbole suivant : 
MISE EN GARDE contre les coupures : le produit présente des extrémités coupantes fonctionnelles. Éviter tout contact pour ne pas se blesser. Les extrémités doivent toujours rester à distance des doigts et du corps. Utiliser avec précaution. Utiliser sous la surveillance d'un adulte. Faire passer tous les fils dans l'attache de sécurité #M044 pour éviter tout risque de trébuchement. Des attaches supplémentaires sont fournies avec le produit. Ne pas insérer de téléphone dans l'espace prévu si le mode de capture de mouvement n'est pas sélectionné. Activer le produit uniquement si la zone est adaptée à l'utilisation prévue (zone bien dégagée). Le produit est destiné à une utilisation au sol.
- ES** El producto podría hacer movimientos inesperados. El usuario y cualquier cuerpo extraño deben mantenerse al menos a unos 30 cm del producto para evitar cualquier impacto no deseado. El juguete solo se debe conectar a dispositivos de Clase II que lleven el símbolo: 
PRECAUCIÓN Riesgo de corte: el producto contiene partes afiladas. El contacto con ellas podría provocar lesiones. Mantén estas partes afiladas lejos de los dedos y del cuerpo. Manipula el juguete con cuidado. Utilízalo bajo la supervisión de un adulto. Todos los cables deben estar bien sujetos con el clip para cables que se proporciona #M044 para evitar riesgos provocados por algún cable suelto. En la caja se incluyen clips para cables adicionales. Coloca el teléfono en la bandeja para teléfono únicamente en el modo de captura de movimiento. Activa el producto solo en áreas apropiadas para tal fin (zonas amplias, sin obstáculos). El producto se ha diseñado para usarlo en el suelo.
- DE** Das Produkt kann unerwartete Bewegungen ausführen. Benutzer und Umstehende sollten mindestens 30 cm Abstand zum Produkt halten, um Zusammenstöße zu vermeiden. Das Spielzeug darf nur an Geräte der Schutzklasse II mit dem folgenden Symbol angeschlossen werden: 
ACHTUNG Schnittgefahr: Das Produkt enthält funktionale scharfe Kanten. Kontakt kann zu Verletzungen führen. Scharfe Kanten von Fingern und anderen Körperteilen fernhalten. Mit Vorsicht handhaben. Unter Aufsicht eines Erwachsenen verwenden. Alle Kabel müssen mithilfe der mitgelieferten Kabelklemme #M044 gesichert werden, um Gefahr durch lose Kabel zu vermeiden. Zusätzliche Kabelklemmen sind im Lieferumfang enthalten. Das Telefon nur im Bewegungserkennungsmodus in die Telefonablage legen. Das Produkt nur in Bereichen aktivieren, die für die Nutzung des Produkts geeignet sind (offene Bereiche ohne Hindernisse). Das Produkt ist ausschließlich für das Spielen auf dem Boden vorgesehen.
- NL** Dit product kan onverwachte bewegingen maken. De gebruiker en derden moeten op een afstand van ten minste 30 cm van het product blijven om een onverwachte botsing te voorkomen. Het speelgoed mag alleen worden verbonden met apparatuur van klasse II met het volgende symbool: 
LET OP Snijgevaar: het product bevat scherpe punten. Contact daarmee kan resulteren in verwondingen. Houd de punten altijd uit de buurt van vingers en lichaam. Wees voorzichtig tijdens het gebruik van het speelgoed. Gebruik onder toezicht van een volwassene. Alle kabels dienen goed bevestigd te worden in de ingegrepen kabelklem #M044 om gevaar van losse kabels te voorkomen. Extra kabelklemmen zijn in de verpakking ingegrepen. Plaats de telefoon alleen in de telefoonhouder bij opnames van bewegingen. Activeer het product uitsluitend als het gebied geschikt is voor het beoogde gebruik (leeg gebied, geen obstakels). Dit product is bedoeld om op de vloer mee te spelen.
- IT** Il prodotto potrebbe muoversi inaspettatamente. Si consiglia di rispettare una distanza di almeno 30 cm dal prodotto per evitare impatti improvvisi. Il giocattolo può essere collegato solo ad apparecchiature di Classe II che recano il simbolo: 
ATTENZIONE! Rischio di taglio: il prodotto presenta elementi appuntiti. Il contatto potrebbe causare infortuni. Tenere sempre gli elementi appuntiti lontano dalle dita e dal corpo. Maneggiare con cura. Utilizzare con la supervisione di un adulto. Tutti i fili devono essere riuniti nel morsetto #M044 fornito in dotazione per evitare eventuali rischi causati da fili sciolti. Nella confezione sono inclusi morsetti aggiuntivi. Inserire il telefono nell'apposito supporto esclusivamente in modalità motion capture. Attivare il prodotto solamente nelle aree indicate per l'uso (spazio libero, senza ostacoli). Il prodotto va utilizzato posizionandolo a terra.
- PT** O produto pode fazer movimentos inesperados. O usuário e qualquer outra pessoa deverão ficar pelo menos a 30 cm de distância do produto para evitar qualquer impacto inesperado. O brinquedo deve ser conectado somente a equipamentos de Classe II com o seguinte símbolo: 
CUIDADO risco de corte: o produto contém pontas afiadas. O contato poderá causar lesões. Sempre mantenha as pontas longe dos dedos e do corpo. Manuseie com cuidado. Use sob a supervisão de um adulto. Todos os fios devem estar bem presos no clipe de fios #M044 incluso para evitar lesões causadas fios soltos. Clipes de fios extra inclusos no pacote. Não coloque o telefone na base, exceto no modo de captura de movimento. Ative o produto somente em uma área apropriada para o uso (área ampla, sem obstáculos). Este produto deve ser utilizado no chão.
- RU** Игрушка может внезапно начать двигаться. Пользователь и окружающие должны находиться на расстоянии не менее в 30 см от игрушки. Игрушка совместима только с оборудованием класса защиты II, отмеченным символом: 
ОСТОРОЖНО! Опасность пореза: игрушка содержит острые детали. Прикосновение к ним может привести к травме. Не прикасайтесь к этим деталям пальцами и другими частями тела. Соблюдайте осторожность. Допускается использование только под присмотром взрослых. Все провода должны быть собраны зажимом для проводов, входящим в комплект #M044, чтобы избежать потенциальной угрозы от незакрепленного провода. В комплект входят несколько дополнительных зажимов для проводов. Телефон можно вставлять в подставку для телефона только в режиме записи движения. Активируйте игрушку только в подходящем месте (для игры требуется свободное пространство без препятствий). Игрушка предназначена для использования на полу.

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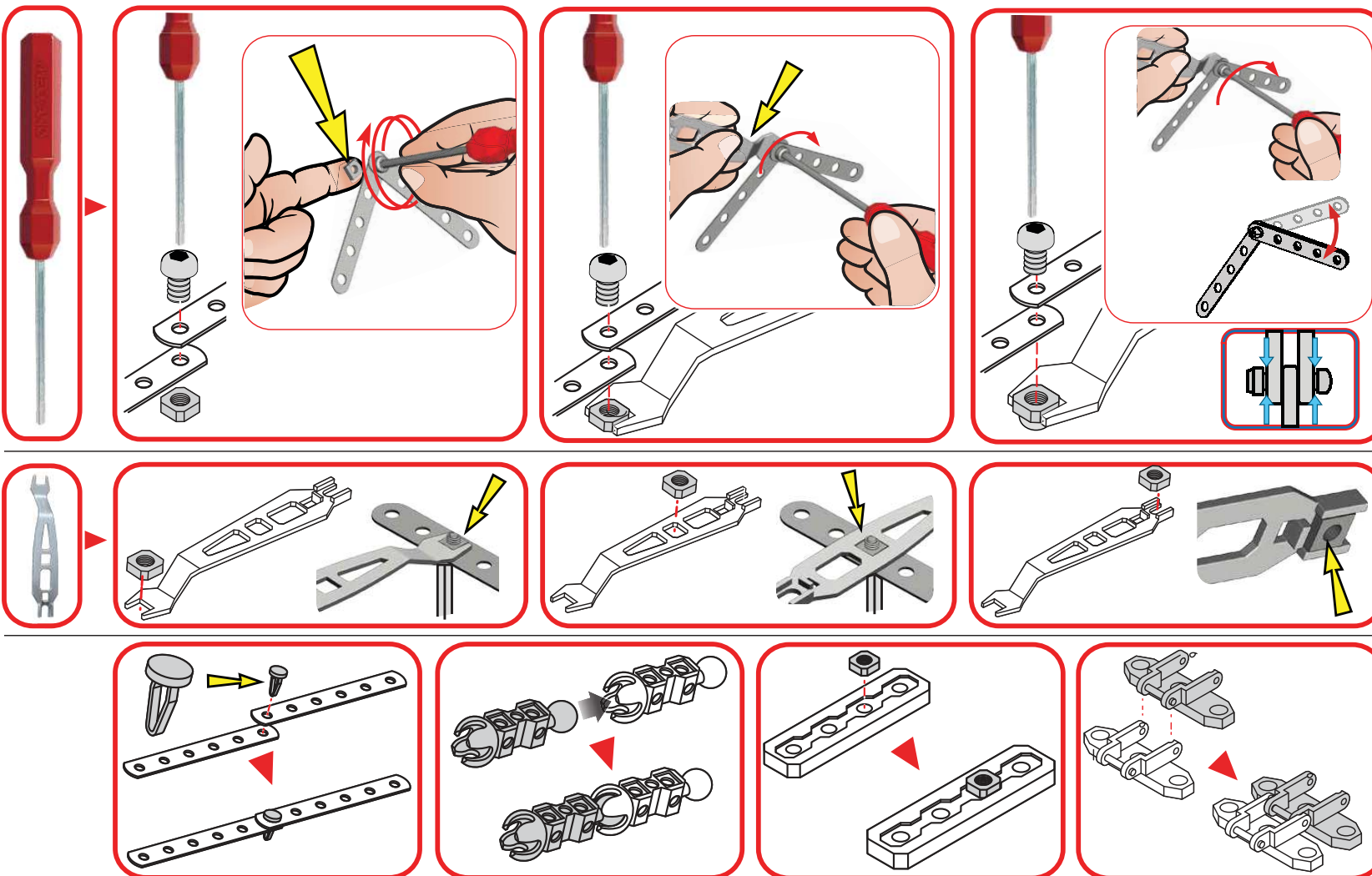
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3. CÓMO JUGAR • SPIELEN • SPELEN • GIOCO • COMO JOGAR • ВОСПРОИЗВЕДЕНИЕ.....	Puedes consultar las instrucciones en tu idioma en www.meccano.com • Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com • Ga verder met instructies in je eigen taal op www.meccano.com • Continua con le istruzioni nella tua lingua su www.meccano.com • Continue a ler as instruções em seu idioma acessando www.meccano.com • Найдти инструкции на вашем языке можно на сайте www.meccano.com
3.1 VAMOS A JUGAR • SO WIRD GESPIELT • LATEN WE SPELEN • COMINCIAMO • VAMOS BRINCAR • ДАВАЙ ПОИГРАЕМ	Puedes consultar las instrucciones en tu idioma en www.meccano.com • Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com • Ga verder met instructies in je eigen taal op www.meccano.com • Continua con le istruzioni nella tua lingua su www.meccano.com • Continue a ler as instruções em seu idioma acessando www.meccano.com • Найдти инструкции на вашем языке можно на сайте www.meccano.com
3.2 TARJETA DE COMANDOS • BEFEHLSKARTE • COMMANDO-KAART • SCHEDA DEI COMANDI • CARTÃO DE COMANDO • КАРТА КОМАНД	Puedes consultar las instrucciones en tu idioma en www.meccano.com • Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com • Ga verder met instructies in je eigen taal op www.meccano.com • Continua con le istruzioni nella tua lingua su www.meccano.com • Continue a ler as instruções em seu idioma acessando www.meccano.com • Найдти инструкции на вашем языке можно на сайте www.meccano.com
3.3 COMANDOS DE VOZ • SPRACHBEFEHLE • SPRAAKOPDRACHTEN • COMANDI VOCALI • COMANDOS DE VOZ • ГОЛОСОВЫЕ КОМАНДЫ	Puedes consultar las instrucciones en tu idioma en www.meccano.com • Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com • Ga verder met instructies in je eigen taal op www.meccano.com • Continua con le istruzioni nella tua lingua su www.meccano.com • Continue a ler as instruções em seu idioma acessando www.meccano.com • Найдти инструкции на вашем языке можно на сайте www.meccano.com
3.4 PROGRAMAR CON APLICACIÓN • ÜBER DIE APP PROGRAMMIEREN • PROGRAMMEERBAAR VIA APP • PROGRAMMA CON L'APP • PROGRAME COM O APLICATIVO ПРОГРАММИРОВАНИЕ С ПОМОЩЬЮ ПРИЛОЖЕНИЯ.....	Puedes consultar las instrucciones en tu idioma en www.meccano.com • Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com • Ga verder met instructies in je eigen taal op www.meccano.com • Continua con le istruzioni nella tua lingua su www.meccano.com • Continue a ler as instruções em seu idioma acessando www.meccano.com • Найдти инструкции на вашем языке можно на сайте www.meccano.com
INFORMACION PARA EL CONSUMIDOR • VERBRAUCHERHINWEISE INFORMATIE VOOR GEBRUIKERS • INFORMAZIONI PER I CONSUMATORI • INFORMAÇÕES PARA O CONSUMIDOR • ИНФОРМАЦИЯ ДЛЯ ПОТРЕБИТЕЛЕЙ.....	41-44





CONSTRUCTION TIPS / ASTUCES DE CONSTRUCTION

TIPS DE CONSTRUCCIÓN / TIPPS ZUM BAUEN
MONTAGETIPS / SUGGERIMENTI PER COSTRUIRE
DICAS DE MONTAGEM / РЕКОМЕНДАЦИИ ПО СБОРКЕ



CONNECT AND PLUG IN • BRANCHEMENTS ET CONNEXIONS • CONÉCTALO • VERBINDEN UND ANSCHLIESSEN • AANSLUITEN • COLLEGAMENTI • CONECTE • ПОДКЛЮЧЕНИЕ И УСТАНОВКА

1.1 PLUG IN AND DOWNLOAD YOUR LANGUAGE • BRANCHEMENTS ET TÉLÉCHARGEMENT DE LA LANGUE

For instructions in other languages, visit www.meccano.com

Pour télécharger les instructions dans une autre langue, rends-toi sur www.meccano.com

Para consultar las instrucciones en otros idiomas, visita www.meccano.com

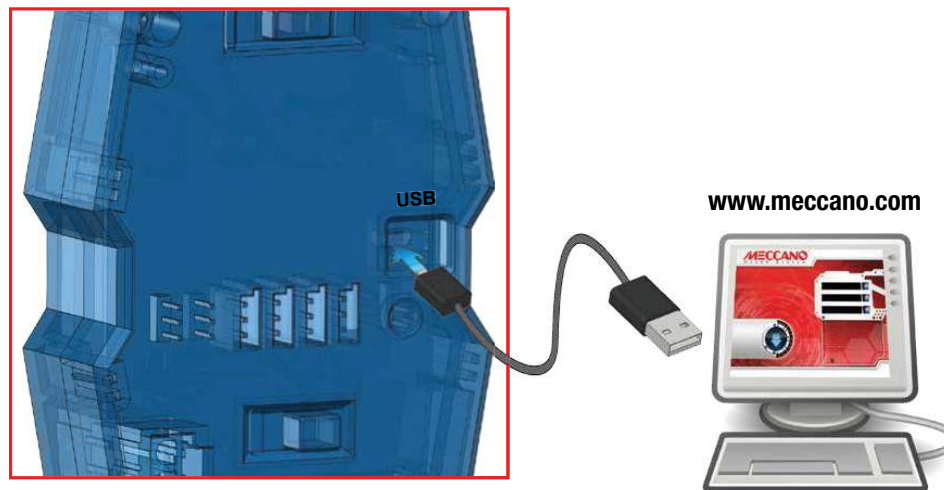
Eine detaillierte Bedienungsanleitung in deutscher Sprache findest du auf www.meccano.com

Voor instructies in andere talen, bezoek www.meccano.com

Per le istruzioni in altre lingue, visitare il sito www.meccano.com

Para instruções em outros idiomas, acesse www.meccano.com

Инструкции на других языках можно найти на сайте www.meccano.com



(EN) Meccanoid must be updated before proceeding. **(ES)**

- To change my language, go to www.meccano.com and find your language.
- Download the Robot Update software
- Locate the included USB cable
- Connect USB cable to computer
- Insert micro USB end into the port on the MeccaBrain™

*U.K. English also available.

- Si quieres cambiar el idioma, ve a www.meccano.com y busca el tuyo.
- Descarga el software de actualización del robot
- Encuentra el cable USB (incluido)
- Conéctalo a la computadora
- Inserta el micro USB en el puerto del MeccaBrain™
- Puedes consultar las instrucciones en tu idioma en www.meccano.com

(NL)

- Om mijn taal te veranderen, ga je naar www.meccano.com en zoek je jouw taal.
- Download de updatesoftware van de robot
- Pak de meegeleverde USB-kabel
- Sluit de USB-kabel aan op de computer
- Steek het micro-USB-uiteinde in de poort van de MeccaBrain™
- Ga verder met instructies in je eigen taal op www.meccano.com

(PT)

- Para mudar meu idioma, acesse www.meccano.com e encontre seu idioma.
- Faça download do software de atualização do robô
- Localize o cabo USB incluído
- Conecte o cabo USB ao computador
- Insira a extremidade micro do cabo USB na porta do MeccaBrain™
- Continue a ler as instruções em seu idioma acessando www.meccano.com

(FR) Meccanoid doit d'abord être mis à jour. **(DE)**

- Pour me faire parler une autre langue de ton choix, rends-toi sur www.meccano.com.
- Télécharge le logiciel de mises à jour du robot
- Munis-toi du câble USB inclus.
- Branche le câble USB sur ton ordinateur.
- Insère le connecteur mini USB du câble dans le port du MeccaBrain™
- Pour la suite des instructions en français, passe à la page 36.

- Du findest deine Sprache als Softwarepaket auf www.meccano.com.
- Software-Update für den Roboter herunterladen.
- Das mitgelieferte USB-Kabel zur Hand nehmen.
- USB-Kabel mit dem Computer verbinden.
- Den Micro-USB-Stecker in den Ladeanschluss von MeccaBrain™ stecken.
- Eine Bedienungsanleitung in deiner Sprache findest du unter www.meccano.com.

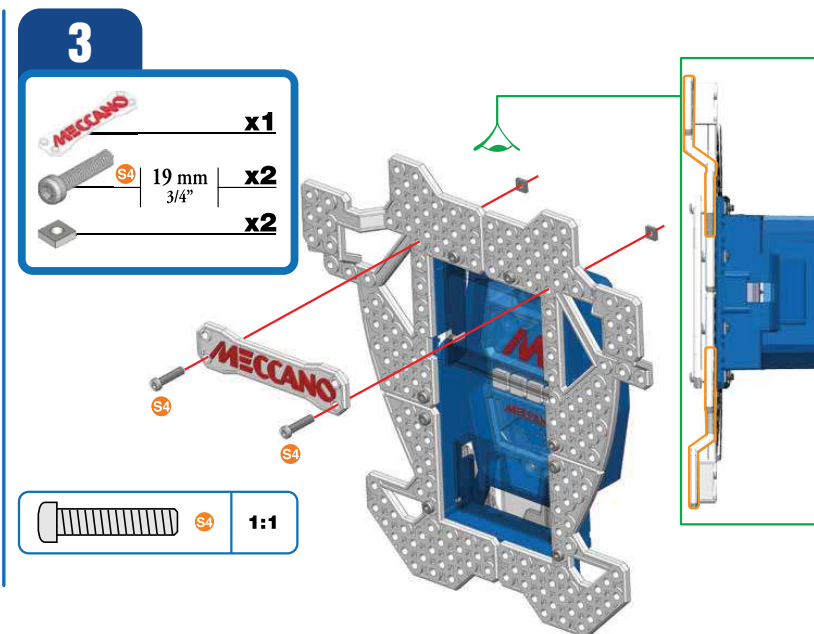
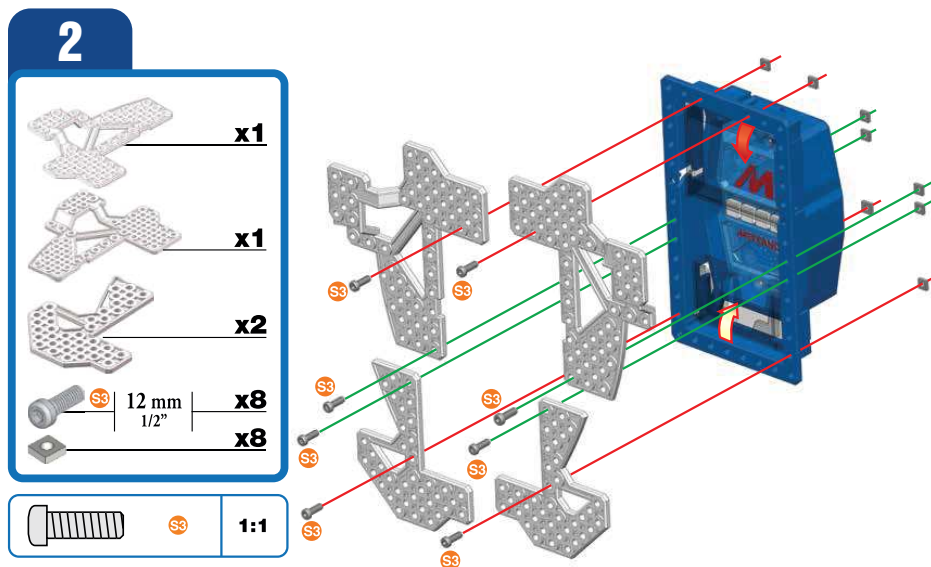
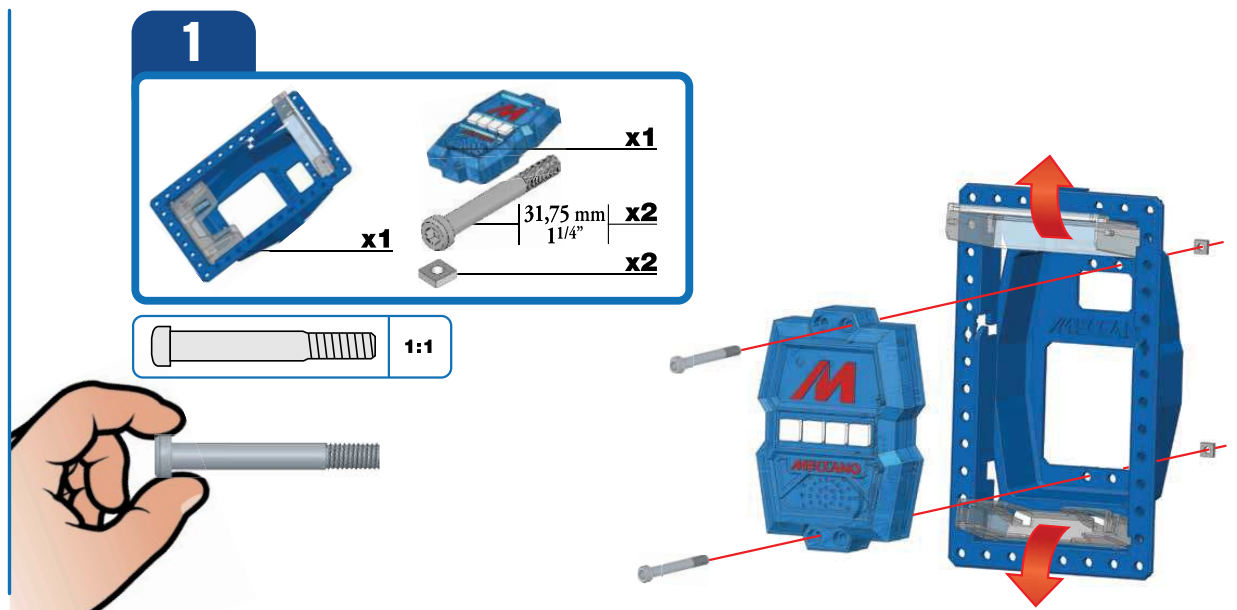
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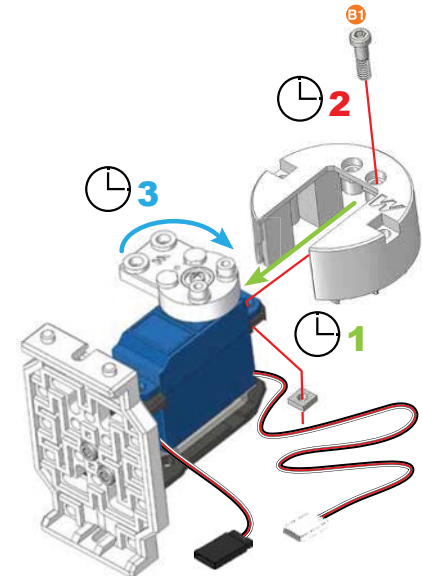
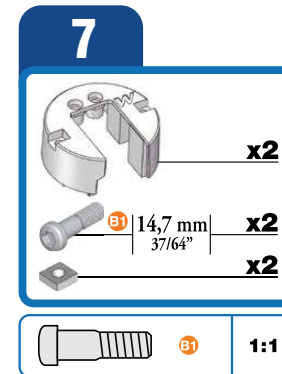
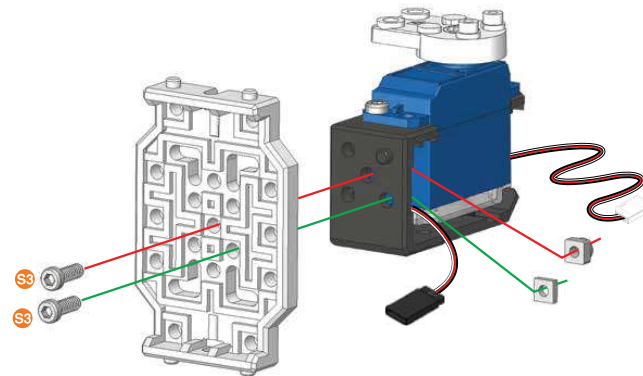
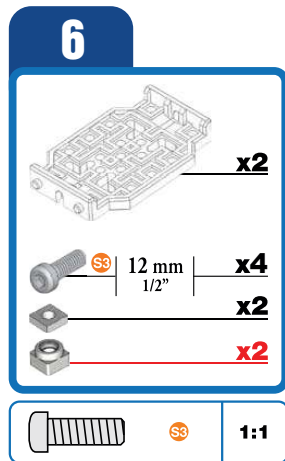
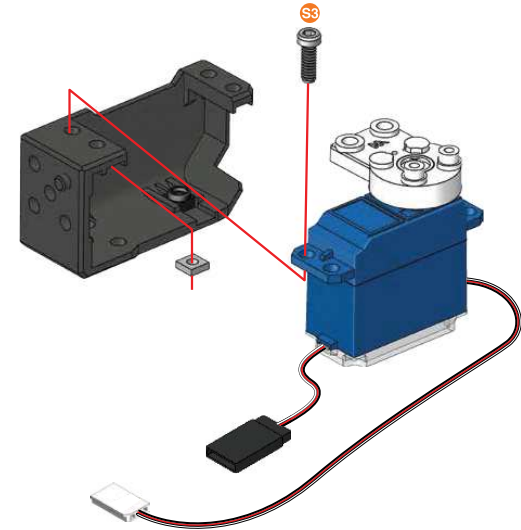
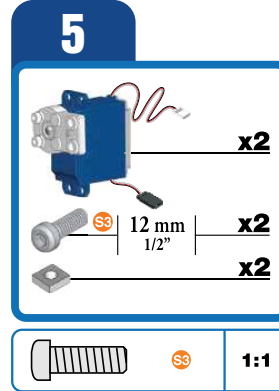
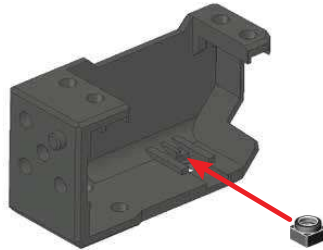
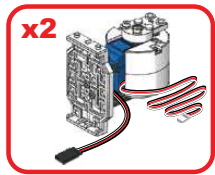
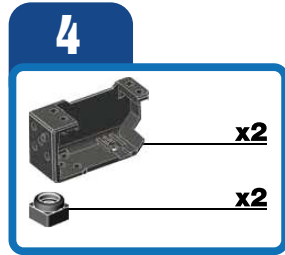
- Per modificare la lingua, visita www.meccano.com e trova la tua lingua.
- Scarica il software di aggiornamento Robot
- Individua il cavo USB in dotazione
- Collega il cavo USB al computer
- Inserisci l'estremità micro USB nella porta del MeccaBrain™
- Continua con le istruzioni nella tua lingua su www.meccano.com

(RU)

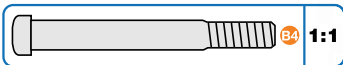
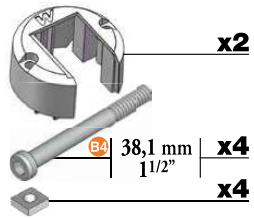
- Чтобы изменить мой язык, перейдите на сайт www.meccano.com и найдите нужный язык.
- Загрузите программное обеспечение для обновления робота
- Возьмите USB-кабель (входит в комплект)
- Подключите USB-кабель к компьютеру
- Подключите разъем micro USB к порту на MeccaBrain™
- Найти инструкции на вашем языке можно на сайте www.meccano.com

1.2 BUILD YOUR ROBOT • CONSTRUYE DU ROBOT • MONTA TU ROBOT • BAUE DEINEN ROBOTER ZUSAMMEN • BOUW JE EIGEN ROBOT • COSTRUISCI IL TUO ROBOT • MONTE SEU ROBÔ • СБОРКА РОБОТА

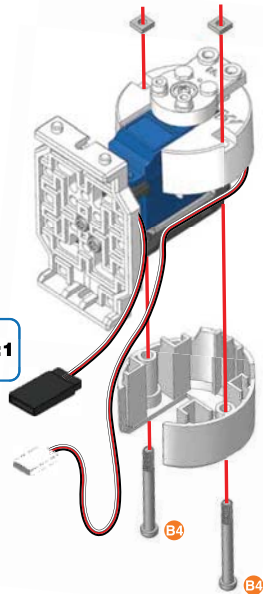
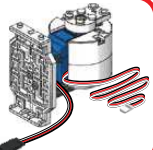




8

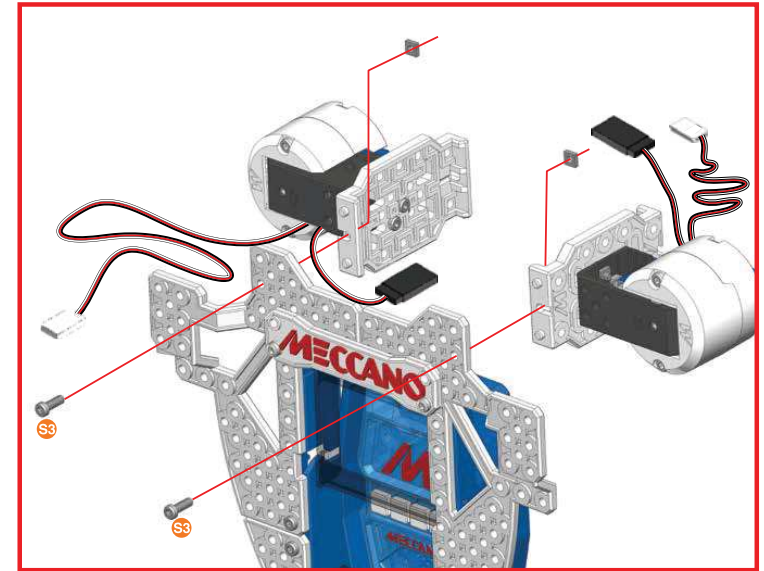
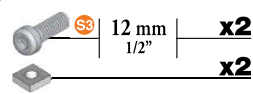


x2

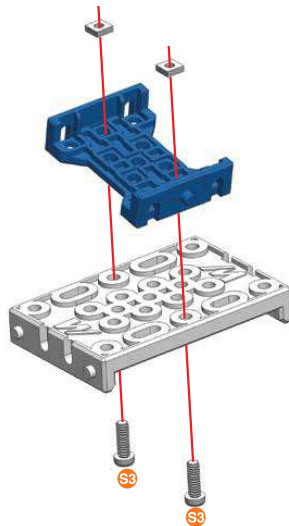
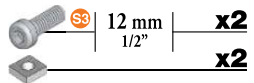
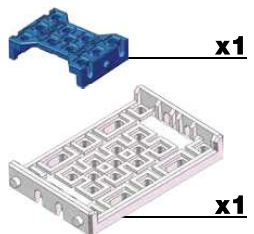


9

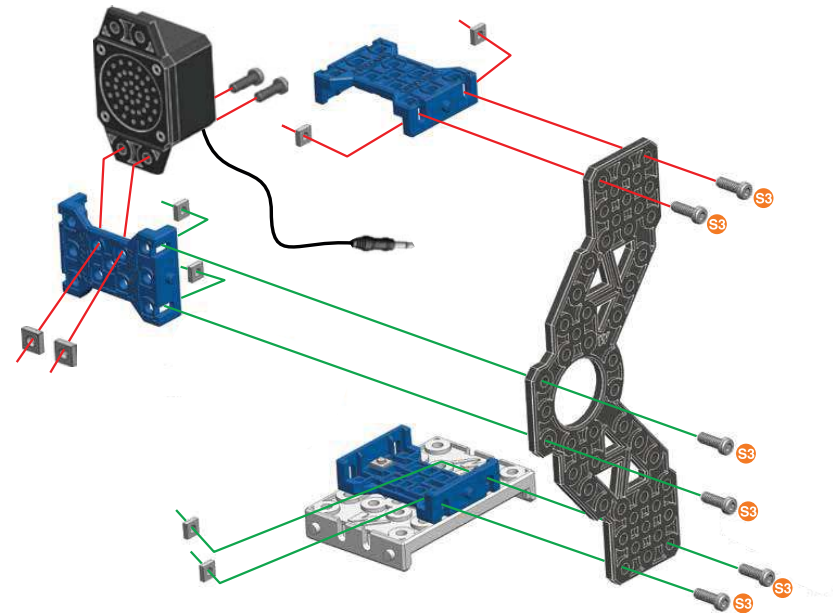
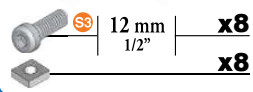
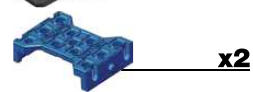
③+⑧+

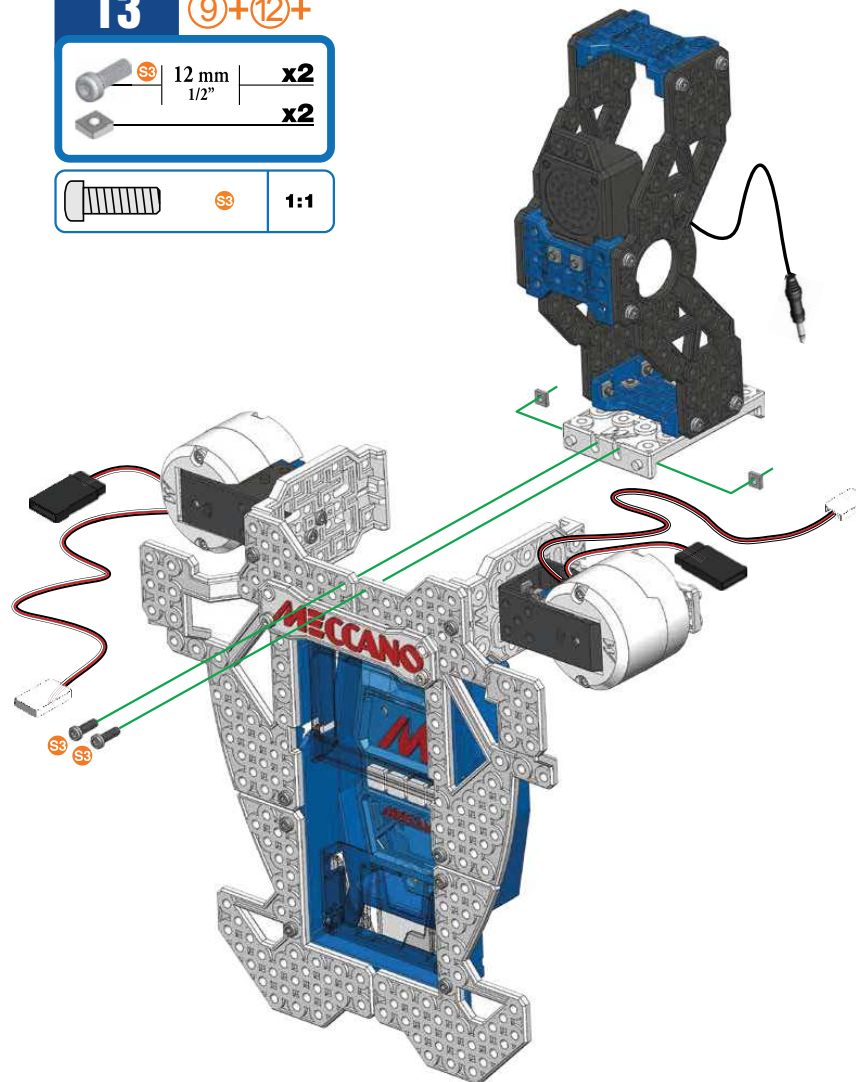
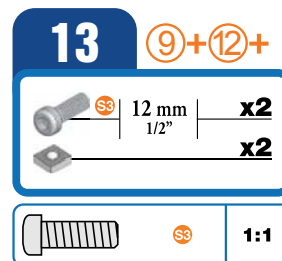
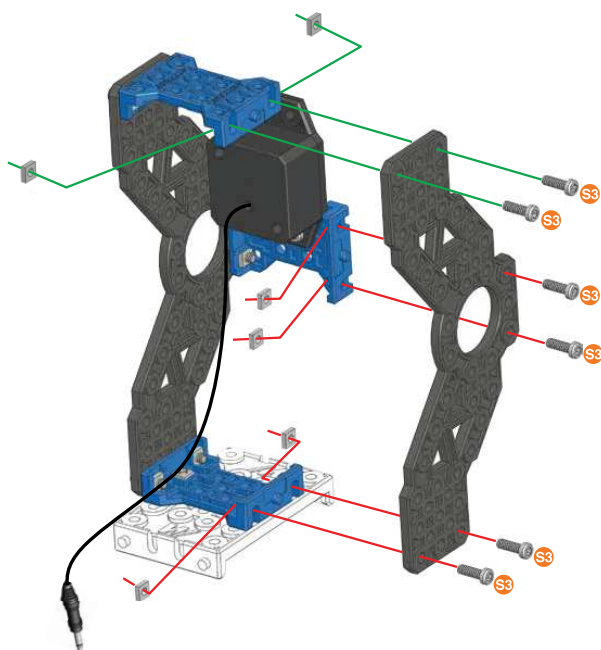
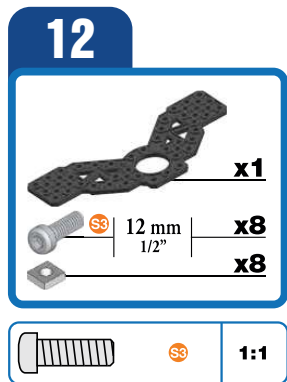


10



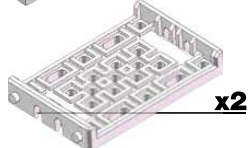
11

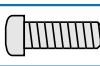


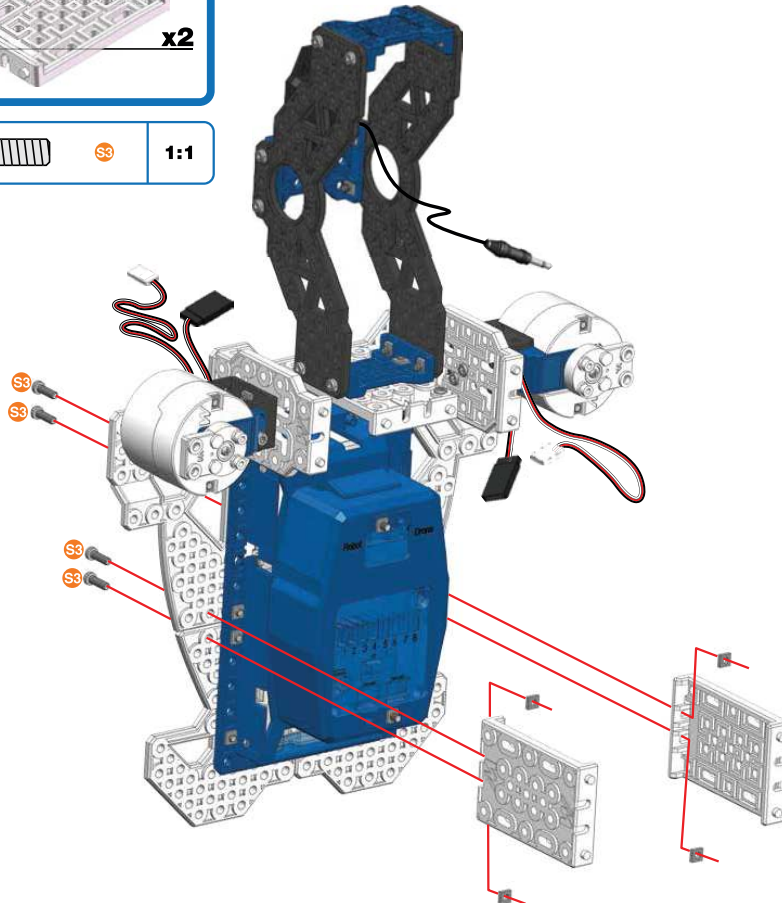


14

 12 mm 1/2" **x4**
x4

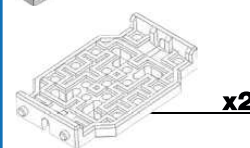


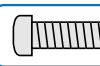
  **1:1**

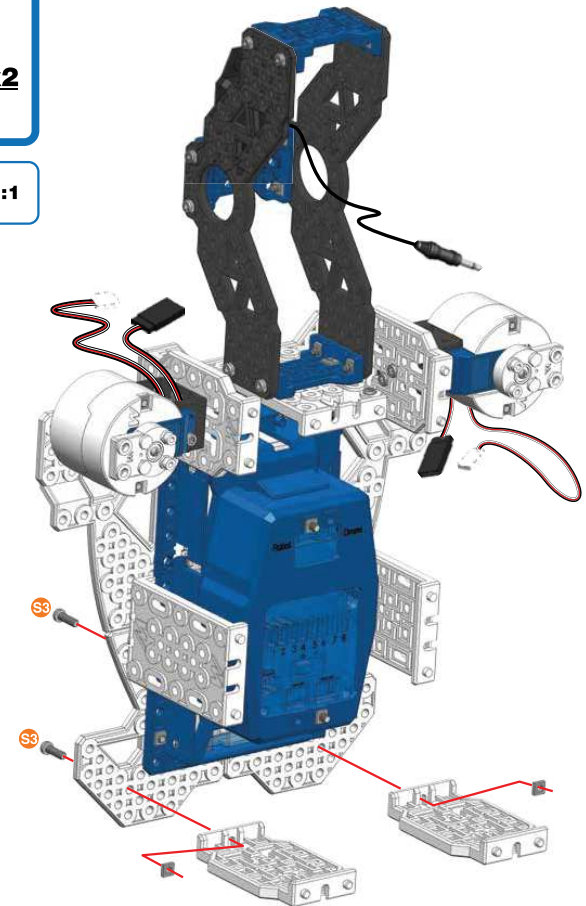


15

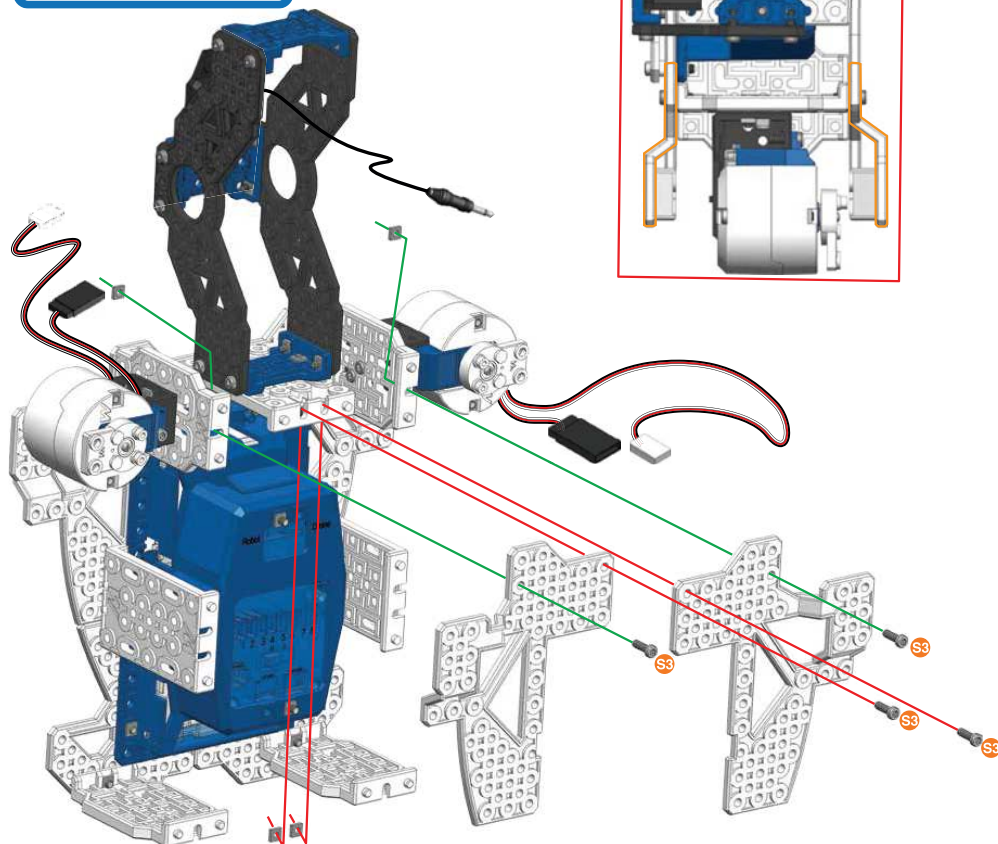
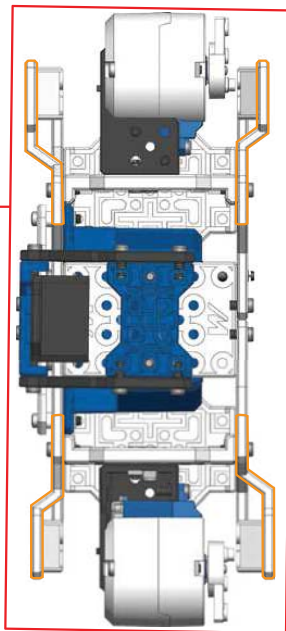
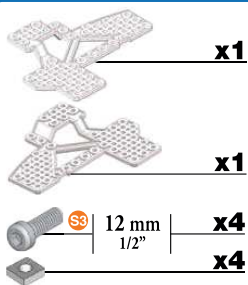
 12 mm 1/2" **x2**
x2



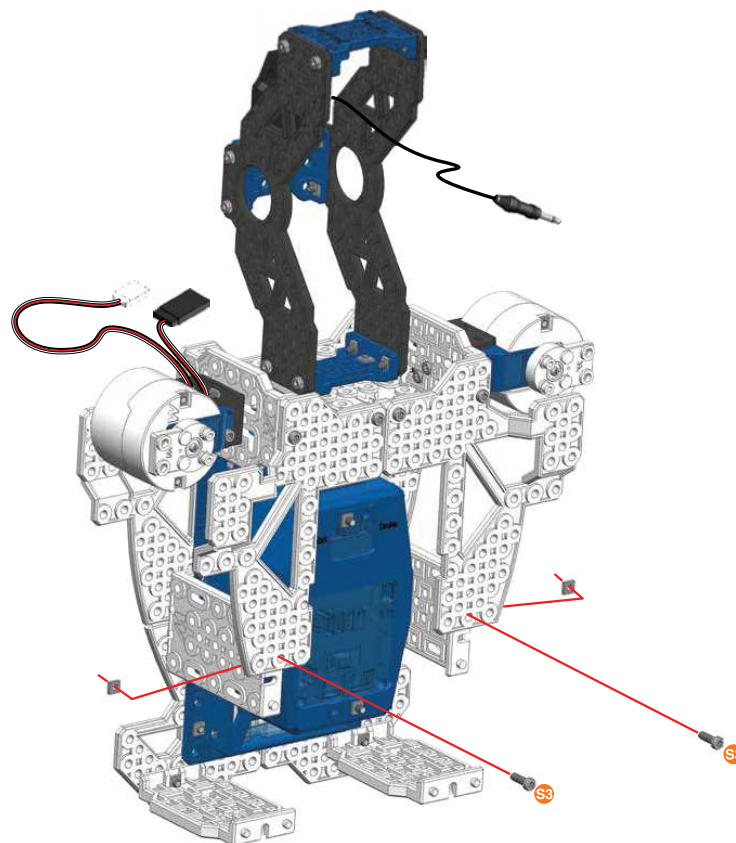
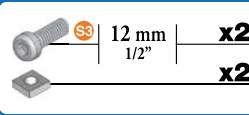
  **1:1**



16



17



18



x2



12 mm
1/2"

x4

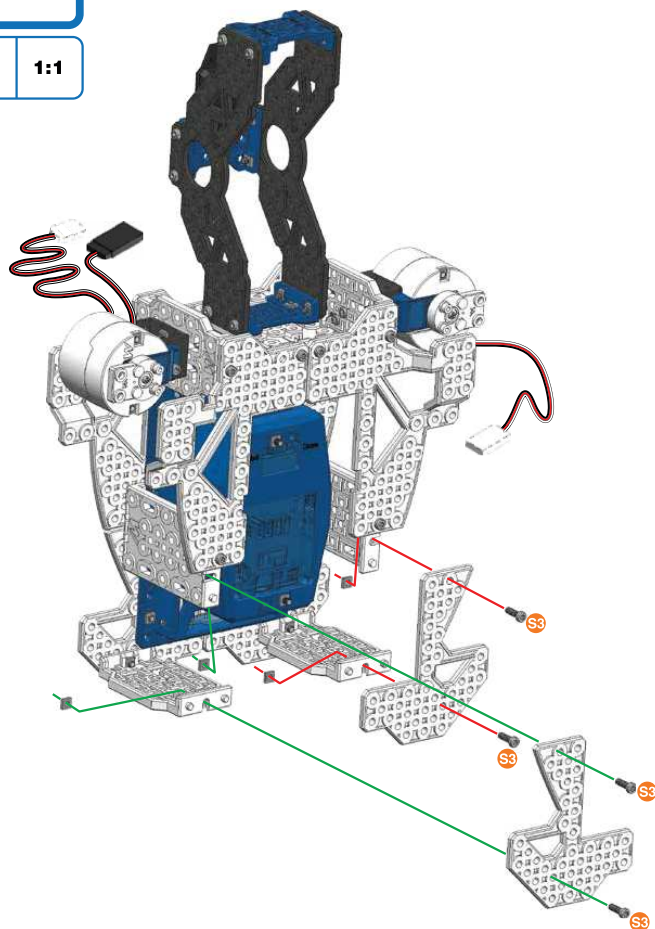


x4

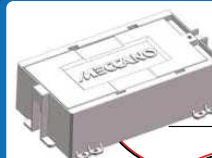


S3

1:1



19



x1



12 mm
1/2"

x2

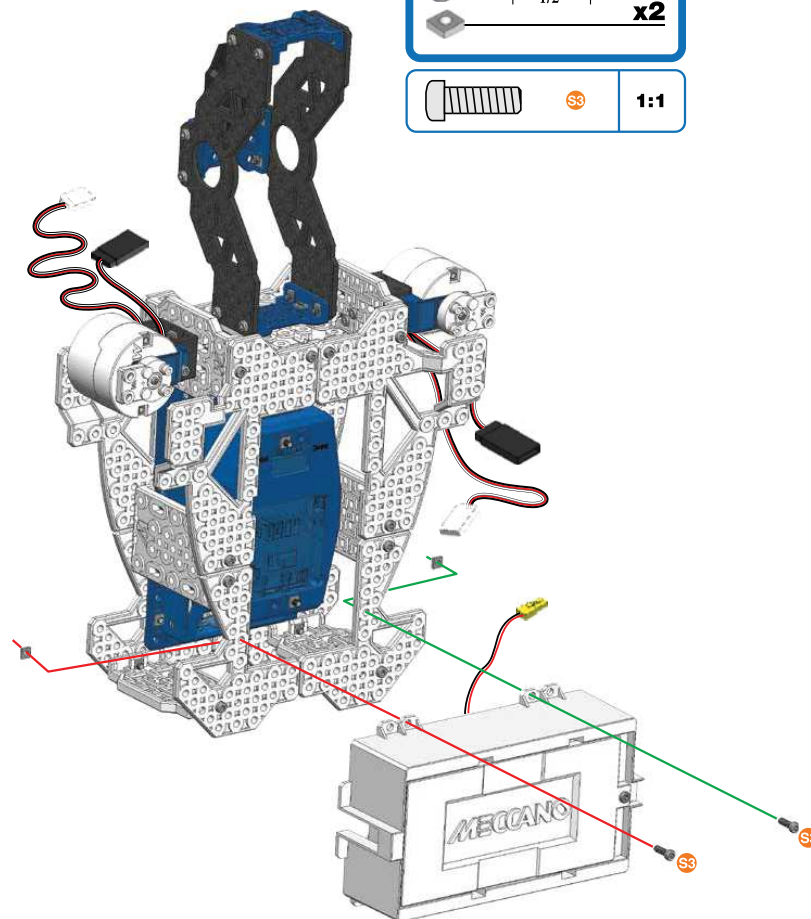


x2



S3

1:1



20

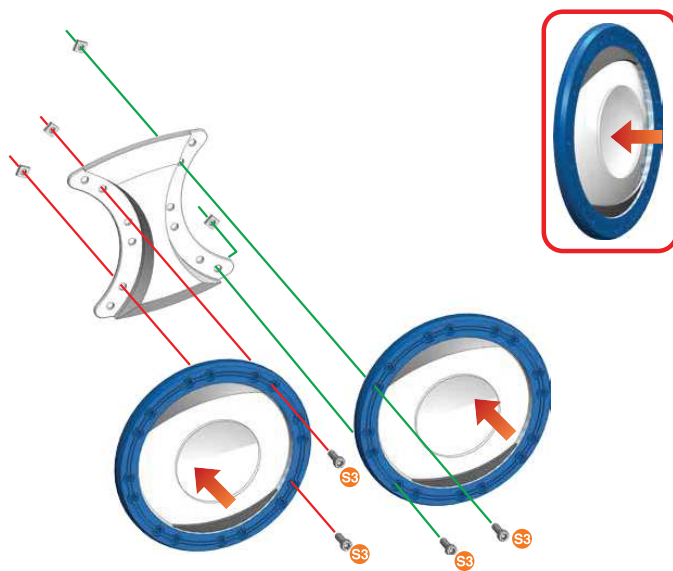
 **x2**

 **x1**

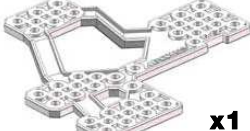
 12 mm | **x4**

 **x4**

 **1:1**



21

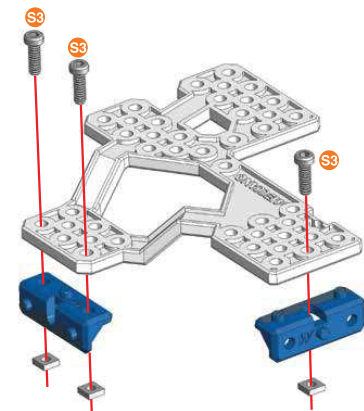
 **x1**

 **x2**

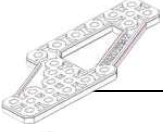
 12 mm | **x3**

 **x3**

 **1:1**



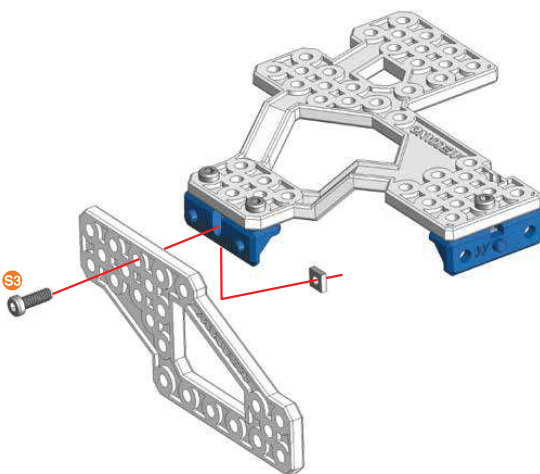
22

 **x1**

 12 mm | **x1**

 **x1**

 **1:1**

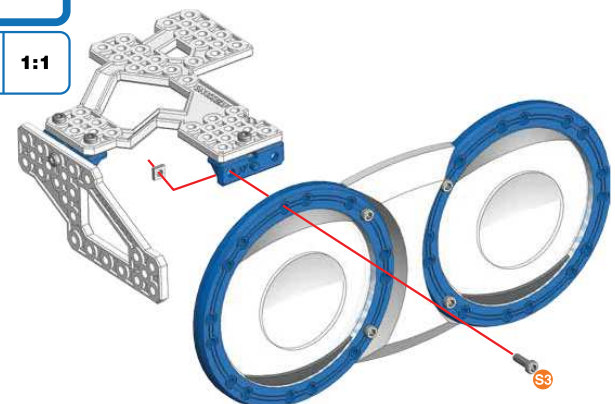


23 (20)+(22)+

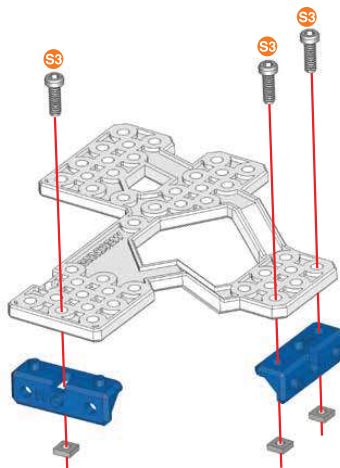
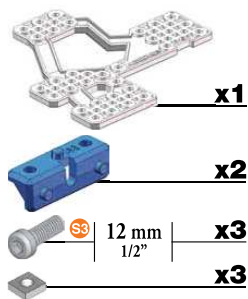
 12 mm | **x1**

 **x1**

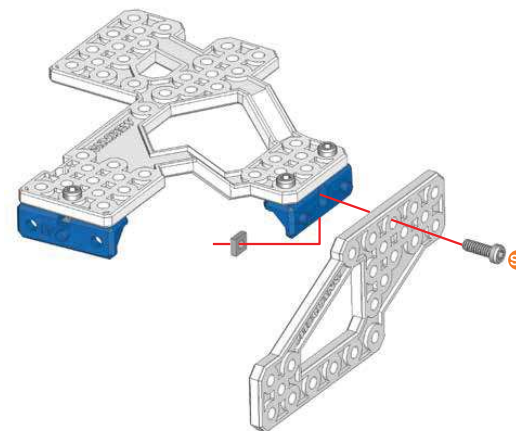
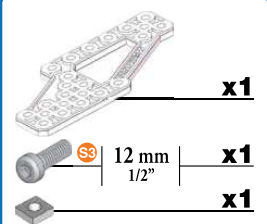
 **1:1**



24

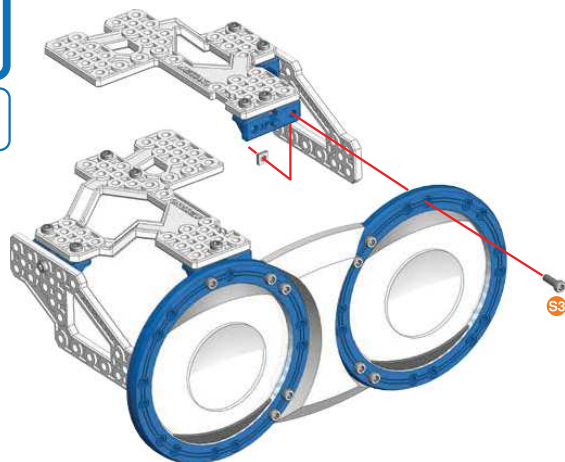
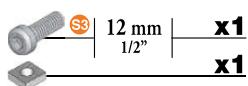


25

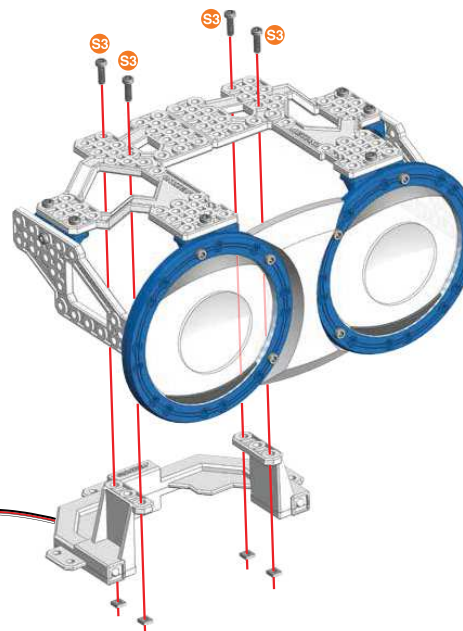
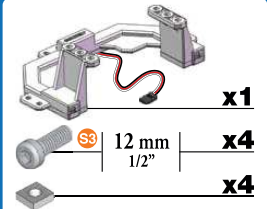


26

23+25+

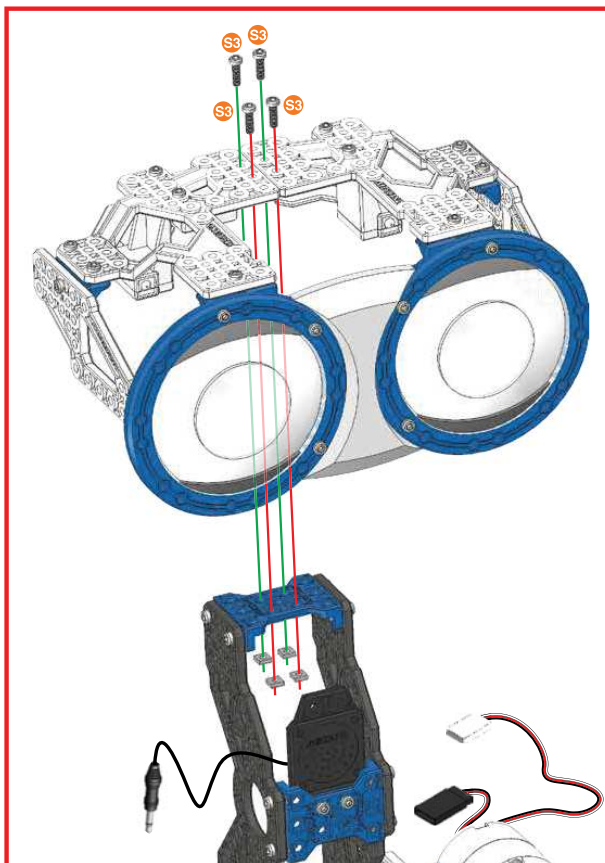
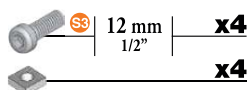


27

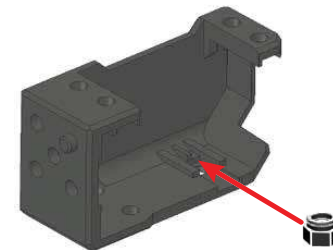
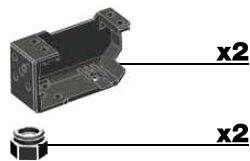


28

(19)+(27)+



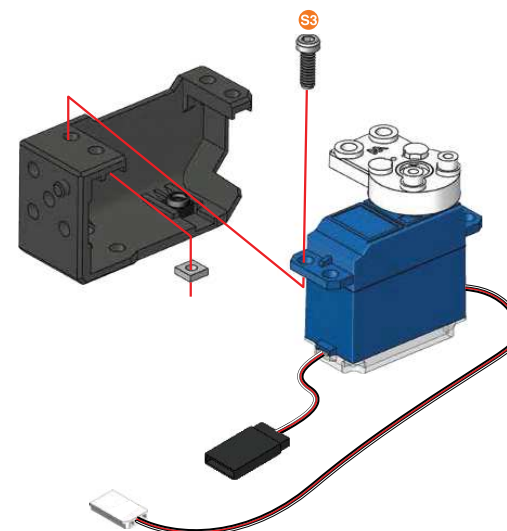
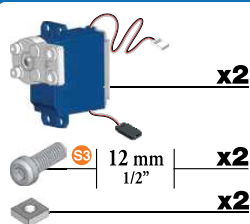
29

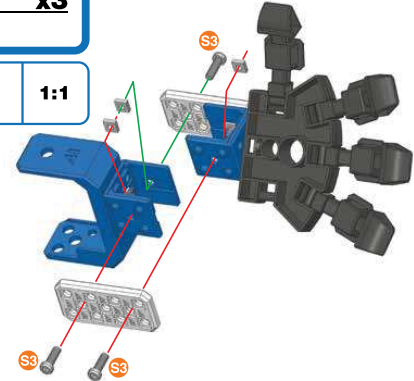
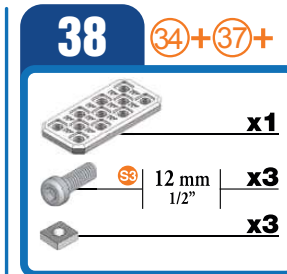
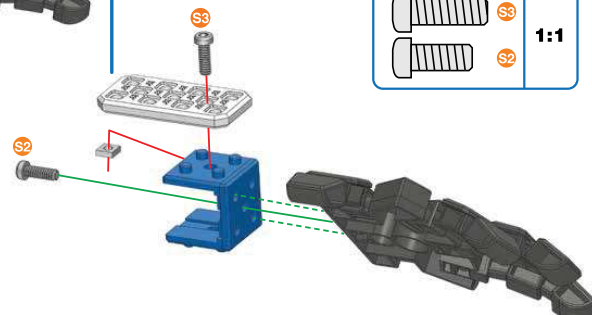
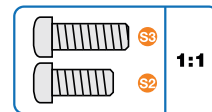
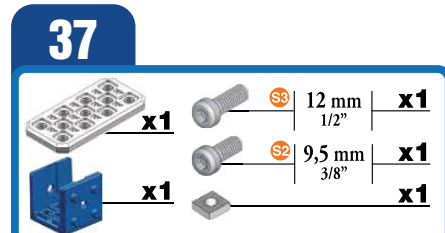
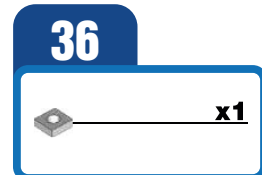
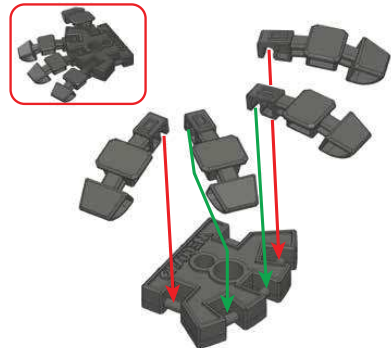
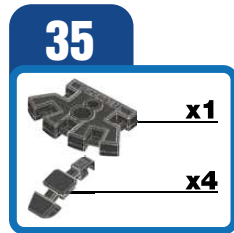
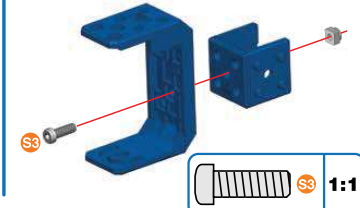
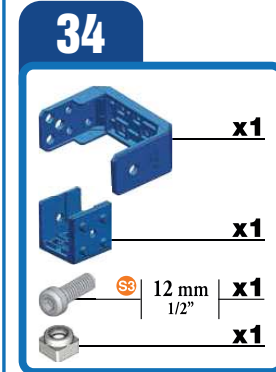
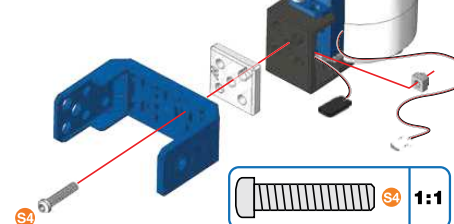
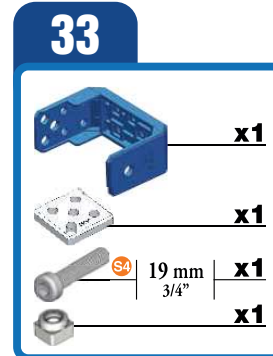
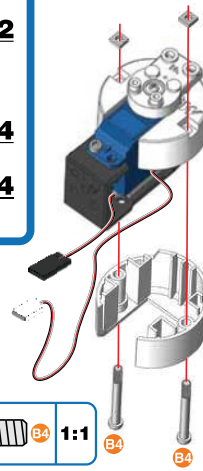
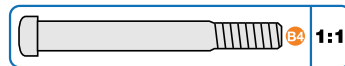
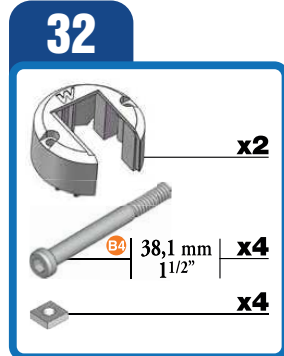
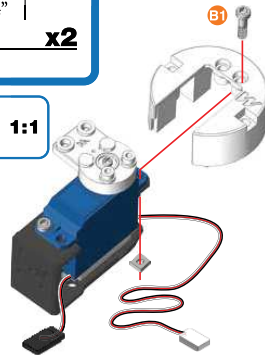
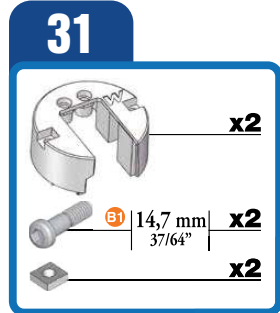


x2



30

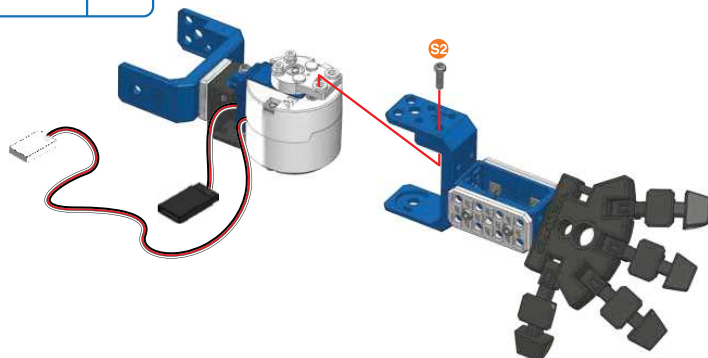




39 ③③+③⑧+

	S2	9,5 mm 3/8"	x1
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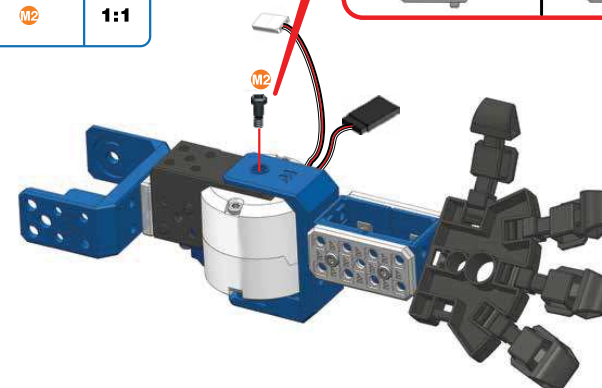
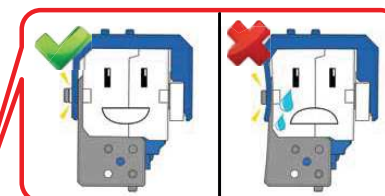
	S2	1:1
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40

	M2	10,5 mm 7/16"	x1
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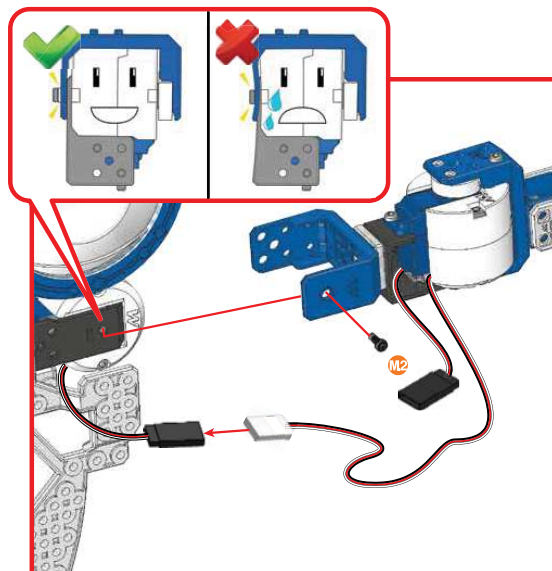
	M2	1:1
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41 ②⑧+④①+

	M2	10,5 mm 7/16"	x1
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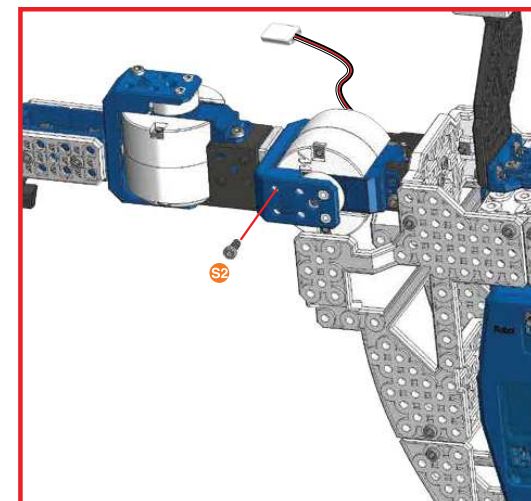
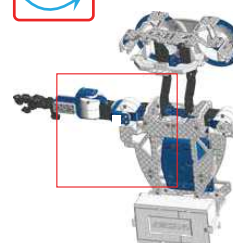
	M2	1:1
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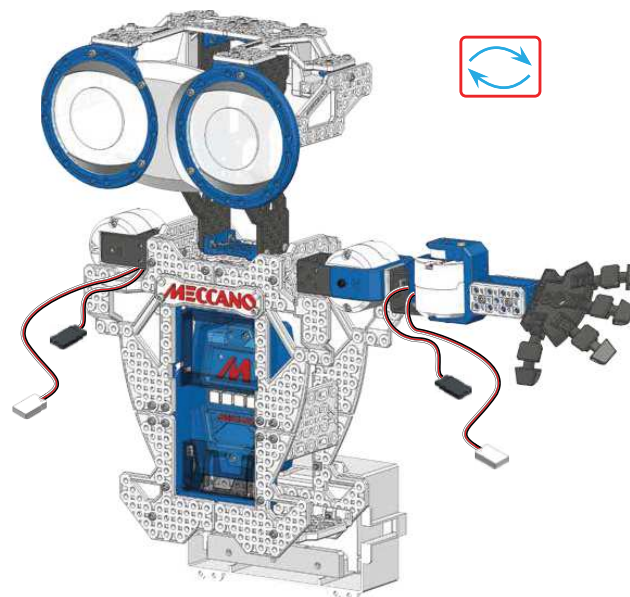
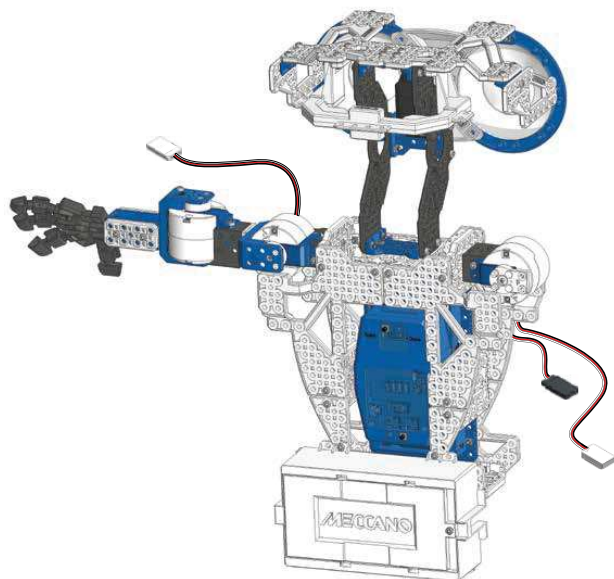
42

	S2	9,5 mm 3/8"	x1
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	S2	1:1
---	----	-----

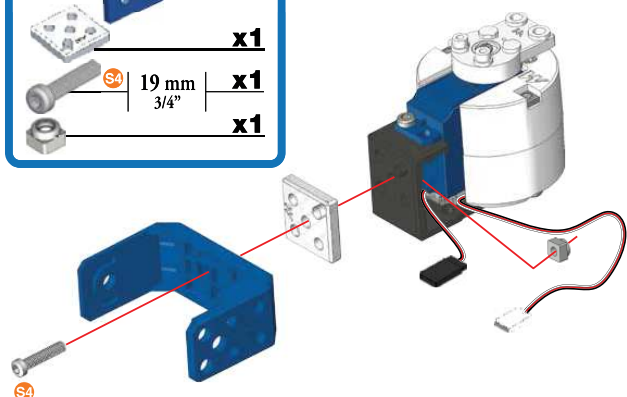
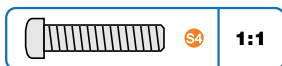
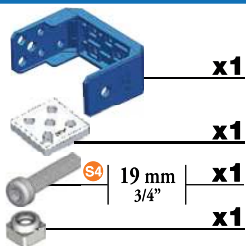


43

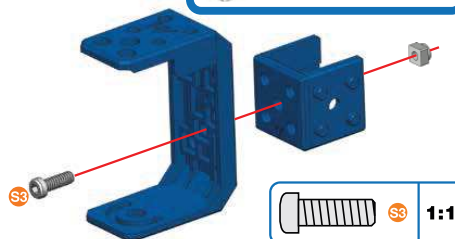
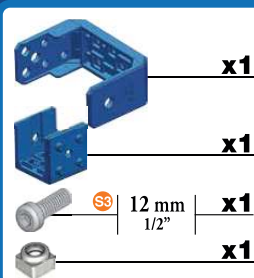


44

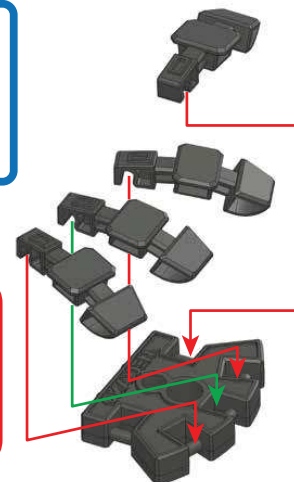
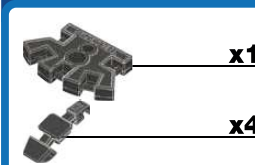
32+



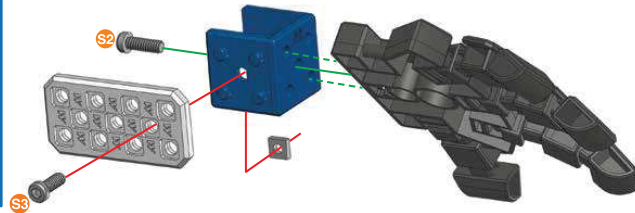
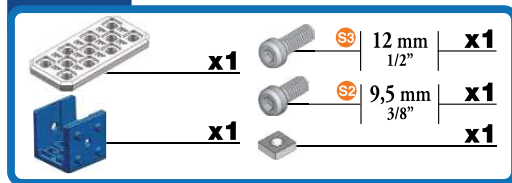
45



46



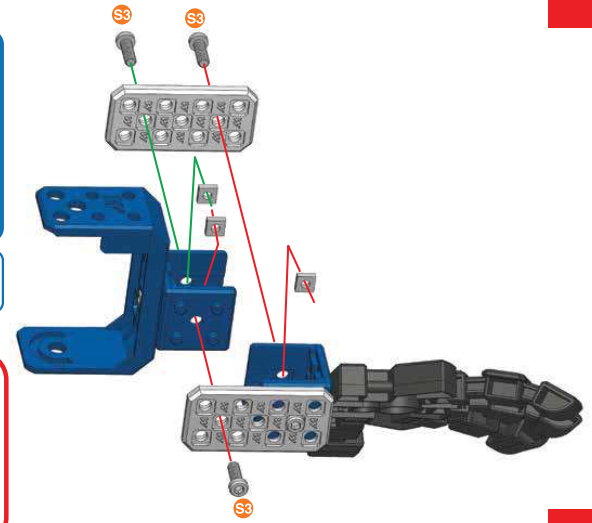
 _____ **x1**



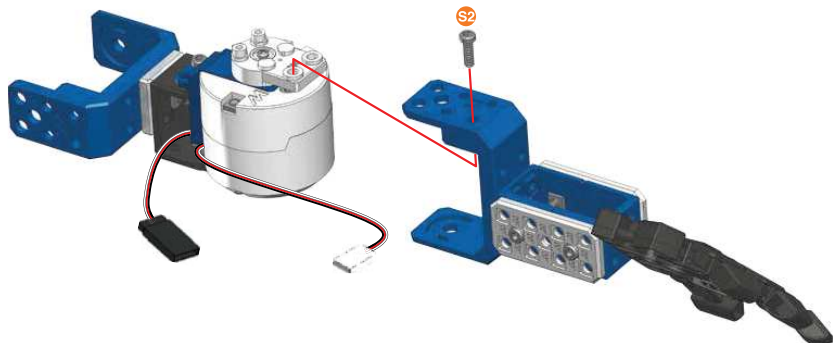
 **x1**

 **12 mm** **x3**
1/2"

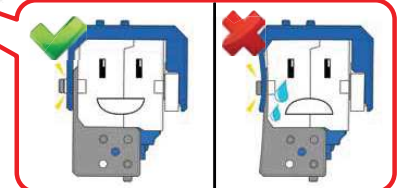
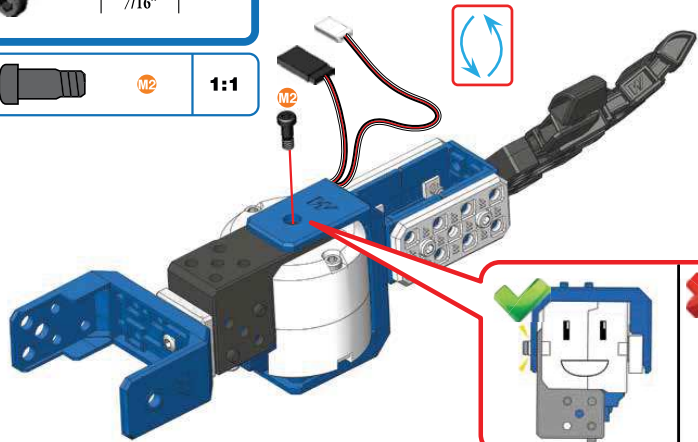
 **x3**



 **S2** | 9,5 mm
3/8" | **x1**



 **M2** | 10,5 mm | **x1**

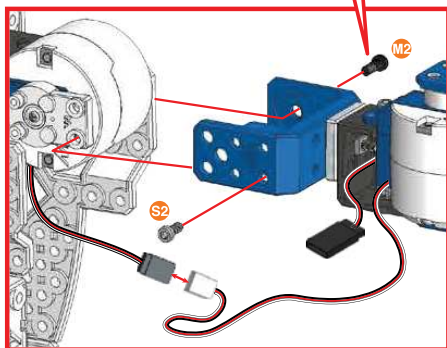
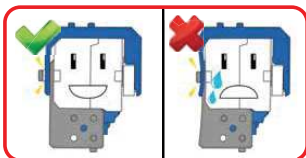


52

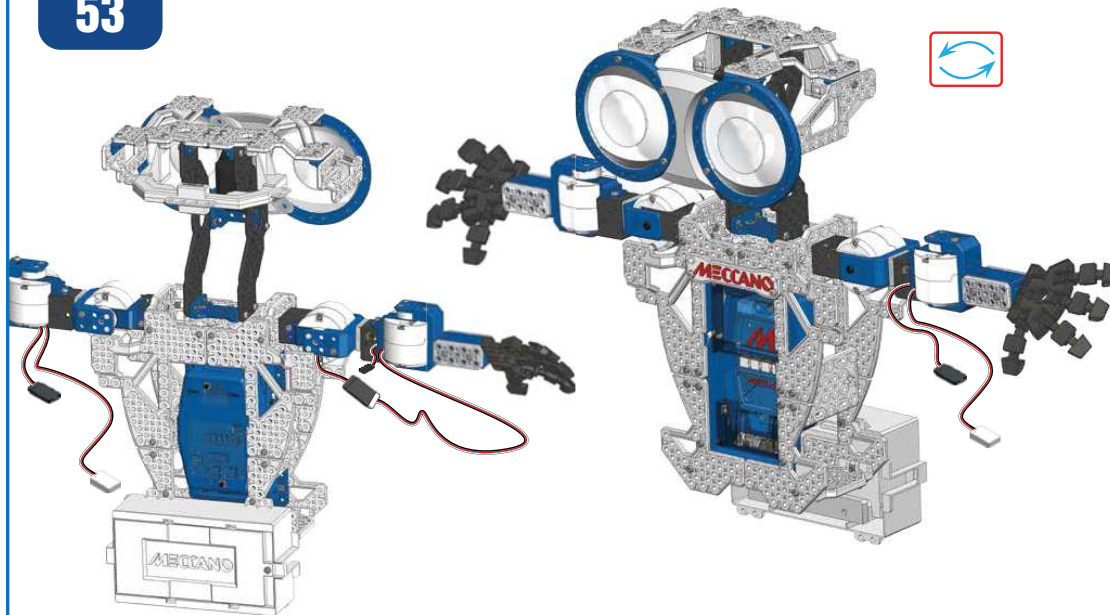
(43)+(51)+

	M2 10,5 mm 7/16"	x1
	S2 9,5 mm 3/8"	x1

	M2	1:1
	S2	



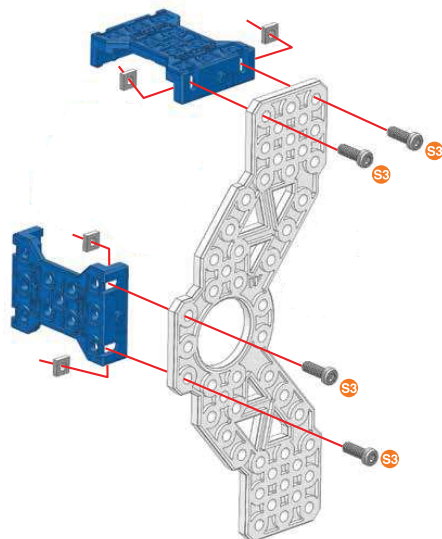
53



54

	x2
	x4
 12 mm	x8
 1/2"	x8

	S3	1:1
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55

	x2	
	S3 12 mm 1/2"	x8
		x8

	S3	1:1
---	----	-----

x2

