

PROFI E-Tec

fischertechnik GmbH

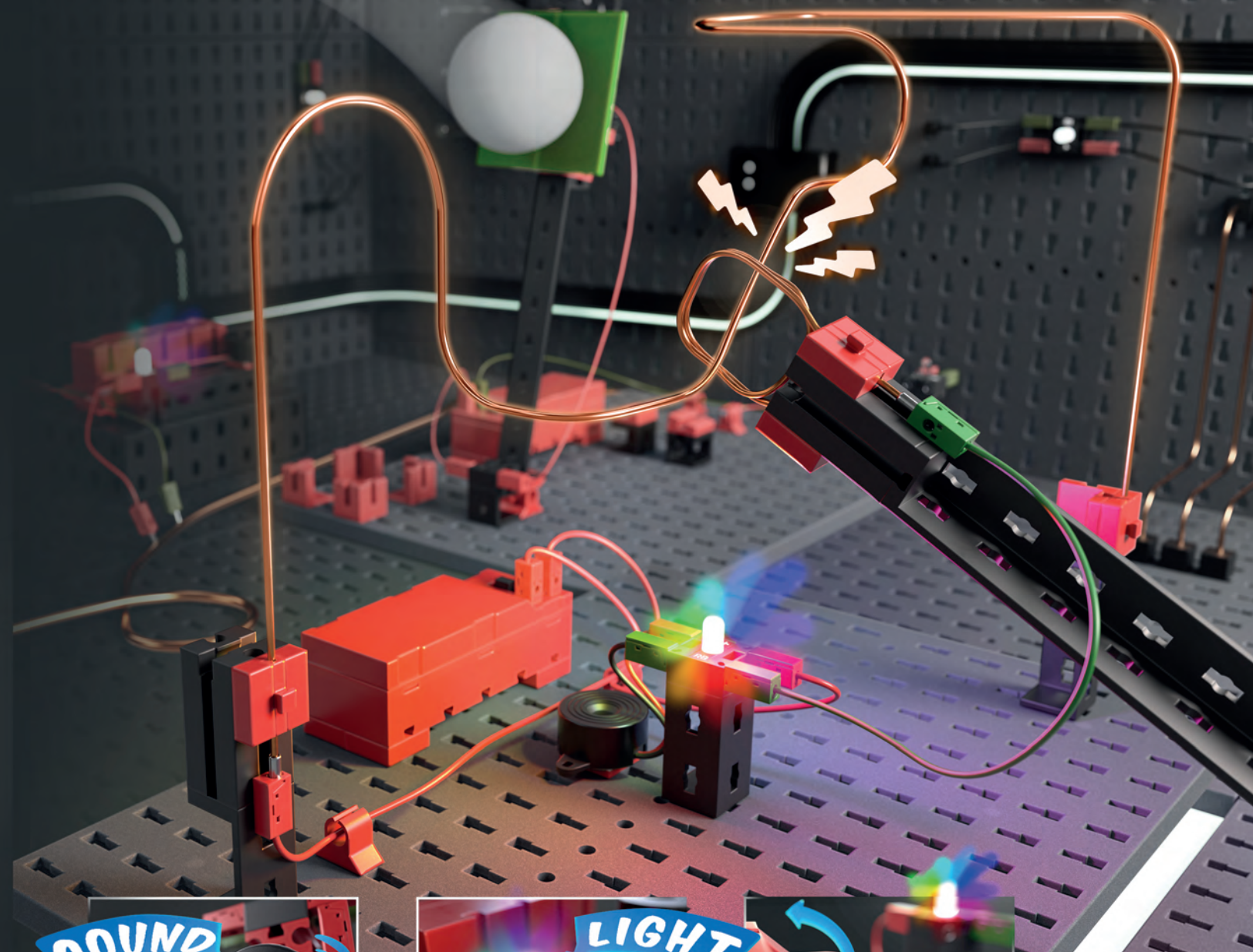
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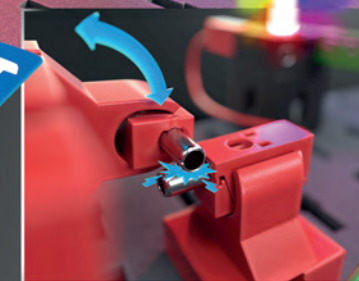
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Bauanleitung
Assembly instruction
Instructions de montage
Bouwhandleiding
Instrucciones de construcción

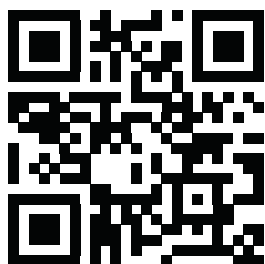
Manual de montagem
Istruzioni di montaggio
Инструкция по сборке
安装说明书

PROFI E-Tec

MODELS

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eLearning



- Mit dem fischertechnik eLearning geben wir dir die Möglichkeit, noch mehr Hintergrundwissen zum Thema des Baukastens zu erhalten. Über **<http://www.fischertechnik.de/e-learning/e-tec>** gelangst du direkt zum Portal.
- The fischertechnik eLearning provides even more background knowledge on the topic of the building set. You can access the portal directly at **<http://www.fischertechnik.de/e-learning/e-tec>**
- Avec le e-learning fischertechnik, nous t'offrons la possibilité d'acquérir encore plus de connaissances de base au sujet du kit de construction. Tu peux accéder directement au portail via le lien **<http://www.fischertechnik.de/e-learning/e-tec>**.
- Met het fischertechnik eLearning geven wij jou de mogelijkheid, om meer achtergrondkennis over het thema van de bouwdoos te verkrijgen. Via **<http://www.fischertechnik.de/e-learning/e-tec>** kom je rechtstreeks op het portaal.
- Con el eLearning de fischertechnik, te damos la posibilidad de obtener aún más conocimientos básicos sobre el tema del kit de montaje. Para acceder al portal, accede en **<http://www.fischertechnik.de/e-learning/e-tec>**
- Com o aprendizagem virtual da fischertechnik, oferecemos a oportunidade de obter conhecimentos adicionais sobre os tópicos do kit de montagem. Acesse o portal diretamente através do endereço **<http://www.fischertechnik.de/e-learning/e-tec>**.
- Con il eLearning fischertechnik, offriamo la possibilità di ottenere ancora maggiori conoscenze specifiche sul tema delle costruzioni. Dalla pagina **<http://www.fischertechnik.de/e-learning/e-tec>** puoi accedere direttamente al portale.
- На обучающем интернет-портале компании fischertechnik вы получите еще больше базовых знаний по теме конструирования. Ссылка **<http://www.fischertechnik.de/e-learning/e-tec>** ведет прямо на портал.
- 通过 fischertechnik 线上学习门户，我们让您能有机会了解更多有关该模块主题的背景知识。可通过 **<http://www.fischertechnik.de/e-learning/e-tec>** 直接前往该门户。



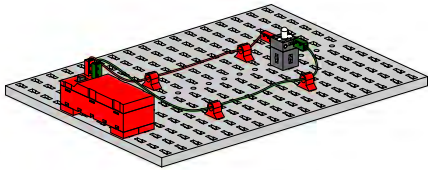
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- Hazte miembro del club de aficionados gratuito de fischertechnik y disfruta de todas las ventajas. Regístrate en **www.fischertechnik.de/FanClub**.
- Torne-se um membro do fã-clube da Fischertechnik gratuitamente e desfrute de todas as vantagens. Basta registrar-se em **www.fischertechnik.de/FanClub**.
- Diventa membro del fan club gratuito di fischertechnik e sfrutta tutti i vantaggi. Basta registrarsi a **www.fischertechnik.de/FanClub**.
- Стань членом бесплатного фан-клуба fischertechnik и пользуйся преимуществами. Для этого просто зарегистрируйся по адресу **www.fischertechnik.de/FanClub**.
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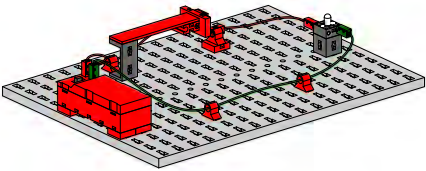
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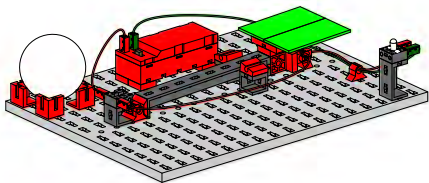
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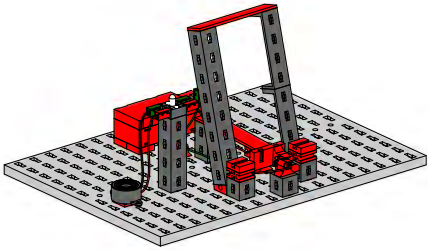
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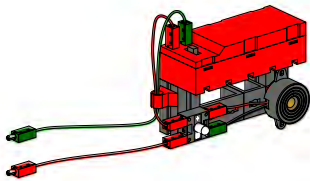
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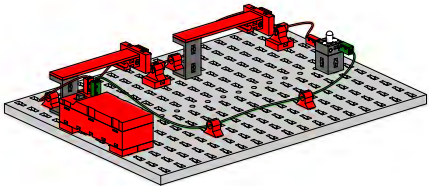
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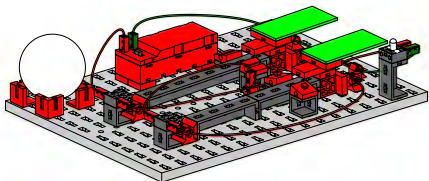
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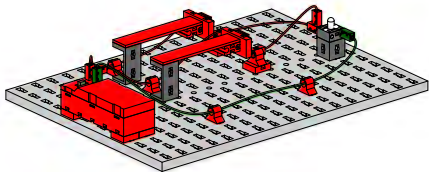
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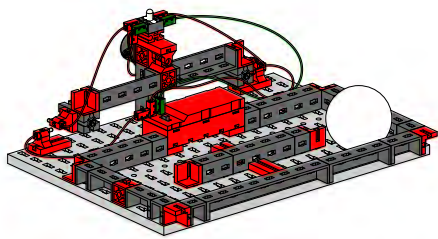


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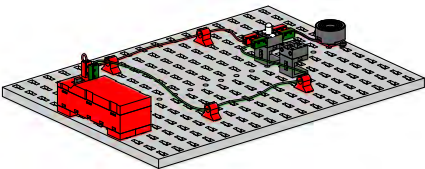
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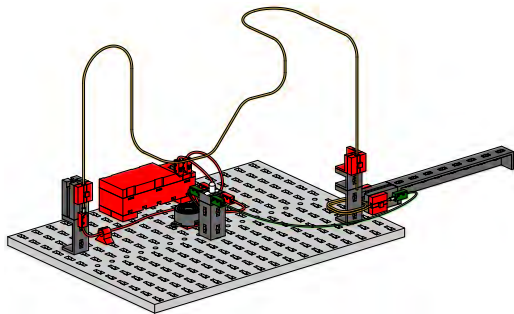
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Einzelteilübersicht
Spare parts list









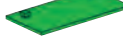
Liste des pièces détachées

	31 426 2 x
	31 436 2 x
	31 981 4 x
	31 982 4 x
	32 064 4 x
	32 879 2 x
	35 049 5 x
	35 608 3 x
	35 969 8 x

Onderdelenoverzicht
Lista da piezas



Resumo de peça individual

	36 293 1 x
	36 920 7 x
	36 921 6 x
	36 922 5 x
	36 950 4 x
	37 034 1 x
	37 237 4 x
	37 238 4 x
	37 468 3 x

	38 216 2 x
	38 240 8 x
	38 244 2 x
	38 246 1 x
	38 428 4 x
	135 719 1 x
	146 375 1 x
	147 009 1 x
	152 249 2 x

Singoli componenti
Перечень деталей

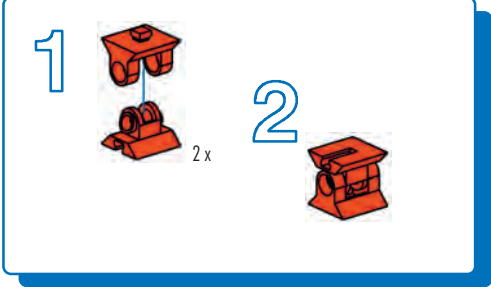
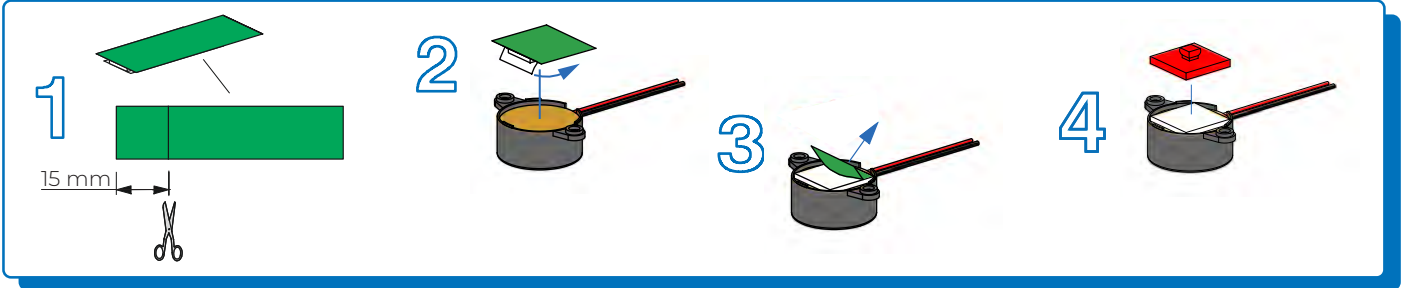
零件概览

	162 136 1 x
	181 583 3 x
	181 584 13 x
	200 921 1 x
	208 543 1 x
	210 049 1 x
	210050 1 x

Montagetipps
Tips for assembly
Tuyaux pour le montage

Montagetipps
Consejos para el montaje
"Dicas" para montagem

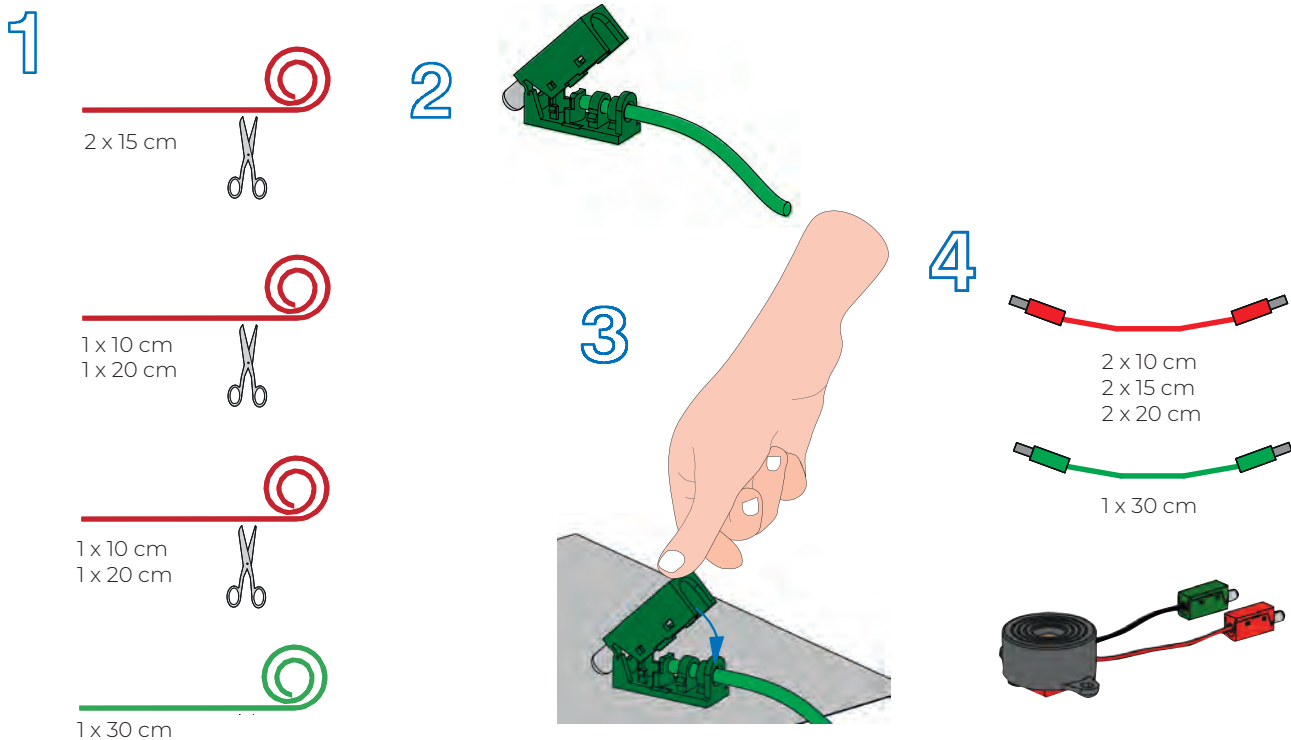
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Montagetipps
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"Dicas" para montagem

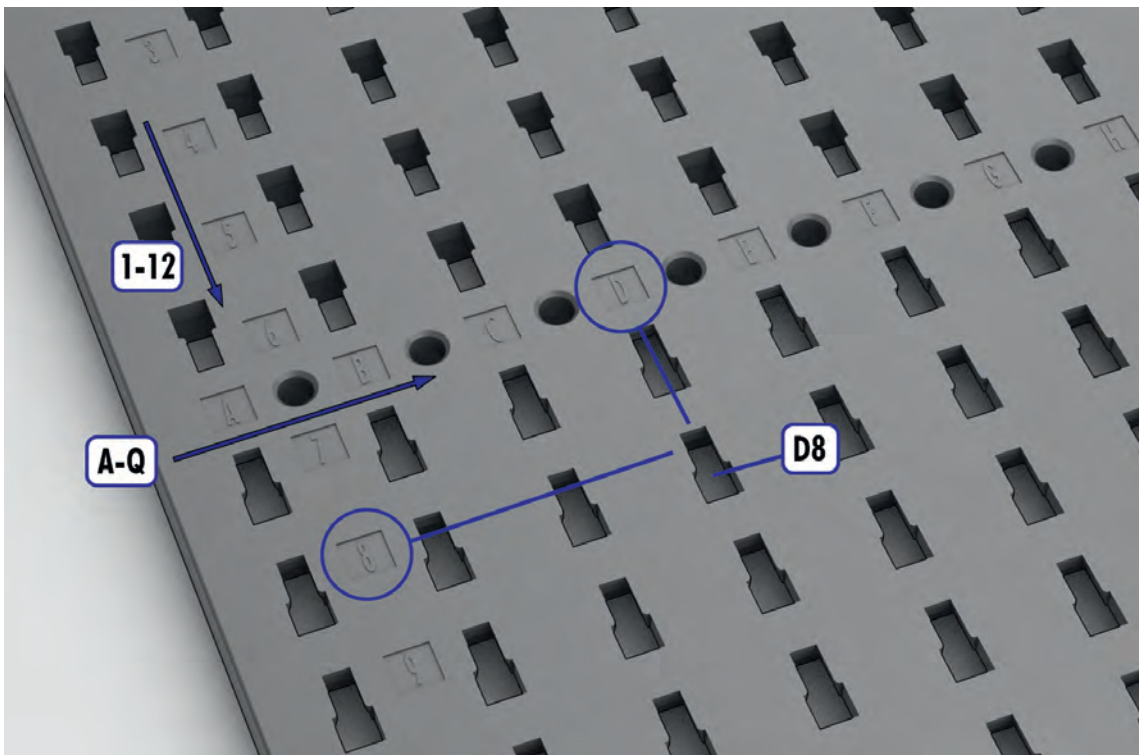
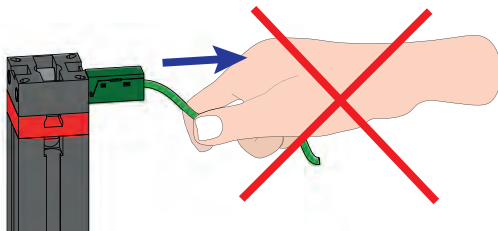
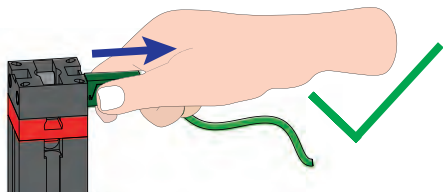
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Советы по сборке
装配建议



Nicht am Kabel ziehen
Do not pull on the cable
Ne pas tirer sur le câble

Trek niet aan de kabel
No tire del cable
Não puxe o cabo

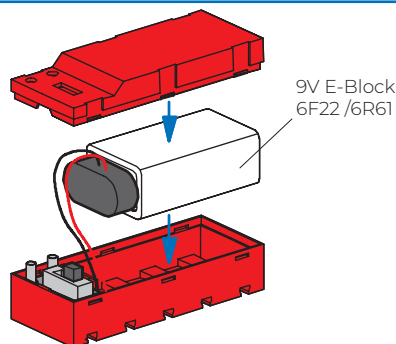
Non tirare il cavo
Не тяните за кабель
不要拉扯电缆



Sicherheitshinweise Safety Information Consignes de sécurité

Veiligheidsrichtlijnen Indicaciones de seguridad Observações sobre segurança

Informazioni per la sicurezza Указания по технике безопасности 安全指南



- Nicht wiederaufladbare Batterien dürfen nicht geladen werden
- Aufladbare Batterien dürfen nur von Erwachsenen geladen werden
- Aufladbare Batterien sind aus dem Batteriehalter herauszunehmen, bevor sie geladen werden.
- Batterien müssen mit der richtigen Polarität eingelegt werden.
- Leere Batterien müssen aus dem Spielzeug herausgenommen werden
- Die Anschlussklemmen dürfen nicht kurzgeschlossen werden.
- Verbrauchte Batterien dem Sondermüll zuführen.
- Drähte nicht in Steckdose einführen!
- Ladegerät regelmäßig auf Schäden überprüfen. Bei einem Schaden darf das Ladegerät bis zur vollständigen Reparatur nicht mehr verwendet werden.
- Alle elektrischen Bauteile (Motoren, Lampen) dürfen ausschließlich an Stromversorgungen von fischertechnik angeschlossen werden.

- Do not attempt to charge NON-rechargeable batteries.
- Rechargeable batteries are only to be charged by adults.
- Take rechargeable batteries out of the battery tray before charging them.
- Insert batteries with the correct polarity.
- Remove dead batteries from the toy.
- Do not short circuit the connecting terminals!
- Discard spent dry cells at special waste disposal centre.
- Do not insert the wires into an outlet!
- Regularly inspect battery charger for damage. If the battery charger has been damaged, it should not be used further until fully repaired.
- No electrical components (motors, lamps) are to be connected to any other power supply than that provided by fischertechnik.

- Il est interdit de recharger des piles qui ne sont pas des accumulateurs
- Le chargement des accumulateurs doit toujours se faire par des adultes
- Retirer les accumulateurs du support de pile avant de les recharger.
- Veiller à la polarité correcte lors de la mise en place des piles.
- Retirer impérativement les piles ou accumulateurs vides du jouet.
- Il est interdit de court-circuiter les bornes de raccordement.
- Jeter les piles usagées dans un conteneur spécial réservé à cet effet.
- Ne pas introduire les fils dans une prise !
- Contrôlez régulièrement le chargeur en vue d'éventuelles détériorations
- En cas de détérioration, il est interdit d'utiliser le chargeur jusqu'à ce qu'il ait été intégralement réparé
- Tous les composants électriques (moteurs, lampes) ne doivent être branchés aux alimentations électriques uniquement que par la société fischertechnik.

- Niet-oplaadbare batterijen mogen niet worden opgeladen.
- Oplaadbare batterijen mogen uitsluitend door volwassenen worden opgeladen.
- Oplaadbare batterijen moeten uit de batterijhouder worden verwijderd, voordat deze worden opgeladen.
- De batterijen moeten met de juiste polariteit worden geplaatst.
- Lege batterijen moeten uit het speelgoed worden verwijderd.
- De aansluitklemmen mogen niet worden kortgesloten.
- Afleveren gebruikte batterijen bij het klein chemisch afval (KCA).
- Geen draden in de contactdoos steken!
- Laadtoestel regelmatig controleren op schade. Bij schade mag het laadtoestel niet meer gebruikt worden tot het volledig hersteld is.
- Alle elektrische componenten (motoren, lampen) mogen uitsluitend op stroomvoorzieningen van fischertechnik worden aangesloten.

- Las pilas no recargables no pueden ser cargadas
- Las pilas recargables sólo pueden ser cargadas por un adulto
- Las pilas recargables deben ser extraídas del compartimiento de pilas antes de que sean cargadas.
- Las pilas deben ser colocadas con la polaridad correcta.
- Las pilas descargadas deben ser extraídas del juguete
- Los bornes de conexión no pueden ser puestos en cortocircuito.
- Retirar las baterías viejas, desechándolas en un depósito de basuras especiales.
- No introducir hilos en la toma de corriente!
- Comprobar con regularidad si el cargador presenta daños. En caso de presentar daños, el cargador no debe volver a ser utilizado hasta que esté completamente reparado.
- Todos los componentes eléctricos (motores, luces) deben conectarse a la alimentación de corriente de la técnica fischer exclusivamente.

- Pilhas não recarregáveis não devem ser novamente carregadas.
- Pilhas recarregáveis somente devem ser recarregadas por adultos.
- Pilhas recarregáveis devem ser retiradas do compartimento de pilhas antes de serem carregadas.
- As pilhas devem ser colocadas com a polaridade correta.
- As pilhas descarregadas devem ser retiradas do brinquedo.
- Os terminais de conexão não devem ser curto-circuitados.
- Eliminar as baterias esgotadas como desperdício perigoso
- Nunca introduzir fios na tomada!
- Verificar regularmente se o carregador apresenta danos. Em caso de dano, o carregador não deverá ser utilizado enquanto não estiver plenamente consertado.
- Todas as peças componentes elétricas (motores, lâmpadas) só podem ser exclusivamente conectadas em abastecimentos de corrente da fischertechnik.

- Le batterie non ricaricabili non devono essere ricaricate
- Le batterie ricaricabili devono essere ricaricate da persone adulte
- Le batterie ricaricabili si devono estrarre dal supporto prima di ricaricarle.
- Le batterie si devono inserire rispettando la polarità.
- Togliere le batterie dal giocattolo quando sono scariche
- I morsetti di allacciamento non devono essere cortocircuitati.
- Smaltire le batterie usate negli appositi contenitori per la raccolta differenziata.
- Non inserire i fili nella presa elettrica.
- Controllare periodicamente se il caricabatterie presenta dei danni. In caso di danni, il caricabatterie non deve più essere utilizzato fino alla riparazione.
- Tutti i componenti elettrici (motori, lampadine) devono essere collegati esclusivamente ad alimentatori fischertechnik.

- Не пытайтесь заряжать непerezаряжаемые батарейки.
- Зарядку перезаряжаемых аккумуляторов разрешается выполнять только взрослым.
- Перед зарядкой перезаряжаемых аккумуляторов извлеките их из аккумуляторного отсека.
- При установке аккумуляторов на место соблюдайте полярность.
- Разряженные батарейки необходимо извлечь из игрушки.
- Не замыкайте накоротко соединительные клеммы.
- Использованные батареи утилизировать как спецотходы.
- Не вставляйте в розетку провода!
- Регулярно проверяйте зарядное устройство на отсутствие повреждений. При наличии повреждений использовать зарядное устройство до выполнения его полного ремонта не разрешается.
- Все электрические детали (электромоторы, лампочки) можно подключать только к источникам электропитания от fischertechnik.

- 不得给非充电电池充电
- 只允许由成年人给充电电池充电
- 在充电前必须将充电电池从电池夹中取出。
- 必须按照正负极正确放入电池。
- 必须从玩具中取出没有电的电池
- 接线柱不允许被短路。
- 用完了的电池应作为特种垃圾处理。
- 禁止将金属丝插入插座！
- 经常检查充电器是否有损坏情况。如果充电器有损，直到完全修好为止不可以再使用。
- 只允许将所有电气部件（传感器，电机，灯泡）与慧鱼技术产品的电源装置相连接

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- Lies die Anleitung vor Versuchsbeginn, befolge sie und halte sie nachschlagebereit.
- Bewahre den Experimentierkasten außerhalb der Reichweite von kleinen Kindern auf.
- Alle Einzelteile, insbesondere bewegliche Teile sind falls notwendig zu warten und zu reinigen.
- Achtung! Verletzungsgefahr an Bauteilen mit funktionsbedingten scharfen Kanten und Spitzen!
- Read these instructions before starting experiments; ensure they are followed and kept readily available for reference.
- Keep the experiment kit out of reach of small children.
- All components, especially moving parts, should be maintained and cleaned as necessary.
- Caution! Be careful not to hurt yourself on components with sharp or pointed edges!
- Lisez le mode d'emploi avant de commencer les essais, suivez-le et maintenez-le à disposition afin que vous puissiez le consulter à tout moment.
- Rangez la boîte expérimentation hors de portée de mains des enfants en bas âge.
- Toutes les pièces détachées et en particulier les pièces mobiles, sont, si nécessaire, à entretenir et à nettoyer.
- Attention! Risque de blessure sur les éléments comportant des arêtes et o pointes vives indispensables au bon fonctionnement!
- Lees de gebruiksaanwijzing voor het begin van het experiment door, volg de aanwijzingen erin op en

- houd haar binnen handbereik voor als u het niet meer weet.
- Houd de experimenteerdoos uit de buurt van kleine kinderen.
- Alle onderdelen, vooral de bewegende delen, kunnen, indien noodzakelijk, onderhouden en gereinigd worden.
- Let op! U kunt zich bezeren aan bouwstenen met scherpe randen of punten!
- Lee estas instrucciones antes de iniciar el ensayo, cúmplelas y tenlas a mano para consultas.
- Guarda la caja de experimentación fuera del alcance de niños pequeños.
- Es necesario limpiar y mantener en buen estado todas las diferentes piezas - especialmente las piezas móviles.
- Attenzione! Esiste il pericolo di lesione con i pezzi di costruzione che hanno bordi e punte spigolosi necessari per la funzionalità del pezzo!
- Leia as instruções antes do início do experimento, observe-as e mantenha-as sempre à mão para verificação.
- Guarde a caixa de experimentos fora do alcance de crianças pequenas.
- Caso necessário, todas as peças individuais, especialmente peças móveis, tem que ser submetidas à manutenção e ser limpas.
- Atenção! Perigo de ferimentos em peças componentes com cantos vivos e pontas obrigatórios para o funcionamento!

- Leggi le istruzioni prima di iniziare l'esperimento, rispettele e tienile a portata di mano per poterle consultare in caso di bisogno.
- Conserva la cassetta di sperimentazione lontano dalla portata dei bambini piccoli.
- Se necessario, tutti i singoli componenti, soprattutto le parti mobili, si devono eventualmente sottoporre a manutenzione e pulizia.
- Attenzione! Pericolo di lesioni dovute a componenti con spigoli vivi e punte per motivi funzionali!
- Прочитай инструкцию до начала эксперимента, выполняй её требования и держи наготове, чтобы обратиться к ней при необходимости.
- Храни набор для экспериментов в месте, недоступном для маленьких детей.
- Все детали, особенно подвижные, требуют ухода и чистки.
- Будьте осторожны! Об острые края деталей и и наконечники можно порезаться!
- 请在使用前阅读说明书，并遵守及妥善保管，以备将来参考。
- 实验构件要存放在幼儿够不到的地方。
- 必要时应保养和清洁所有零件，尤指运动部件。
- 注意！因功能需要而带有锋利的棱边和尖角的部件可能会带来受伤危险！

- Das Produkt darf nur mit einer der folgenden fischertechnik Energiequellen benutzt werden: Art-Nr.: 135719 Batteriehalter 9V oder Art-Nr.: 35537 Accu Pack 8,4V
- The product may only be used with one of the following fischertechnik energy sources: Art No.: 135719 battery tray 9V or Art No.: 35537 Accu Pack 8.4V. You are not allowed to use 9V NiMH accu packs in this product.
- L'utilisation de ce produit n'est permis qu'avec l'une des sources d'énergie fischertechnik suivantes: Art. n° : 203864 support de pile 9 volts ou Art. n° : 35537 pack d'accumulateurs 8,4 volts.
- Het product mag uitsluitend met een van de volgende fischertechnik energiebronnen worden gebruikt: art.nr.: 135719 batterijhouder 9V of art.nr.: 35537 accupack 8,4V.
- El producto se debe utilizar únicamente con una de las siguientes fuentes de energía: Art. No. 135719 soporte de pila de 9V o Art. No. 35537 paquete acumulador de 8,4V.

- O produto somente pode ser utilizado com uma das seguintes fontes de energia da fischertechnik: art. n°: 135719 Suporte de bateria de 9 V ou art. n°: 35537 Bloco de bateria de 8,4V.
- Questo prodotto può essere utilizzato solo con le seguenti fonti di energia fischertechnik: cod. prod.: 135719 portabatteria da 9V oppure cod. prod.: 35537 confezione batterie da 8,4V.
- Игрушку можно использовать только с одним из следующих источников энергии от fischertechnik: арт. №: 135719 держатель батарейки 9В или арт. №: 35537 Accu Pack 8,4В
- 该商品只允许使用如下的慧鱼 (fischertechnik) 电源：货号：135719，9V DC电池盒 货号：35537，8.4V 电池 (Accu Pack)

Ratschläge an überwachende Erwachsene

Advice for supervising adults

Recommandations à l'attention des adultes chargés de la surveillance

Adviezen voor de volwassene die toezicht houdt

Consejos de supervisión para adultos

Conselhos para os adultos vigilantes

Consigli per gli adulti che sorvegliano

Советы контролирующим взрослым

给进行监督的成人的建议

- Ausschließlich für Kinder von mindestens 8 Jahren geeignet.
- Die Anleitungen sollen den Erwachsenen befähigen die Experimente im Hinblick auf die Eignung für das betreffende Kind abzuschätzen.
- Not intended for children under 8 years of age.
- The instructions are intended to enable adults to assess the experiment's suitability for the child concerned.
- Boîte exclusivement appropriée aux enfants de plus de 8 ans.
- Les instructions devraient permettre aux adultes d'évaluer si l'enfant concerné est apte à effectuer les essais respectifs.

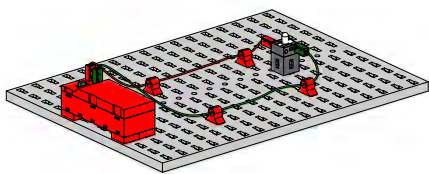
- Uitsluitend geschikt voor kinderen vanaf minimaal 8 jaar.
- De gebruiksaanwijzingen dienen als hulp voor de volwassene om te kunnen beoordelen of de experimenten geschikt zijn voor het desbetreffende kind.
- Adecuado exclusivamente para niños de mínimo de 8 años.
- Las instrucciones deben facultar al adulto de evaluar el experimento con miras a su adecuación para el niño afectado.
- Adequado exclusivamente para crianças com, no mínimo, 8 anos.
- As instruções devem capacitar os adultos a avaliar os experimentos em relação a sua adequação para a criança pertinente.

- Adatti esclusivamente per bambini di almeno 8 anni di età.
- I manuali devono consentire all'adulto di saper valutare gli esperimenti in merito alla loro adeguatezza per il bambino in questione.
- Только для детей старше 8 лет.
- Эти инструкции дают взрослым возможность оценить эксперименты с точки зрения их пригодности для ребёнка.
- 只适合于 8 岁以上的儿童
- 说明书应该能让成人判断该实验是否适合想做实验的孩子玩。



Hinweise zum Umweltschutz / Instructions for Environmental Protection / Remarques de protection de l'environnement / Bescherming van het milieu / Notas con respecto a la protección del medio ambiente / Instruções para a proteção do meio ambiente / Indicazioni sulla tutela ambientale / Указания по охране окружающей среды / 有关环保的提示：

www.fischertechnik.de/environment

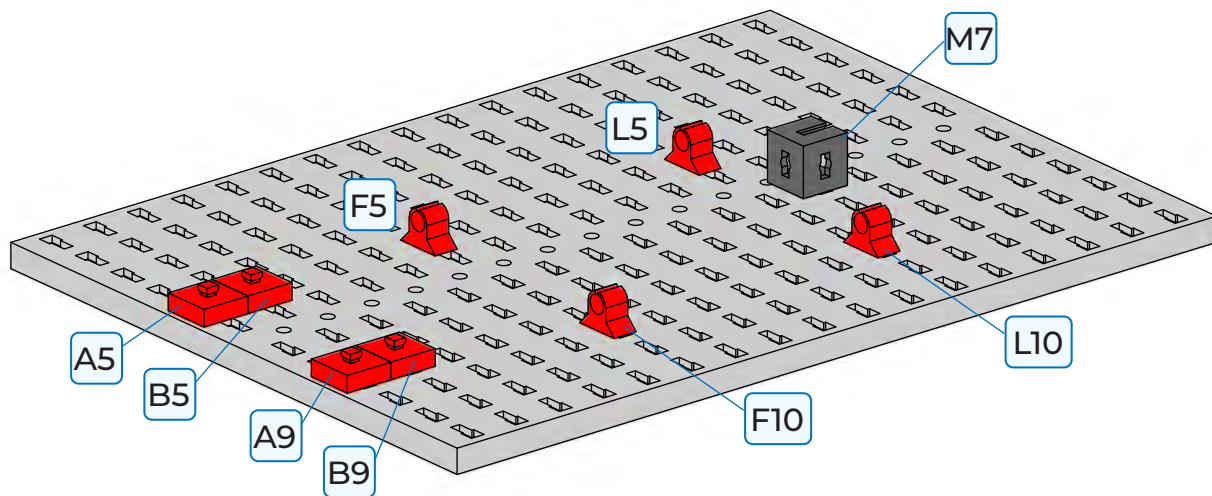
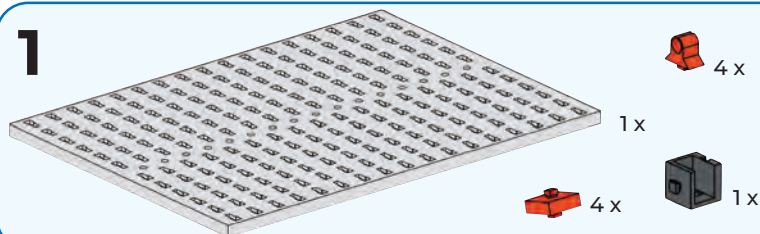


Einfacher Stromkreis mit
Polwendeschalter
Simple electrical circuit
with pole reversing switch
Circuit simple avec interrupt-
eur d'inversion des pôles

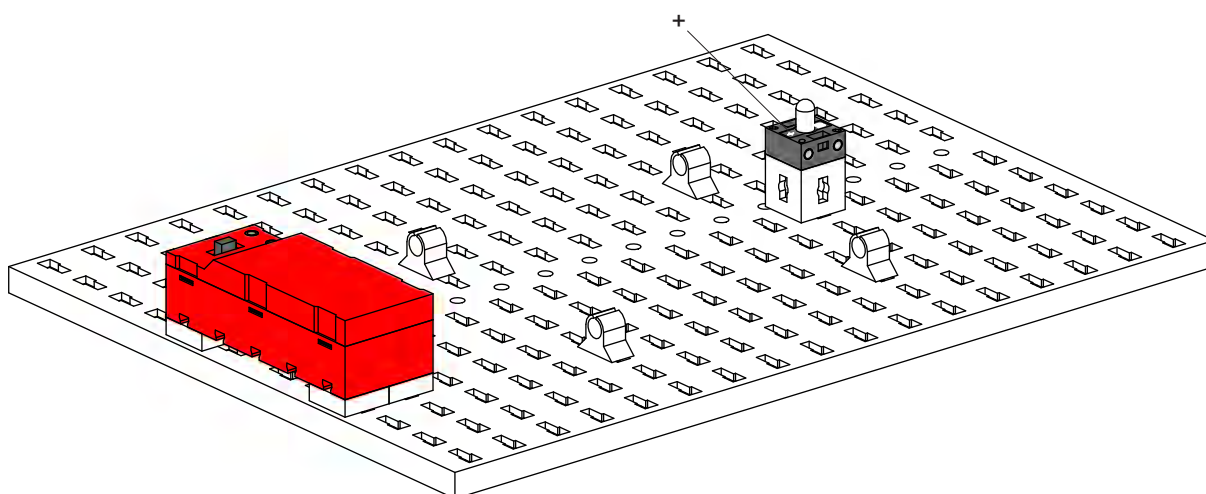
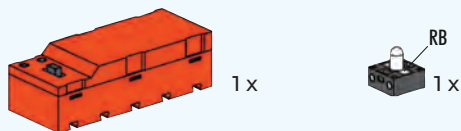
Eenvoudige schakeling met
poolomkeerschakelaar
Circuito simple con
conmutador inversor de polos
Circuito simples com chave
reversora de polo

Circuito semplice con interrut-
tore di inversione dei poli
Простая схема с
полюсными реверсивными
переключателями
带极反向开关的简单电路

1

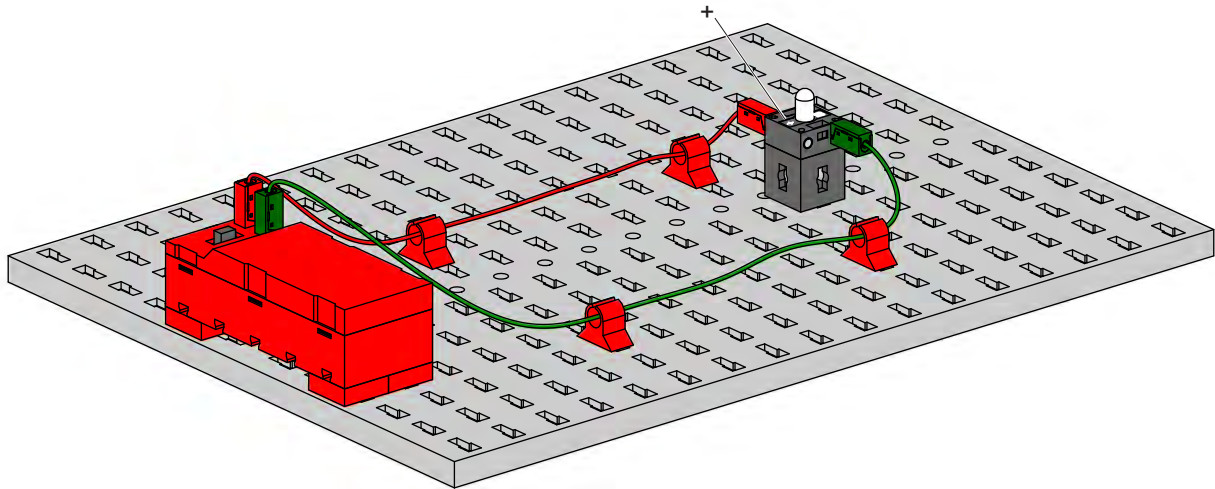
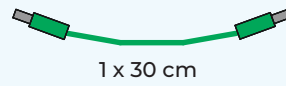
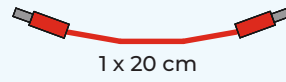


2



25 cm
20 cm
15 cm
10 cm
5 cm
0

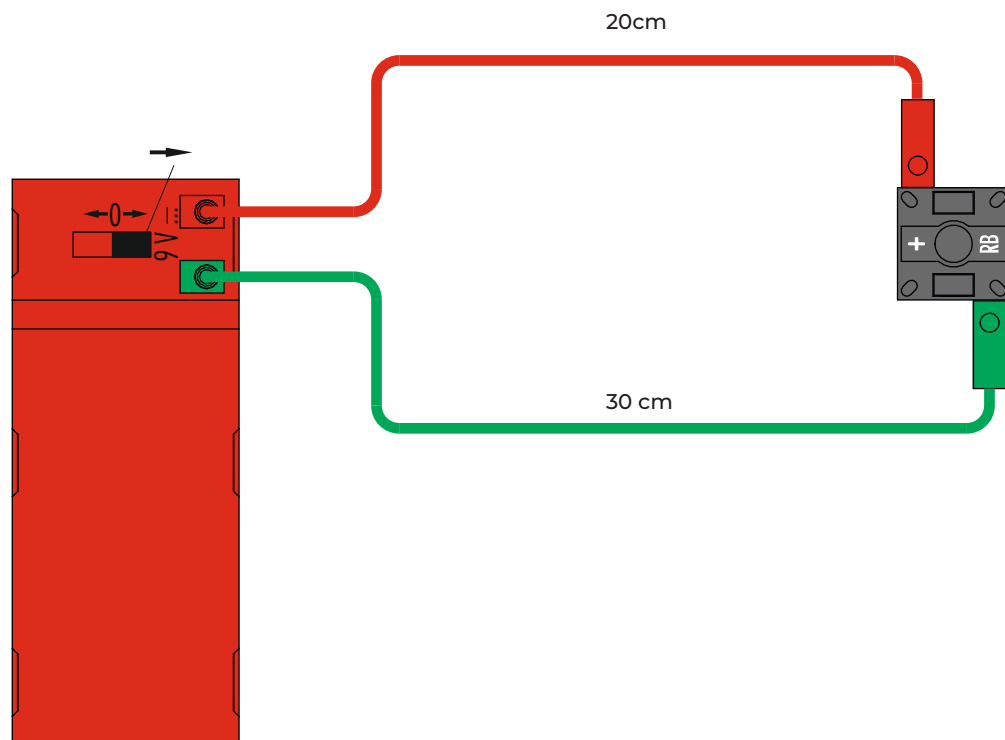
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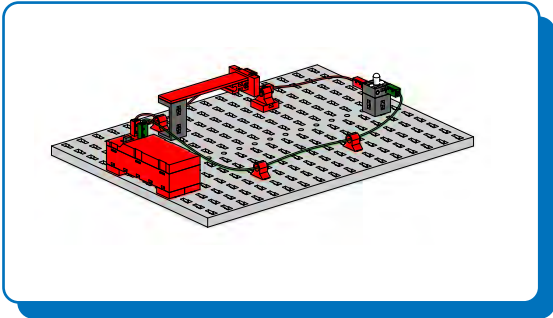


Schaltplan
Circuit diagram
Plan électrique

Schakelschema
Diagrama de circuitos
Plano elétrico de ligação

Schema elettrico
Схема подключения
电路图

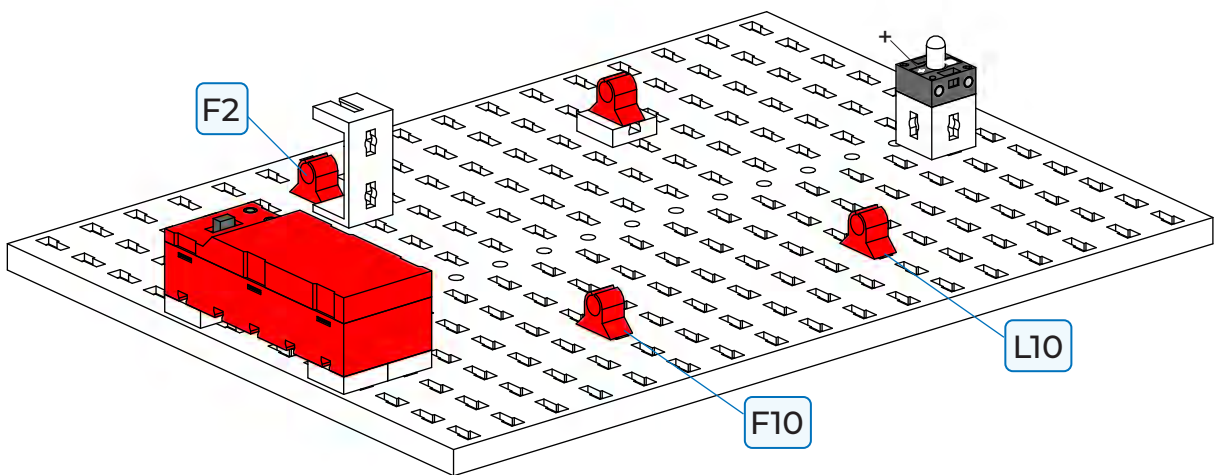
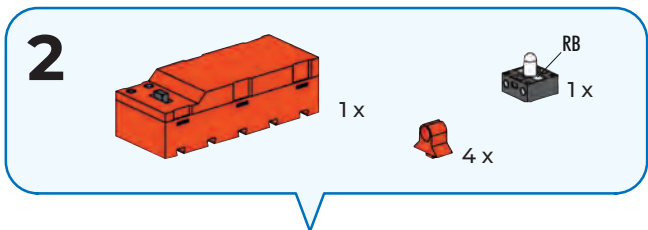
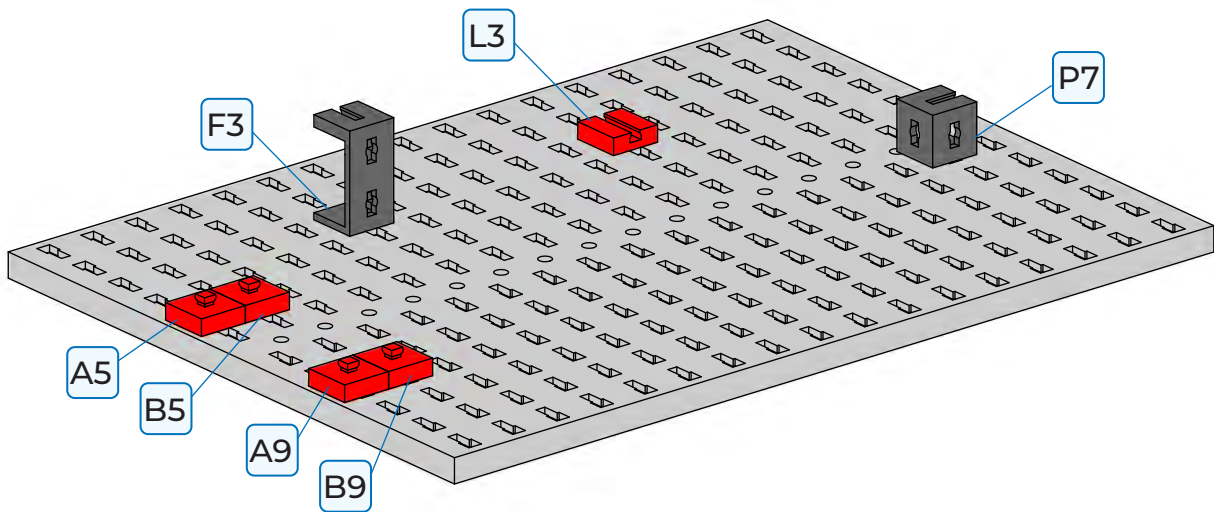
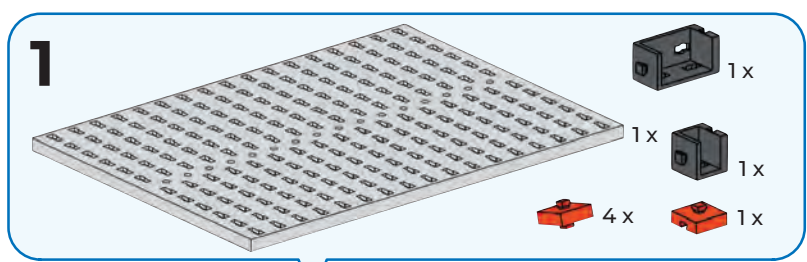




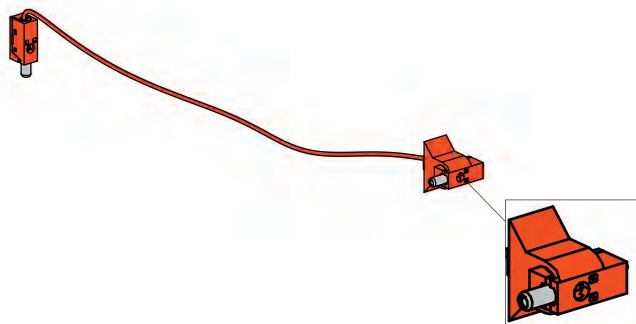
Ein-/Ausschalter mit Taster
On/off switch with button
Interrupteur marche/arrêt
avec bouton-poussoir

Aan/uit-schakelaar met knop
Interruptor de encendido/
apagado con botón
Chave liga/desliga com
botão

Interruttore on/off
Переключатель включения/
выключения с кнопкой
帶按鈕的开关



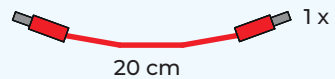
25 cm
20 cm
15 cm
10 cm
5 cm
0



3



1 x



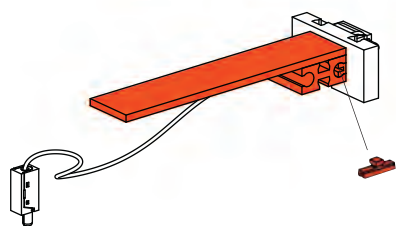
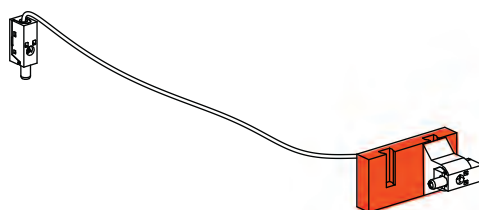
20 cm

1 x

4



1 x



5



1 x

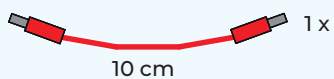


1 x



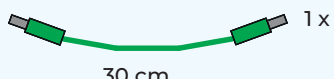
1 x

6



10 cm

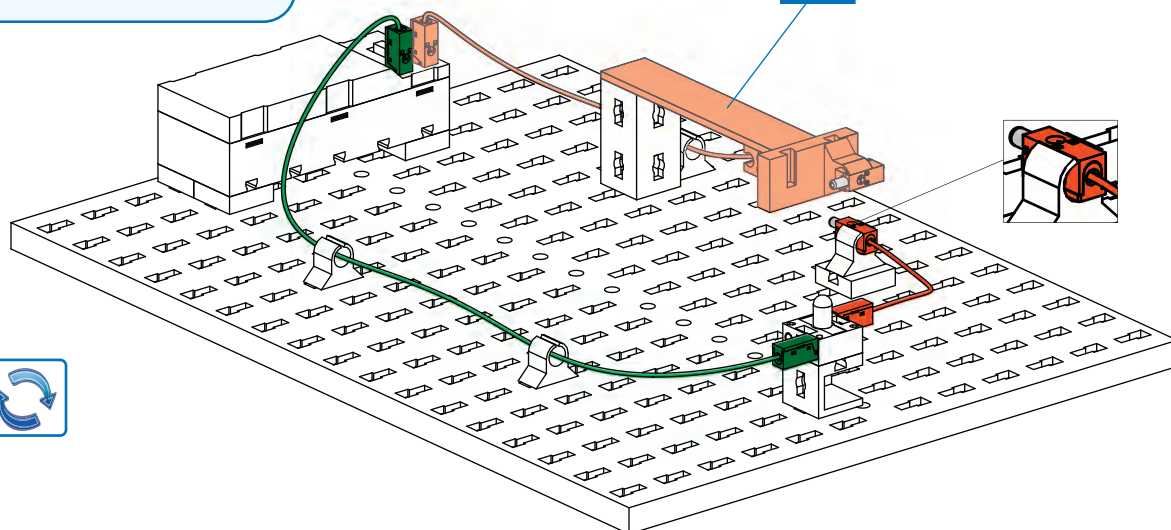
1 x

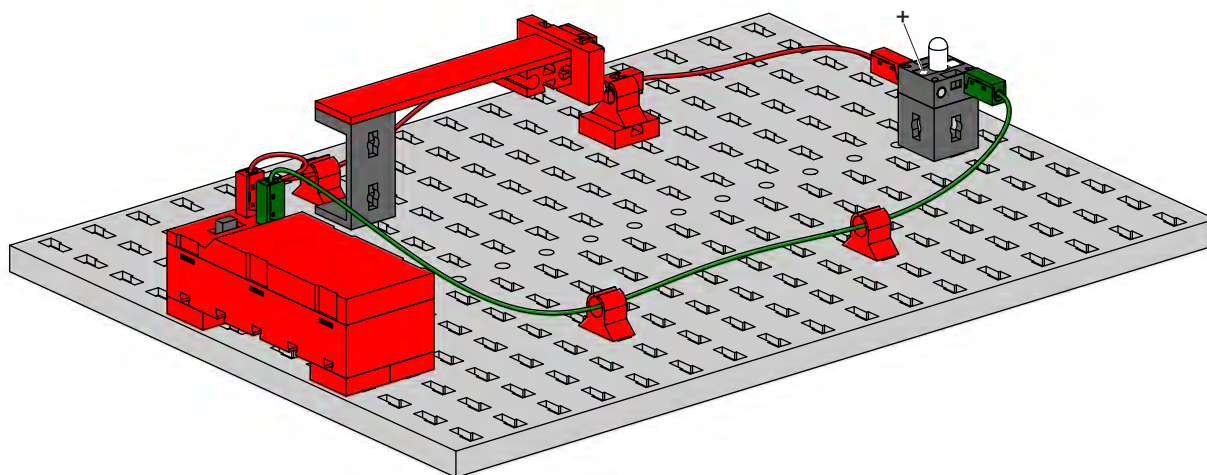


30 cm

1 x

5

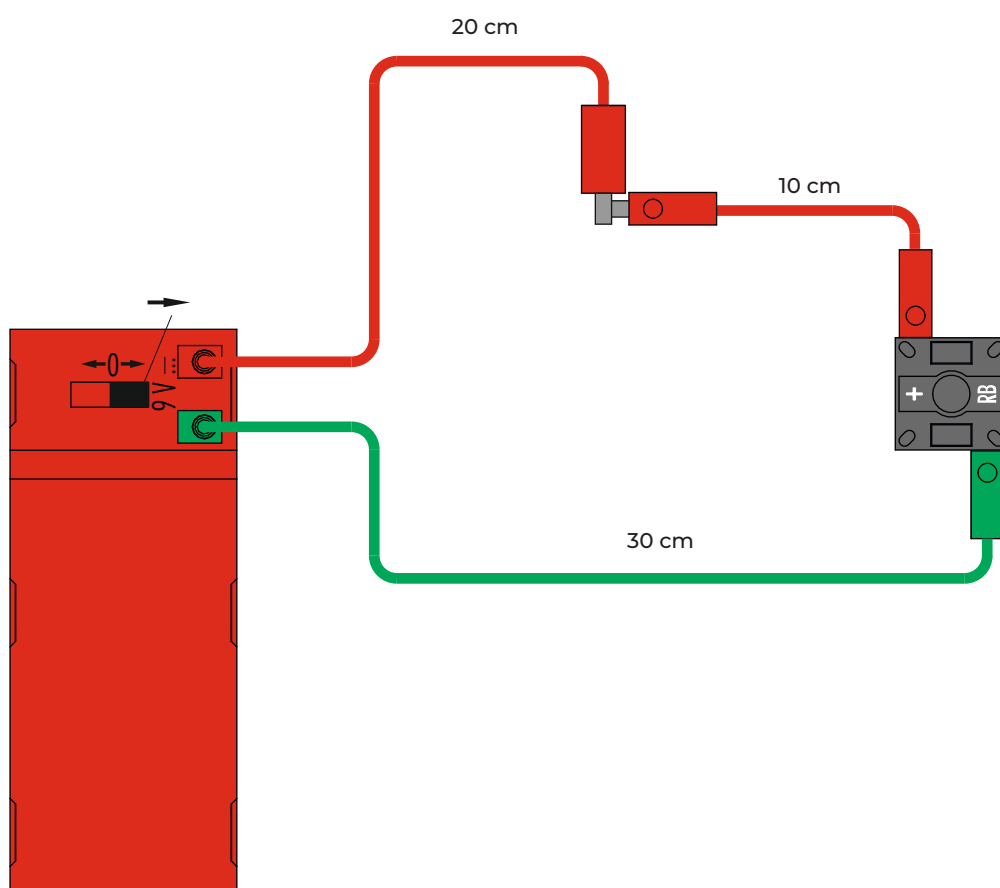


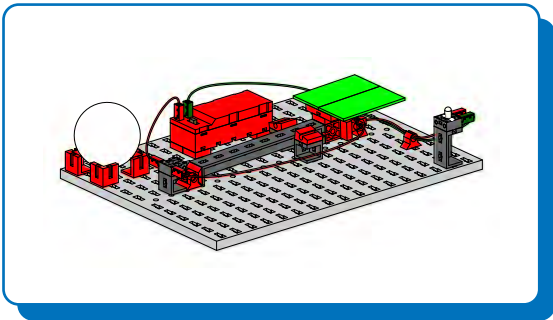


Schaltplan
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Plano elétrico de ligação

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Схема подключения
电路图

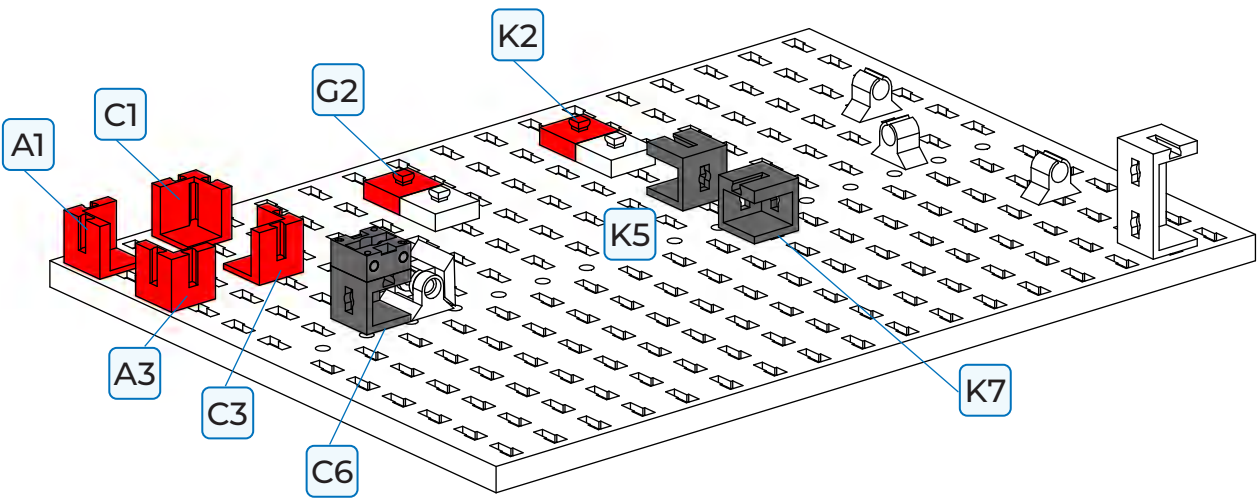
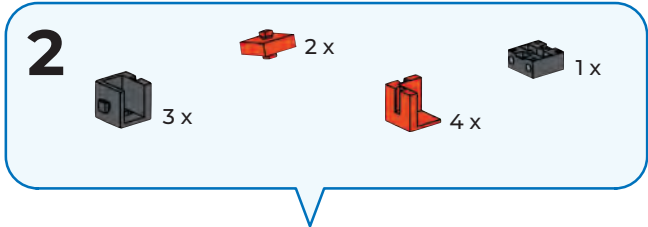
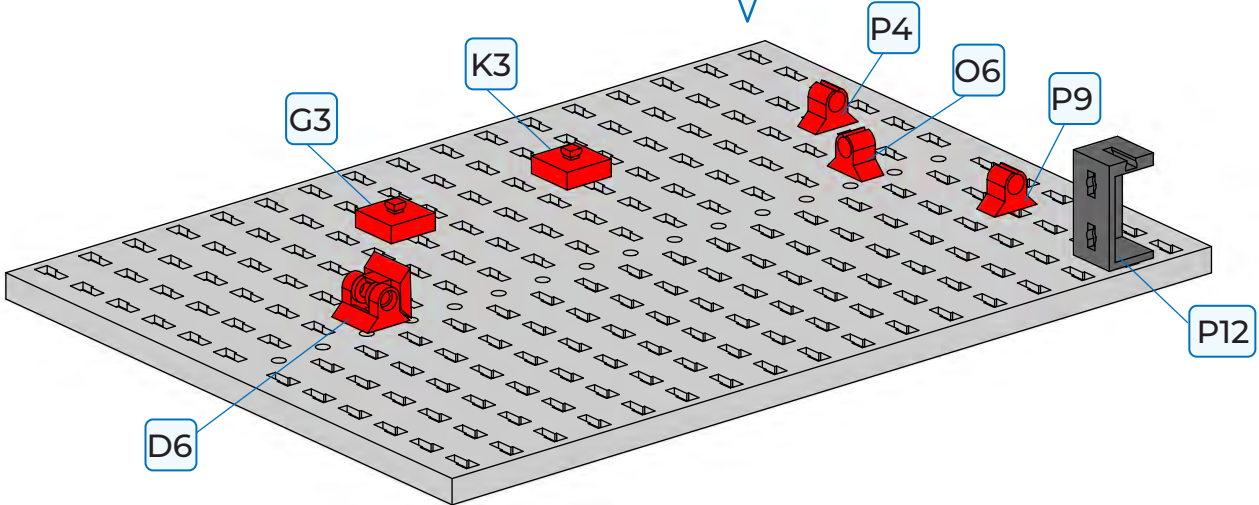
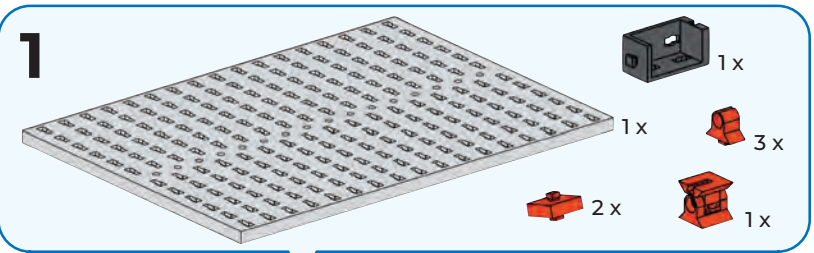




Wurfspiel
Throwing game
Jeu de lancer

Werpspel
Juego de lanzamiento
Jogo de arremesso

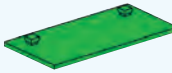
Gioco di lancio
Игра на метание
投掷游戏



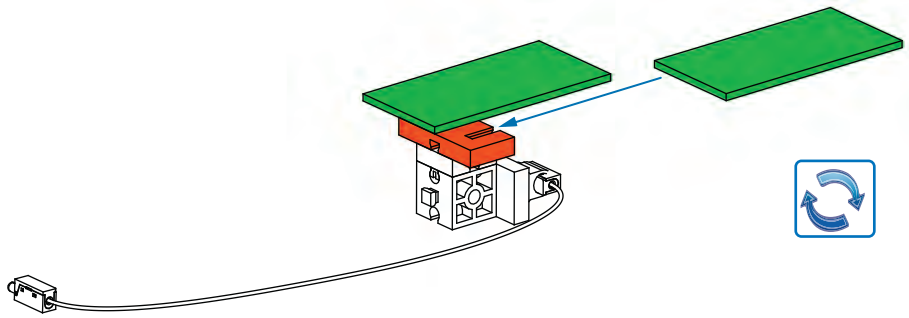
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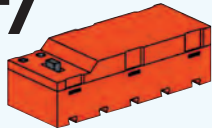
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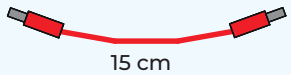
2 x



7

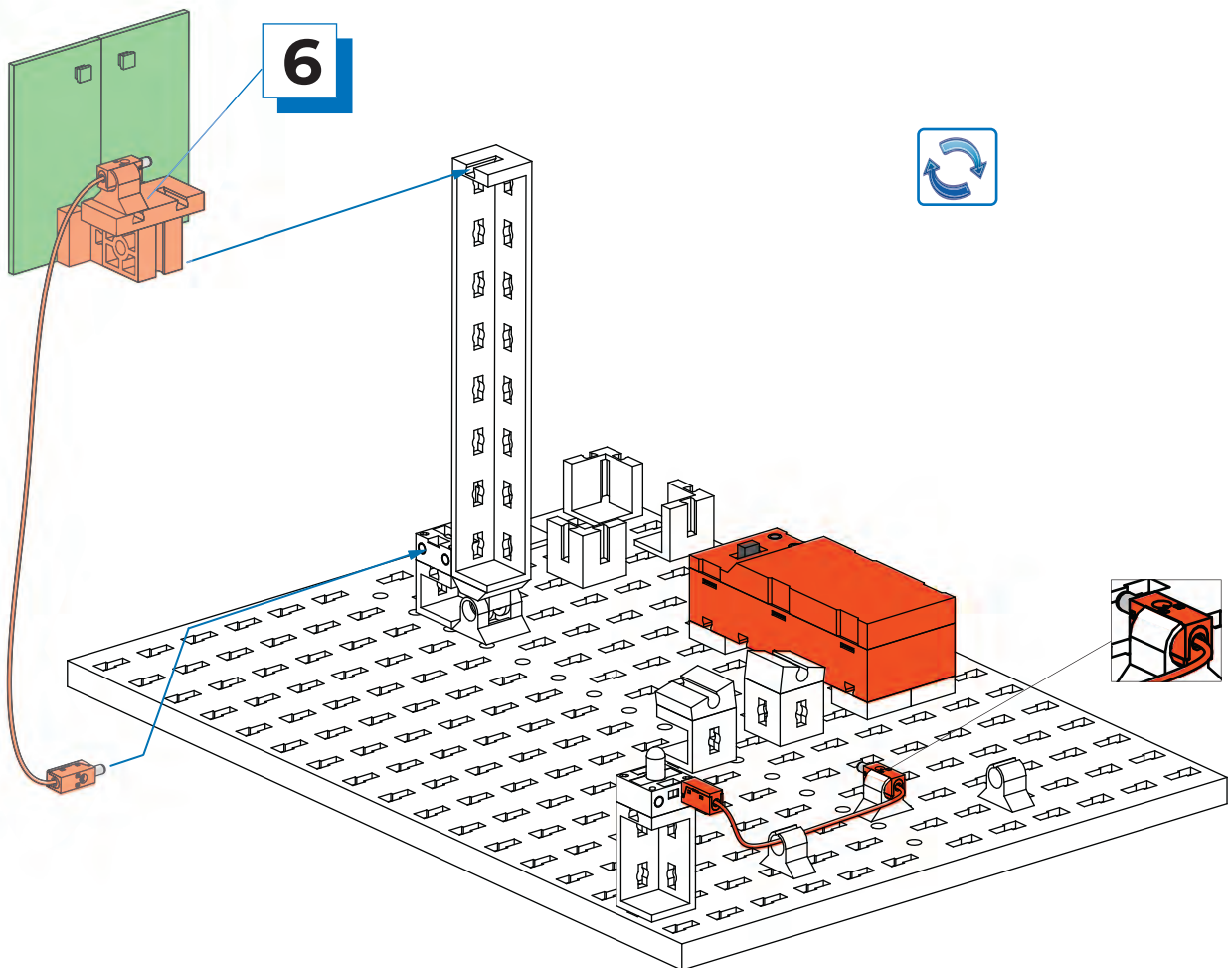


1 x



1 x

15 cm



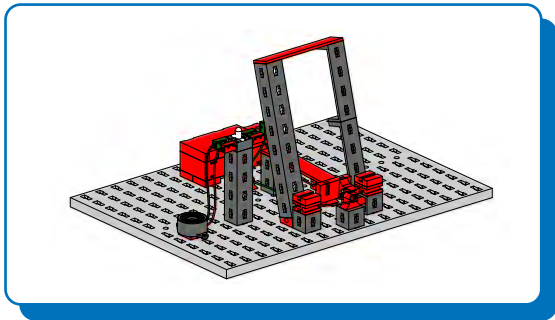
1 x

1 x 30 cm



Schema elettrico
Схема подключения
电路图



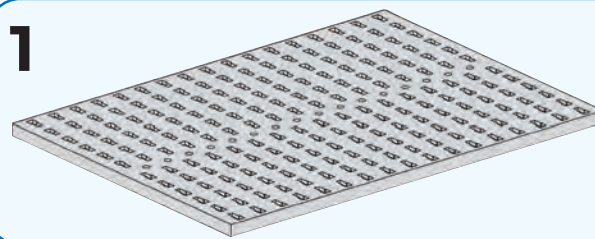


Handyhalter mit
Alarmanlage
Cell phone holder with
alarm system
Porte-téléphone portable
avec alarme

Houder voor mobiele
telefoon met alarmsysteem
Soporte para teléfono móvil
con sistema de alarma
Suporte para celular com
sistema de alarme

Portacellulare con sistema
di allarme
Держатель для
мобильного телефона с
системой сигнализации
带警报系统的手机支架

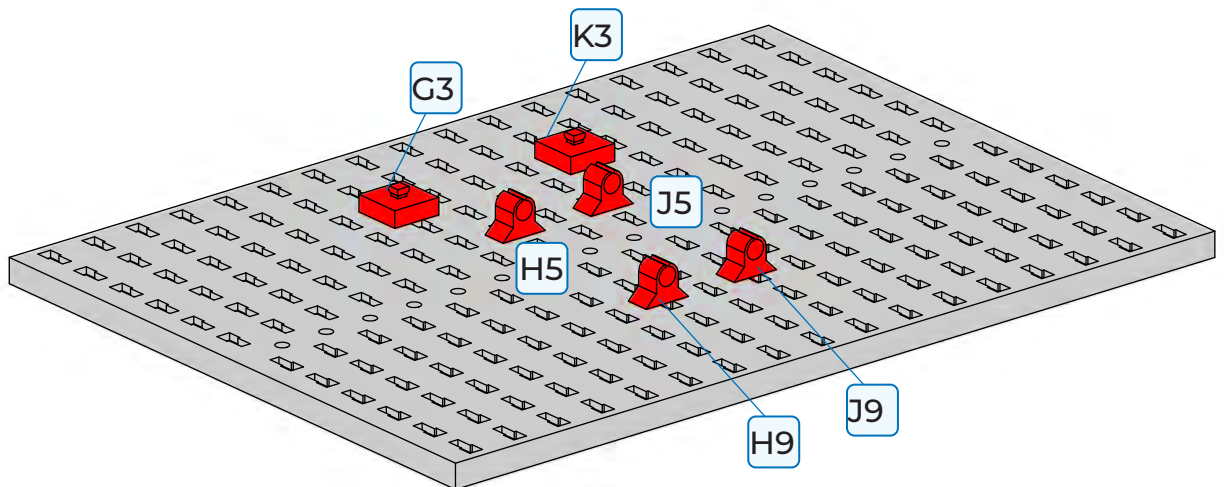
1



4 x

1 x

2 x

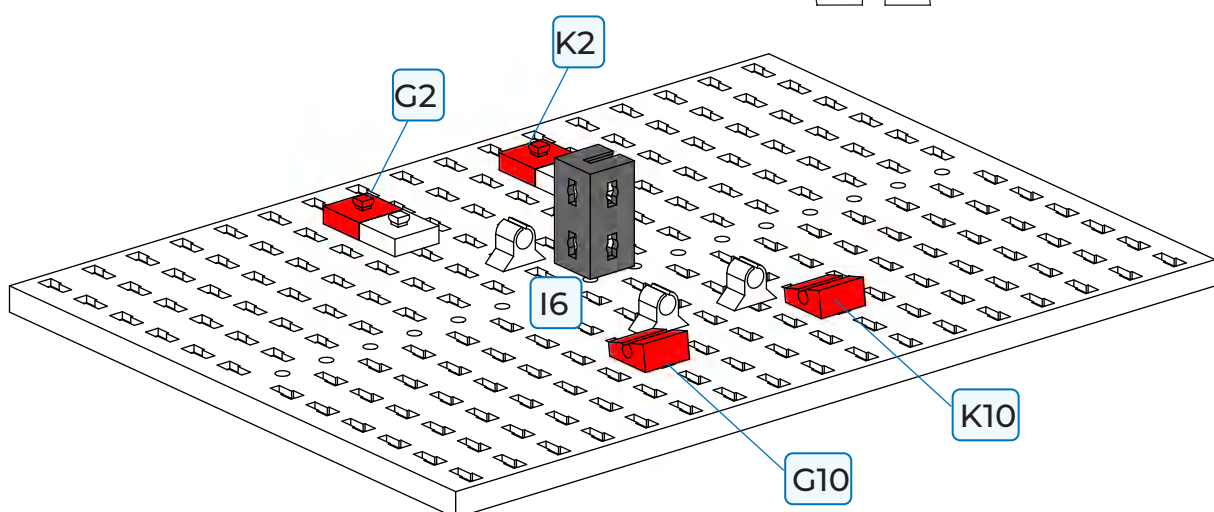


2

1 x

2 x

15°
2 x

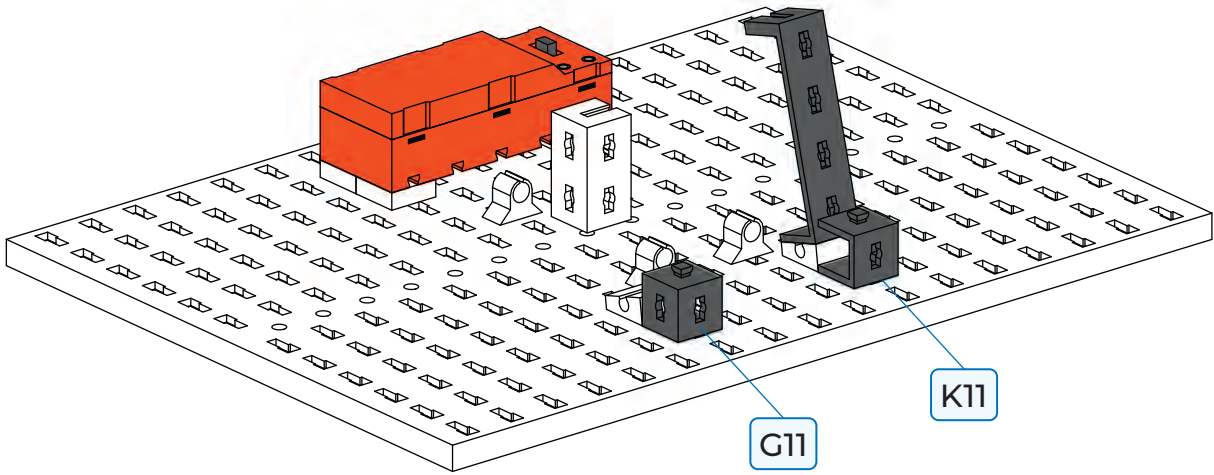


3

1x

1x

2x



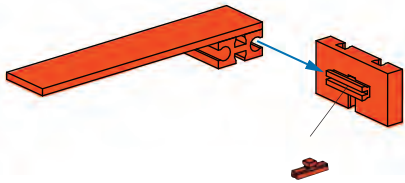
4

1x

1x

1x

1x



5

2x

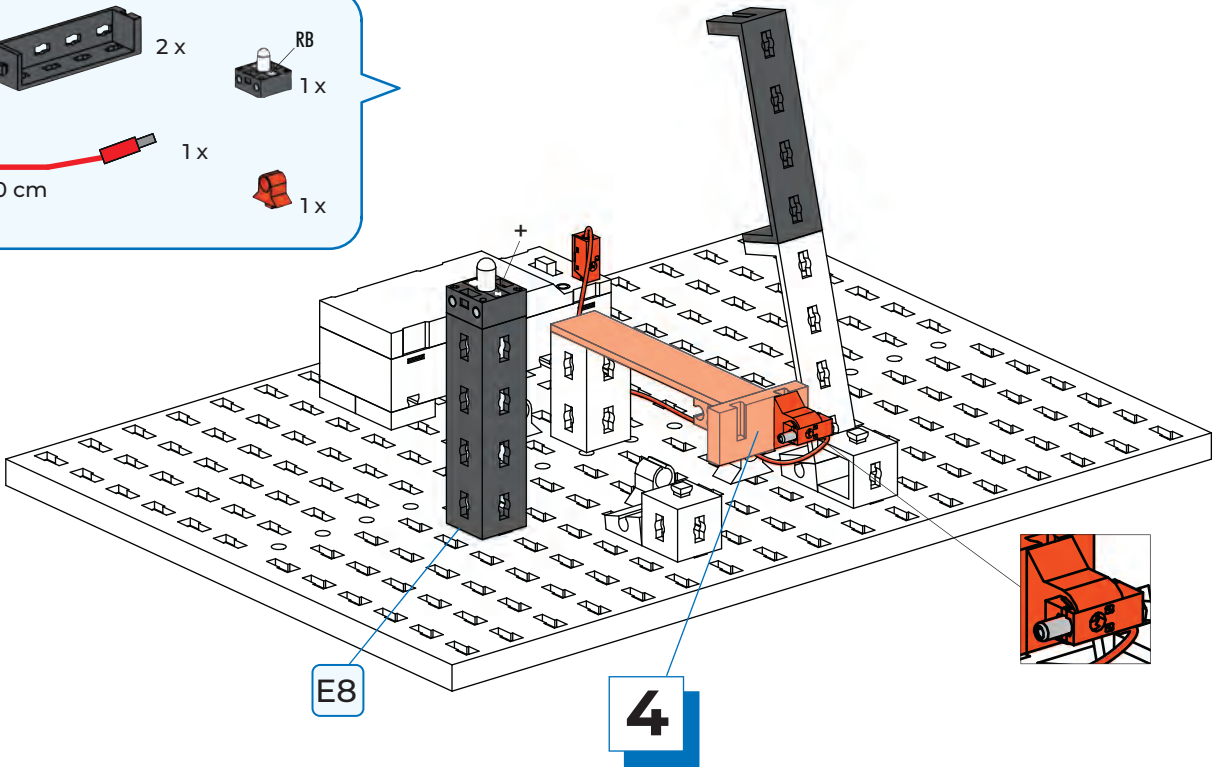
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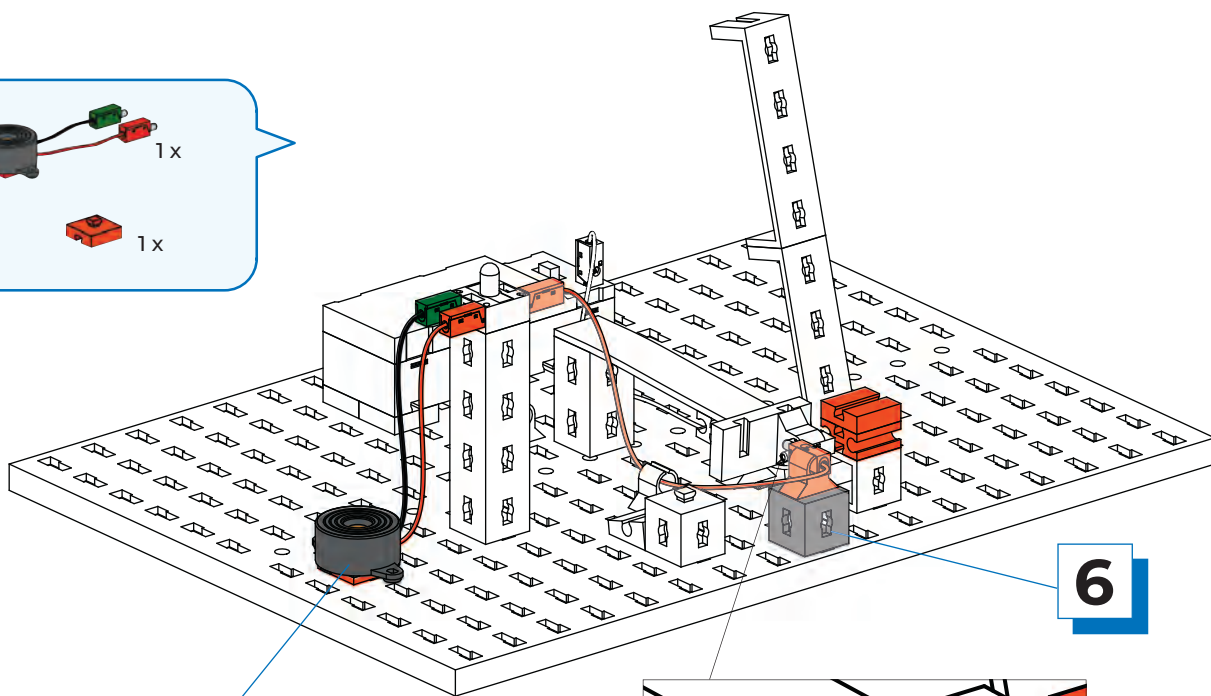
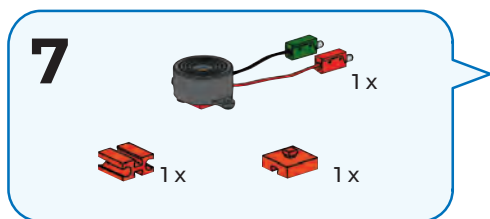
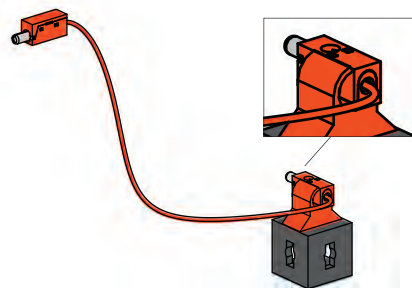
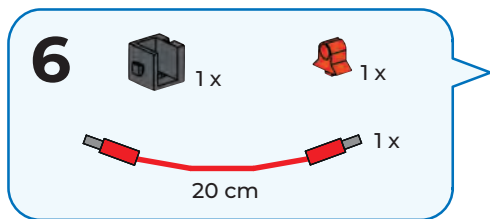
1x

20 cm

1x

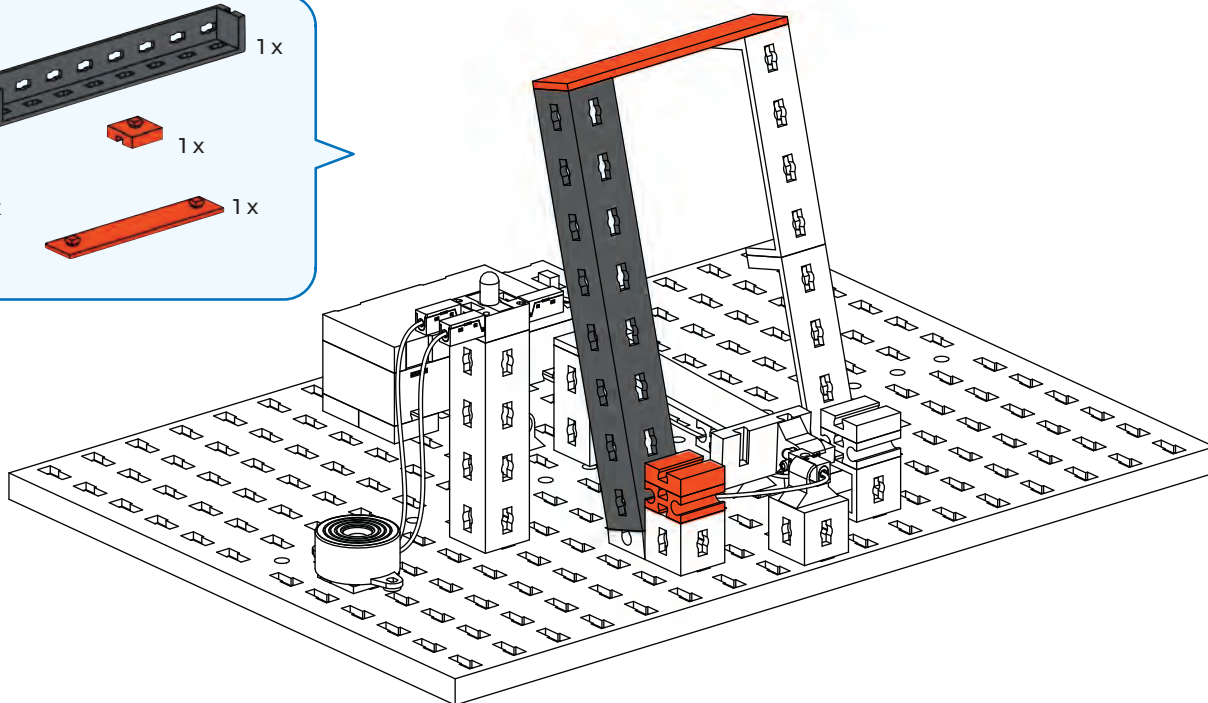
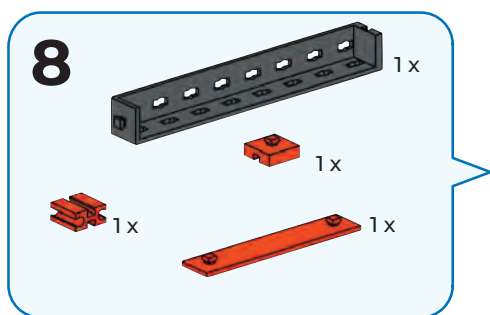
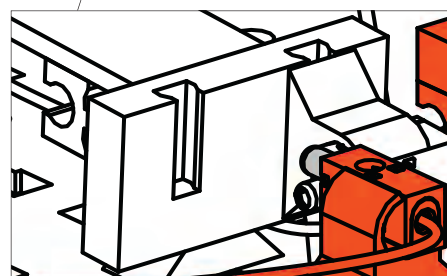
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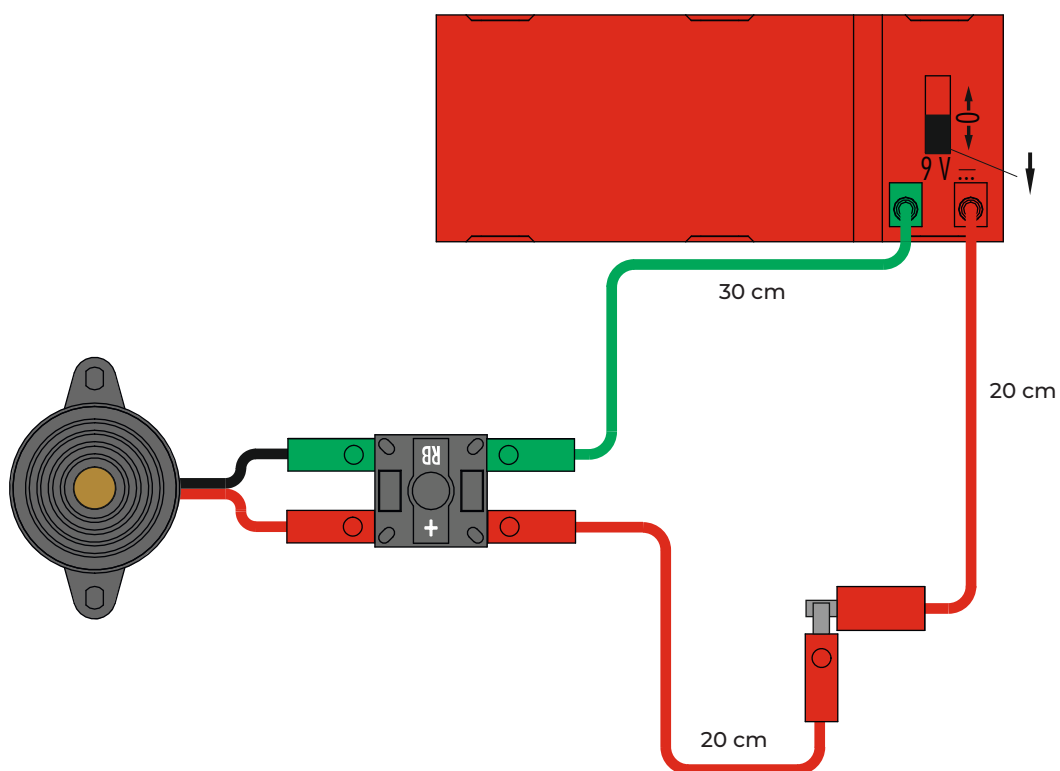


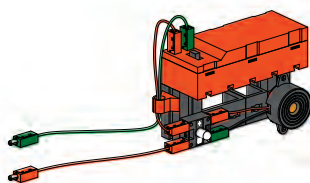
B8

6



Schema elettrico
Схема подключения
电路图



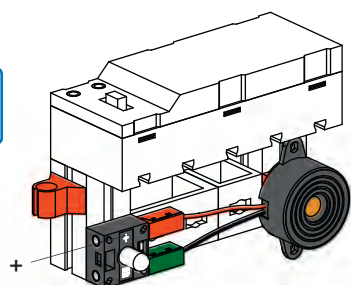
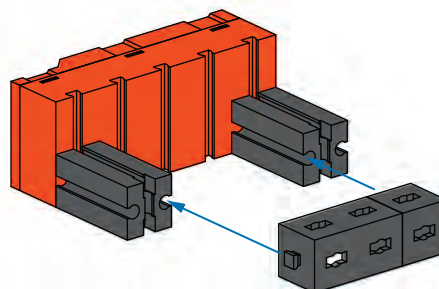
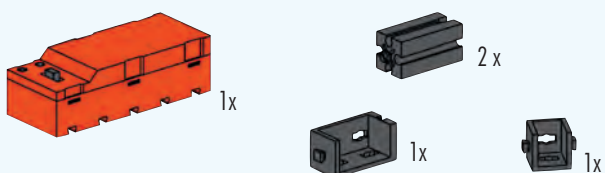


Durchgangsprüfer
Continuity tester
Contrôleur de
continuité

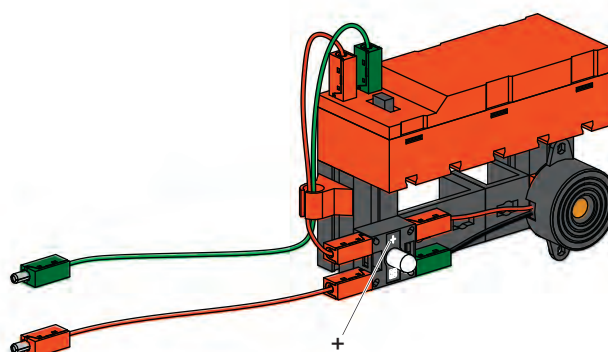
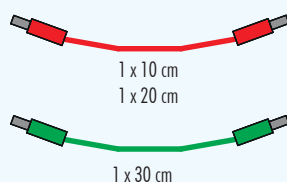
Ohmmeter
Probador de
continuidad
Dispositivo de teste
de continuidade

Misuratore di
continuità
Пробник
通路检测仪

1



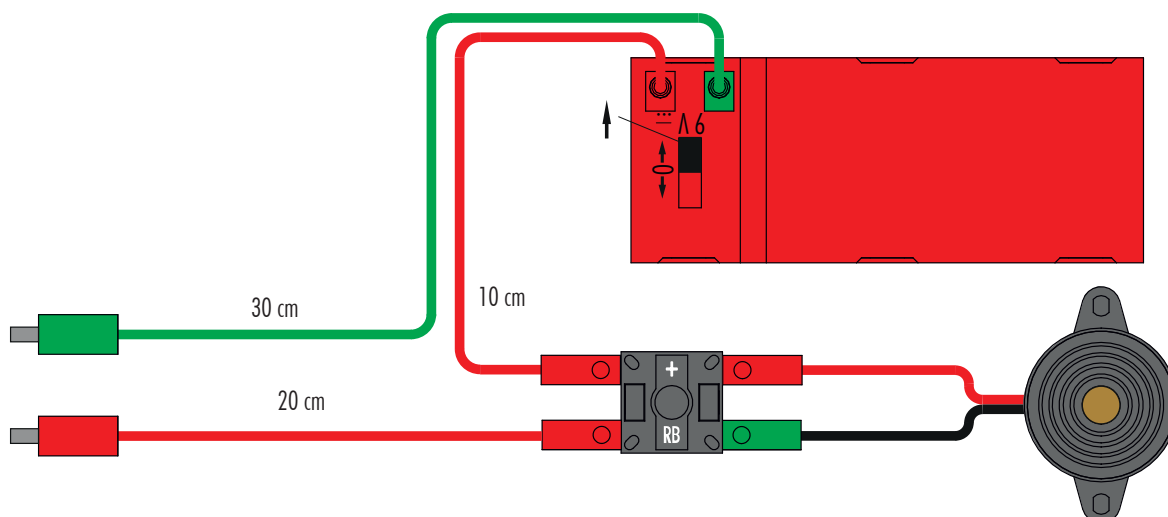
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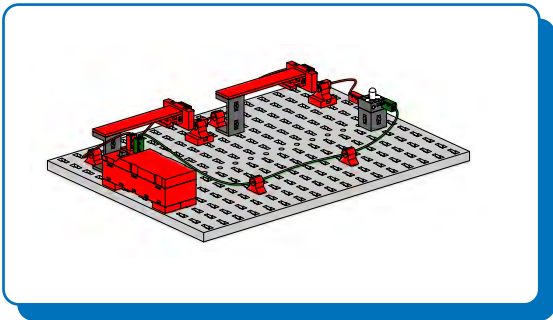


Schaltplan
Circuit diagram
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Schema elettrico
Схема подключения
电路图

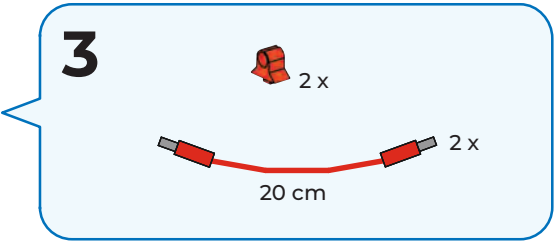
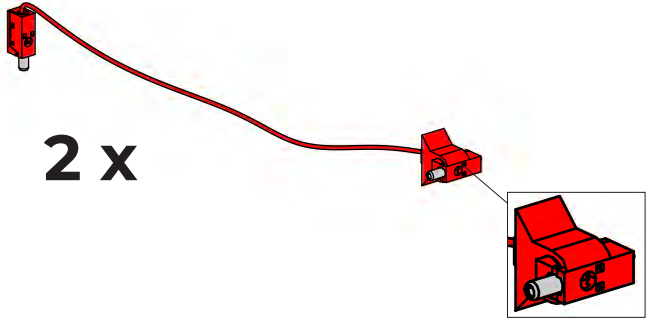
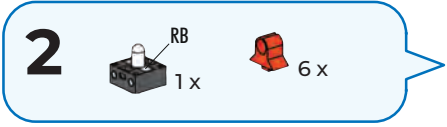
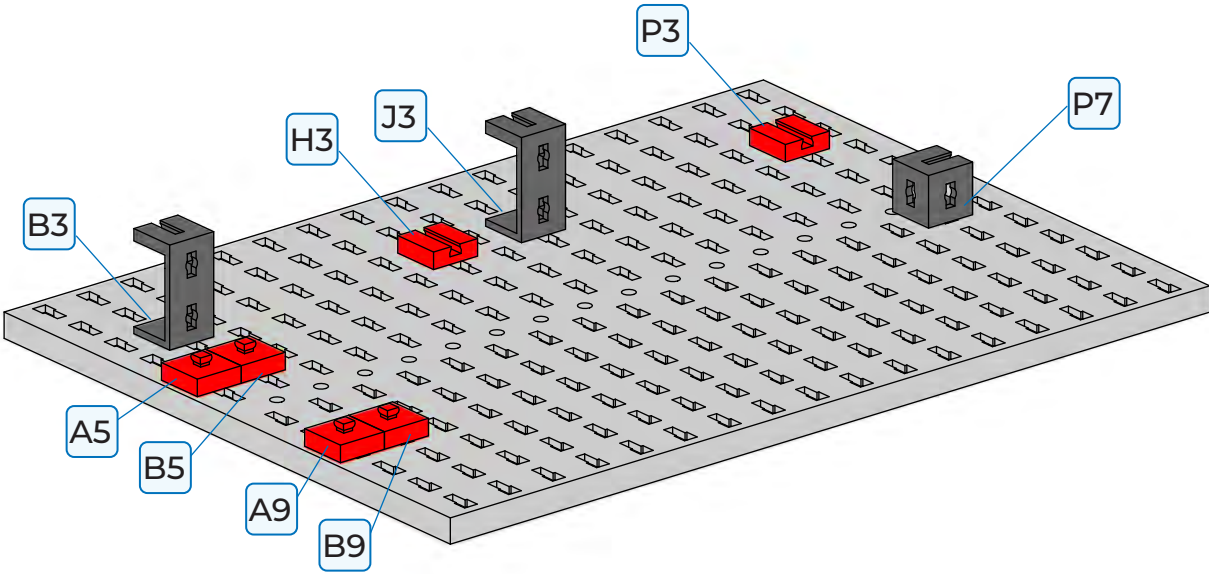
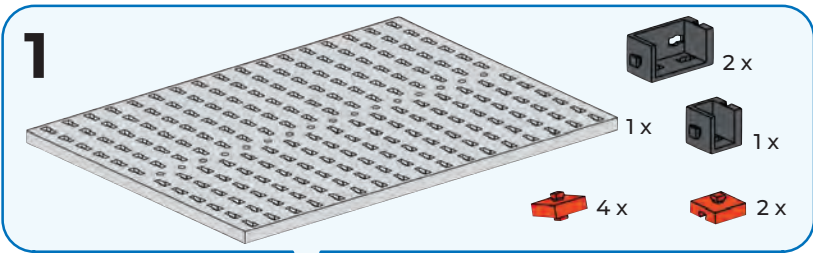




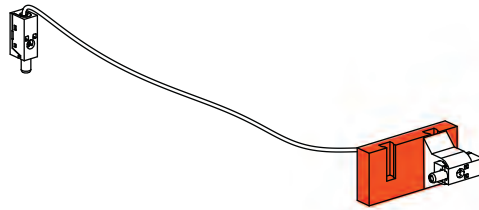
Und-Schaltung
AND circuit
Circuit ET

AND-schakeling
Circuito AND
Circuito AND

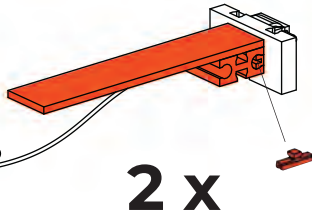
Circuito AND
Cхема „И“
与电路



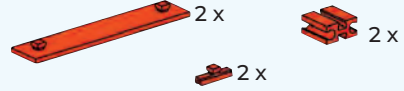
4



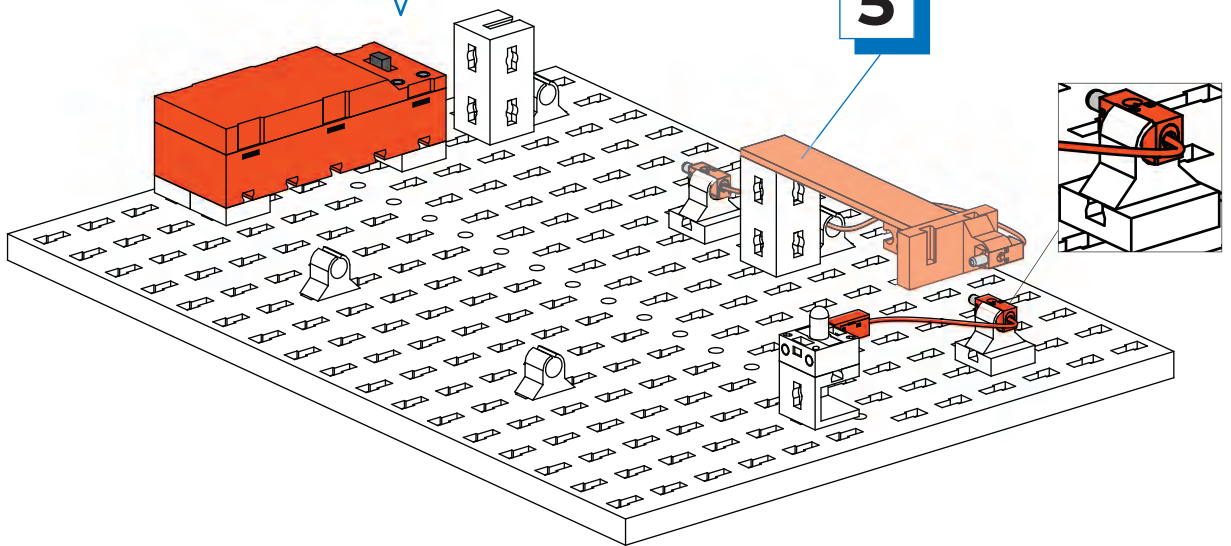
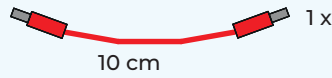
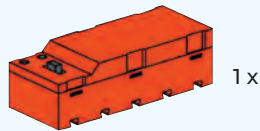
2 x



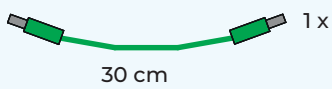
5



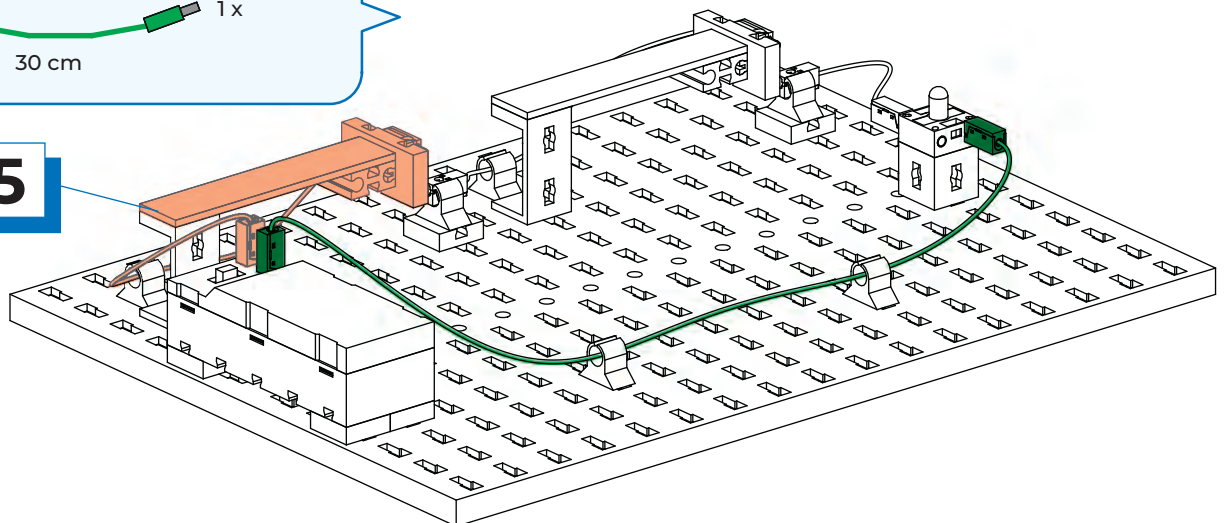
6

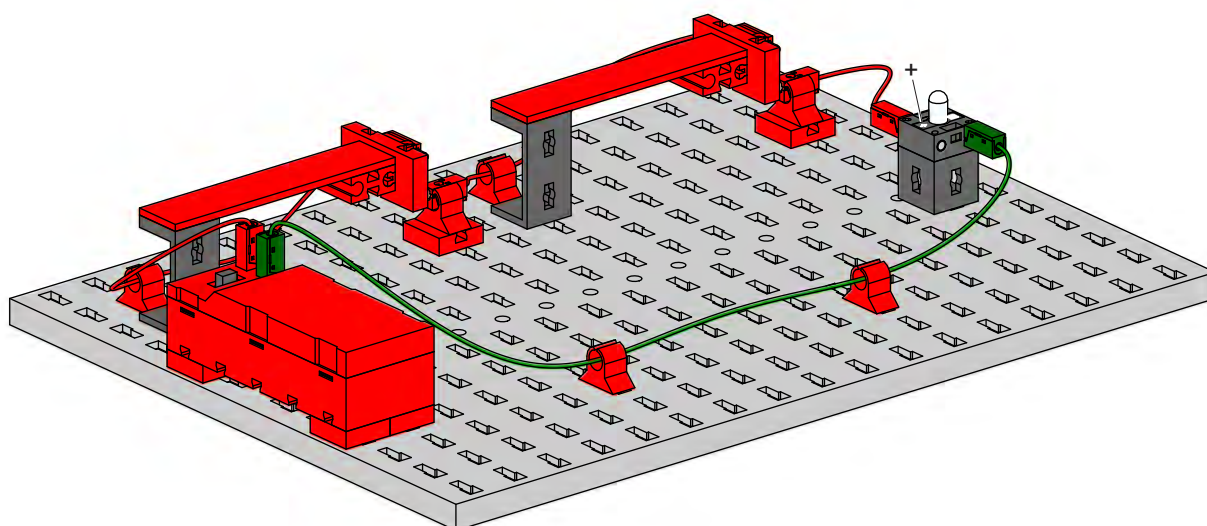


7



5

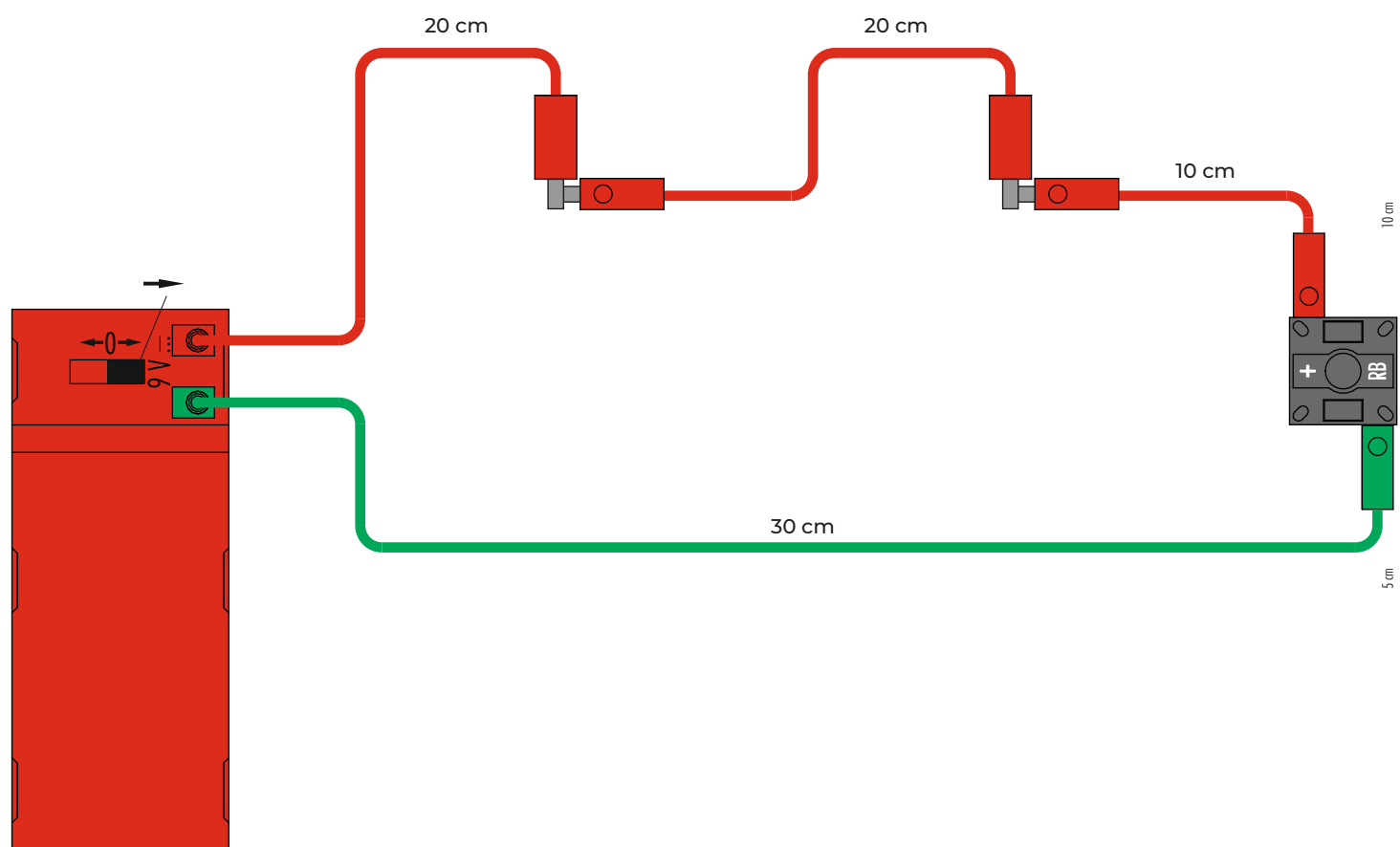


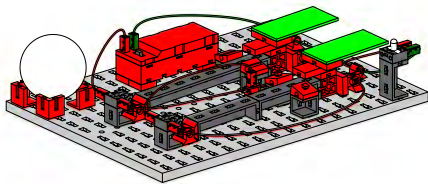


Schaltplan
Circuit diagram
Plan électrique

Schakelschema
Diagrama de circuitos
Plano elétrico de ligação

Schema elettrico
Схема подключения
电路图



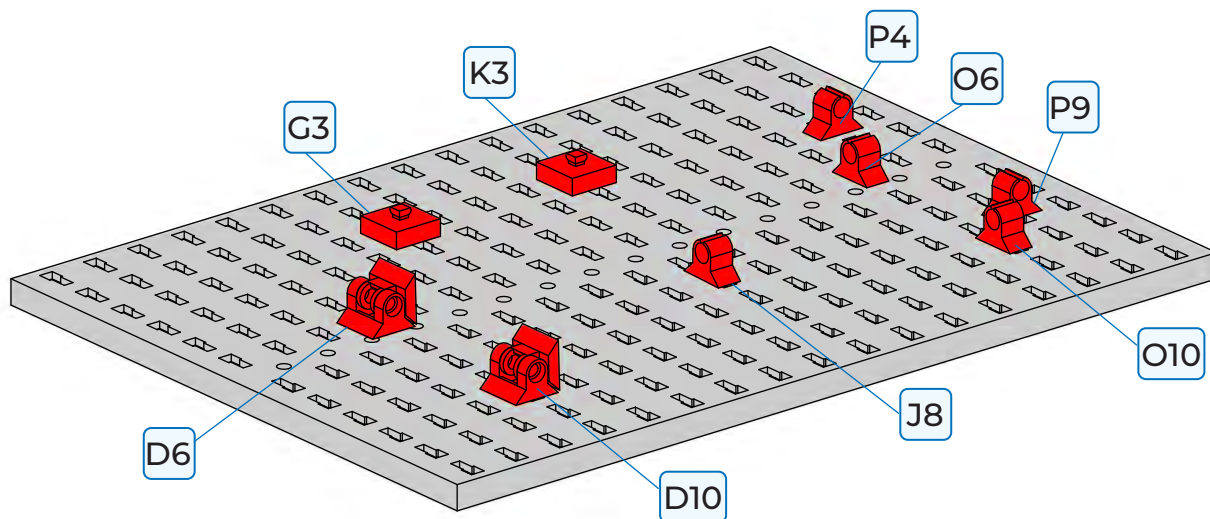
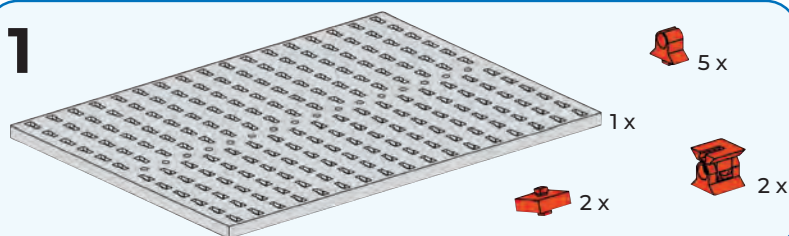


Wurfspiel mit
Und-Schaltung
Throwing game with
AND circuit
Jeu de lancer avec
circuit ET

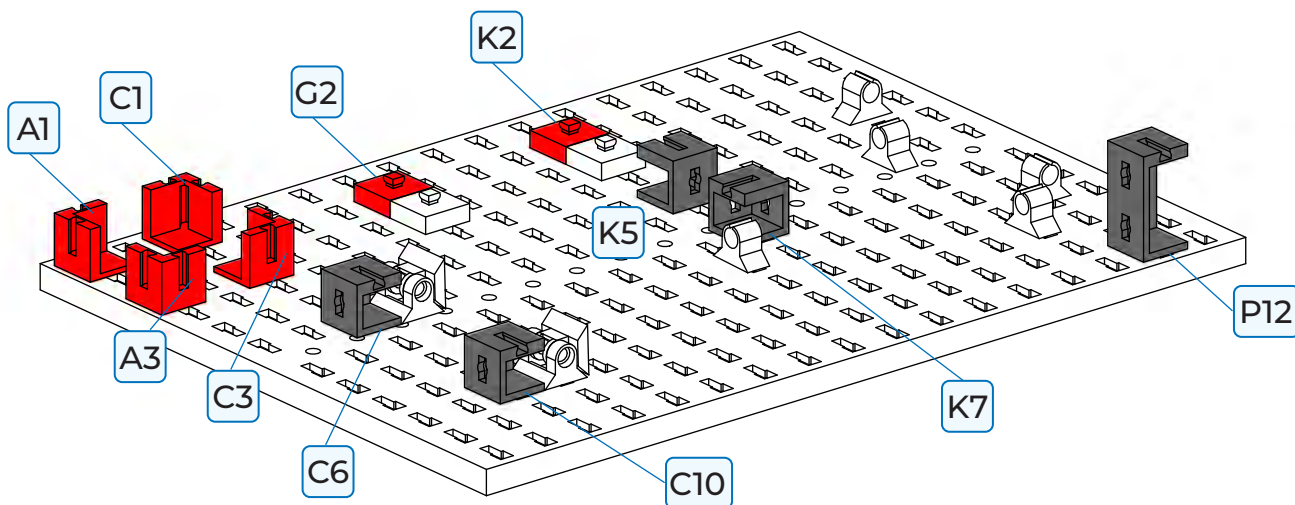
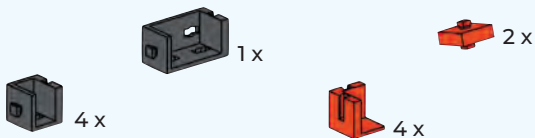
Werpstel met
AND-schakelaar
Juego de lanzamiento
con circuito AND
Jogo de arremesso
com circuito AND

Gioco di lancio
con circuito AND
Игра на метание со
схемой „И“
带 AND 电路的投掷游戏

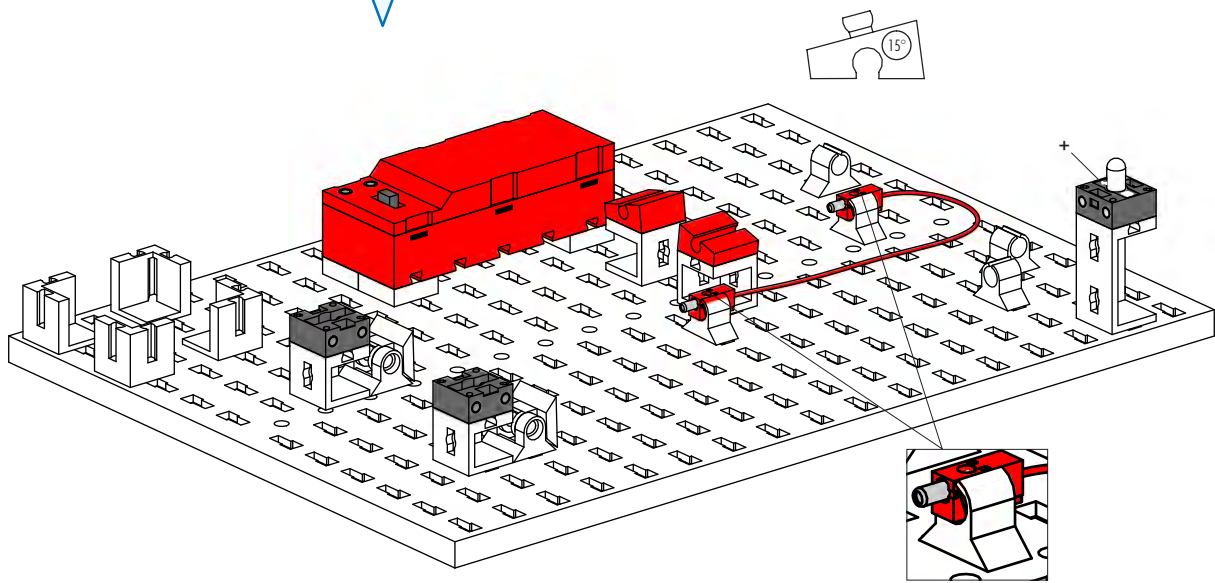
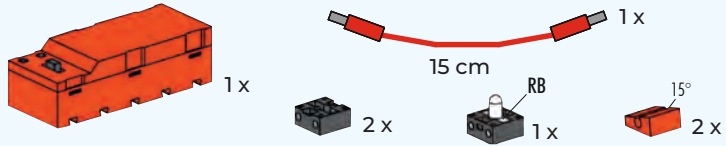
1



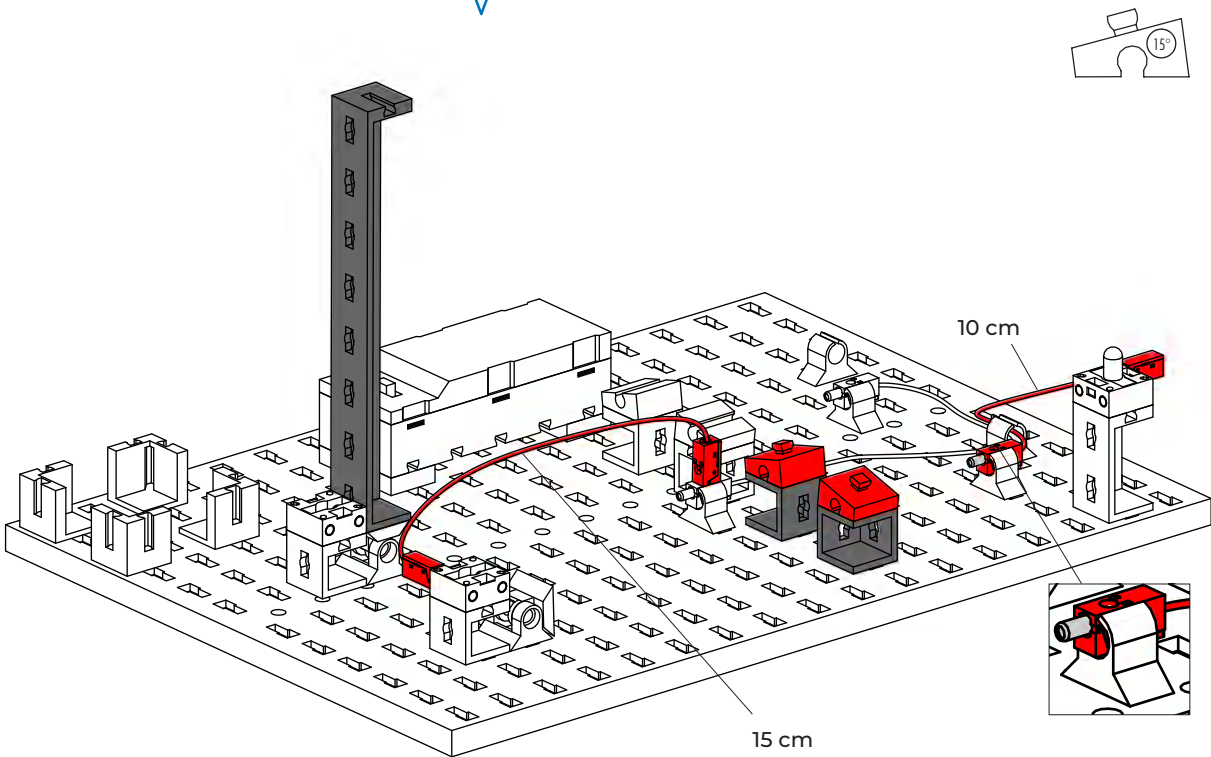
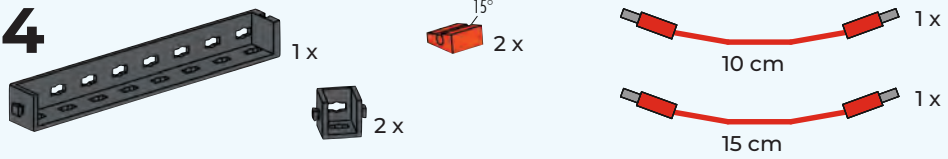
2




3



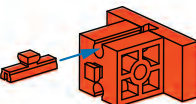
4



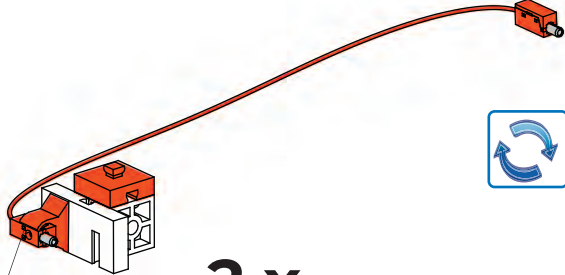
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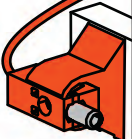
2 x 2 x 2 x



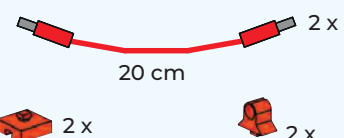
2 x



2 x

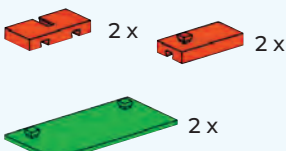


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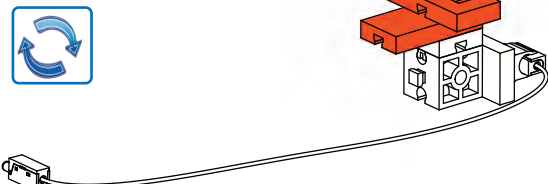


20 cm 2 x 2 x

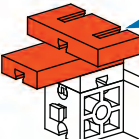
7

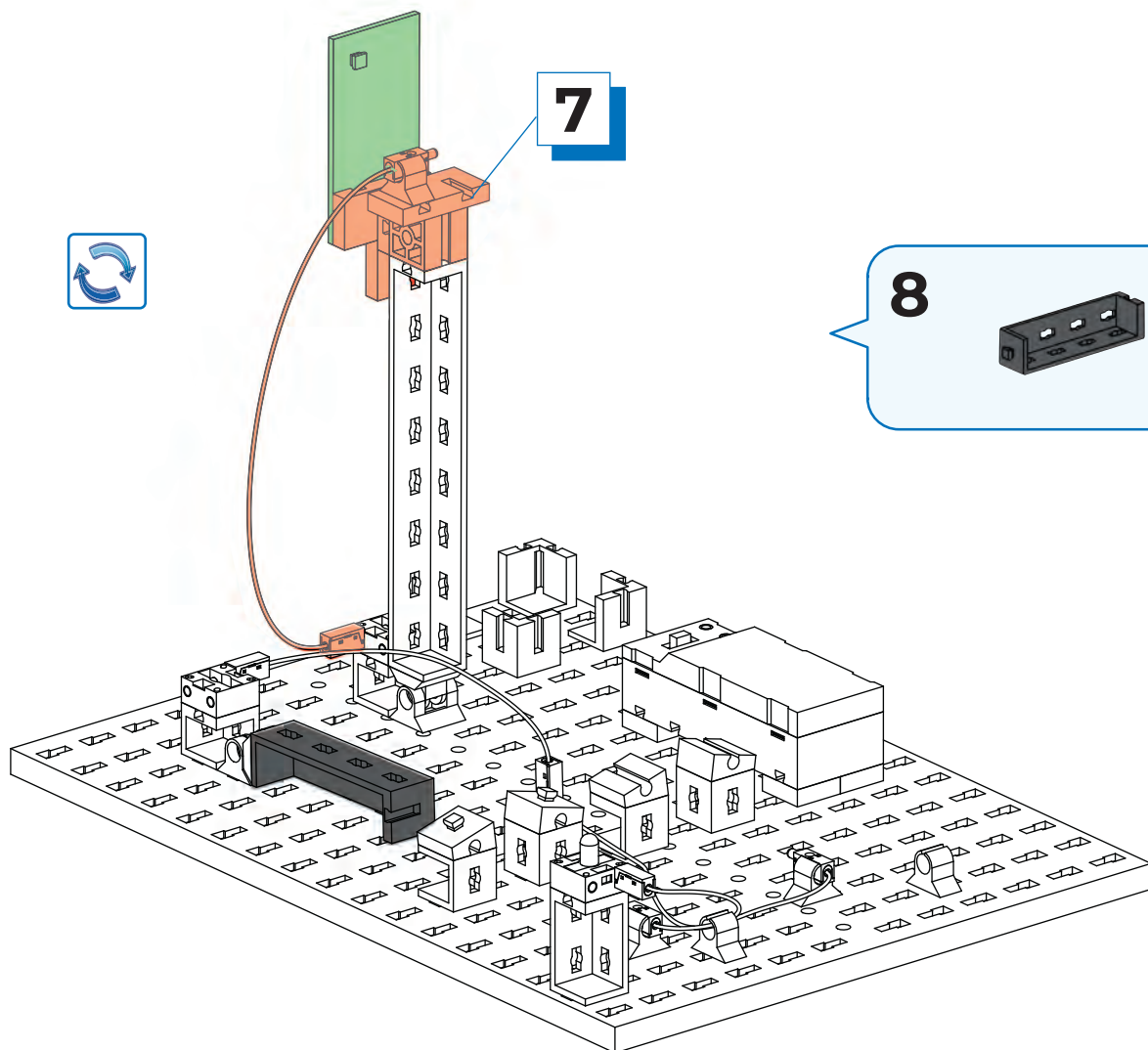


2 x 2 x 2 x



2 x





25 cm

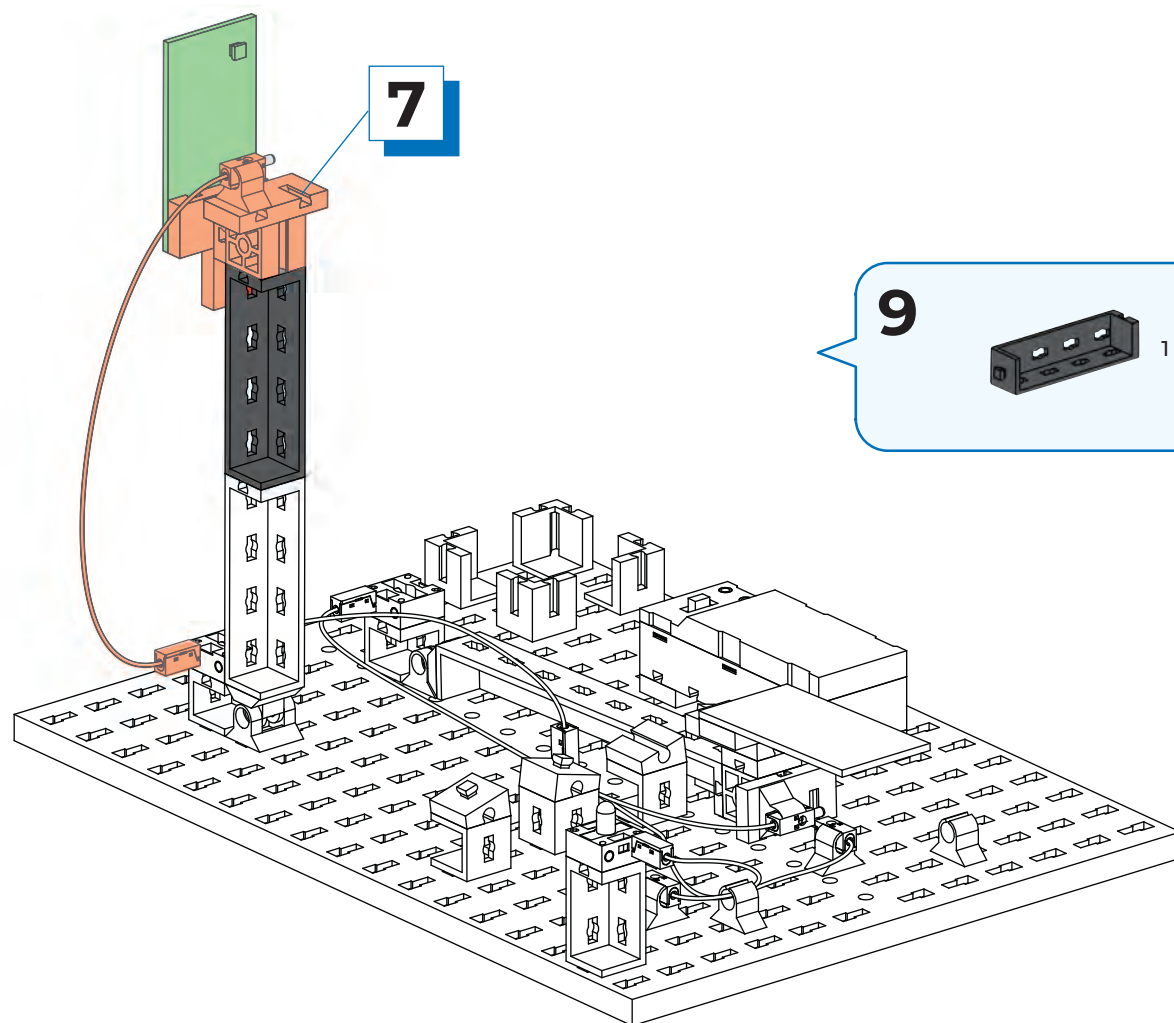
20 cm

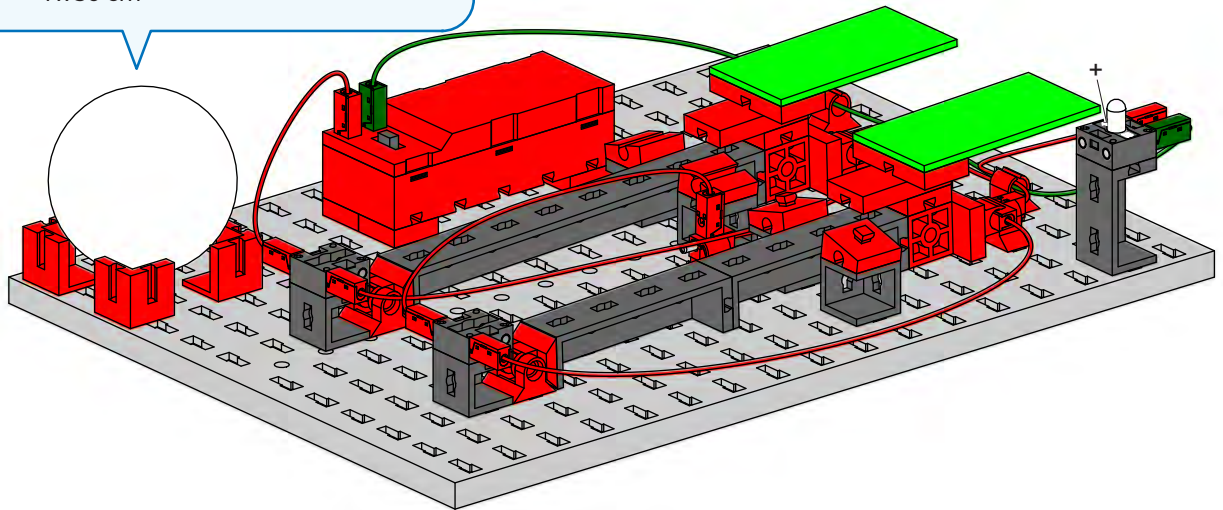
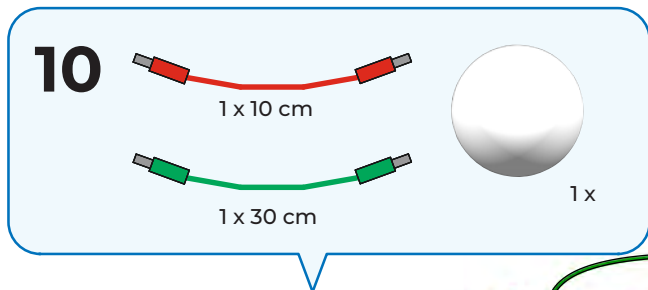
15 cm

10 cm

5 cm

0

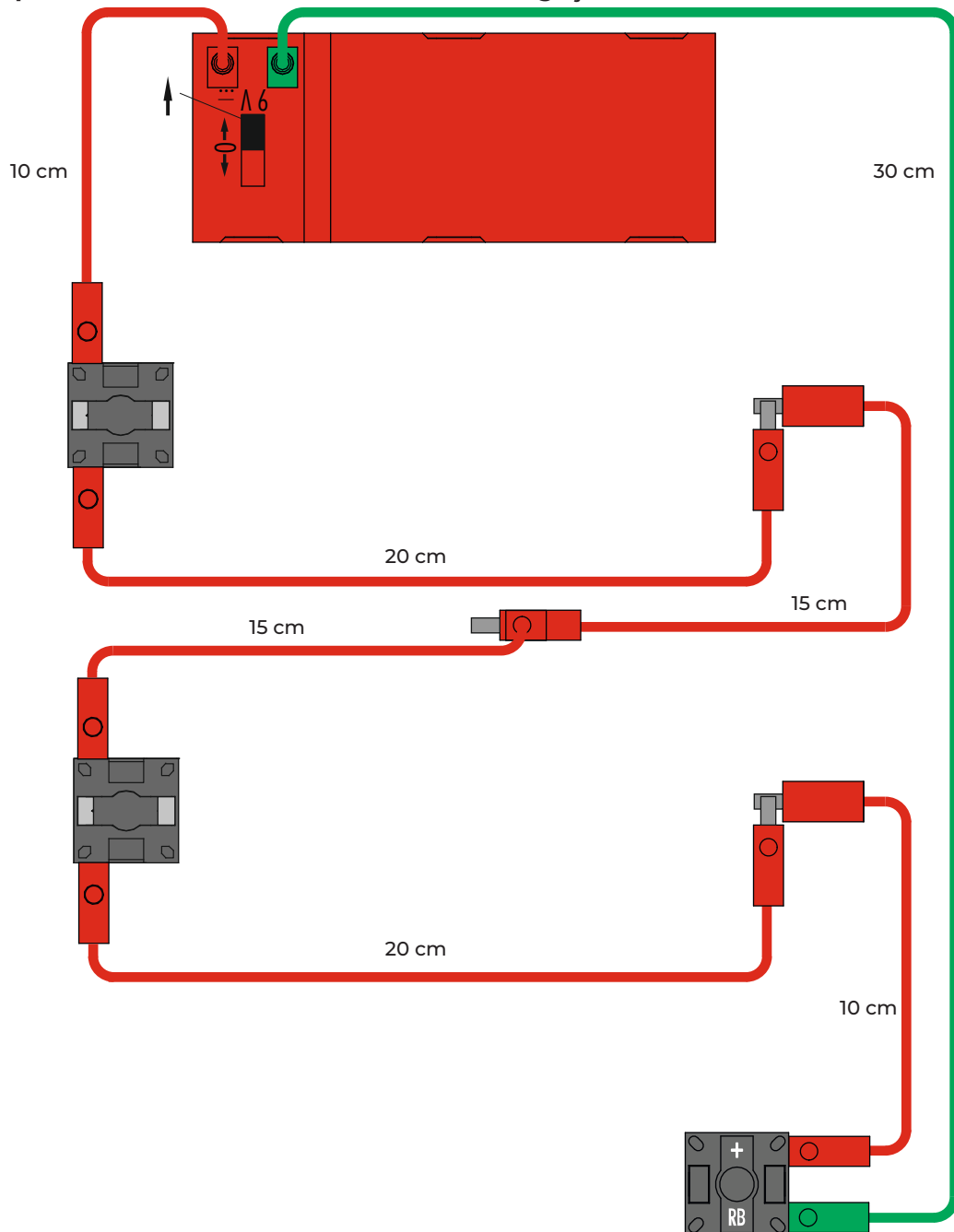


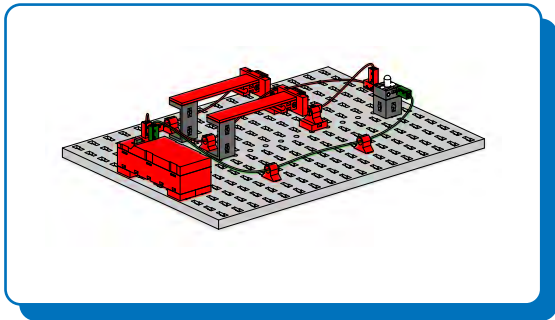


Schaltplan
Circuit diagram
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Схема подключения
电路图

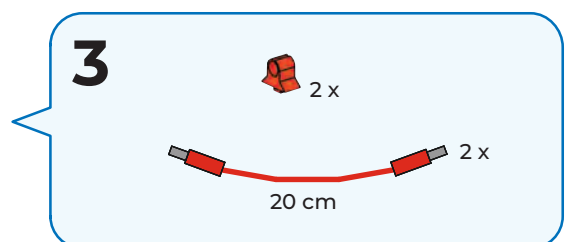
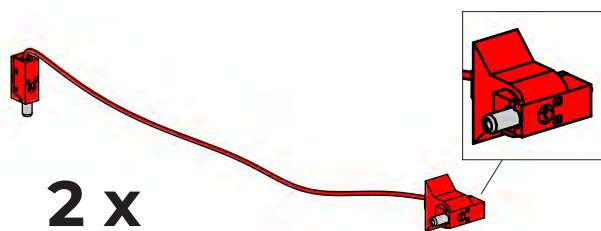
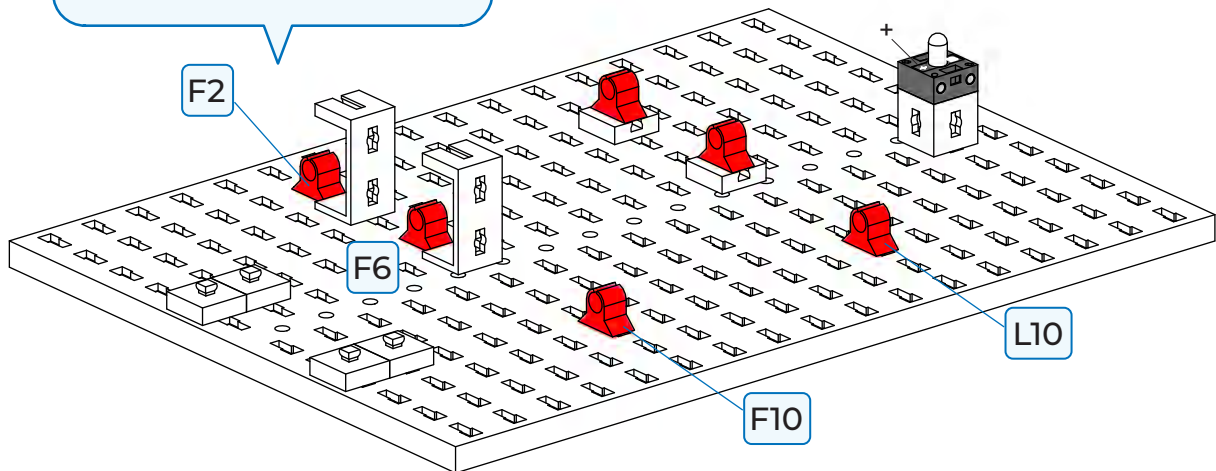
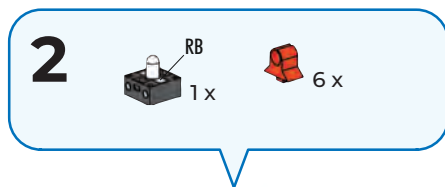
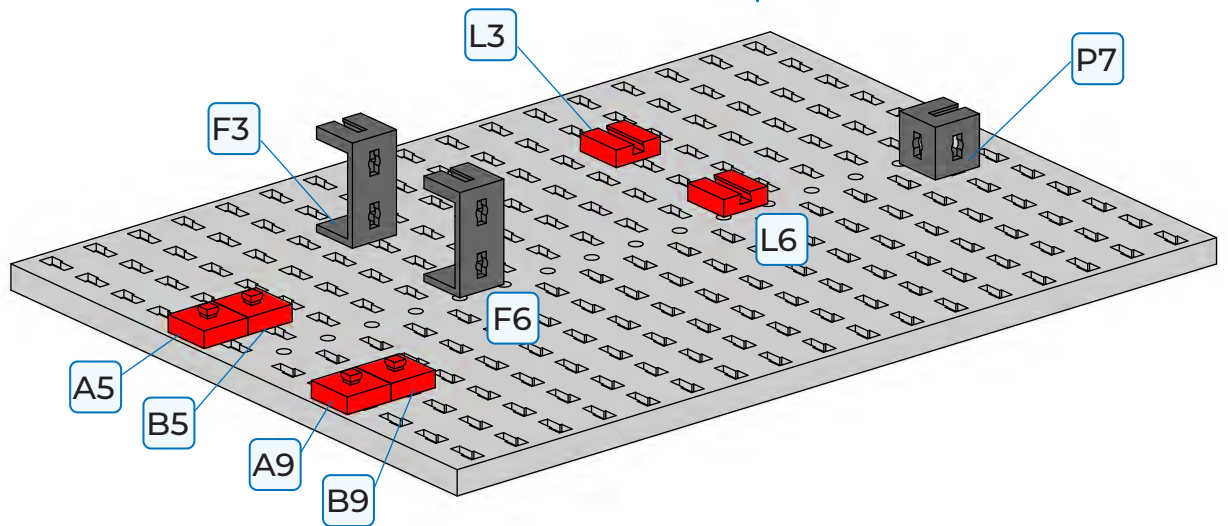
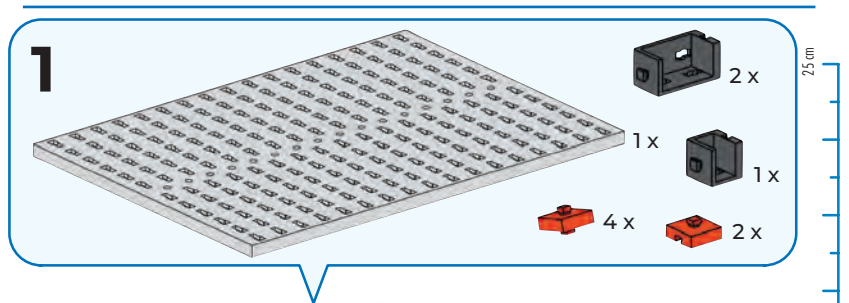




Oder-Schaltung
OR circuit
Circuit OU

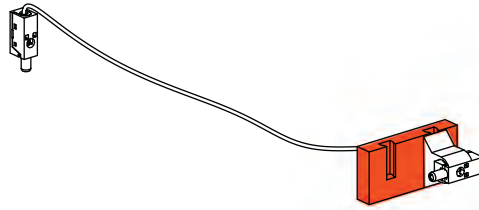
OR-circuit
OF-circuit
Circuito OR

Circuito OR
Схема „ИЛИ“
OR 电路

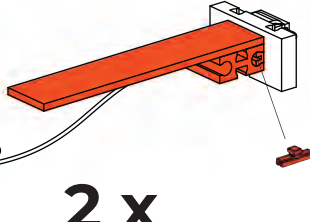


4

2 x



2 x



2 x

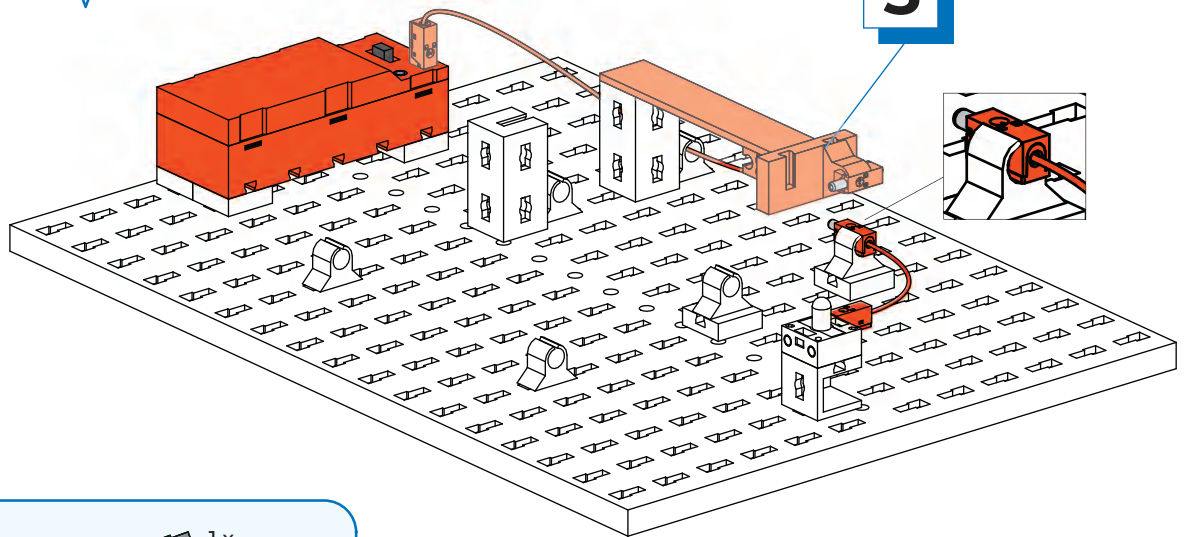
5

2 x 2 x 2 x

6

1 x

10 cm 1 x



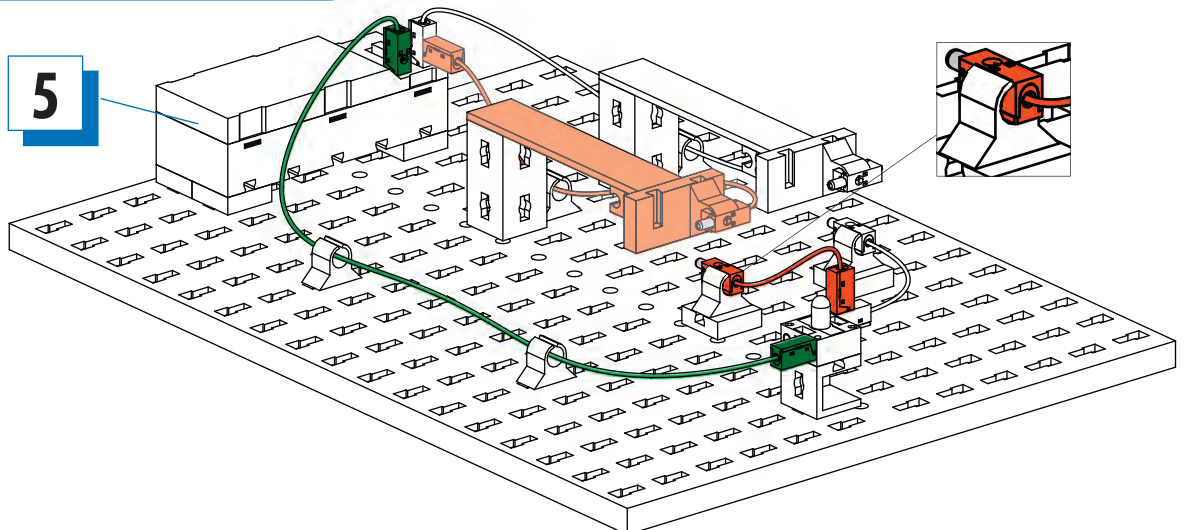
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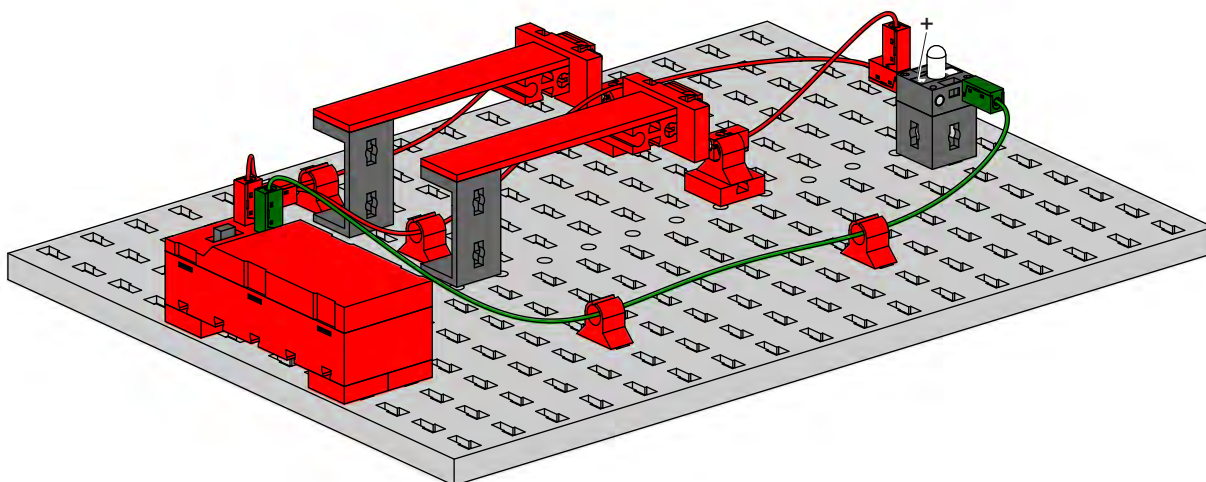
7

1 x 30 cm

1 x 10 cm

5

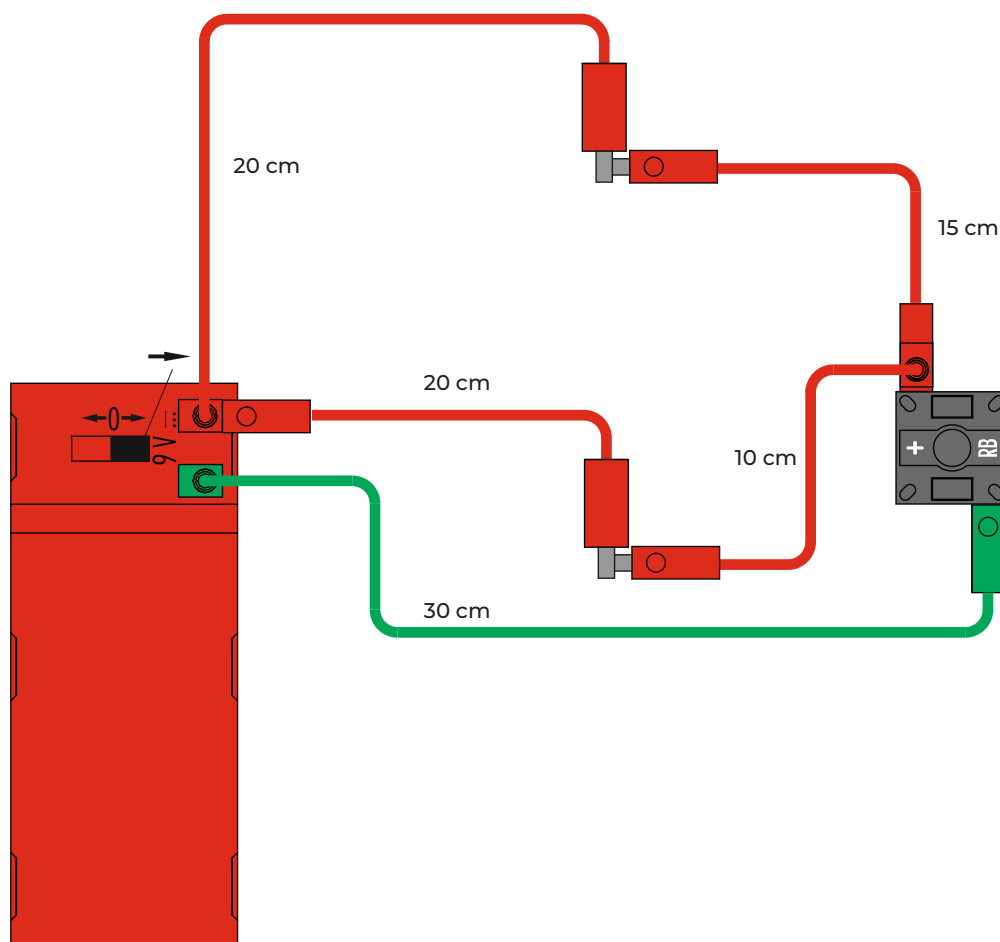


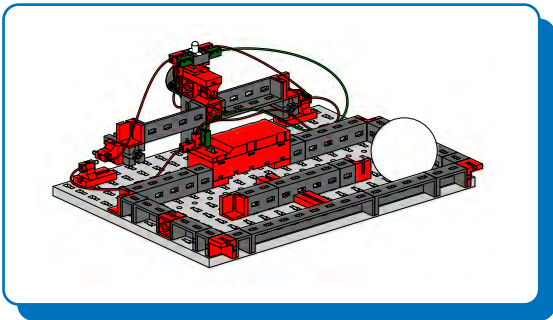


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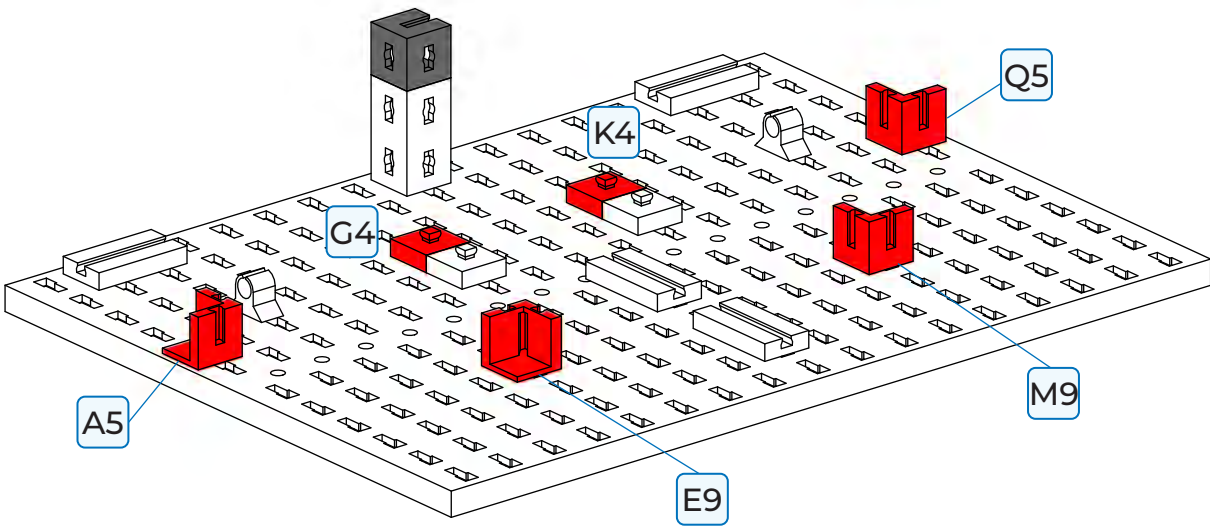
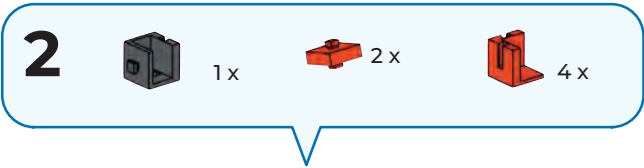
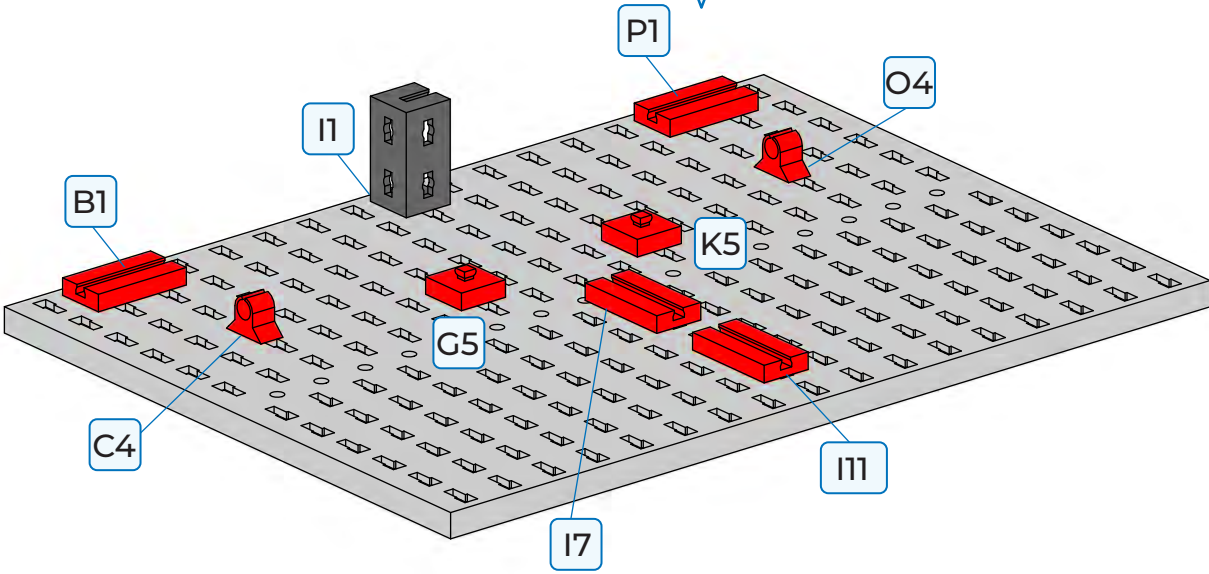
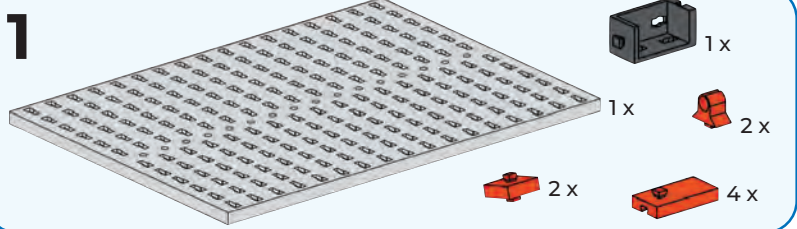


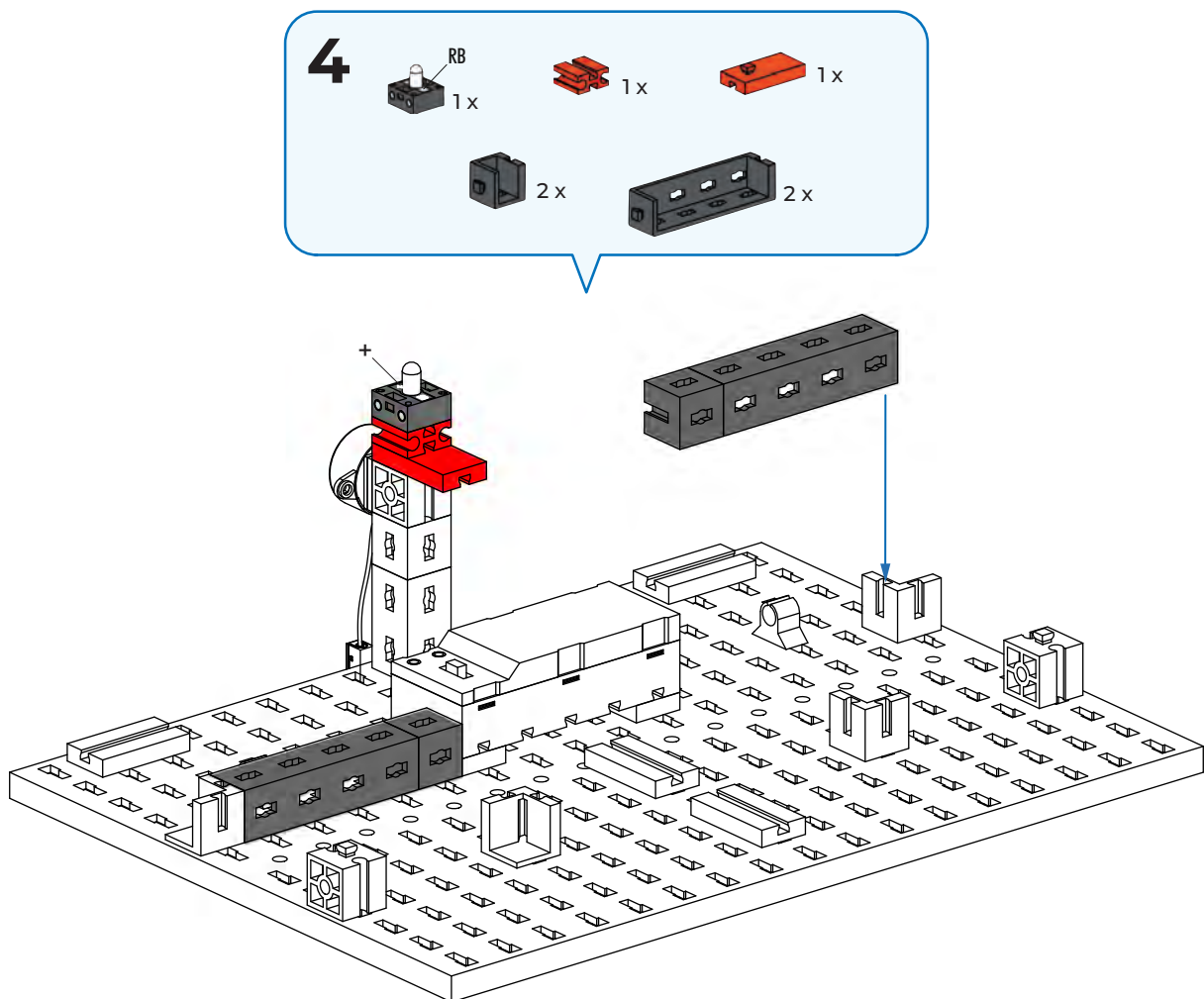
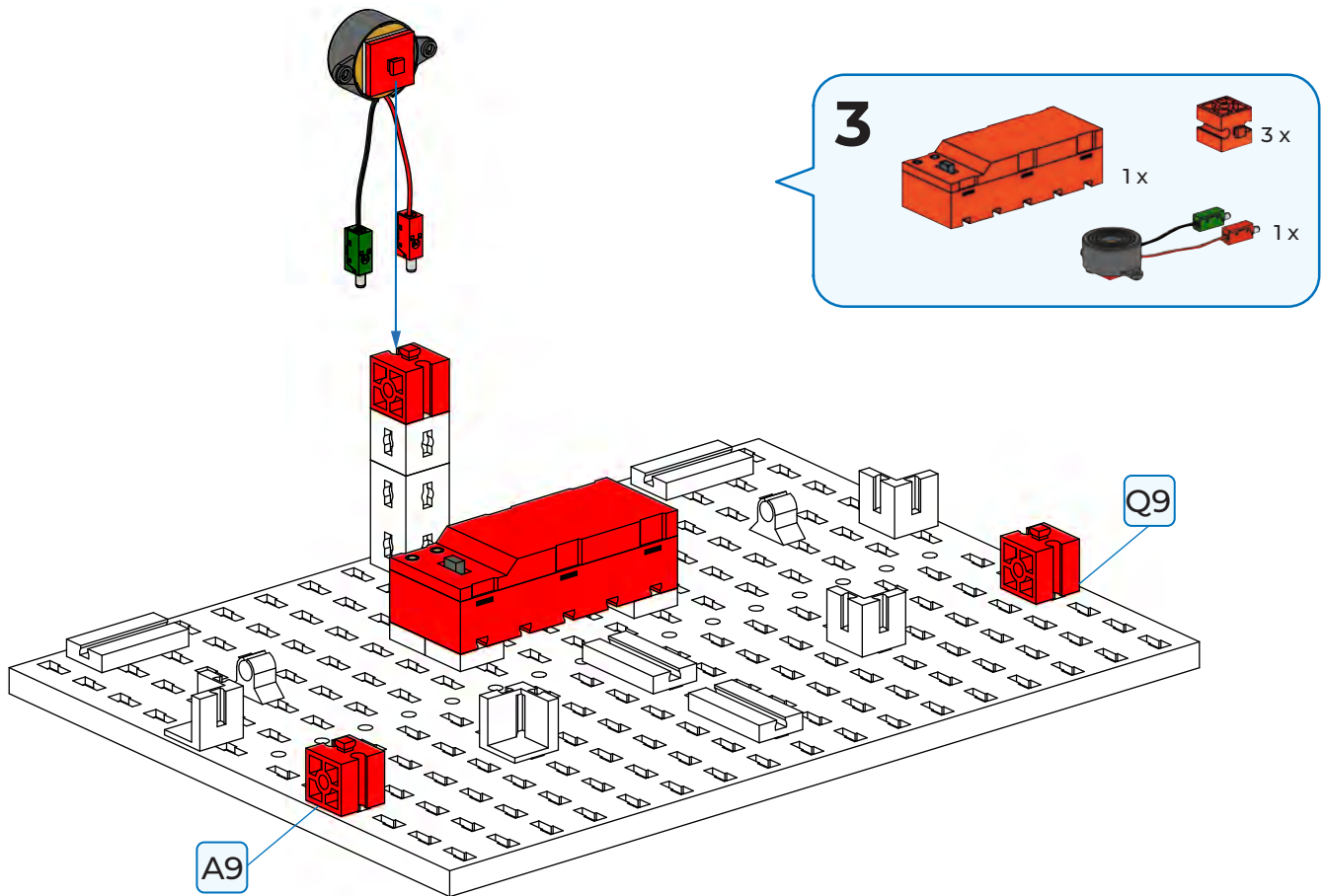


Balance-Spiel
Balance game
Jeu d'équilibre

Balansspel
Juego de equilibrio
Jogo de equilibrio

Gioco di equilibrio
Игра на равновесие
平衡游戏





25 cm

20 cm

15 cm

10 cm

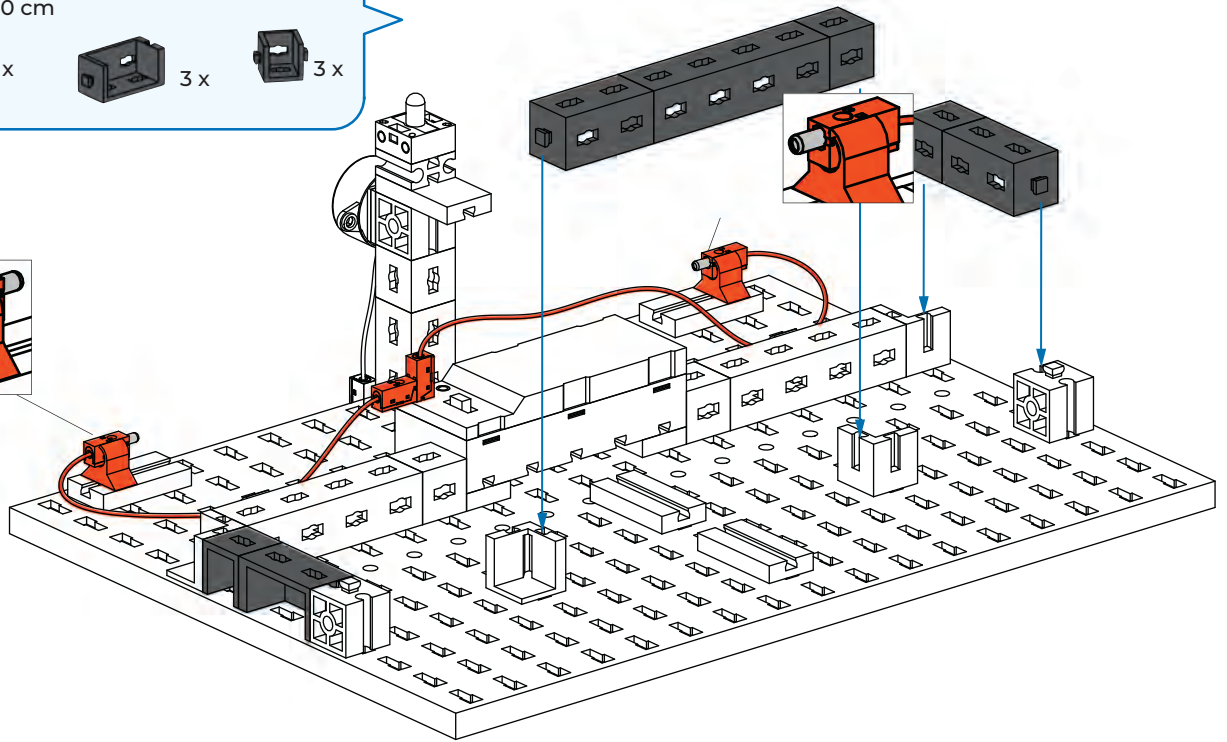
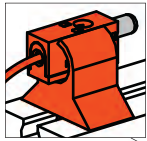
5 cm

0

5

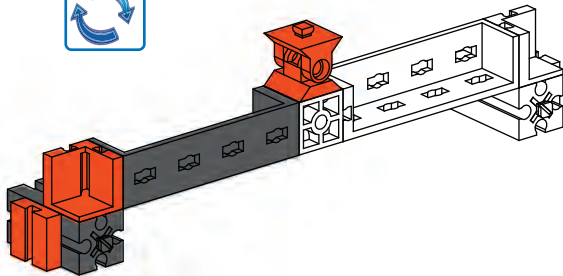
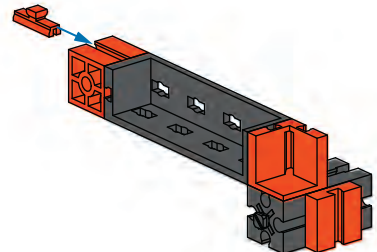
20 cm 2 x 2 x

1 x 3 x 3 x



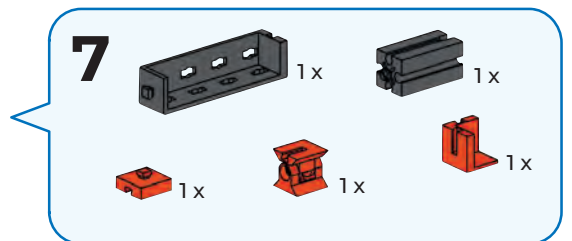
6

1 x 1 x 1 x 1 x 1 x 1 x



7

1 x 1 x 1 x 1 x 1 x



8



2 x

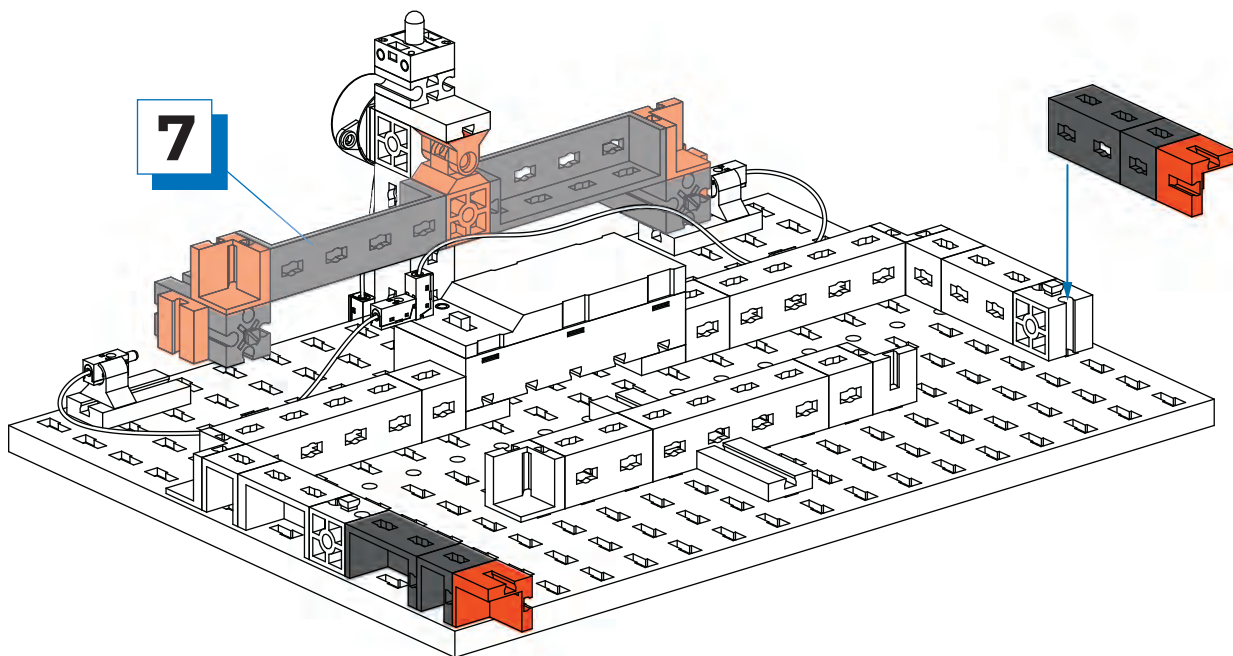


2 x

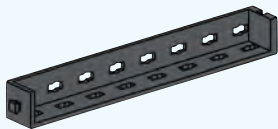


2 x

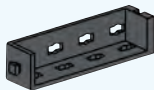
7



9



1 x



1 x



1 x



1 x

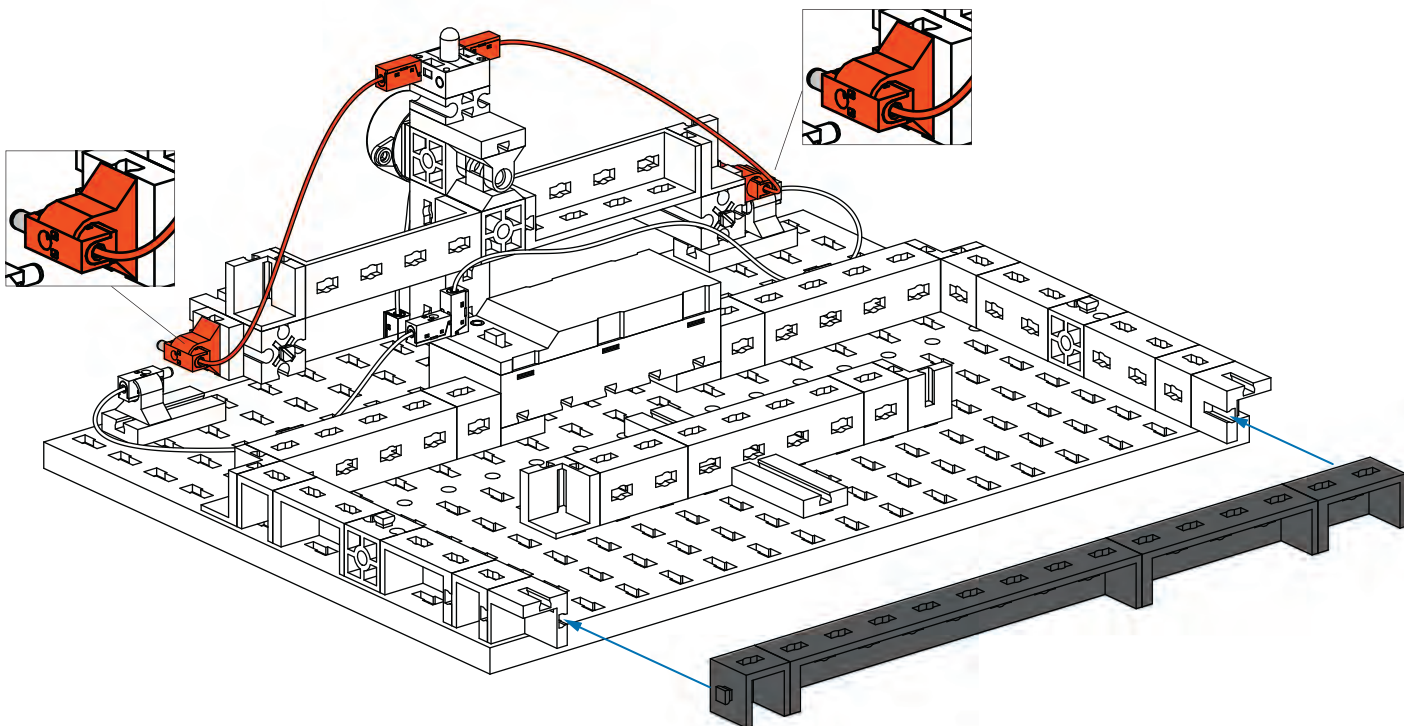


2 x




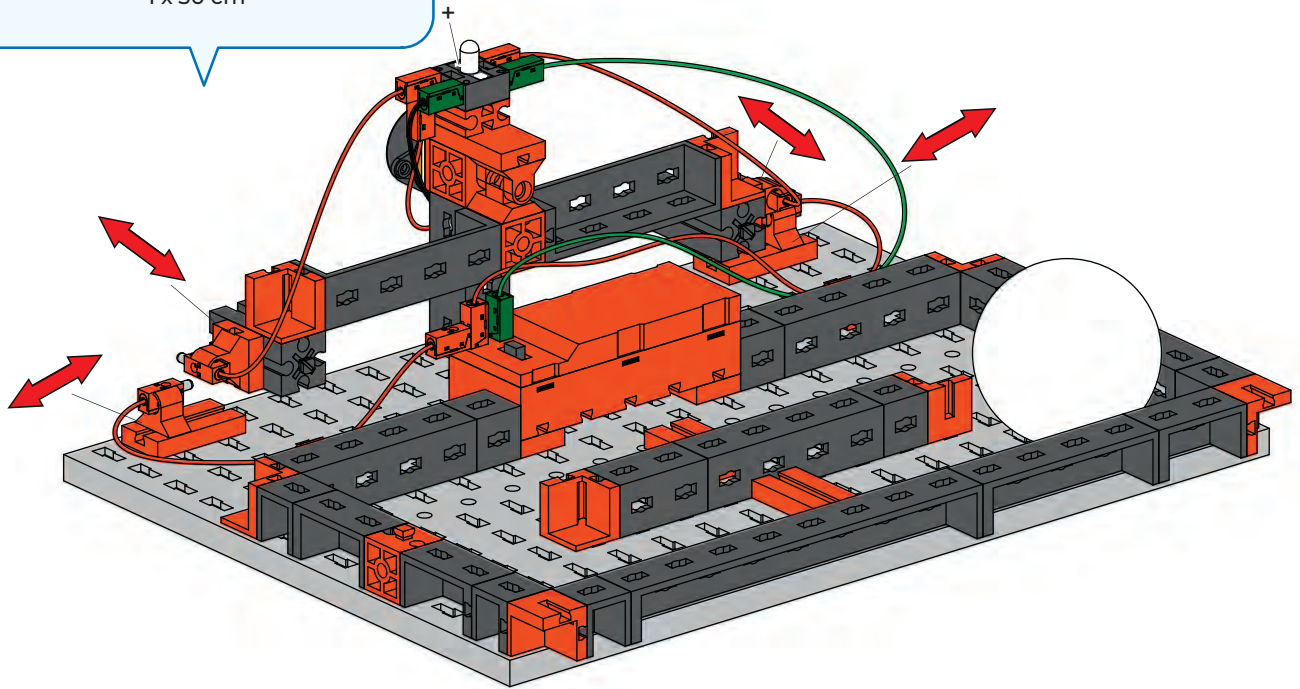
15 cm

2 x



25 cm
20 cm
15 cm
10 cm
5 cm
0

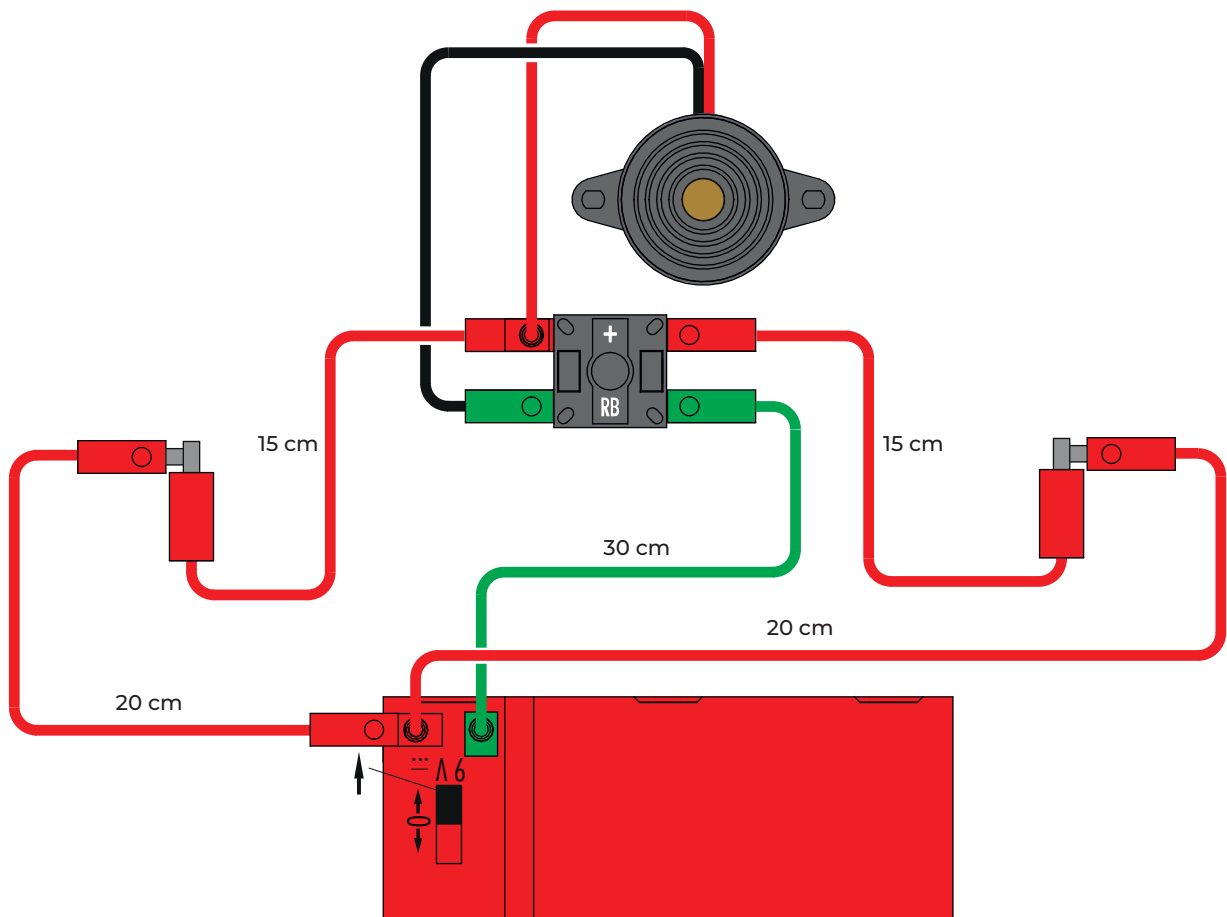
10  1 x 30 cm



Schaltplan
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Plano elétrico de ligação

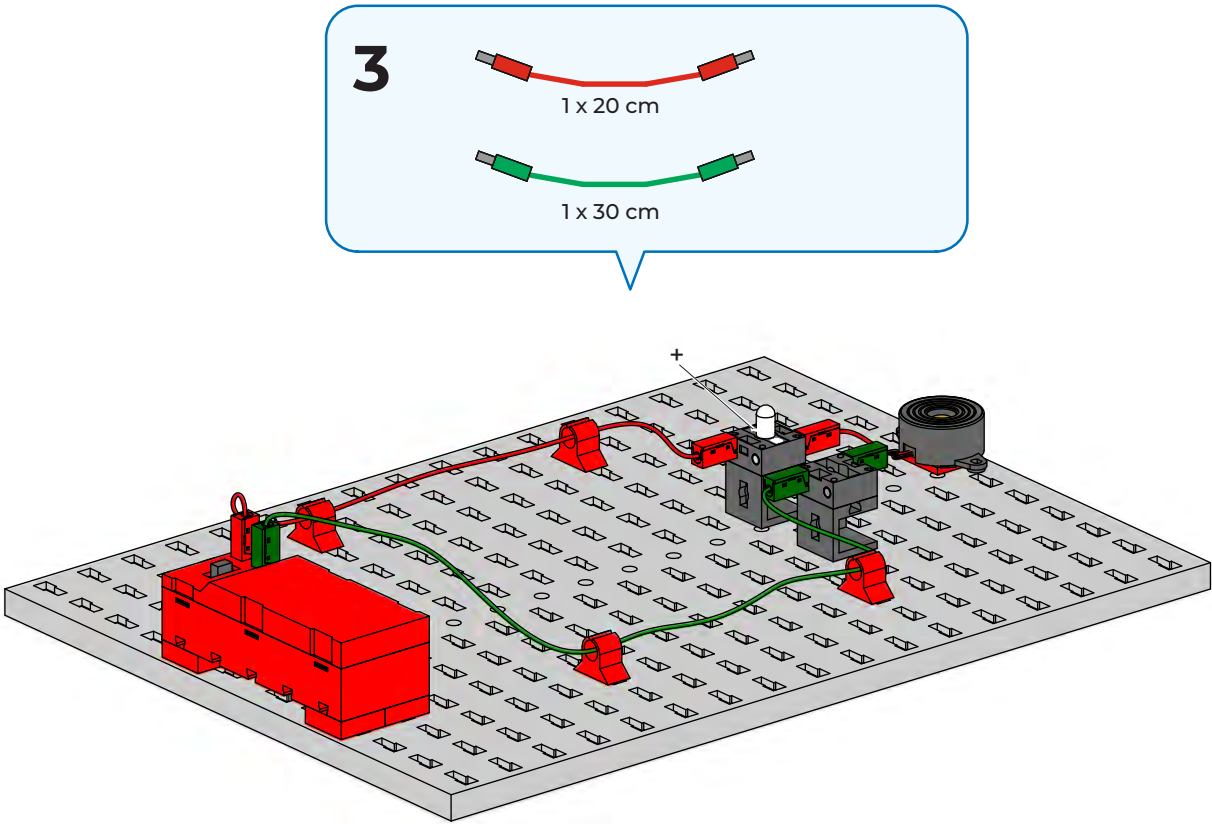
Schema elettrico
Схема подключения
电路图



Reihenschaltung
Series connection
Connexion en série

Serrieschakeling
Circuito en serie
Circuito em Série

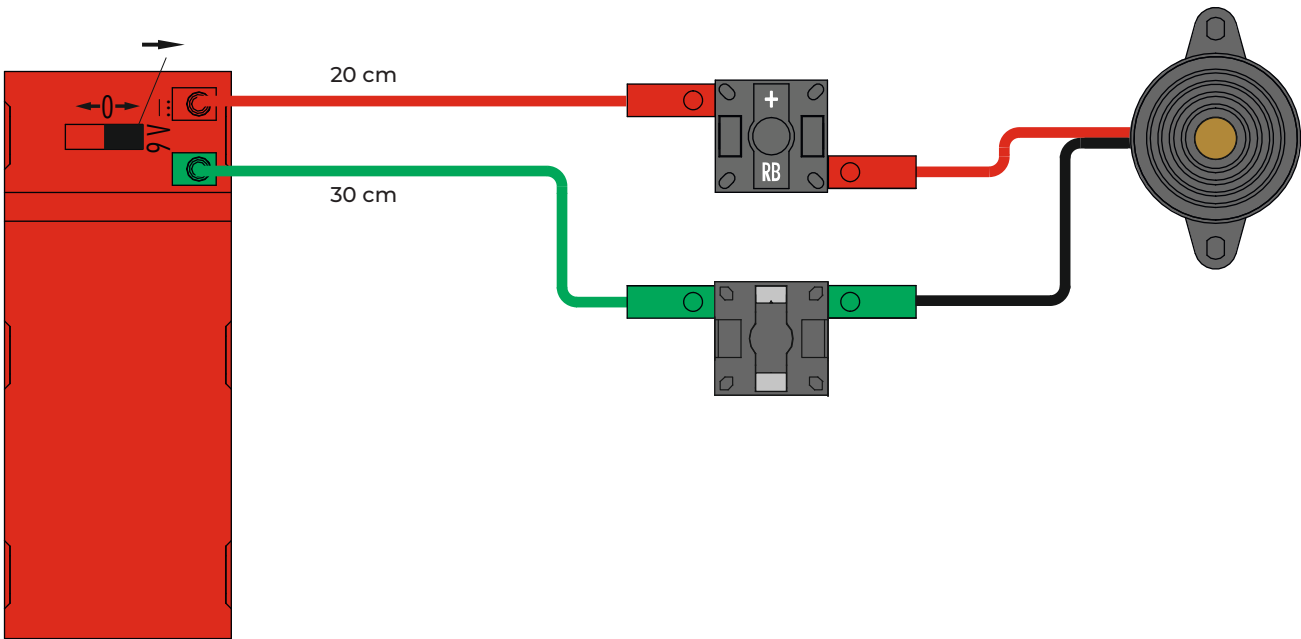
Collegamento in serie
Последовательное соединение
串联电路



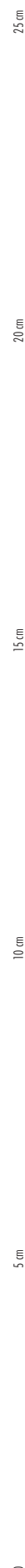
Schaltplan
Circuit diagram
Plan électrique

Schakelschema
Diagrama de circuitos
Plano elétrico de ligação

Schema elettrico
Схема подключения
电路图

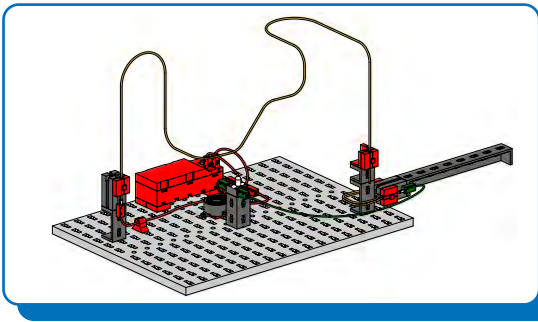


Collegamento in parallelo
Параллельное соединение
并联电路



Schema elettrico
Схема подключения
电路图





„Heißer Draht“
„Hot wire“
„Fil chaud“

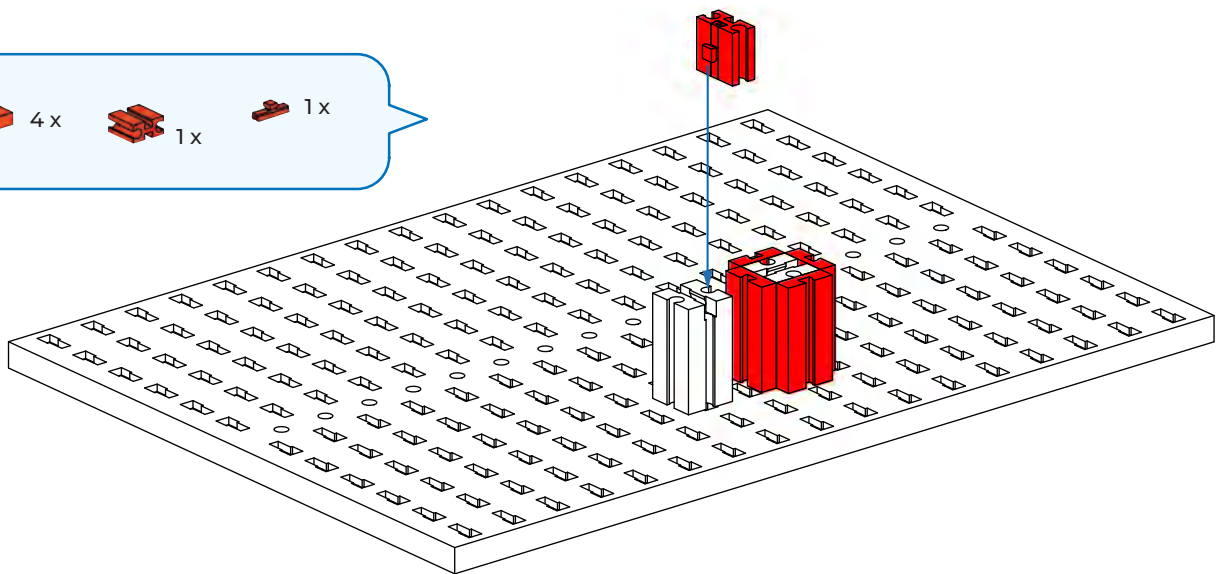
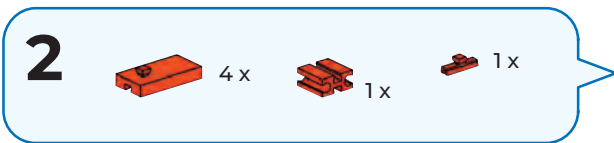
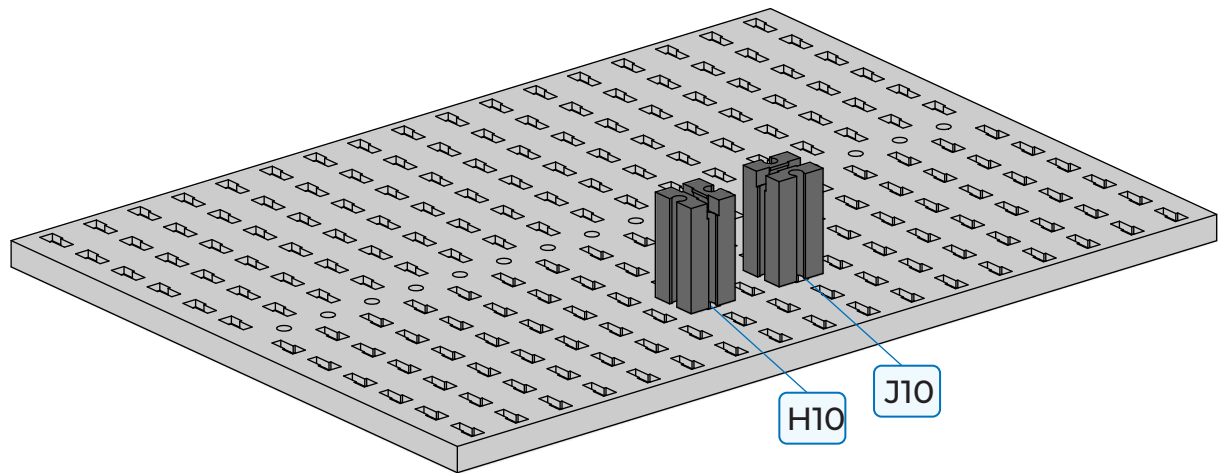
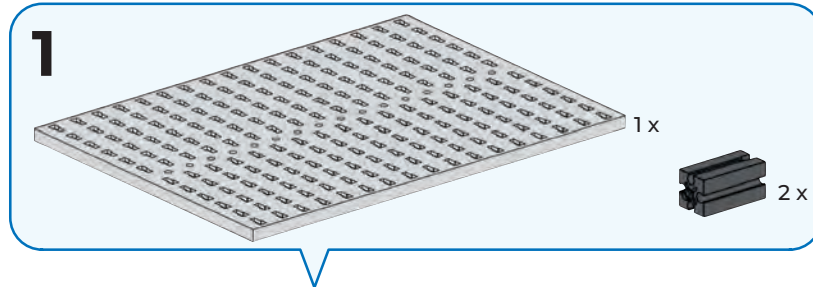
„Hete draad“
„Hilo caliente“
„Fio quente“

„Filo caldo“
Игра „горячая“
проволока
热导线

Biegevorrichtung
„Heißer Draht“
Hot wire bending device
Dispositif de pliage
„fil chaud“

„Hete draad“ buigapparaat
Dispositivo de plegado
„hilo caliente“
Dispositivo de dobragem
de „fio quente“

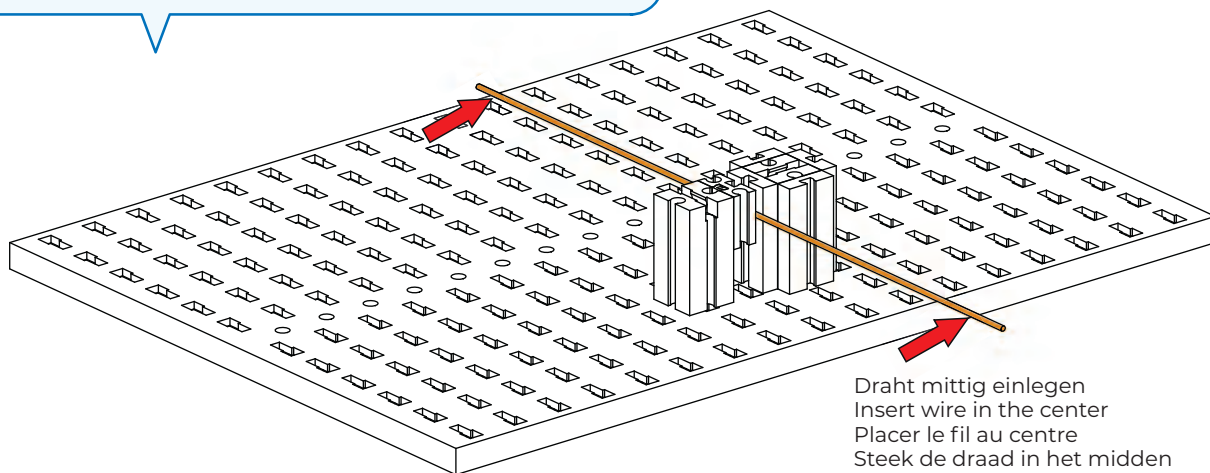
Dispositivo di piegatura a
„filo caldo“
Устройство для гибки
„горячей проволоки“
热丝 „弯曲装置“



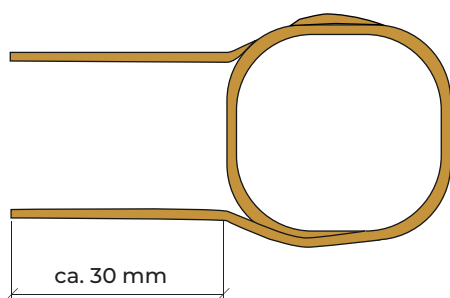
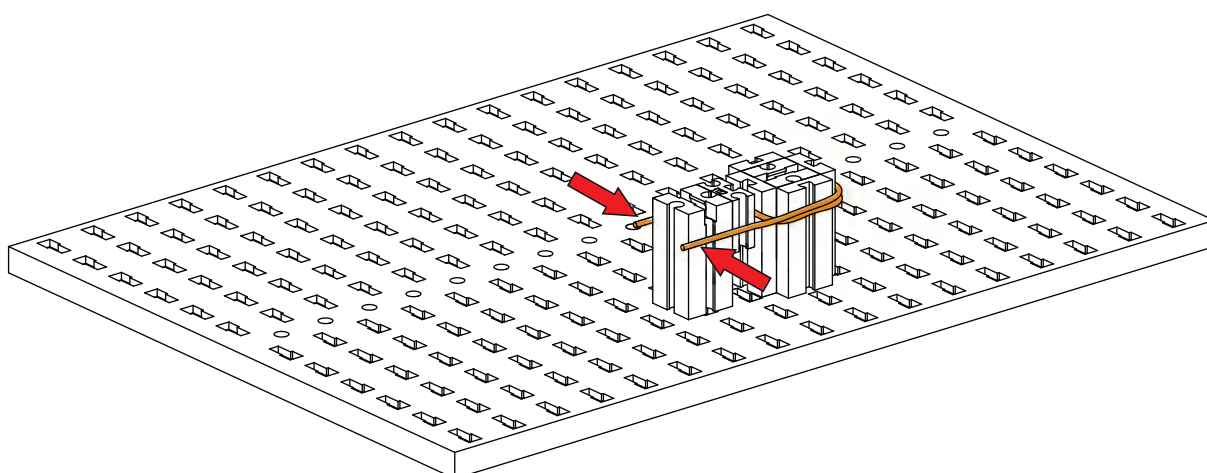
3

240

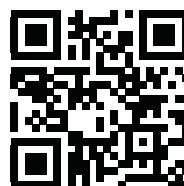
1 x



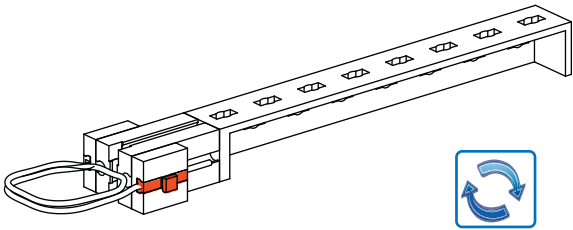
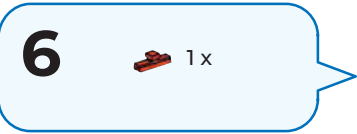
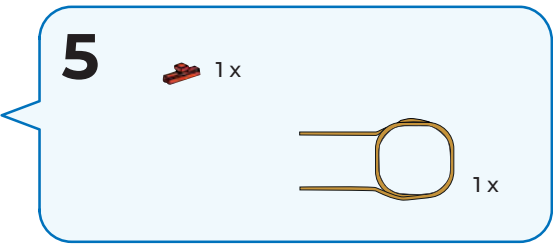
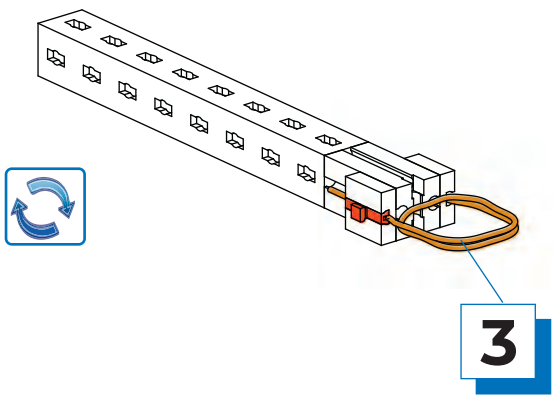
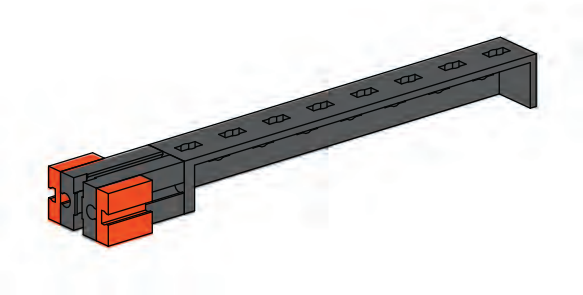
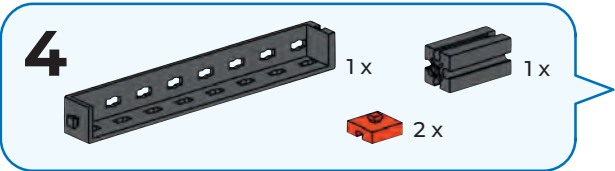
Draht mittig einlegen
Insert wire in the center
Placer le fil au centre
Steek de draad in het midden
Insertar el alambre en el centro
Introduzir o fio no centro
Inserire il filo al centro
Вставьте проволоку в центр
在中间插入铁丝

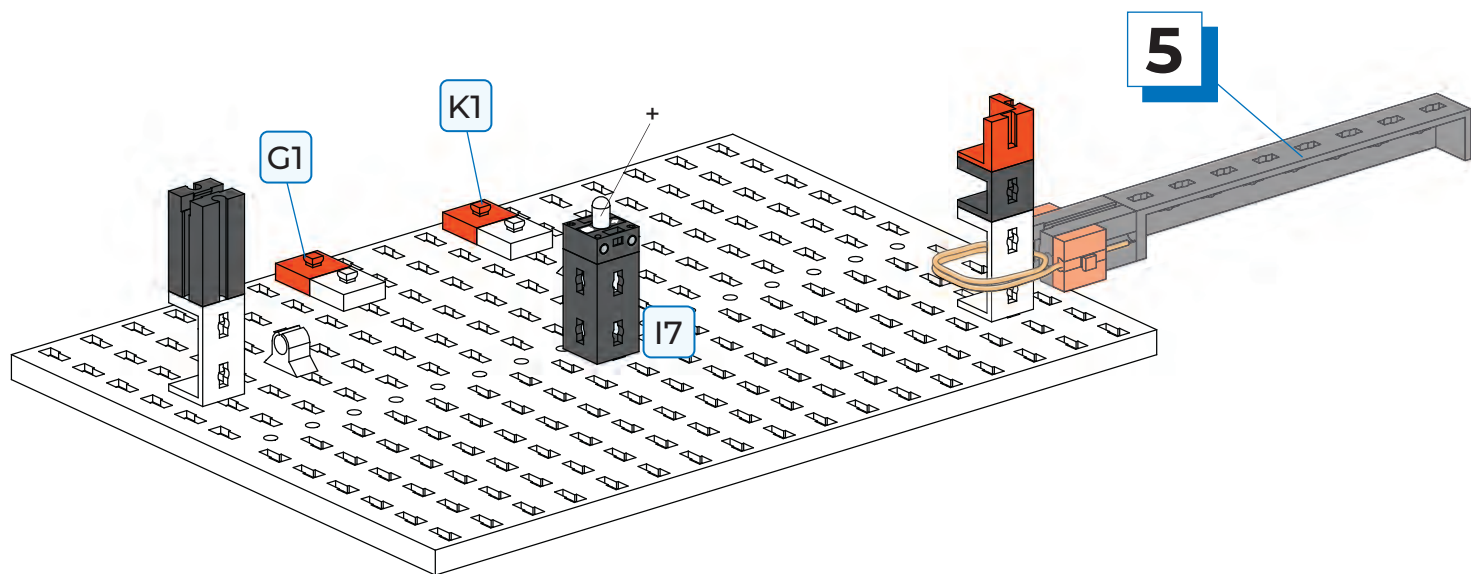
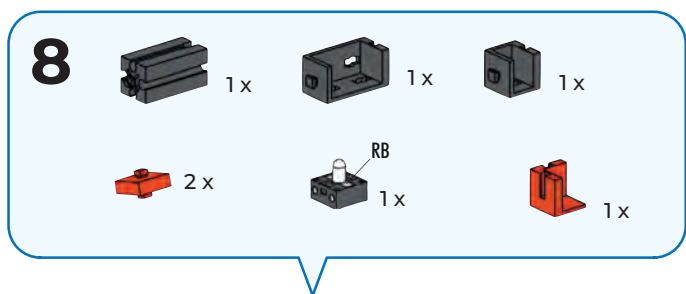
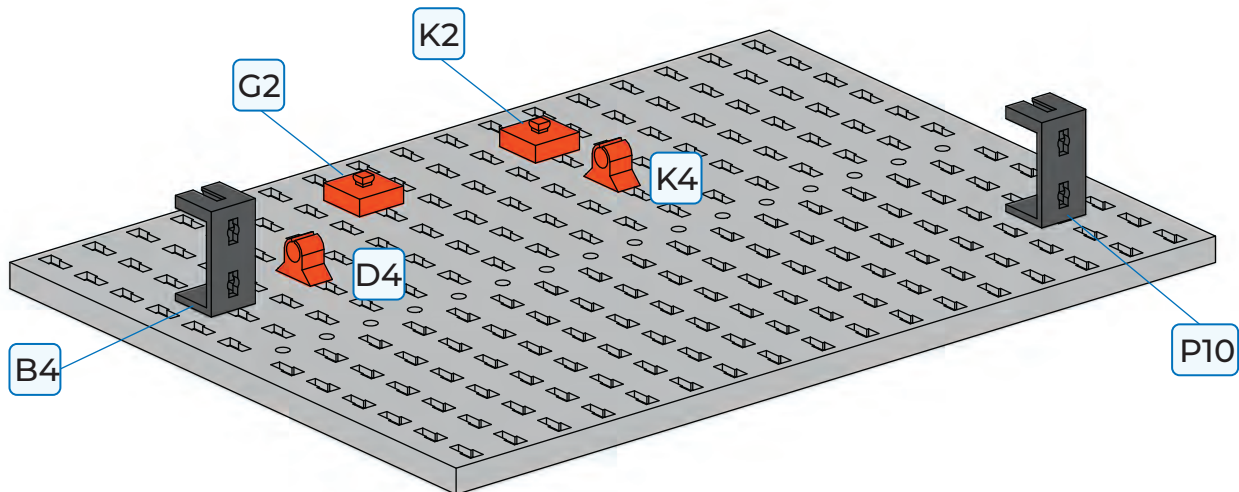
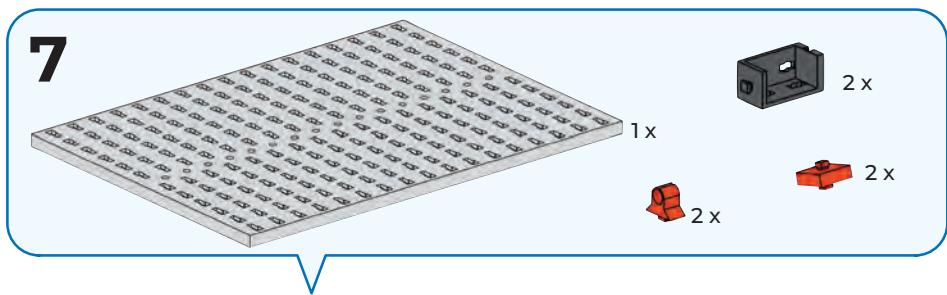


+eLearning

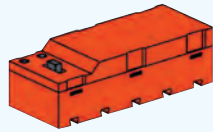


Biegevorrichtung wieder auseinanderbauen, Bauteile werden beim weiteren Bauen benötigt / Dismantle the bending device again, components are required for further construction / Démontez le dispositif de pliage, les composants sont nécessaires pour la suite de la construction. / Demonteer het buigapparaat weer, er zijn onderdelen nodig voor verdere constructie/ Desmontar de nuevo el dispositivo de plegado, se necesitan componentes para la construcción posterior / Desmonte o dispositivo de dobra novamente, os componentes são necessários para a construção posterior / Снова демонтируйте гибочное устройство, компоненты необходимы для дальнейшего строительства / 再次拆卸折弯装置，进一步施工需要部件

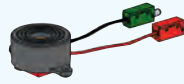




9



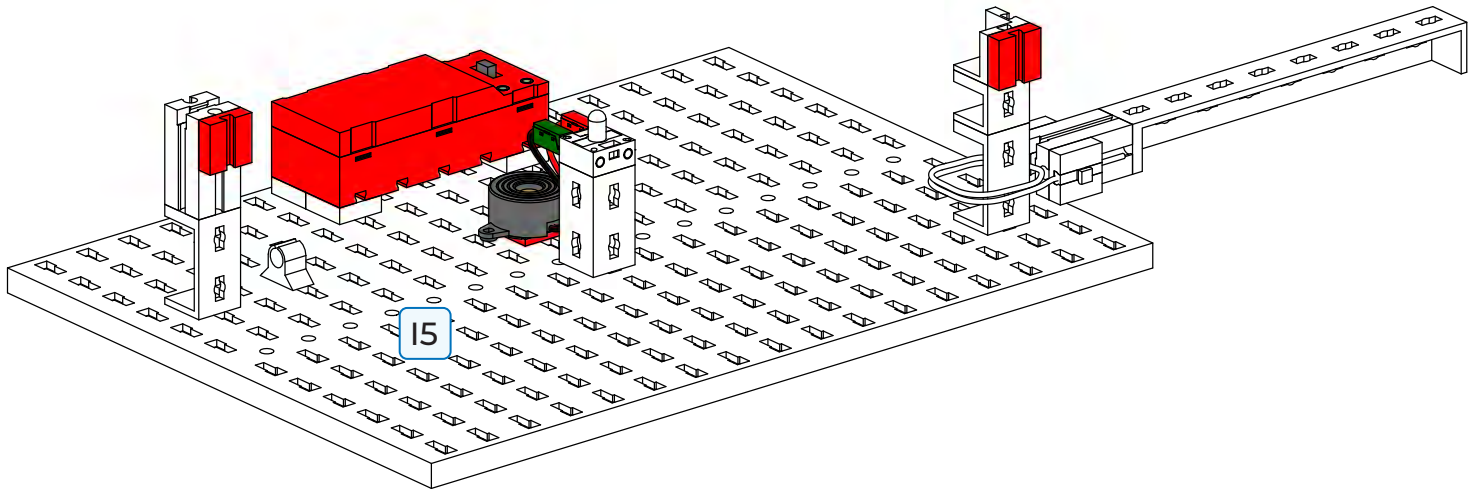
1 x



1 x



2 x



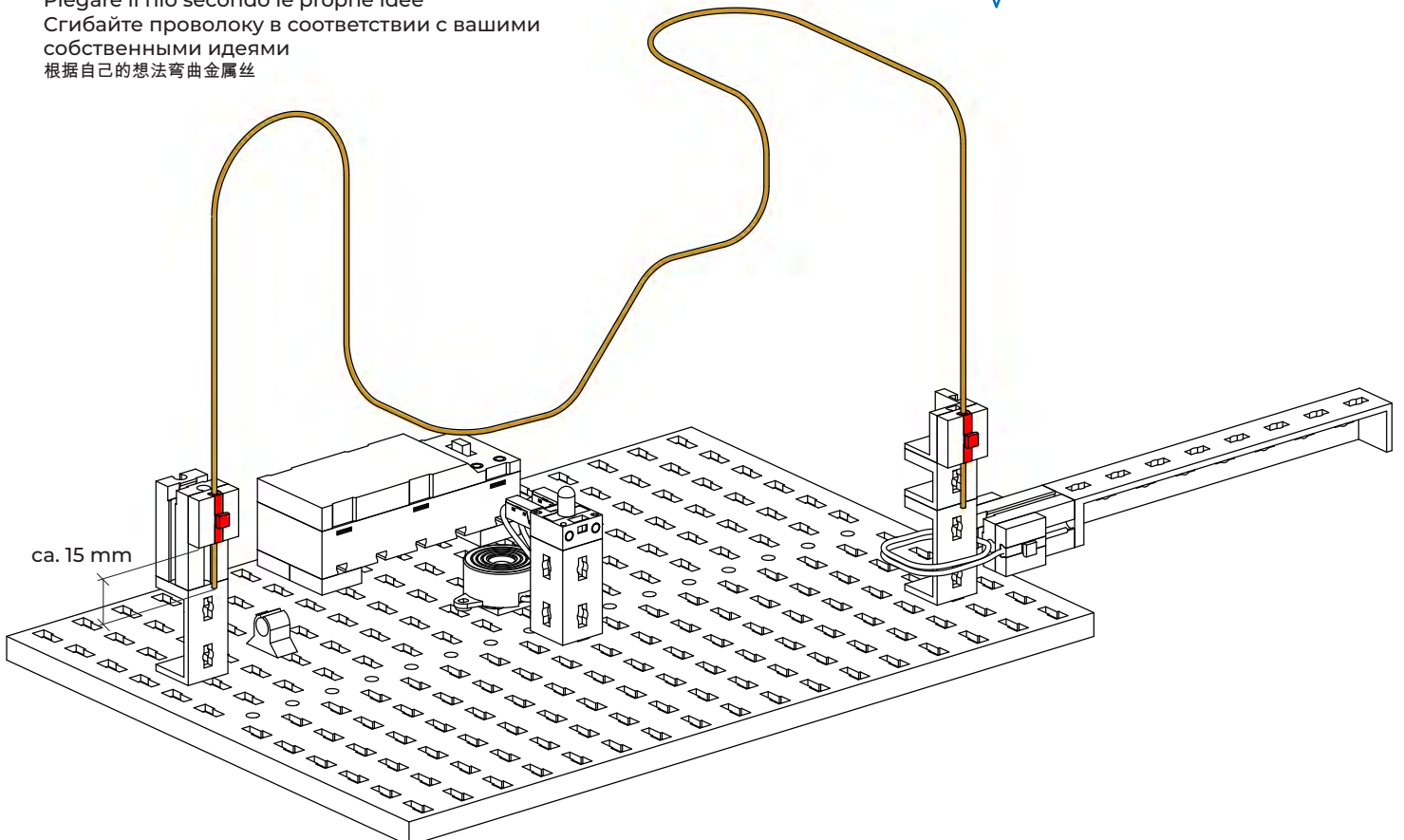
10

2 x

160

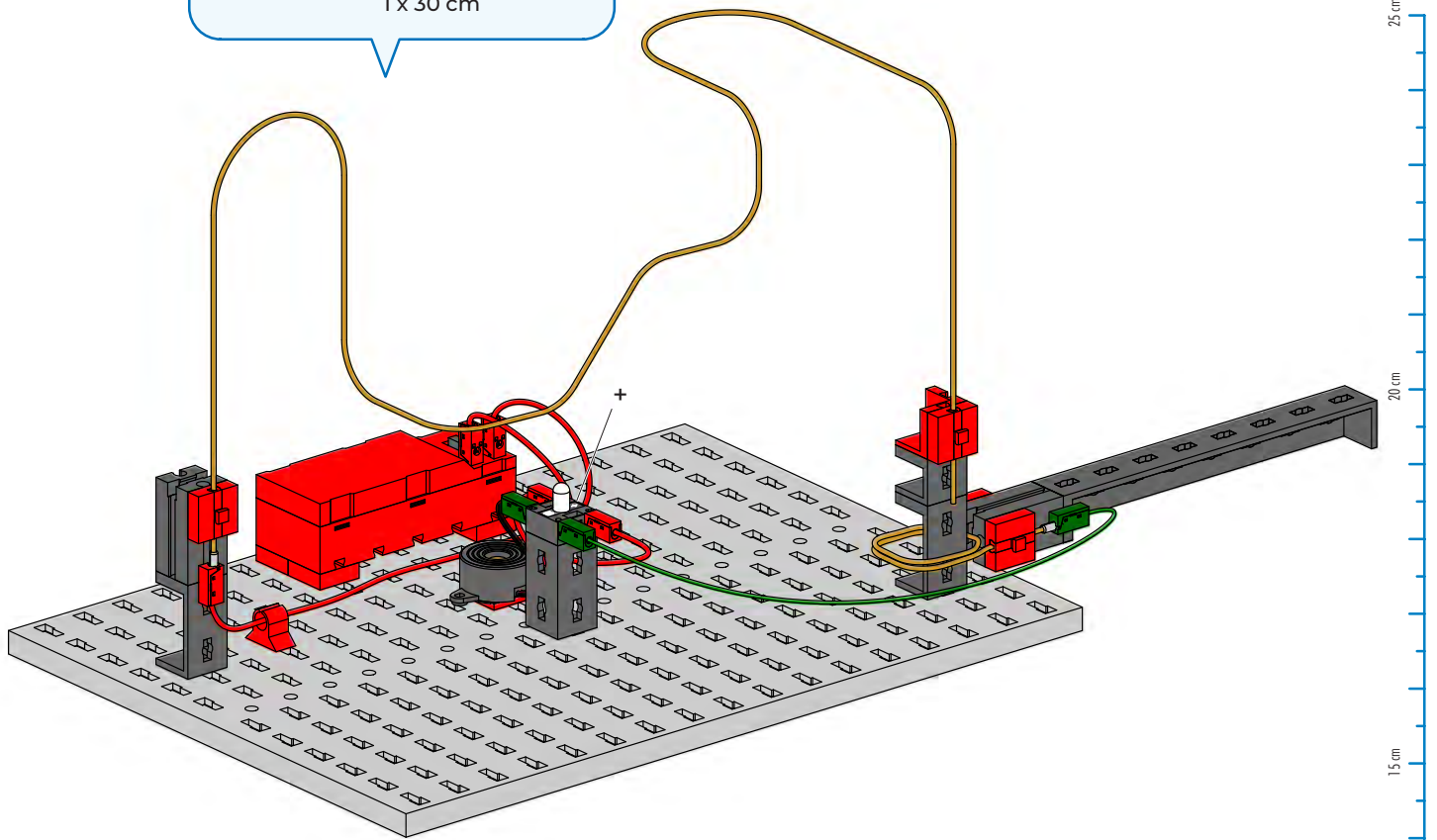
1 x

Draht nach eigenen Vorstellungen biegen
 Bend wire according to your own ideas
 Courber le fil selon ses propres idées
 Buig draad volgens je eigen ideeën
 Dobla el alambre según tus propias ideas
 Dobre o arame de acordo com suas próprias ideias
 Piegare il filo secondo le proprie idee
 Сгибайте проволоку в соответствии с вашими
 собственными идеями
 根据自己的想法弯曲金属丝



1 x 15 cm
1 x 20 cm

1 x 30 cm



Schaltplan
Circuit diagram
Plan électrique

Schakelschema
Diagrama de circuitos
Plano elétrico de ligação

Schema elettrico
Схема подключения
电路图

