



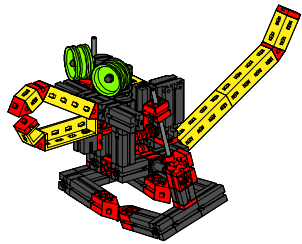
# PROFI



I' M WALKING

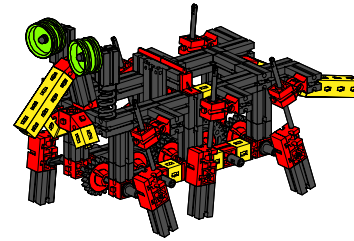
**fischertechnik**® 





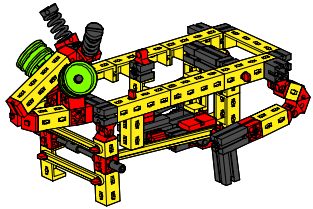
6

Woody



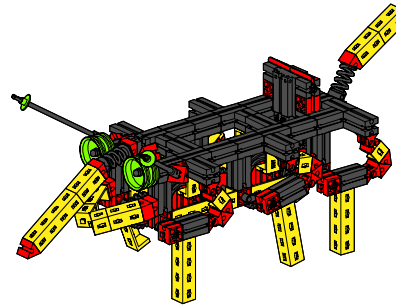
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Henry



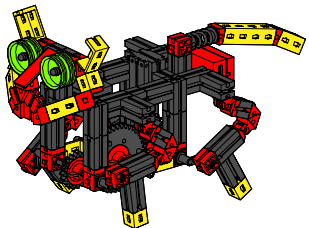
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Bernie



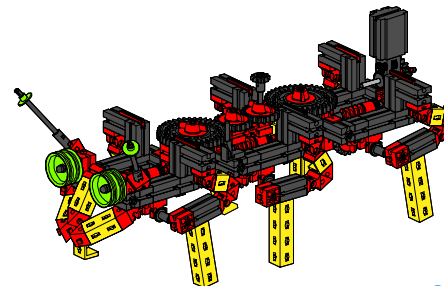
27

Charly



16

Betty



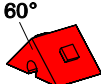
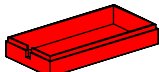
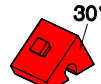
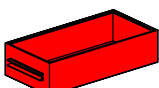
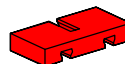
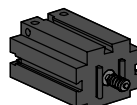
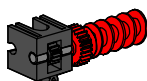
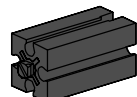
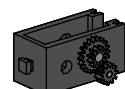
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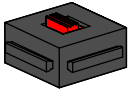
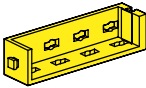
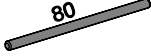
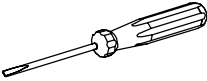
Herbie



Einzelteilübersicht  
Spare parts list  
Liste des pièces

Onderdelenoverzicht  
Lista de piezas  
Lista dei pezzi

|                                                                                     |              |                                                                                     |              |                                                                                       |              |                                                                                       |              |                                                                                       |              |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------|--------------|
|    | 31010<br>20x |    | 31330<br>1x  |    | 32071<br>2x  |    | 32958<br>1x  |    | 35087<br>3x  |
|    | 31011<br>5x  |    | 31426<br>16x |     | 32200<br>2x  |    | 35031<br>8x  |    | 35088<br>6x  |
|    | 31021<br>6x  |    | 31436<br>16x |     | 32233<br>1x  |    | 35053<br>8x  |    | 38423<br>17x |
|    | 31022<br>2x  |    | 31760<br>2x  |     | 32263<br>1x  |    | 35063<br>6x  |    | 38428<br>6x  |
|    | 31058<br>8x  |    | 31891<br>2x  |     | 32293<br>1x  |    | 35064<br>2x  |    | 35945<br>3x  |
|    | 31061<br>6x  |    | 31915<br>3x  |    | 32850<br>2x  |    | 35065<br>2x  |    | 35969<br>1x  |
|  | 31063<br>1x  |   | 31981<br>4x  |  | 32870<br>2x  |  | 35066<br>11x |  | 35971<br>4x  |
|  | 31075<br>1x  |  | 31982<br>16x |   | 32879<br>36x |  | 35071<br>1x  |  | 35972<br>2x  |
|  | 31078<br>1x  |  | 31999<br>1x  |  | 32881<br>6x  |  | 35073<br>4x  |  | 36227<br>2x  |
|  | 31082<br>1x  |  | 32064<br>24x |  | 32882<br>6x  |  | 35076<br>5x  |  | 36229<br>1x  |

|                                                                                     |              |                                                                                     |              |                                                                                    |             |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------|-------------|
|    | 36264<br>2x  |    | 36708<br>1x  |  | 37858<br>3x |
|    | 36297<br>11x |    | 37237<br>8x  |  | 38242<br>1x |
|    | 36298<br>6x  |    | 37384<br>2x  |                                                                                    |             |
|    | 36299<br>11x |    | 37468<br>14x |                                                                                    |             |
|    | 36323<br>9x  |    | 37636<br>6x  |                                                                                    |             |
|     | 36335<br>1x  |    | 37679<br>6x  |                                                                                    |             |
|  | 36382<br>1x  |  | 35116<br>5x  |                                                                                    |             |
|  | 36443<br>1x  |  | 35117<br>5x  |                                                                                    |             |
|  | 36700<br>2x  |  | 38213<br>10x |                                                                                    |             |
|  | 36701<br>2x  |  | 38214<br>10x |                                                                                    |             |

Alle Einzelteile, insbesondere bewegliche Teile sind falls notwendig zu warten und zu reinigen.

All components, especially moving parts, should be maintained and cleaned as necessary.

Toutes les pièces détachées et en particulier les pièces mobiles, sont, si nécessaire, à entretenir et à nettoyer.

Alle onderdelen, vooral de bewegende delen, kunnen, indien noodzakelijk, onderhouden en gereinigd worden.

Es necesario limpiar y mantener en buen estado todas las diferentes piezas – especialmente las piezas móviles.

Provvedere all'occorrenza alla manutenzione e alla pulizia di tutti i particolari, specialmente le parti mobili.

**Achtung**  
Verletzungsgefahr an Bauteilen mit funktionsbedingten scharfen Kanten und Spitzen!

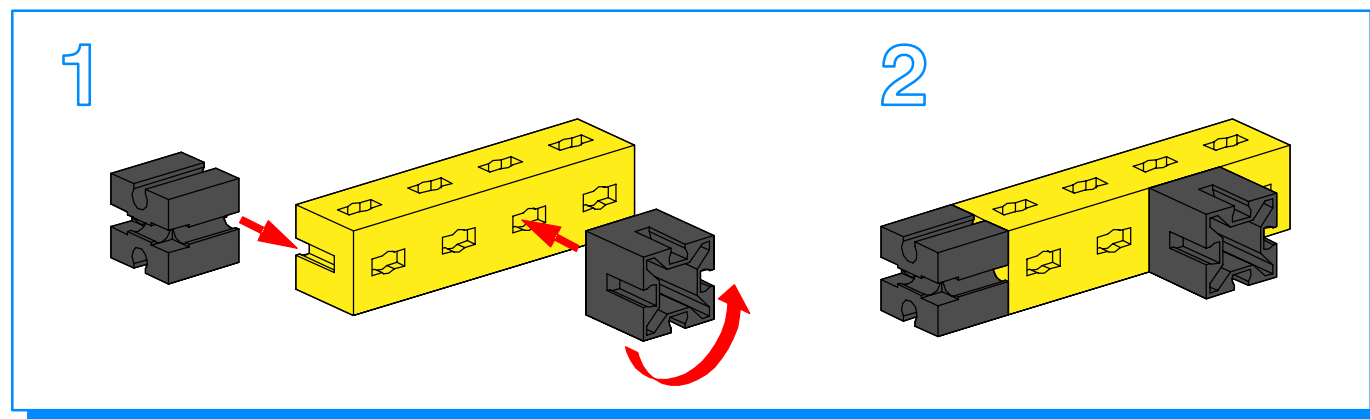
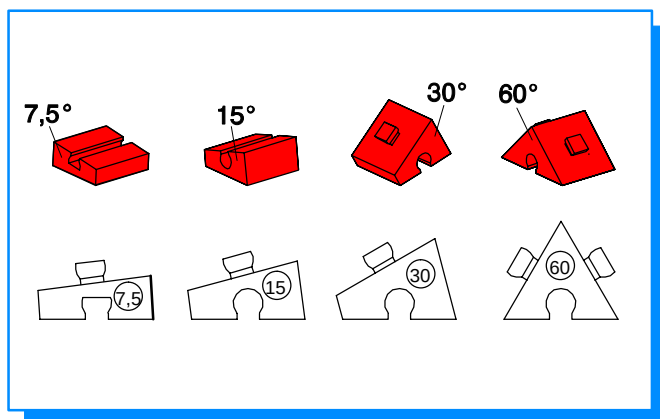
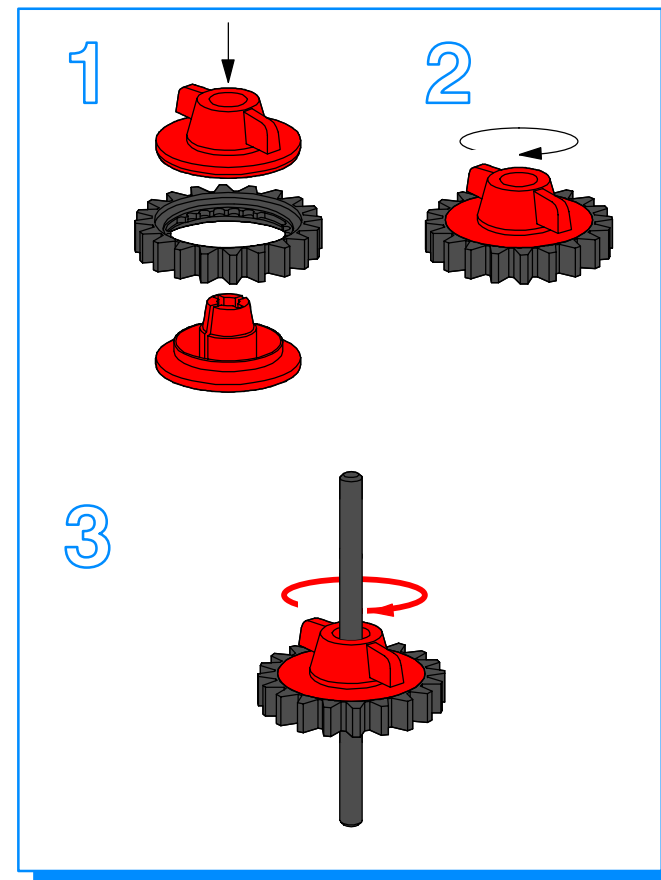
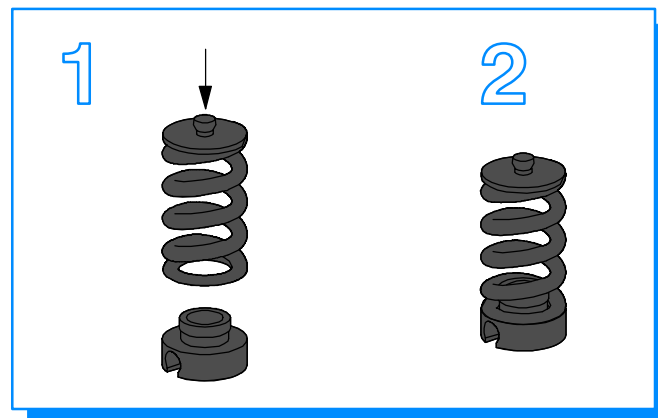
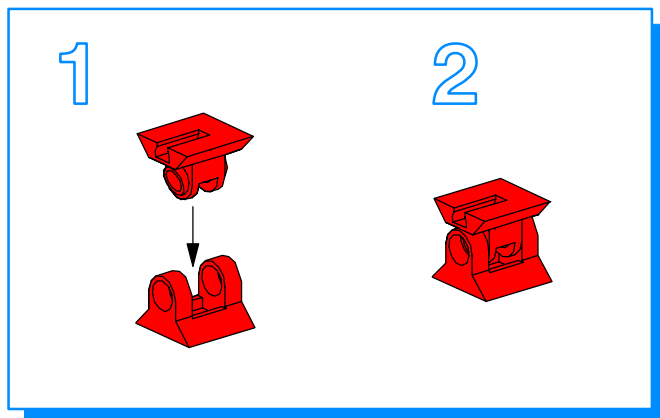
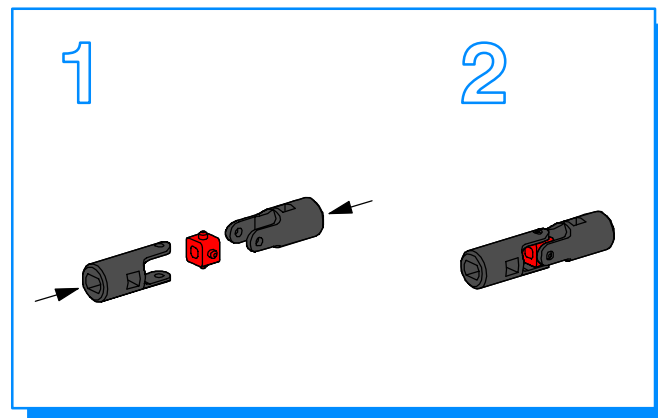
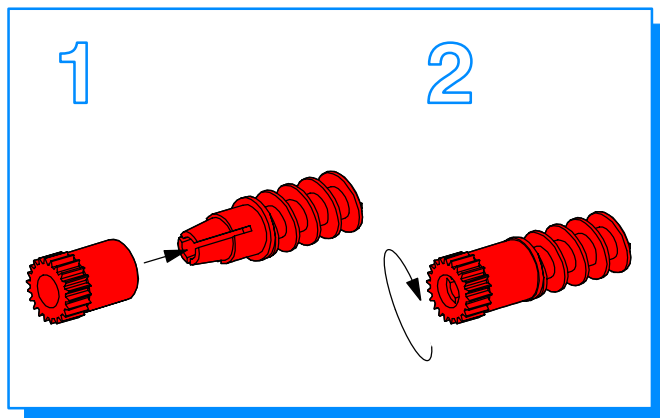
**Caution**  
Be careful not to hurt yourself on components with sharp or pointed edges!

**Attention**  
Risque de blessure sur les éléments comportant des arêtes et pointes vives indispensables au bon fonctionnement!

**Let op**  
U kunt zich bezeren aan bouwstenen met scherpe randen of punten!

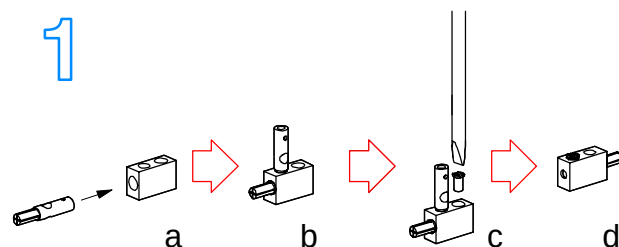
**Attenzione**  
Esiste il pericolo di lesione con i pezzi di costruzione che hanno bordi e punte spigolosi necessari per la funzionalità del pezzo!

**Precaución**  
Peligro de heridas ocasionadas por componentes puntiagudos o de cantos afilados que estén en funcionamiento!

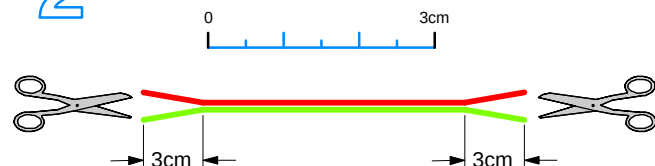




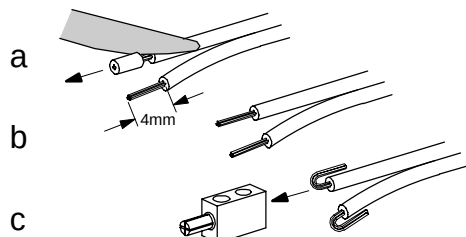
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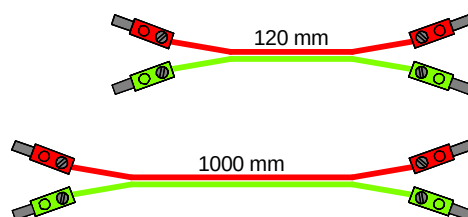
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3

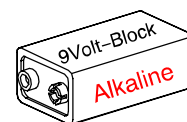
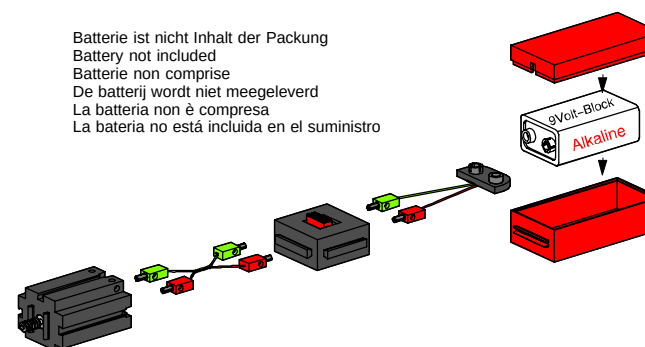


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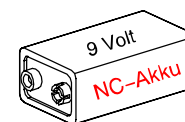


5

Batterie ist nicht Inhalt der Packung  
Battery not included  
Batterie non comprise  
De batterij wordt niet meegeleverd  
La batteria non è compresa  
La batería no está incluida en el suministro



oder  
or  
ou  
of  
o



**1 Batterie 9Volt-Block Alkaline oder 1 NC-Akku 9V**

- Leere Akkus zum Laden entnehmen.
- Verbrauchte Batterien dem Sondermüll zuführen.

**9V rechargeable battery or 9 V alkaline dry cell**

- Remove discharged battery and place in charger for recharging.
- Discard spent dry cells at special waste disposal centre.

**pile 9V ou accu 9V**

- Pour recharger les accus vides, il faut les sortir et les placer dans le chargeur.
- Jeter les piles usagées dans un conteneur spécial réservé à cet effet.

**alkaline batterije of oplaadbare batterije (9Volt)**

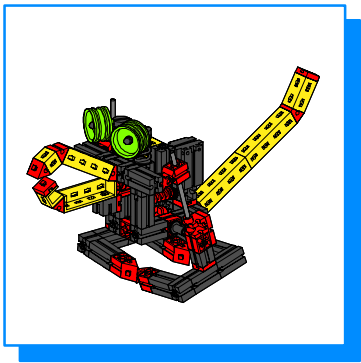
- Voor het opladen van batterijen de lege batterijen uit nemen en met behulp van het oplaadapparaat opladen.
- Afleveren gebruikte batterijen bij het klein chemisch afval (KCA).

**batteria normale o batteria ad accumulatore (9Volt)**

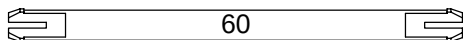
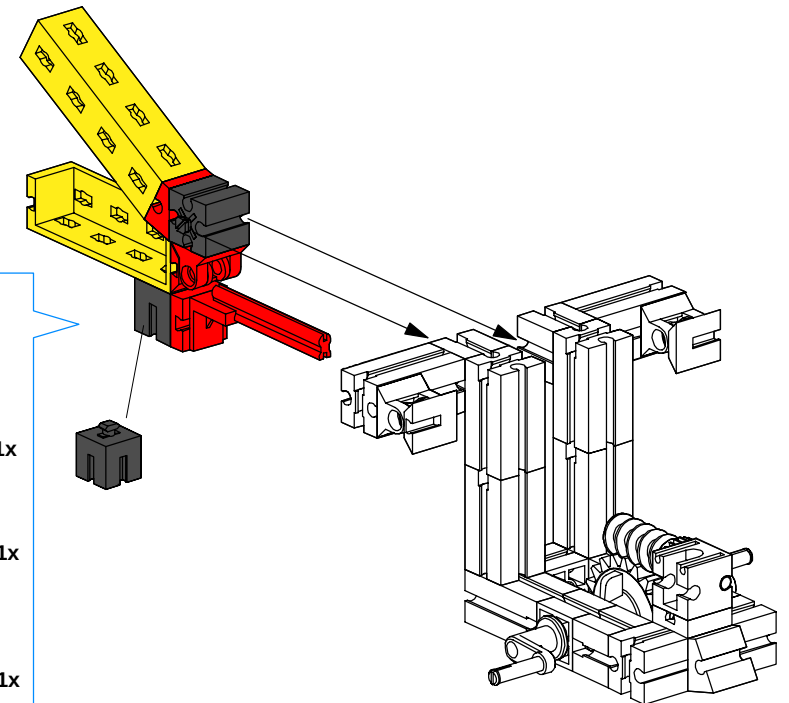
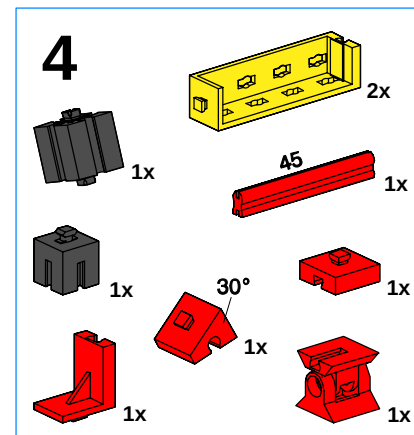
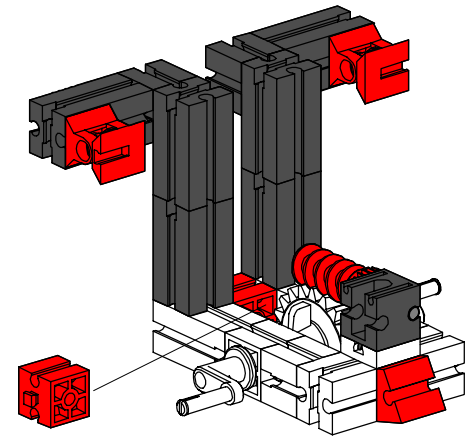
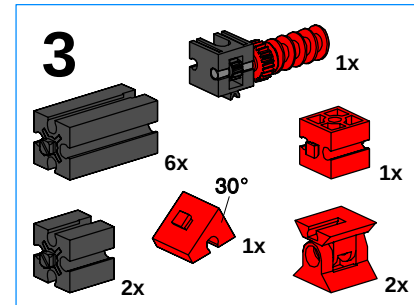
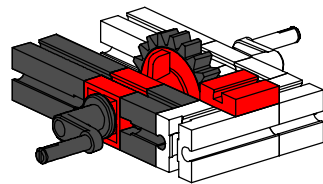
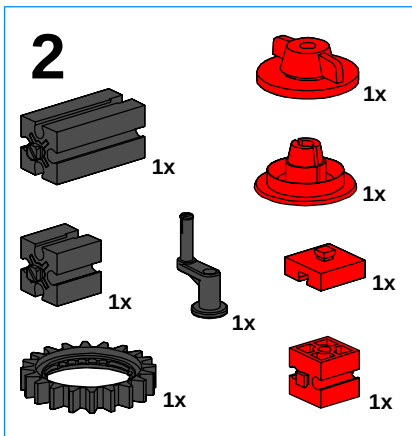
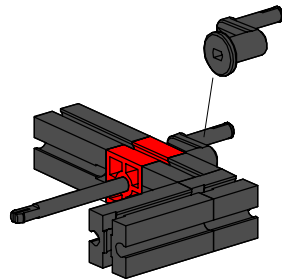
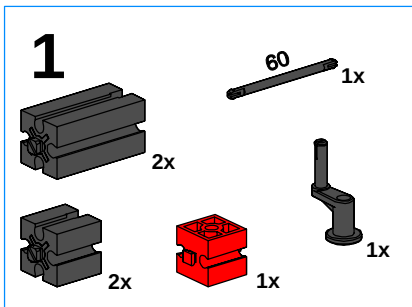
- Togliere le batterie ad accumulatore scariche per ricaricarle.
- Gettare le batterie scariche negli appositi cassonetti di raccolta differenziata.

**pila alcalina bloque de 9 Voltios o acumulador NC de 9 Voltios**

- Retirar el acumulador descargado y colocarlo en el cargador
- Retirar las baterías viejas, desechándolas en un depósito de basuras especiales.

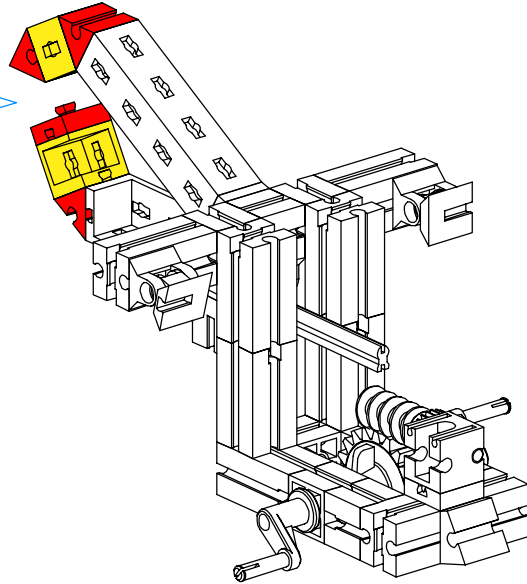
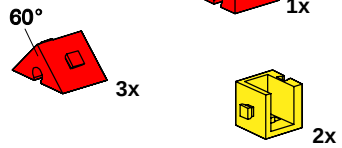


## Woody

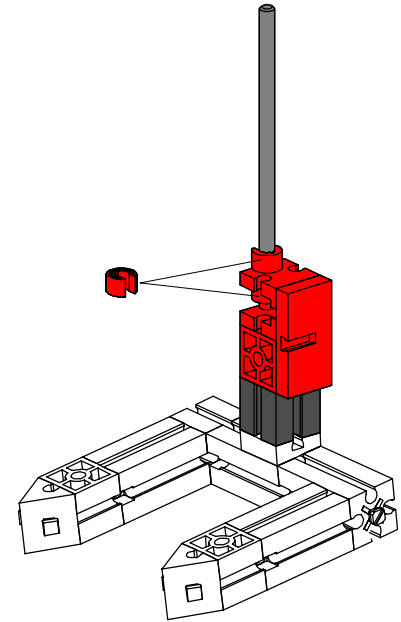
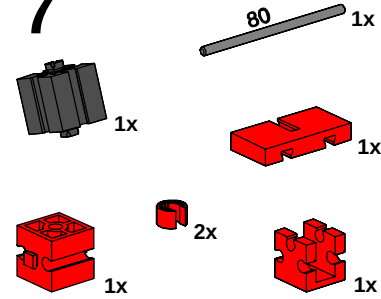




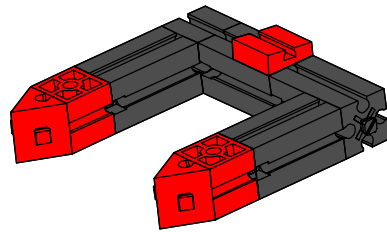
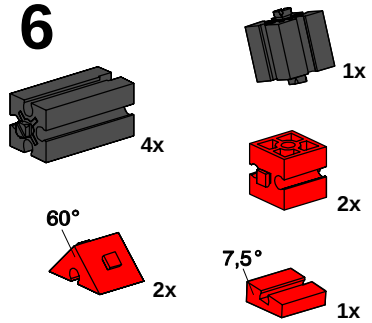
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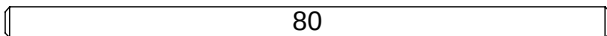
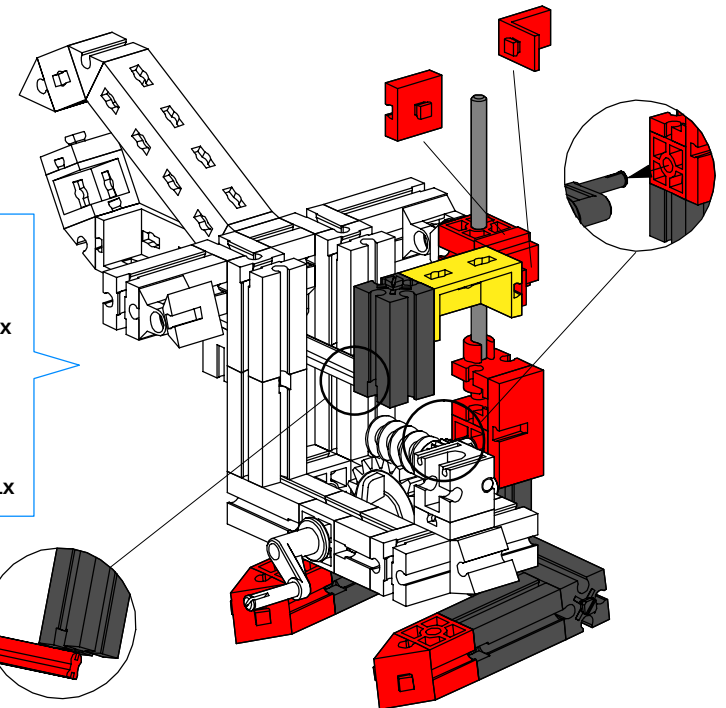
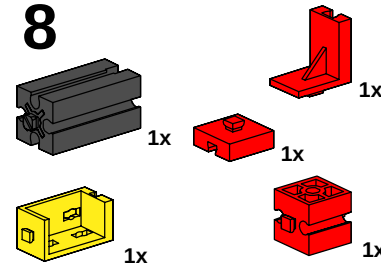
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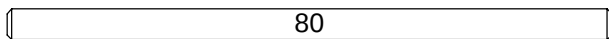
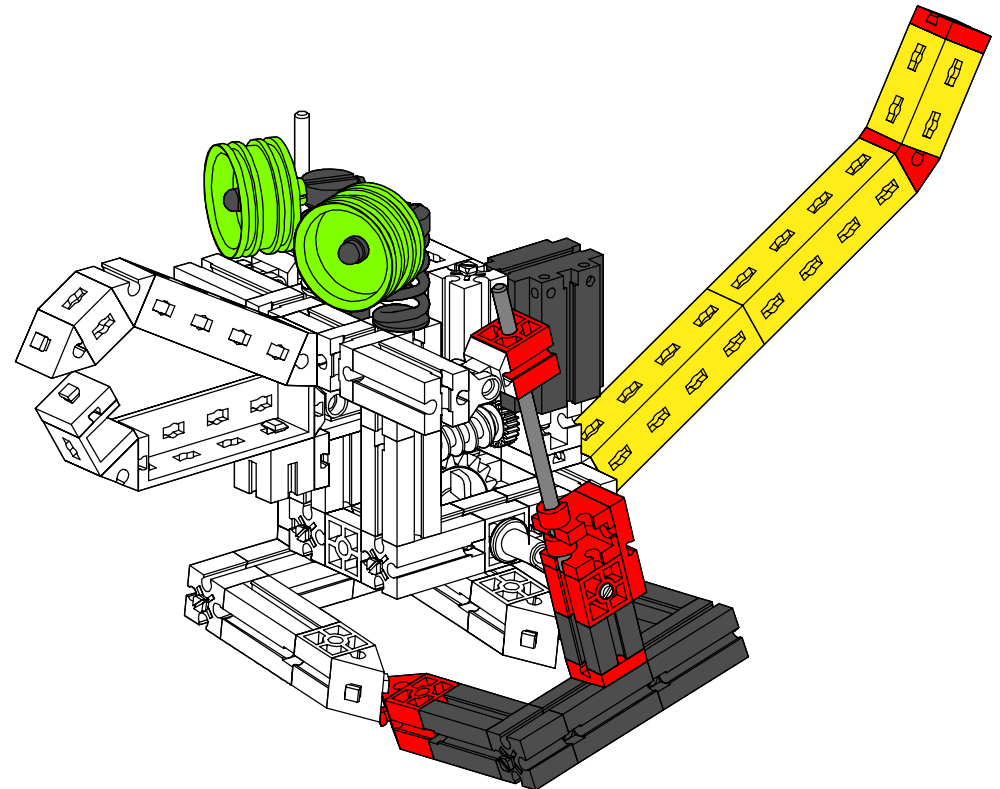
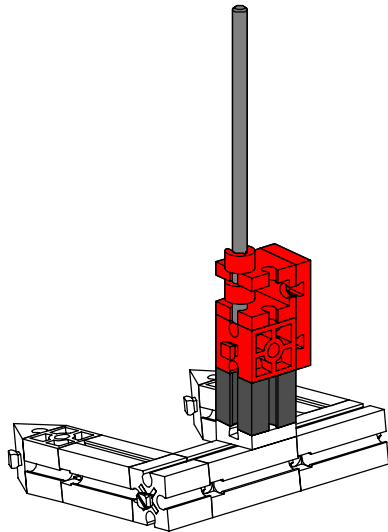
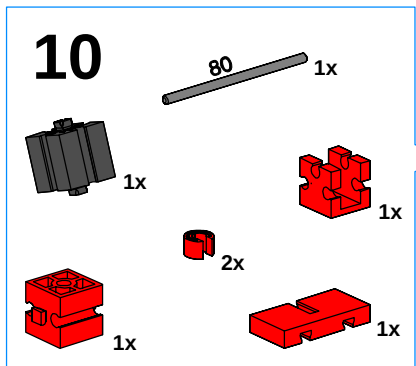
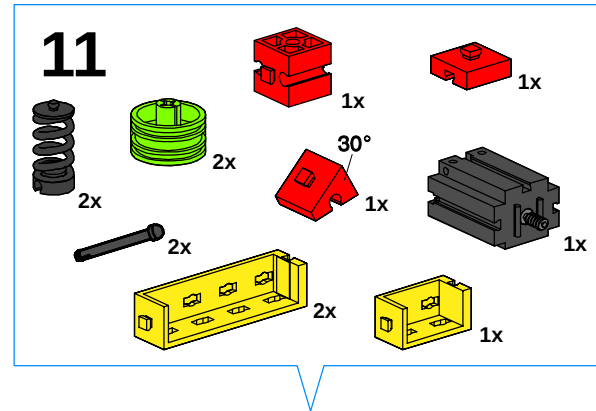
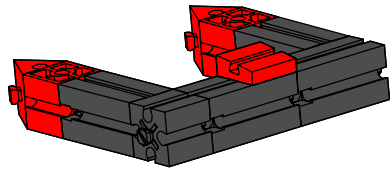
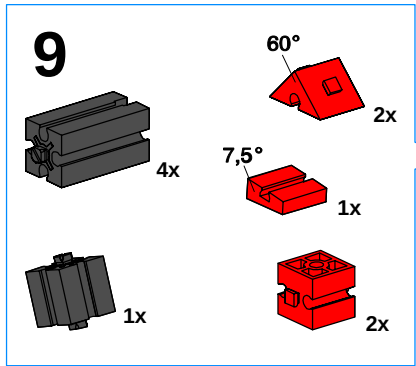


6



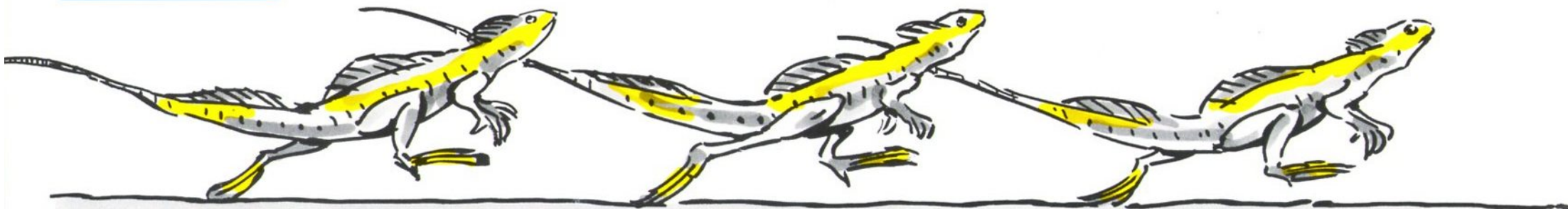
8











Wechselschritt / Bipedal gait / Pas alterné / Wisselstap / Paso de cambio / Passo di cambio



Das Laufen auf zwei Beinen beherrschen nicht nur wir Menschen. Auch Vögel gehören zu den Zweibeinern. Ihre Lauffähigkeit ist aber sehr unterschiedlich ausgeprägt. Zu den schnellsten Laufvögeln gehört der Strauß. Er erreicht Geschwindigkeiten von bis zu 60 km/h. Sogar einige Reptilienarten können auf zwei Beinen rennen. Warane, Leguane und Rinechsen benutzen auf der Flucht im ebenen Gelände nur ihre kräftigen Hinterbeine. Der lange Schwanz dient zum Balancieren – wie bei Woody. Das Laufen auf zwei Beinen ist die schwierigste aller Fortbewegungsarten. Das ganze Gewicht des Körpers ruht immer nur auf einem Bein und muß so ausbalanciert werden, daß der Läufer – Woody oder wer auch immer – nicht umkippt.

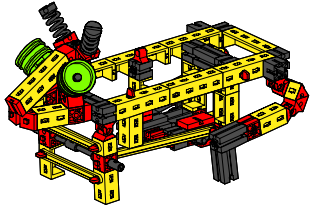
Not only human beings can walk on two legs. Birds are also bipeds. But they have wide-ranging capabilities. The fastest flightless bird is the ostrich. It reaches speeds up to 60 km/h (37.5 mph). Even some reptiles can run on two legs. Monitor lizards, iguanas, etc. only use their powerful rear legs when they flee over flat terrain. They use their long tails for balancing – just like Woody. Walking on two legs is the most difficult means of locomotion. The entire weight of the body always rests on only one leg. The person walking, whether it is Woody or anyone else, must continuously balance out forces to avoid falling over.

Les hommes ne sont pas les seuls à maîtriser la marche sur deux jambes: certains oiseaux sont bipèdes, mais leurs capacités de déplacement sont très variables suivant les espèces. L'autruche est un des oiseaux coureurs les plus rapides: elle est capable d'atteindre 60 km/h. Certaines espèces de reptiles peuvent aussi se déplacer sur deux pattes: pour fuir en terrain plat, les varans, iguanes et autres lézards coureurs se servent uniquement de leurs puissants membres inférieurs. Comme notre Woody, ils utilisent alors leur longue queue comme un balancier. La marche sur deux jambes est le mode de locomotion le plus difficile. En effet, tout le poids du corps repose à chaque instant sur une seule jambe, et le marcheur, Woody ou n'importe qui d'autre, doit en permanence trouver son équilibre pour ne pas tomber.

Niet alleen mensen kunnen op twee benen lopen. Ook vogels zijn tweebeinig. Hun loopvermogen verschilt echter sterk van soort tot soort. De struisvogel behoort tot één van de snelste loopvogels. Hij kan snelheden bereiken tot 60 kilometer per uur. Zelfs enkele reptielsoorten kunnen op twee benen rennen. Varanen, leguanen en sommige hagedissen gebruiken tijdens hun vlucht op vlak land alleen hun krachtige achterpoten. De lange staart is voor de balans – net als bij Woody. Het lopen op twee benen is de moeilijkste manier van voortbewegen. Het gehele lichaamsgevoel rust telkens maar op één been en moet zodanig uitgebalanceerd worden dat de loper – Woody of wie dan ook – niet omvalt.

No solamente los seres humanos pueden andar en dos piernas; también las aves son bípedas, es decir, que tienen dos patas. Sin embargo, su habilidad para andar o correr es muy diferente. Entre las aves corredoras más veloces se cuenta el avestruz, que puede alcanzar velocidades de hasta 60 km/h. Incluso algunos reptiles pueden correr en dos patas. Al huir, en terrenos planos, los varanos, las iguanas y las lagartijas emplean únicamente sus fuertes patas traseras. Su larga cola les permite conservar el equilibrio – como el Woody. El andar o caminar en dos piernas es la forma más difícil de locomoción. Todo el peso del cuerpo se apoya siempre en una sola pierna y debe ser equilibrado de tal forma que impida que el corredor – bien se trate de Woody, o de quien sea – no se caiga.

Non sono solo le persone che camminano su due gambe. Anche gli uccelli possono camminare su due gambe. La loro capacità di camminare comunque è molto diversa a seconda della specie. Lo struzzo è tra gli uccelli più veloci. Riesce a raggiungere velocità di corsa fino a 60 km/h. Anche alcune specie di rettili possono correre su due gambe. Varani, iguane e sauri usano in superfici piane le loro forti gambe posteriori per scappare da pericoli. La lunga coda è un ausilio per l'equilibrio – proprio come per Woody. Camminare su due gambe è il più difficile tipo di movimento. Tutto il peso del corpo è sostenuto sempre da una sola gamba e quindi ci vuole equilibrio in modo che il corridore – Woody o chiunque altro – non cada.

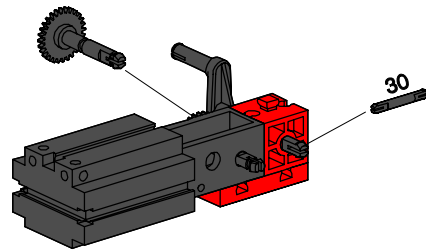
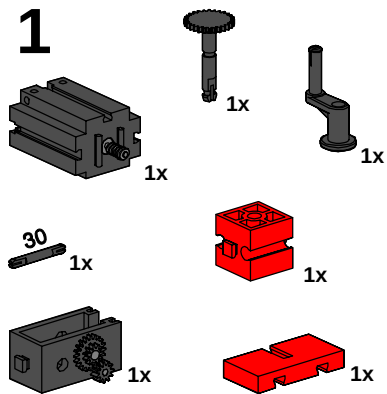


## Bernie

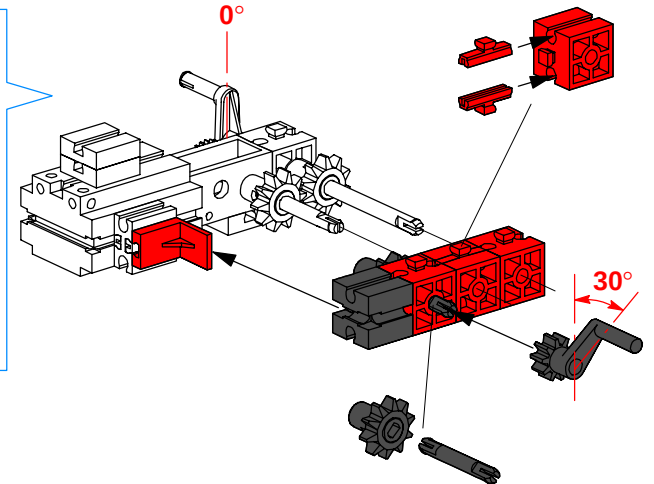
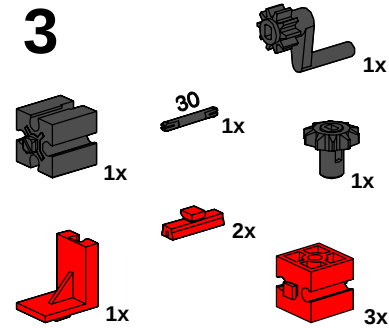


- **Kurbelstellungen beim Einbau beachten**
- Note the positions of the cranks when mounting
- Lors du montage, faire attention aux positions des bielles
- Let bij de montage op de juiste positie van de krukken
- Fare attenzione alla posizione delle manovelle durante il montaggio
- Tener en cuenta las posiciones del cigüeñal durante el montaje

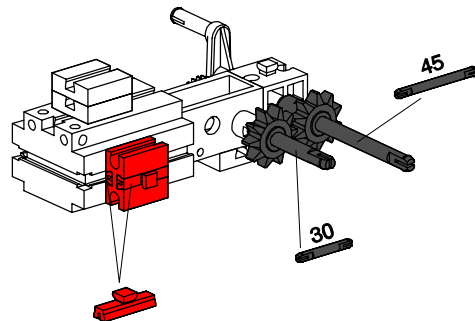
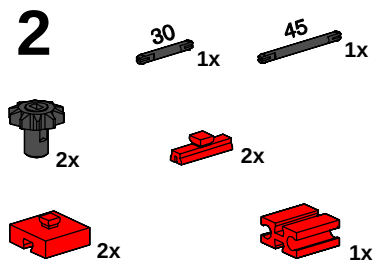
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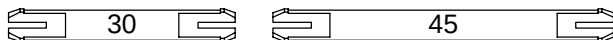
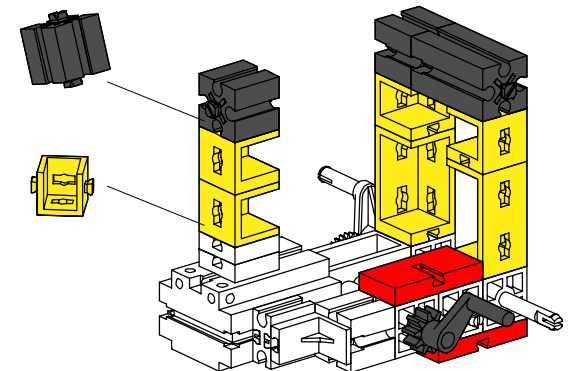
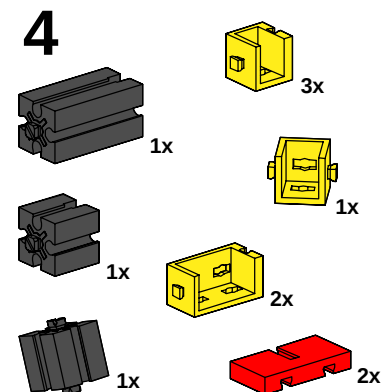
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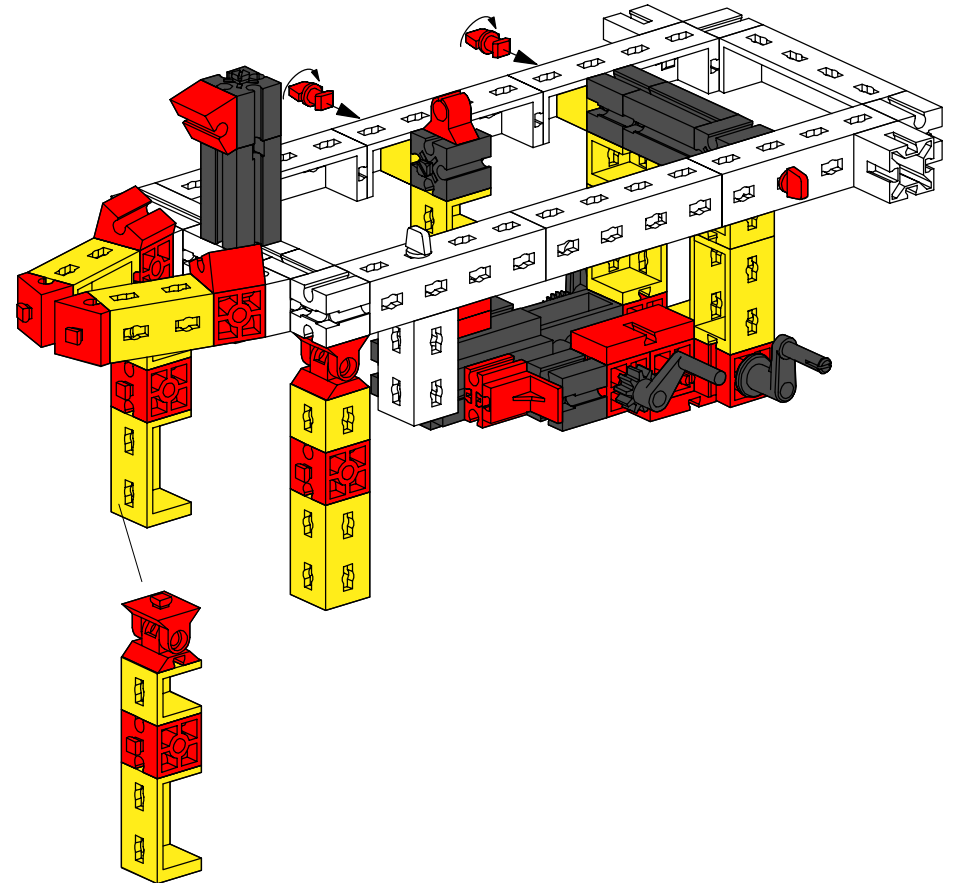
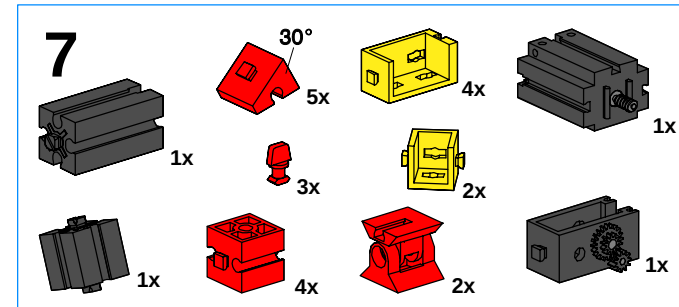
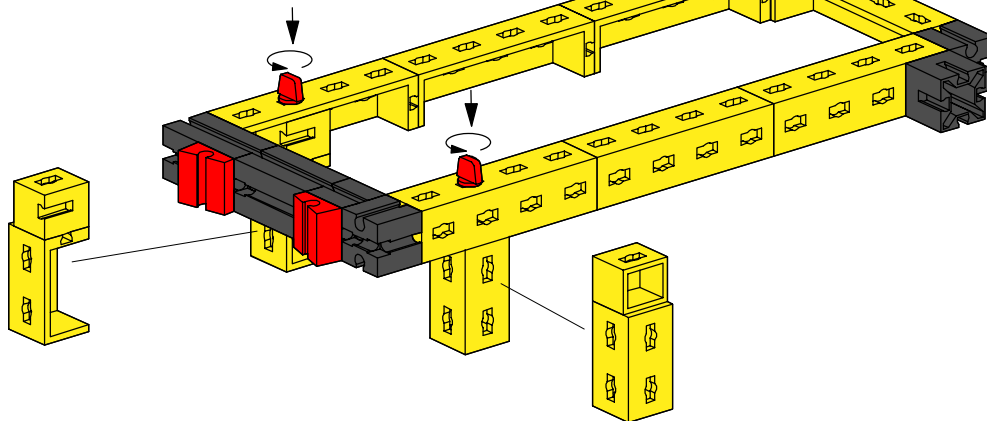
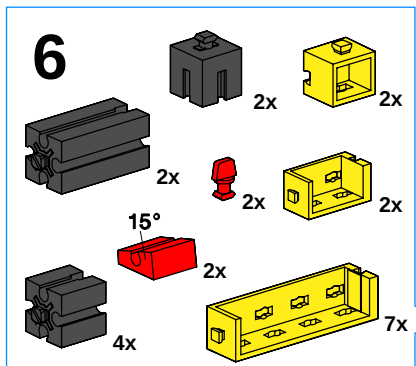
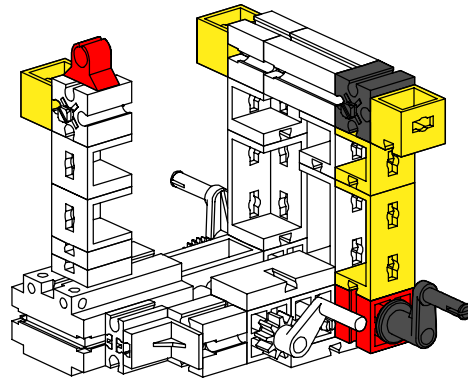
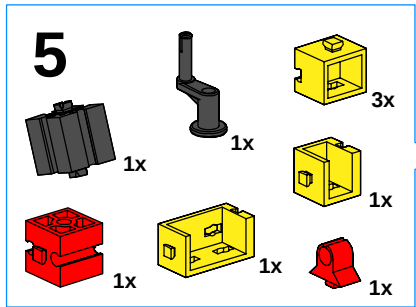
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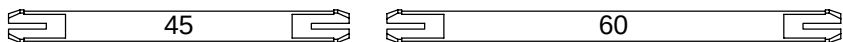
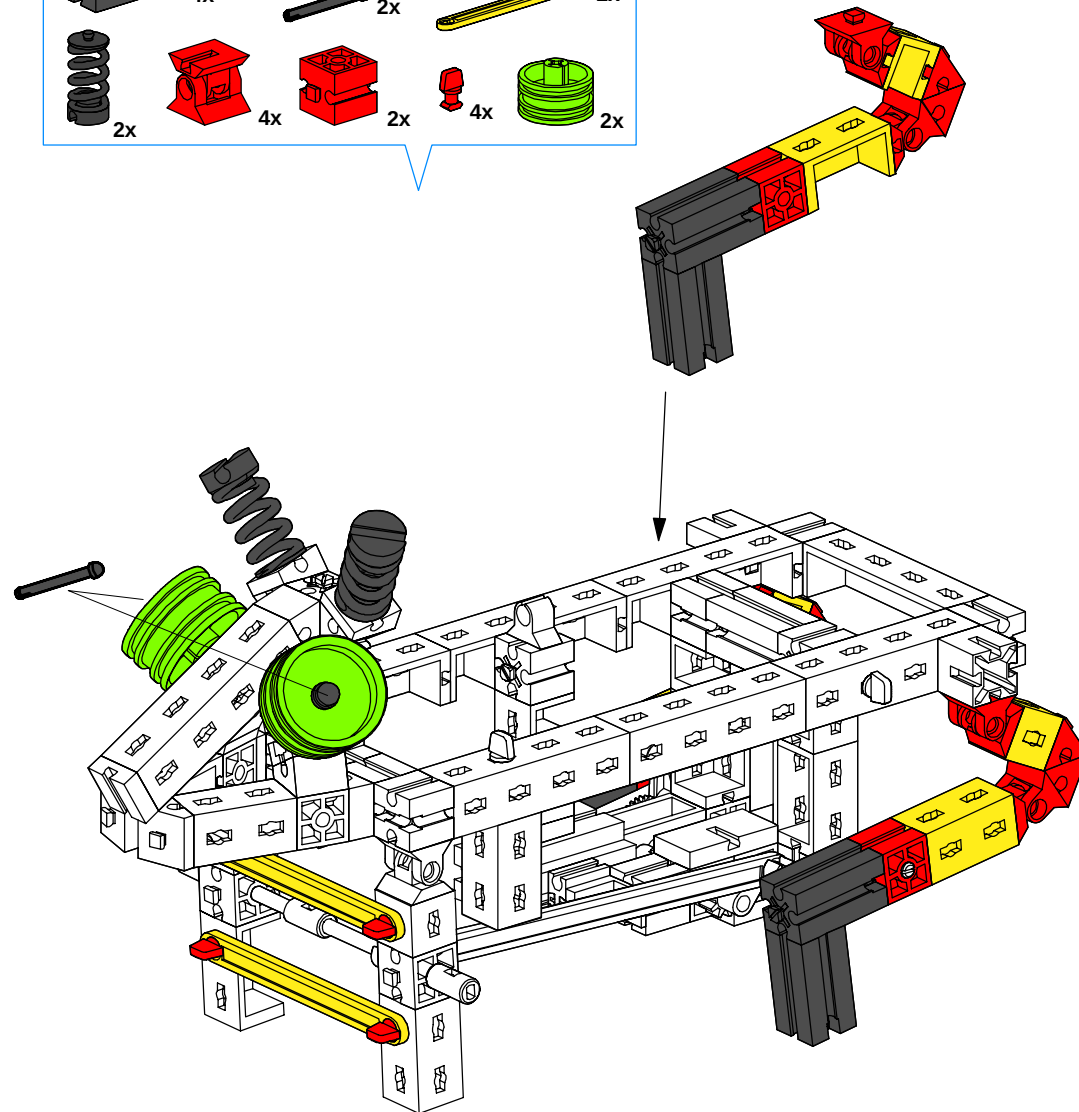
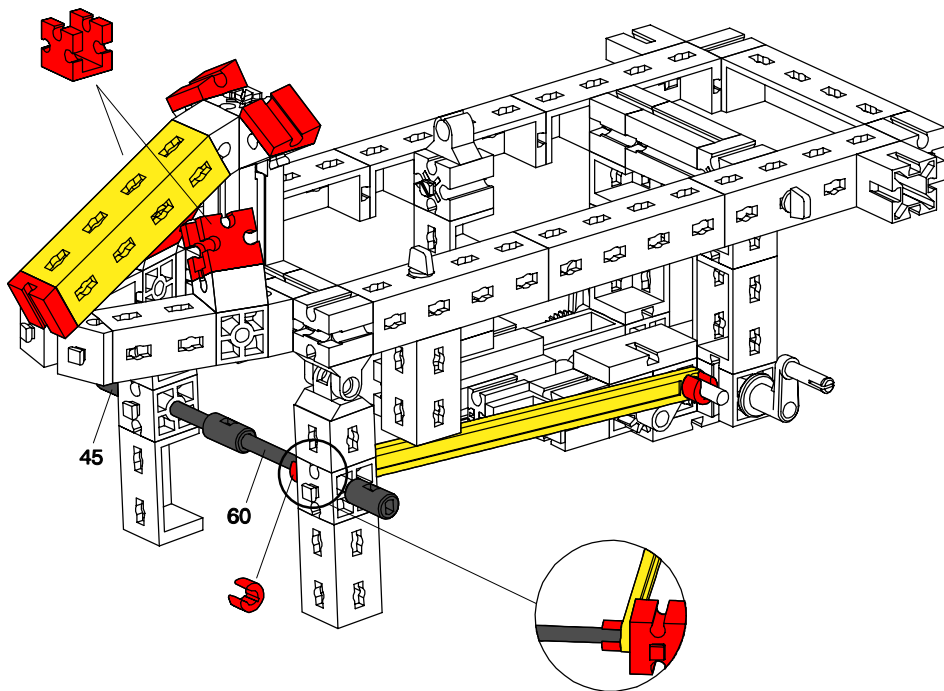
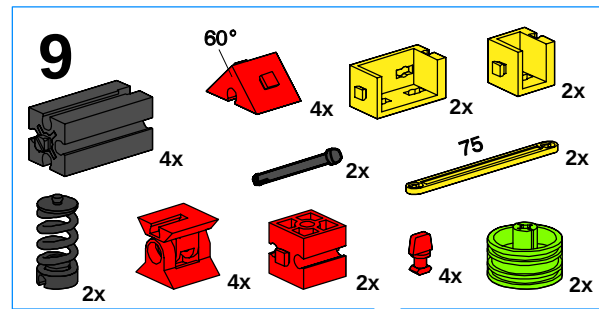
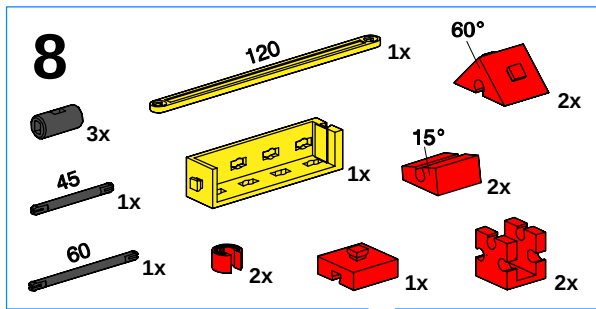


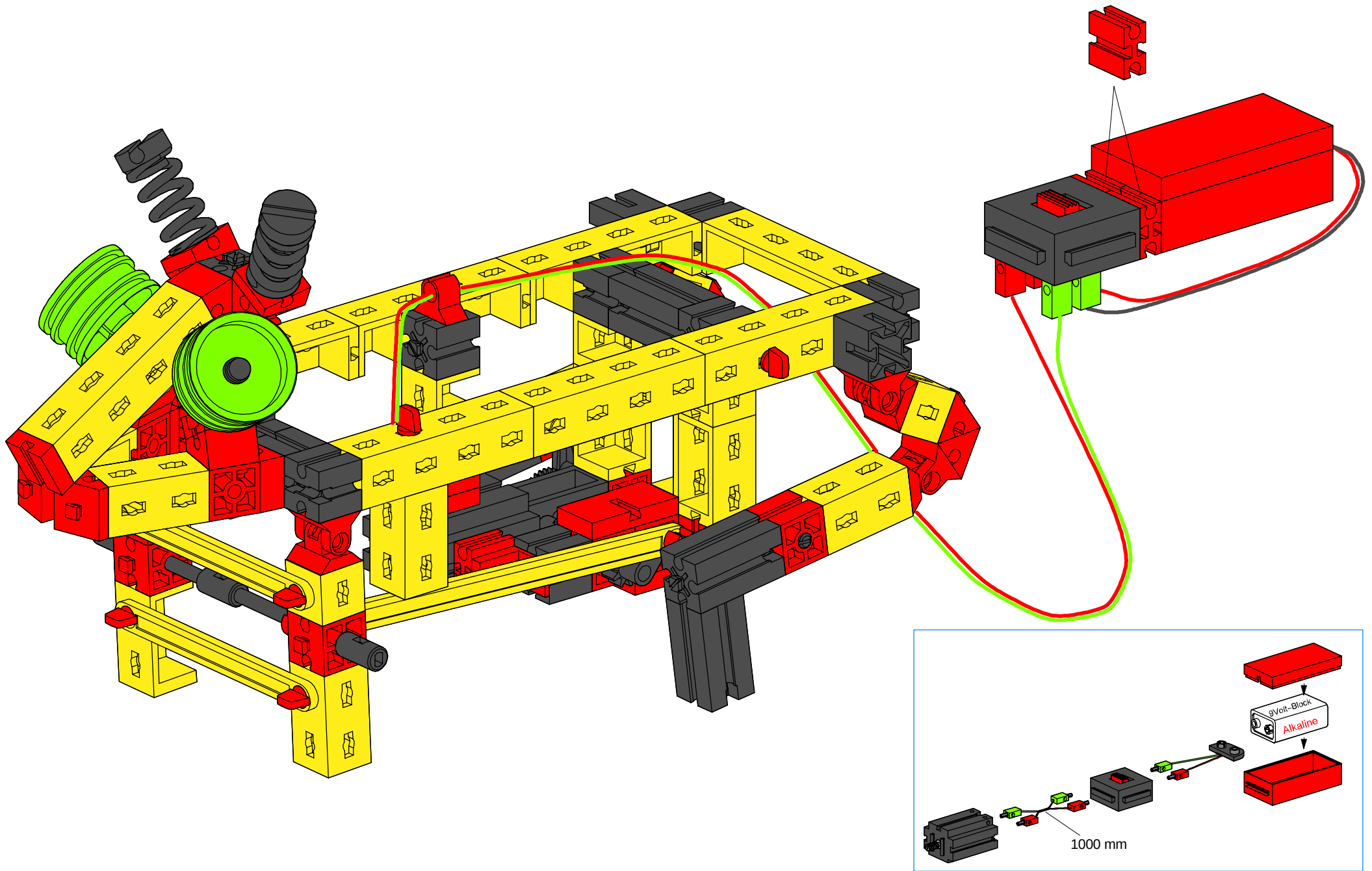
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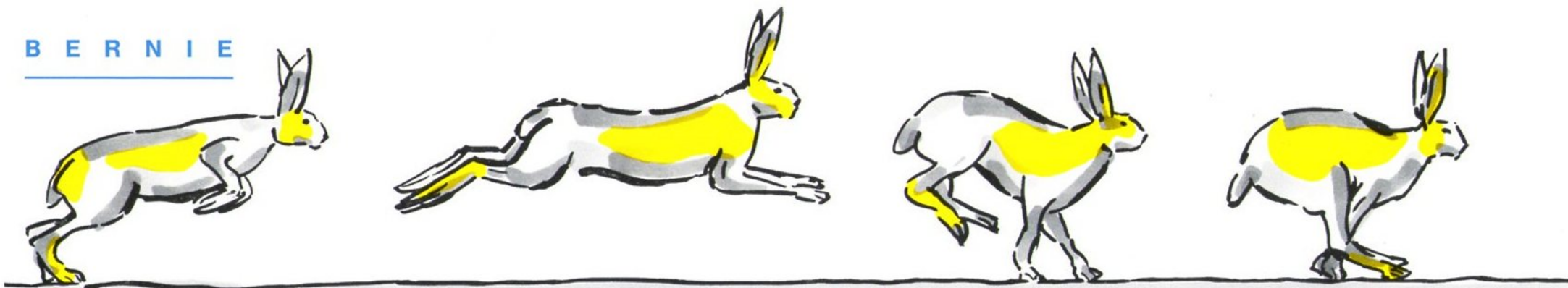








# B E R N I E



Sprunggalopp / Saltation / Course par bonds / Springgalop / Galope a saltos / Galoppo a salti



Bernie hoppelt wie ein Hase. Diese Fortbewegungsart nennt man Sprunggalopp. Die kräftigen Hinterbeine des Hasen stoßen den Körper vom Boden ab. Die Vorderbeine dienen als Landungshilfen. Sie sind biegsam und federn den Stoß bei der Landung ab. Bei einem echten Hasen fallen die Sprünge natürlich viel gewaltiger aus als bei unserem Bernie.

Damit Bernie richtig hoppelt, muß zum einen die Stellung der Kurbeln genau stimmen, zum anderen die Geschwindigkeit des Motors. Wird Bernie mit der 9-V-Batterie angetrieben, hoppelt er richtig. Beim Einsatz des Netzgerätes (Power Supply Art.-Nr. 30 180) muß man entweder die Geschwindigkeit mit dem Power Controller (Art.-Nr. 30 181) regeln oder einfach Bernies Hinterbeine mit je einem Winkelträger 15 verlängern.

Bernie hops along like a rabbit. This type of locomotion is called saltation. The rabbit's powerful rear legs raise the body from the ground. The front legs only act as landing aids. They are flexible and absorb the shock on landing. With a real rabbit, the jumps are of course much more powerful than our Bernie. To make Bernie hop properly, you must adjust the position of the cranks precisely and fine-tune the motor speed. If Bernie is driven by the 9 V battery, he will hop properly. If you use the power adapter (Power Supply Art. No. 30 180), regulate the speed using the power controller (Art. No. 30 181) or simply lengthen Bernie's rear legs with a size 15 angle bracket.

Comme un lièvre, Bernie progresse par bonds. Les puissantes pattes arrière du lièvre font décoller le corps. Grâce à leur souplesse, les membres antérieurs servent d'amortisseurs à l'atterrissage. Comme on peut s'en douter, un véritable lièvre bondit beaucoup plus vite et plus fort que notre Bernie. Pour que Bernie sautille correctement, il faut d'abord trouver la position exacte des bielles, mais aussi déterminer la bonne vitesse du moteur. Si Bernie est alimenté avec la pile de 9 V, il saute correctement. En revanche, avec le bloc d'alimentation (Power Supply réf. 30 180), il faut soit réguler la vitesse avec le Power Controller (réf. 30 181), soit simplement rallonger chaque patte postérieure de Bernie au moyen d'un support coudé 15.

Bernie hupt als een haas. Deze manier van voortbewegen noemt men springgalop. De krachtige achterpoten van de haas stoten het lichaam als het ware van de grond. De voorpoten dienen als landingsgestel. Ze zijn buigzaam en vangen bij de landing de klap op. Bij een echte haas zijn de sprongen natuurlijk veel groter dan bij onze Bernie.

Om Bernie goed te laten huppen, moet enerzijds de positie van de krukken en anderzijds de snelheid van de motor goed zijn. Wanneer Bernie met de 9V-batterij aangedreven wordt, huppelt hij zoals het moet. Bij gebruik van het netapparaat (Power Supply artikelnummer 30 180) moet de snelheid met de Power Controller geregeld worden. Men kan in een dergelijk geval ook Bernie's achterpoten gewoon door middel van een hoekdrager 15 verlengen.

Bernie salta como una liebre. Este tipo de locomoción se denomina galope a saltos. Las fuertes patas traseras de la liebre impulsan el cuerpo al saltar. Las patas delanteras, flexibles, amortiguan el golpe al caer hacia adelante. Desde luego, los saltos que dan las liebres de verdad son mucho más fuertes que los que da Bernie.

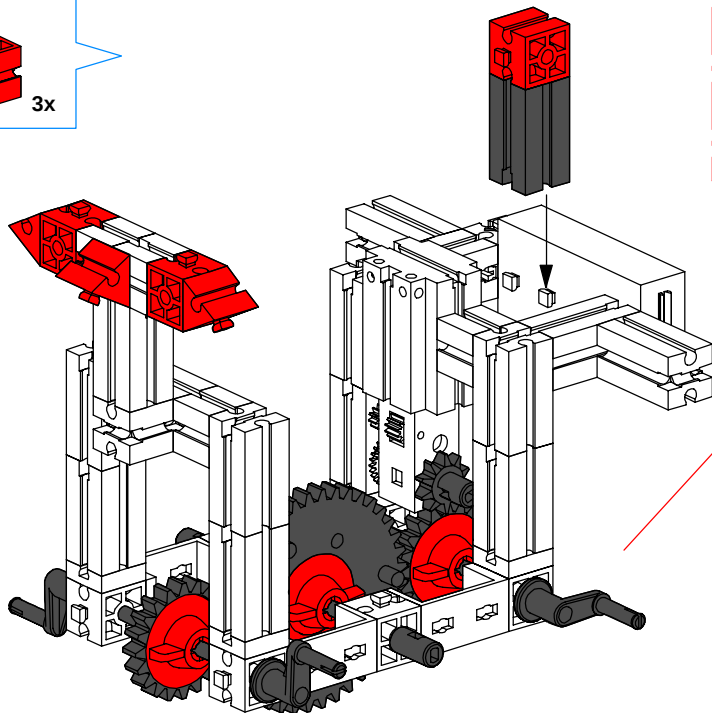
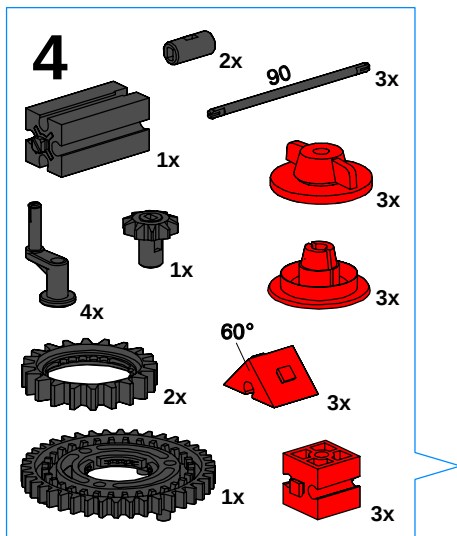
Para que Bernie pueda saltar bien, es necesario regular perfectamente el lugar de las articulaciones, así como la velocidad del motor. Al accionar a Bernie con una pila de 9 voltios, saltará correctamente. Si se utiliza el aparato de alimentación (Power Supply, núm. de artículo 30 180) será necesario regular la velocidad con el Power Controller (núm. de artículo 30 181), o sencillamente alargarle las patas traseras colocando un soporte angular 15 en cada una de ellas.

Bernie saltella come una lepore. Questo tipo di movimento si chiama galoppo di corsa. Le forti gambe posteriori della lepore spingono in alto il corpo dal terreno. Le gambe anteriori servono come aiuto per l'atterraggio. Sono elastiche e ammortizzano l'impatto dell'atterraggio. Naturalmente per una vera lepore i salti sono molto più forti di quelli del nostro Bernie.

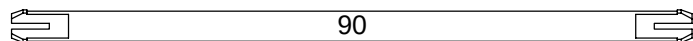
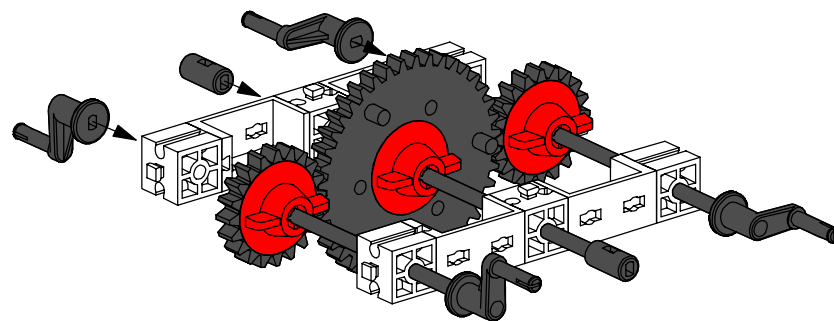
In modo che Bernie riesca a saltare correttamente, da un lato deve essere corretta la posizione delle manovelle, dall'altro la velocità del motore. Se Bernie viene azionato da una batteria a 9 V, salta correttamente. Utilizzando l'apparecchio rete (Power Supply n. art. 30 180) si deve regolare la velocità con il Power Controller (n. art. 30 181) oppure allungare semplicemente le gambe posteriori di Bernie con due angolari 15.

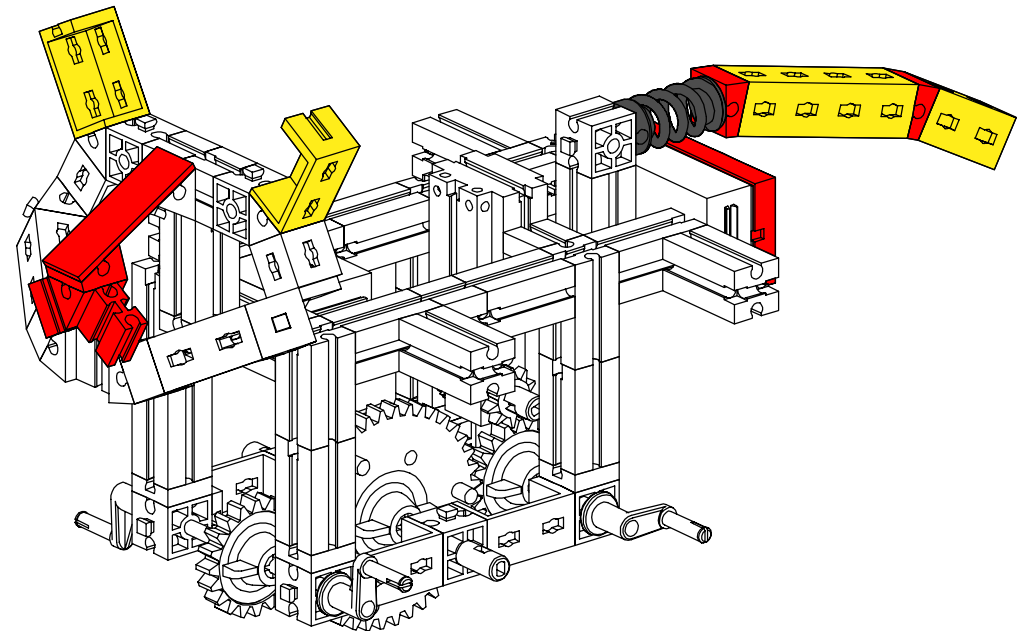
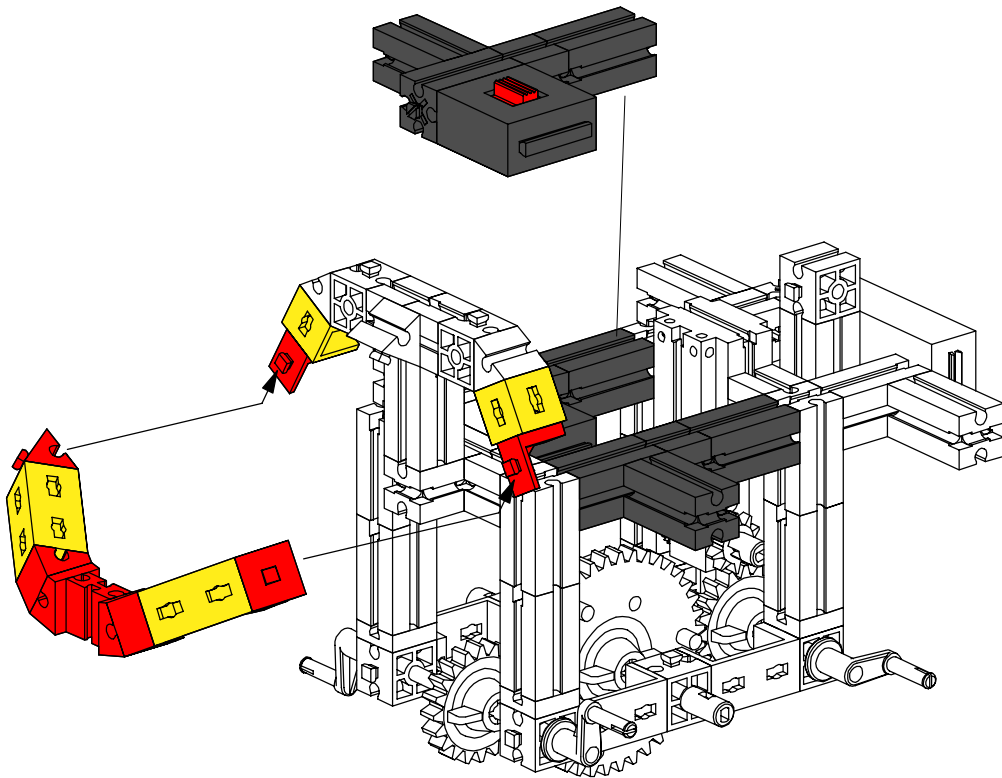
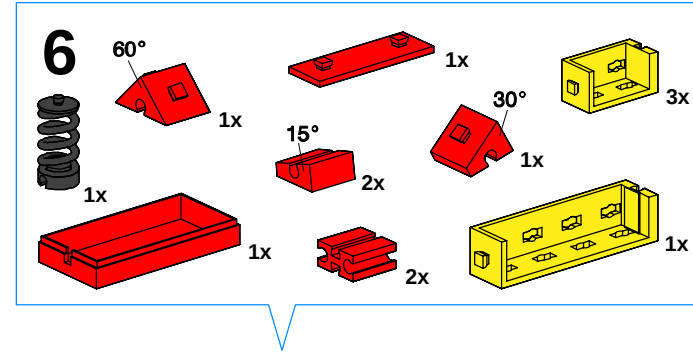
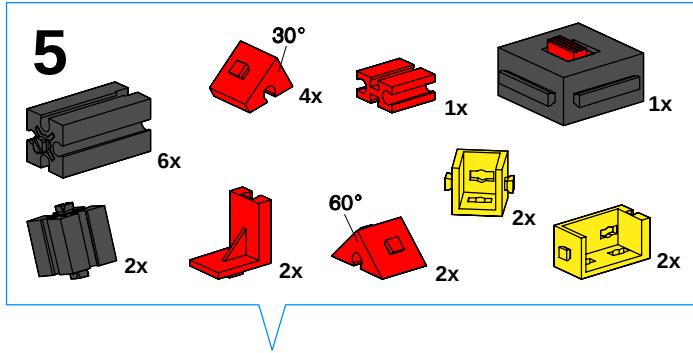


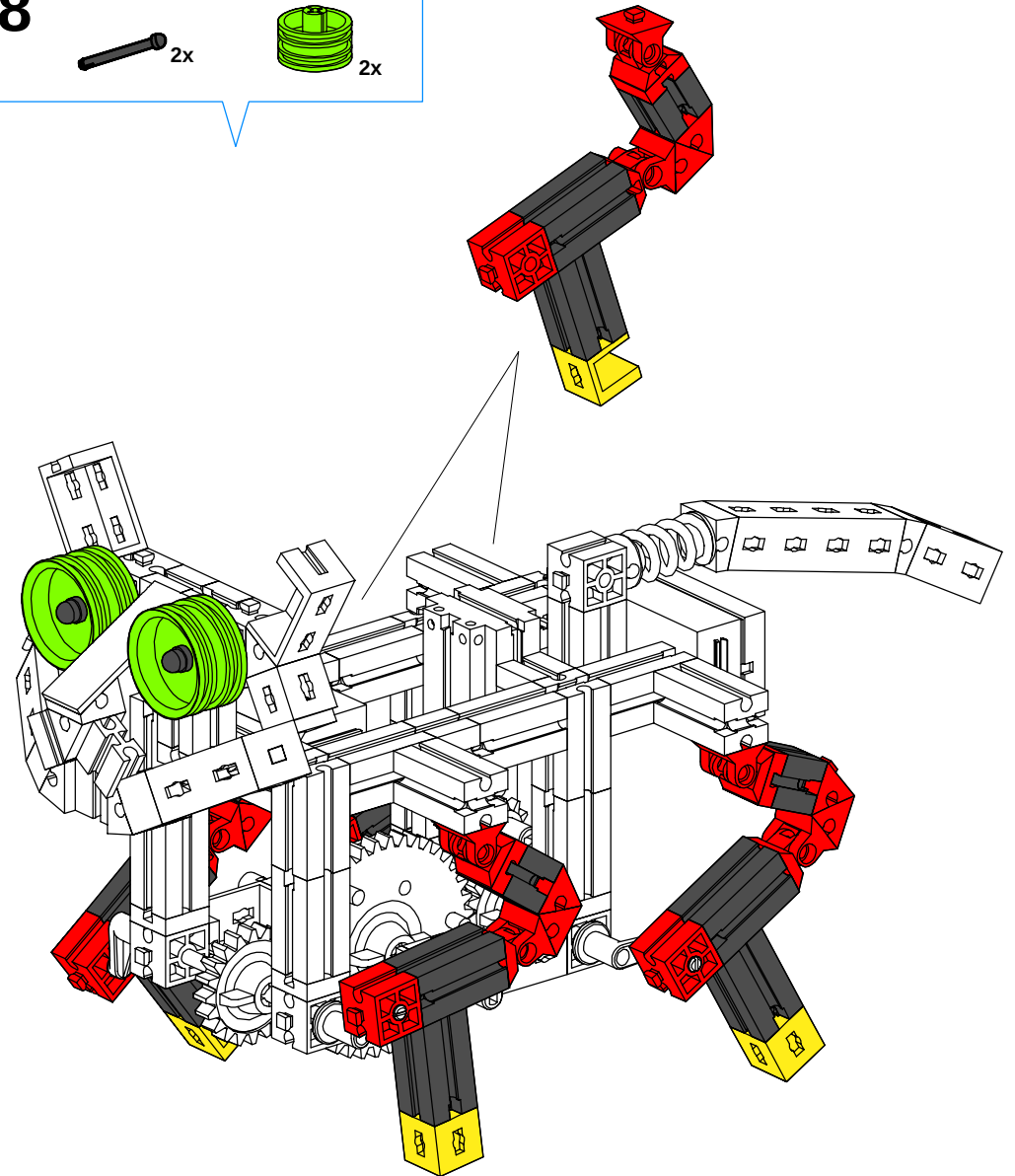
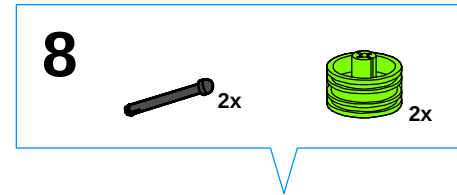
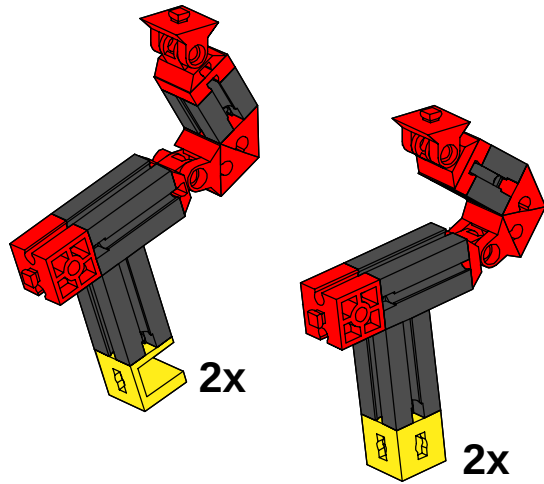
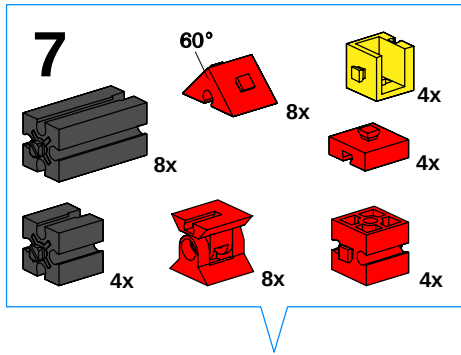




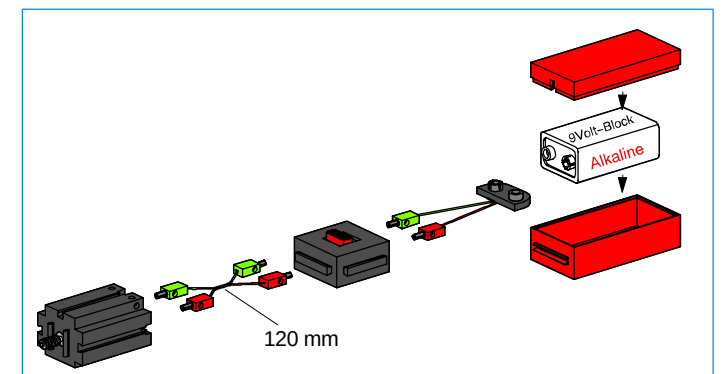
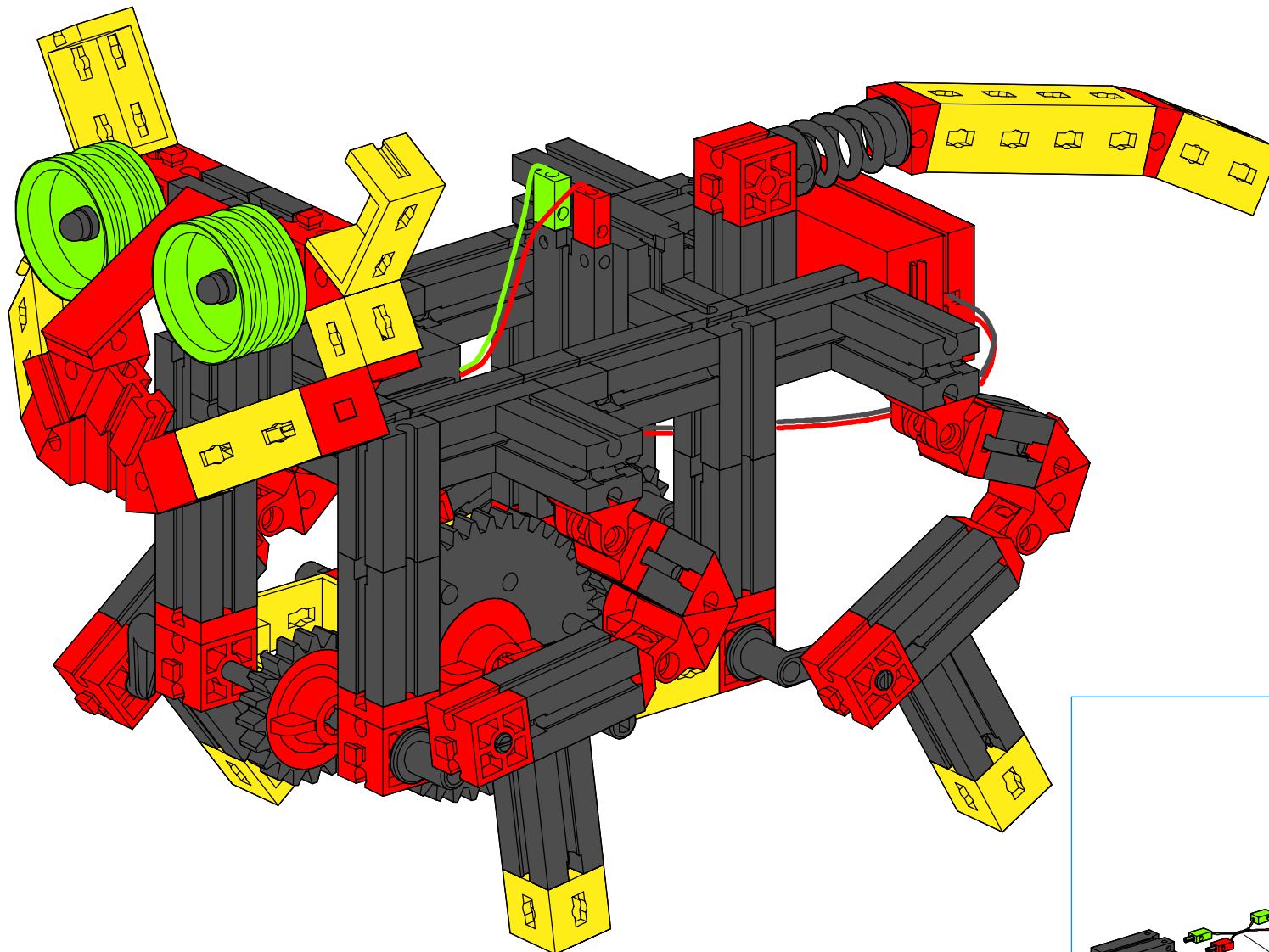
- **Kurbelstellungen beim Einbau beachten und Nabenmutter festdrehen**
- Note the positions of the cranks when mounting and fasten the hub nuts home
- Lors du montage, faire attention aux positions des bielles et serrer les écrous de moyeu
- Let bij de montage op de juiste positie van de krukken en draal de naafmoeren vast
- Fare attenzione alla posizione delle manovelle durante il montaggio e stringere bene i dadi del mozzo
- Tener en cuenta las posiciones del cigüeñal y de las tuercas laterales durante el montaje

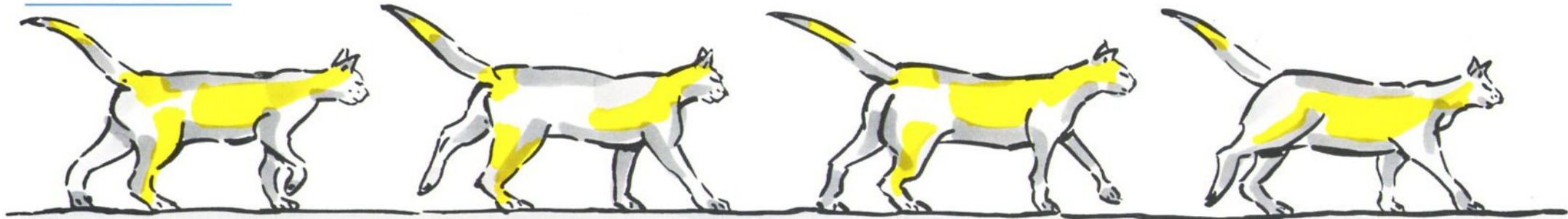












Kreuzgang / Tetrapodal gait / Pas croisé du quadrupède / Kruisgang / Paso cruzado / Marcia incrociata



Betty bewegt sich in der langsamsten Gangart der Säugetiere, dem sogenannten Schritt. Katzen und Hunde beispielsweise laufen so. Der Körper der Tiere stützt sich dabei immer auf drei Beine, während sich ein Bein einen neuen Standort sucht. Sie bewegen sich dabei im Kreuzgang vorwärts – mit der Schrittfolge rechtes Vorderbein, linkes Hinterbein, linkes Vorderbein, rechtes Hinterbein.

Das Gewicht der 9-V-Batterie sorgt bei Betty für die richtige Balance. Deshalb muß sich in dem Halter auf Bettys Rücken auch dann eine Batterie befinden, wenn zur Stromversorgung der Powerblock (Art.-Nr. 30 263) oder das Netzgerät (Power Supply, Art.-Nr. 30 180) verwendet werden.

Betty moves at the slowest gait for mammal. The advance of one leg is called a step. Cats and dogs, for example, walk like this. The animal's body is always supported by three legs. One leg is always searching for a new place to stand. Tetrapodal (four-legged) vertebrates have the following basic walking pattern: left hind leg, left fore leg, right hind leg, right fore leg.

The weight of the 9 V battery provides Betty with the correct balance. For this reason, you must always make sure that a battery is in the compartment on Betty's back if the power block (Art. No. 30 263) or the power supply (Art. No. 30 180) are used for power supply.

Betty se meut à l'allure la plus lente utilisée par les mammifères, le pas, à l'exemple des chiens et des chats. Dans ce mode de locomotion, le corps de l'animal repose toujours sur trois pattes, tandis que le dernier membre cherche un nouveau point d'appui. Il s'agit d'un pas croisé, car les pattes décollent alternativement du sol dans un ordre croisé: patte antérieure droite, patte postérieure gauche, patte antérieure gauche, patte postérieure droite.

Chez Betty, c'est le poids de la pile de 9 V qui assure l'équilibre. Pour cette raison, il faut laisser une pile dans le support situé sur le dos de Betty même si vous utilisez le bloc d'alimentation (réf. 30 263 ou réf. 30 180) pour lui fournir de l'électricité.

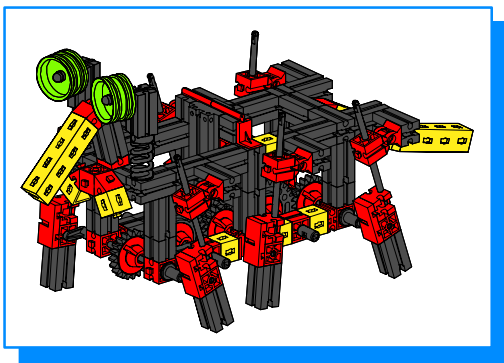
Betty beweegt zich voort op de langzaamste manier van alle zoogdieren, de zogenaamde stapsgewijze gang. Katten en honden lopen bijvoorbeeld op deze wijze. Het lichaam van het dier steunt daarbij altijd op drie poten, terwijl één been een nieuwe standplaats zoekt. Ze bewegen zich daarbij in kruisgang voort – met als stapvolgorde rechter voorpoot, linker achterpoot, linker voorpoot, rechter achterpoot.

Het gewicht van de 9V-batterij zorgt bij Betty voor de juiste balans. Daarom moet zich in de houder op Betty's rug ook dan een batterij bevinden, wanneer als netvoeding het Powerblock (artikelnummer 30 263) of het Power Supply (artikelnummer 30 180) gebruikt wordt.

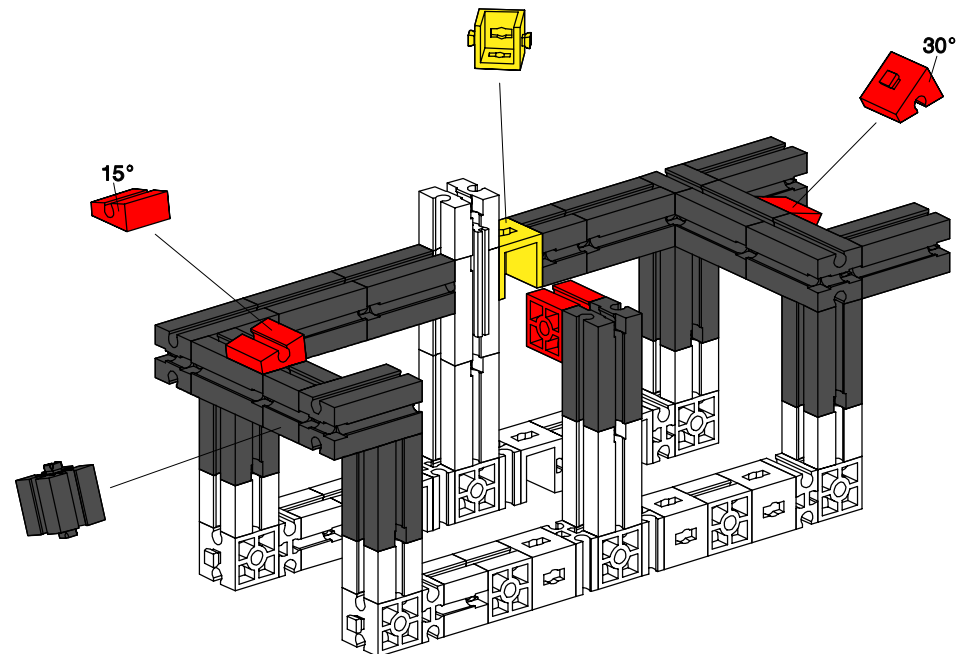
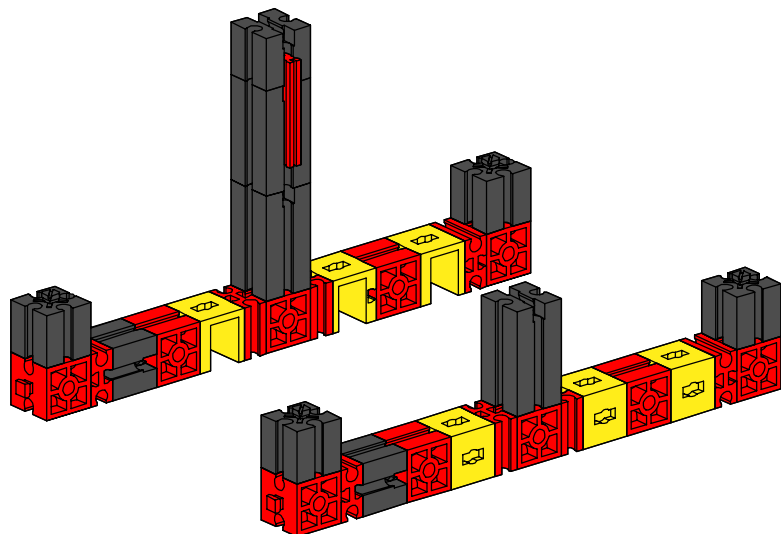
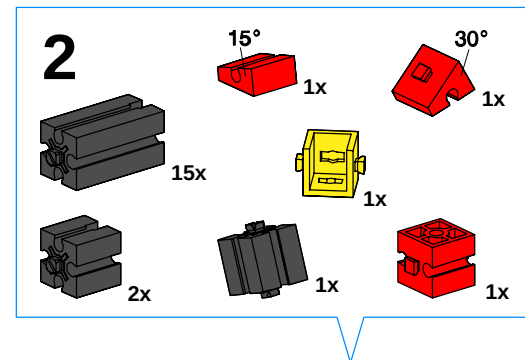
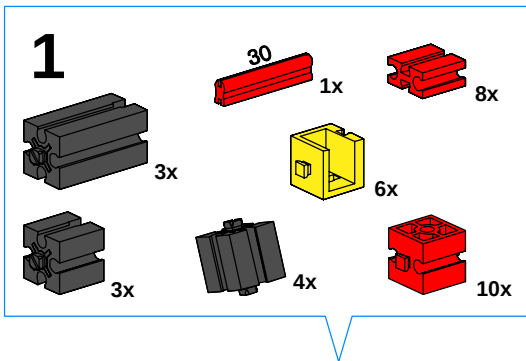
Betty anda al paso, que es el modo de andar más lento de los mamíferos. Los perros y los gatos, por ejemplo, también andan de esta manera. Al avanzar, el cuerpo de los animales se apoya siempre en tres patas, mientras que la otra busca un nuevo punto de apoyo en el suelo. Se mueven en paso cruzado hacia adelante, siguiendo esta secuencia: pata delantera derecha, pata trasera izquierda, pata delantera izquierda, pata trasera derecha.

El peso de la pila de 9 voltios permite que Betty conserve el equilibrio adecuado. Por eso, incluso al tomar la corriente del Powerblock (núm. de artículo 30 263) o del Power Supply (núm. de artículo 30 180), debe haber siempre una pila en el soporte que lleva Betty en el lomo.

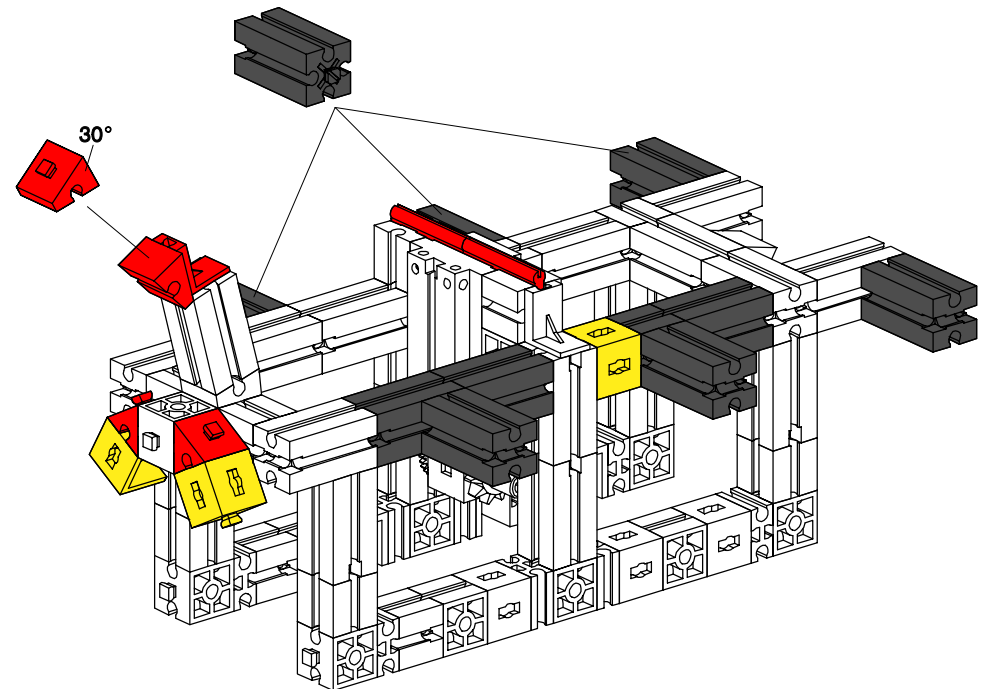
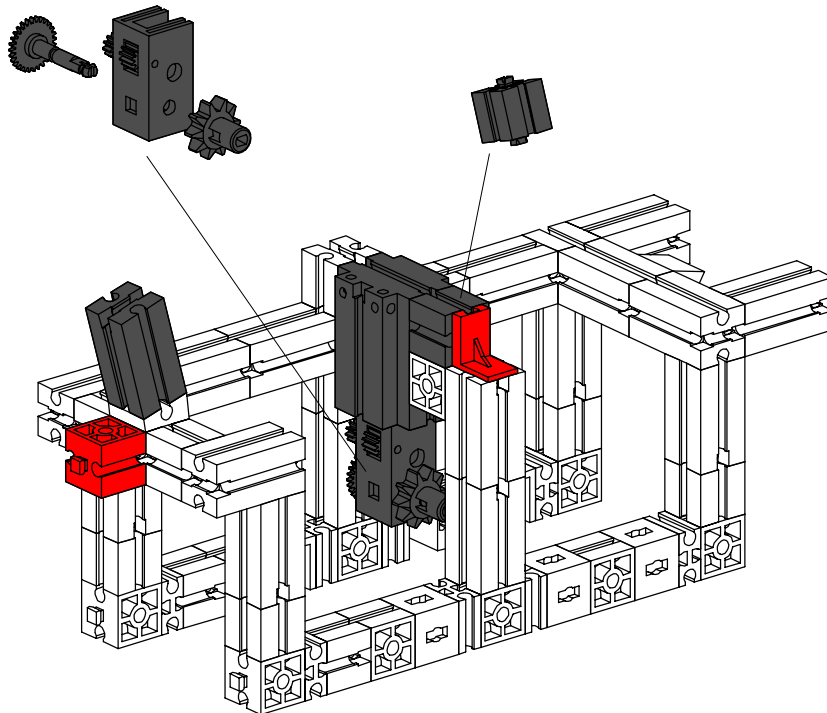
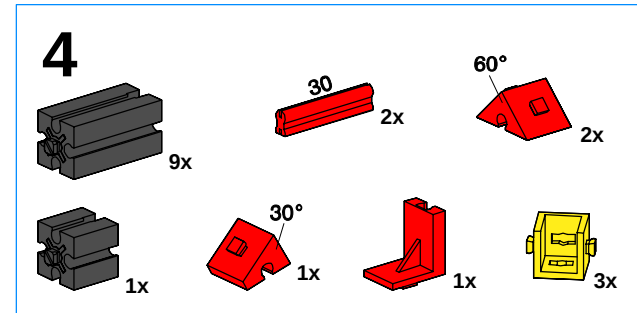
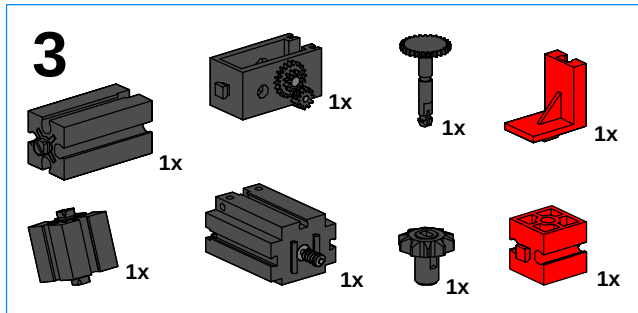
Betty si muove con l'andatura lenta dei mammiferi, il cosiddetto passo. Per esempio i gatti ed i cani camminano in questo modo. Il corpo dell'animale si appoggia sempre su tre gambe, mentre una gamba tasta il terreno. Si muovono con un'andatura incrociata – con la sequenza di passi gamba anteriore destra, gamba posteriore sinistra, gamba anteriore sinistra, gamba posteriore destra. Il peso della batteria a 9 V dà a Betty il giusto equilibrio. Quindi ci deve sempre essere una batteria nel vano batteria nella schiena di Betty anche quando si utilizza il Powerblock (n. art. 30 263) o il Power Supply (n. art. 30 180) per l'alimentazione di corrente.



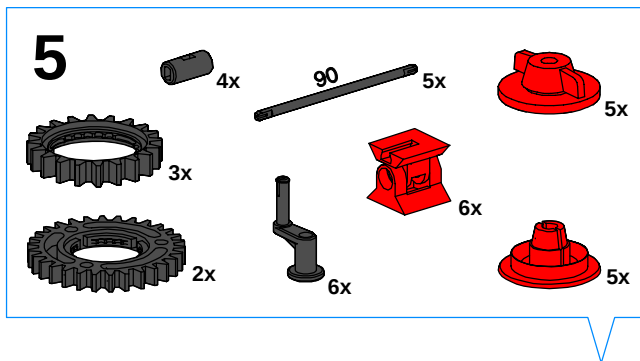
## Henry



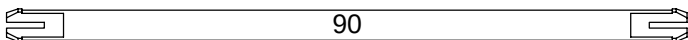
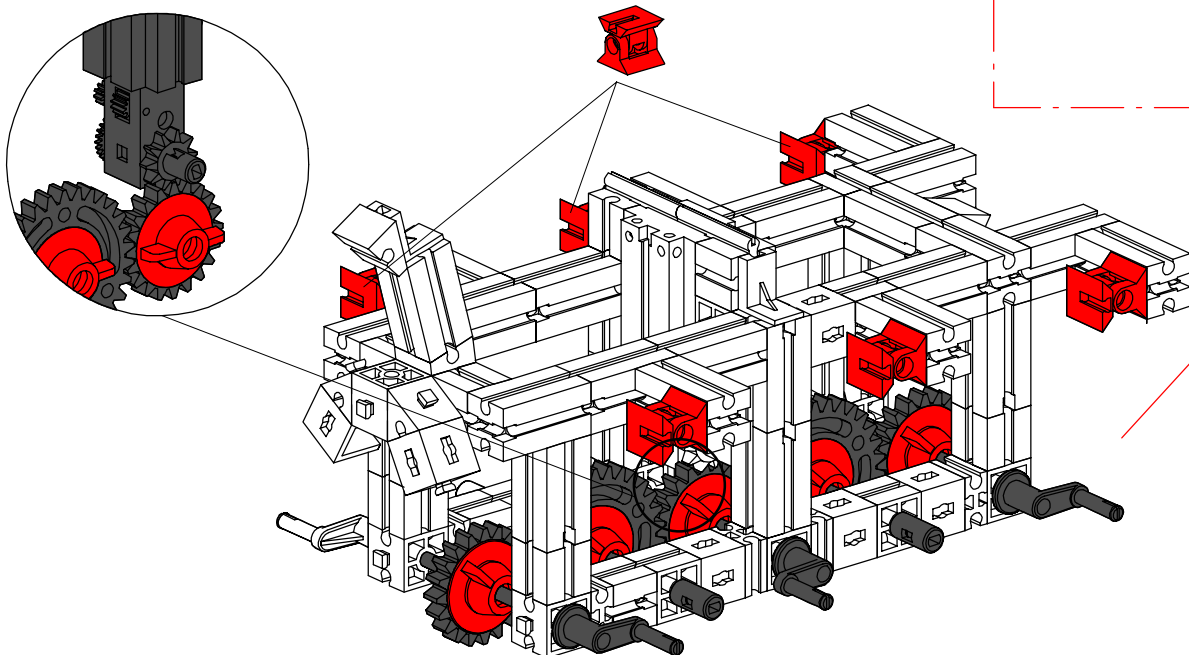
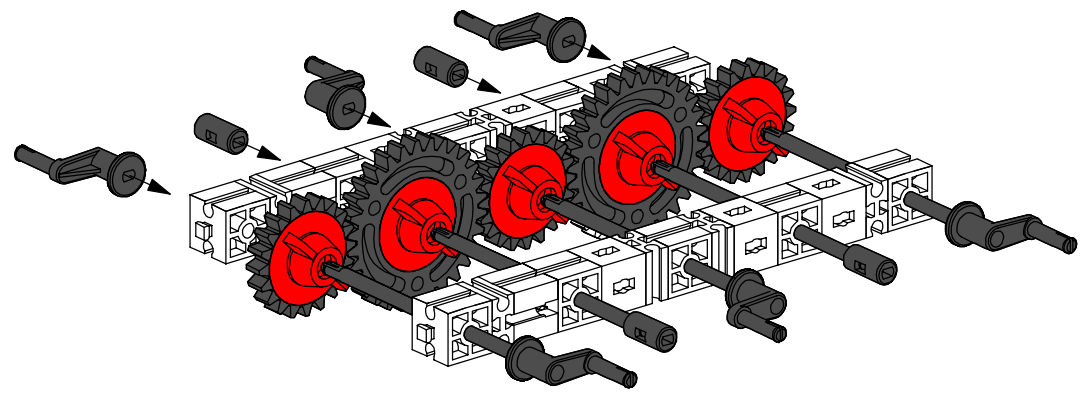


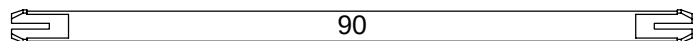
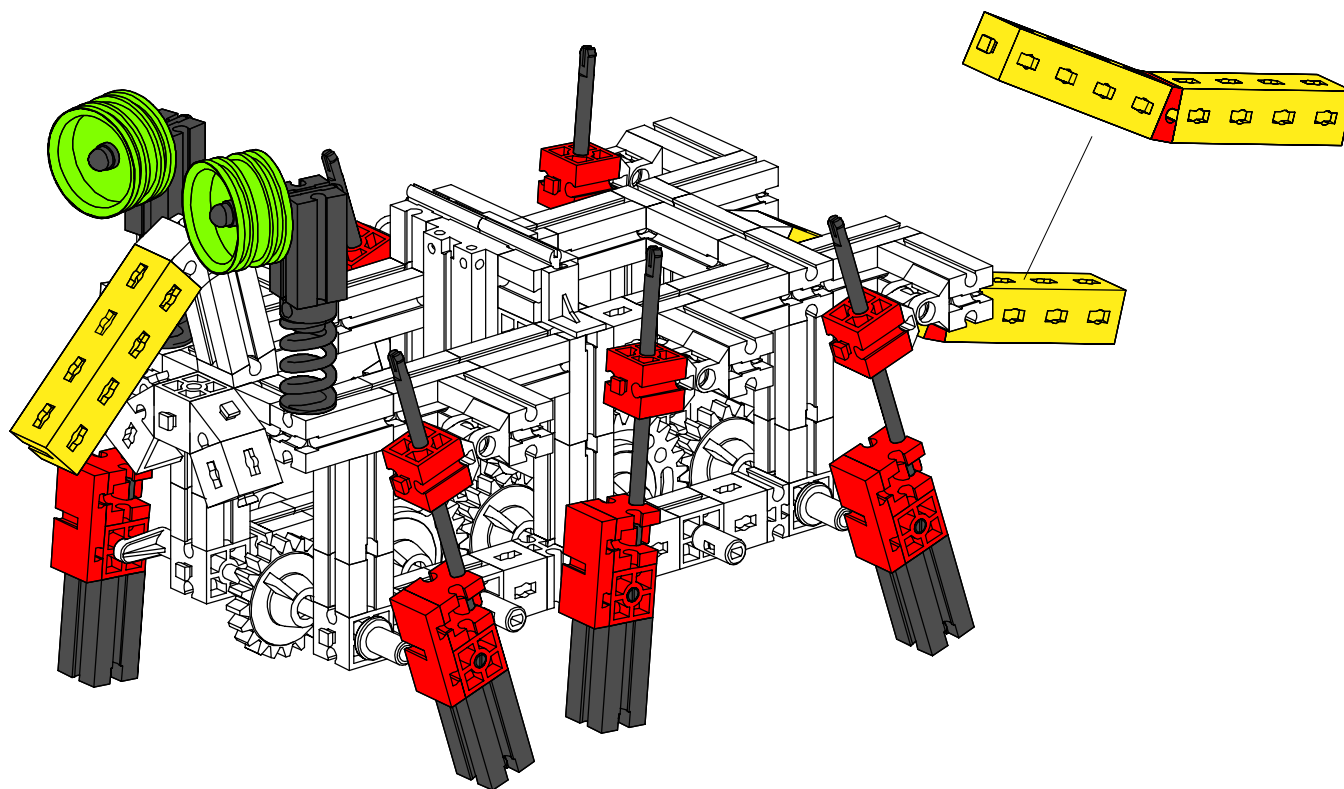
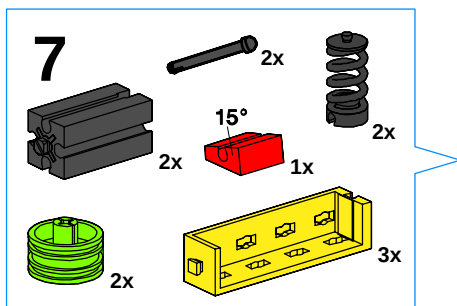
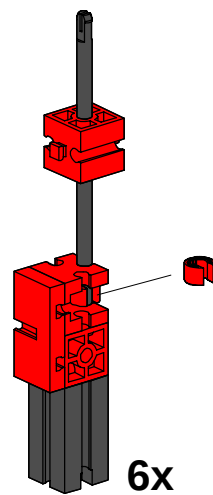
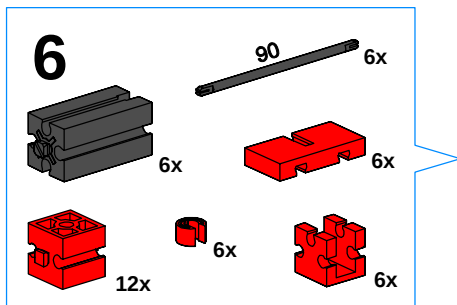


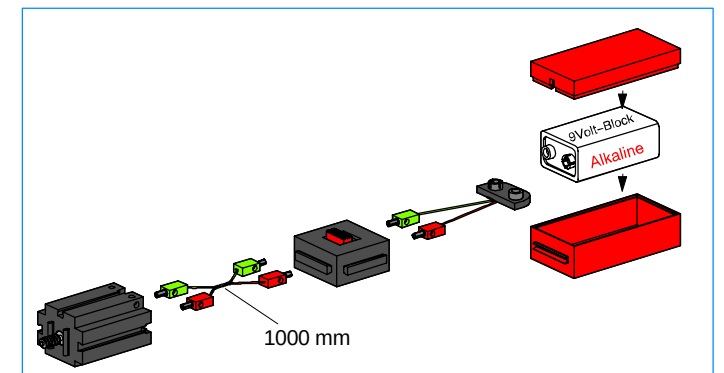
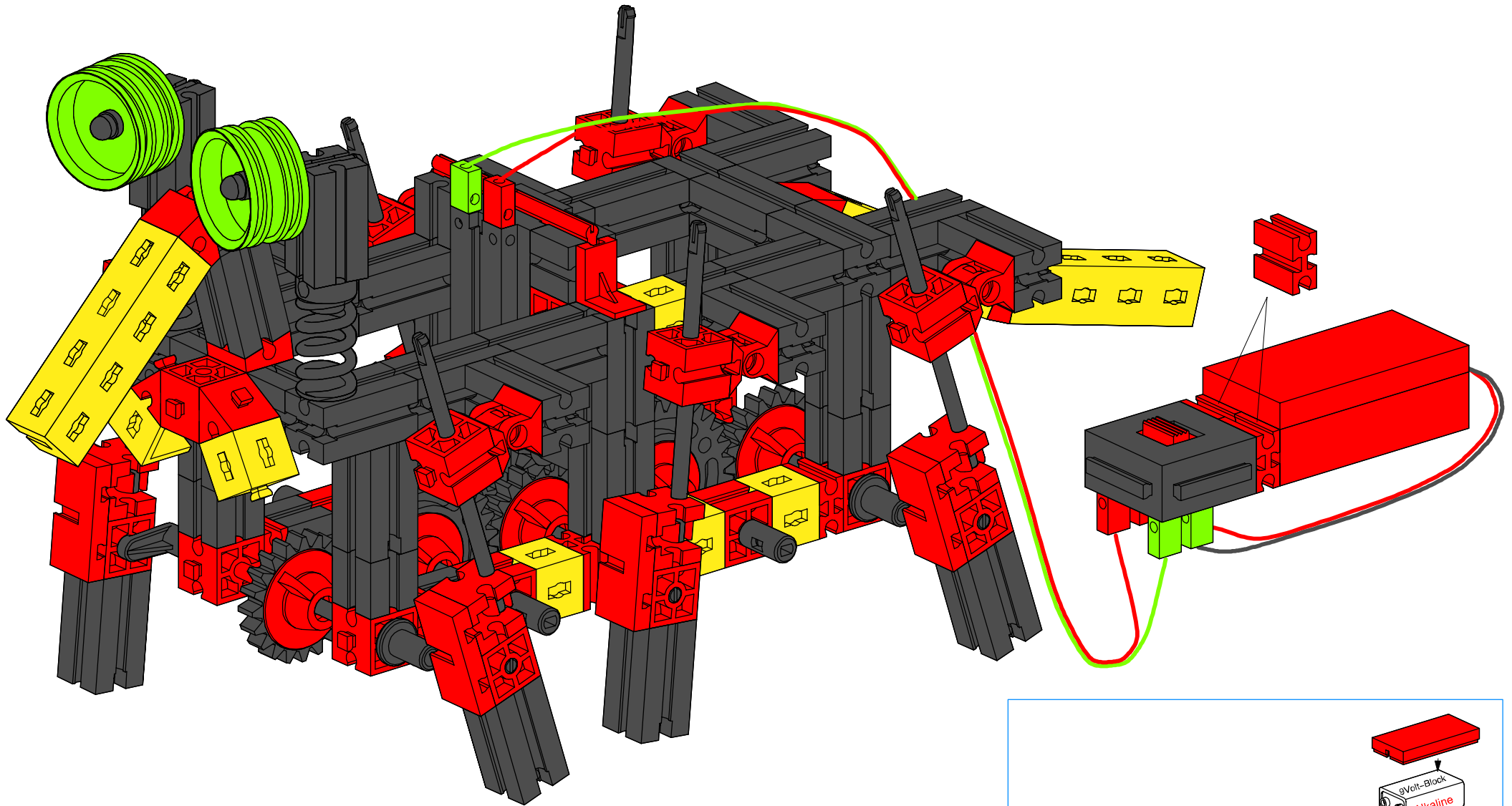


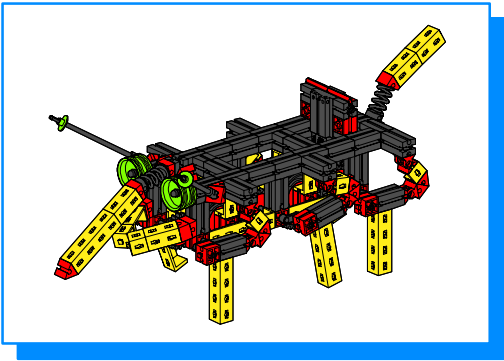


- **Kurbelstellungen beim Einbau beachten und Nabenmuttern festdrehen**
- Note the positions of the cranks when mounting and fasten the hub nuts home
- Lors du montage, faire attention aux positions des bielles et serrer les écrous de moyeu
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- Fare attenzione alla posizione delle manovelle durante il montaggio e stringere bene i dadi del mozzo
- Tener en cuenta las posiciones del cigüeñal y de las tuercas laterales durante el montaje

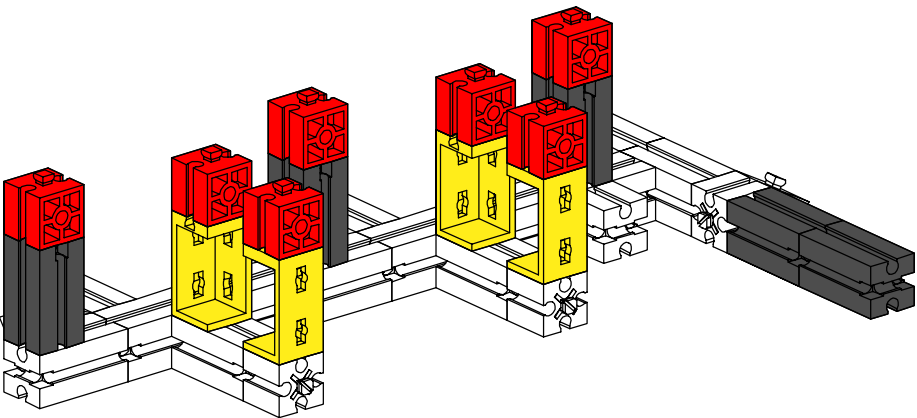
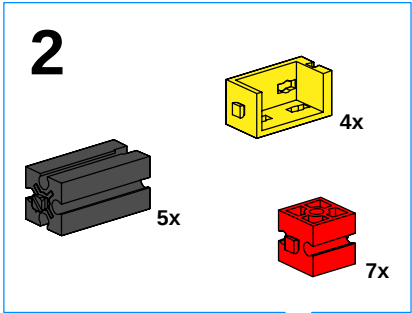
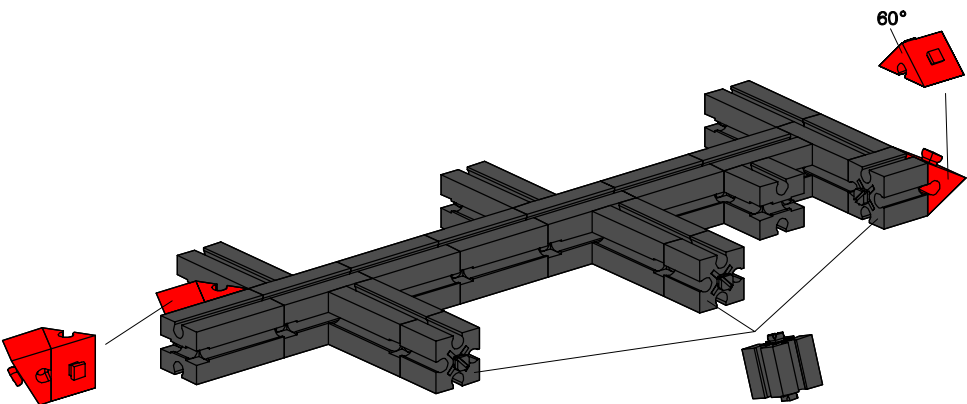
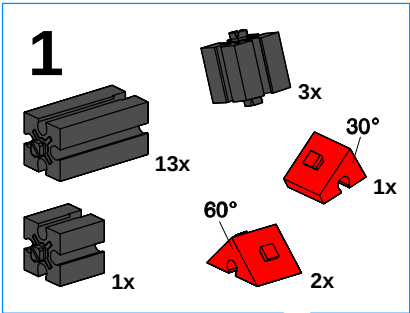




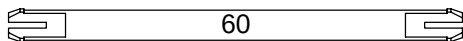
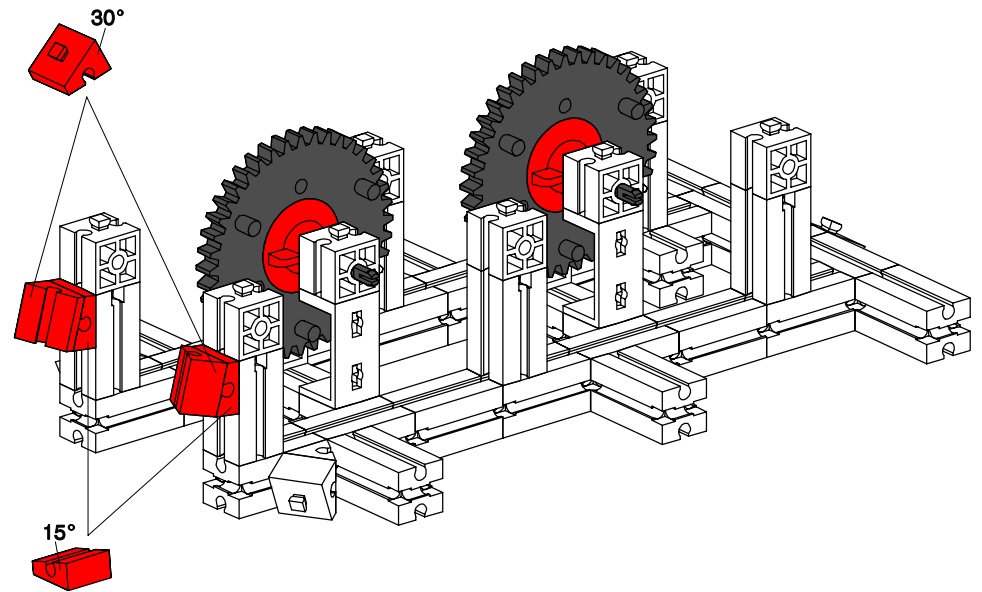
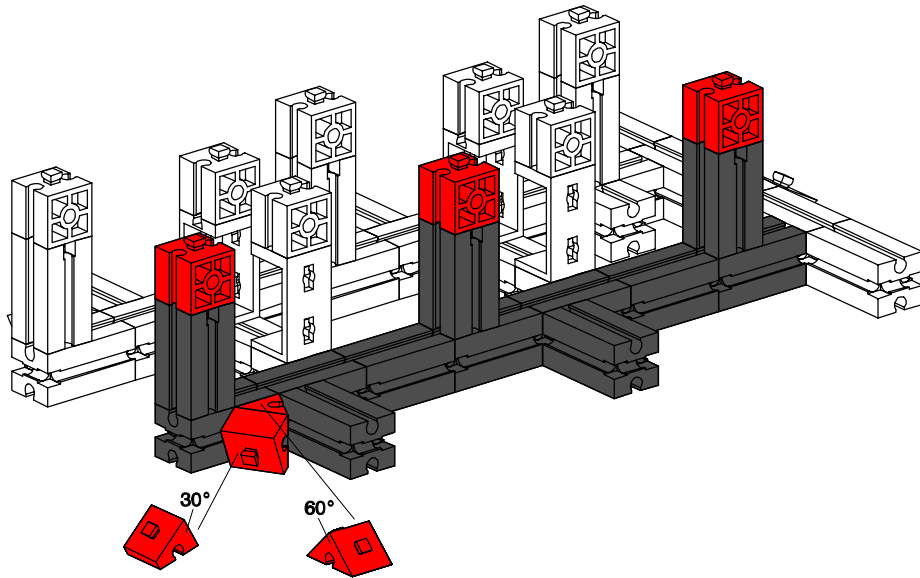
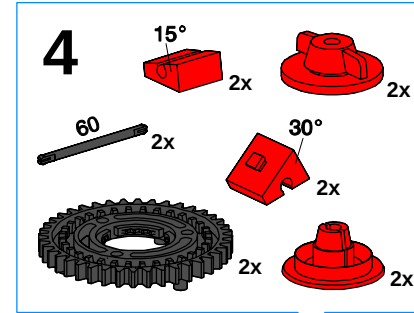
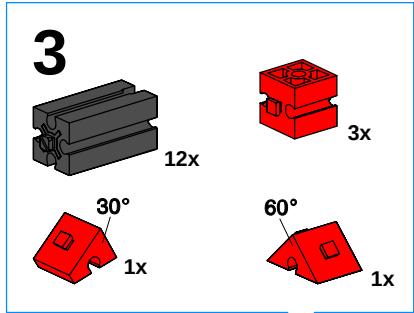


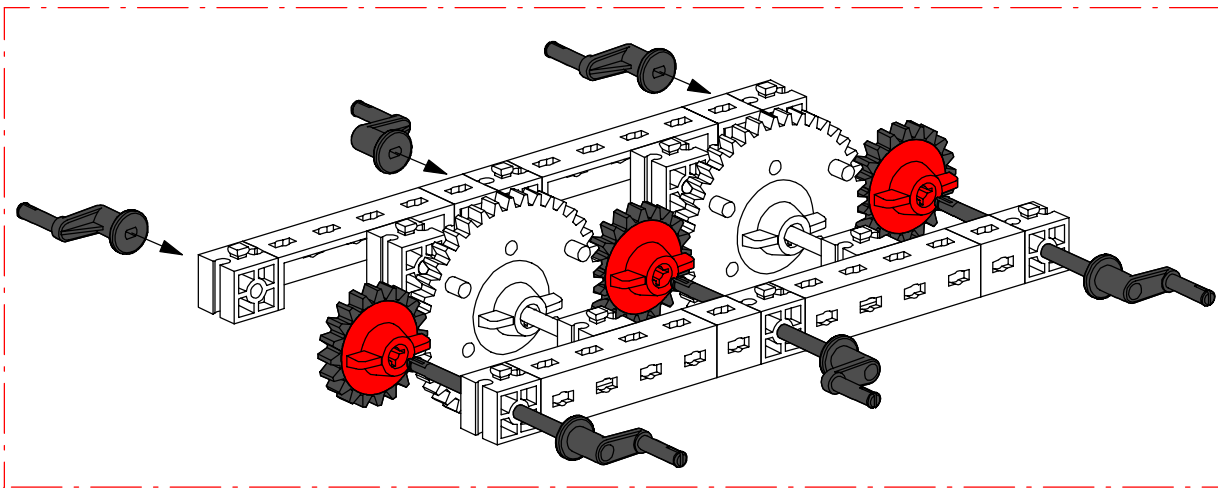
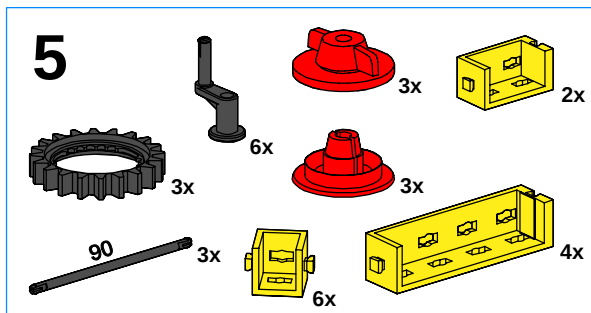


Charly

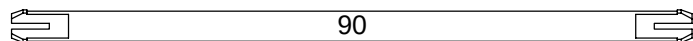
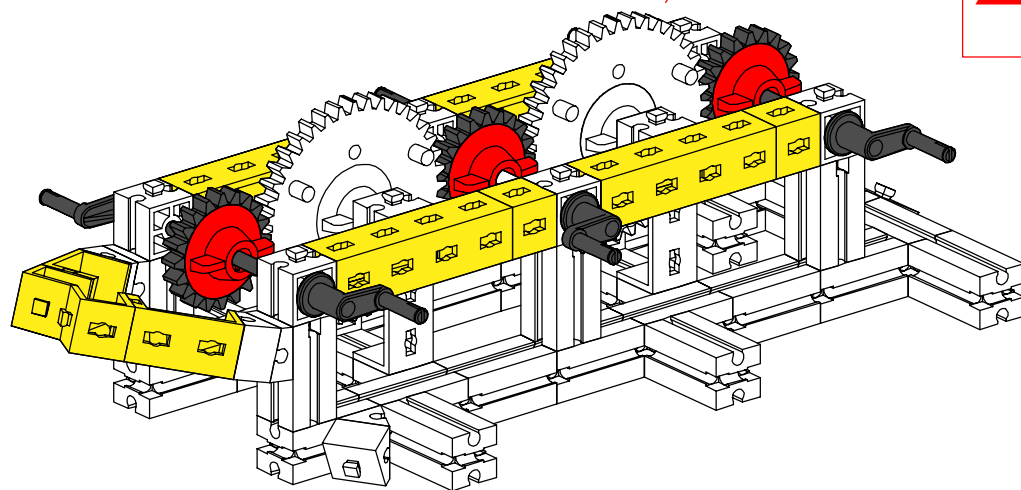


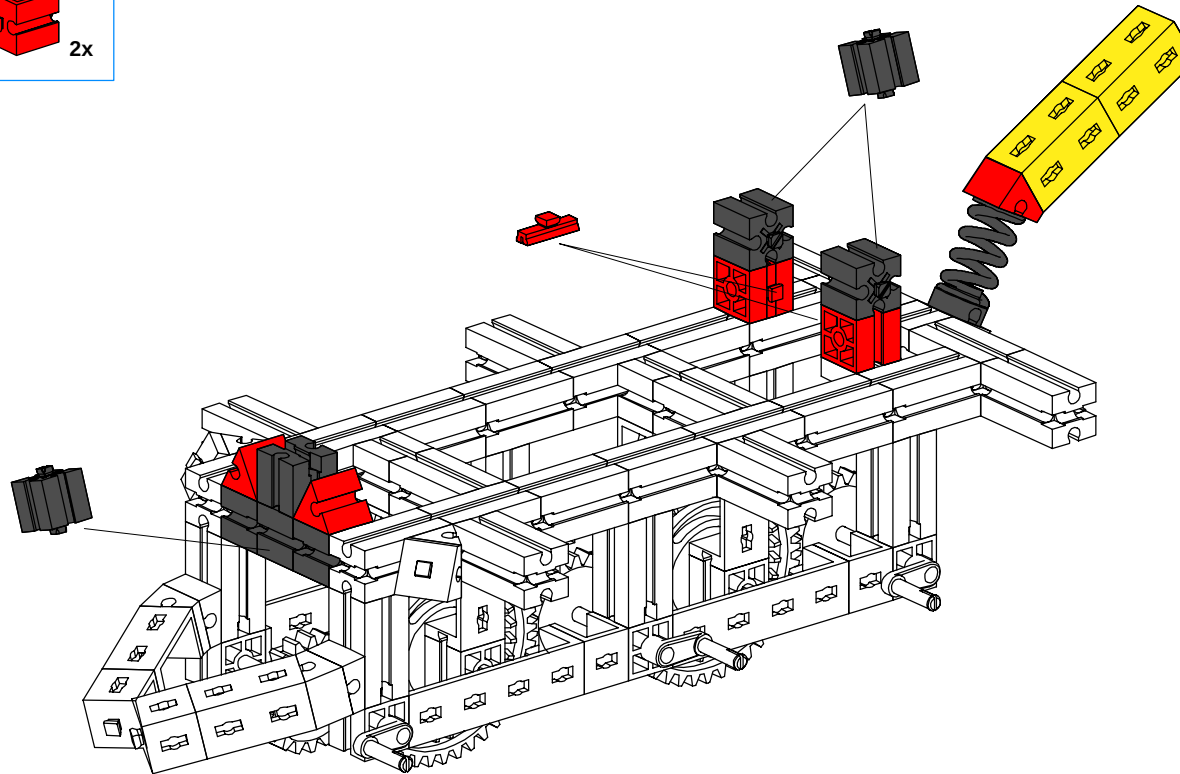
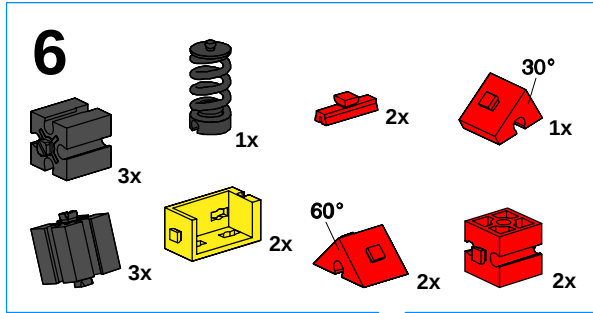


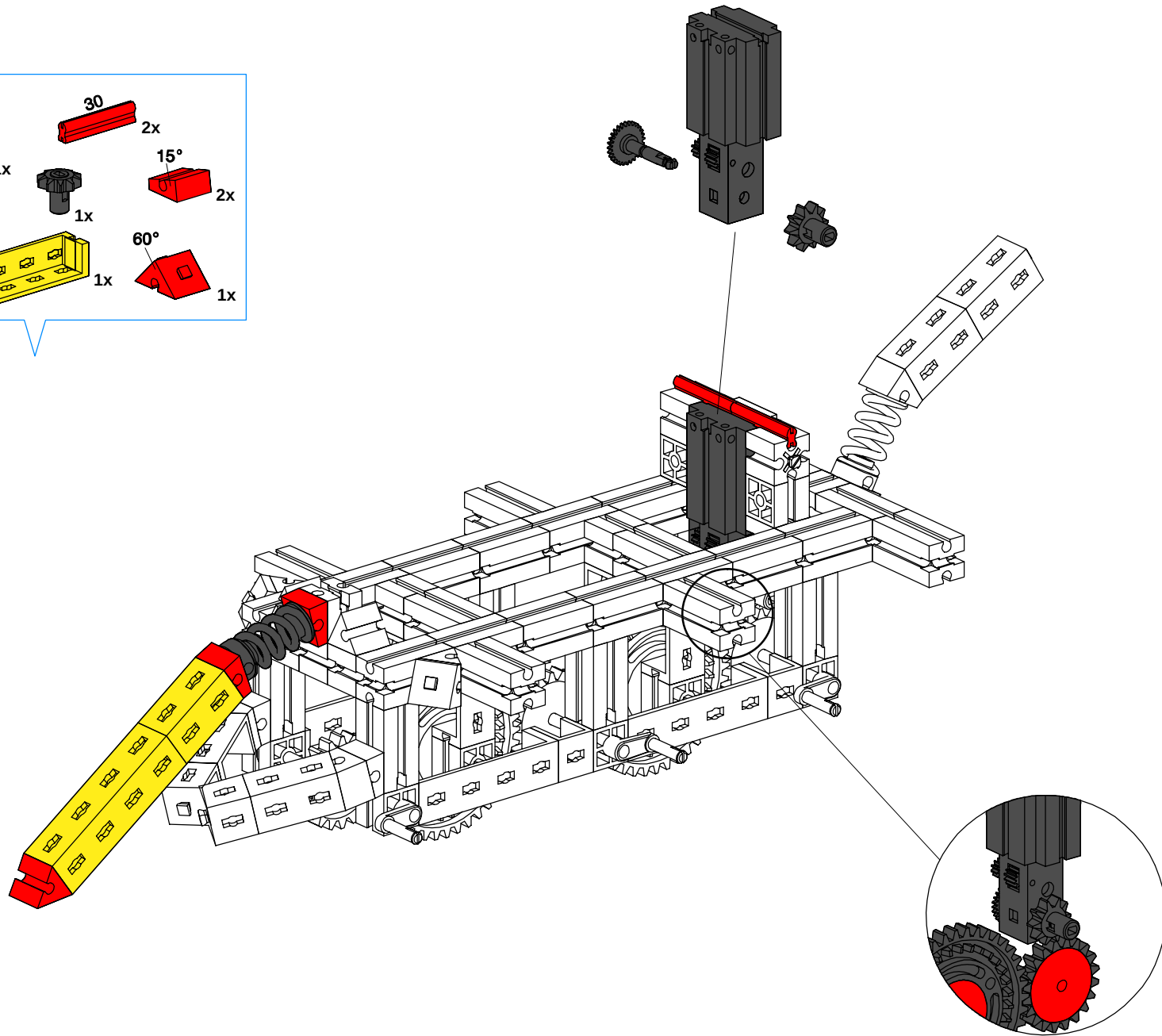
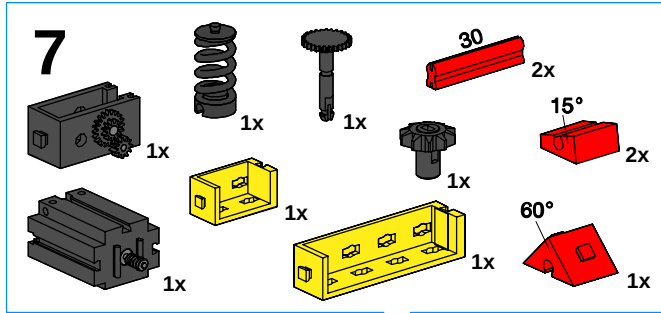




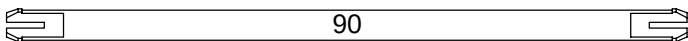
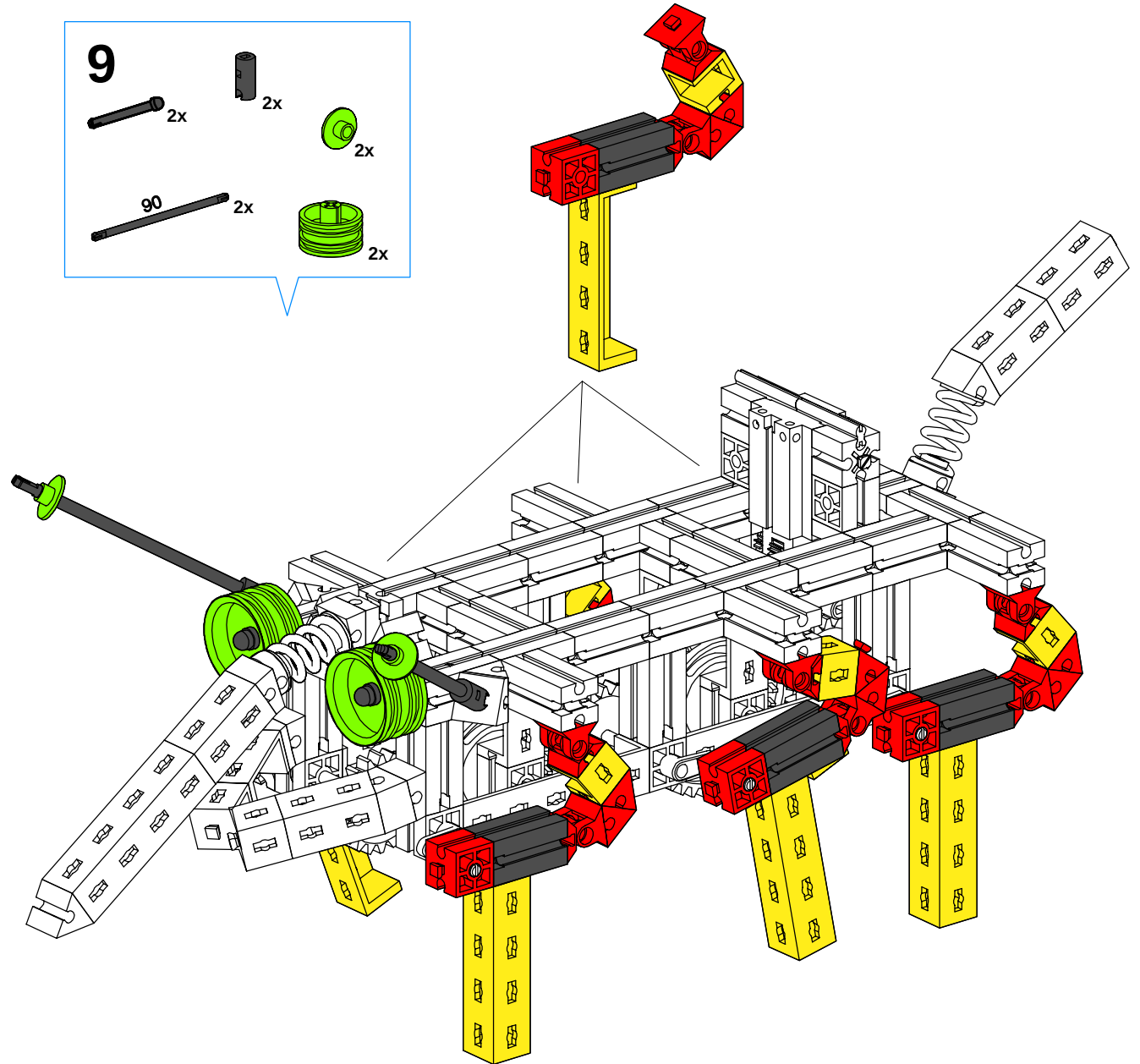
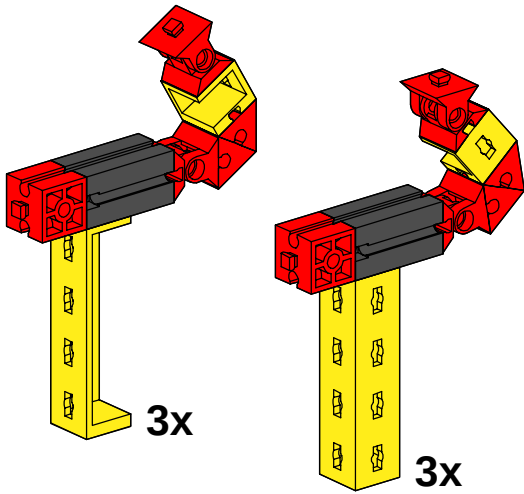
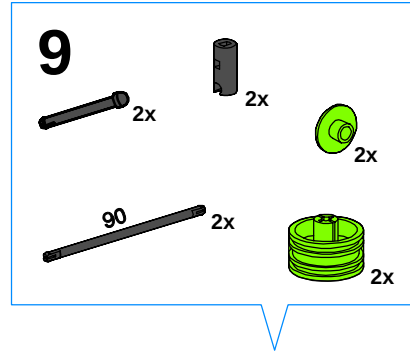
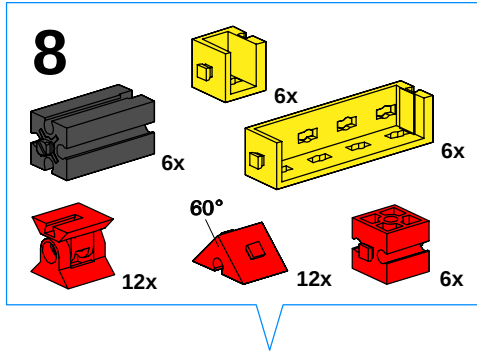
- **Kurbelstellungen beim Einbau beachten und Nabenmuttern festdrehen**
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- Let bij de montage op de juiste positie van de krukken en draal de naafmoeren vast
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- Tener en cuenta las posiciones del cigüeñal y de las tuercas laterales durante el montaje

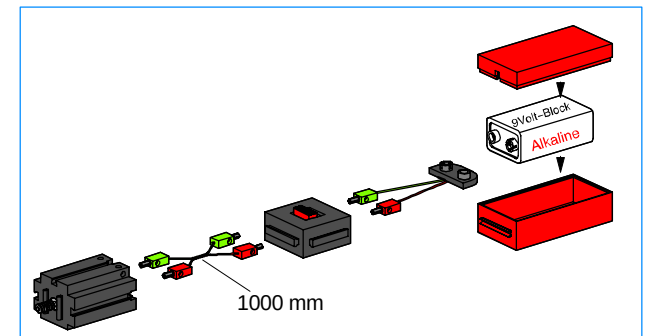
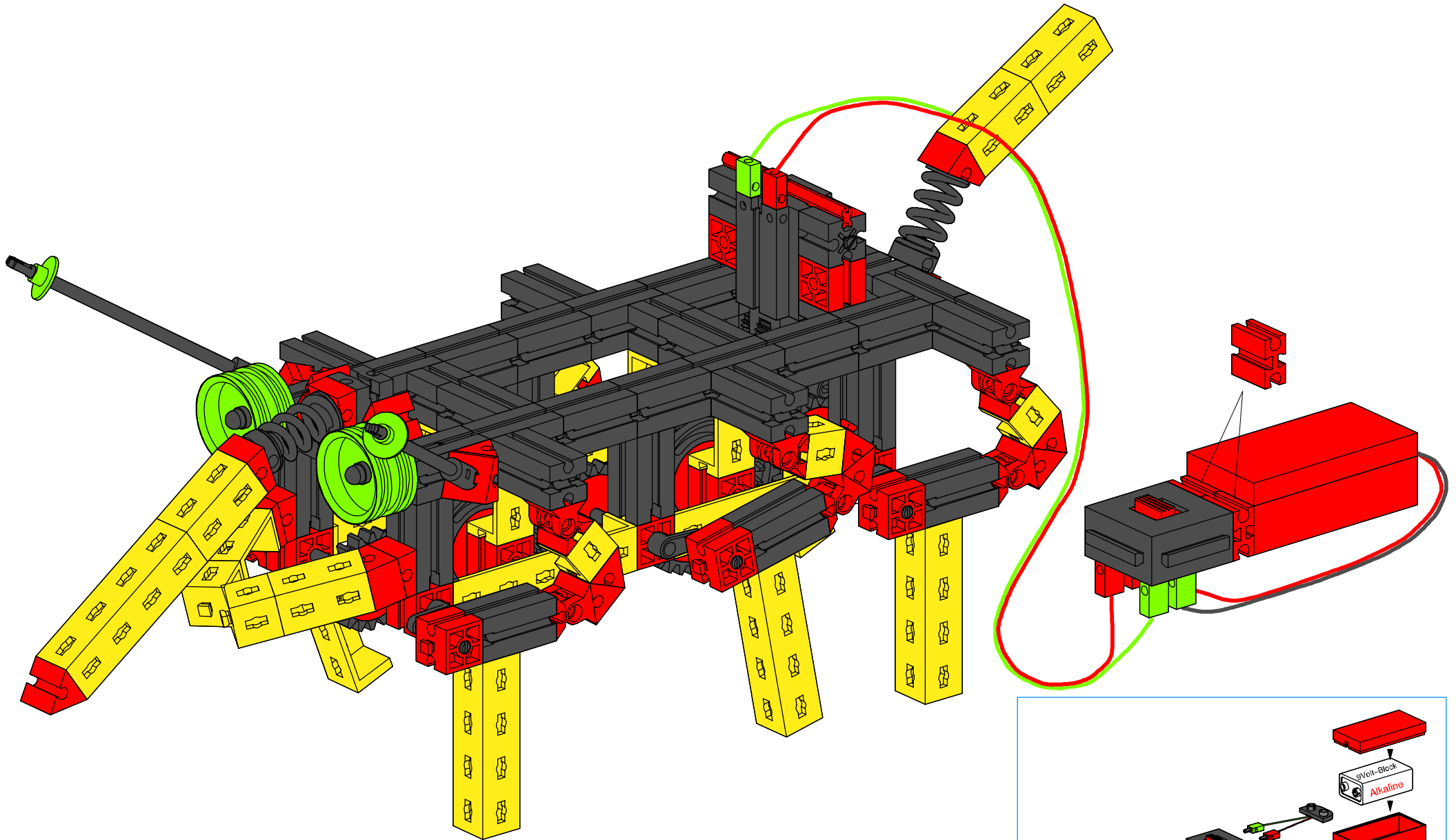


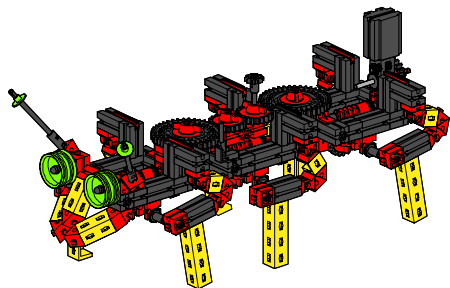




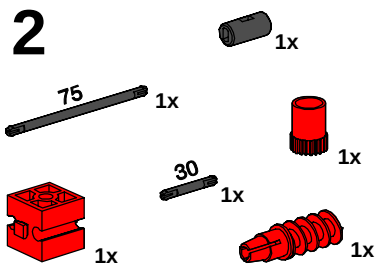
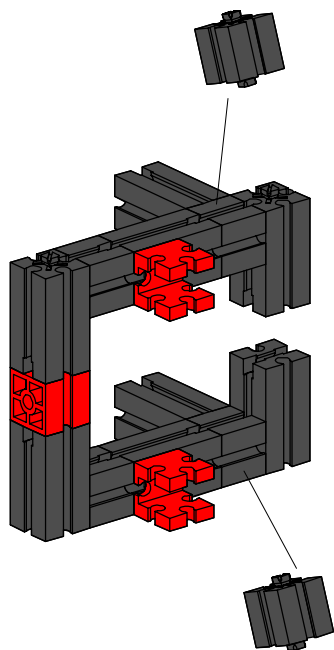
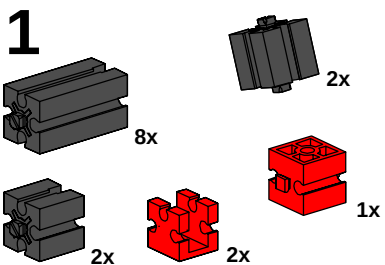




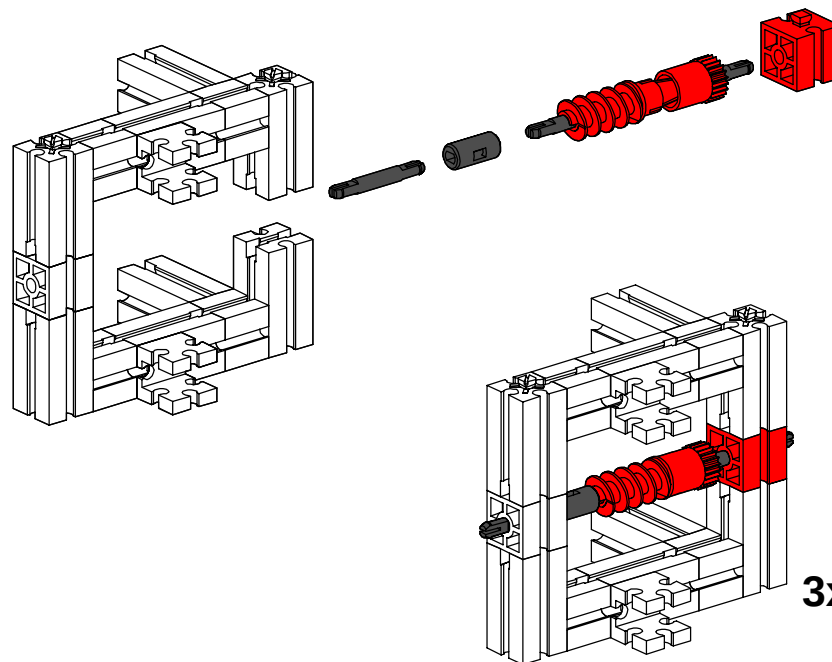


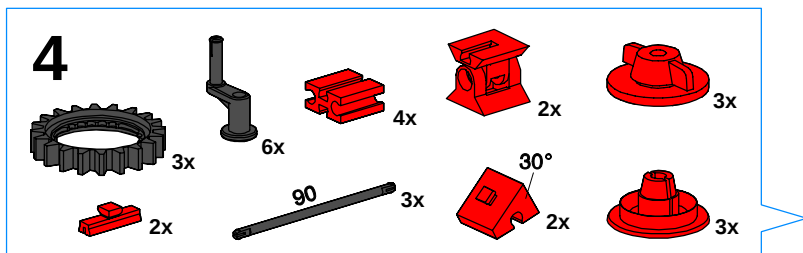
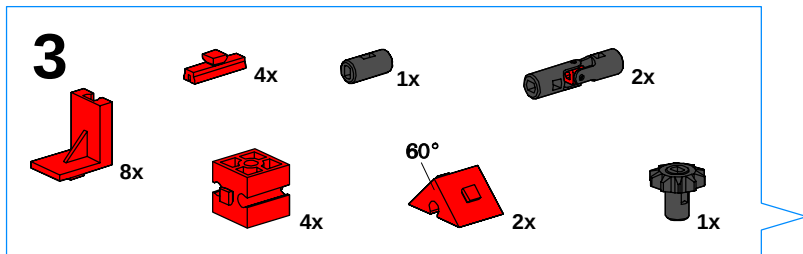


## Herbie

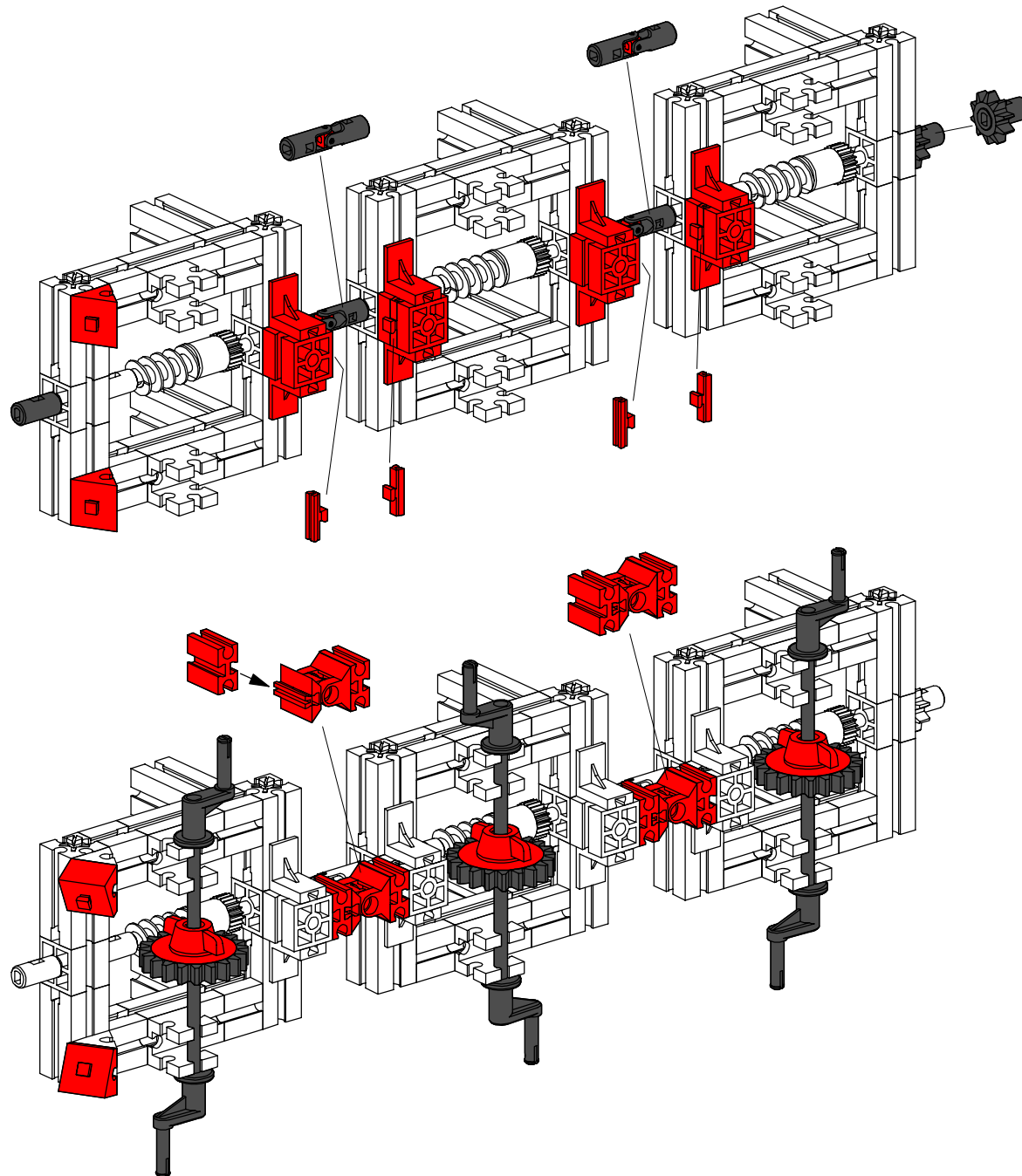
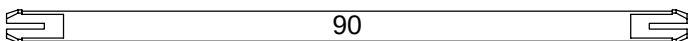


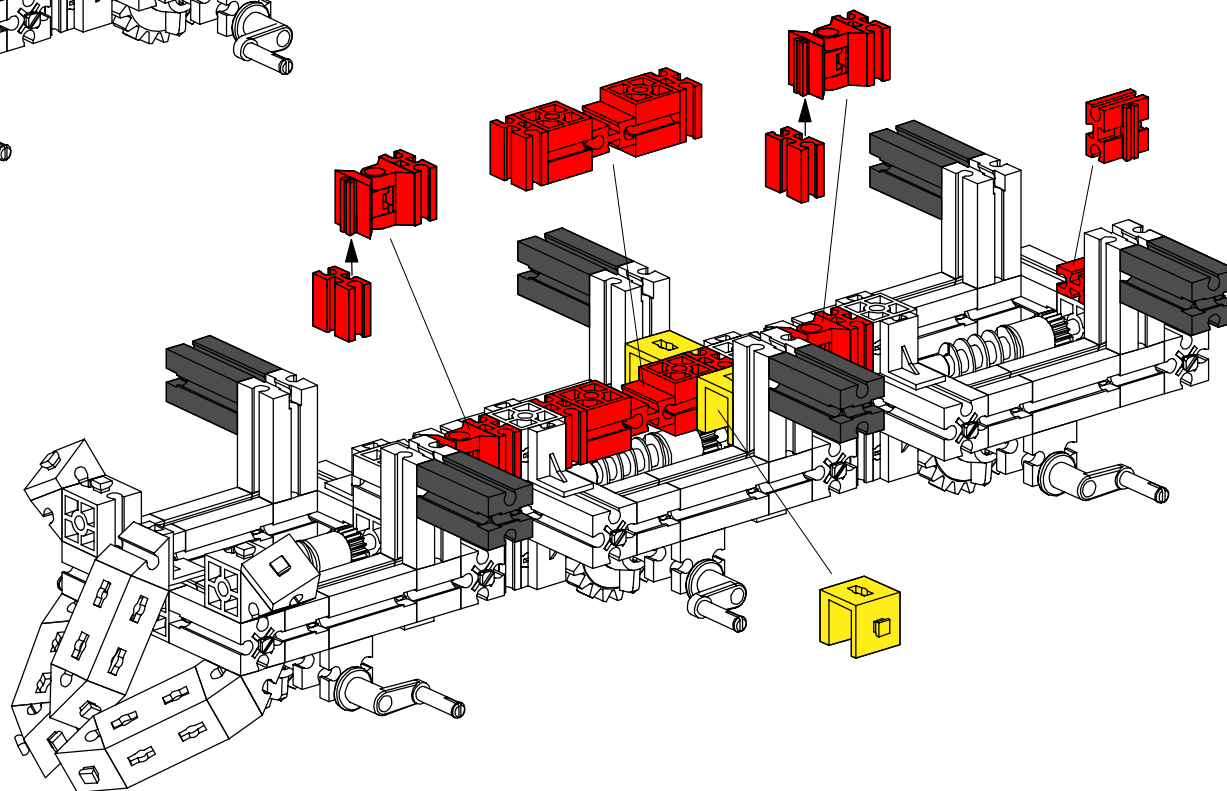
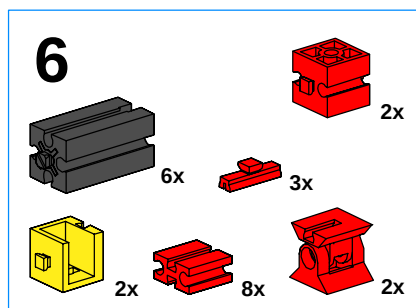
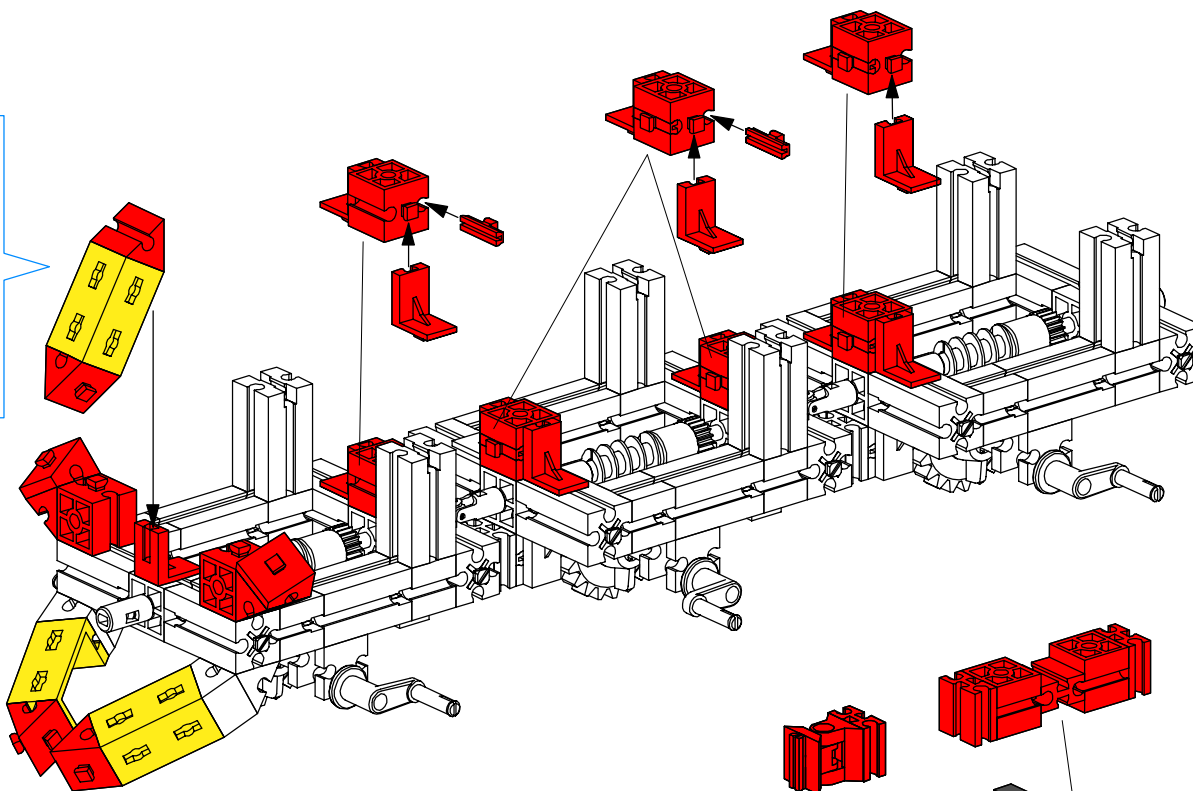
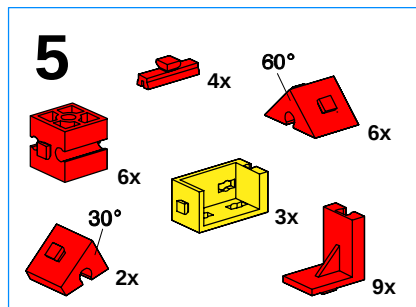
- **Zangenmutter festdrehen**
- Fasten the worm hub nut
- Serrer l'écrou-prince
- Draal de tangmoer vast
- Stringere bene il dado della pinza
- Atornillar la tuerca de alicates



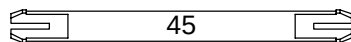
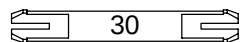
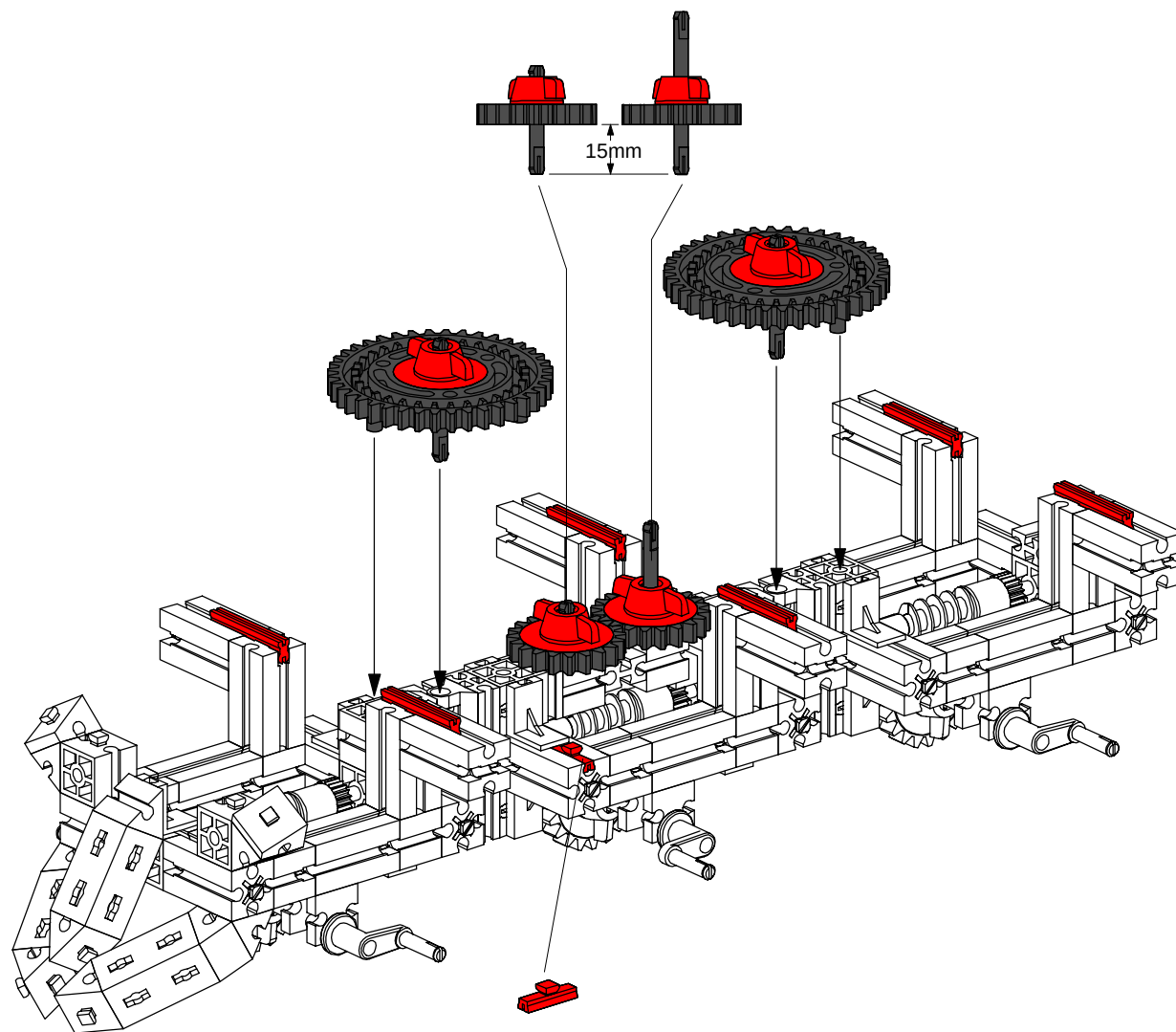
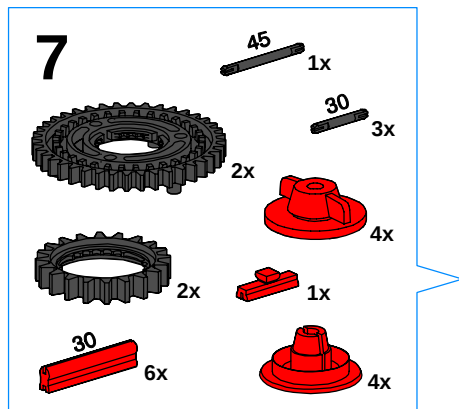


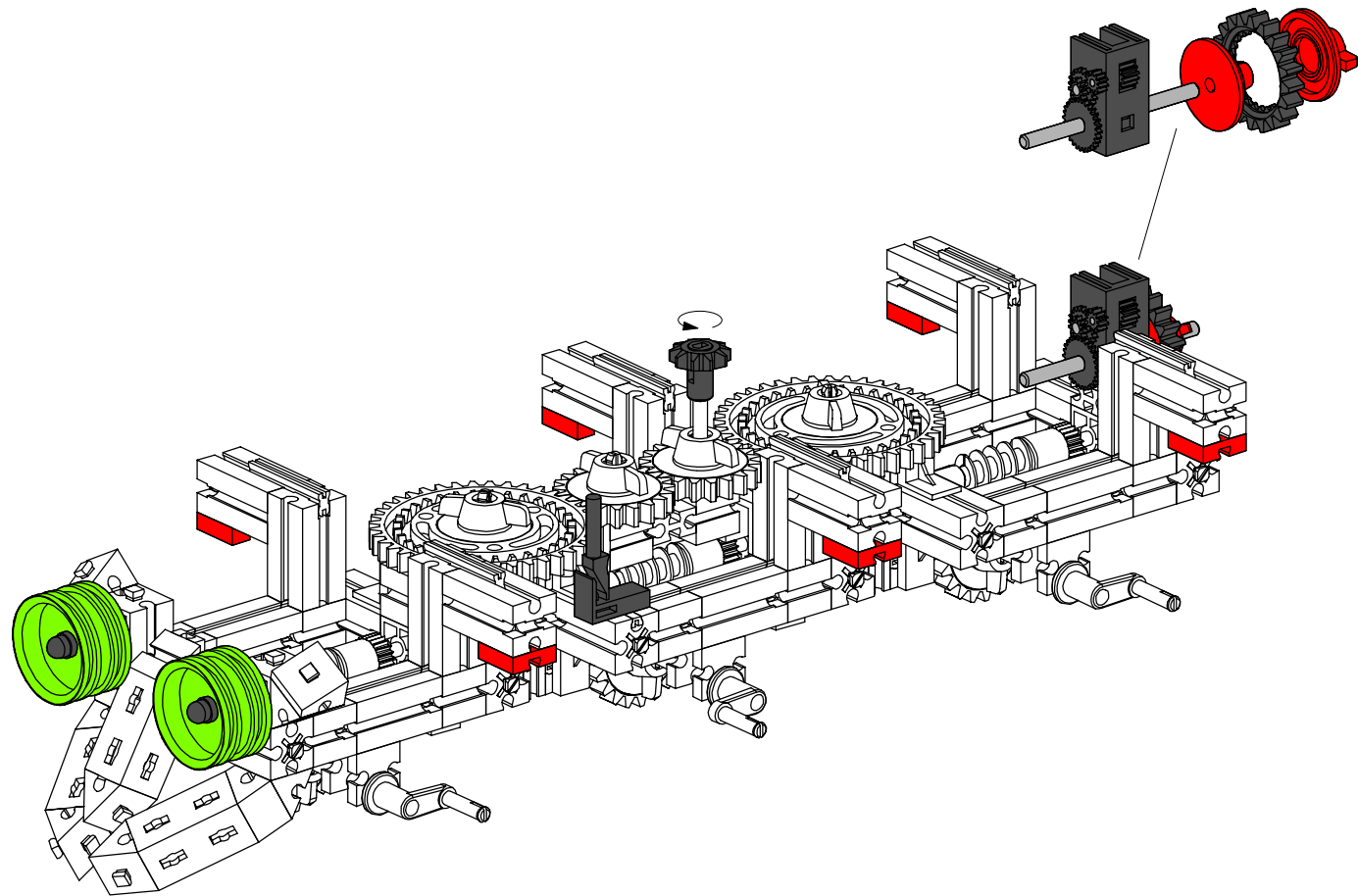
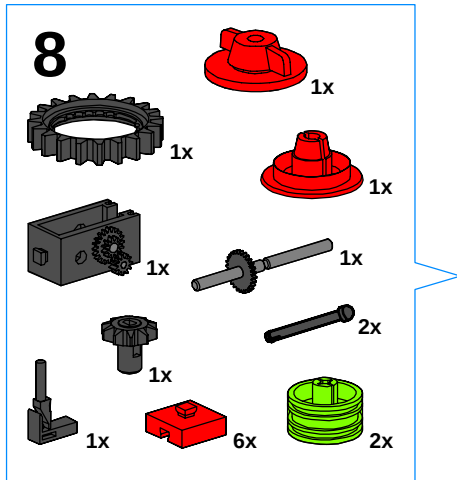
- 
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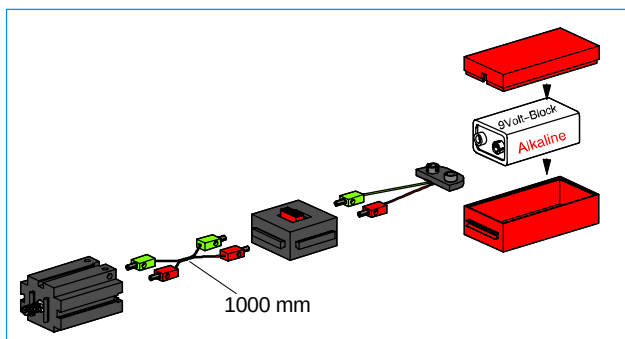
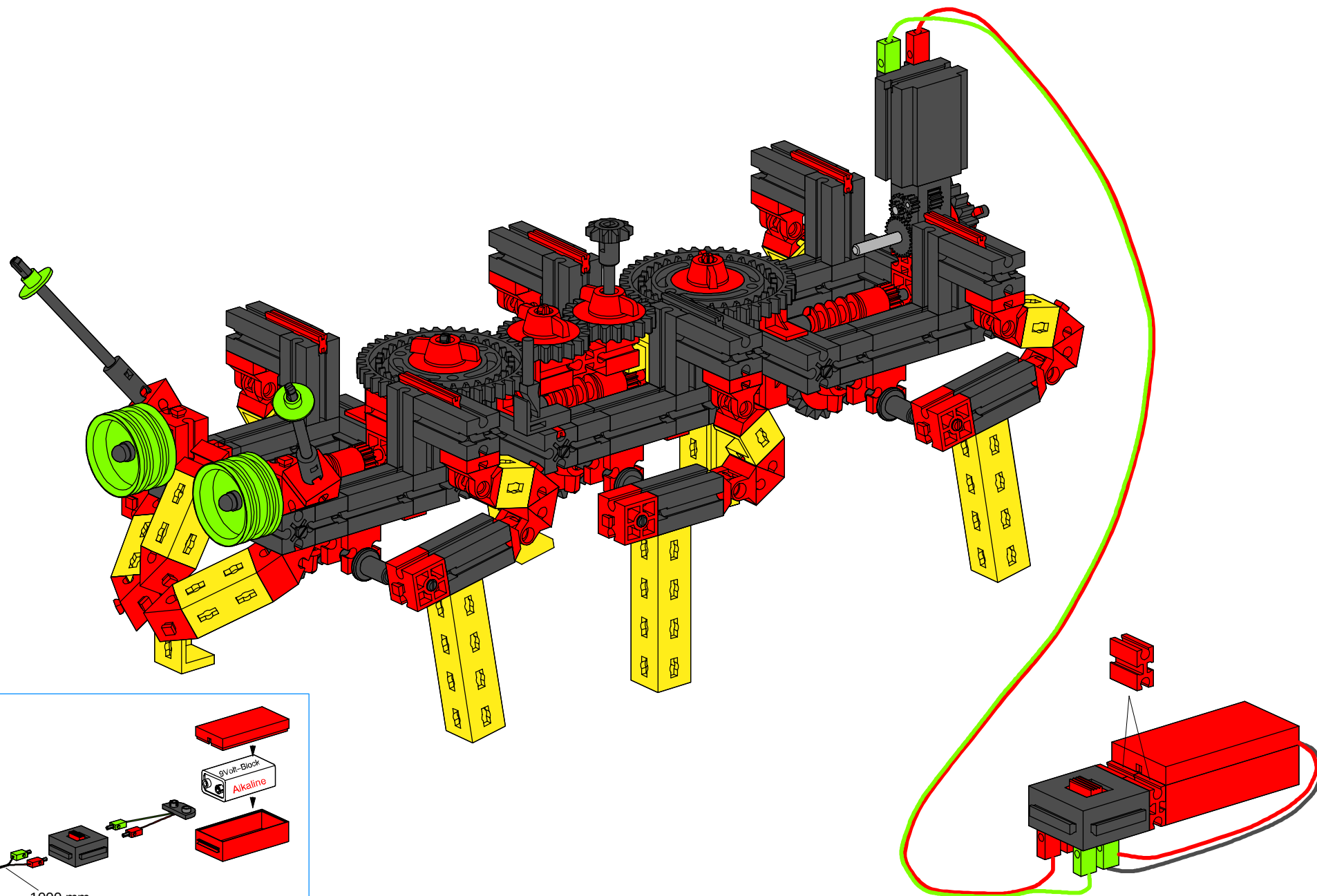






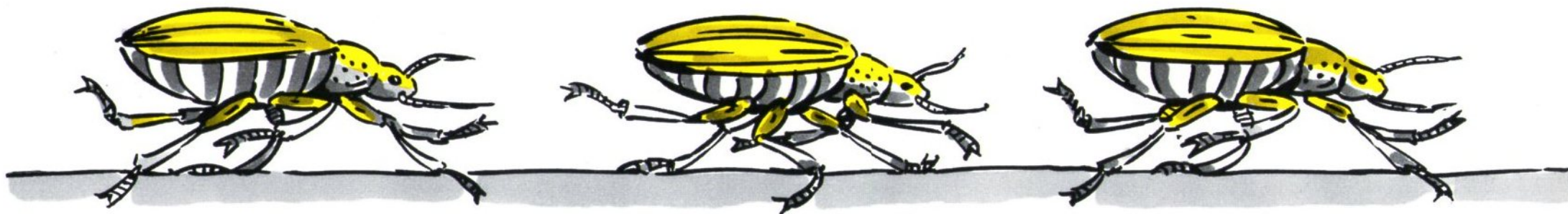








# C H A R L Y , H E N R Y , H E R B I E



Dreifußgang / Hexapodal gait / Pas hexapode / Driepootsgang / Paso en tres pies / Marcia a tre piedi



Die drei sechsbeinigen Modelle – Charly, Herbie und Henry – bewegen sich nach dem Vorbild der Insekten. Die Gangart heißt Dreifußgang, weil immer drei der sechs Beine gleichzeitig vom Boden abheben, und zwar das vordere und hintere Bein der einen Seite zusammen mit dem mittleren Bein der anderen Seite.

Henry überquert mühelos kleine Hindernisse. Charly läuft sehr elegant und schnell. Herbie kriecht etwas gemächlicher, ist aber dafür in der Lage, Kurven zu laufen.

The three six-legged models, Charlie, Herbie and Henry, move in the same way as insects. This gait is called the hexapodal gait: three of the six legs are always on the ground, i.e. the front and rear legs on one side and the middle leg on the other side.

Henry can negotiate small obstacles without any difficulty. Charlie walks very elegantly and quickly. Herbie creeps a little more leisurely but he can go around curves.

Ces trois modèles à 6 pattes, Charly, Herbie et Henry, se meuvent à la manière des insectes. Leur déplacement se caractérise par le fait que trois des six pattes se trouvent toujours en l'air en même temps, à savoir: les pattes avant et arrière d'un même côté ainsi que la patte centrale de l'autre côté.

Henry franchit sans peine les petits obstacles. Charly se déplace vite et avec une grande élégance. Herbie est un peu plus nonchalant, mais il est capable de marcher en tournant.

De drie zesbenige modellen – Charly, Herbie en Henry – bewegen zich voort naar het voorbeeld van de insecten. De manier van voortbewegen heet driepootsgang, omdat telkens drie van de zes benen gelijktijdig de grond aanraken, en weliswaar het voorste en het achterste been van de ene kant samen met het middelste been van de andere kant.

Henry bedwingt moeiteloos kleine hindernissen. Charly loopt zeer elegant en snel. Herbie kruipt iets trager, maar is daarentegen in staat bochten te lopen.

Los modelos de seis patas, es decir, Charly, Herbie y Henry, se mueven imitando a los insectos. Este tipo de marcha se denomina paso en tres patas ya que, al andar, se levantan simultáneamente tres de las seis patas, es decir, la pata delantera y la pata trasera de un lado, junto con la pata del medio del otro lado.

Henry supera sin ninguna dificultad los pequeños obstáculos. Charly anda muy rápida y elegantemente. Herbie se arrastra con más dificultad, pero puede andar también en las curvas.

I tre modelli a sei gambe – Charly, Henry e Herbie – si muovono come gli insetti. Il tipo di movimento si chiama andatura a tre piedi, perché si alzano sempre contemporaneamente tre gambe da terra e cioè la gamba anteriore e posteriore di un lato insieme alla gamba media dell'altro. Henry supera piccoli ostacoli senza problemi. Charly cammina in modo molto elegante e veloce. Herbie striscia più tranquillamente ma è in grado di fare le curve.



fischerwerke Artur Fischer GmbH & Co.KG  
D-72178 Waldachtal · Telefon (07443) 12-490



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