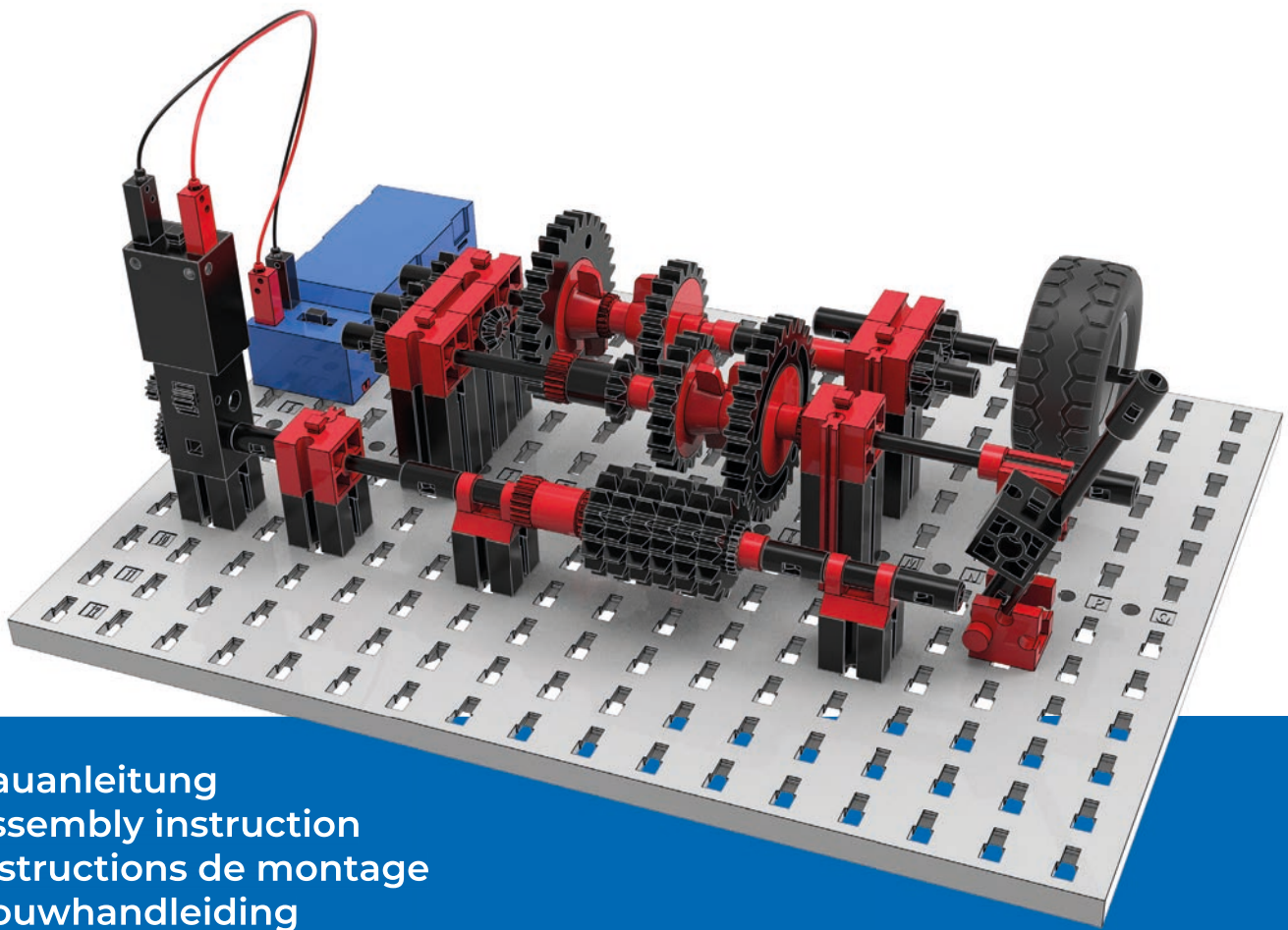


STEM Mechanics

SECONDARY SCHOOL

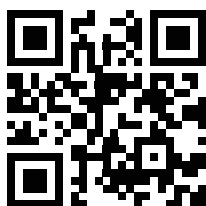


Bauanleitung
Assembly instruction
Instructions de montage
Bouwhandleiding
Instrucciones de construcción
Manual de montagem
Istruzioni di montaggio
Инструкция по сборке
安装说明书



- Auf dem fischertechnik eLearning bieten wir Ihnen die Möglichkeit, noch mehr Hintergrundwissen zum Thema des Baukastens zu erhalten und sich umfangreiche didaktische Begleitmaterialien für den Einsatz im Unterricht herunterzuladen. Über <https://www.fischertechnik.de/elearning-stem-mechanics> gelangen Sie direkt zum eLearning Portal.
- On the fischertechnik eLearning, we offer you the opportunity to obtain even more background knowledge on the subject of the construction kit and to download extensive didactic accompanying materials for use in the classroom. You can access the eLearning portal directly via <https://www.fischertechnik.de/elearning-stem-mechanics>.
- Avec le eLearning de fischertechnik, vous pouvez parfaire vos connaissances au sujet de la boîte de construction. Cliquez sur <https://www.fischertechnik.de/elearning-stem-mechanics> pour accéder directement à notre portail.
- Met het fischertechnik eLearning geven wij u de mogelijkheid, nog meer achtergrondkennis over het thema van het modulaire systeem te verkrijgen. Via <https://www.fischertechnik.de/elearning-stem-mechanics> komt u direct bij het eLearning portaal.
- En el eLearning de fischertechnik te ofrecemos la posibilidad de obtener aún más conocimientos de fondo sobre el tema del kit de construcción y de descargar amplios materiales didácticos de acompañamiento para utilizar en el aula. A través de <https://www.fischertechnik.de/elearning-stem-mechanics> podrá acceder directamente al portal de aprendizaje electrónico.
- Com o eLearning da fischertechnik damos lhe a possibilidade de obter ainda mais conhecimentos aprofundados sobre os kits de construção. Em <https://www.fischertechnik.de/elearning-stem-mechanics> pode aceder diretamente ao portal de eLearning.
- Con il eLearning di fischertechnik vi diamo la possibilità di accumulare maggiori informazioni di base sul tema delle scatole di montaggio. Tramite <https://www.fischertechnik.de/elearning-stem-mechanics> potete raggiungere direttamente il portale eLearning.
- Обучающий Интернет-портал компании fischertechnik предлагает вам возможность получить больше базовых знаний по теме конструирования. По ссылке <https://www.fischertechnik.de/elearning-stem-mechanics> вы попадаете прямо на обучающий Интернет-портал.
- 通过 fischertechnik eLearning 电子学习门户网站，我们为您提供更多关于积木的背景知识。登陆 <https://www.fischertechnik.de/elearning-stem-mechanics> 访问我们的 elearning 门户网站。

<https://www.fischertechnik.de/elearning-stem-mechanics>



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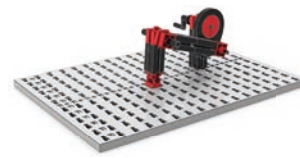
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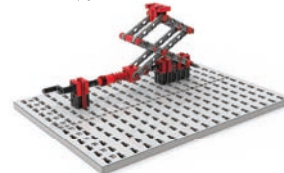
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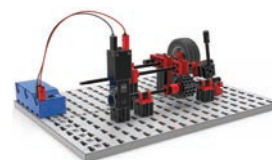
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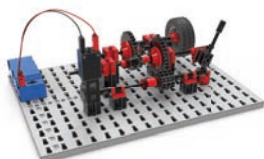
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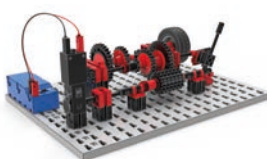
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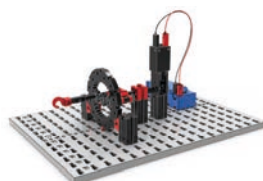
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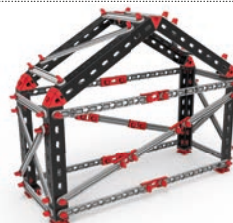
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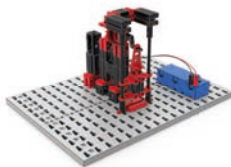
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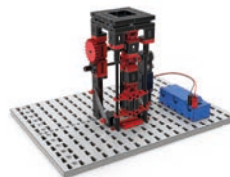
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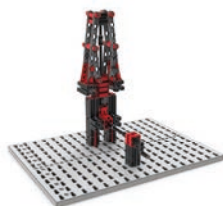
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Liste des pièces détachées

Onderdelenoverzicht

Lista da piezas

Resumo de peça individual

Singoli componenti

Перечень деталей

零件概览

	31 010 6 x		31 597 12 x		35 031 4 x		35 466 1 x
	31 011 6 x		31 667 4 x		35 033 2 x		35 694 1 x
	31 019 2 x		31 668 4 x		35 049 5 x		35 695 6 x
	31 021 2 x		31 674 2 x		35 061 2 x		35 797 3 x
	31 022 1 x		31 690 6 x		35 062 2 x		35 945 6 x
	31 027 1 x		31 848 8 x		35 063 4 x		35 971 4 x
	31 031 1 x		31 915 1 x		35 064 4 x		35 972 2 x
	31 032 1 x		31 981 5 x		35 065 2 x		35 975 2 x
	31 058 4 x		31 982 10 x		35 066 2 x		35 981 1 x
	31 060 4 x		31 983 3 x		35 069 1 x		36 227 5 x
	31 061 2 x		32 064 12 x		35 070 1 x		36 264 2 x
	31 078 1 x		32 071 6 x		35 073 8 x		36 293 12 x
	31 082 1 x		32 321 2 x		35 087 3 x		36 323 52 x
	31 124 4 x		32 879 9 x		35 088 3 x		36 324 4 x
	31 330 2 x		32 881 8 x		35 112 1 x		36 334 4 x
	31 426 6 x		32 882 3 x		35 113 2 x		36 574 6 x
	31 436 8 x		32 913 2 x		35 129 2 x		36 586 2 x

Einzelteilübersicht

Spare parts list

Liste des pièces détachées

Onderdelenoverzicht

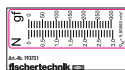
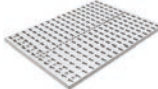
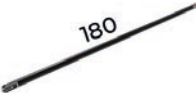
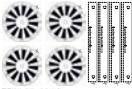
Lista da piezas

Resumo de peça individual

Singoli componenti

Перечень деталей

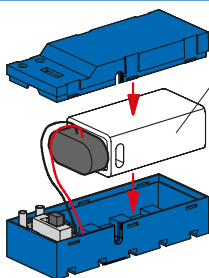
零件概览

	36 819 3 x		37 925 1 x		68 535 1 x		160 546 12 x
	36 920 4 x		37 926 1 x		116 913 2 x		160 547 12 x
	36 921 8 x		38 225 2 x		130593 3 x		160 548 12 x
	36 922 6 x		38 240 4 x		137 096 1 x		167 984 1 x
	36 950 6 x		38 242 1 x		137 654 2 x		173 045 4 x
	37 237 7 x		38 253 4 x		137 677 2 x		176 669 4 x
	37 238 2 x		38 258 2 x		153 367 2 x		193 731 1 x
	37 468 13 x		38 260 4 x		153 669 4 x		200 921 1 x
	37 527 1 x		38 413 3 x		153 670 8 x		210 625 1 x
	37 636 1 x		38 414 4 x		156 105 4 x		218 336 1 x
	37 679 12 x		38 423 4 x		160 543 12 x		219 140 1 x
	37 858 1 x		38 428 3 x		160 545 4 x		

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



9V E-Block
6F22 / 6R61

Batterie ist nicht Inhalt der Packung
Battery not included
Batterie non comprise
De batterij wordt niet meegeleverd
La batería no está incluida en el suministro
A bateria não é o conteúdo da embalagem
La batteria non è inclusa nella confezione
Батарея в комплект не входит
包装中不含电池

- 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 Batteriehalter 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 battery tray.
- 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.
- Toutes les piles doivent être retirées du compartiment à piles.
- 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 de batterijhouder 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 gastadas deben retirarse del compartimiento de las pilas.
- 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 gastadas devem ser removidas do suporte das pilhas.
- 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.
- Le batterie scariche devono essere rimosse dal vano batterie.
- 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 батареи необходимо извлечь из батарейного отсека.
- 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。
- 空电池必须从电池盒中取出。
- 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）与鳊鱼技术产品的电源装置相连接

- 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 o pointes vives indispensables au bon fonctionnement!
- Let op! U kunt zich bezeren aan bouwstenen met scherpe randen of punten!
- Atención! ¡Cuidado, no te hagas daño con los componentes con bordes afilados o puntiagudos!

- Atenção! Perigo de ferimentos em peças componentes com cantos vivos e pontas obrigatórios para o funcionamento!
- Attenzione! Pericolo di lesioni dovute a componenti con spigoli vivi e punte per motivi funzionali!
- Будьте осторожны! Об острые края деталей и и наконечники можно порезаться!
- 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！

- 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 mantener limpio y en buen estado cada una de las piezas. Particularmente las piezas móviles.
- Todas as peças individuais, especialmente peças móveis, devem ser submetidas à manutenção e limpas se necessário.
- Se necessario, tutti i singoli componenti, soprattutto le parti mobili, si devono eventualmente sottoporre a manutenzione e pulizia.
- Все детали, особенно подвижные, требуют ухода и чистки.
- 必要时应保养和清洁所有零件，尤指运动部件。

- Das Produkt darf nur mit einer der folgenden fischertechnik Energiequellen benutzt werden: Art-Nr.: 203864 Batteriehalter 9V oder Art.-Nr.: 135719 Batteriehalter 9V
- The product may only be used with one of the following fischertechnik energy sources: Art No.: 203864 battery tray 9V or Art No.: 135719 battery tray 9V
- 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° : 135719 support de pile 9 volts
- Het product mag uitsluitend met een van de volgende fischertechnik energiebronnen worden gebruikt: art.nr.: 203864 batterijhouder 9V of art.nr.: 135719 batterijhouder 9V
- El producto se debe utilizar únicamente con una de las siguientes fuentes de energía: Art. No. 203864 soporte de pila de 9V o Art. No. 135719 soporte de pila de 9V

- O produto somente pode ser utilizado com uma das seguintes fontes de energia da fischertechnik: art. n°: 203864 Suporte de bateria de 9 V ou art. n°: 135719 Suporte de bateria de 9 V
- Questo prodotto può essere utilizzato solo con le seguenti fonti di energia fischertechnik: cod. prod.: 203864 portabatteria da 9V oppure cod. prod.: 135719 portabatteria da 9V
- Игрушку можно использовать только с одним из следующих источников энергии от fischertechnik: арт. №: 203864 держатель батареек 9В или арт. №: 135719 держатель батареек 9В
- 该商品只允许使用如下的慧鱼 (fischertechnik) 电源: 货号: 203864, 9V DC电池盒 货号: 135719, 9V DC

- 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, cúmpelas 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.
- Atención! Existe el peligro de lesión 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, rispetta e tienle 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！

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.

- Adequado 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 à 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。

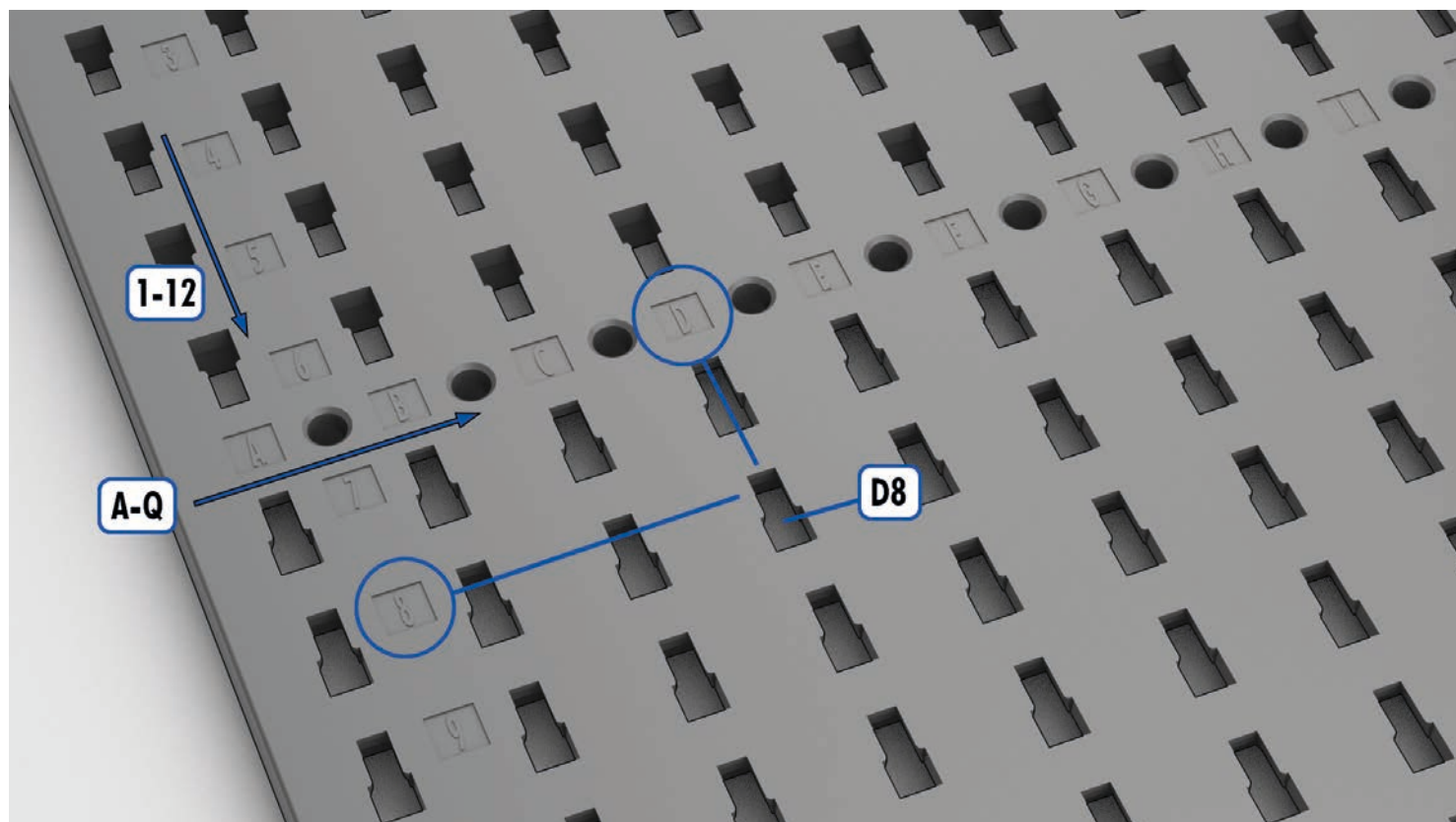
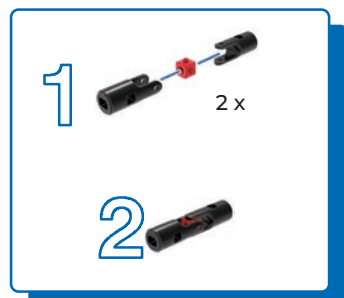
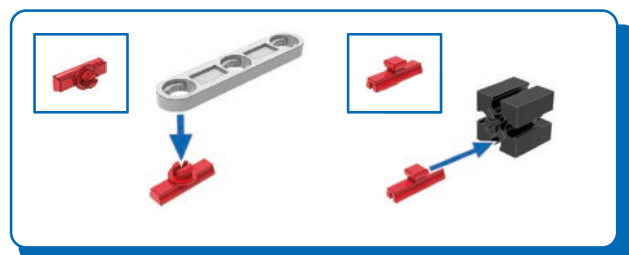
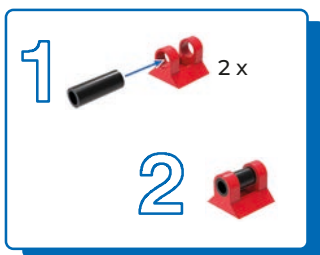
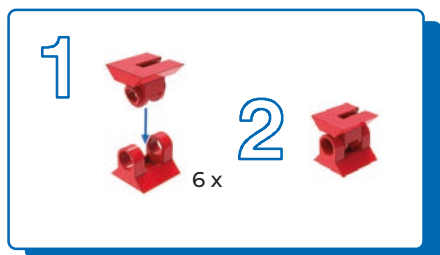
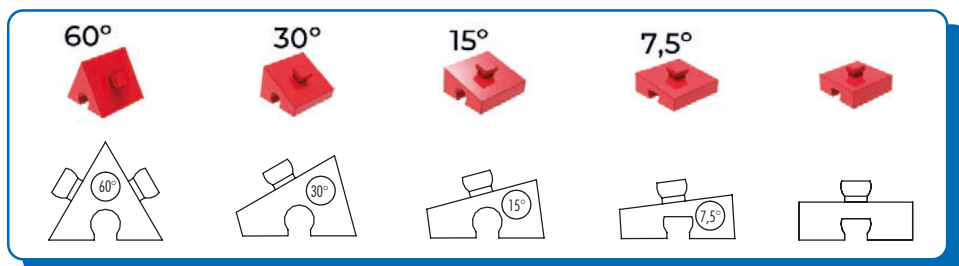
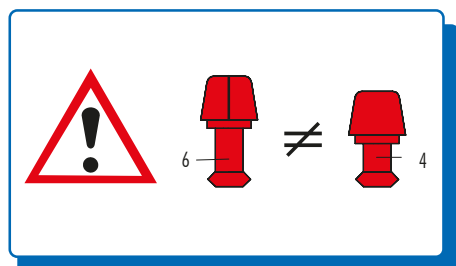
Hinweise zum Umweltschutz / Instructions for Environmental Protection / Remarques de protection de l'environnement / Bescherming van het milieu / Notas con respecto a la protección del medio ambiente / Instruções para a proteção do meio ambiente / Indicazioni sulla tutela ambientale / Указания по охране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

www.fischertechnik.de/environment

Montagetipps
Tips for assembly
Tuyaux pour le montage

Montagetips
Consejos para el montaje
"Dicas" para montagem

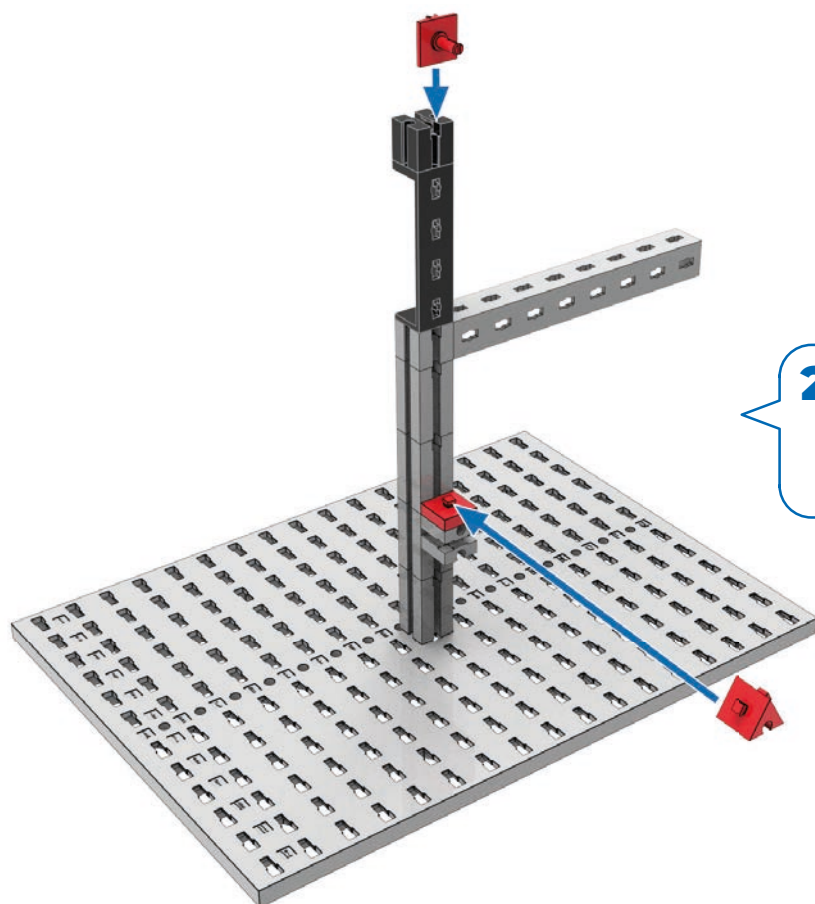
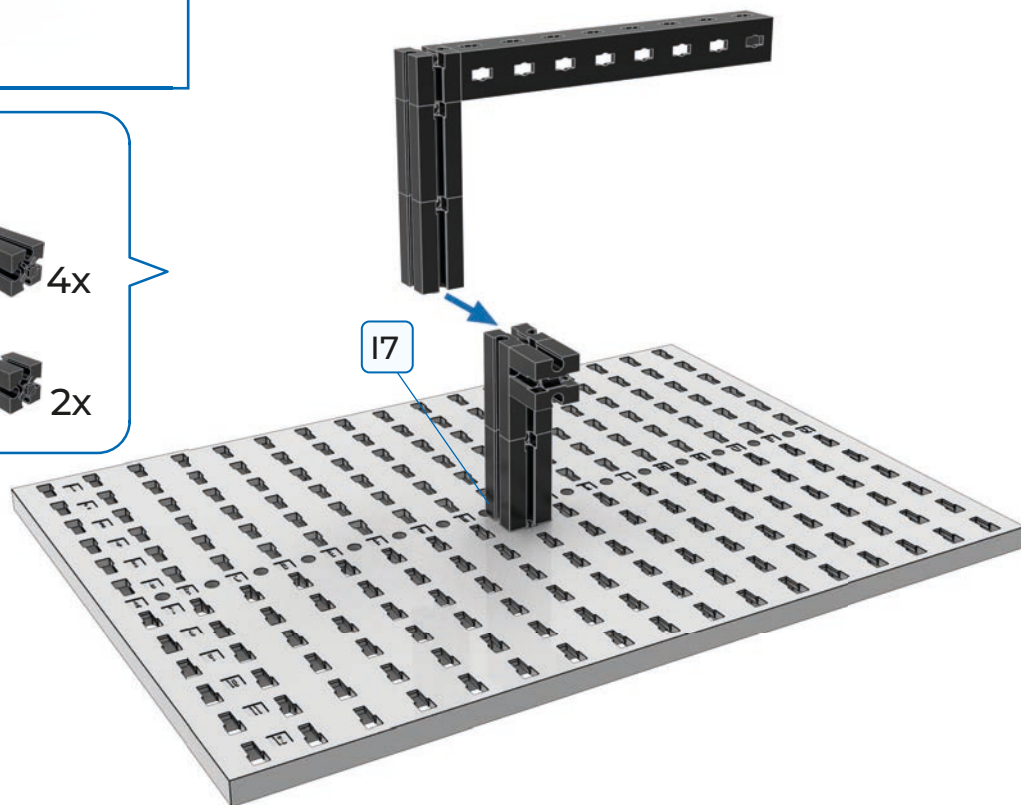
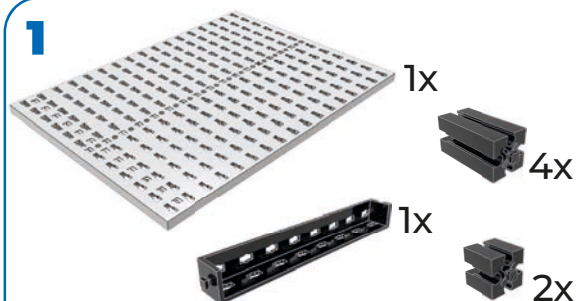
Consigli per il montaggio
Советы по сборке
装配建议



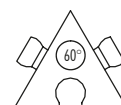
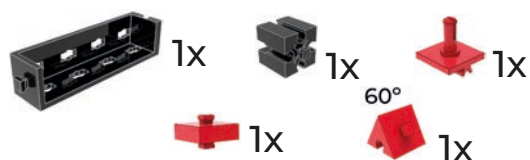


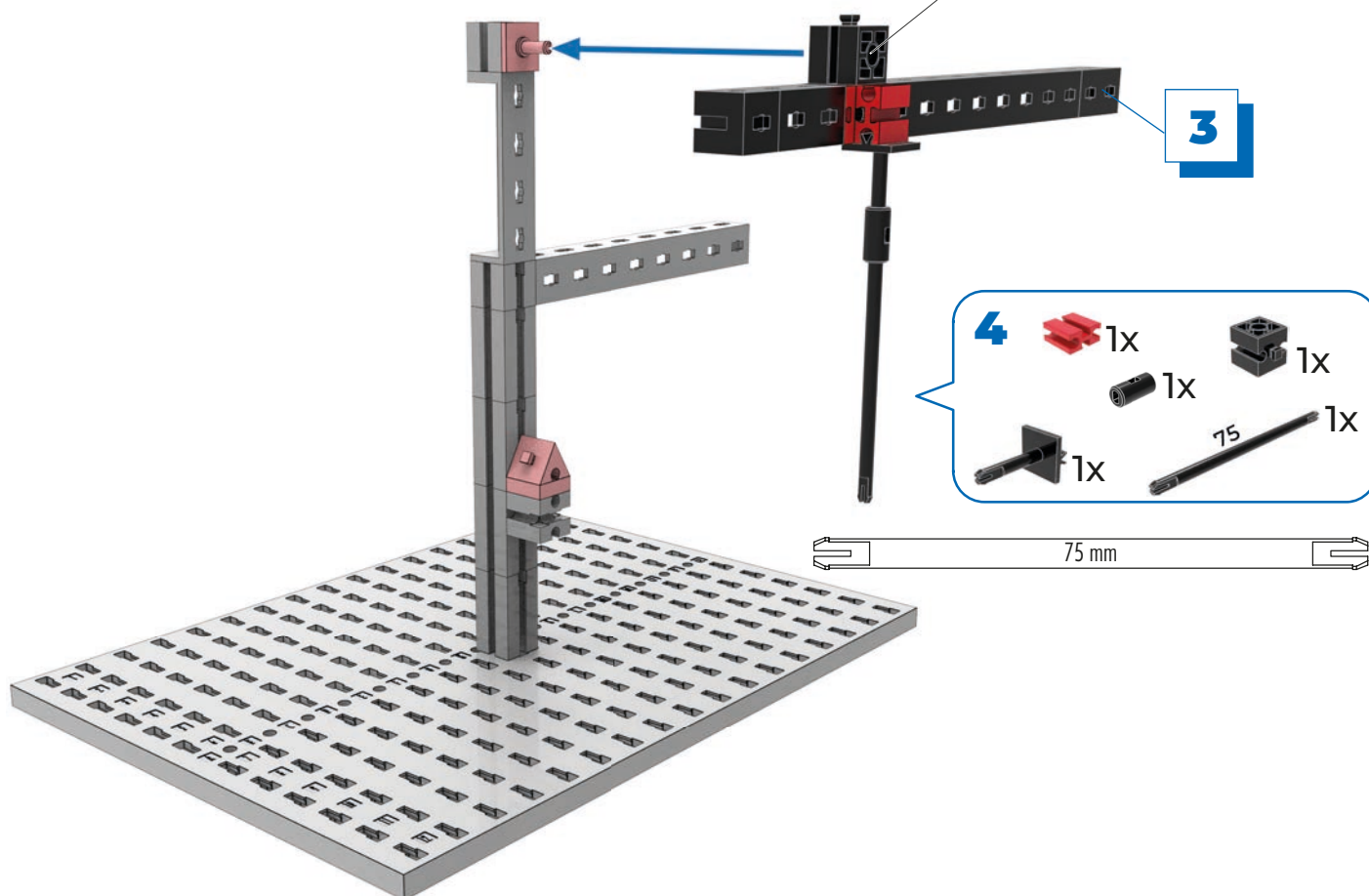
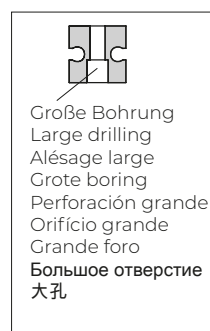
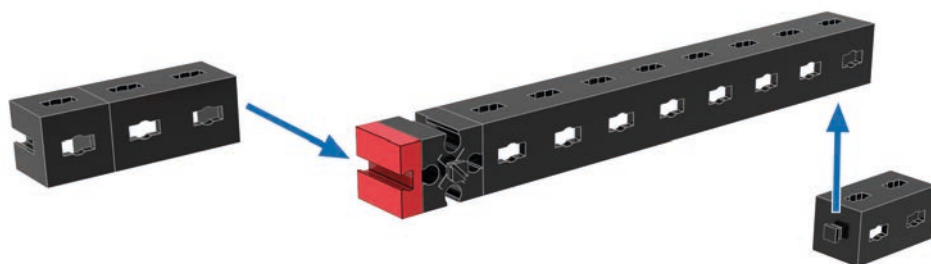
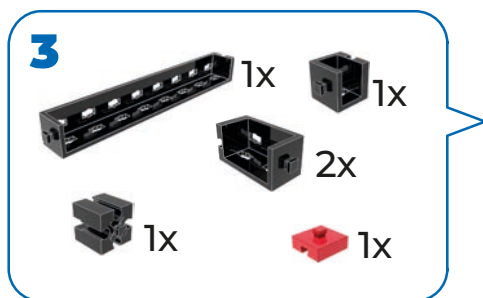
Balkenwaage
Beam scale
Echelle de faisceau
Balk schaal
Escala de vigas
Escala de feixe
Scala del fascio
Шкала луча
 光束刻度

1

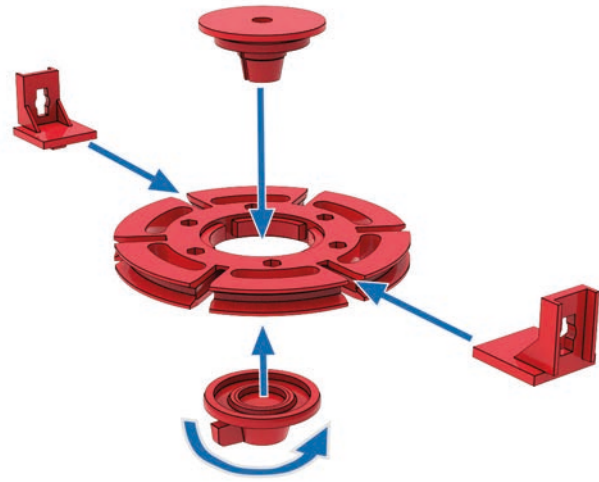
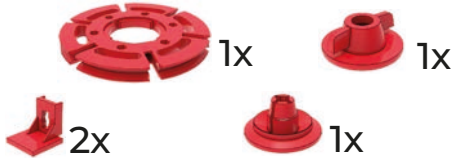


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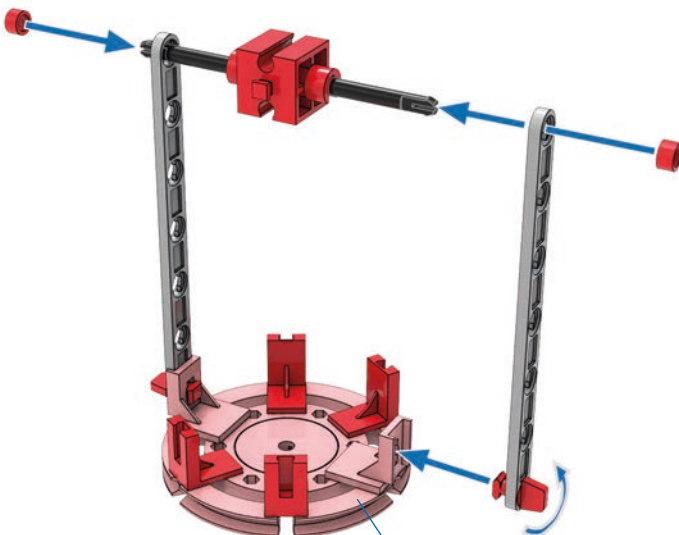
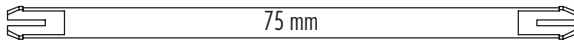
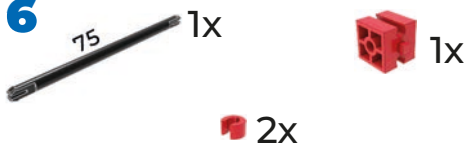




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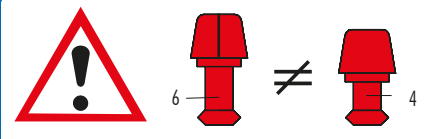


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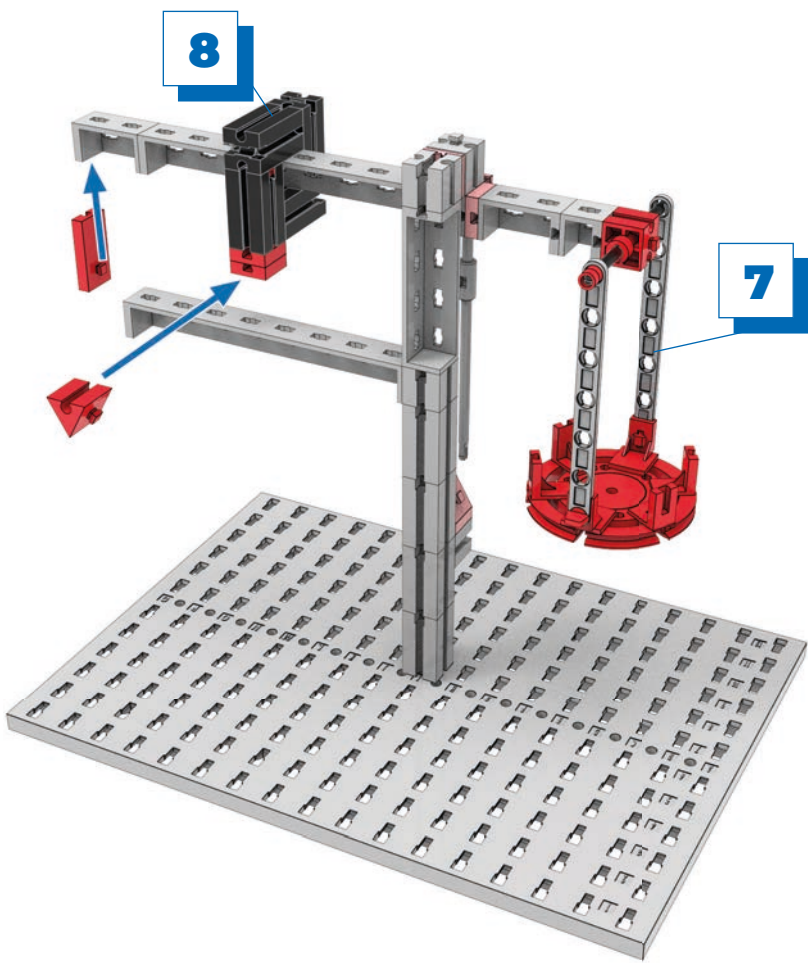
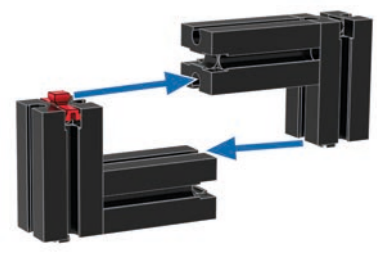


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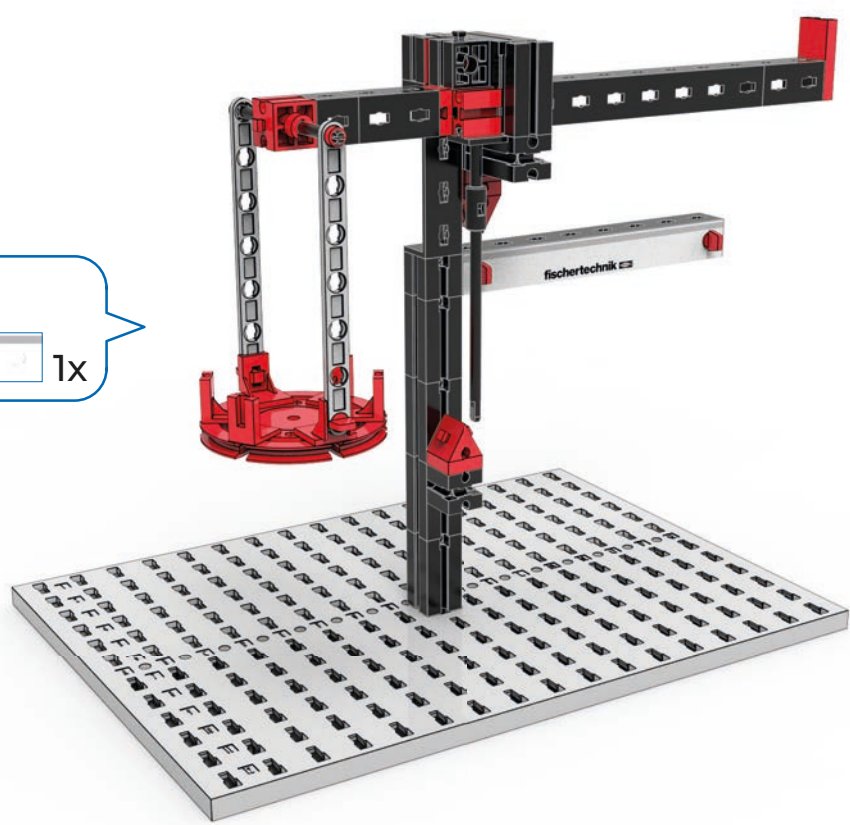


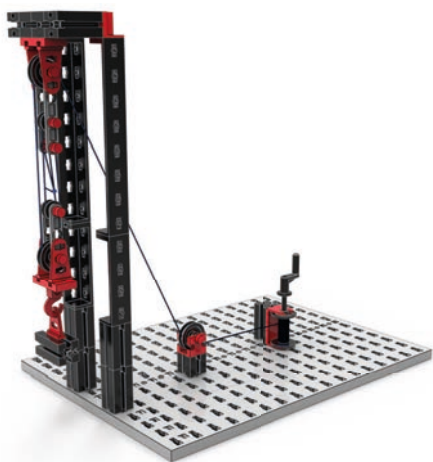
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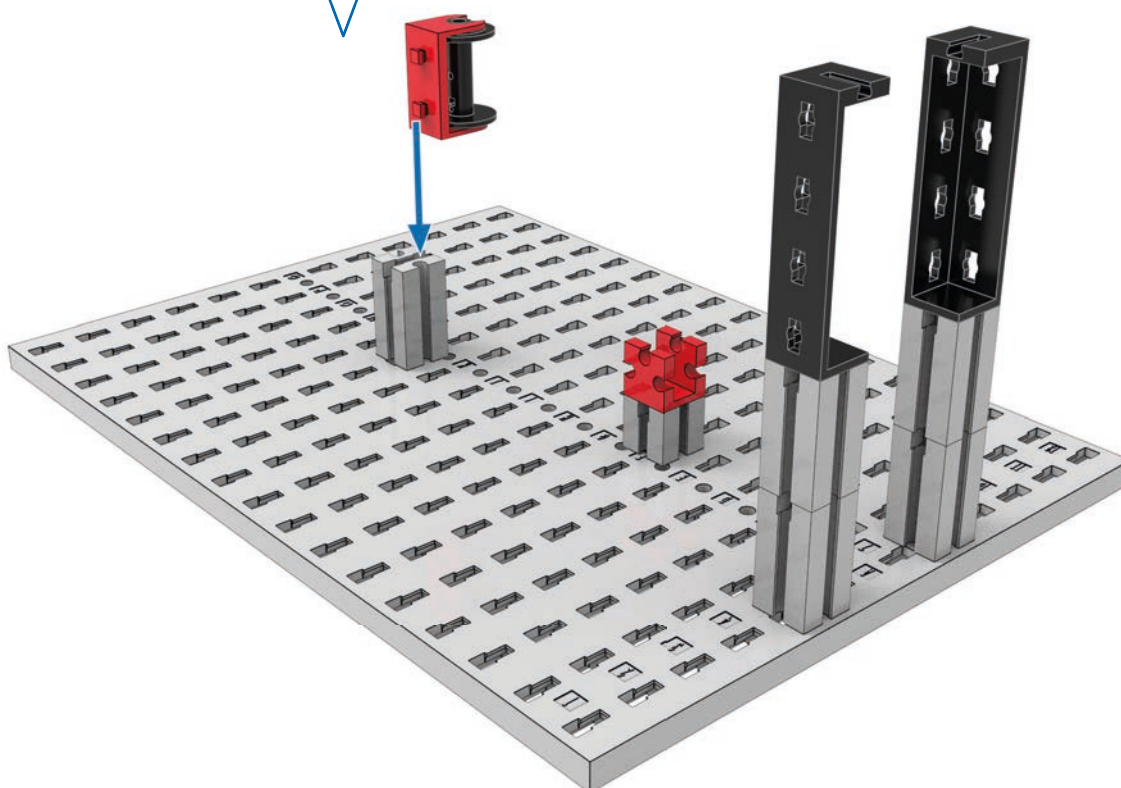
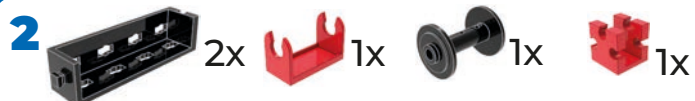
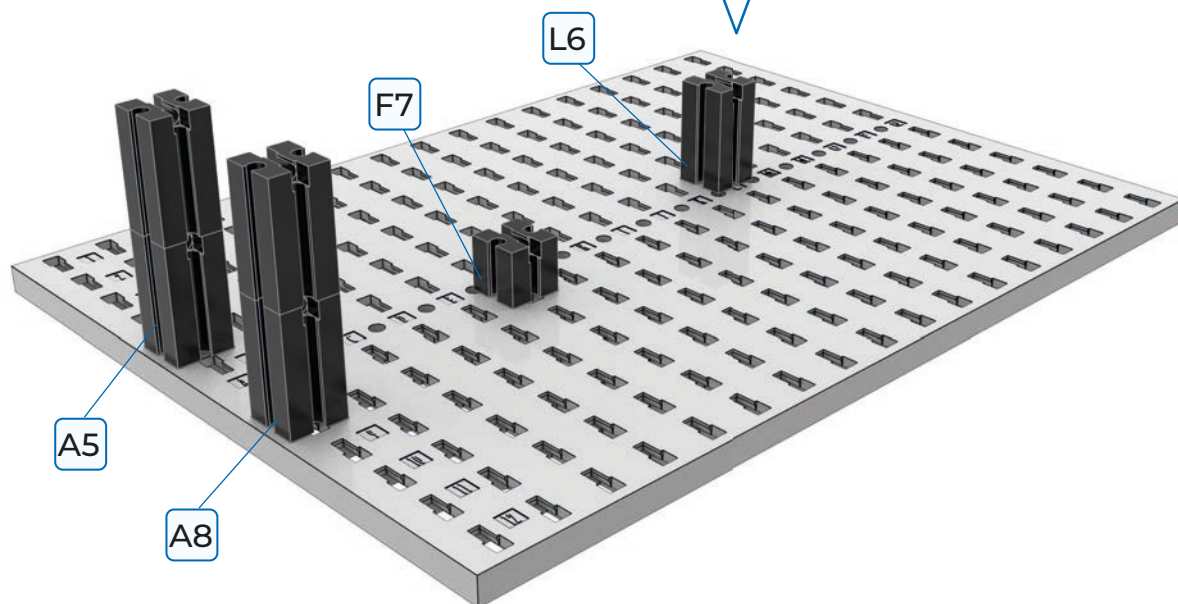
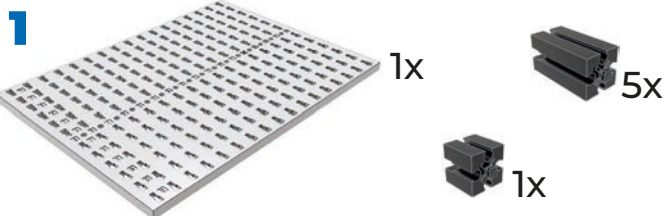
- 9**  1x  1x
 2x

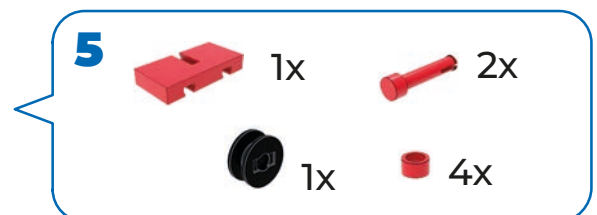
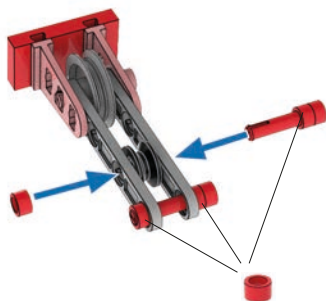
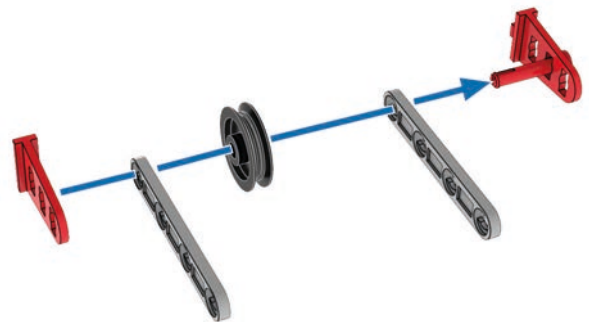
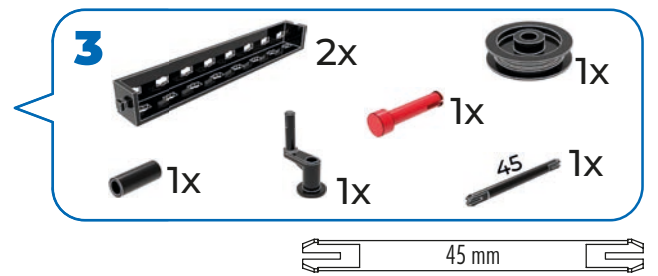
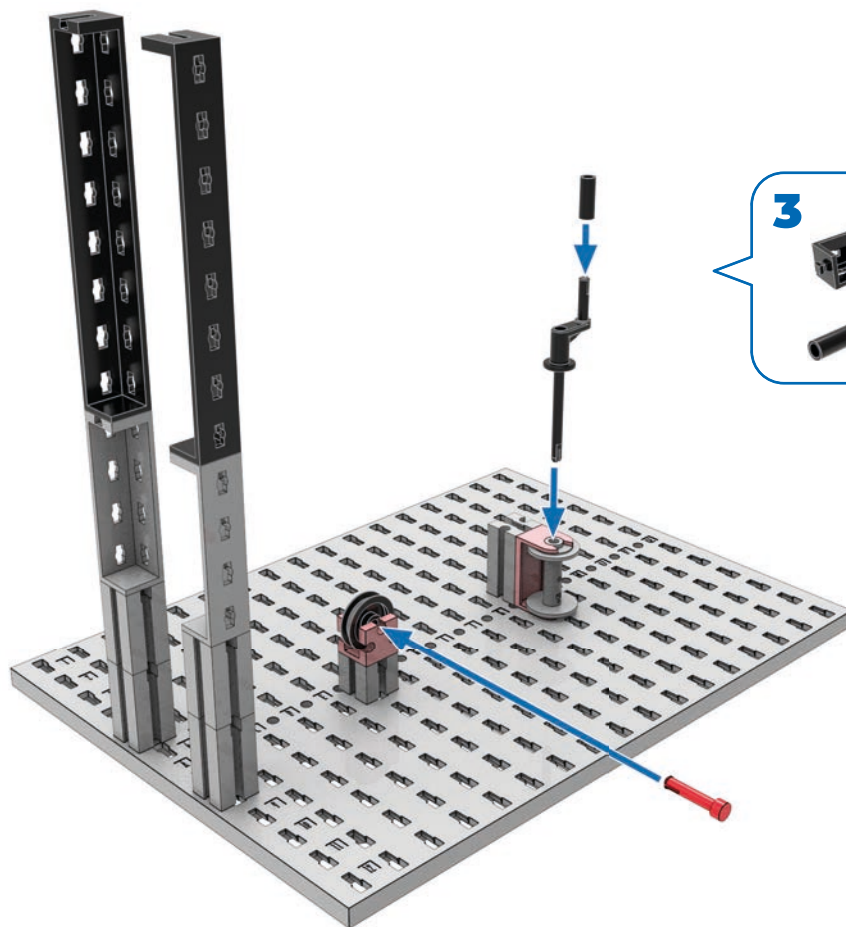
- 10**  4  2x
 1x



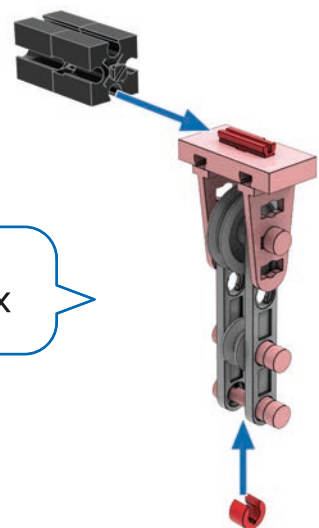


Flaschenzug
Pulley block
Bloc de poulie
Katrolblok
Bloque de poleas
Bloco de roldanas
Blocco della puleggia
блок Пули
 滑轮组

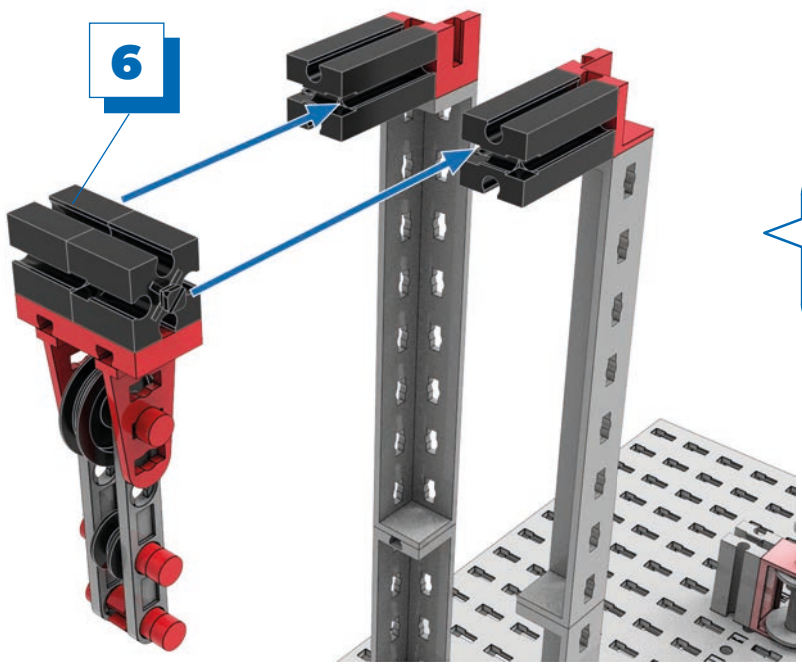




- 6**  1x  1x  1x  1x

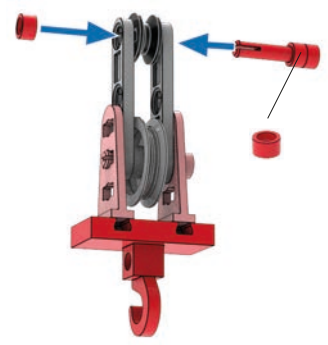
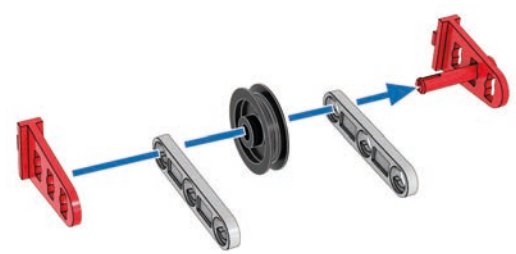


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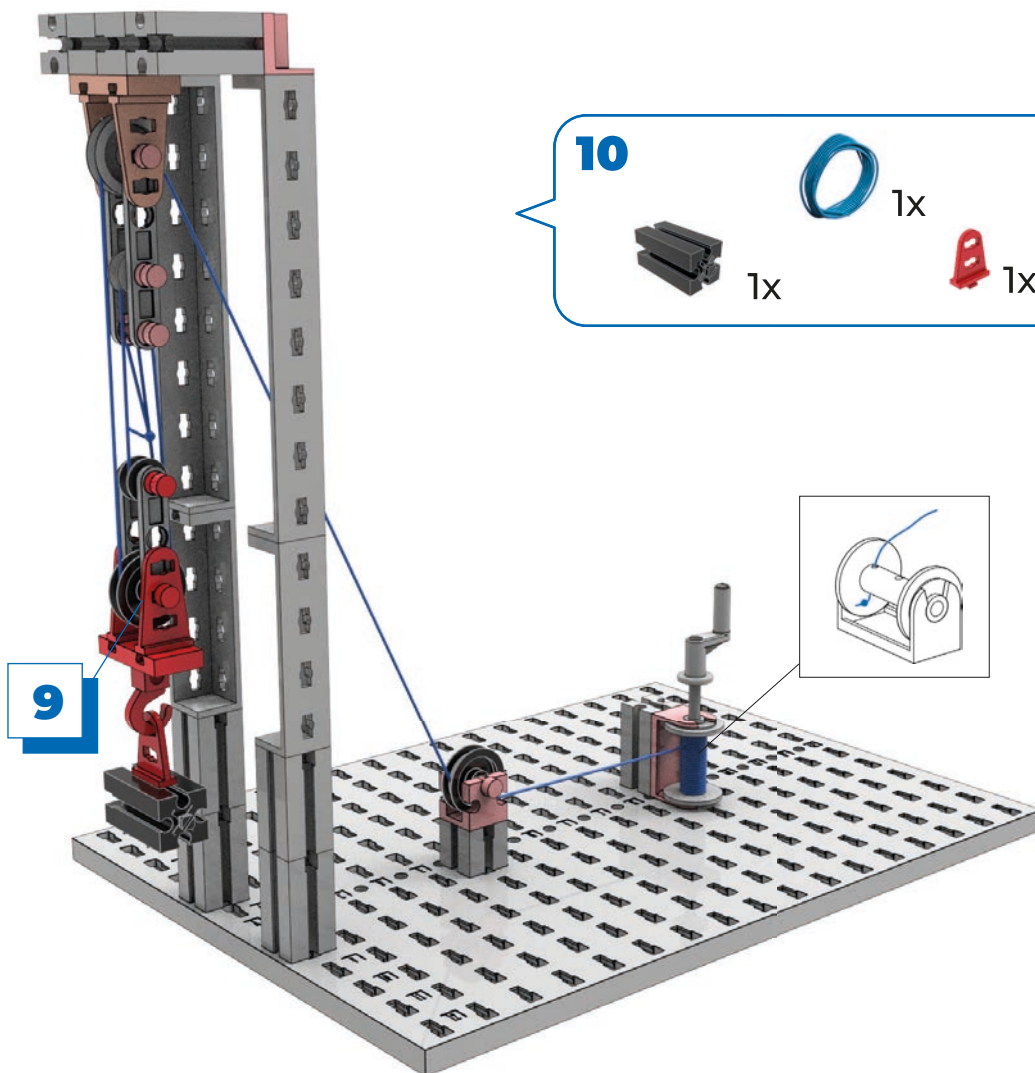
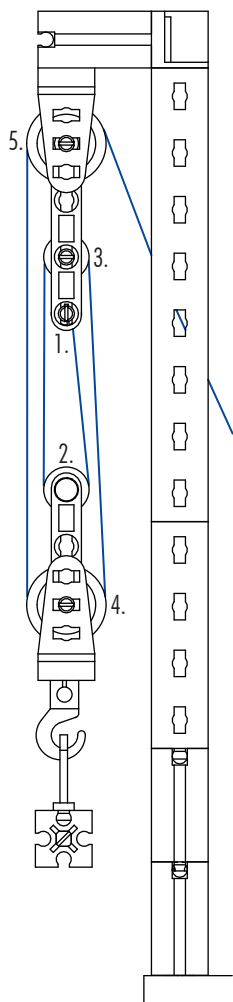


- 7**  2x  2x

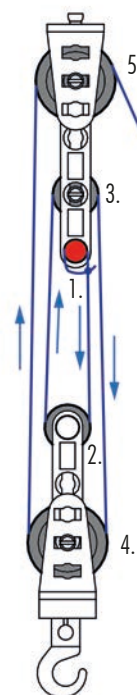
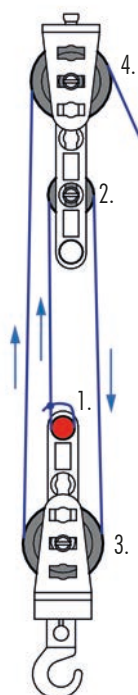
- 8**  2x  1x  1x  2x



- 9**  1x  1x  1x  2x  1x



umbauen
modify
modifier
veranderen
modificar
modificar
modificare
переделать
改装



11



1x



3x



3x



12



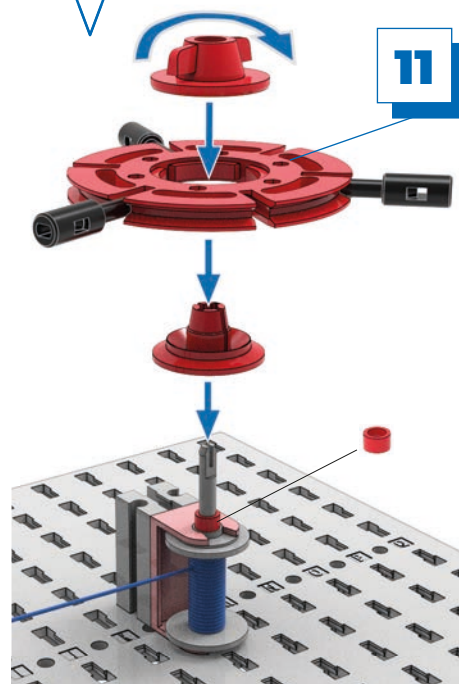
1x



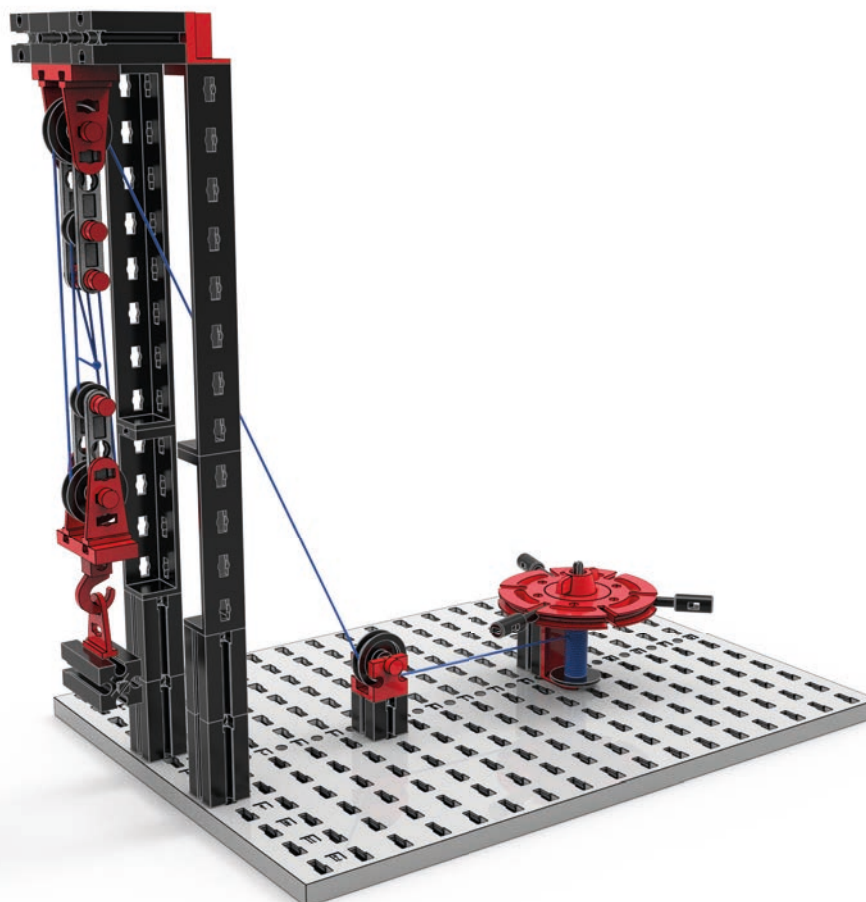
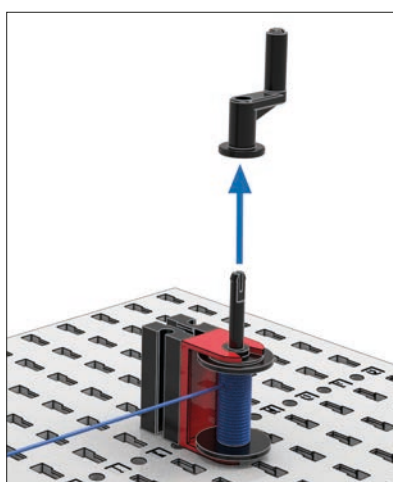
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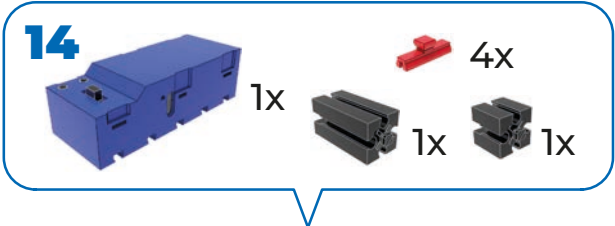
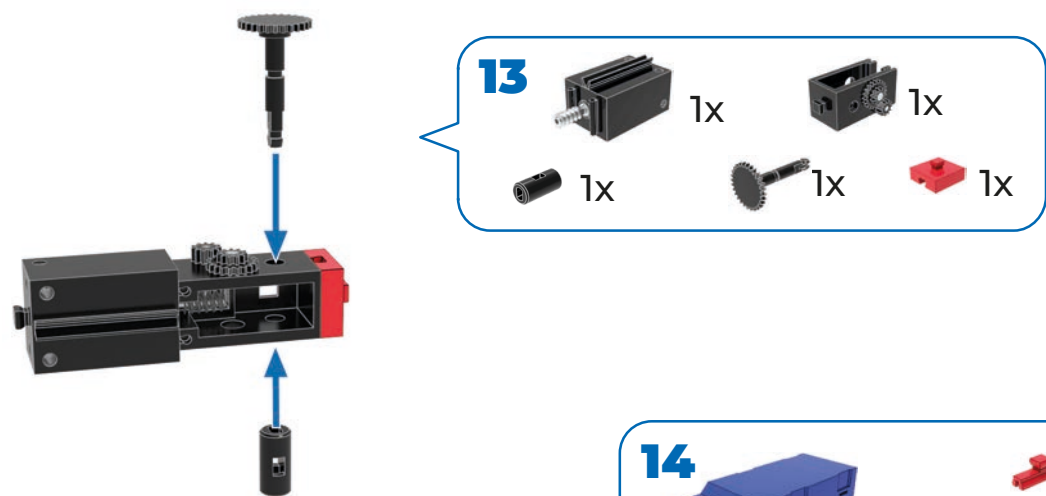


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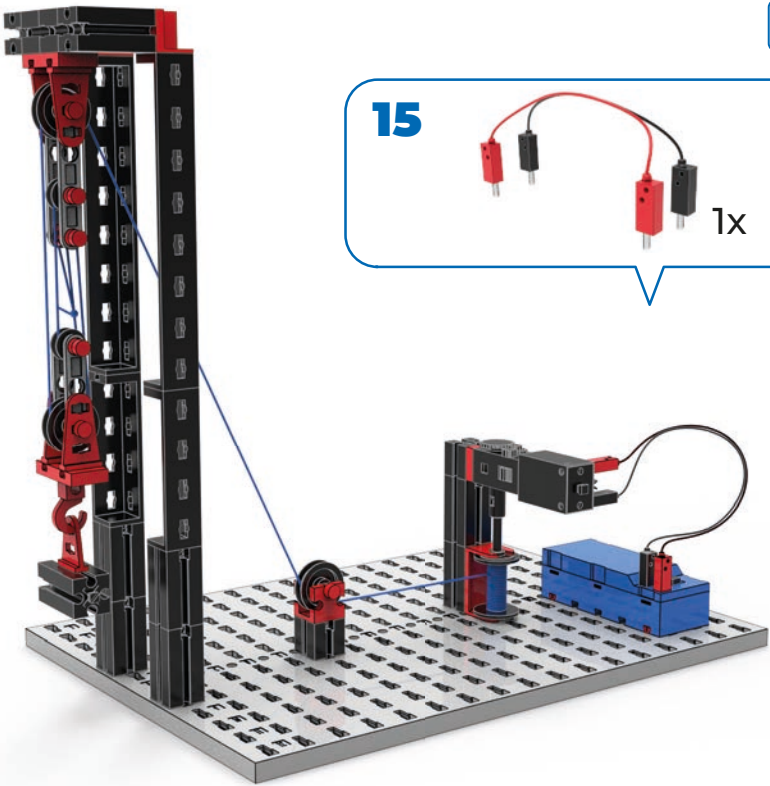
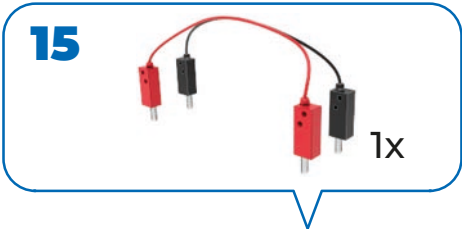
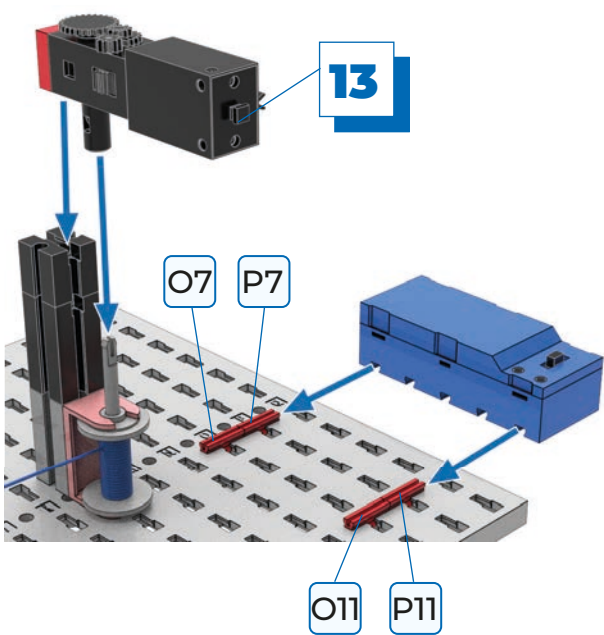
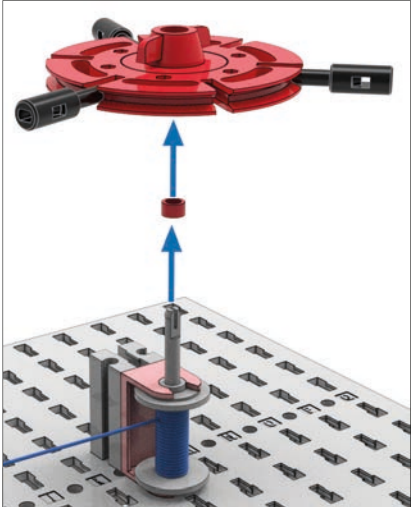


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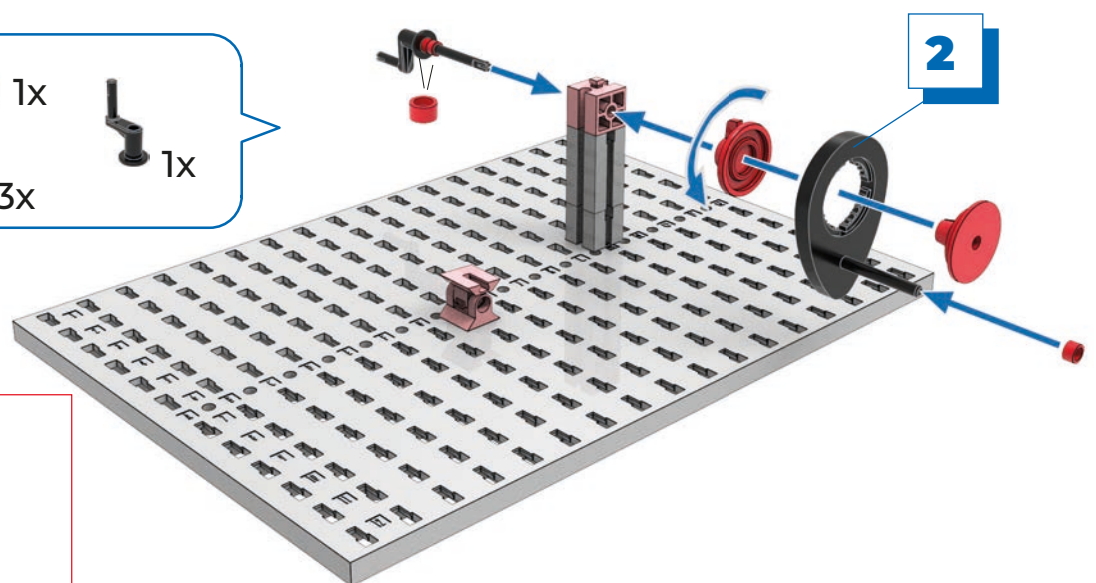
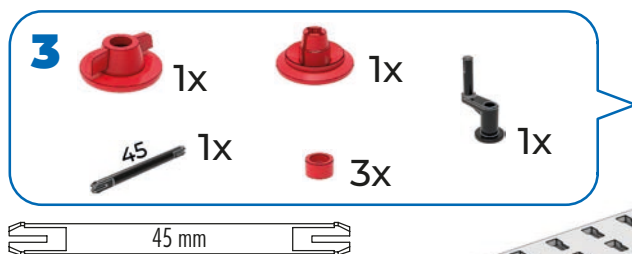
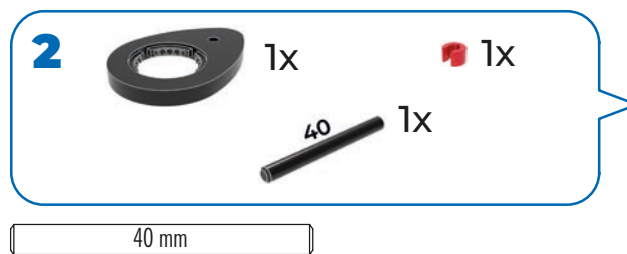
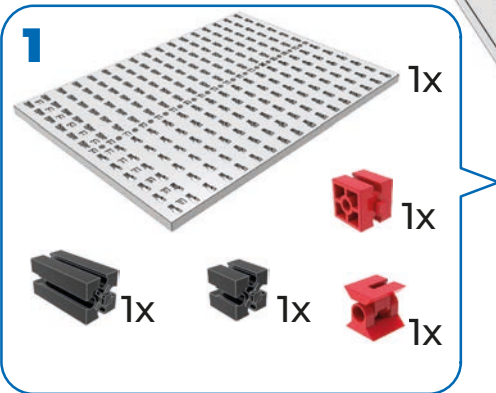
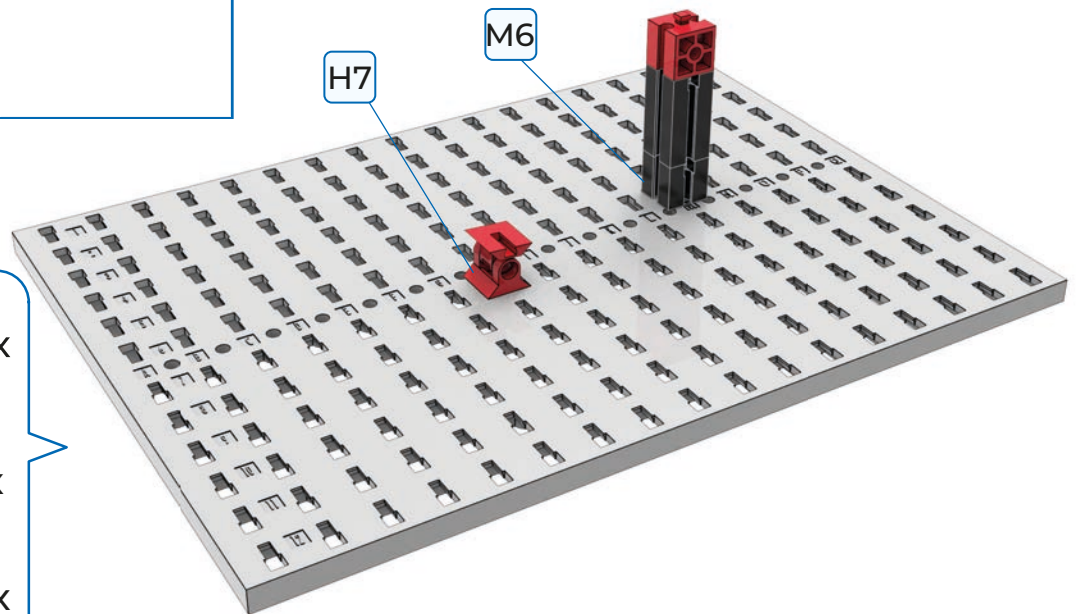
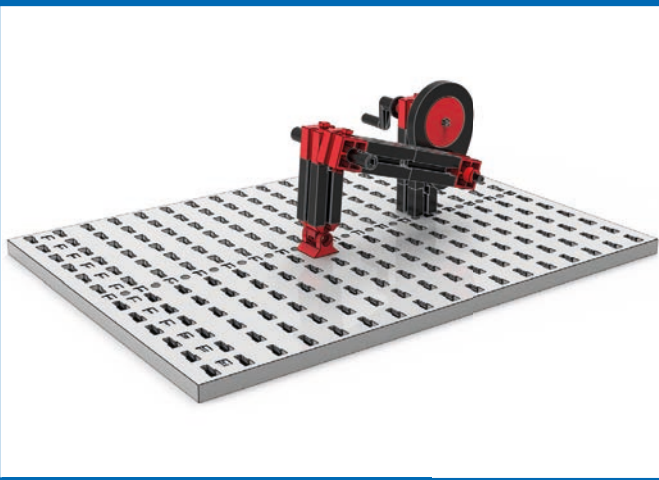




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Kurbelschwinge
Crank arm
Balancement de la manivelle
Slinger
Balanceo de la manivela
Balanço da manivela
Manovella oscillante
качели кривоши пнкоятки
曲柄摆动

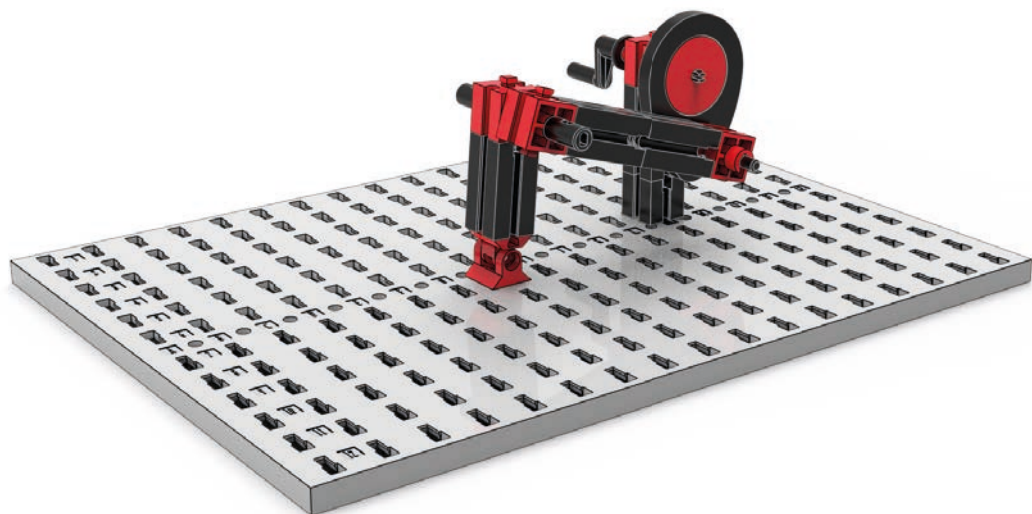
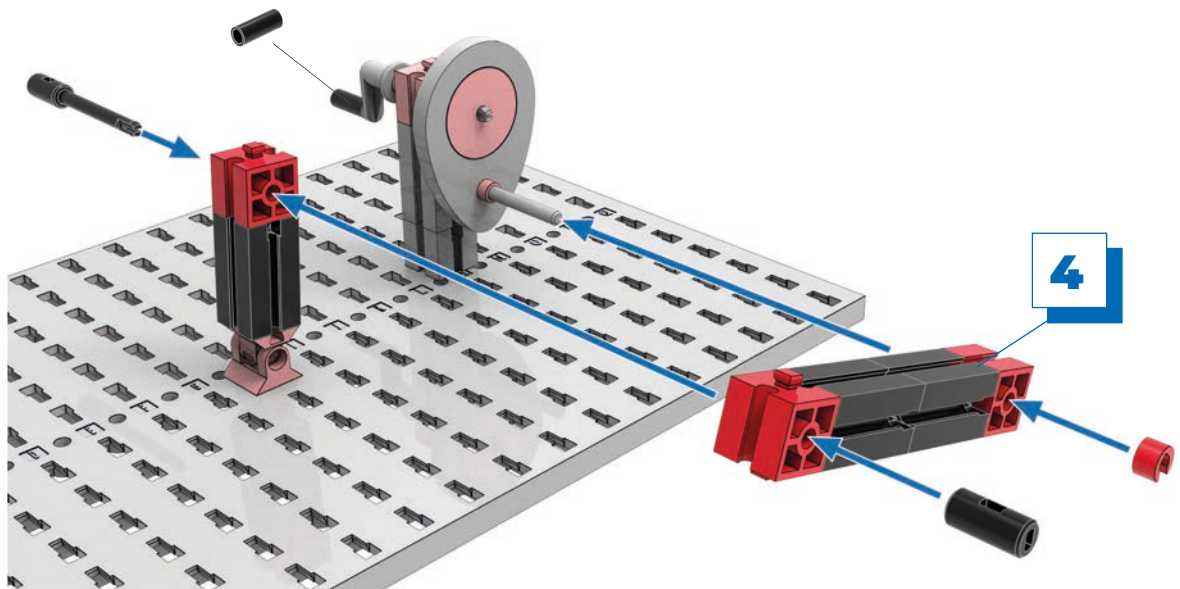
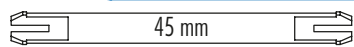


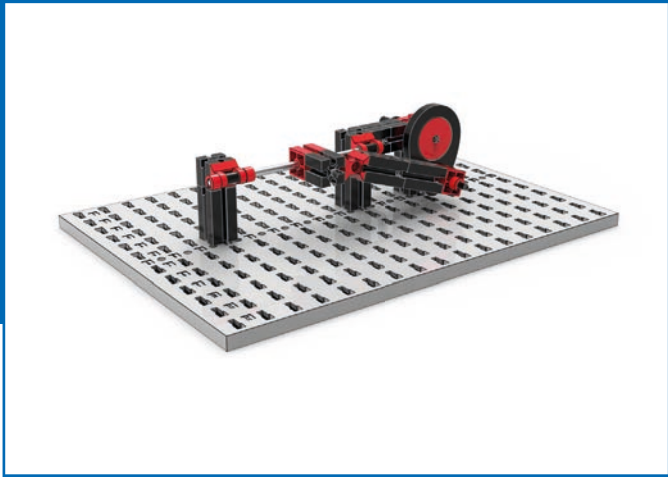
- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧

4  2x  2x

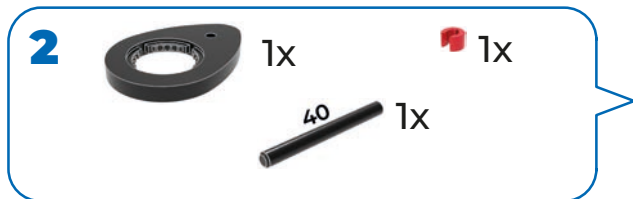
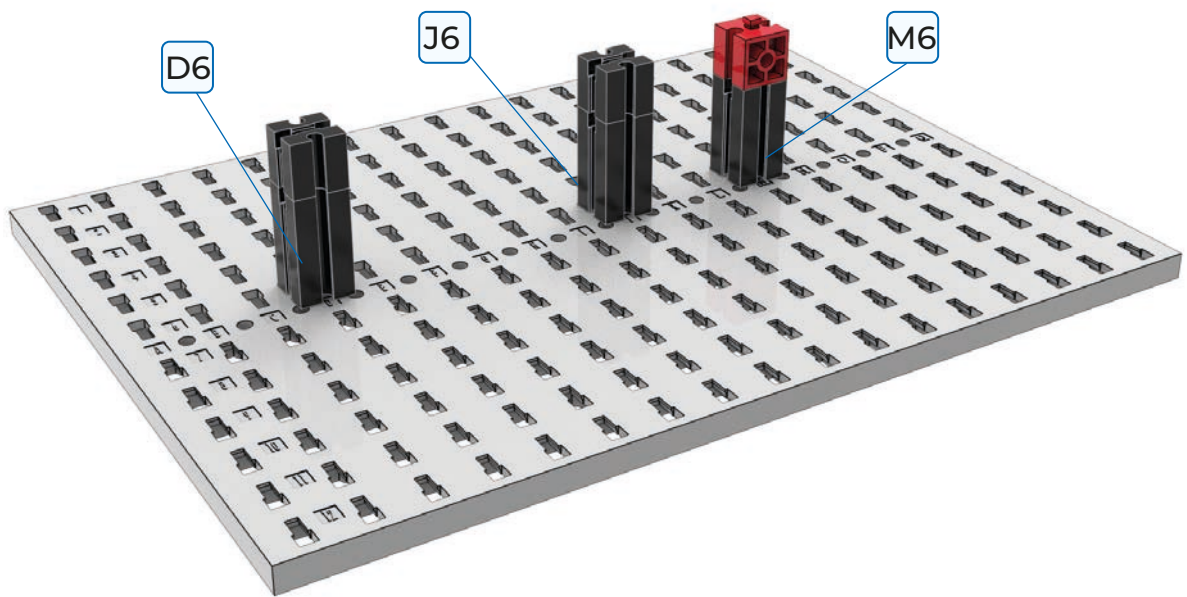
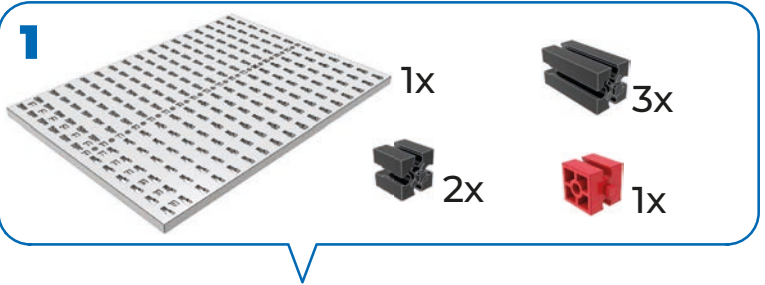


5  1x  1x  1x
 1x  2x  1x

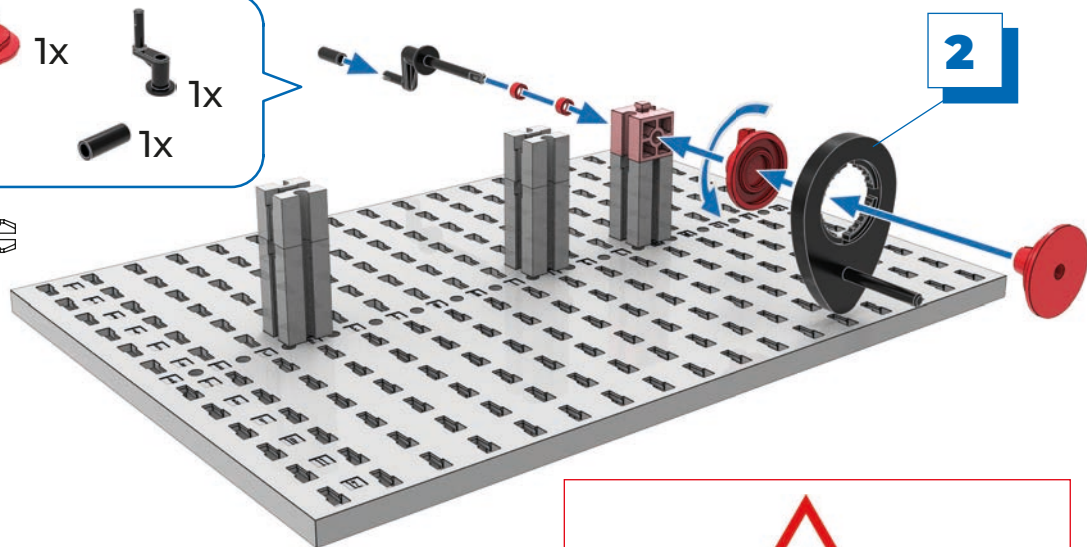
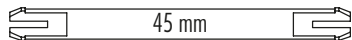
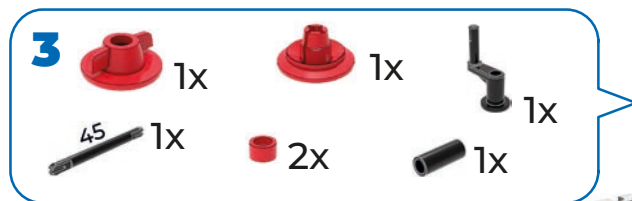




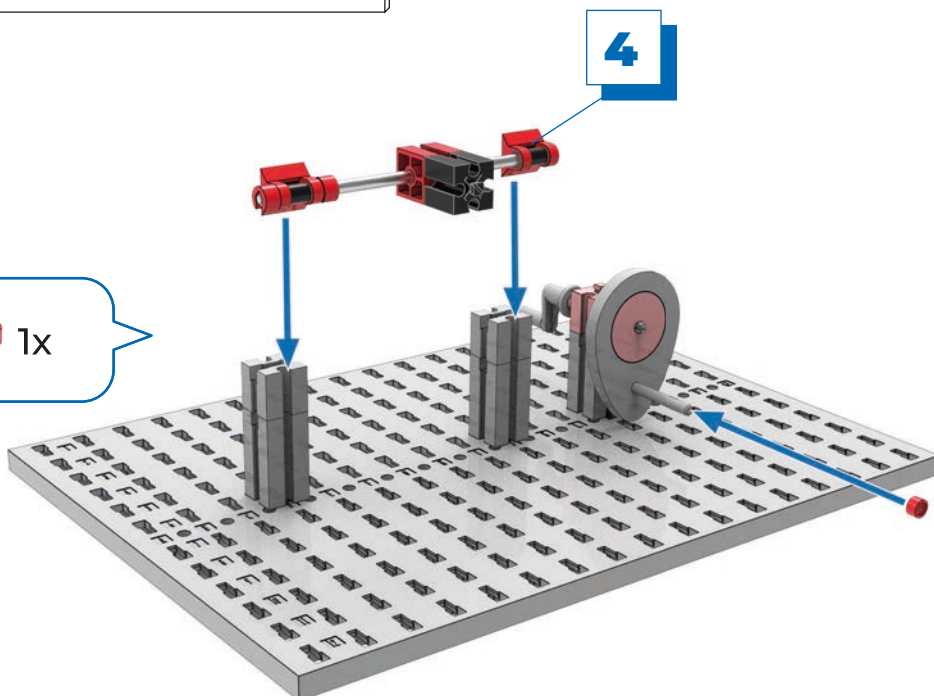
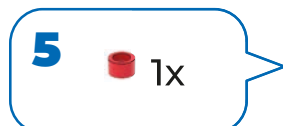
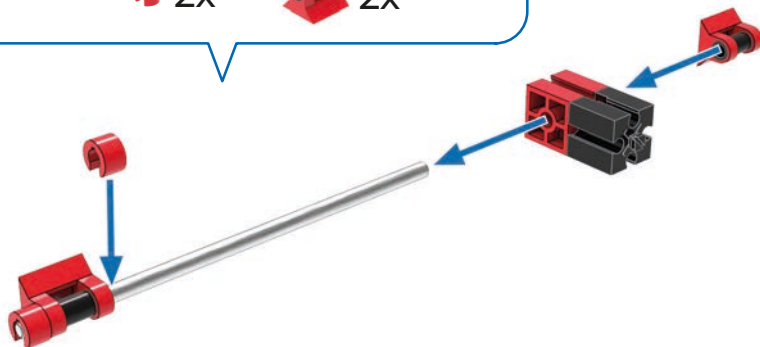
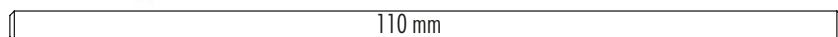
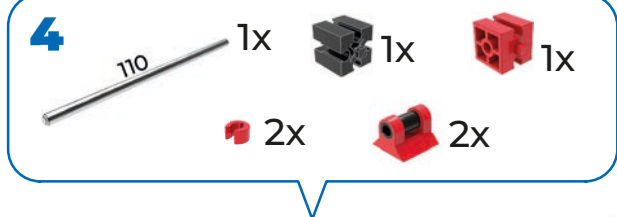
Schubkurbel
Push crank
Poussez la manivelle
Duw slinger
Manivela de empuje
Manivela de empurrar
Spingere la manovella
Пуш-шатун
推曲柄



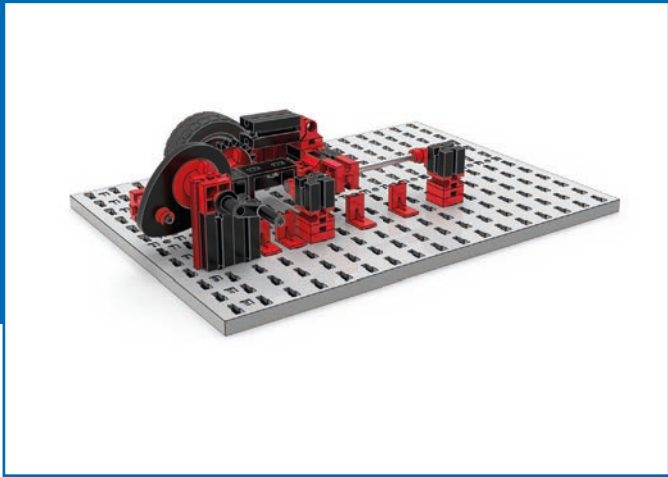
40 mm



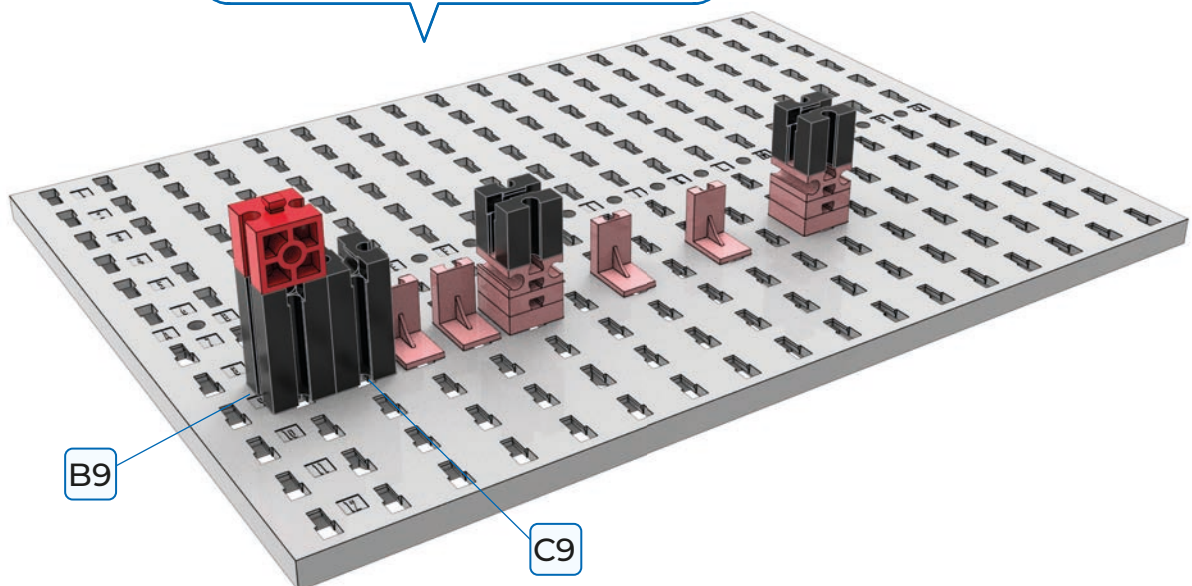
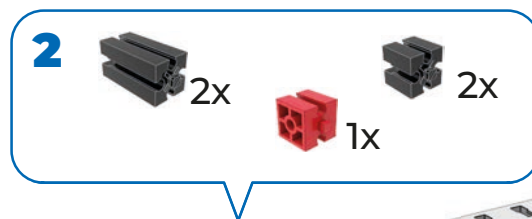
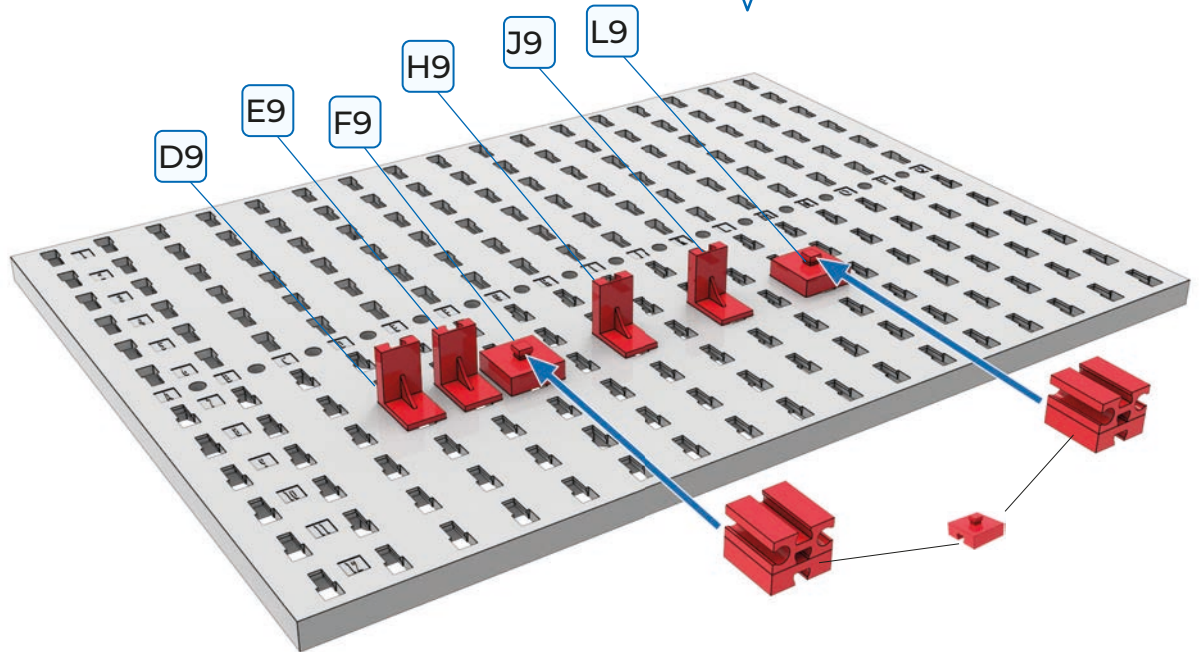
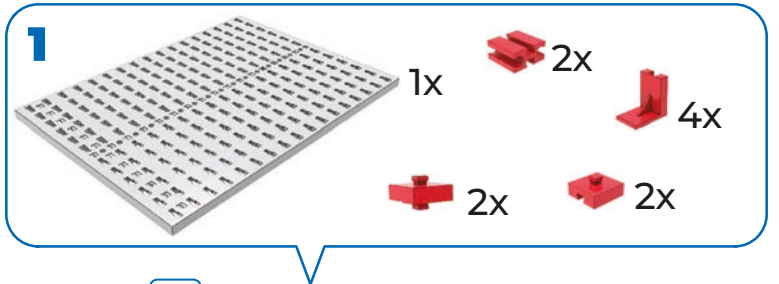
- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧

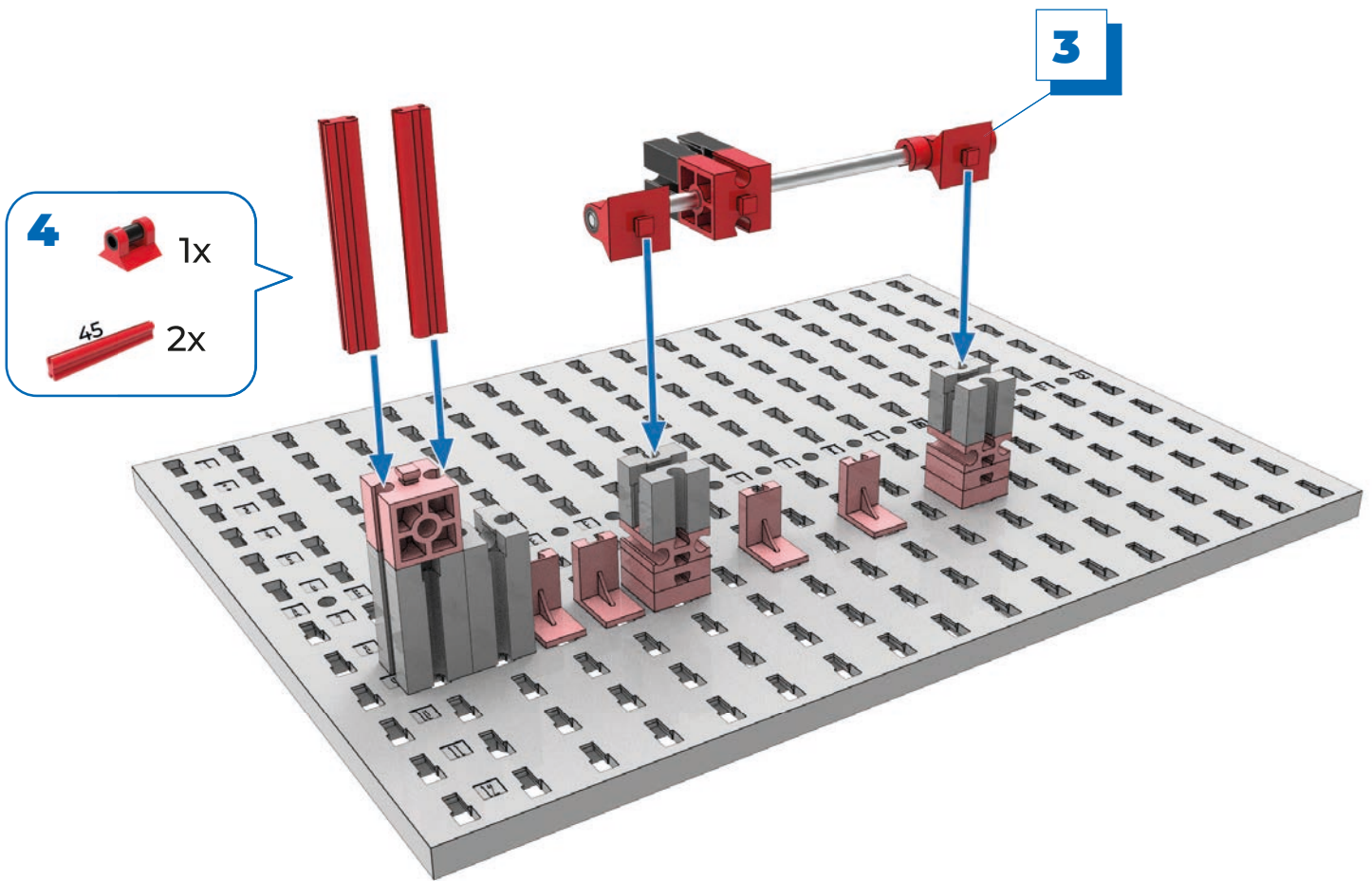
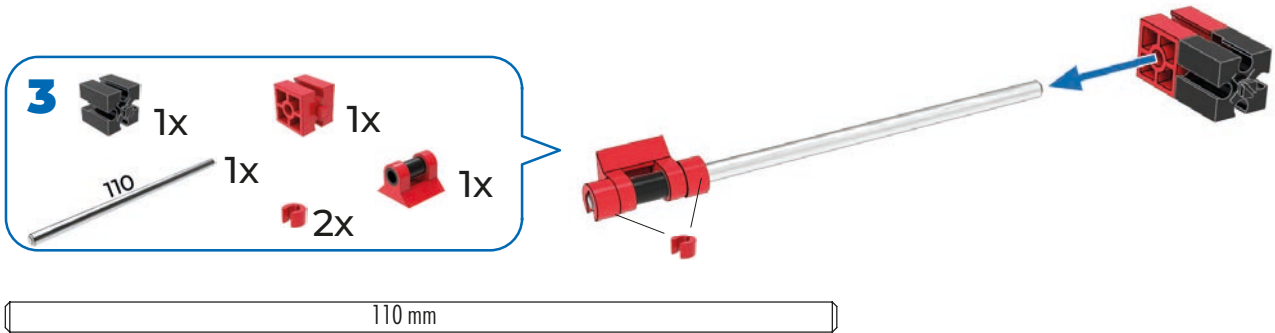






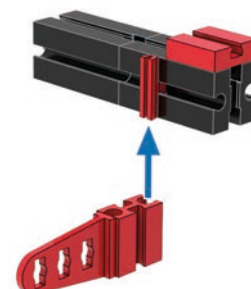
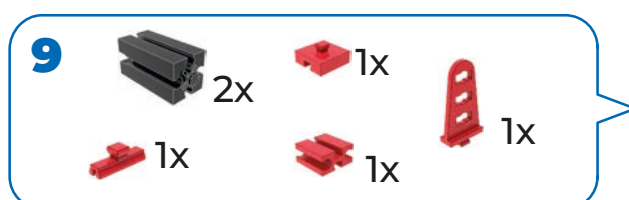
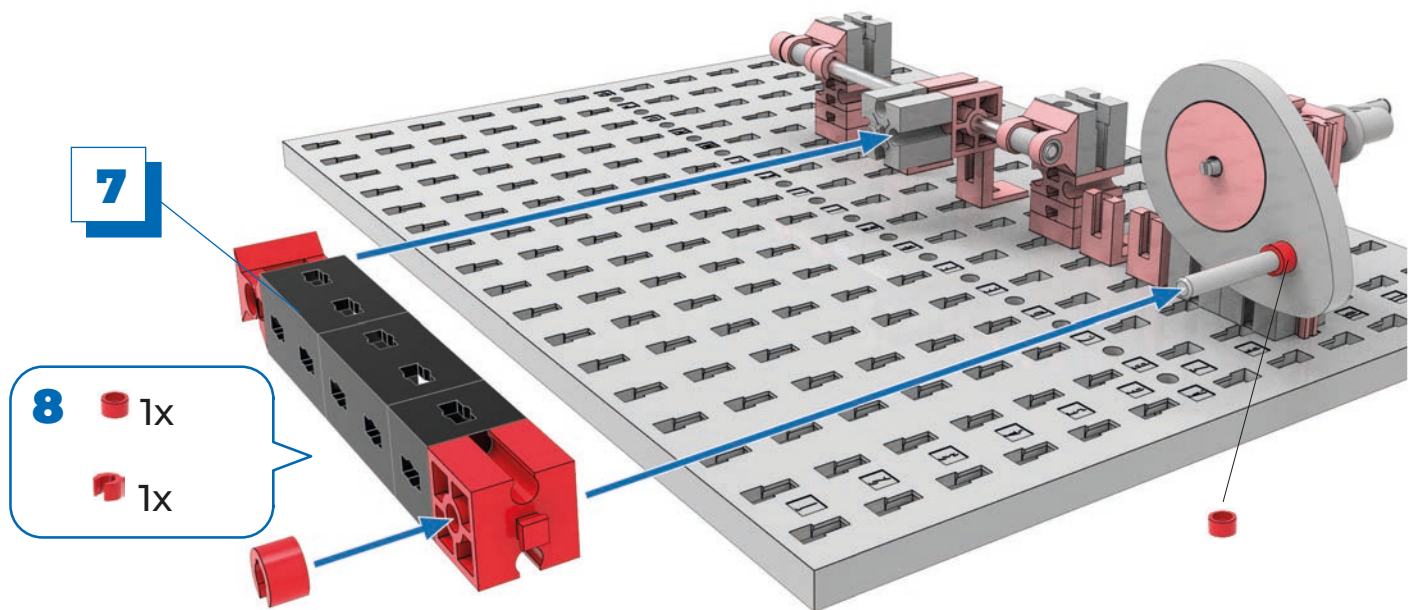
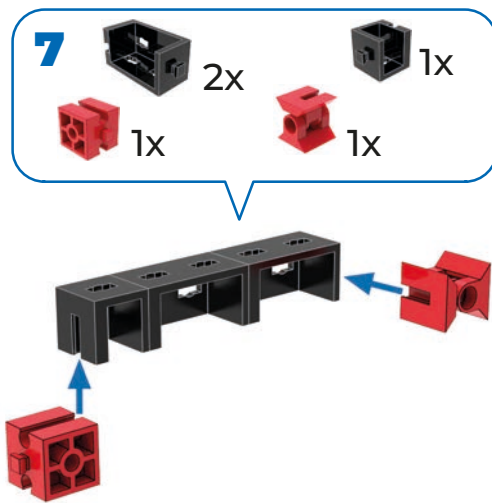
Vorschubgetriebe
Feed gearbox
Boîte d'alimentation
Voedertandwielkast
Caja de cambios de alimentación
Caixa de alimentação
Cambio di alimentazione
Редуктор питания
送料齿轮箱







- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧





10

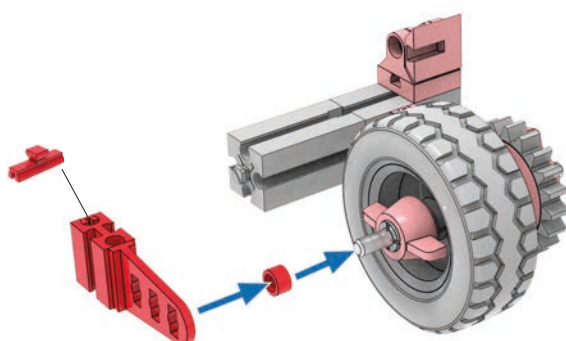
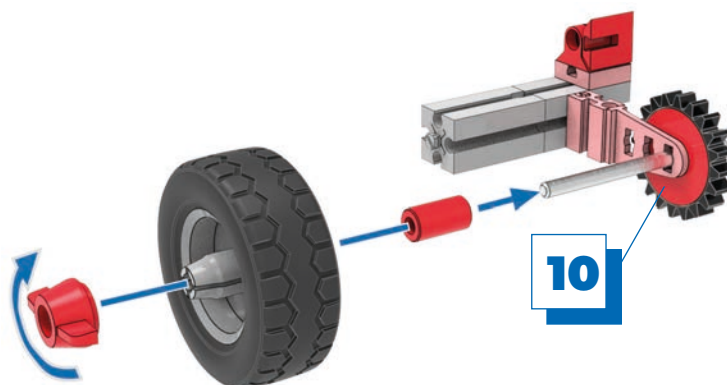


60 mm

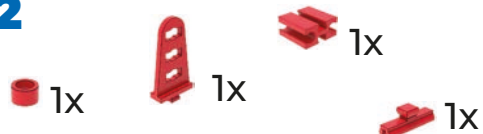


- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
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- Затянуть гайки ступиц
- 拧紧

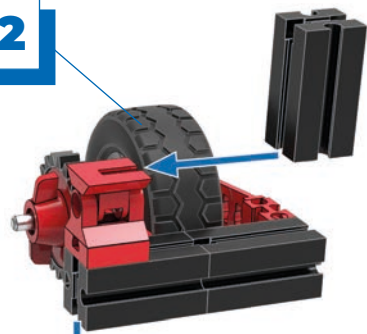
11



12



12



13



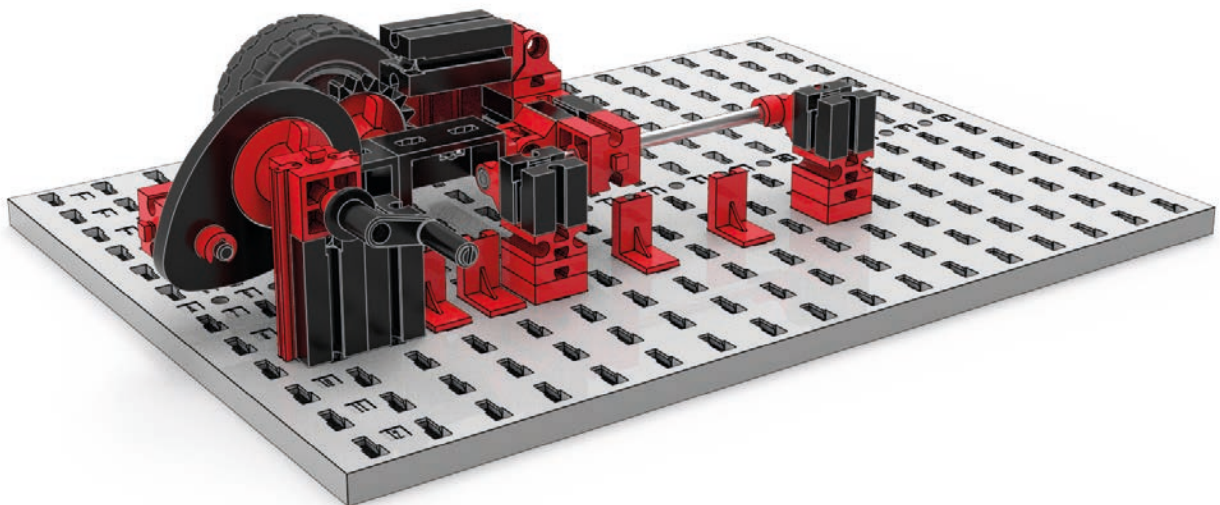
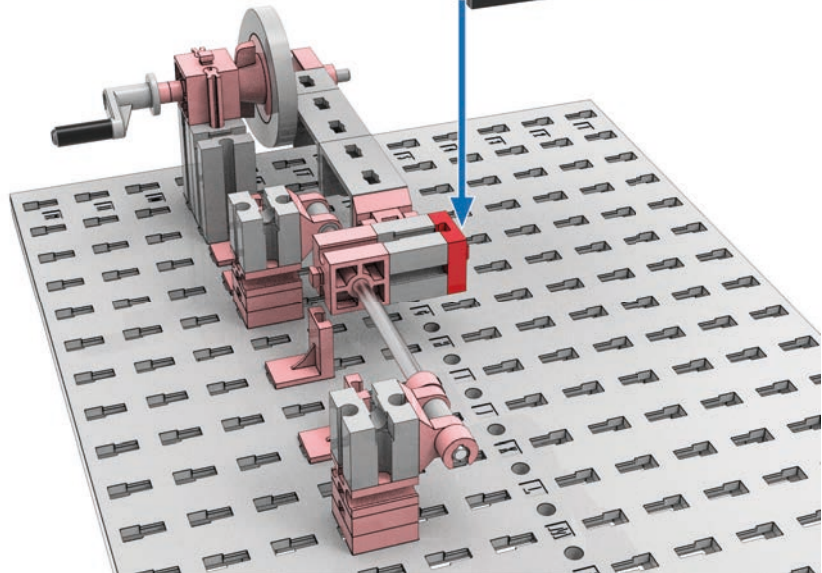
1x

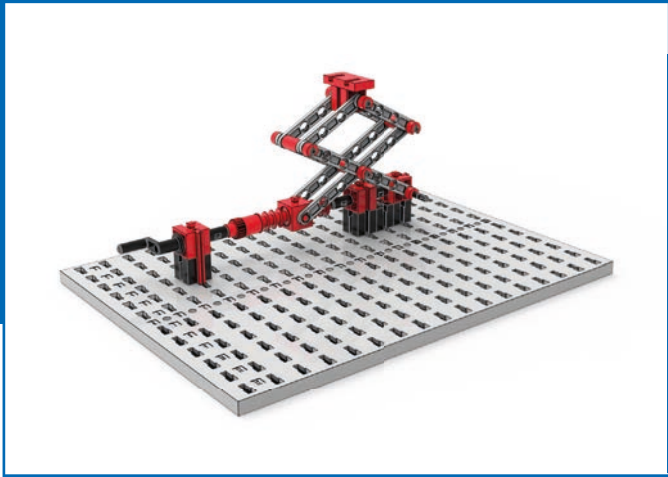


1x

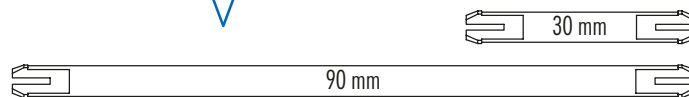
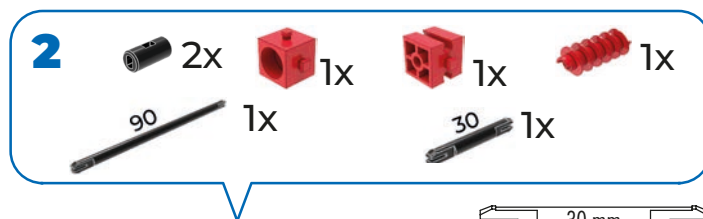
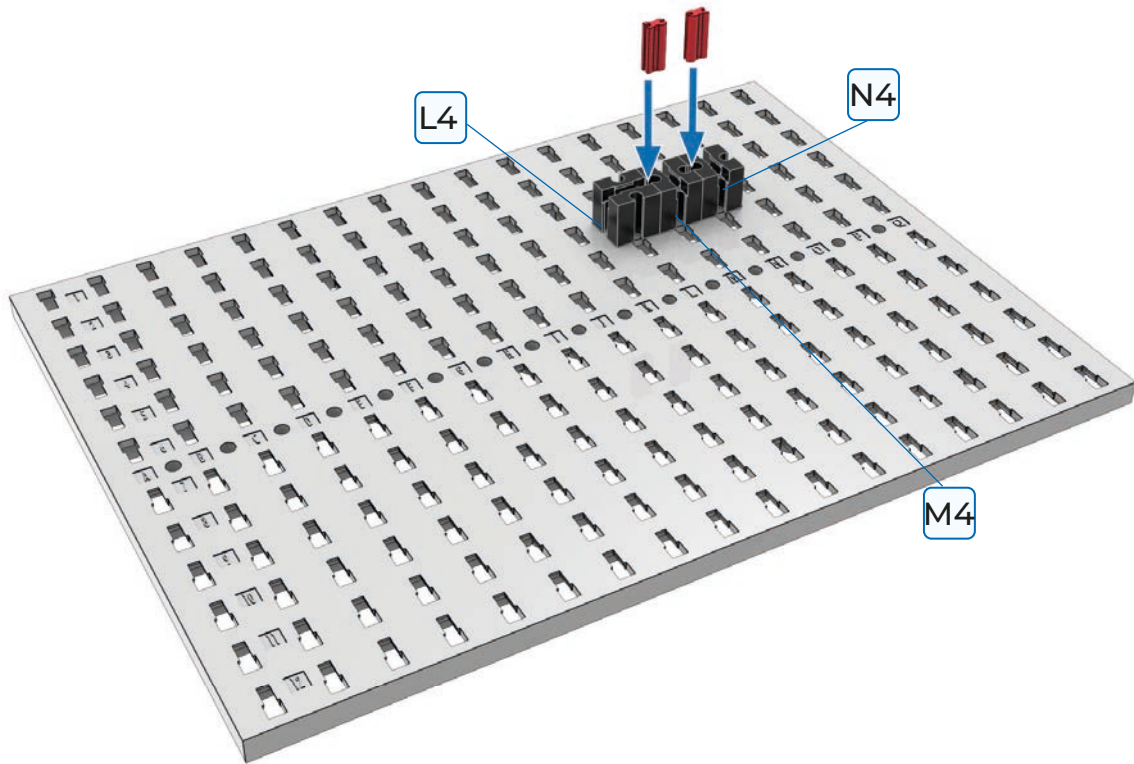
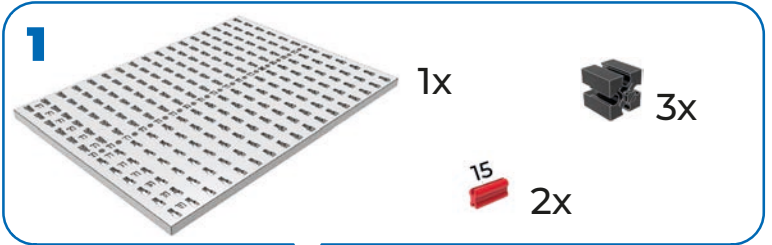


1x

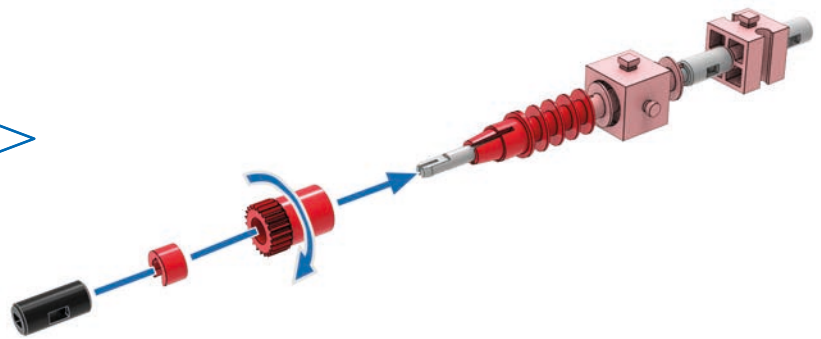




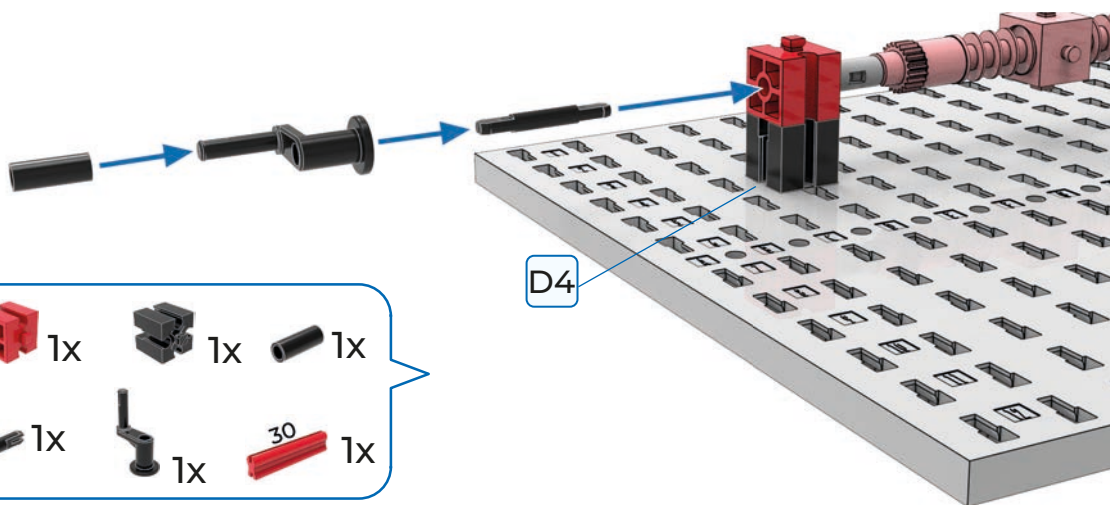
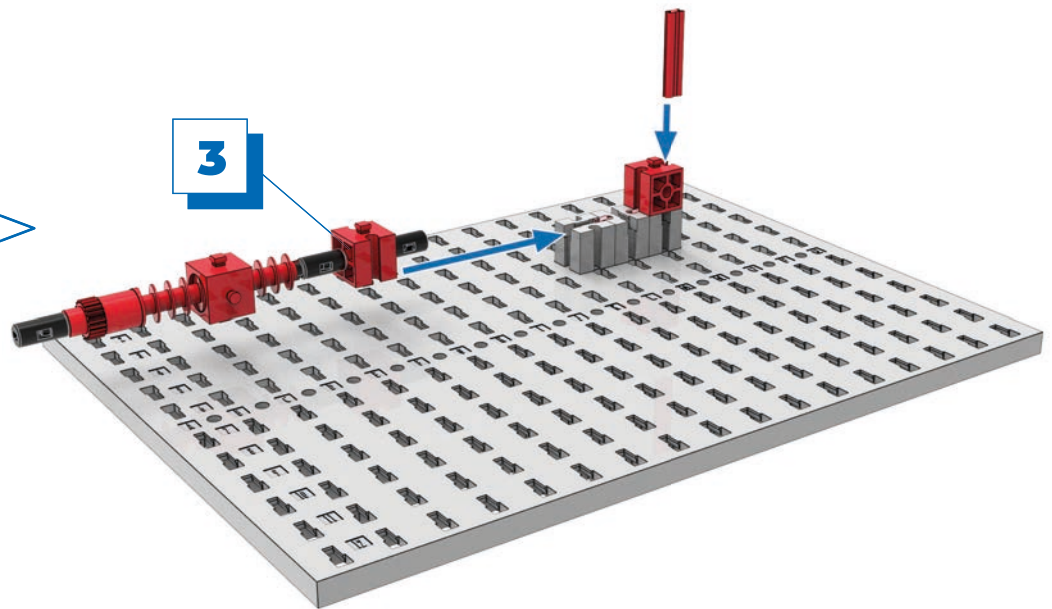
Scherenhubgetriebe
Scissor lifting gear
Appareils de levage à ciseaux
Schaarhefwerktuig
Aparato elevador de tijera
Aparelhos de elevação em tesoura
Apparecchiatura di sollevamento a forbice
Ножничный подъёмник
送料齿轮箱



- 3**
- 1x (Red long pin)
 - 1x (Red short pin)
 - 1x (Black short pin)
 - 1x (Red 1-way connector)

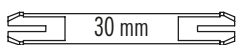


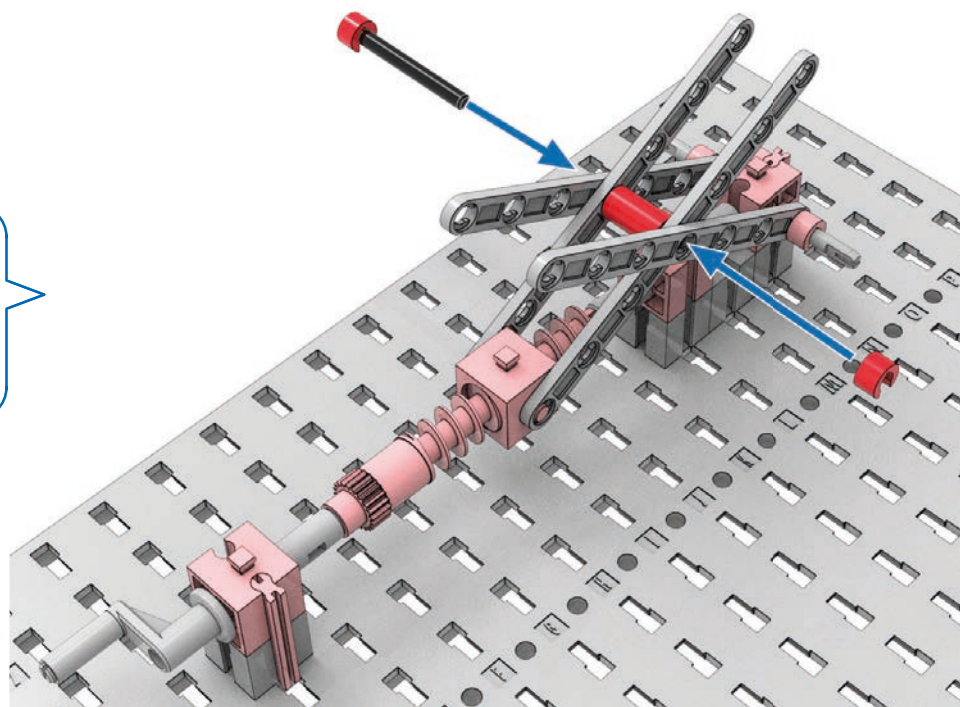
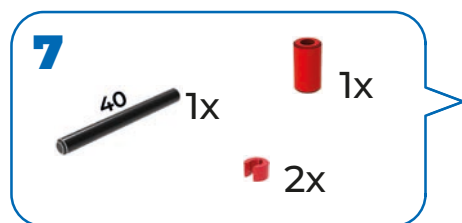
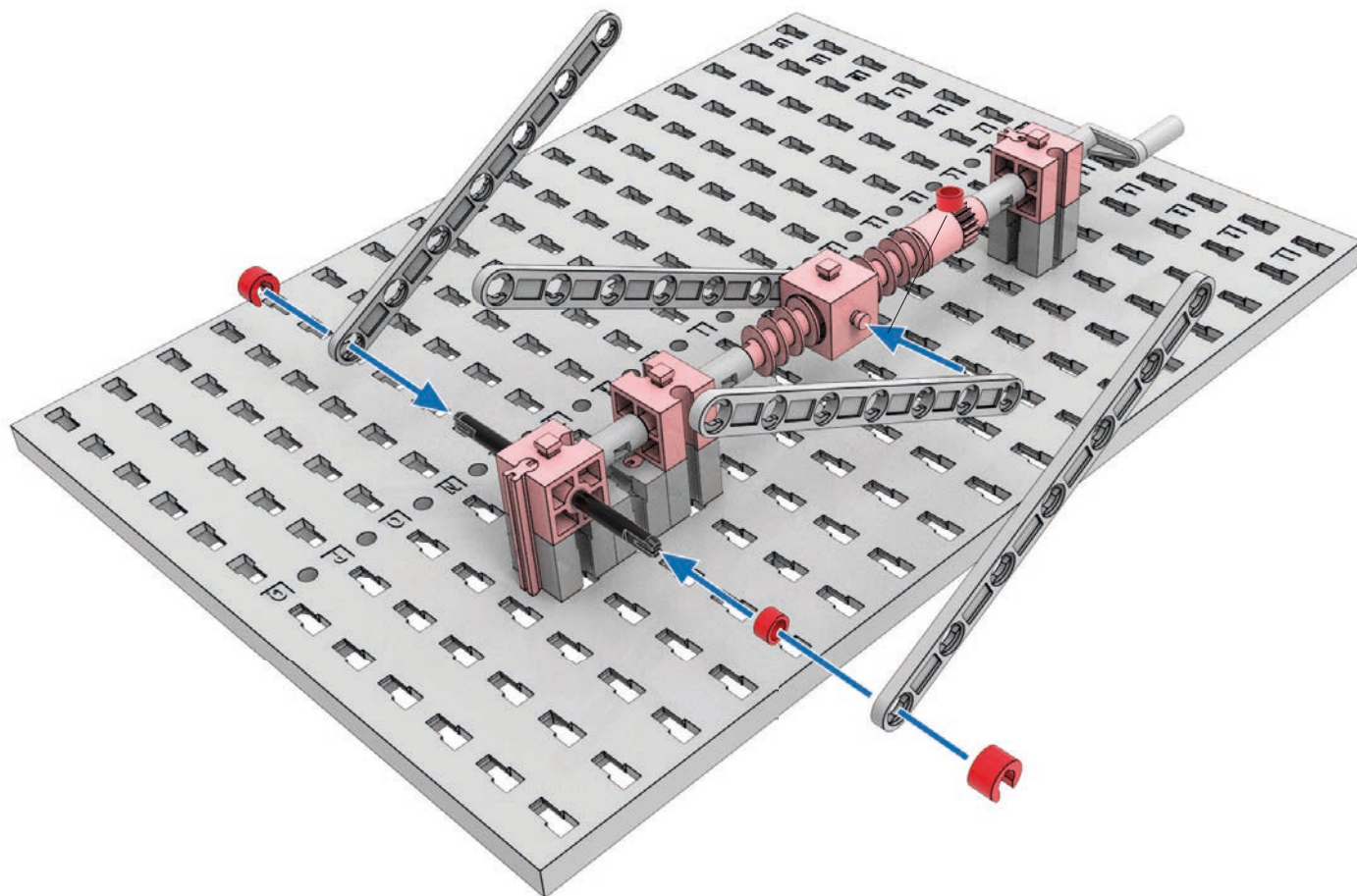
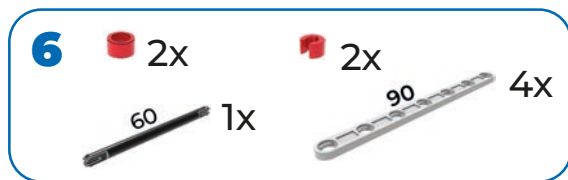
- 4**
- 1x (Red 30mm Technic beam)
 - 1x (Red 2-way connector)



- 5**
- 1x (Red 2-way connector)
 - 1x (Black 2-way connector)
 - 1x (Black short pin)
 - 1x (Red 30mm Technic beam)
 - 1x (Black 30mm Technic beam)
 - 1x (Black L-shaped connector)

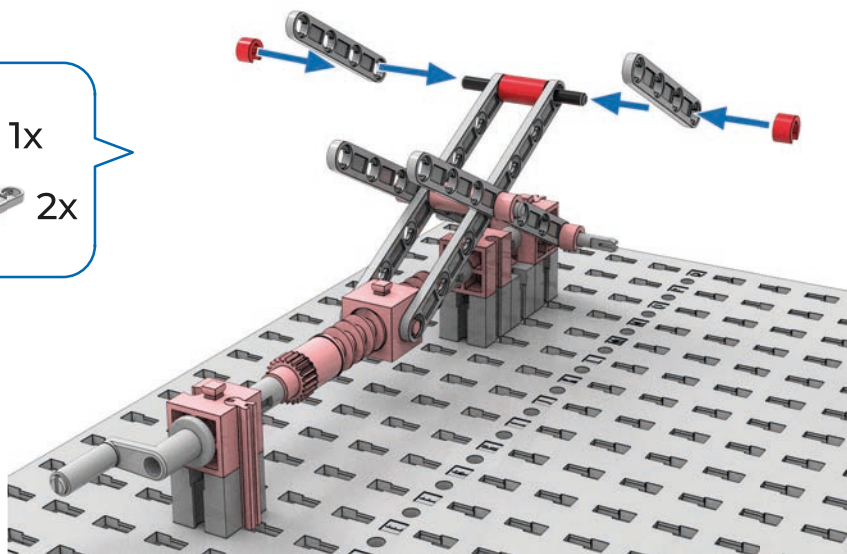
D4





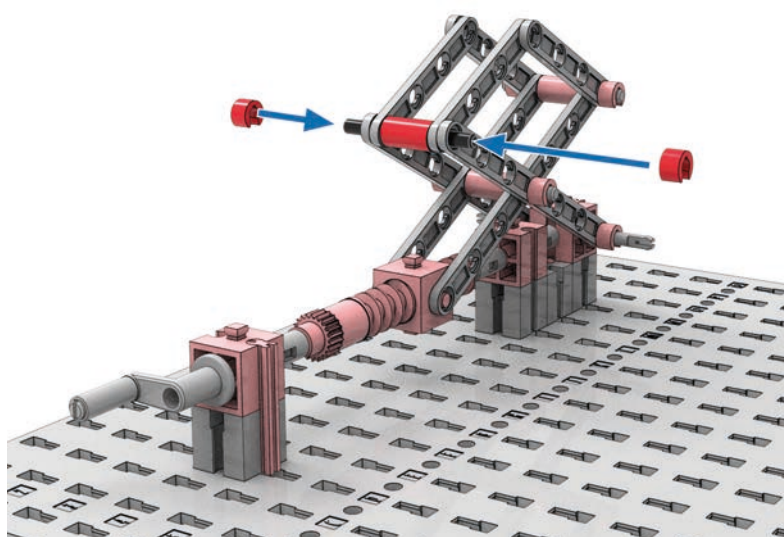
- 8**
- 2x
 - 1x
 - 40 1x
 - 45 2x

40 mm

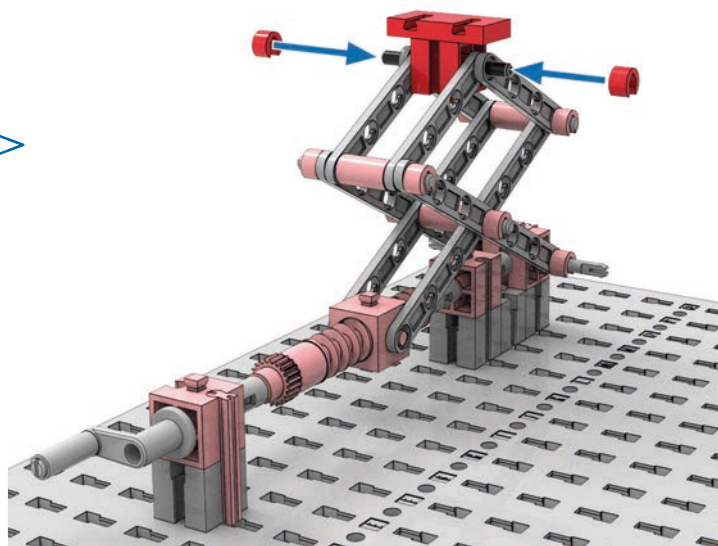


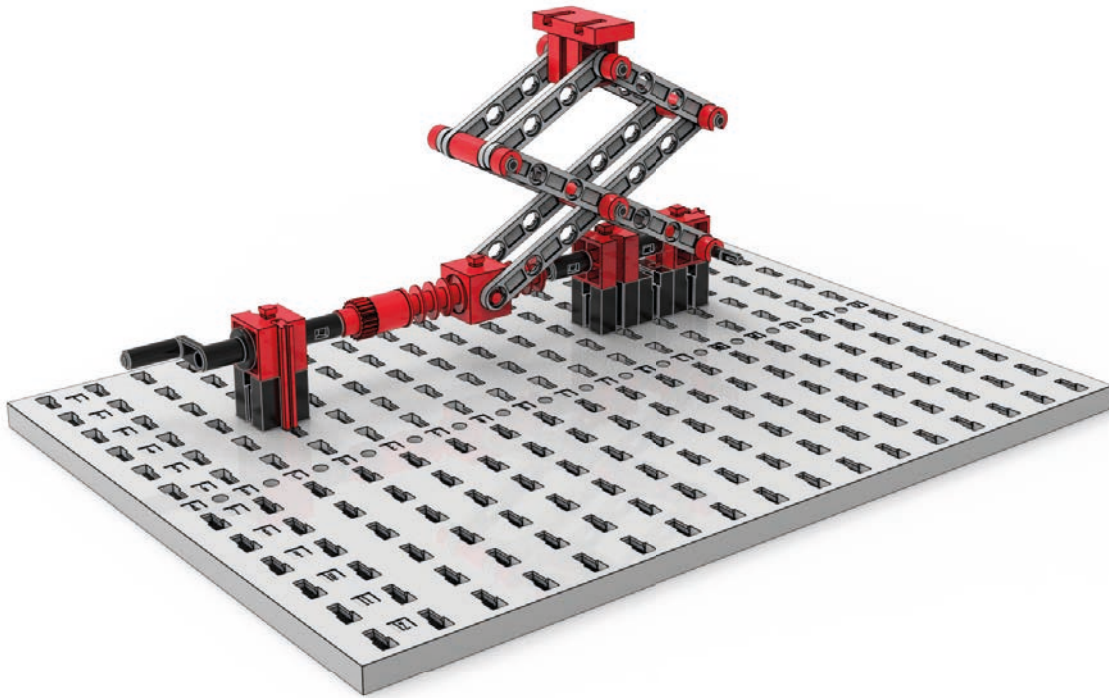
- 9**
- 2x
 - 1x
 - 40 1x
 - 45 2x

40 mm



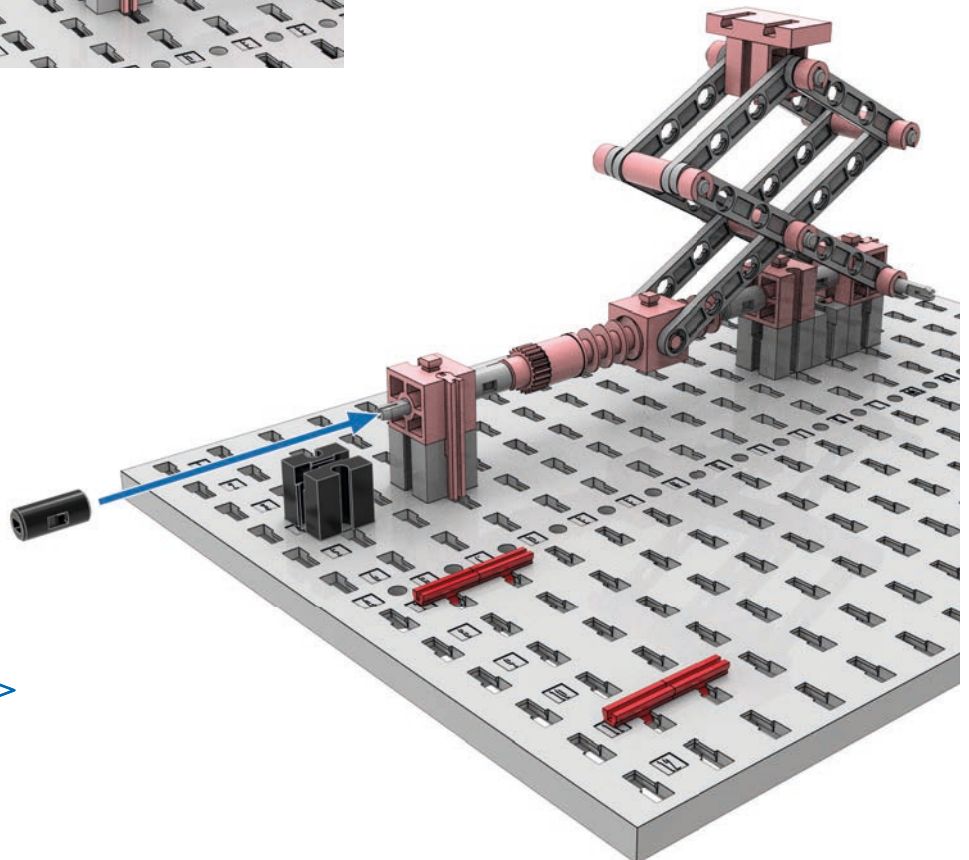
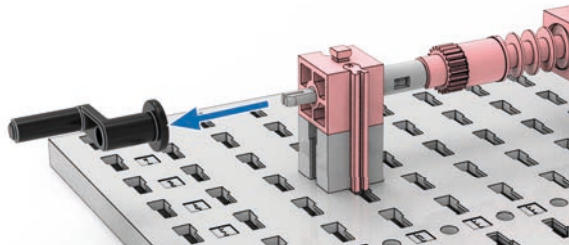
- 10**
- 1x
 - 1x
 - 40 1x
 - 2x





Modellvariante / model variant / variante de modèle / modelvariant / variante del modelo /
variante del modelo / variante del modelo / вариант модели / 型号变体

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modify
modifier
veranderen
modificar
modificar
modificare
переделатъ
改装



11



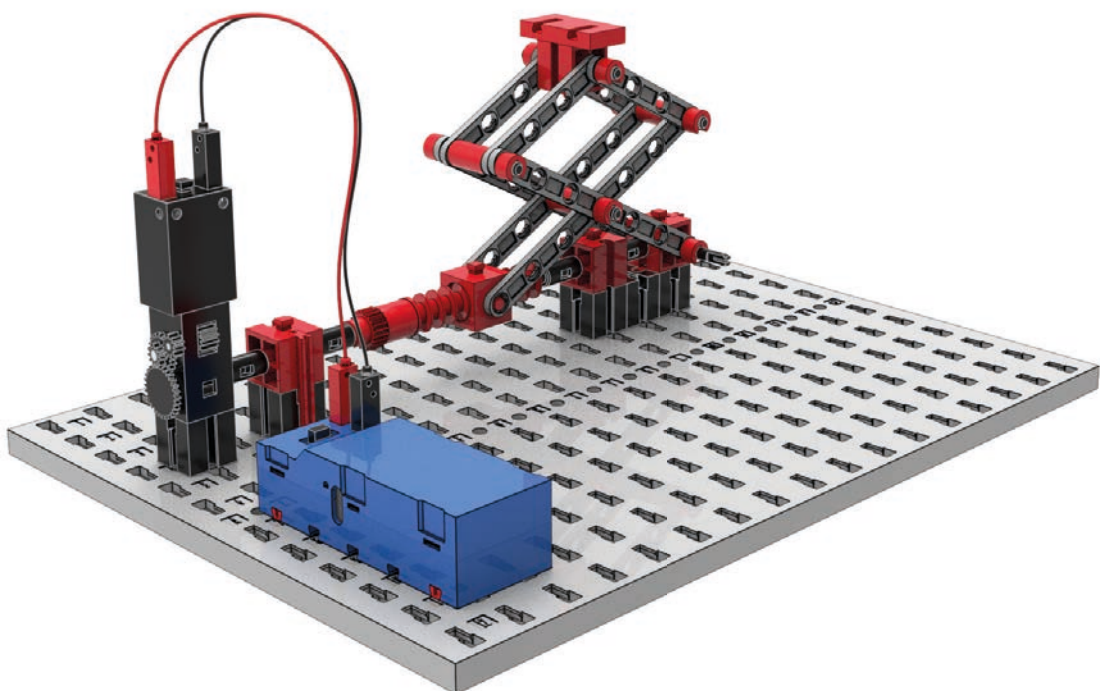
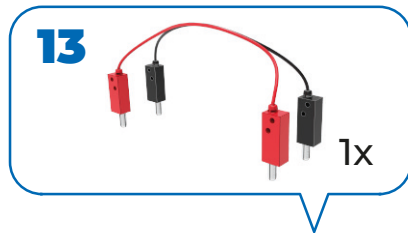
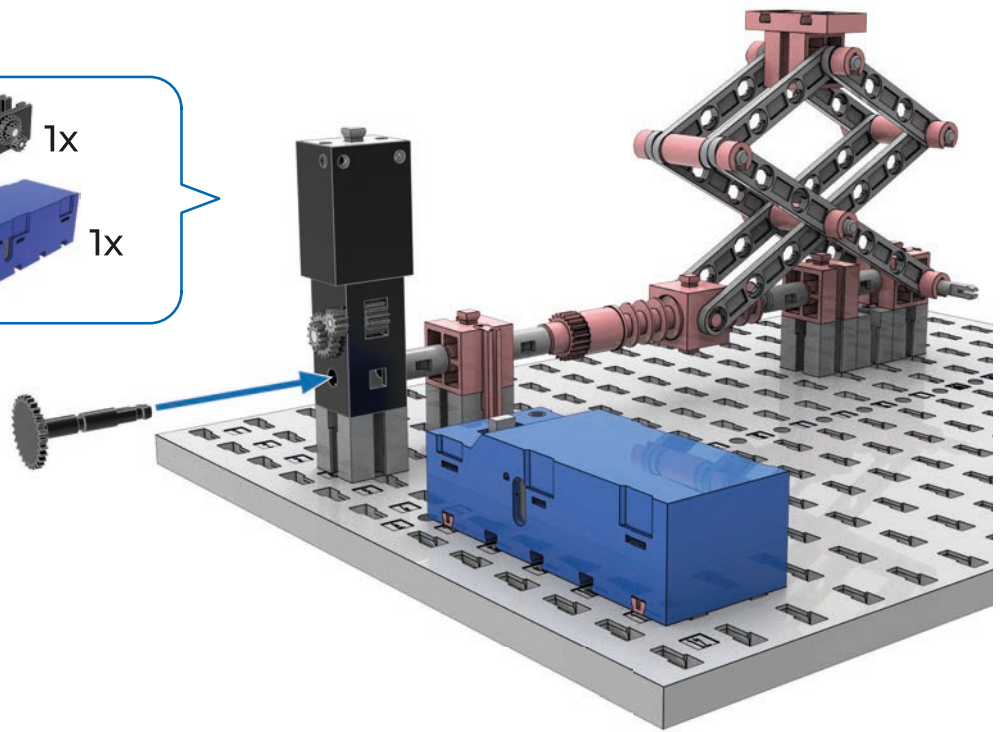
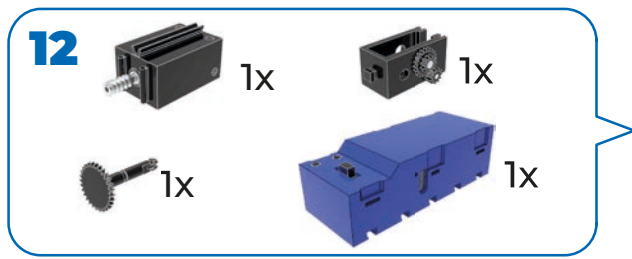
4x



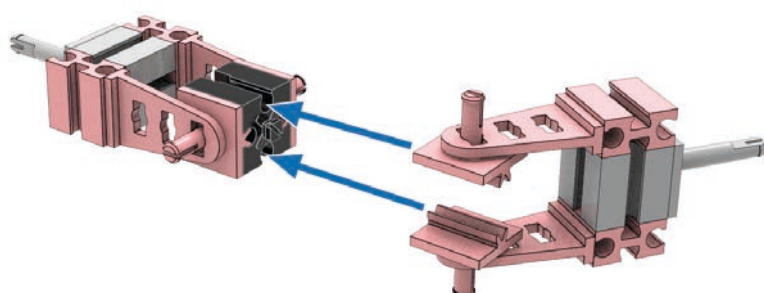
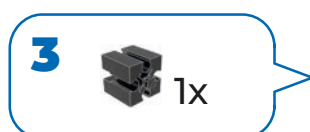
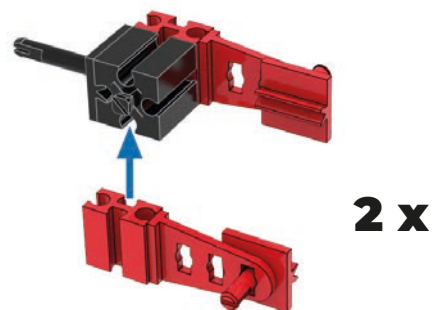
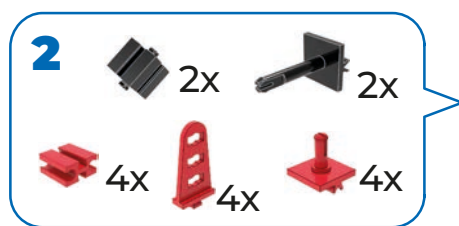
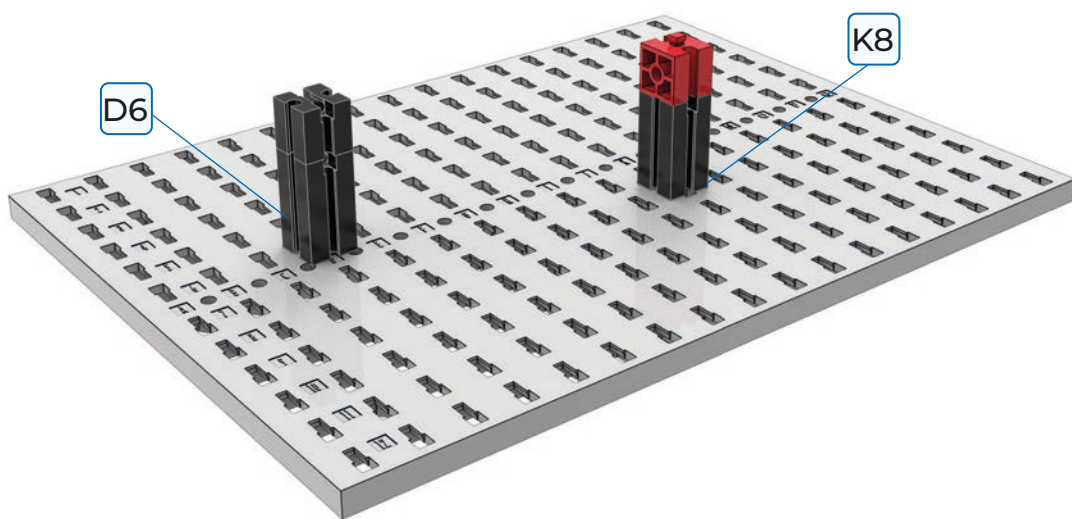
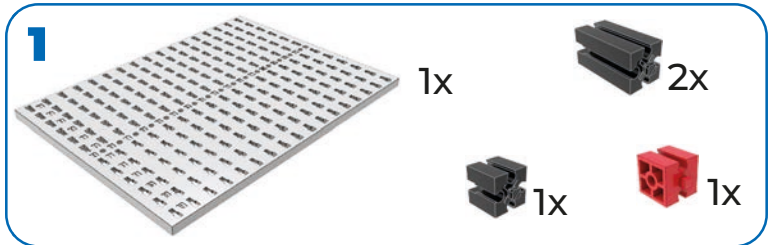
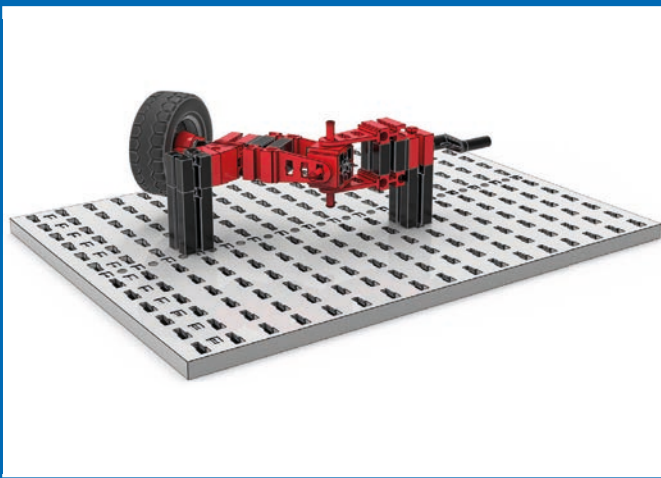
1x

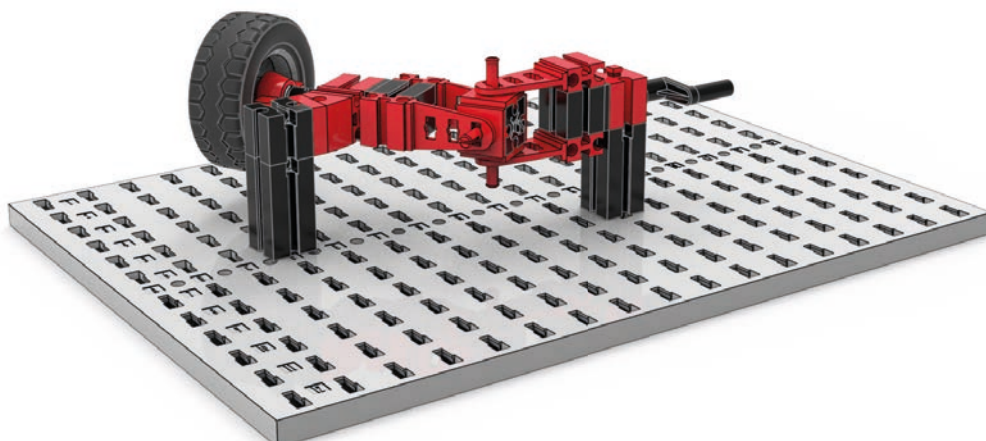
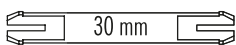
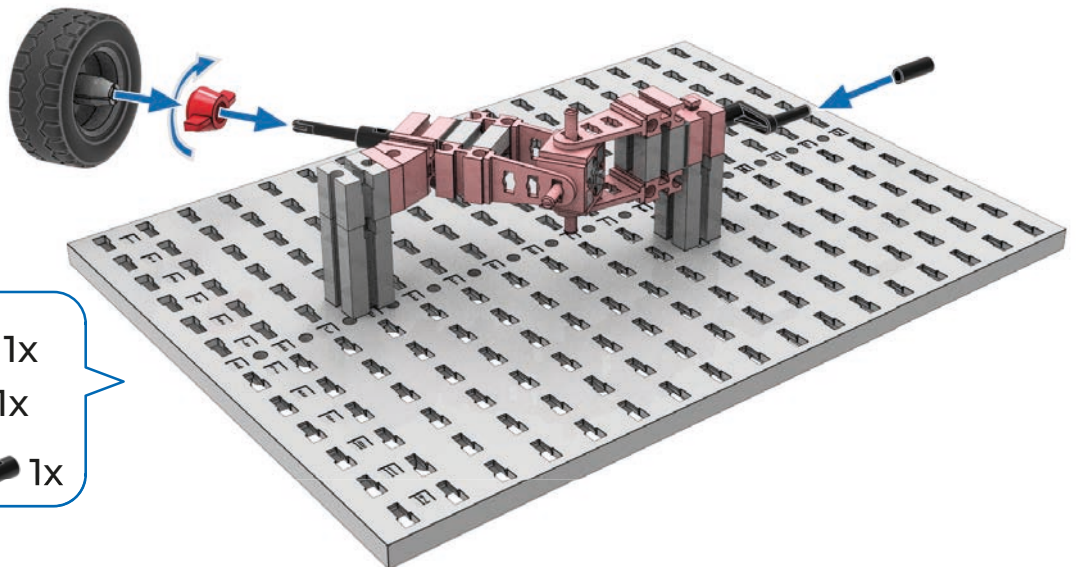
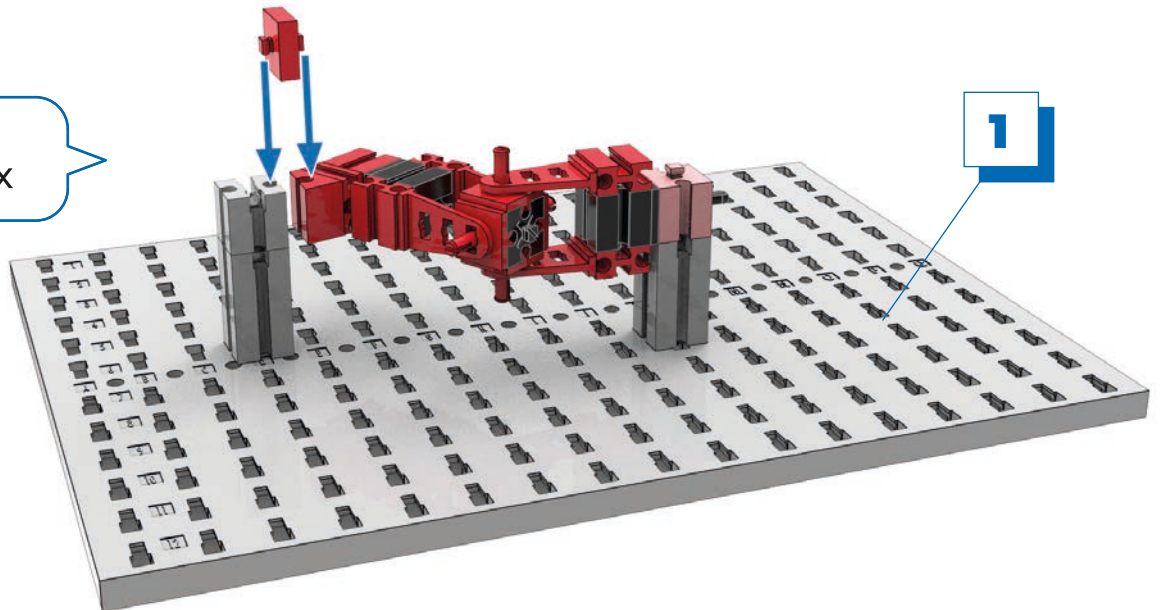
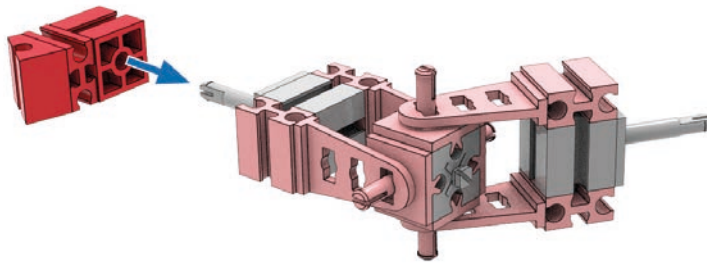
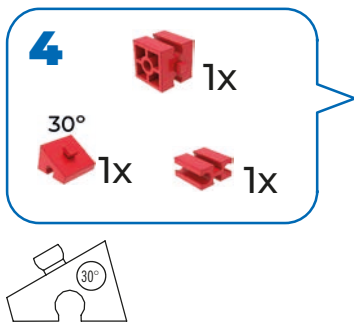


1x

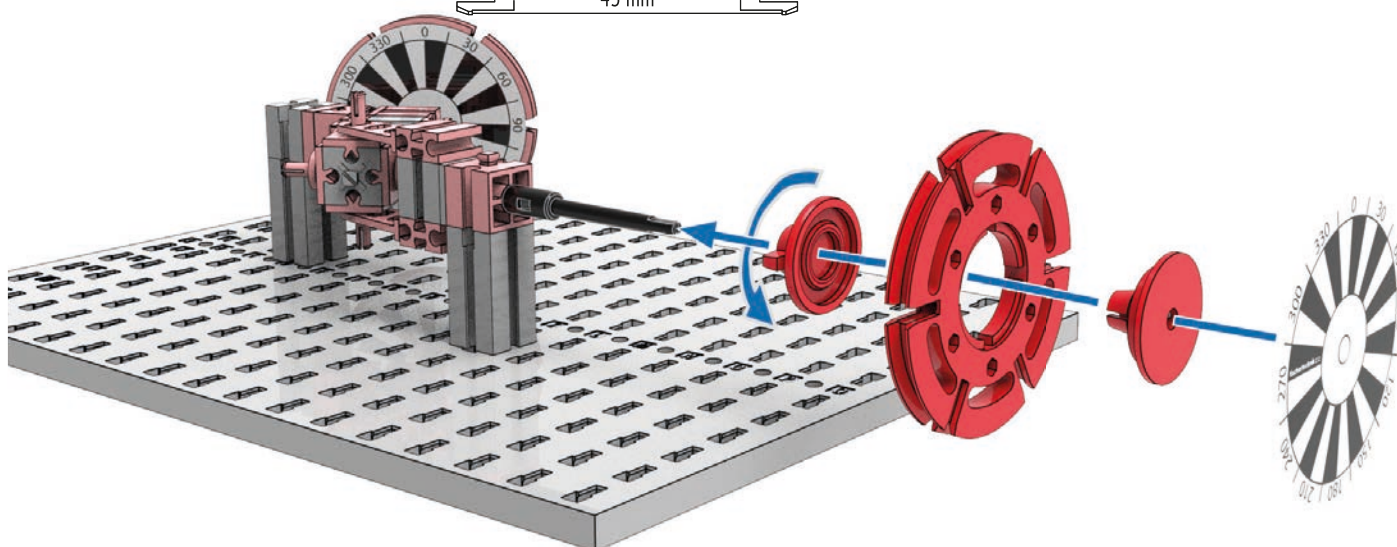
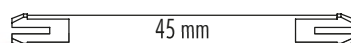
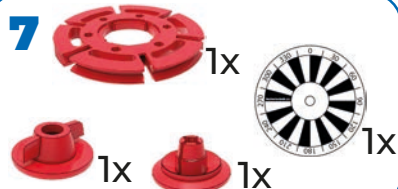
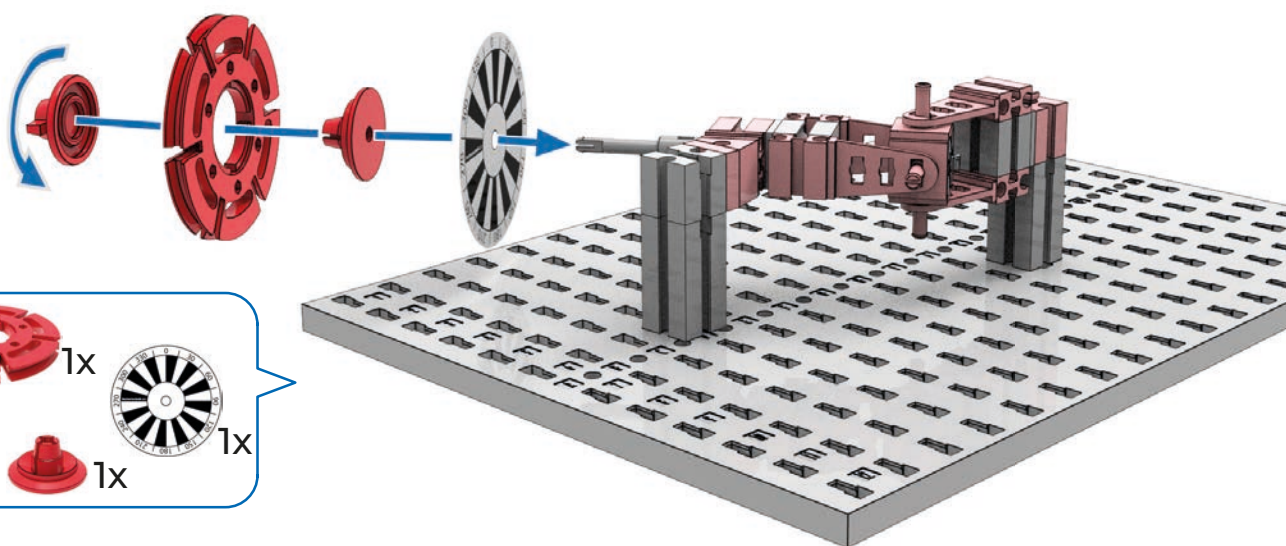
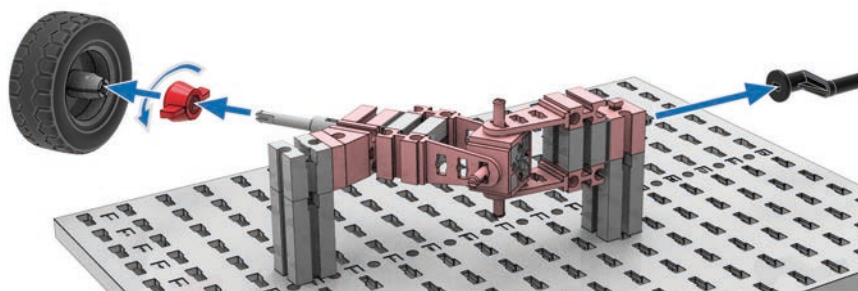


Kardangelenk
Cardan joint
Joint de Cardan
Cardan-verbinding
Junta de cardán
Junta Cardan
Giunto cardanico
карданный шарнир
卡丹关节





umbauen
modify
modifier
veranderen
modificar
modificare
переделать
改装

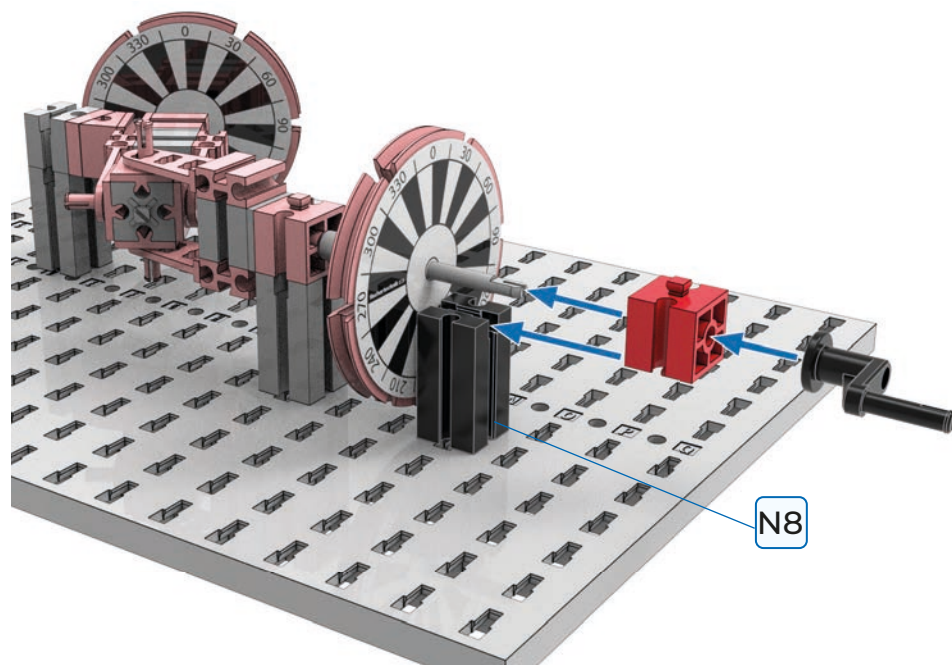


9

1x

1x

1x

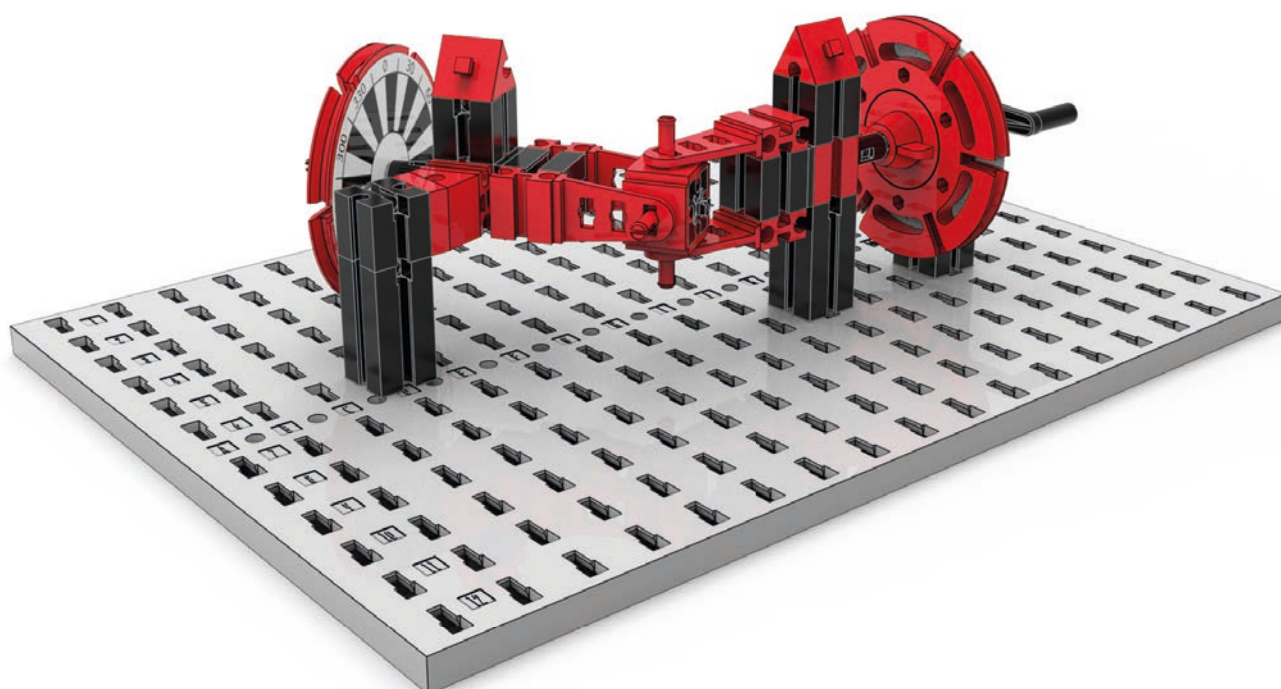
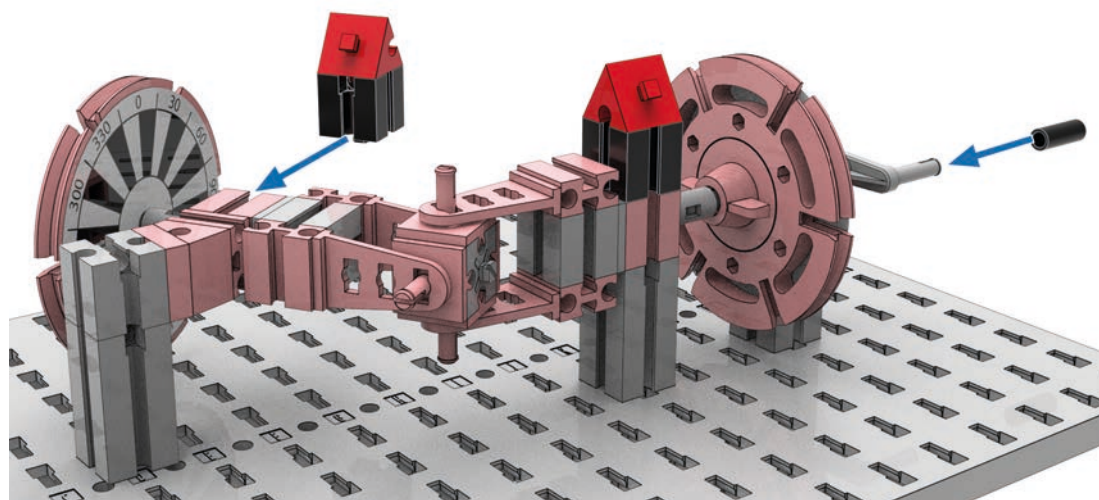


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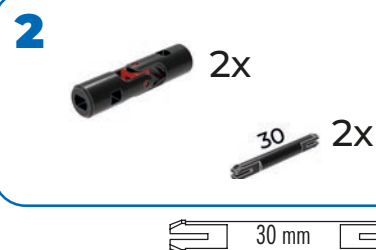
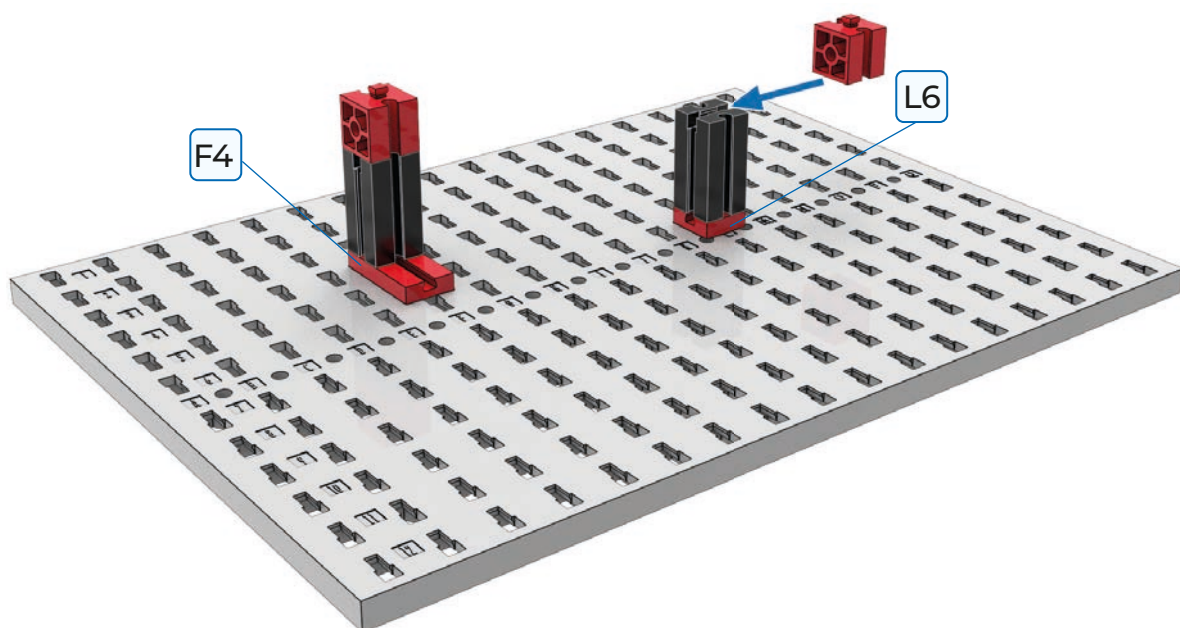
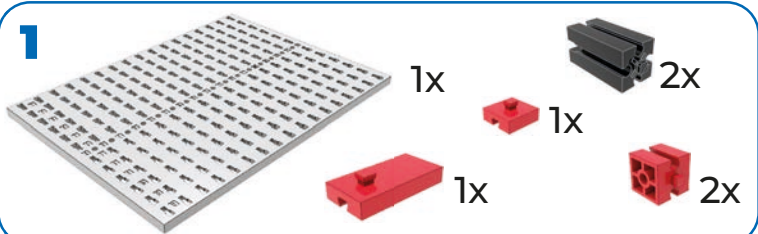
60° 2x

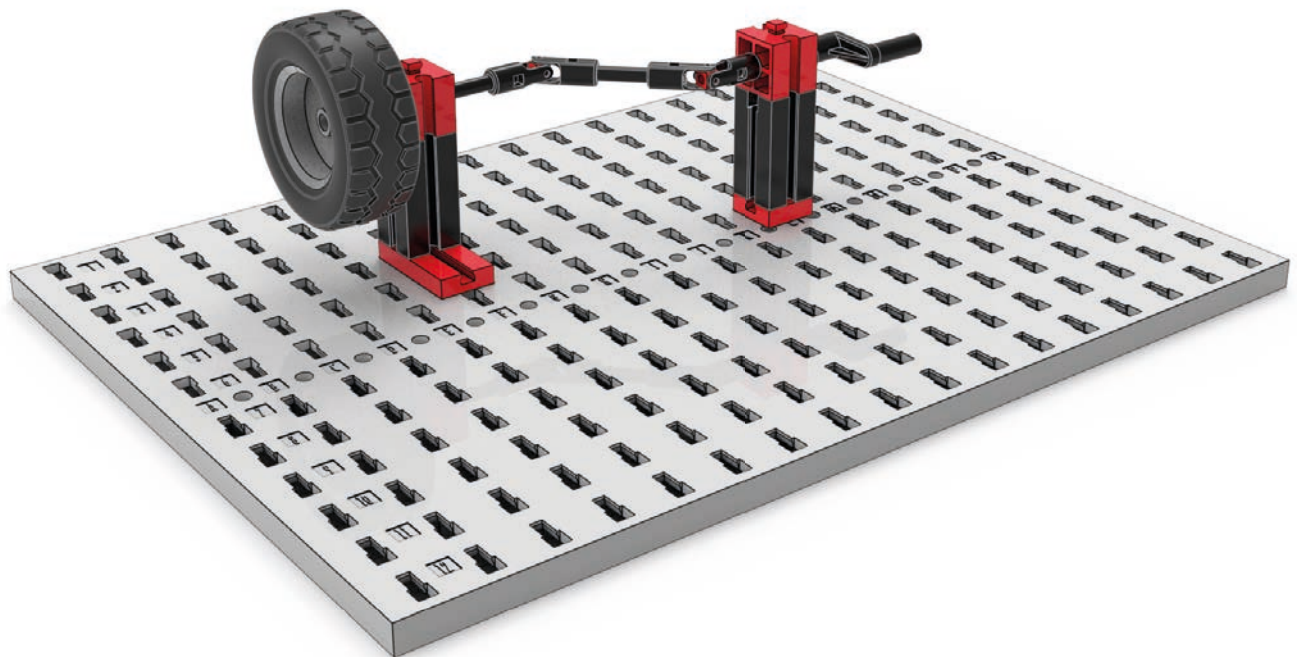
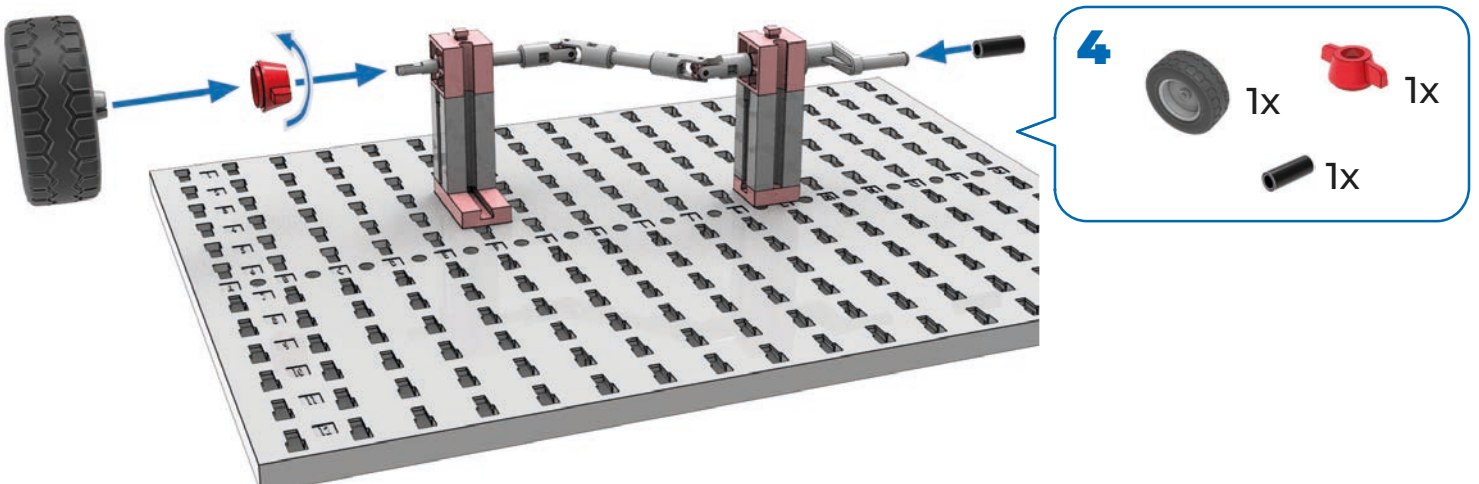
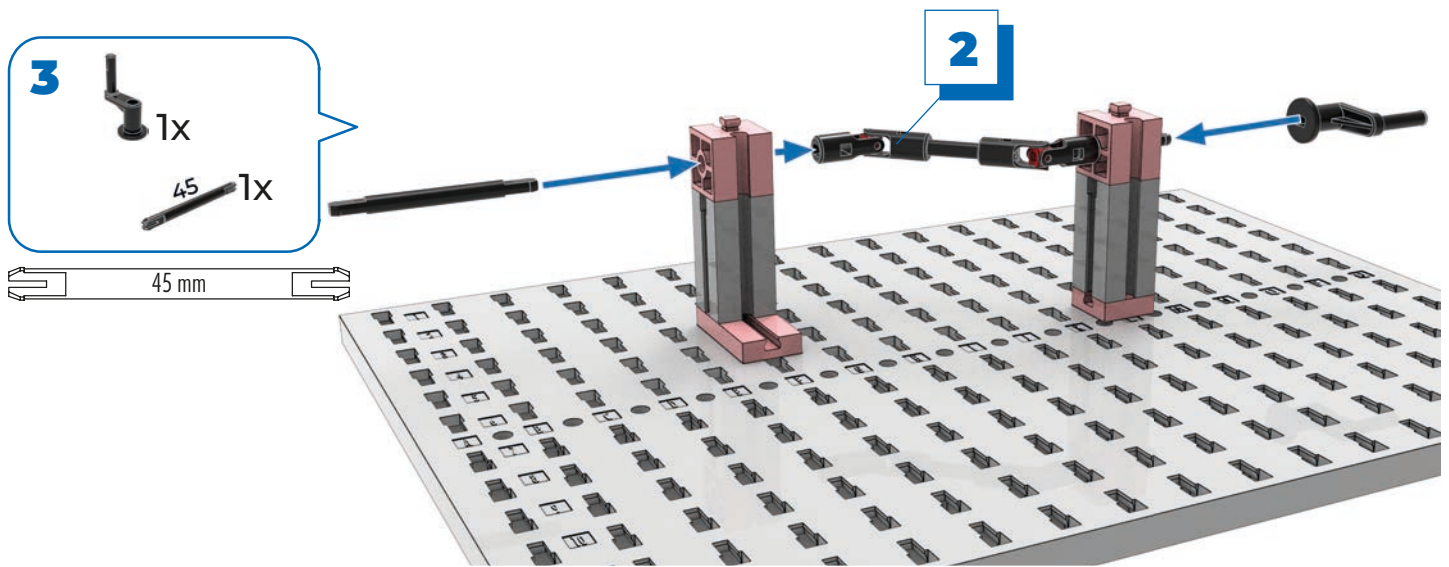
2x

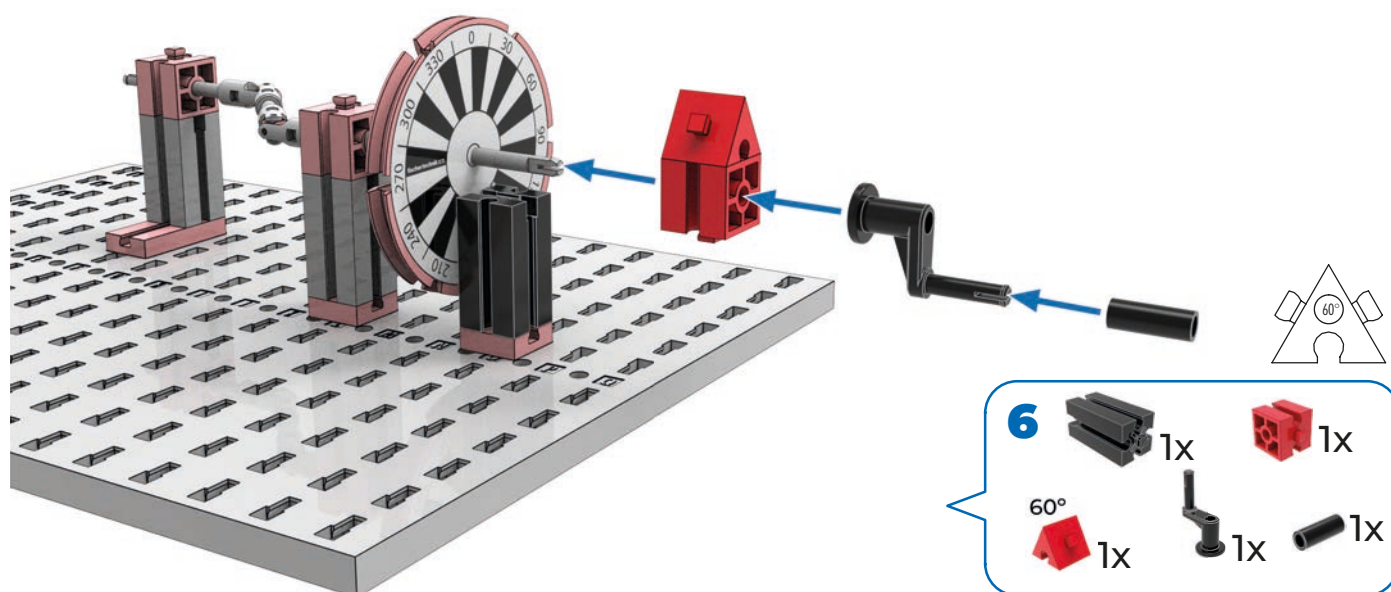
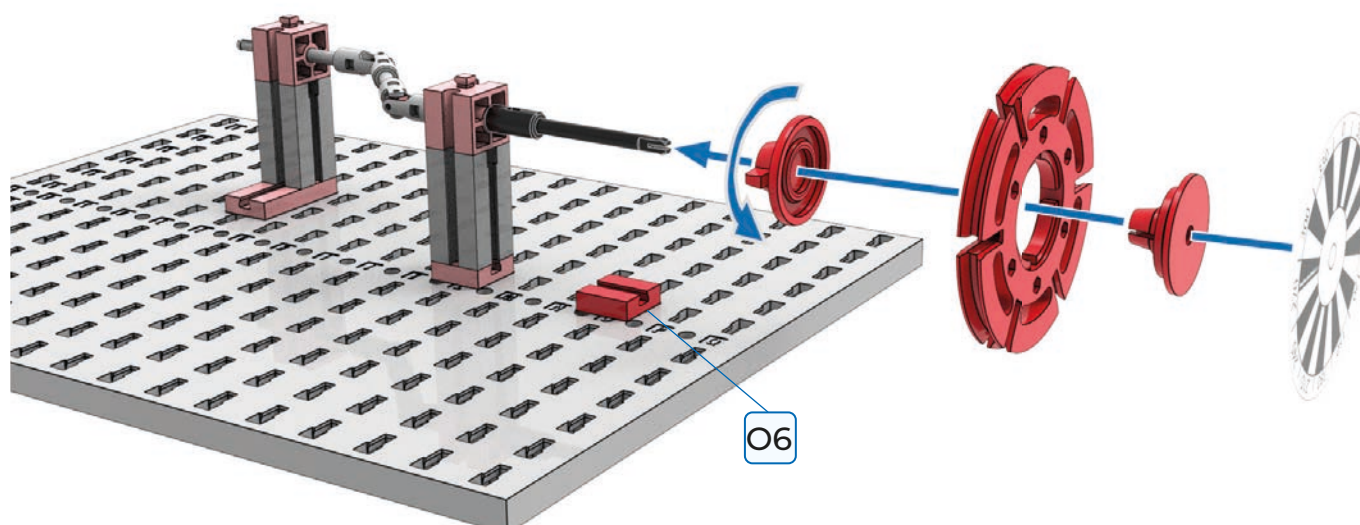
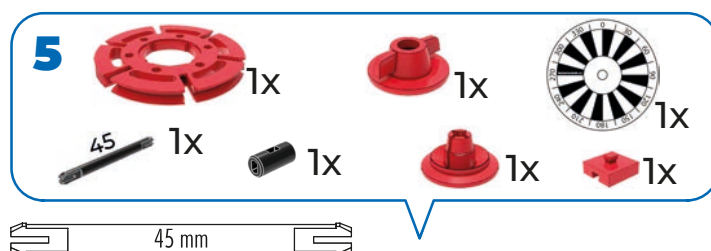
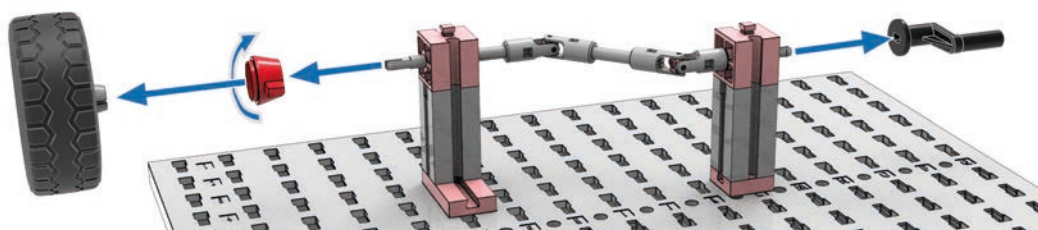
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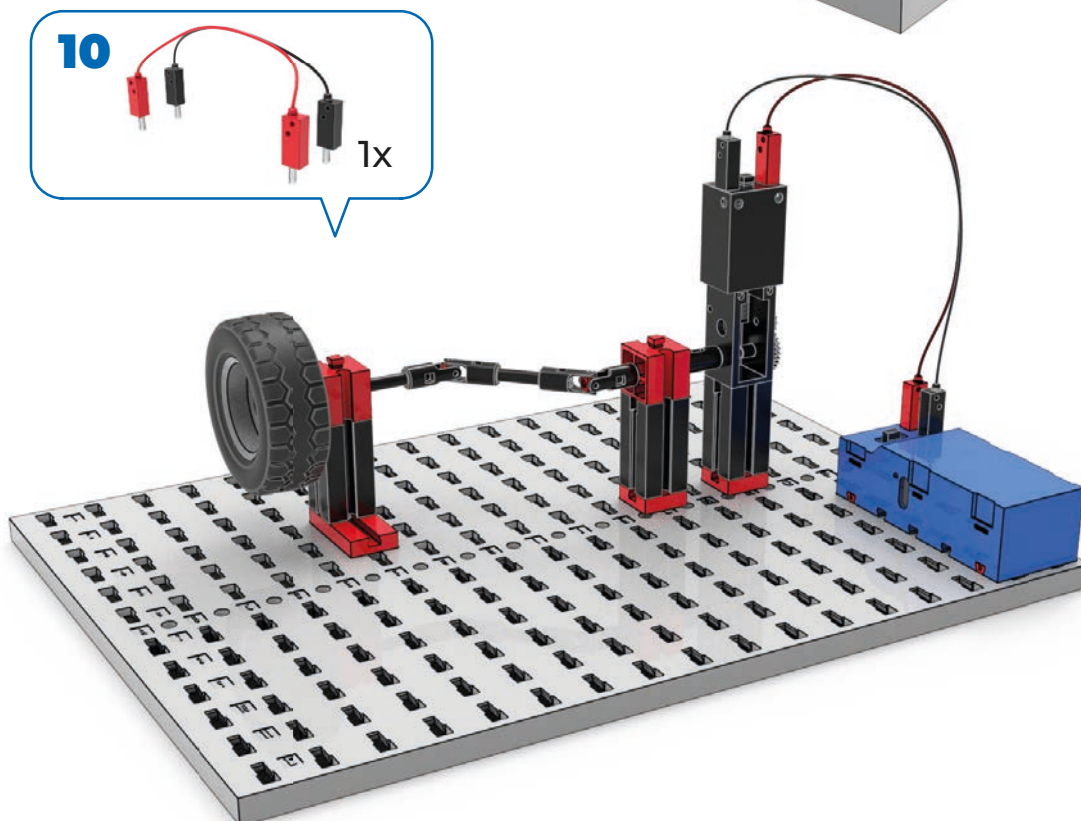
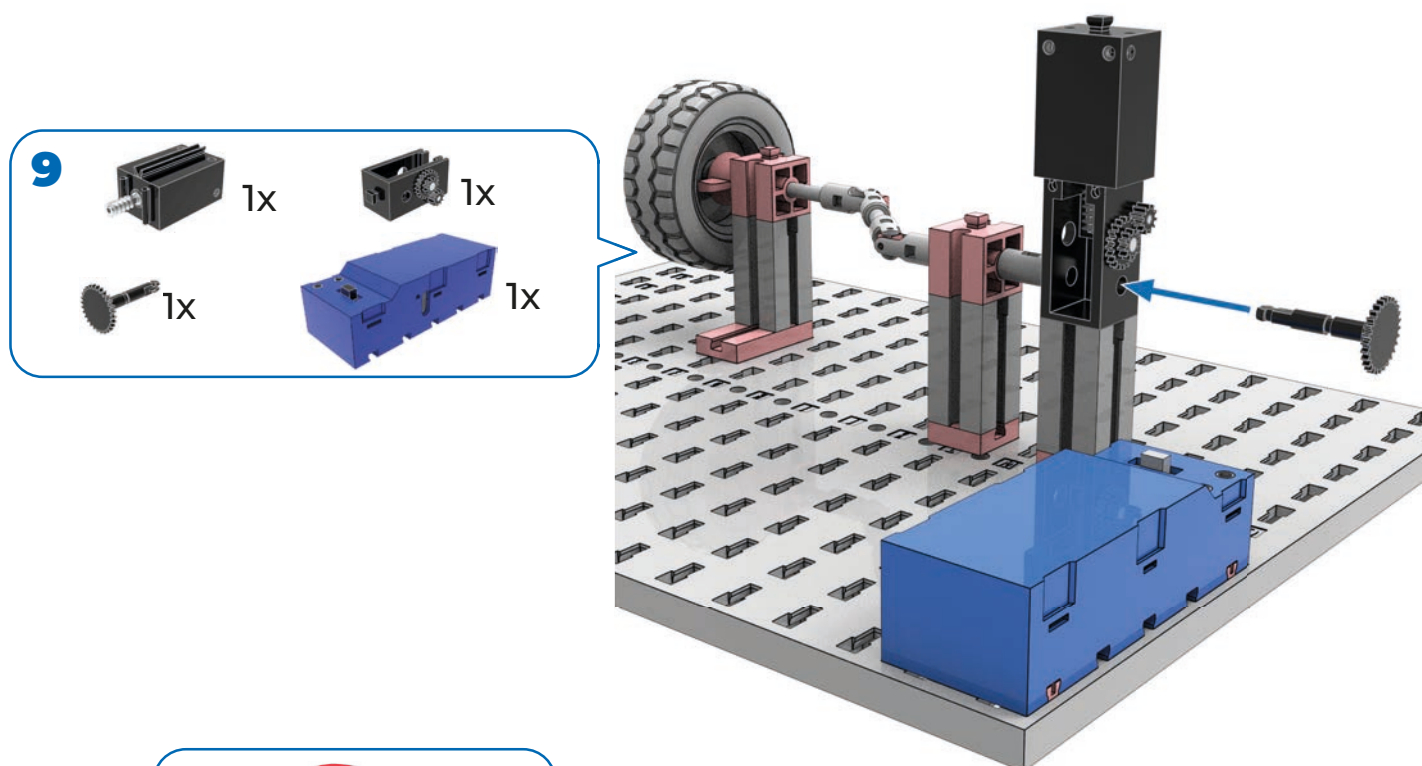
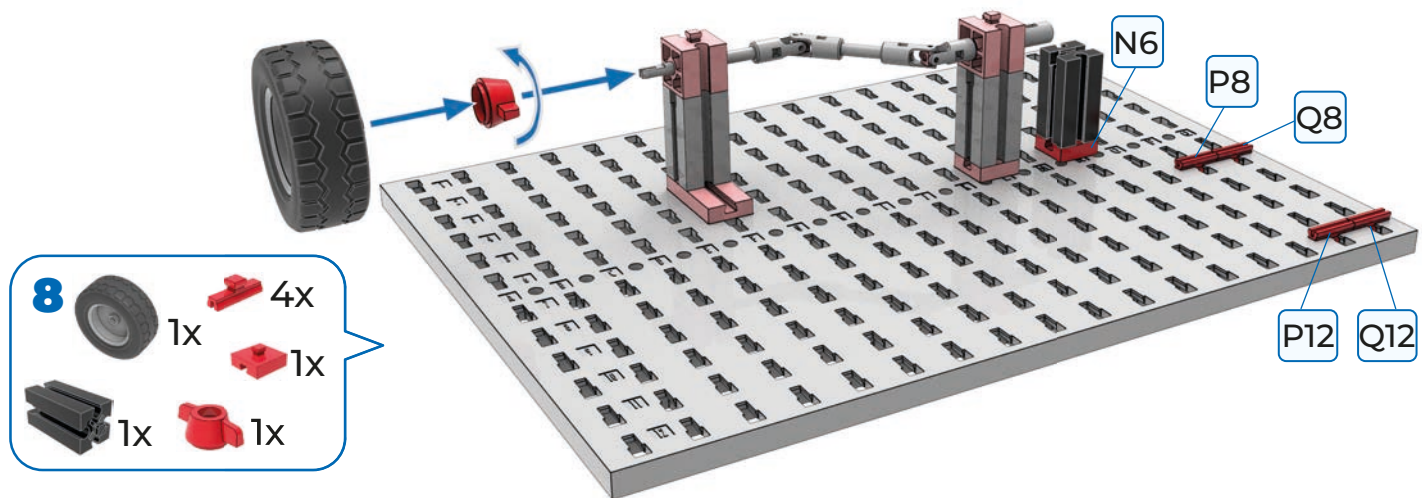


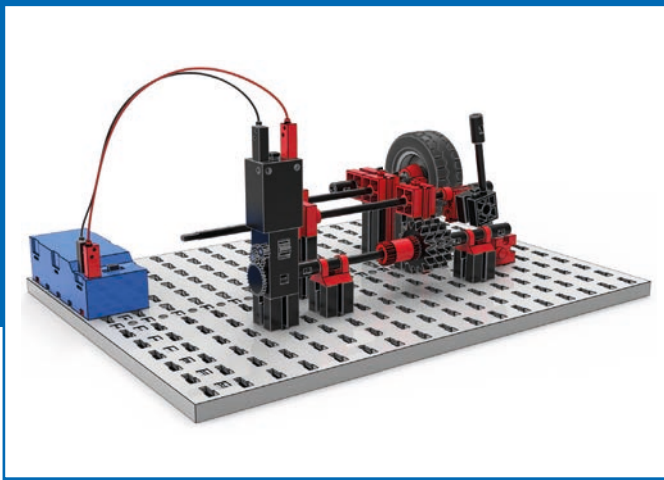
Kardanwelle
Cardan shaft
Arbre à cardan
Cardanas
Eje cardán
Eixo Cardan
Albero cardanico
вал карданный
万向轴



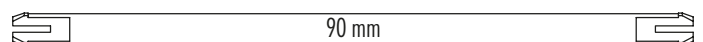
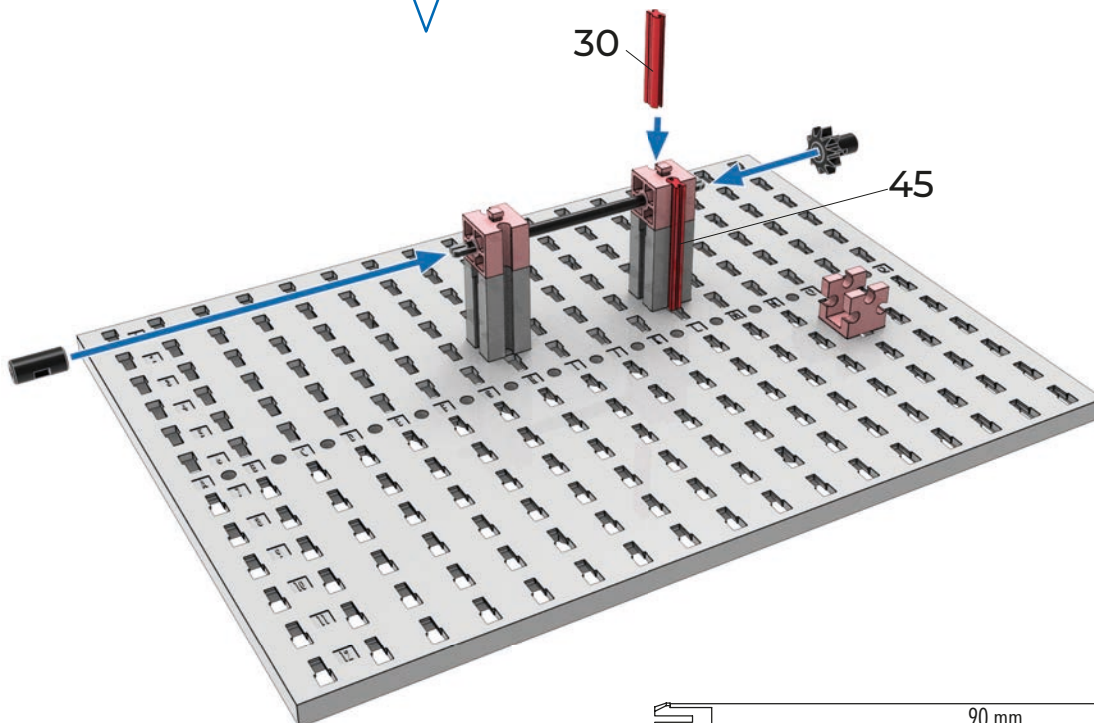
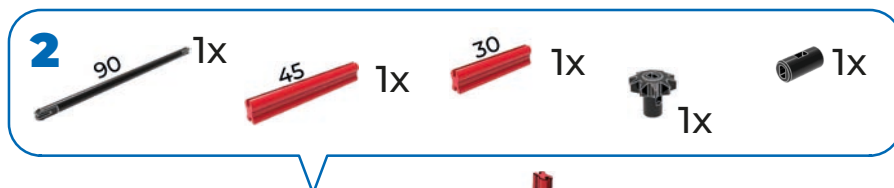
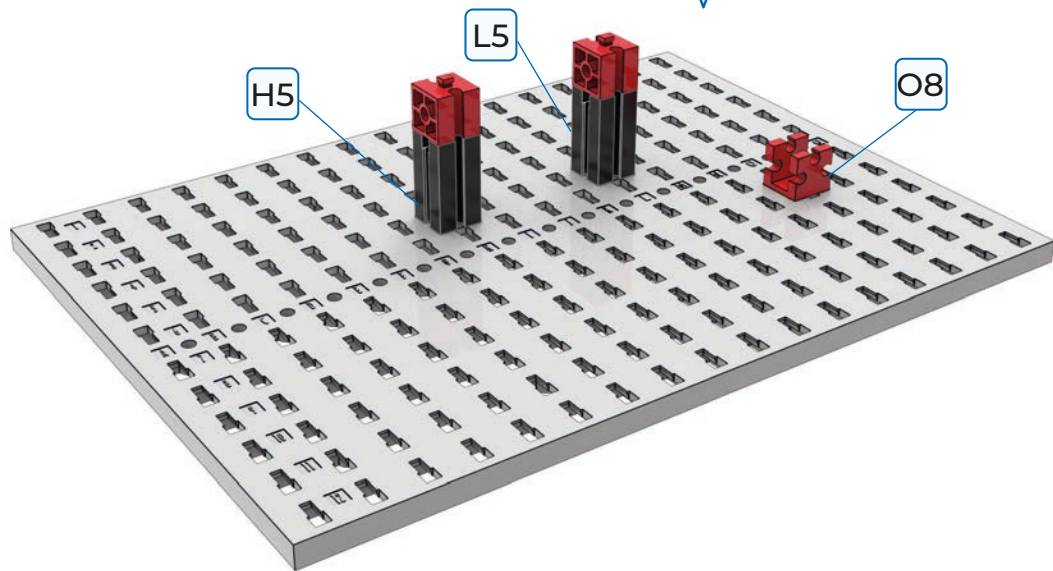
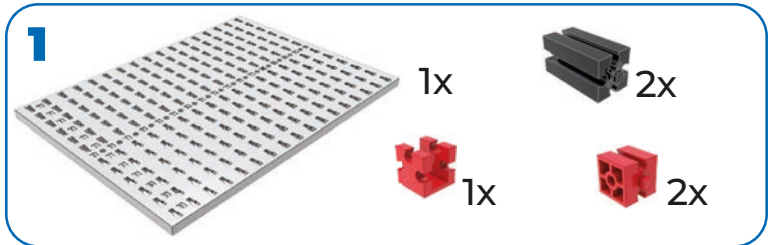


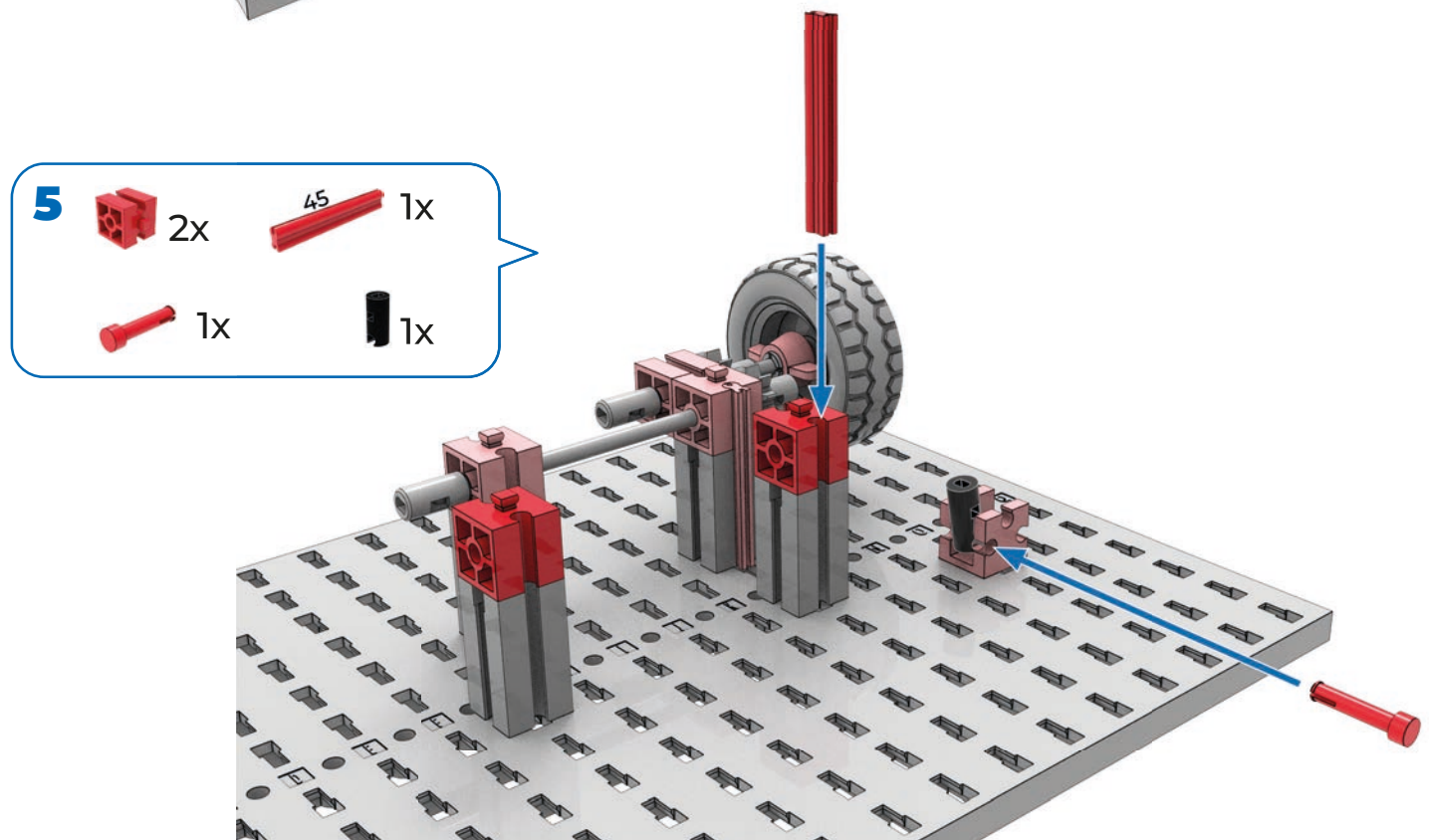
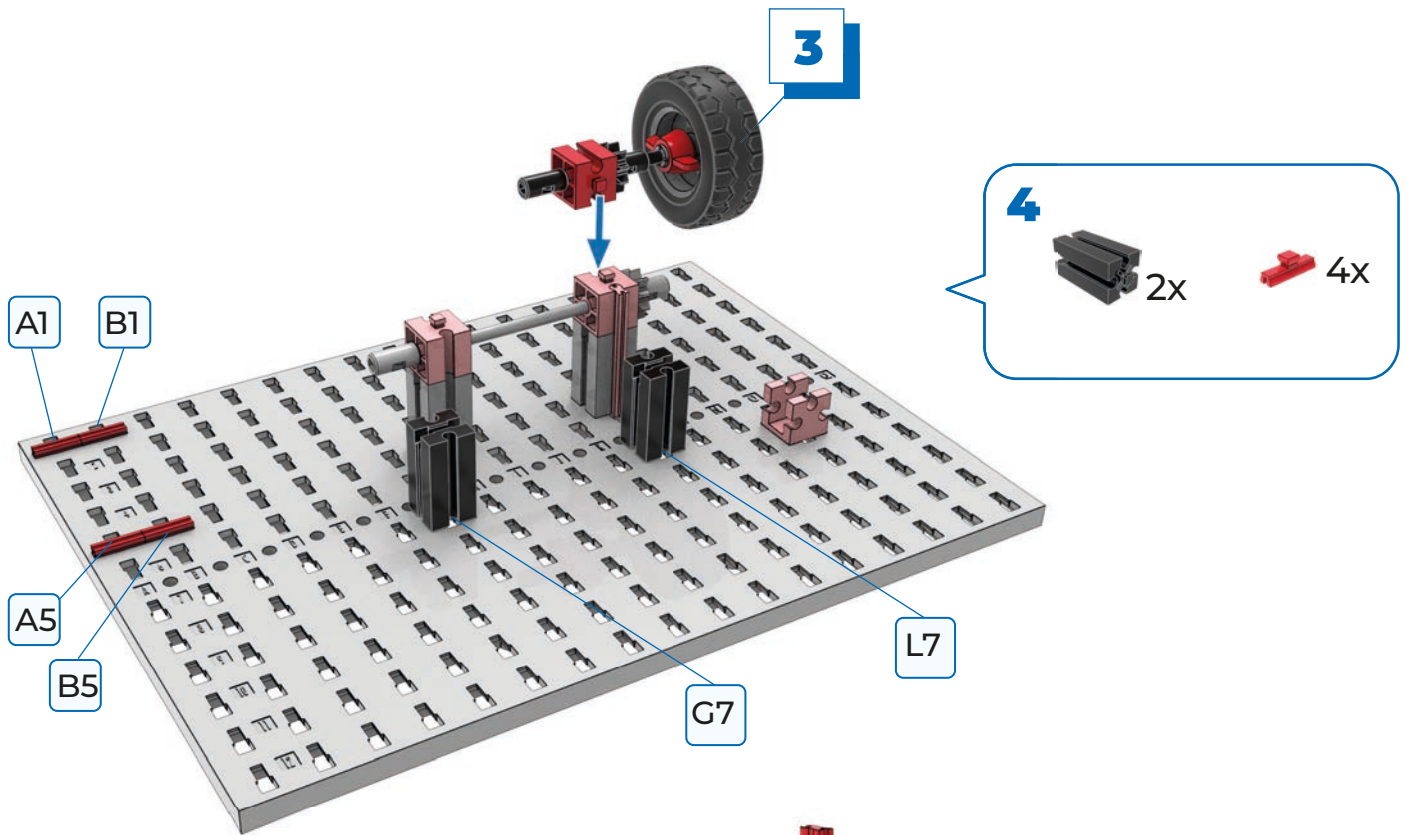
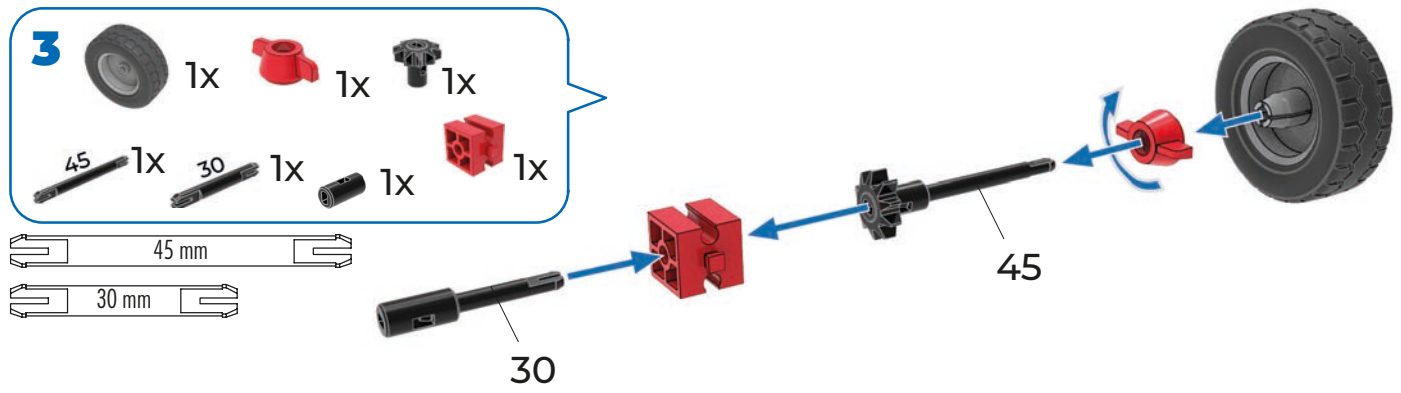


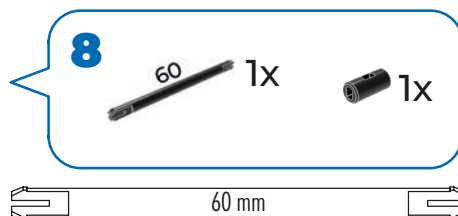
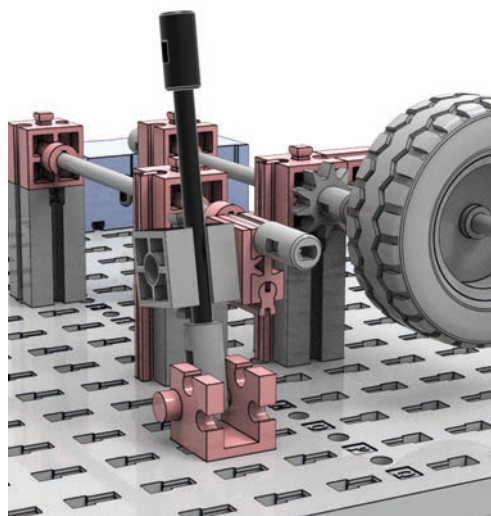
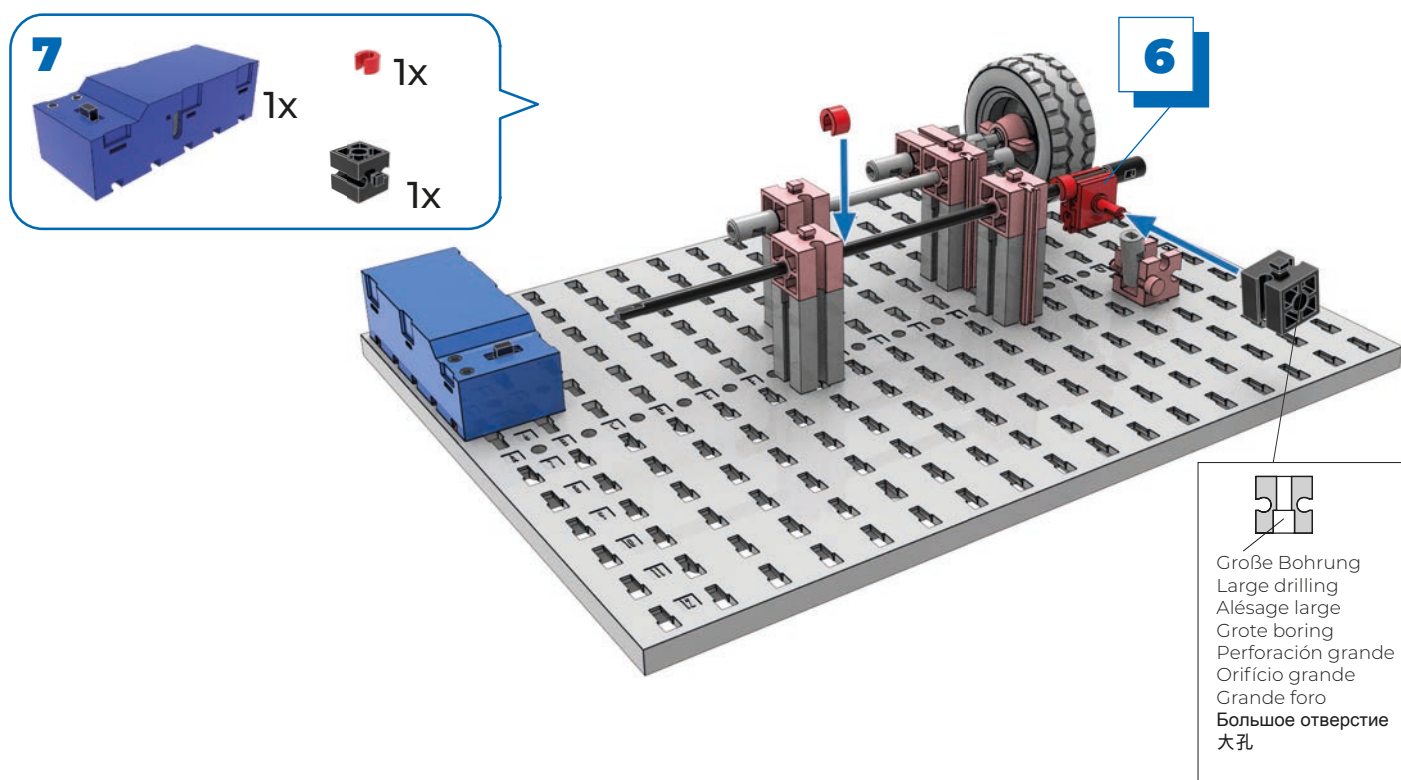
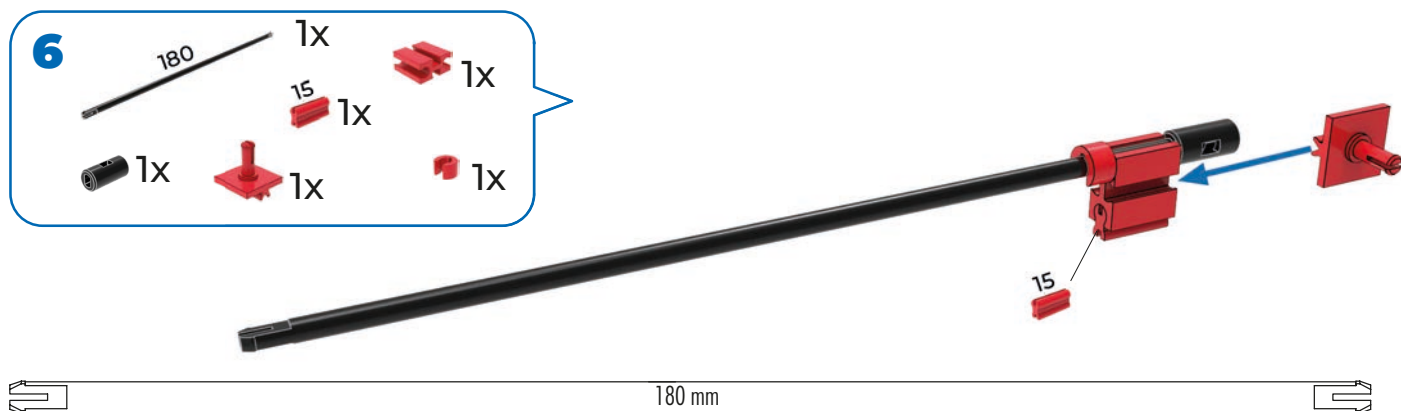


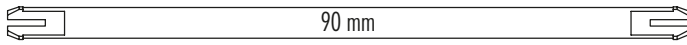


Schaltgetriebe - Basismodell
Manual gearbox - Basic model
Boîte de vitesses manuelle - Modèle de base
Handgeschakelde versnellingsbak - Basismodel
Caja de cambios manual - Modelo básico
Caixa de velocidades manual - Modelo básico
Cambio manuale - Modello di base
Механическая коробка передач - 2 передачи Базовая модель
手动变速箱--基本模型

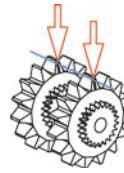
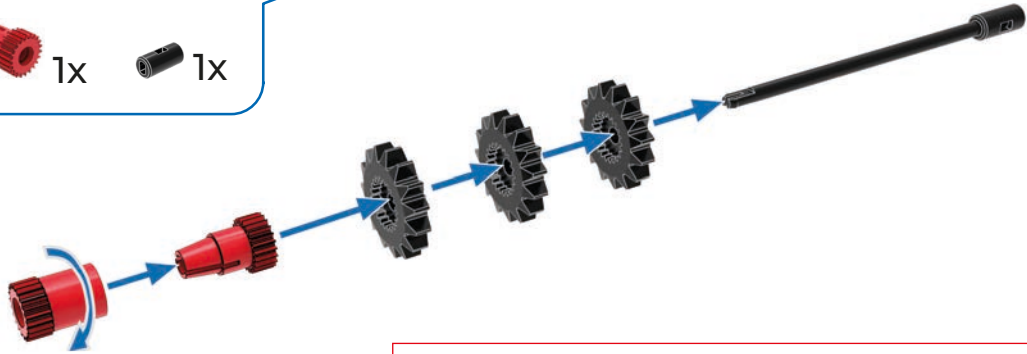
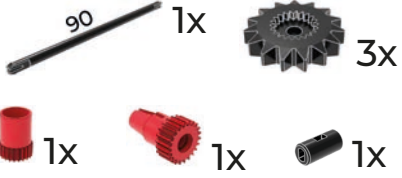






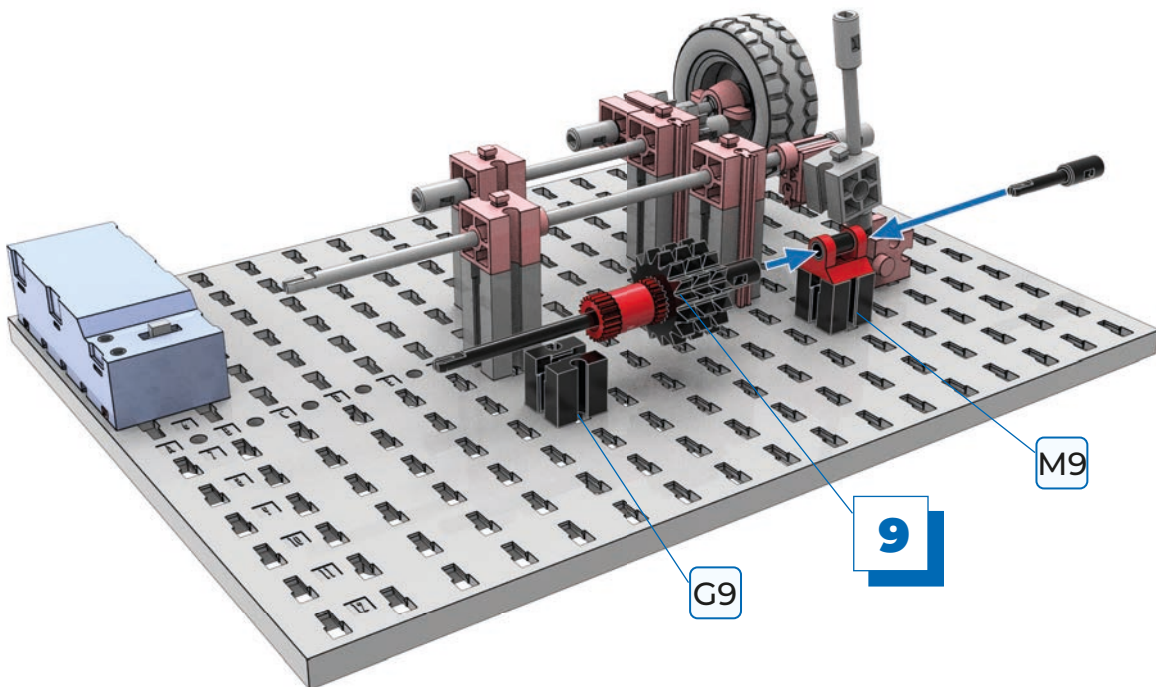
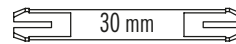


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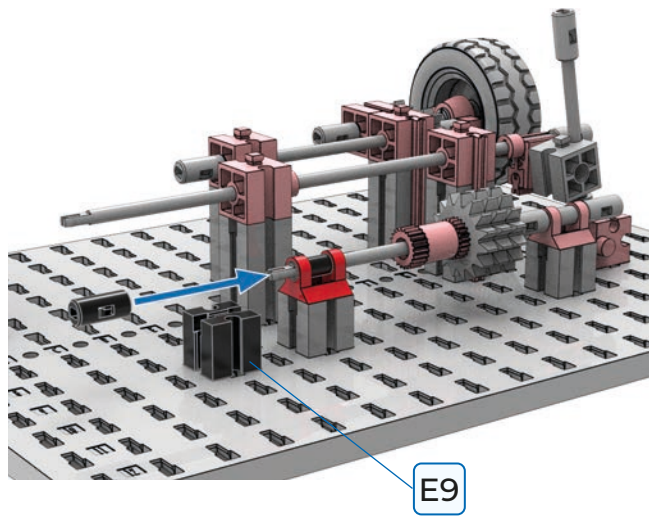


Markierung beachten!
Note marking!
Tenir compte des repères!
Let op de markering!
¡Tener en cuenta el marcaje!
Observar a marcação!
Osservare il contrassegno!
Учитывайте маркировку
注意标记！

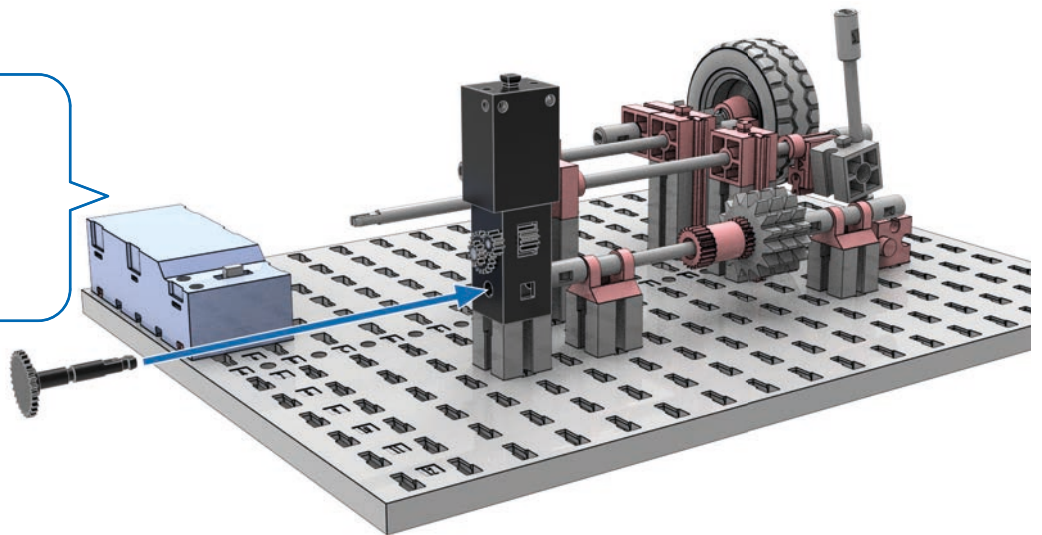
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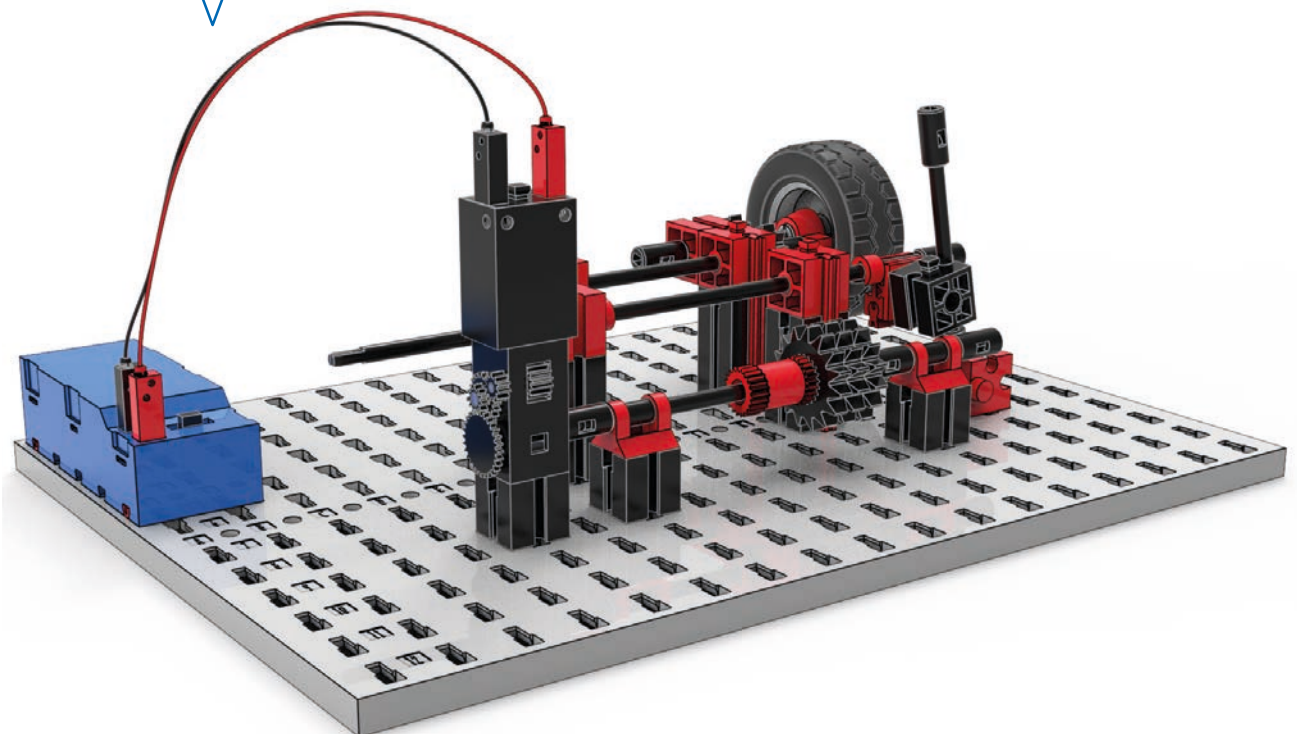
- 11**
- 1x
 - 1x
 - 1x

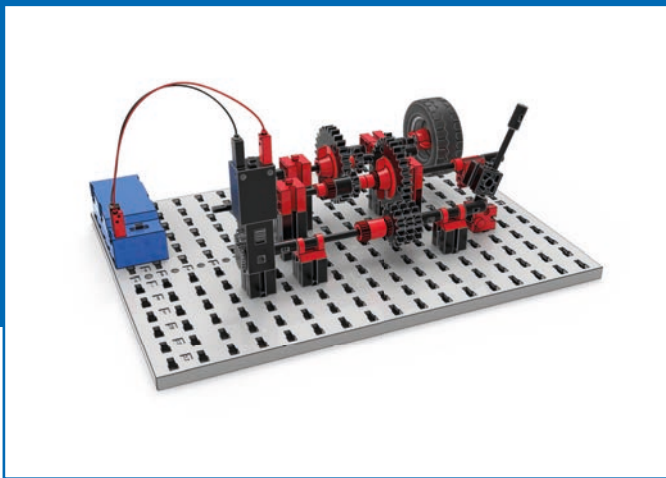


- 12**
- 1x
 - 1x
 - 1x

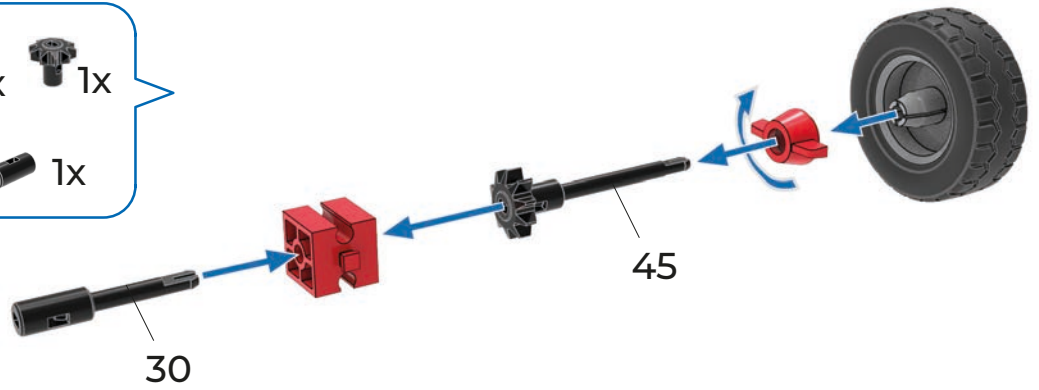
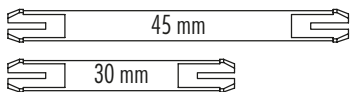
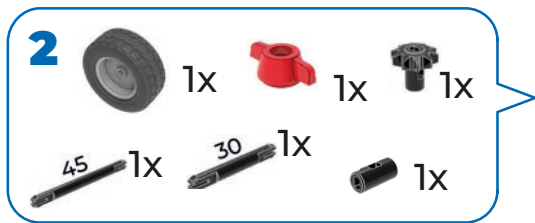
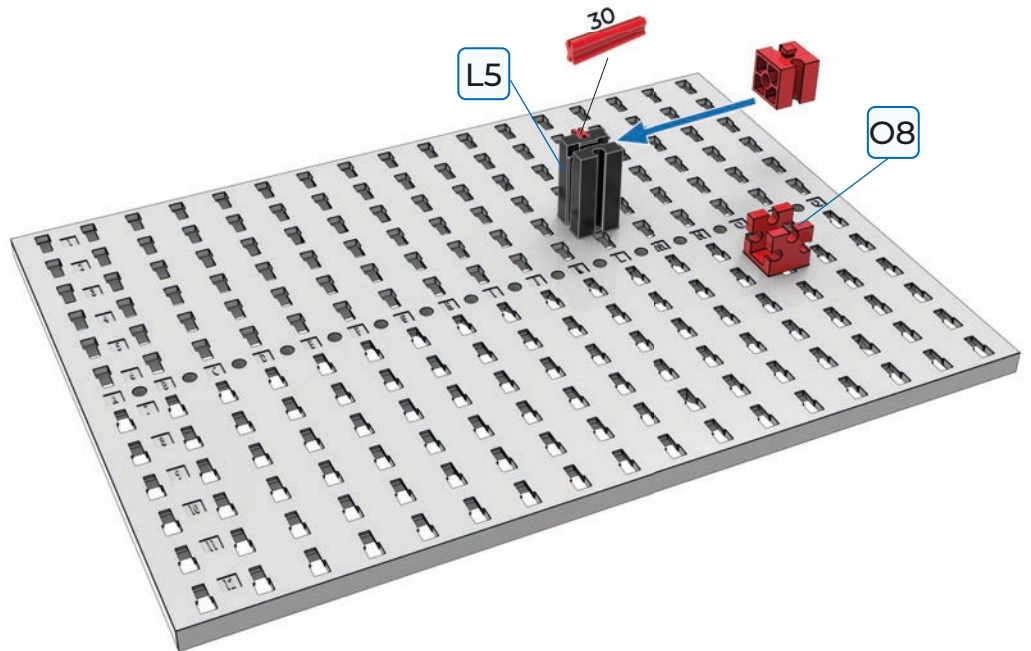
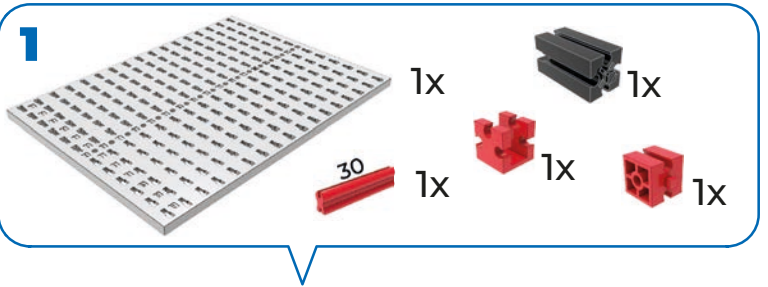


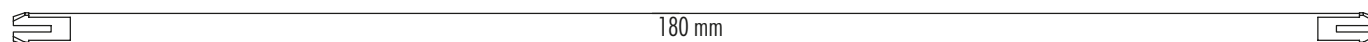
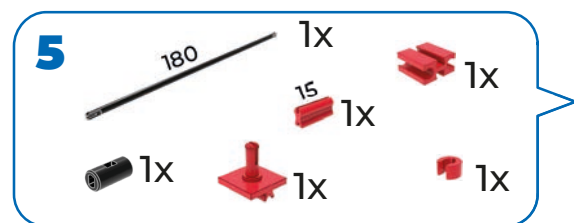
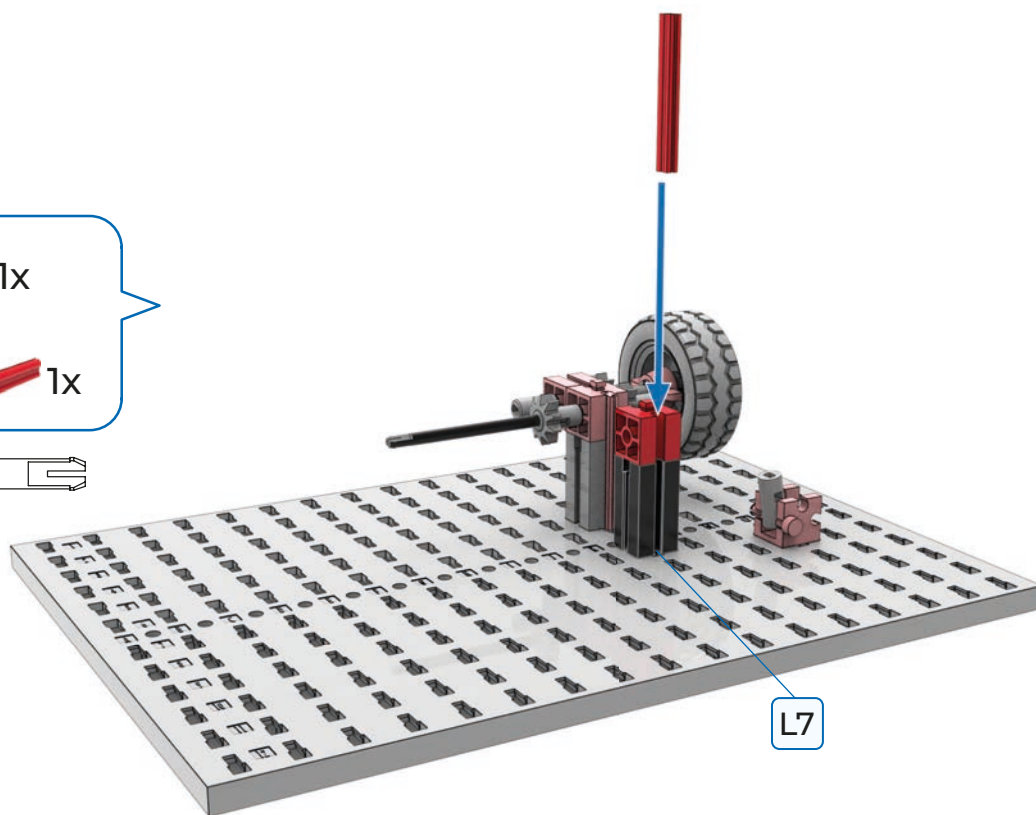
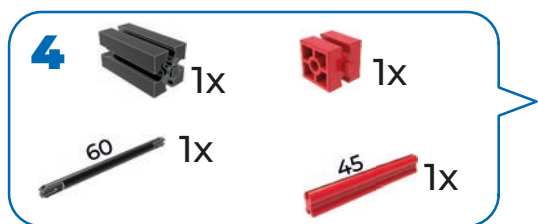
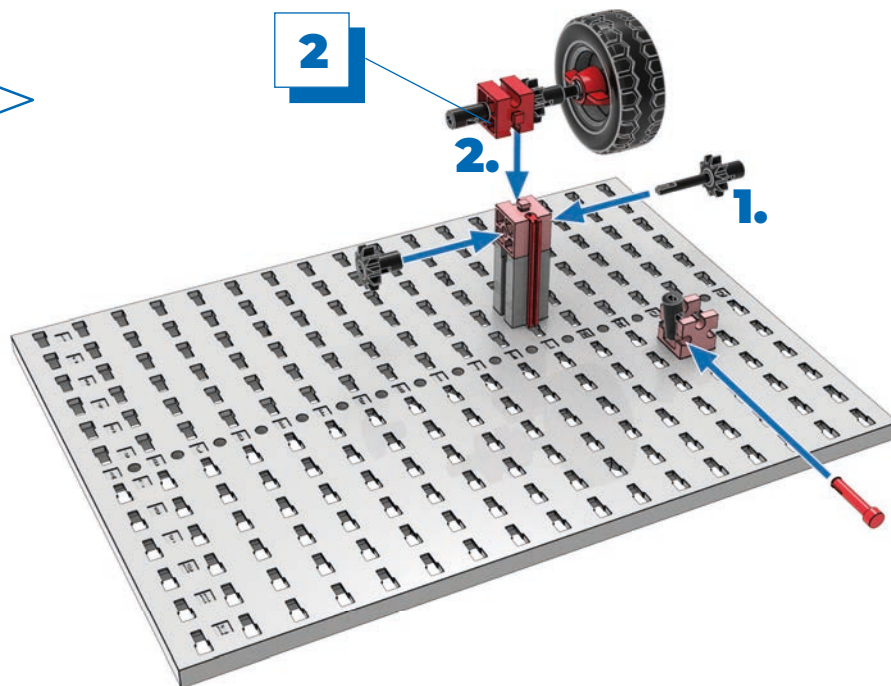
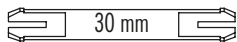
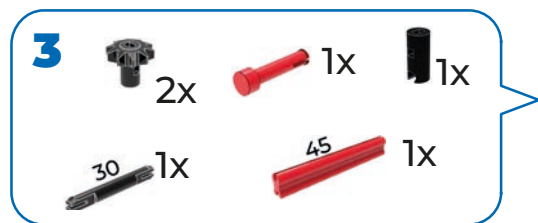
- 13**
- 1x

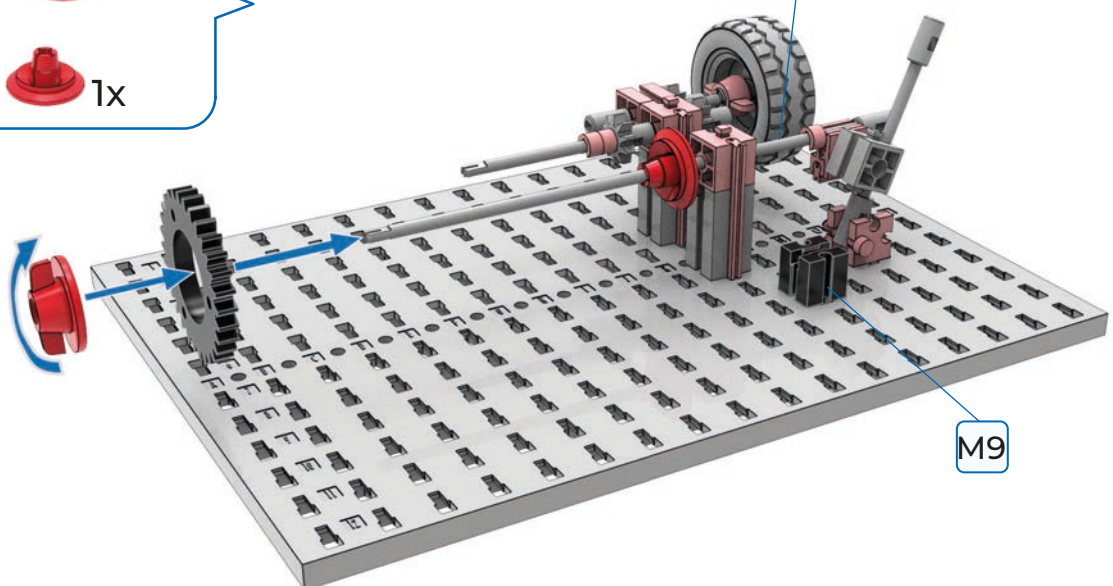
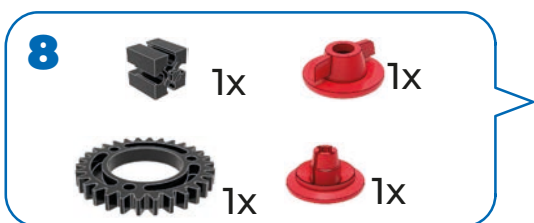
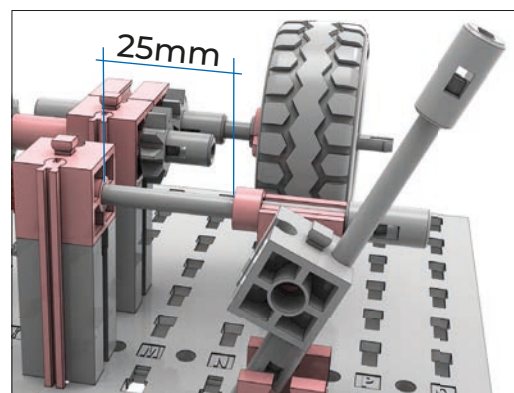
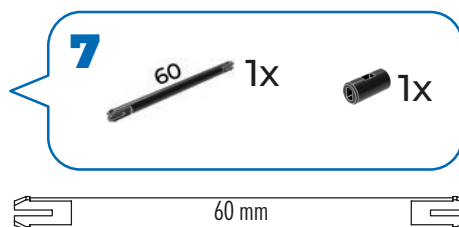
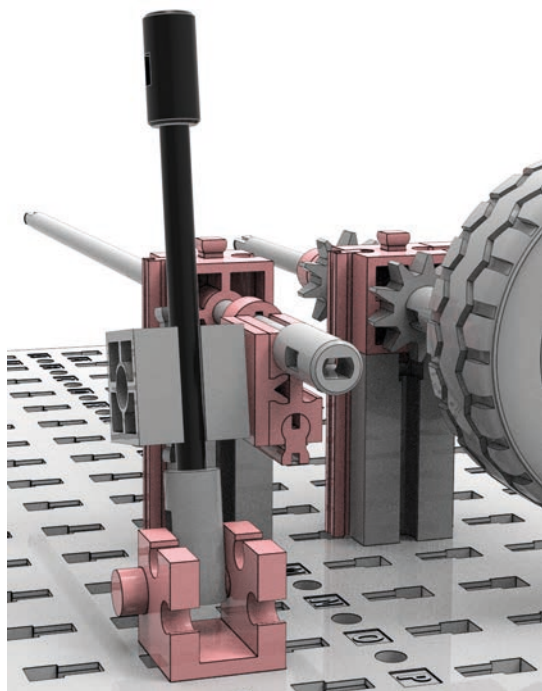
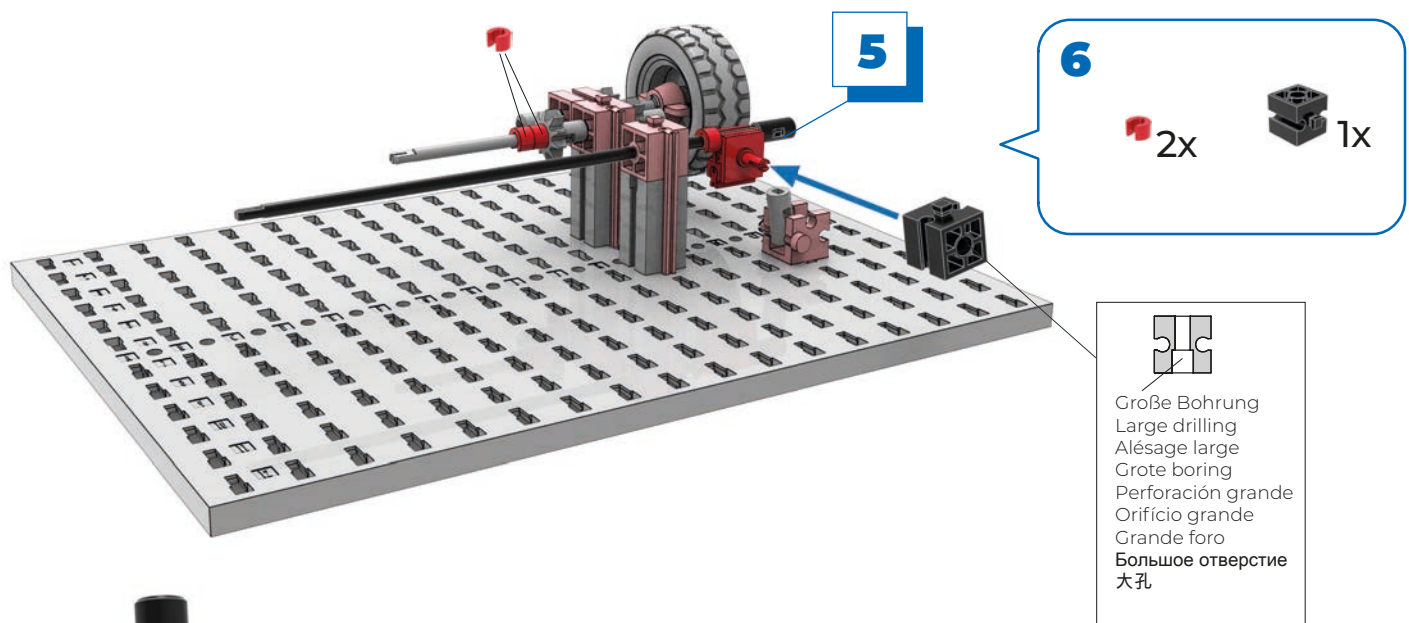


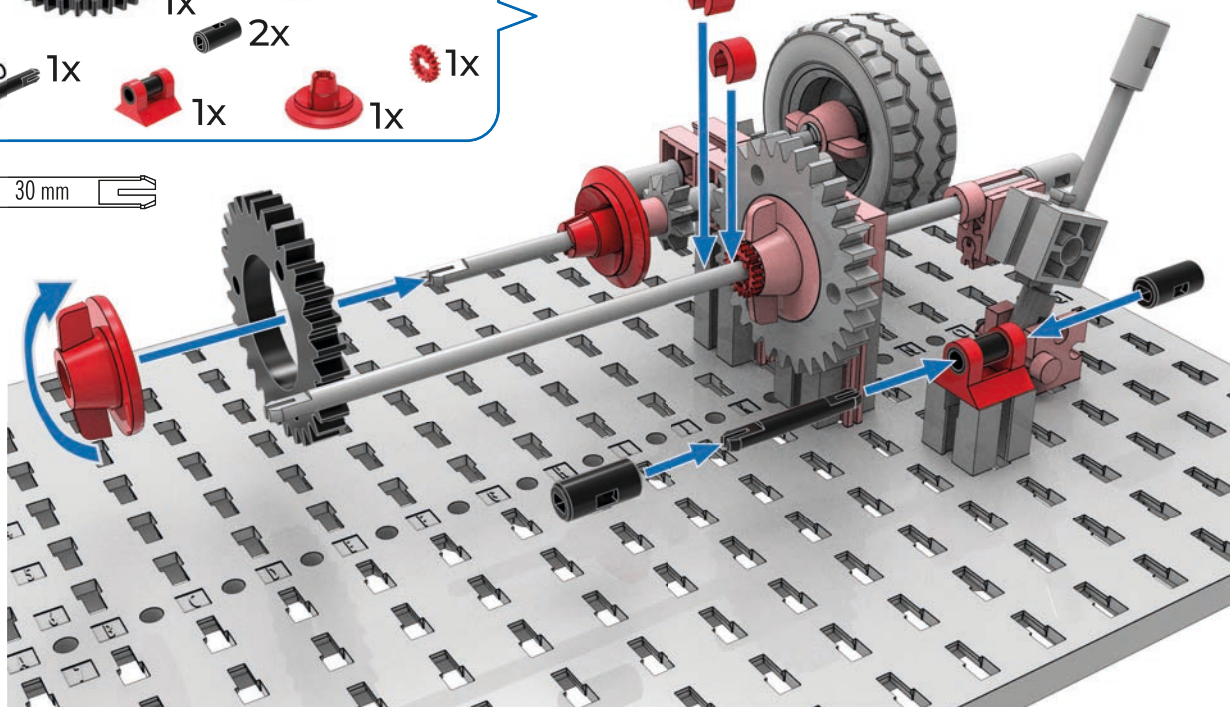
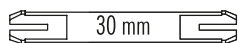
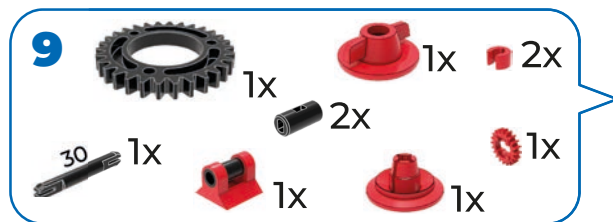


Schaltgetriebe - 2 Gang
Manual gearbox - 2 gear
Boîte de vitesses manuelle - 2 rapports
Handgeschakelde versnellingsbak - 2 versnellingen
Caja de cambios manual - 2 marchas
Caixa de velocidades manual - 2 velocidades
Cambio manuale - 2 marce
Механическая коробка передач - 2 передача
手动变速箱--2档

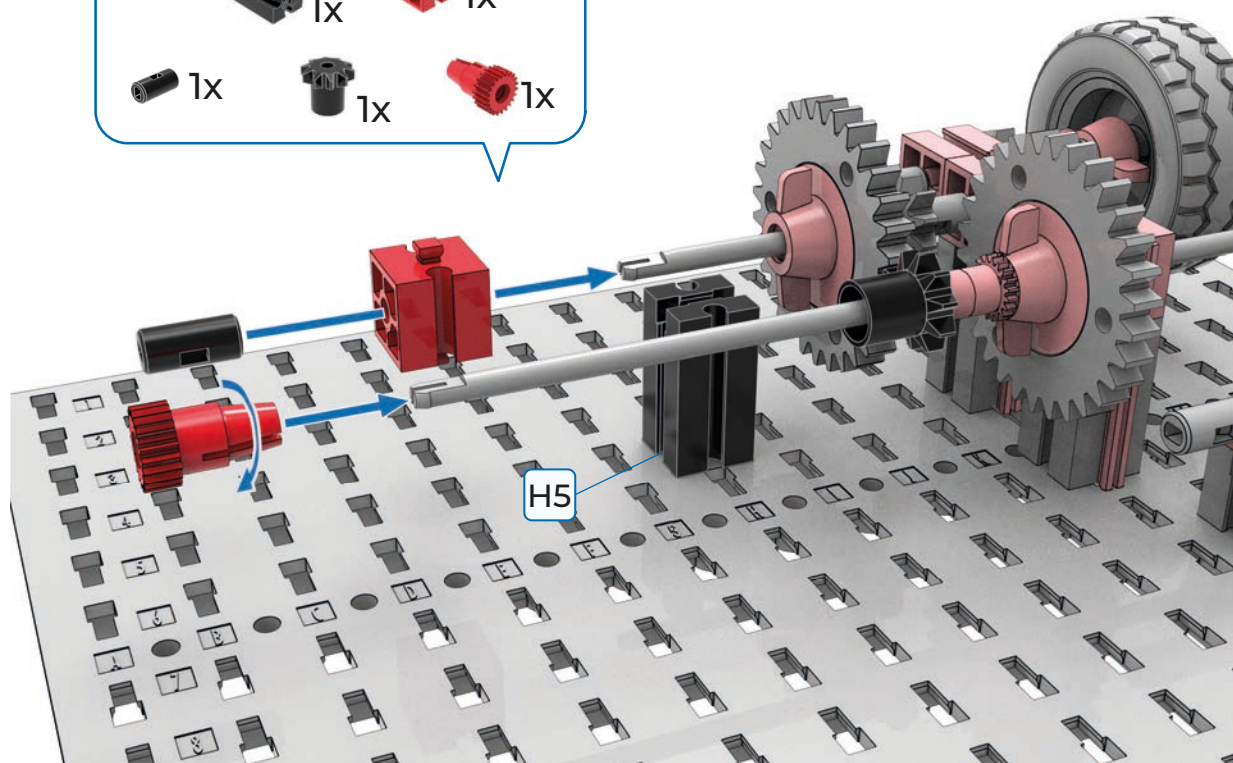
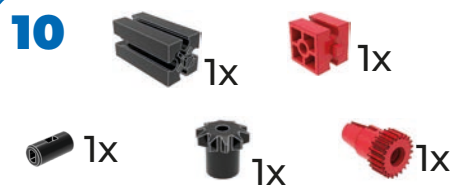


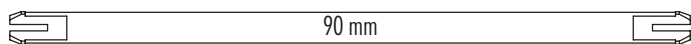




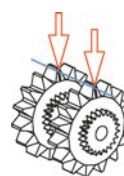
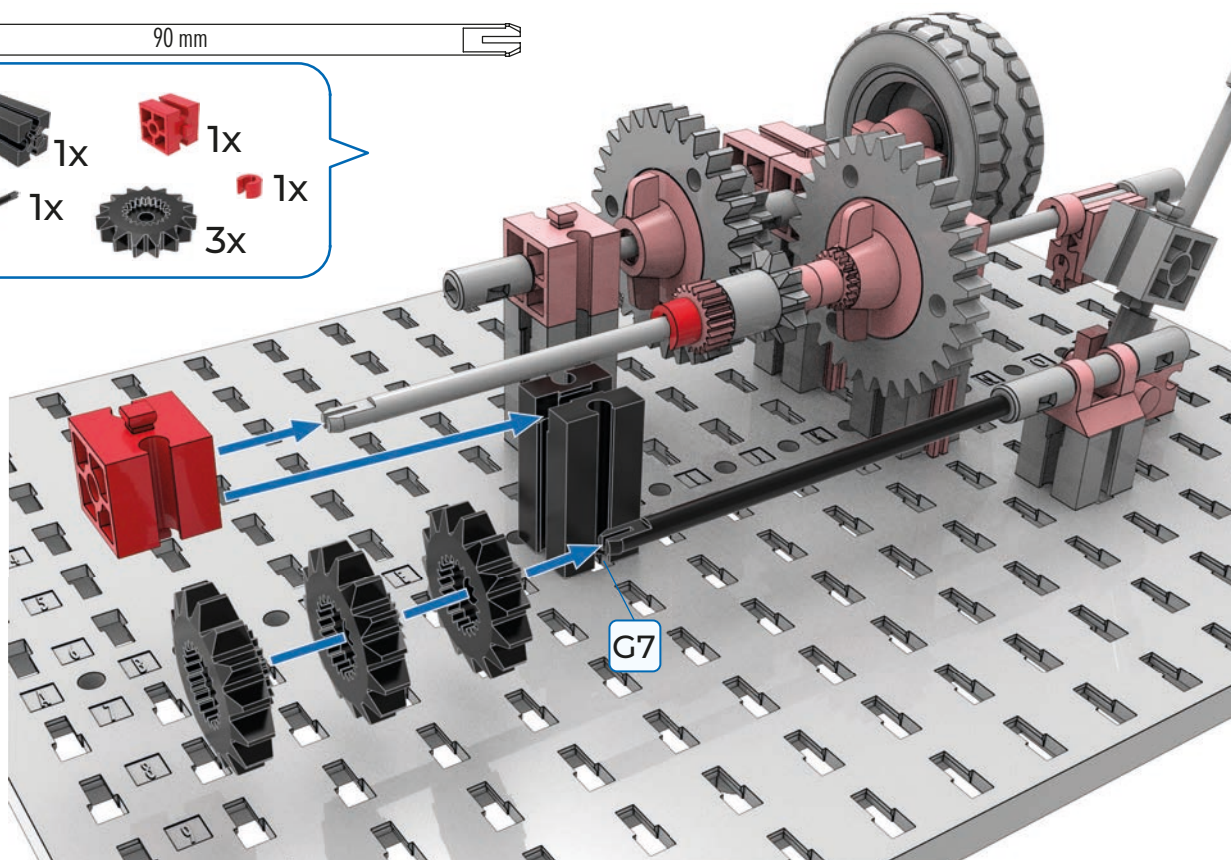
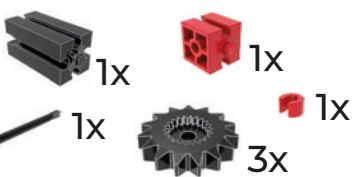


- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧



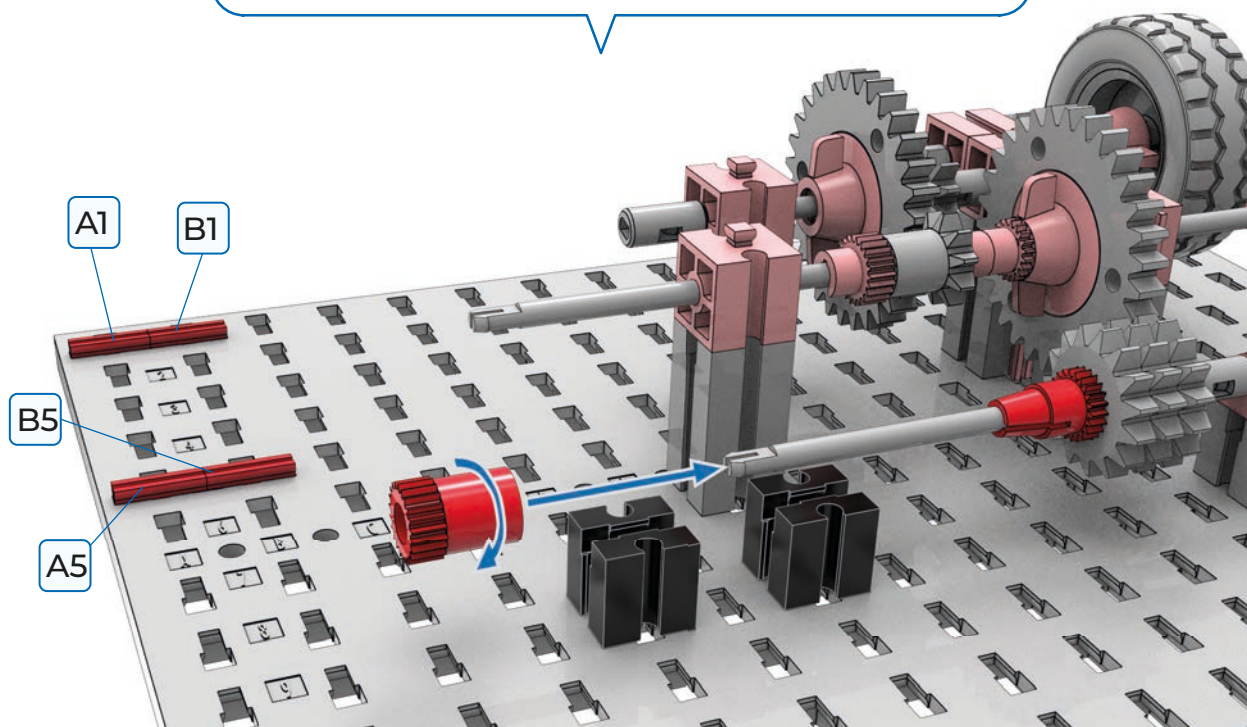


11

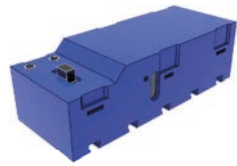


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 Observar a marcação!
 Osservare il contrassegno!
 Учитывайте маркировку
 注意标记!

12



13



1x



1x



1x



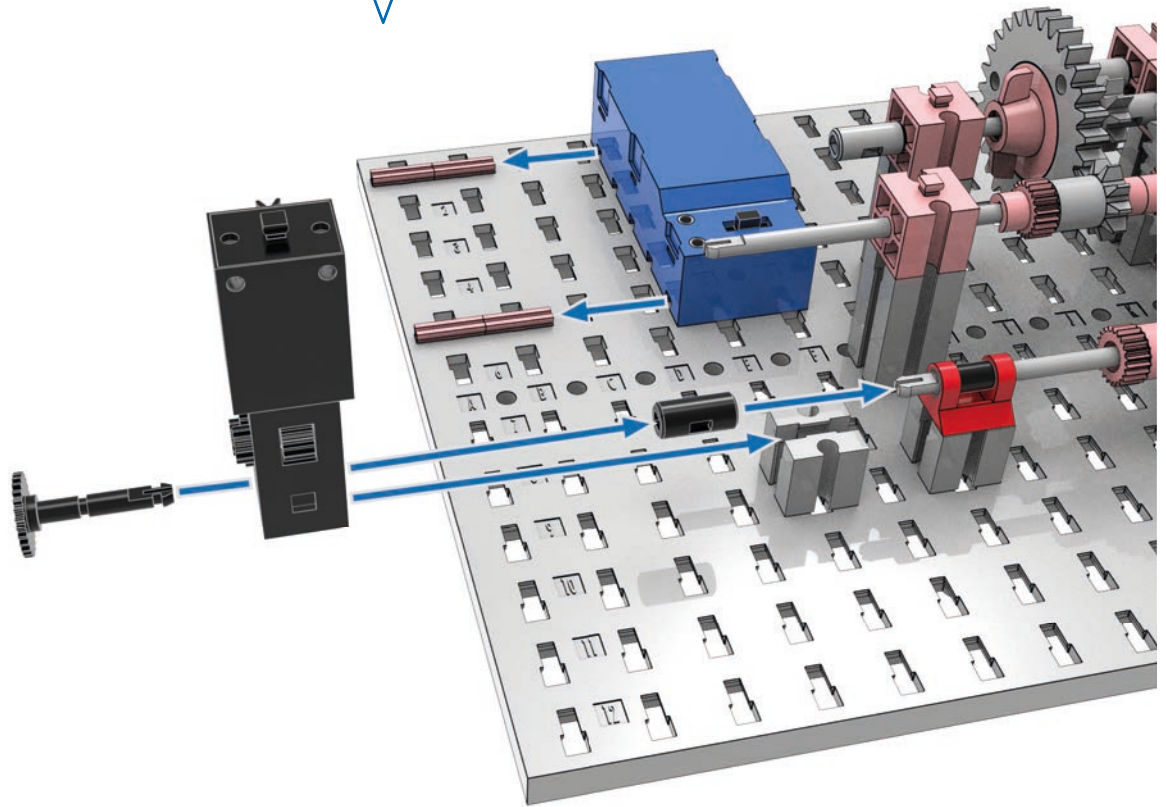
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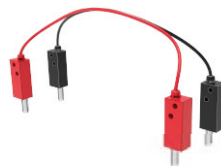
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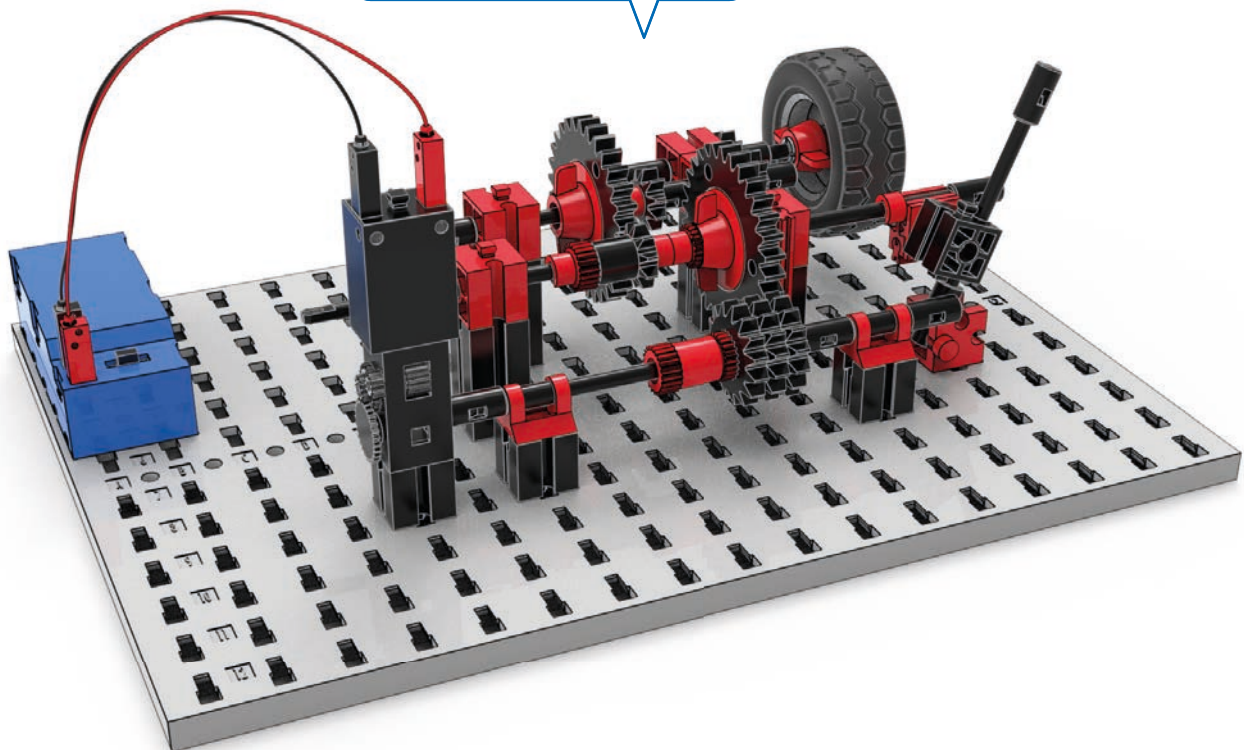
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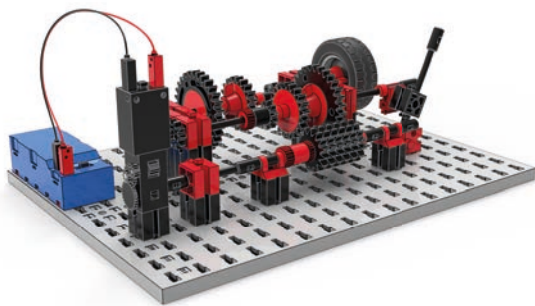


14

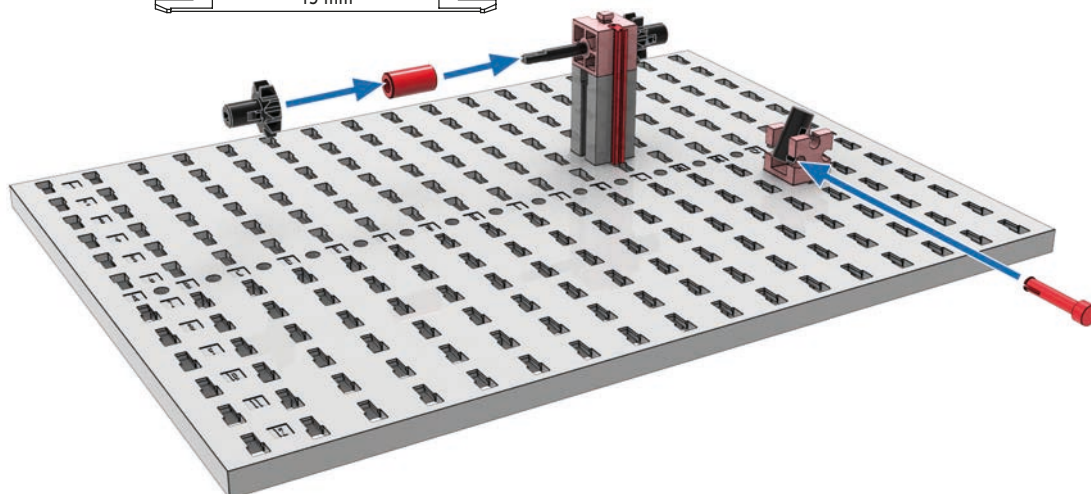
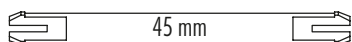
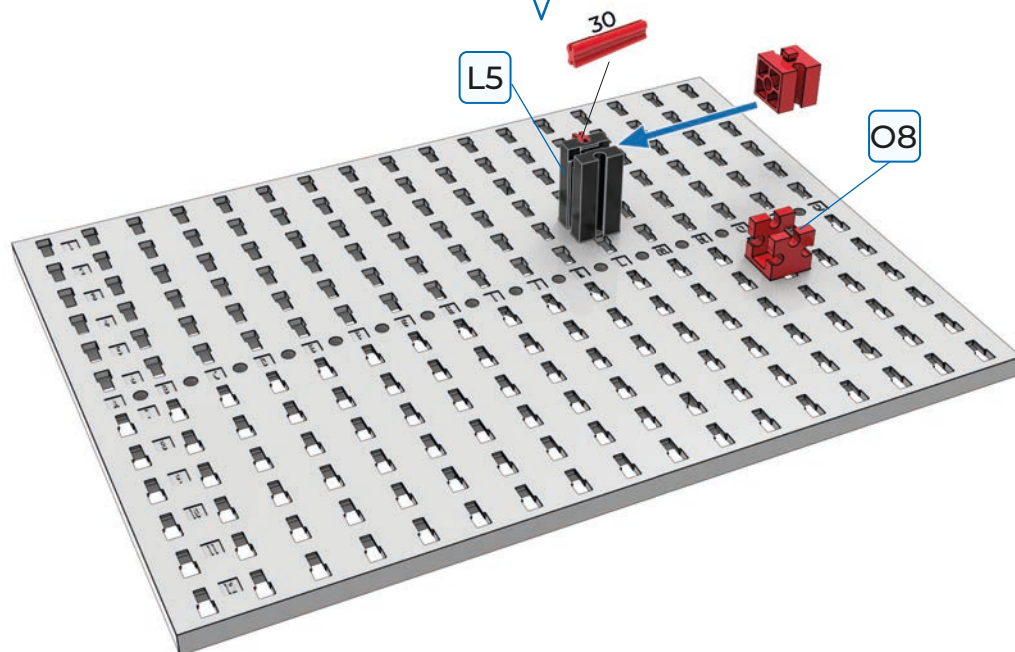
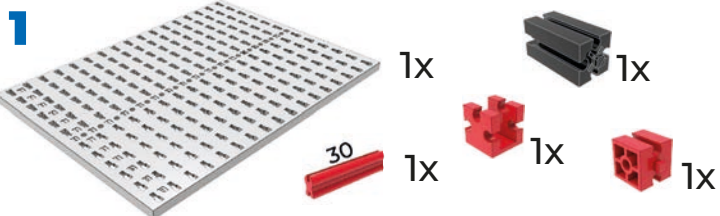


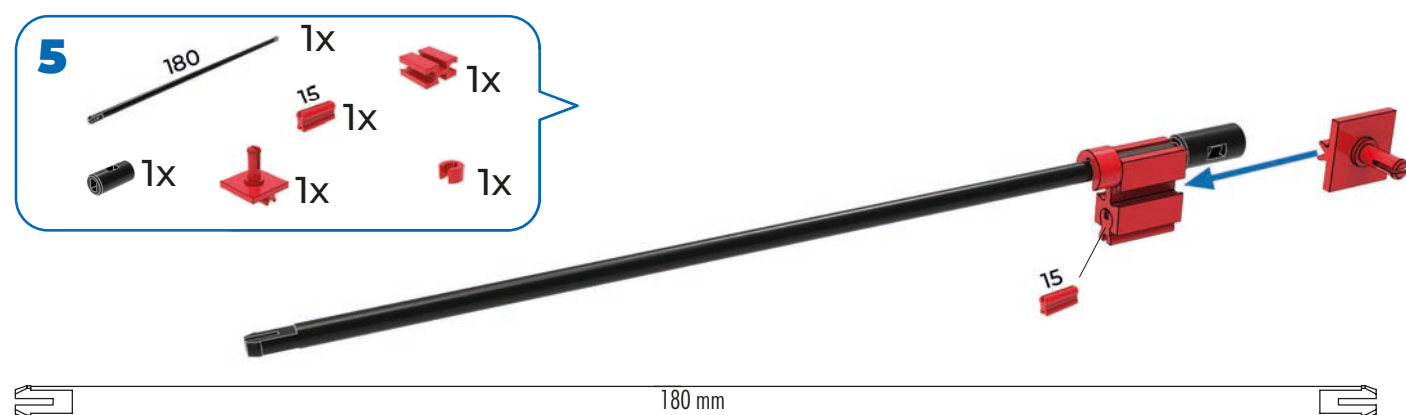
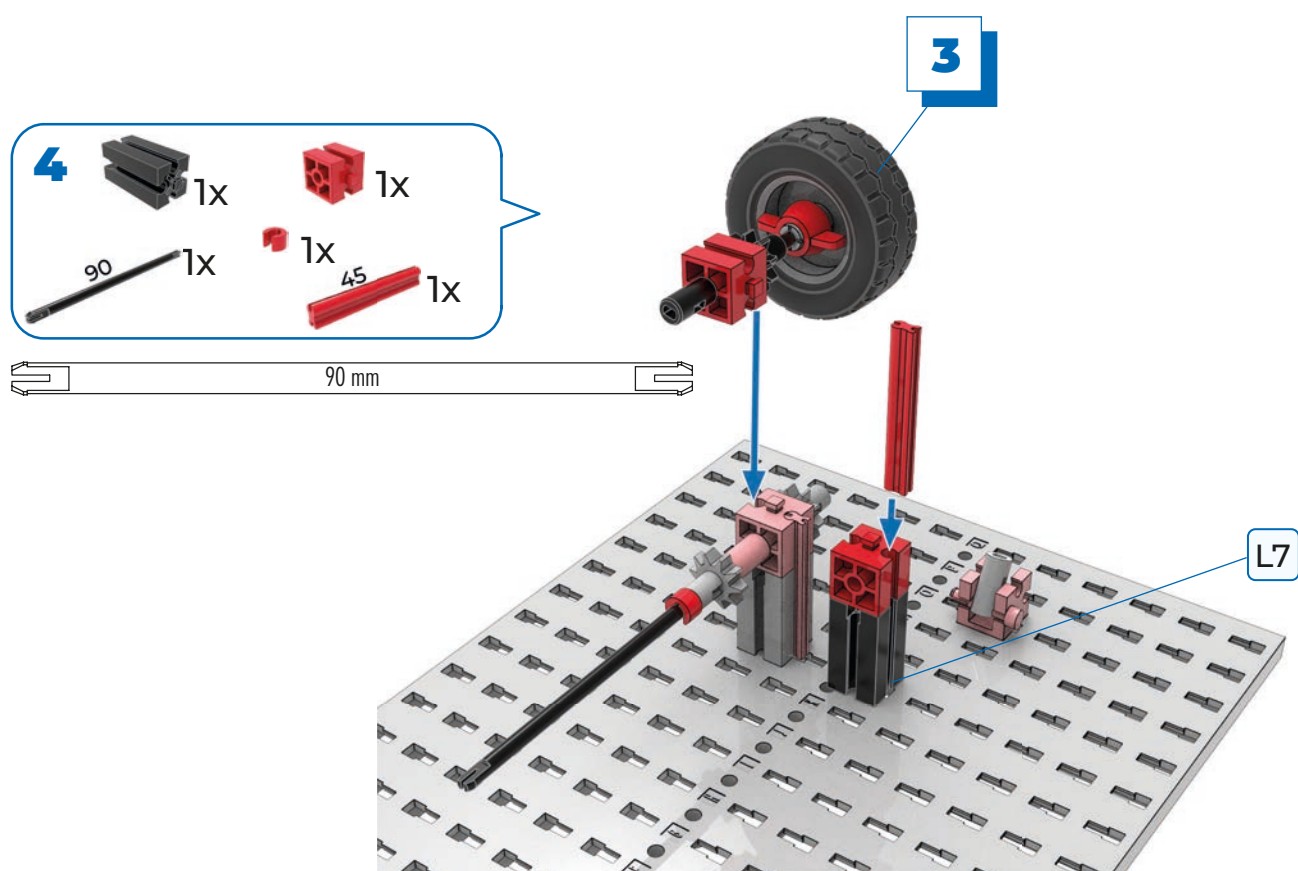
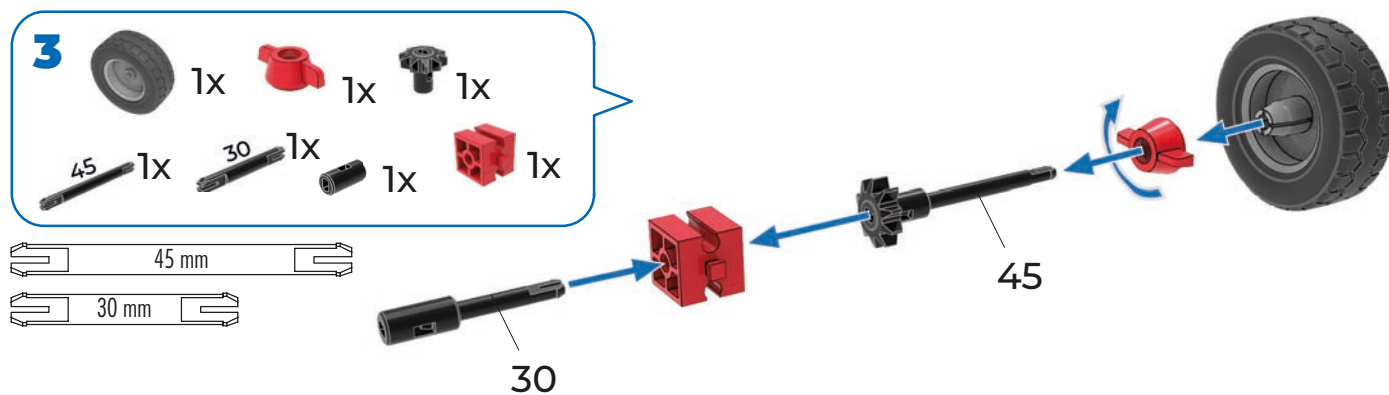
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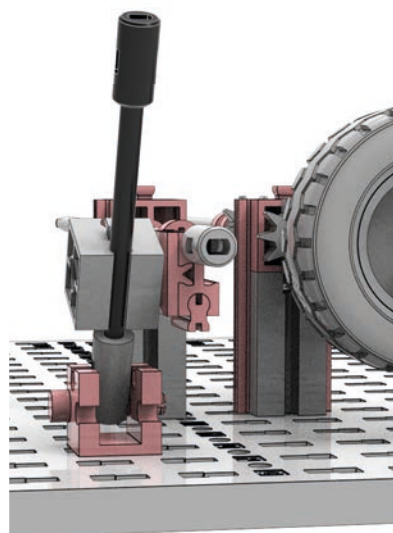
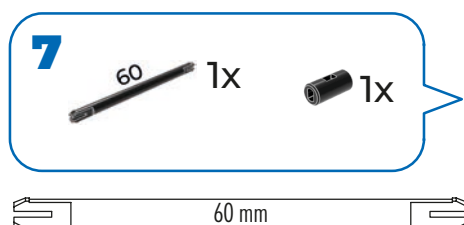
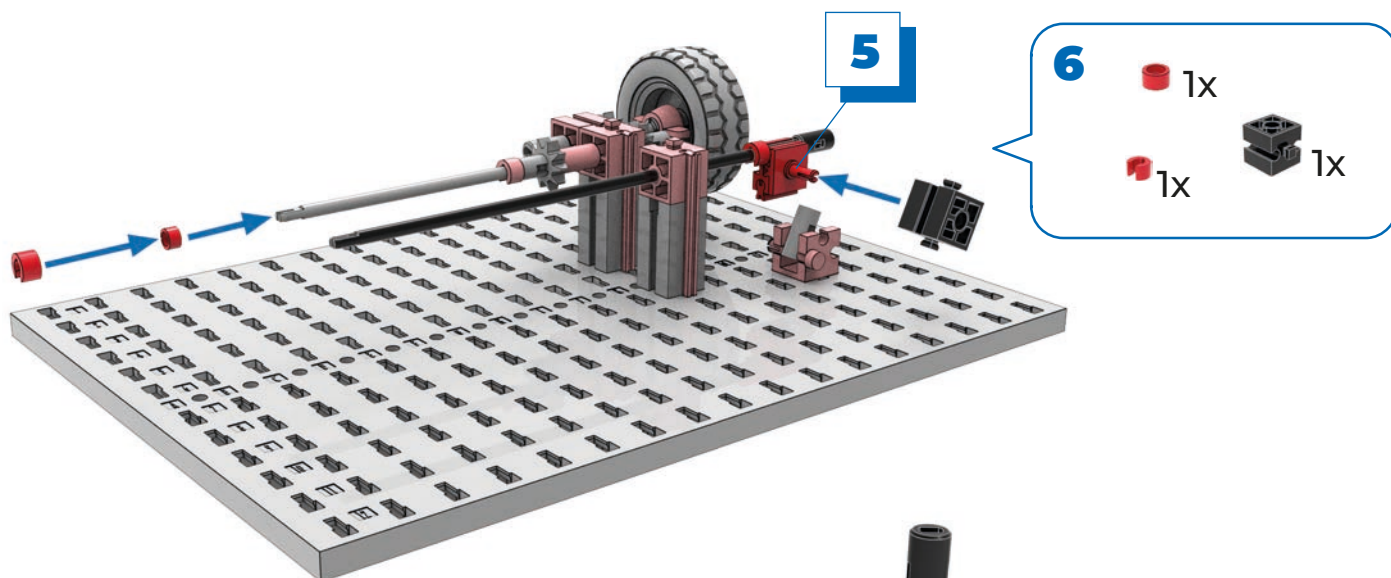




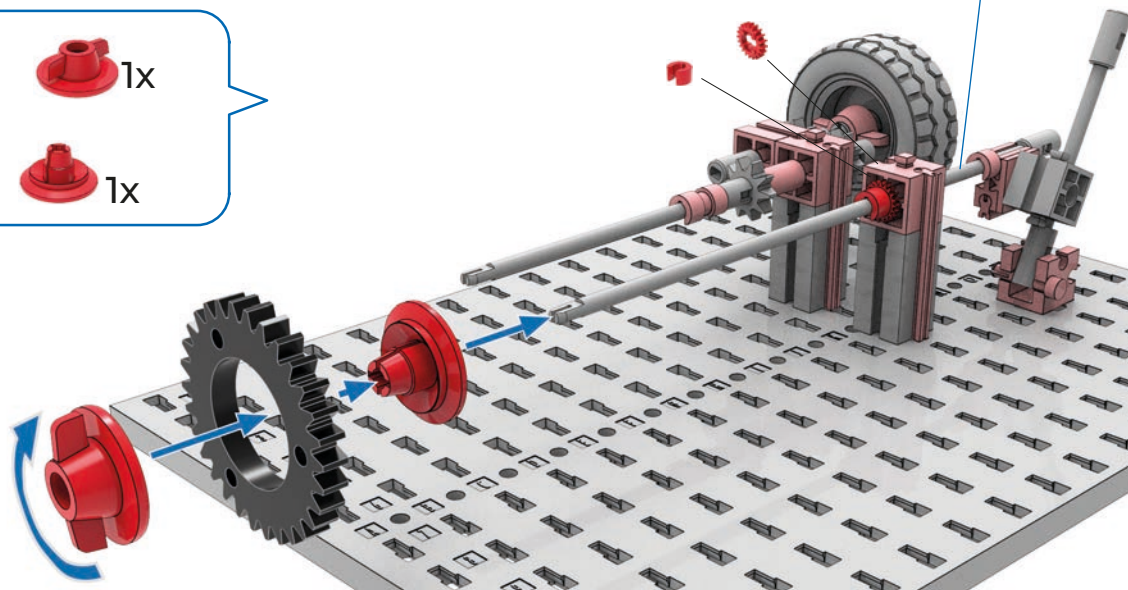
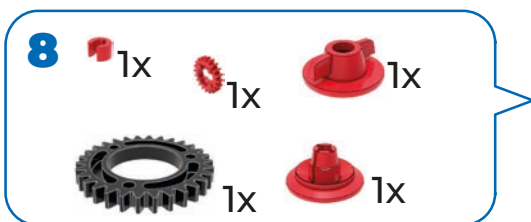
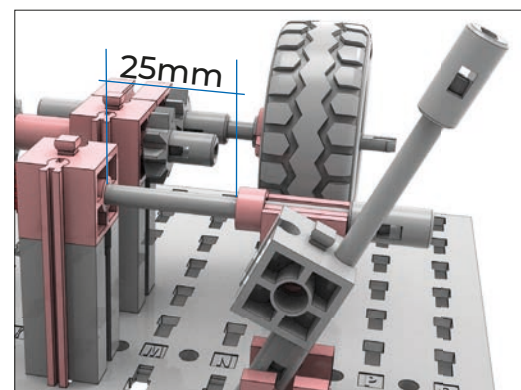
Schaltgetriebe - 3 Gang
Manual gearbox - 3 gear
Boîte de vitesses manuelle - 3 rapports
Handgeschakelde versnellingsbak - 3 versnellingen
Caja de cambios manual - 3 marchas
Caixa de velocidades manual - 3 velocidades
Cambio manuale - 3 marce
Механическая коробка передач - 3 передача
手动变速箱--3档

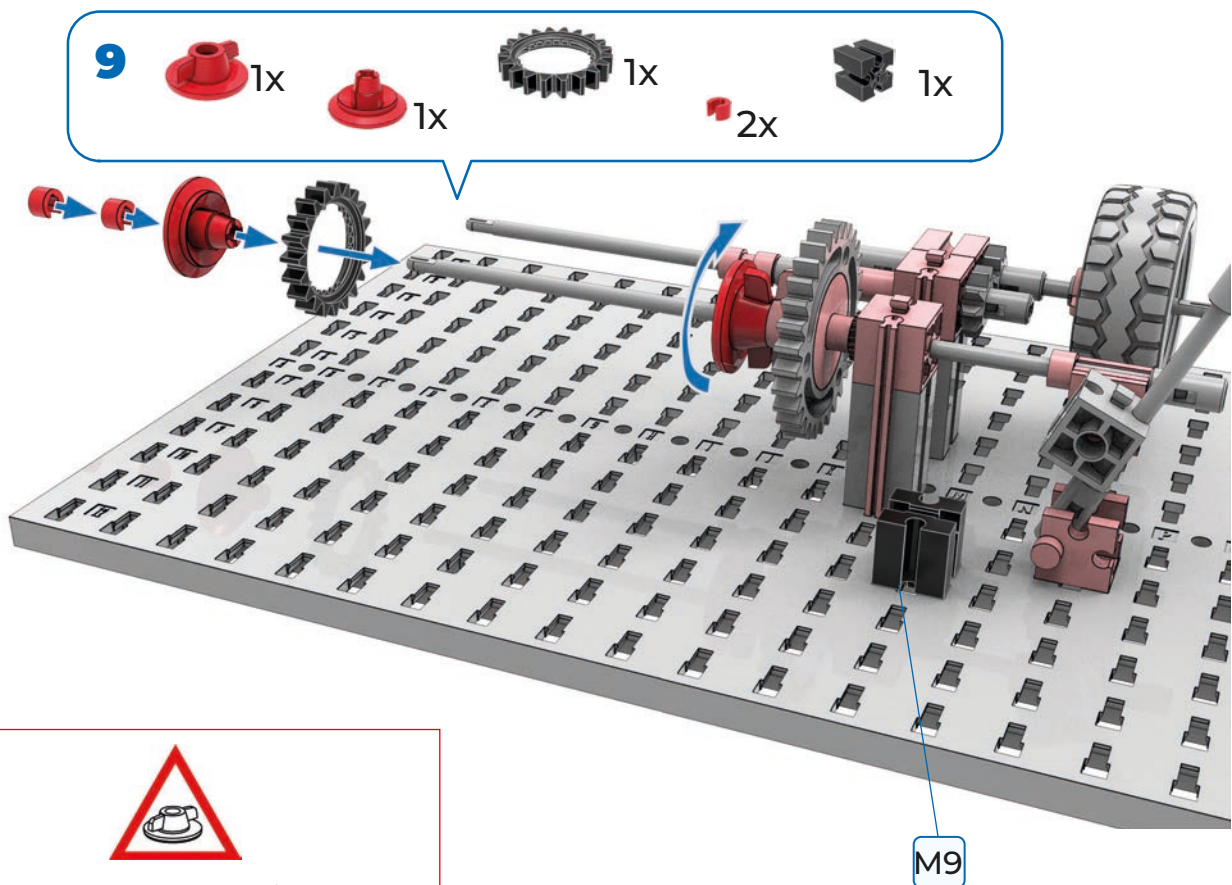




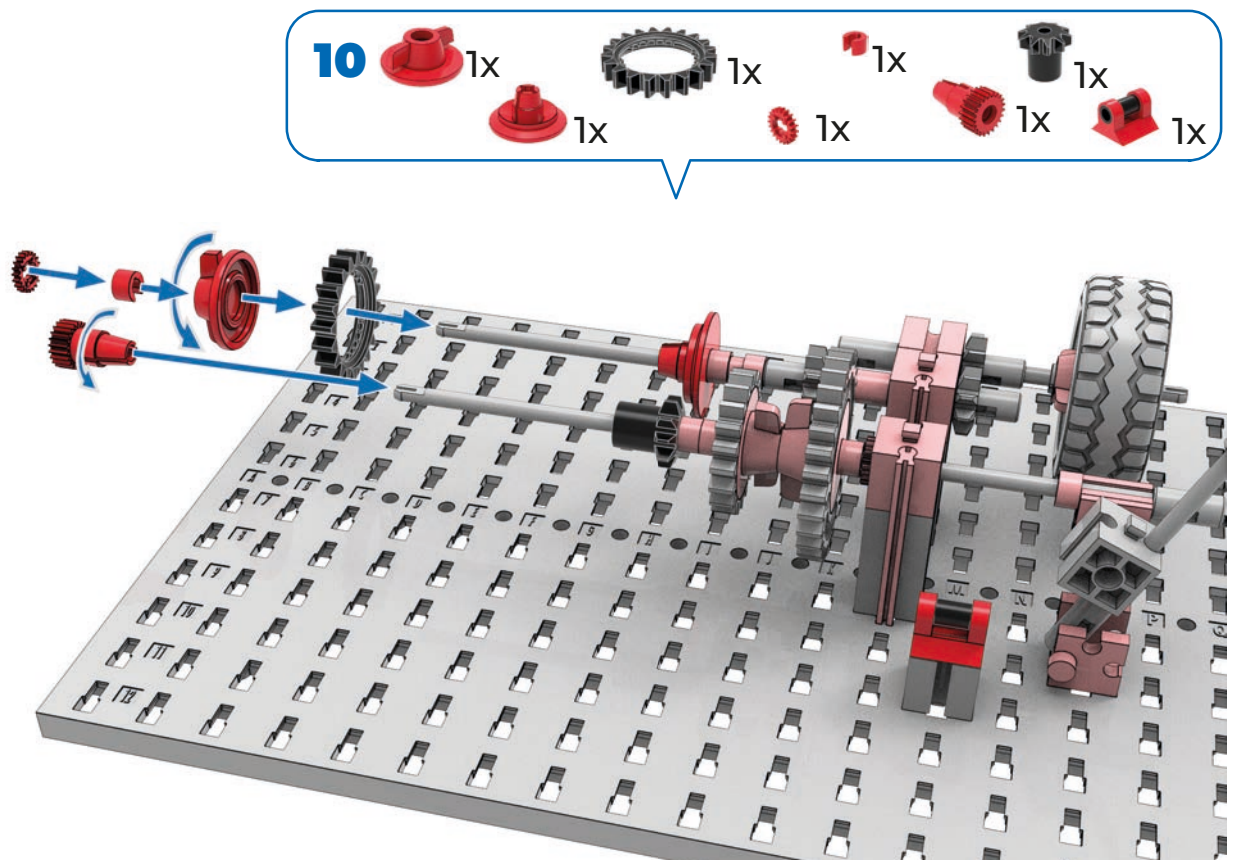


- Nabenmutter sehr fest anziehen
- Fasten the hub nut very tightly
- Serrer l'écrou du moyeu très serré
- Draai de naafmoer goed vast
- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧

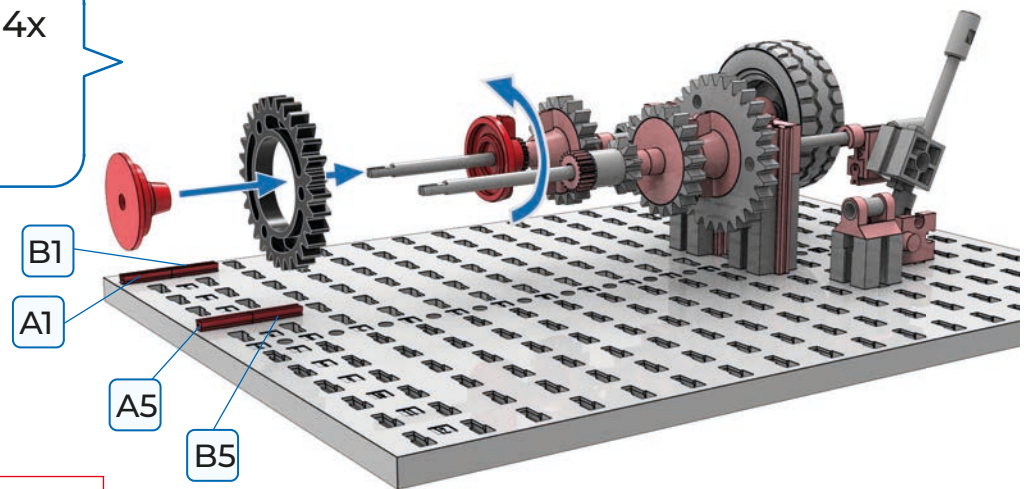
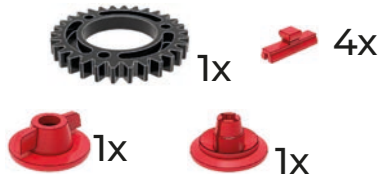




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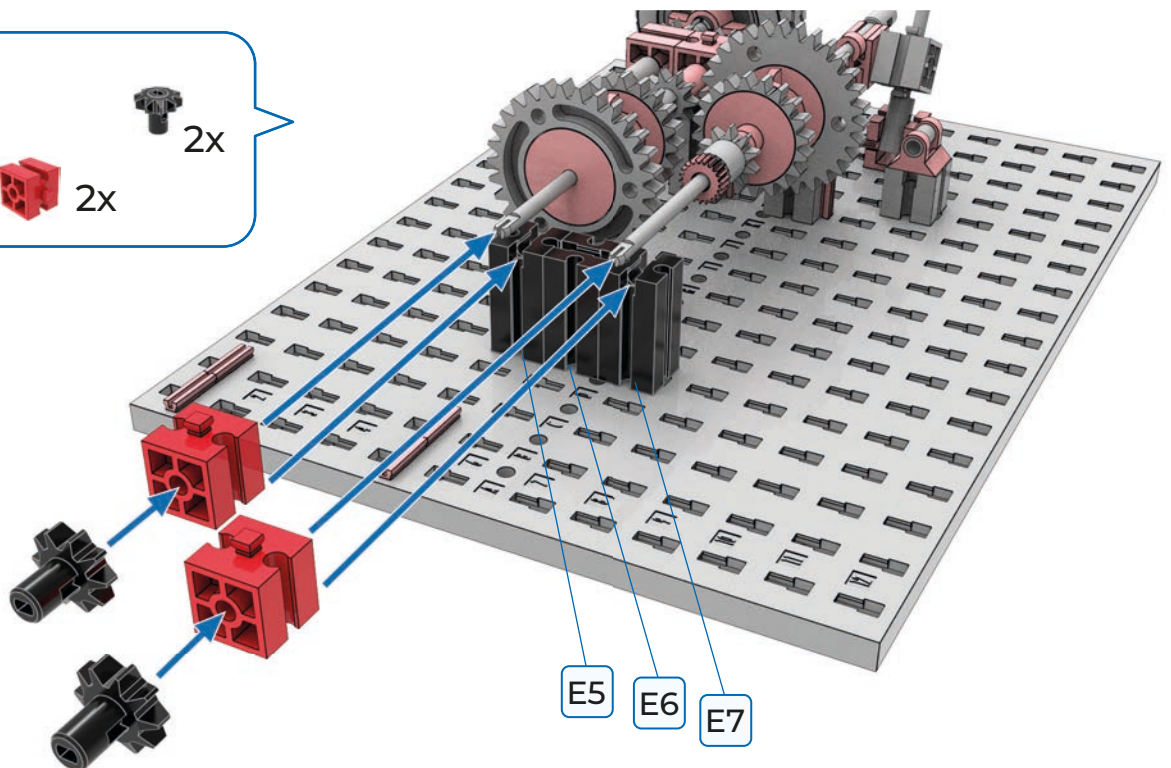
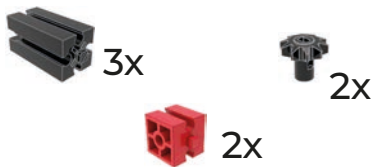


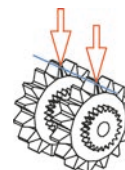
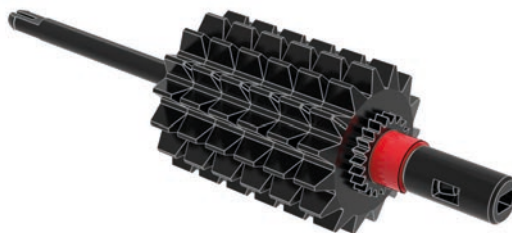
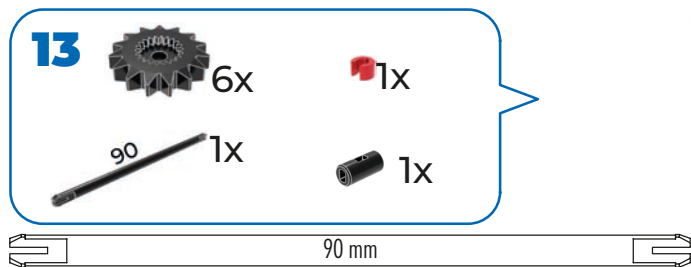
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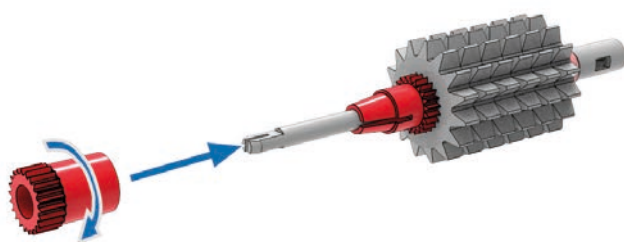
- Nabenmutter sehr fest anziehen
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- 拧紧

12

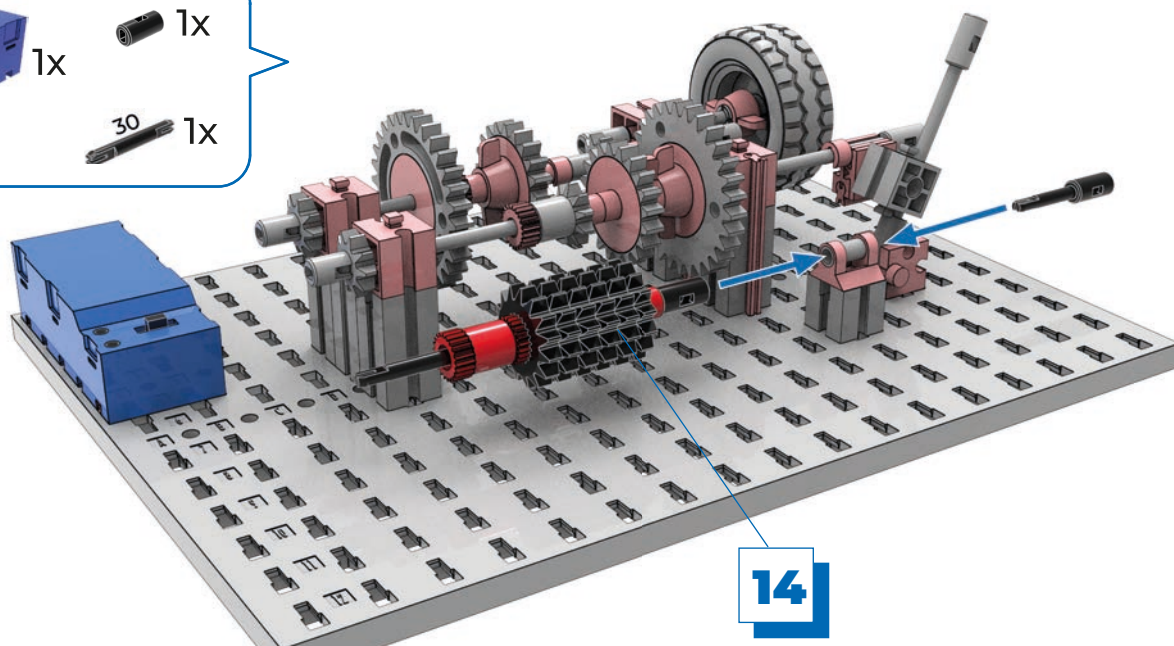
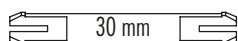
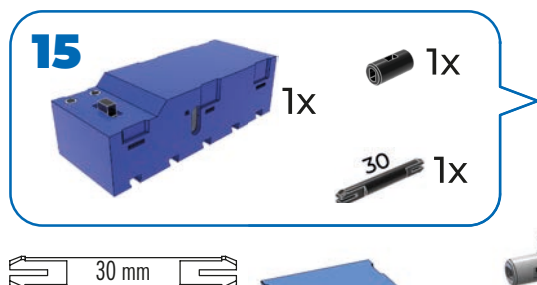




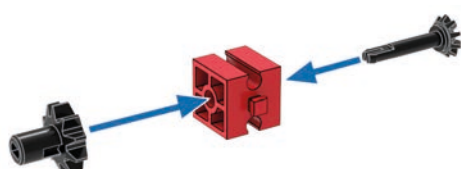
Markierung beachten!
 Note marking!
 Tenir compte des repères!
 Let op de markinging!
 ¡Tener en cuenta el marcaje!
 Observar a marcação!
 Osservare il contrassegno!
 Учитывайте маркировку
 注意标记！



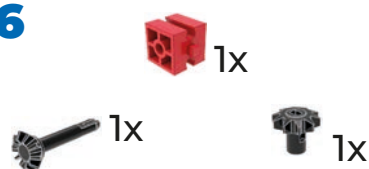
14



14

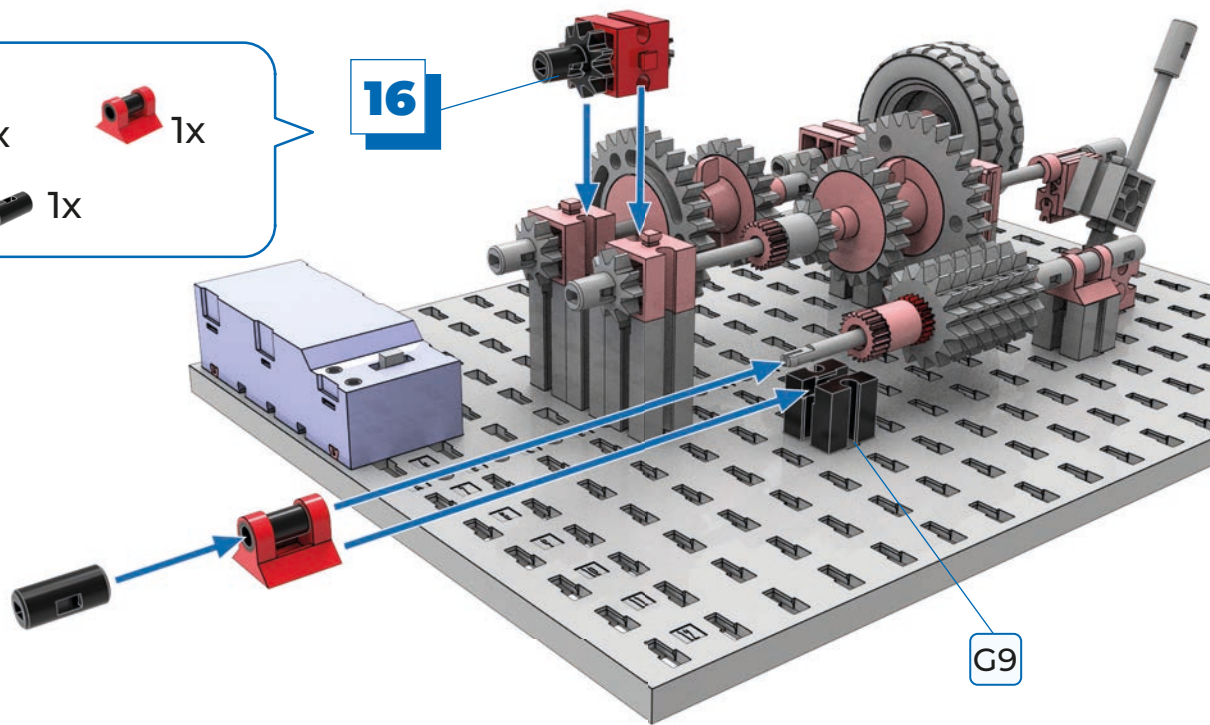


16



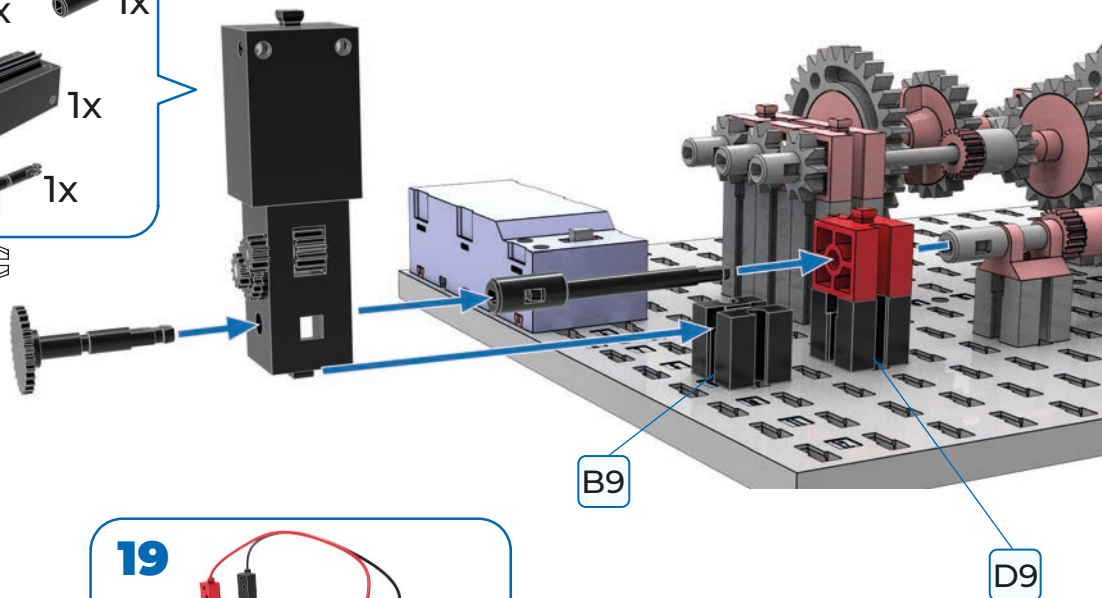
- 17**
- 1x
 - 1x
 - 1x

16

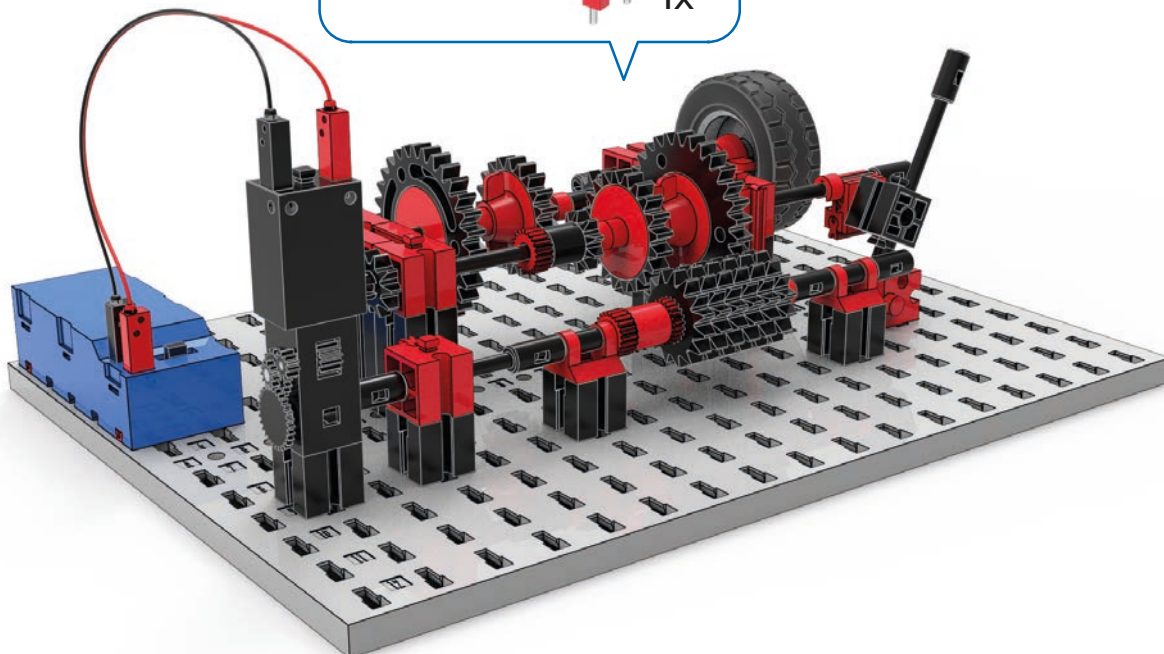
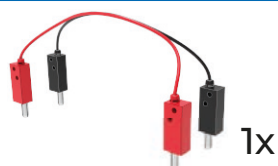


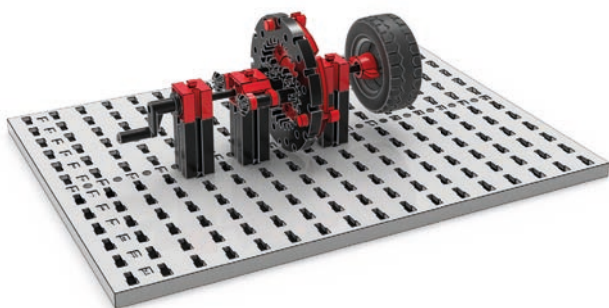
- 18**
- 2x
 - 1x
 - 1x
 - 1x
 - 1x
 - 1x
 - 45

45 mm



19





Planetengetriebe mit festem Planetenträger

Planetary gear with fixed planet carrier

Engrenage planétaire avec porte-satellites fixe

Planetaire tandwielkast met vaste planetdrager

Engranaje planetario con portasatélites fijo

Equipamento planetário com suporte planetário fixo

Ingranaggio planetario con portapianeti fisso

Планетарный редуктор с фиксированным планетарным носителем

帶固定行星架的行星齿轮

1



1x

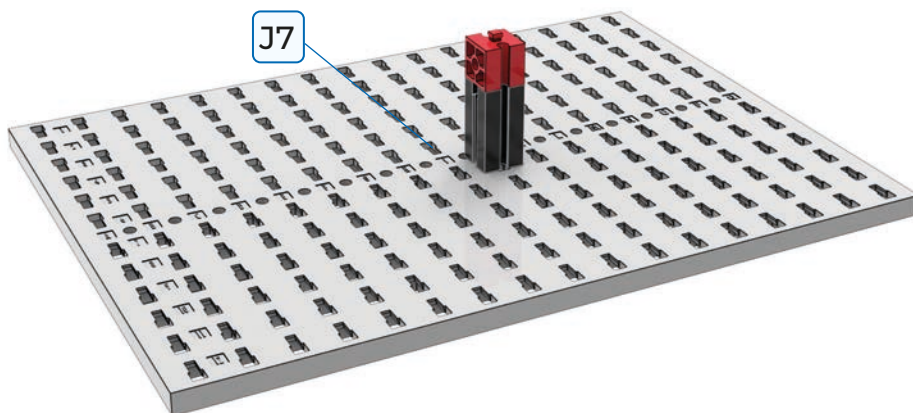


1x



1x

J7



2



1x



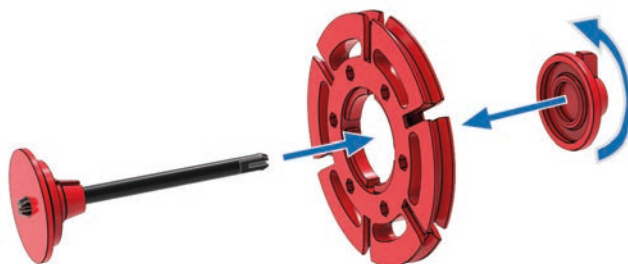
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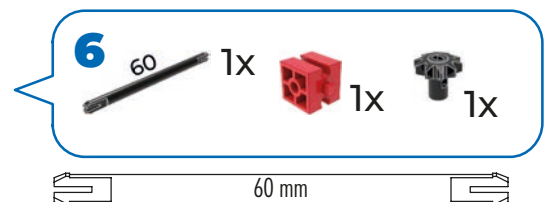
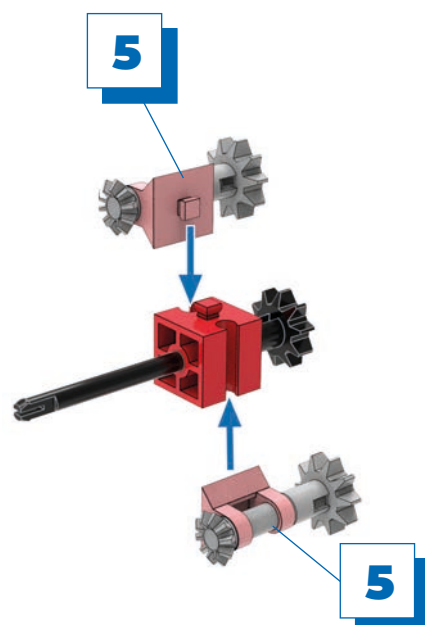
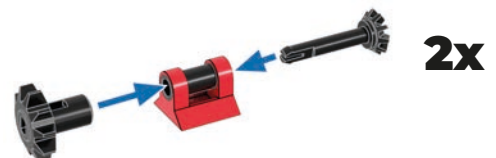
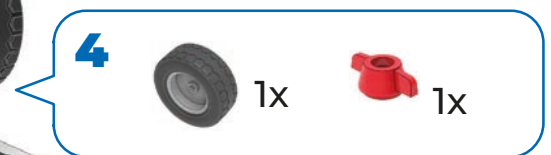
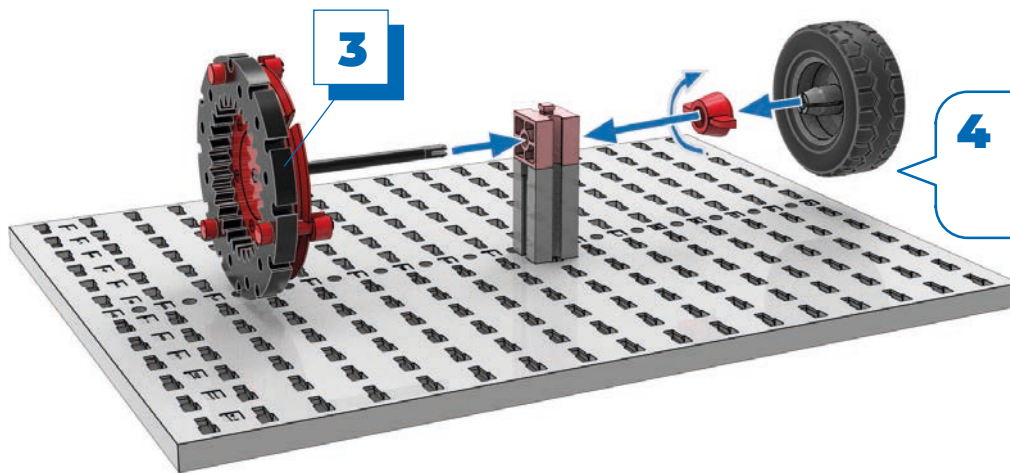
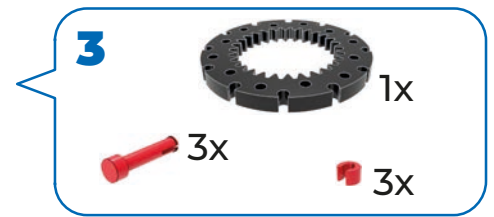
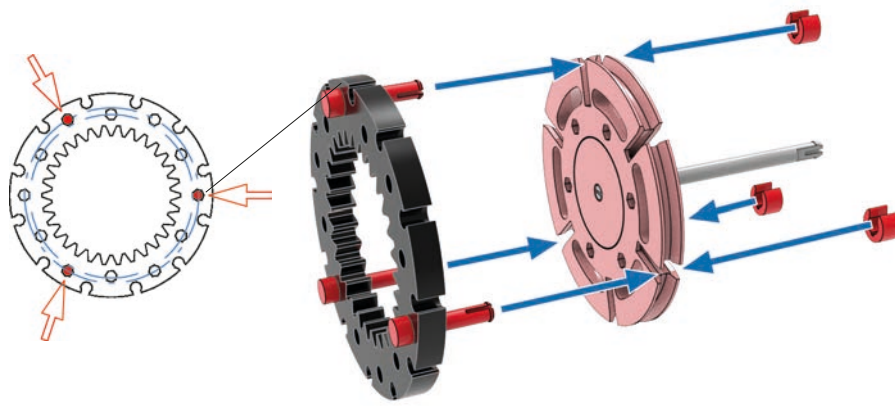
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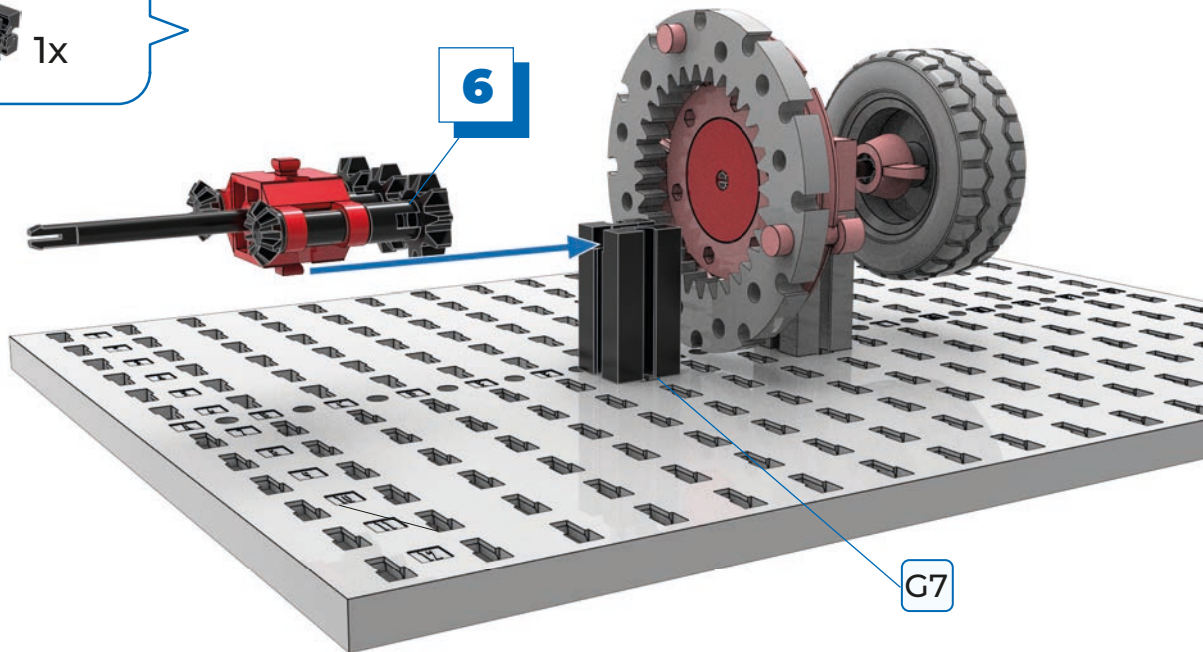
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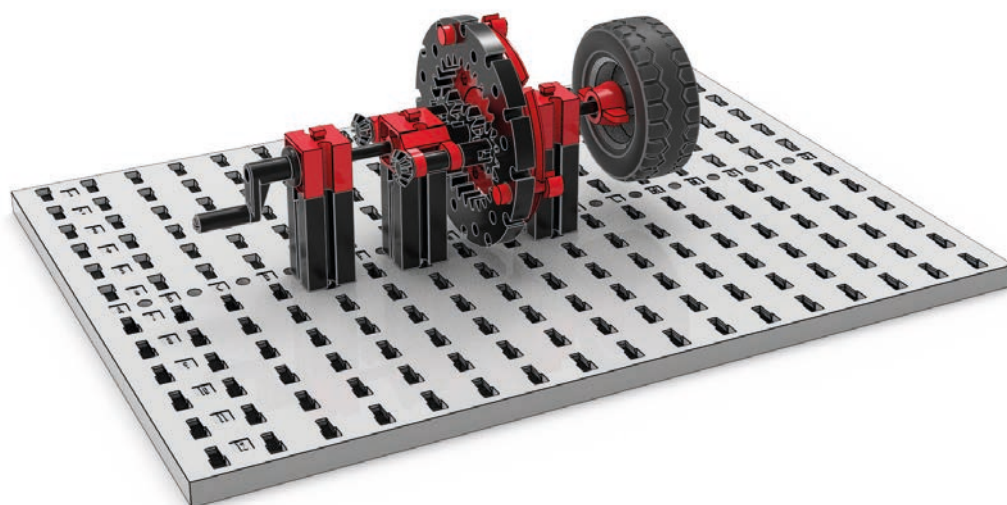
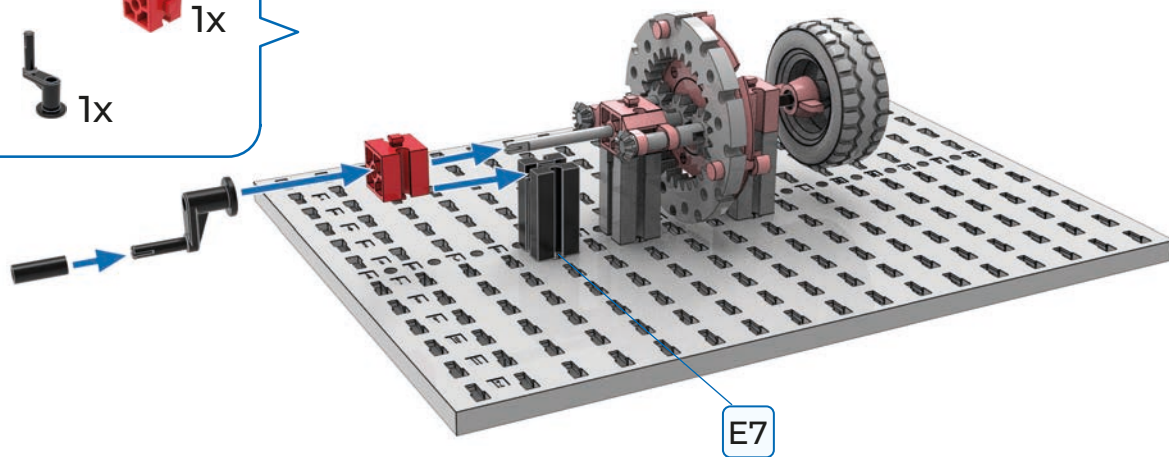
- Nabenmutter sehr fest anziehen
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- Затянуть гайки ступиц
- 拧紧

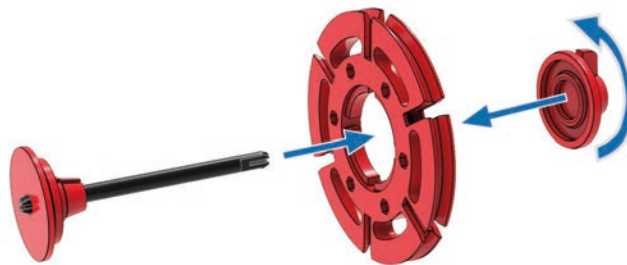
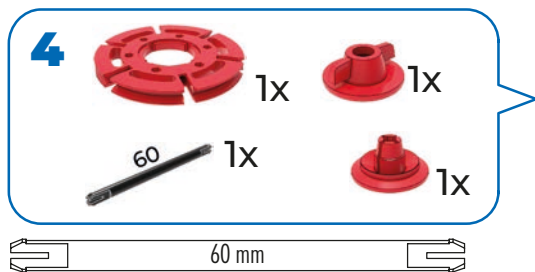


7  1x

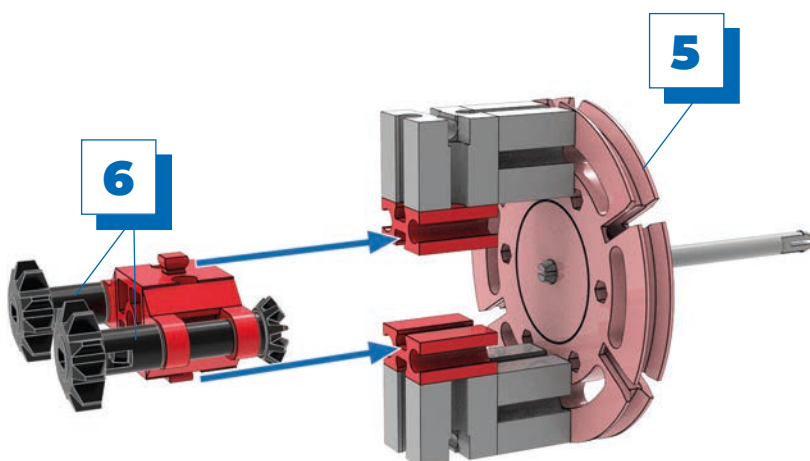
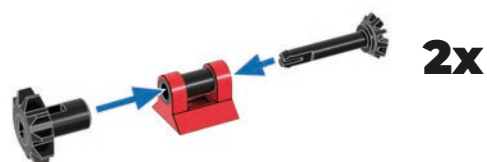
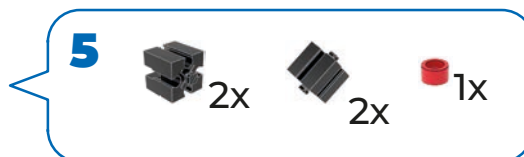
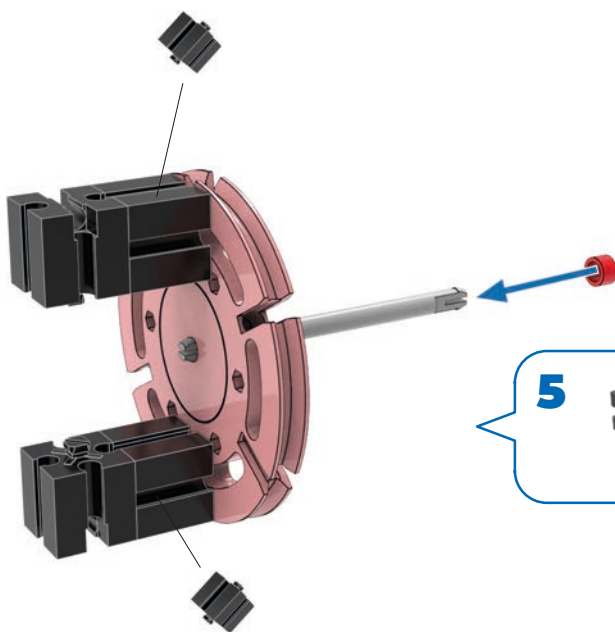


8  1x  1x
 1x  1x





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8

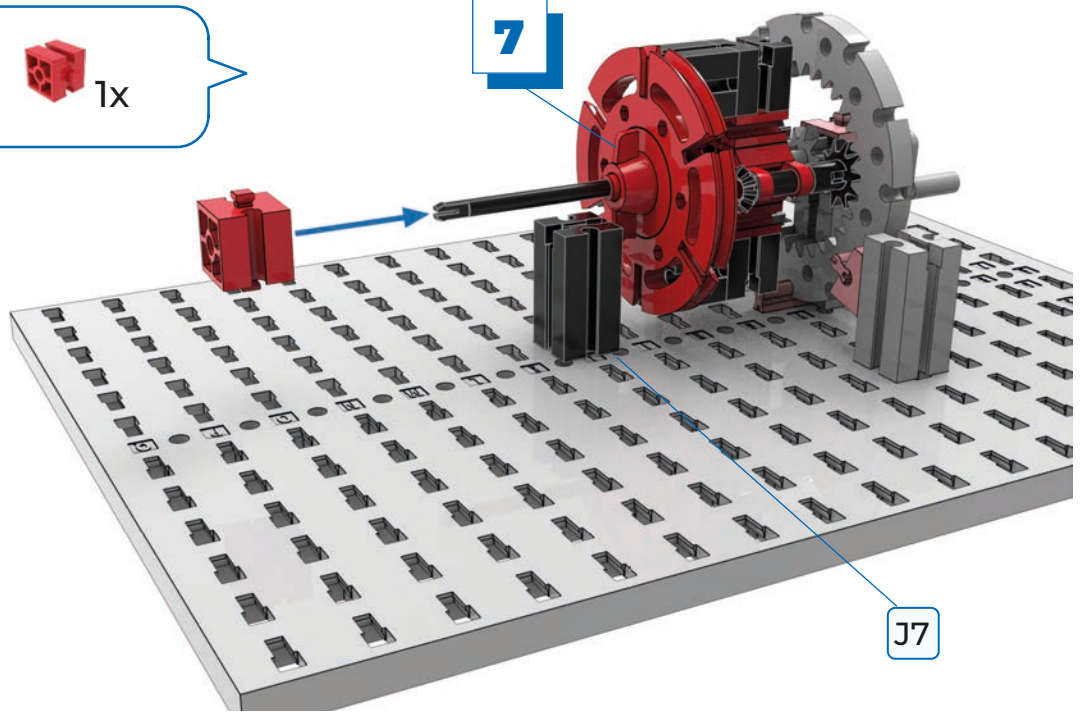


1x



1x

7



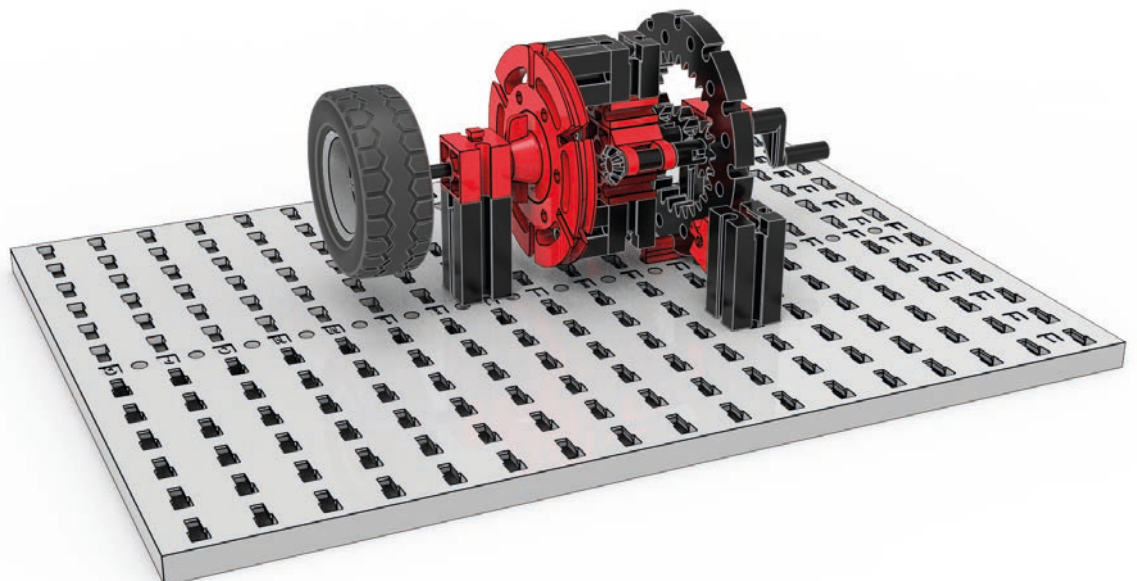
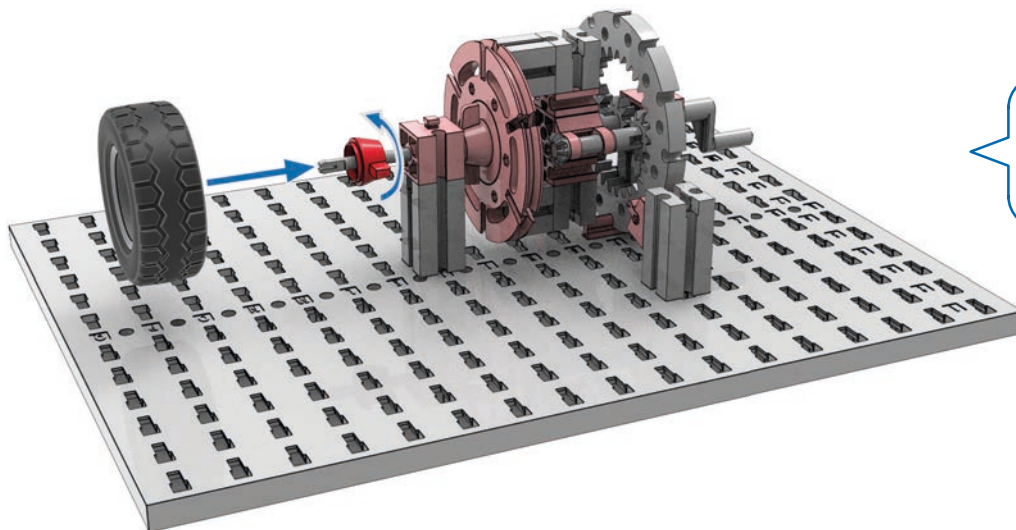
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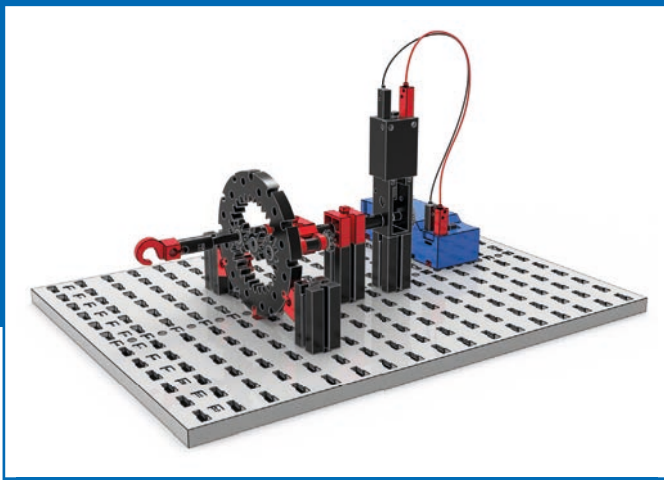


1x

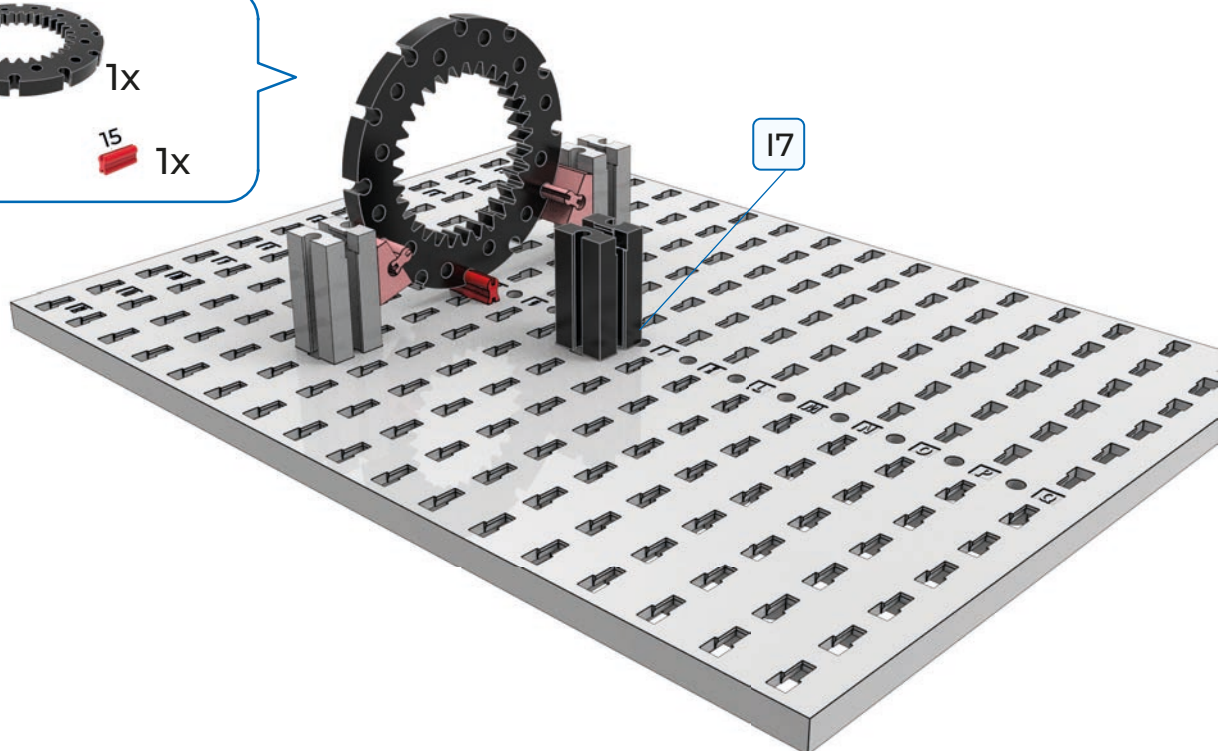
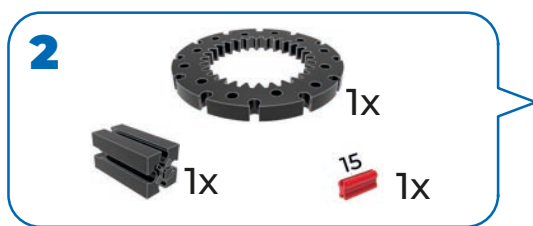
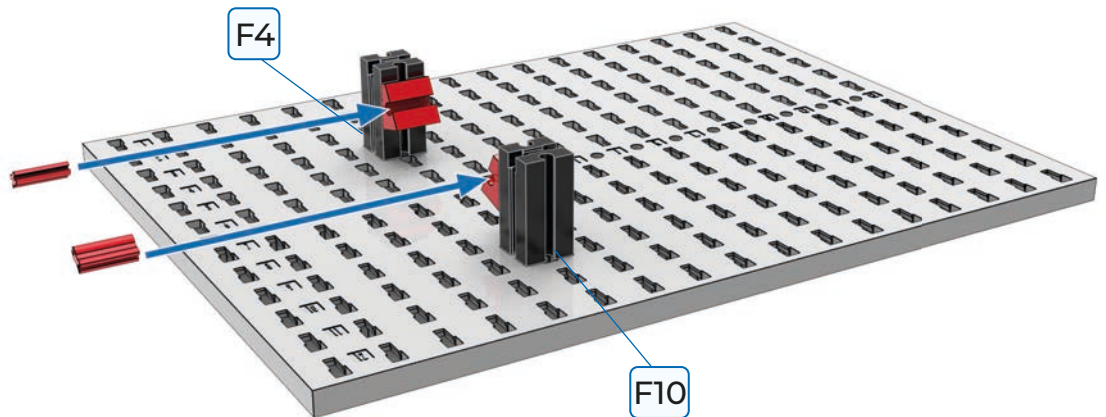
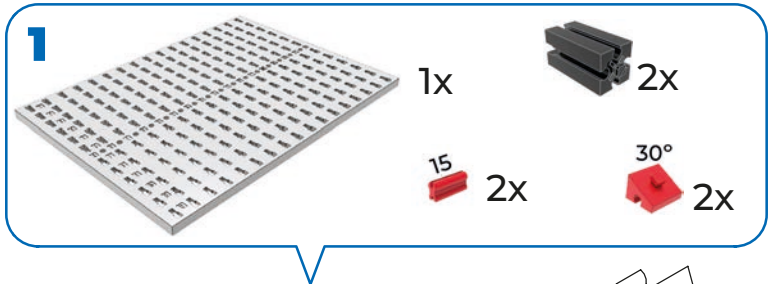


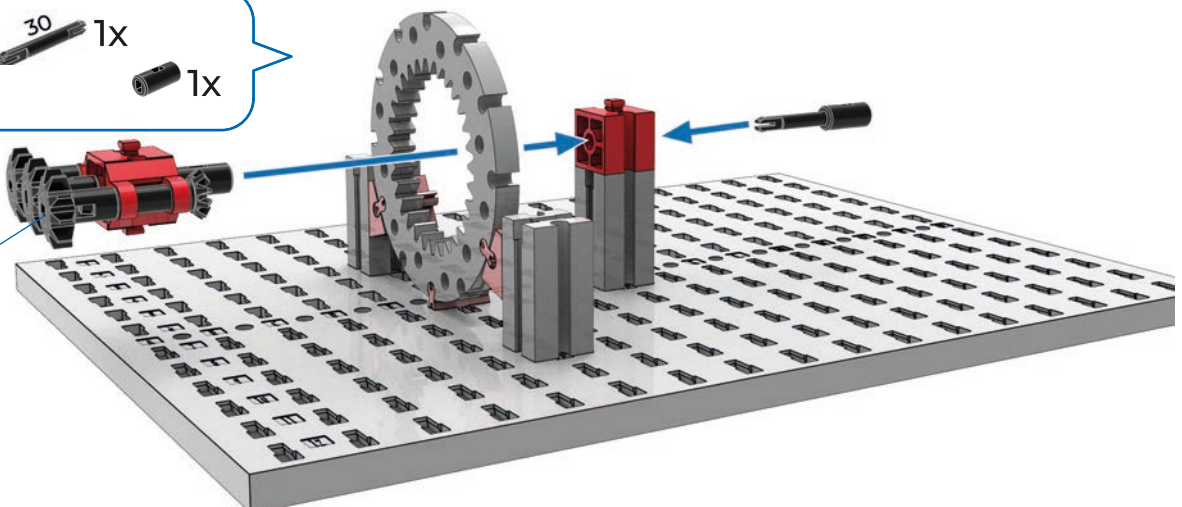
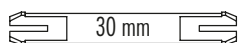
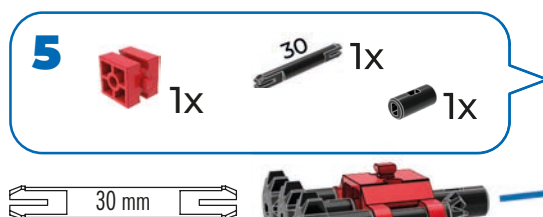
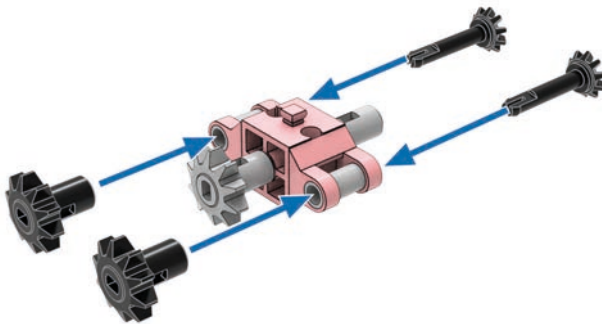
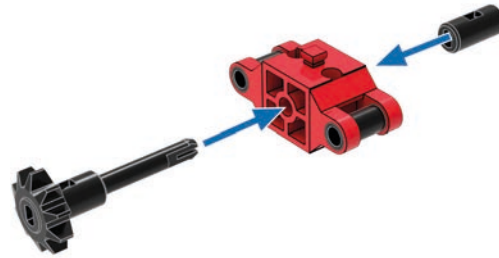
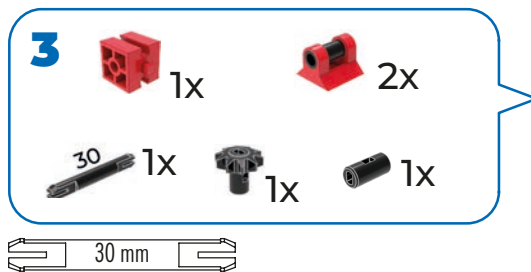
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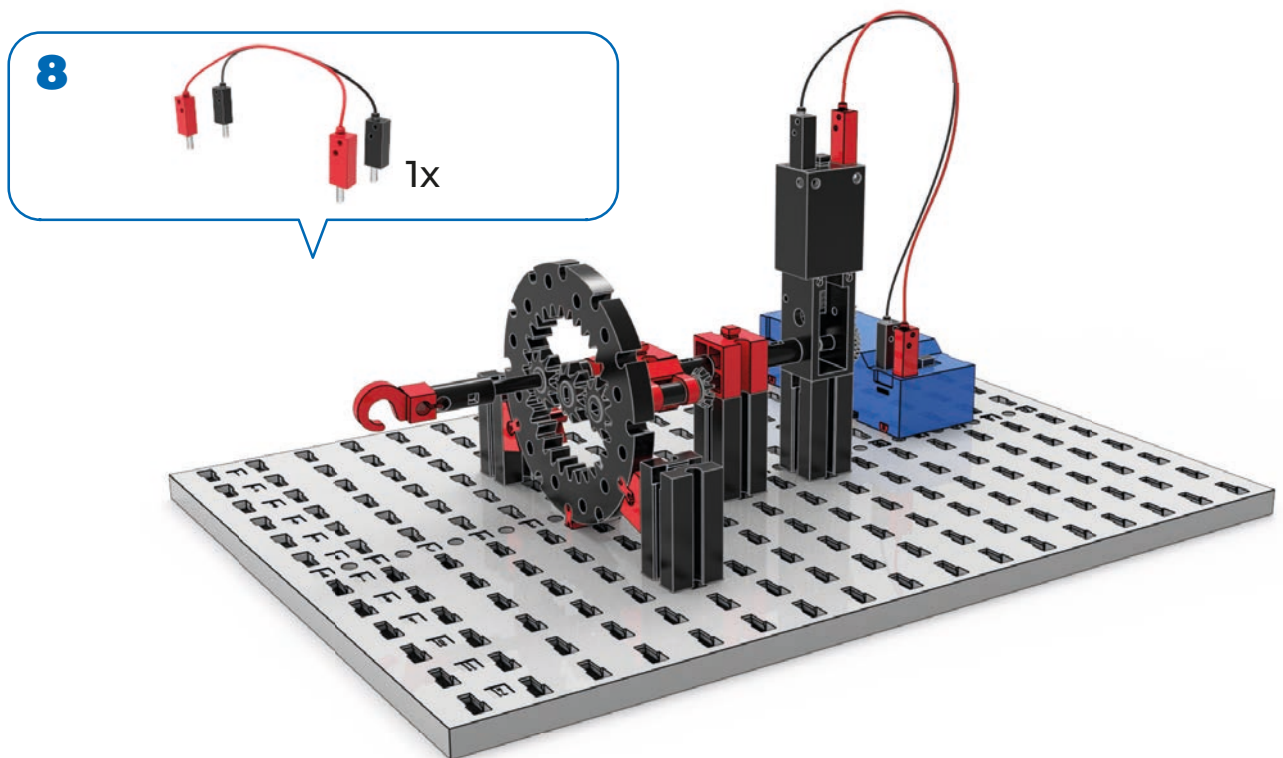
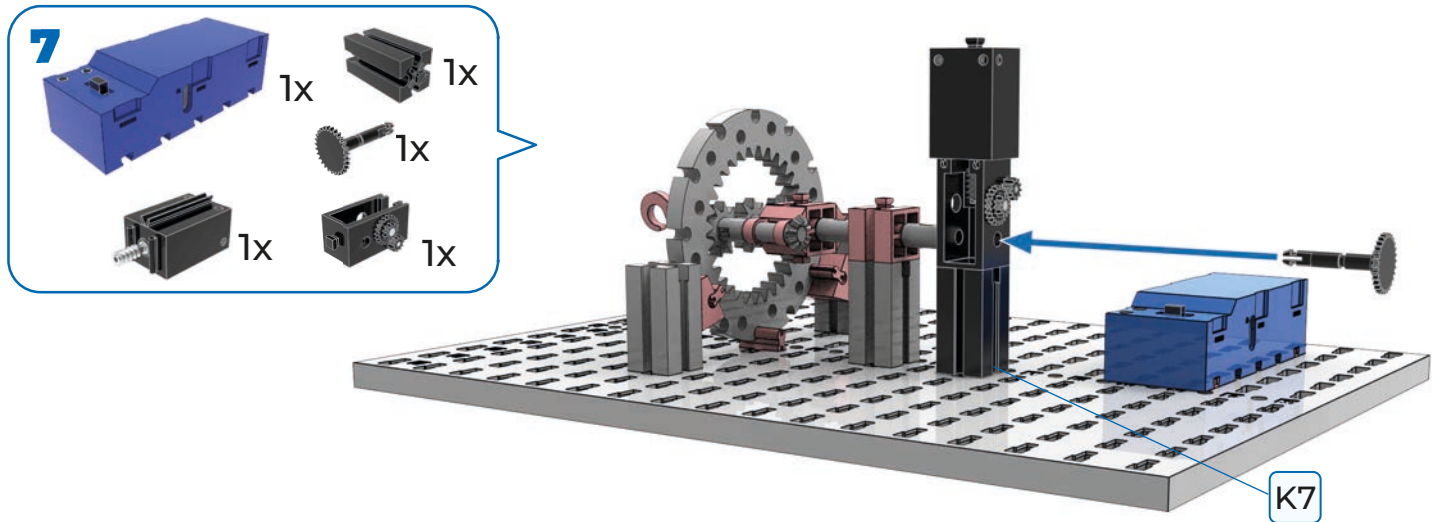
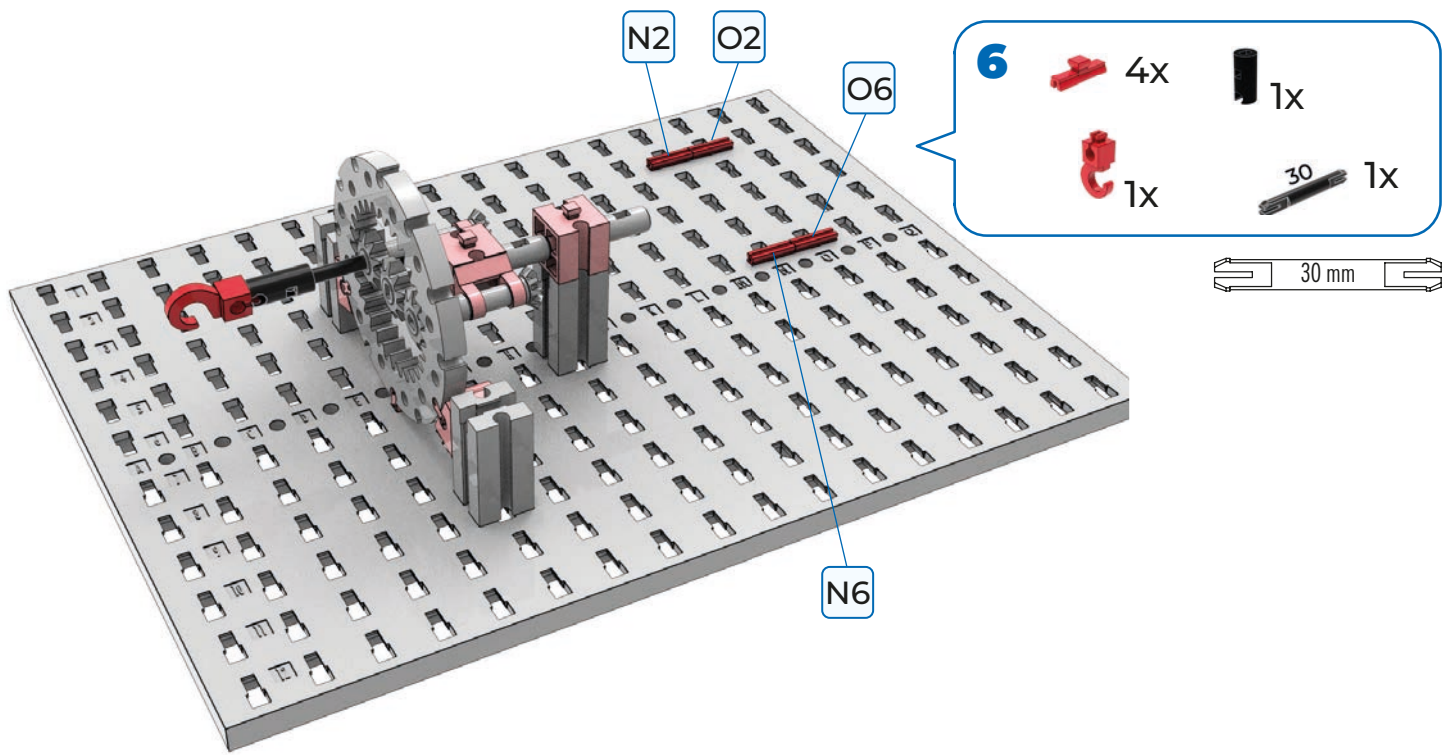




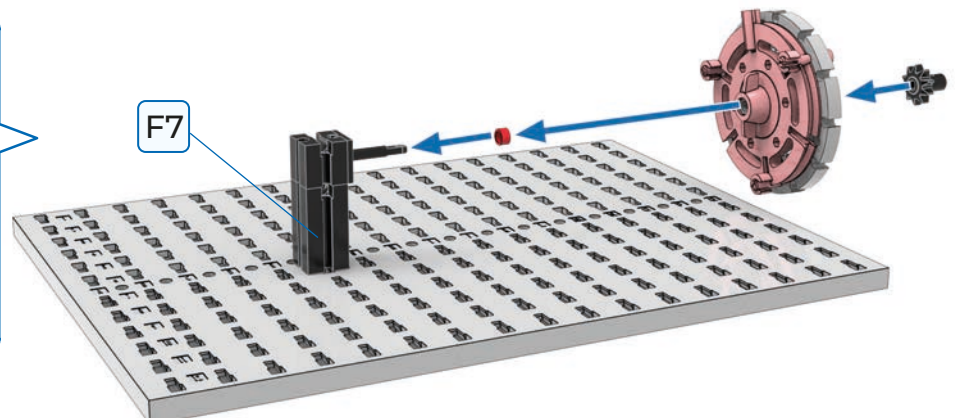
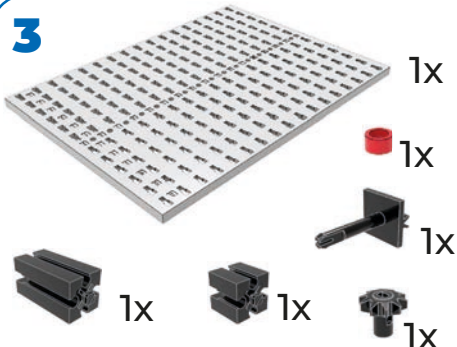
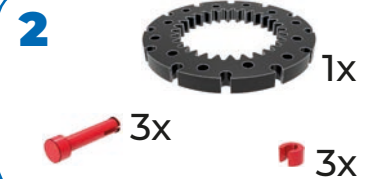
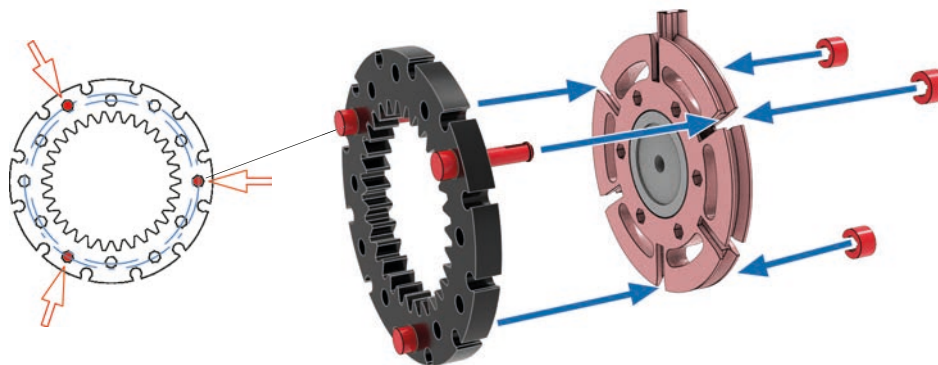
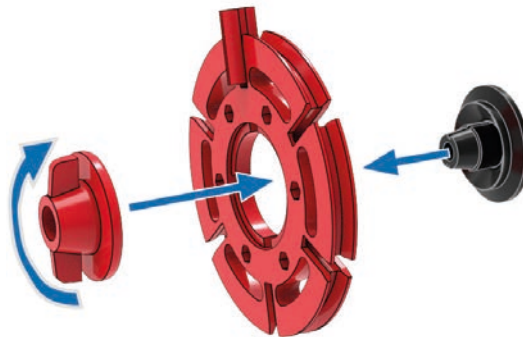
Planetengetriebe - Rührwerk
Planetary gear - agitator
Engrenage planétaire - Agitateur
Planetaire versnelling - Roerwerk
Engranaje planetario - Agitador
Equipamento planetário - Agitador
Ingranaggio planetario - Agitatore
Планетарный редуктор - Мешалка
 行星齿轮 - 搅拌器

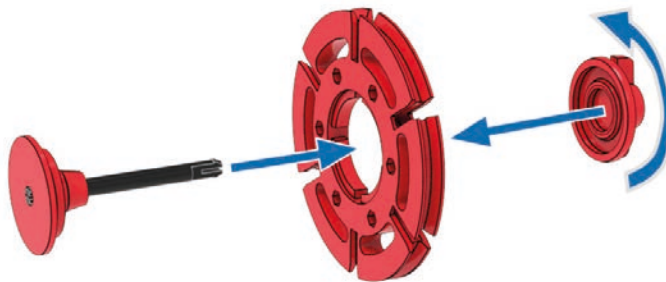
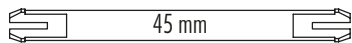
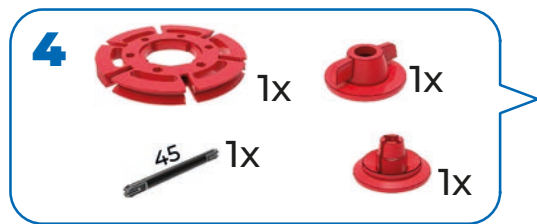




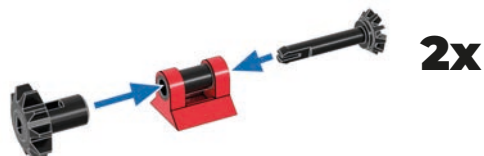
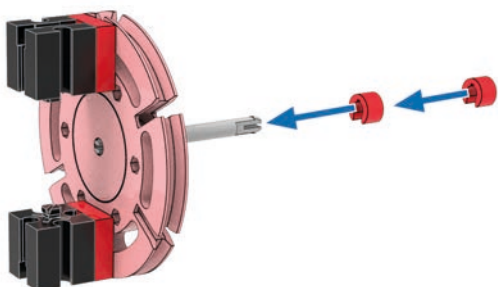


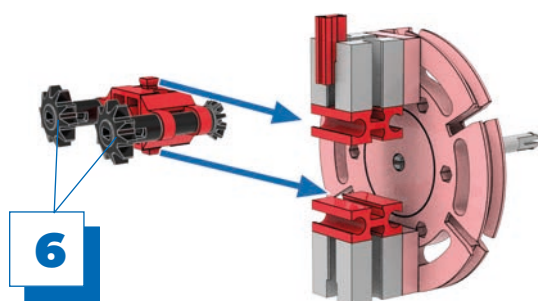
Planetengetriebe mit festem Sonnenrad
 Planetary gear with fixed sun gear
 Engrenage planétaire avec pignon solaire fixe
 Planetaire tandwieloverbrenging met vast zonnetandwiel
 Engranaje planetario con engranaje solar fijo
 Equipamento planetário com equipamento solar fixo
 Ingranaggio planetario con ingranaggio solare fisso
 Планетарный редуктор с фиксированным солнцезащитным механизмом
 帶固定太陽齒輪的行星齒輪





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- Serrer l'écrou du moyeu très serré
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- Atornillar las tuercas laterales muy fuertes
- Apertar bem as porcas de cubo
- Stringere saldamente il dado del mozzo
- Затянуть гайки ступиц
- 拧紧

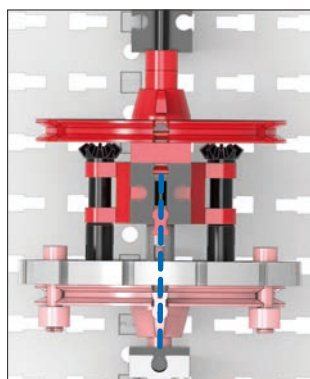




6

7

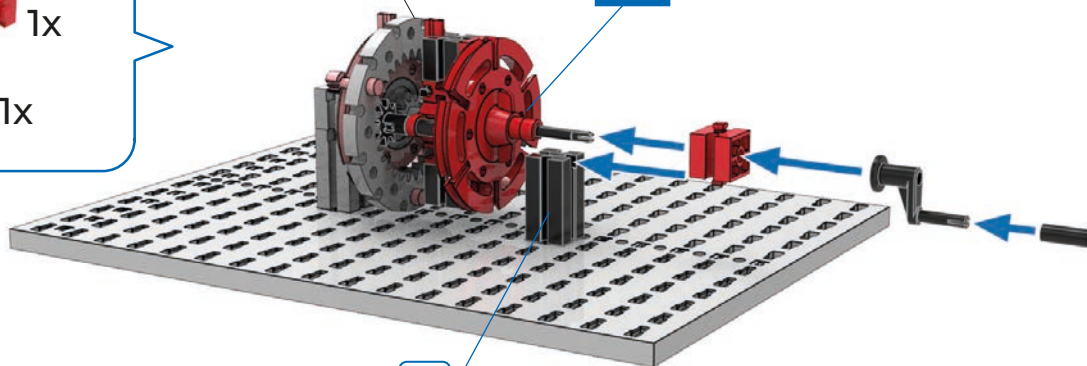
1x 2x 15 1x



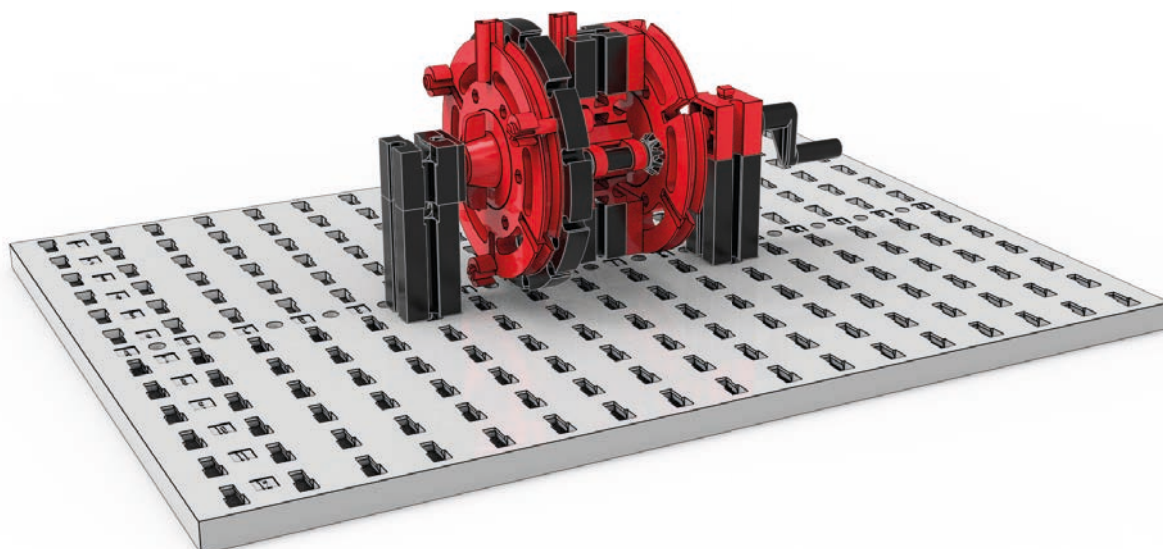
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8

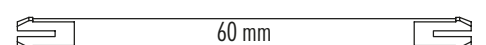
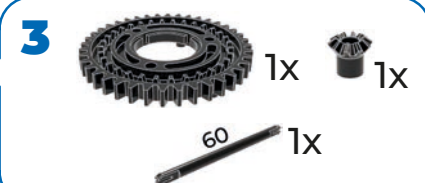
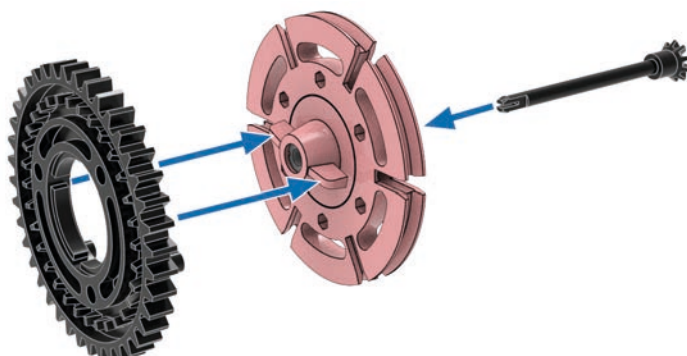
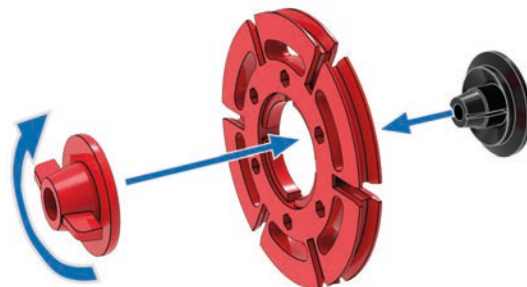
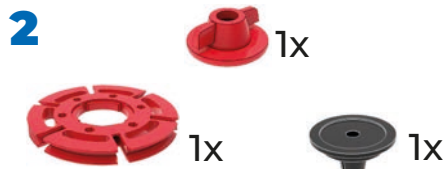
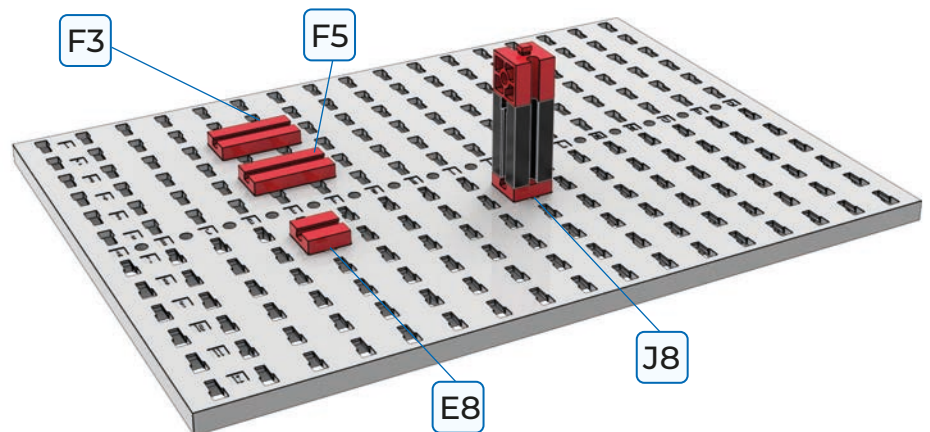
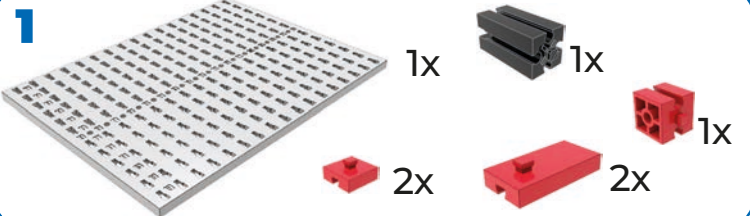
1x 1x 1x 1x



L7

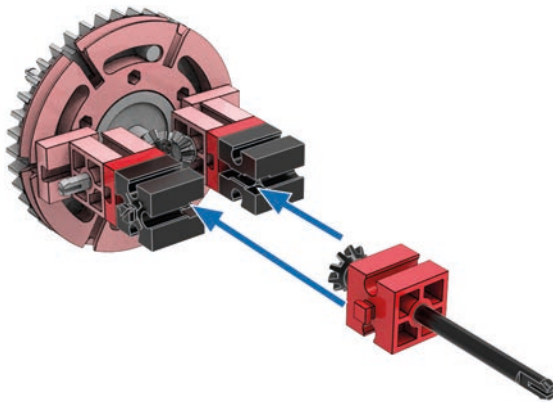
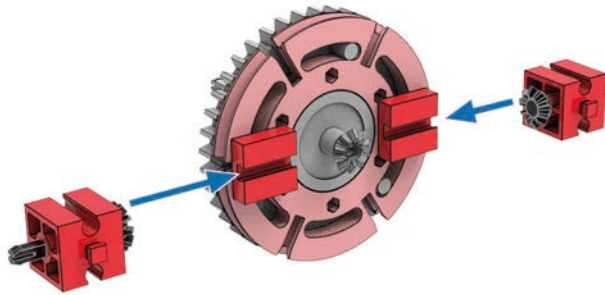


Differentialgetriebe
Differential gear
Différentiel
Differentieel
Engranaje diferencial
Engrenagem diferencial
Ingranaggio differenziale
Деренциальная передача
差速器

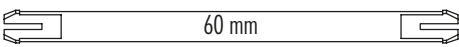


4

 2x
  2x
 2x

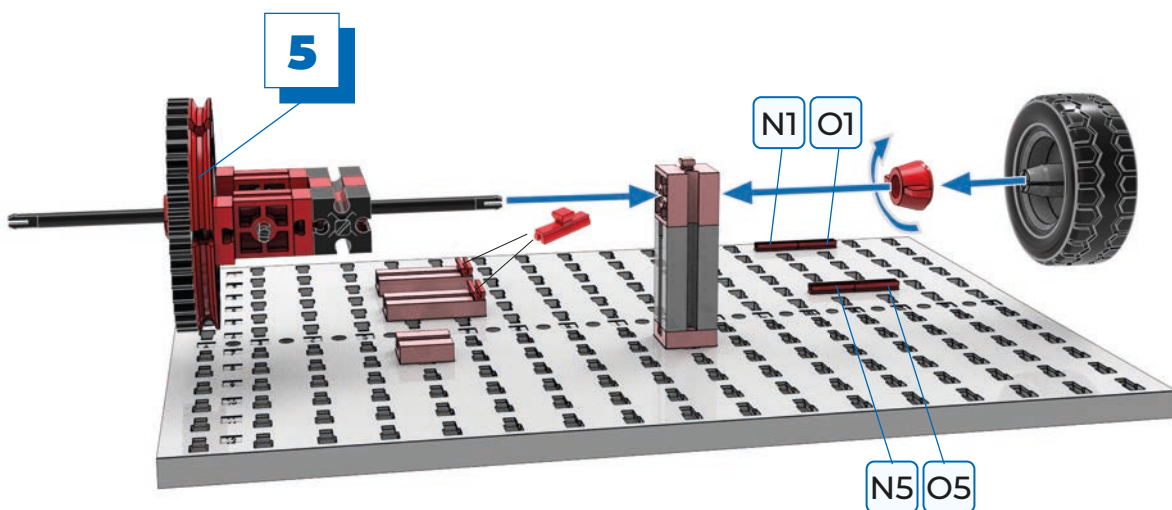


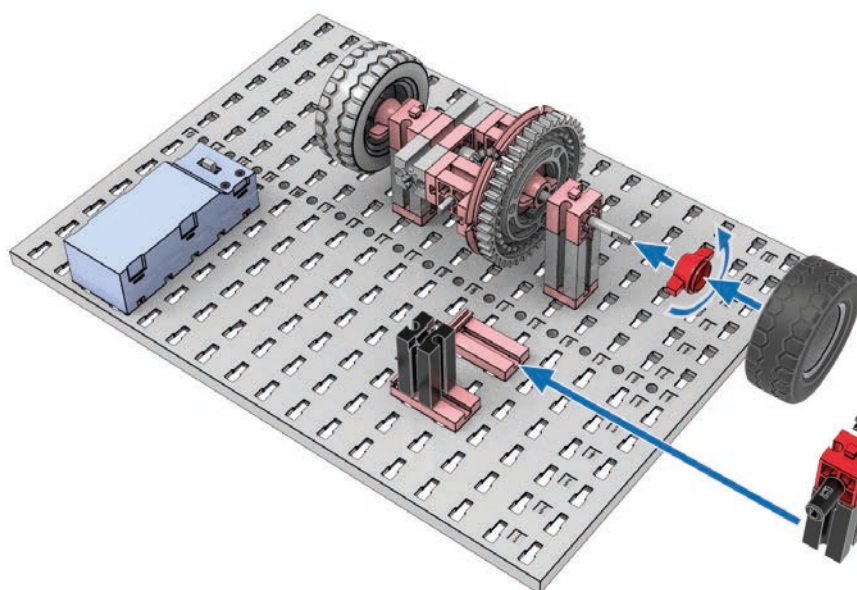
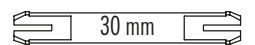
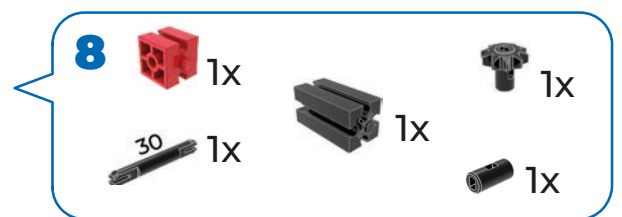
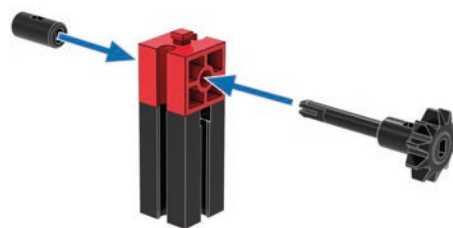
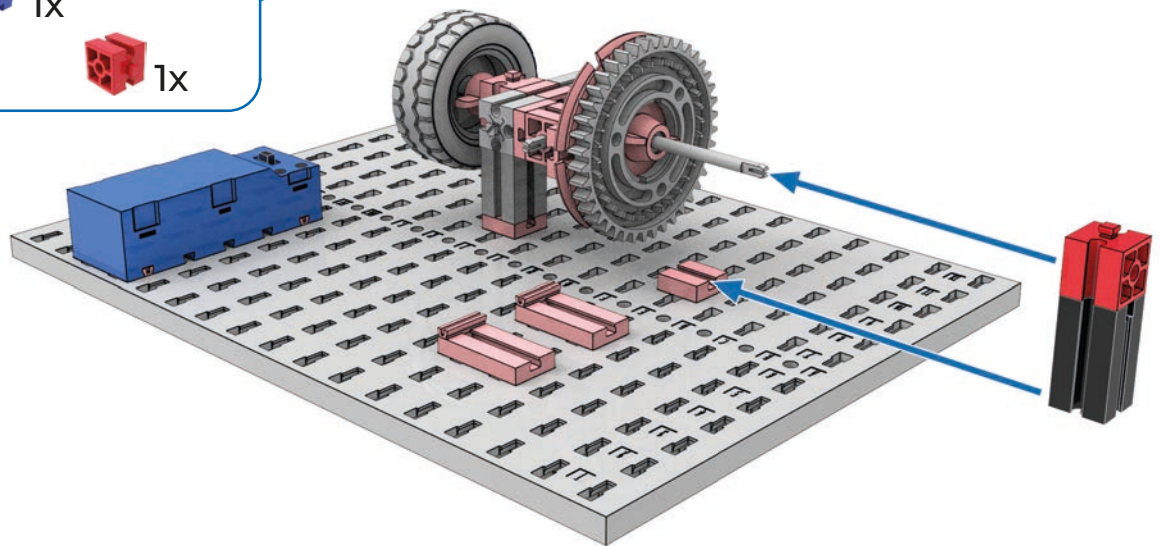
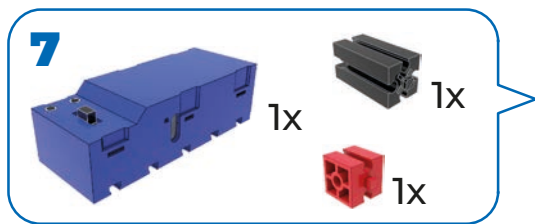
5

 2x
  1x
  2x
 60 1x
  1x
 60 mm

6

 1x
  1x
  6x





10



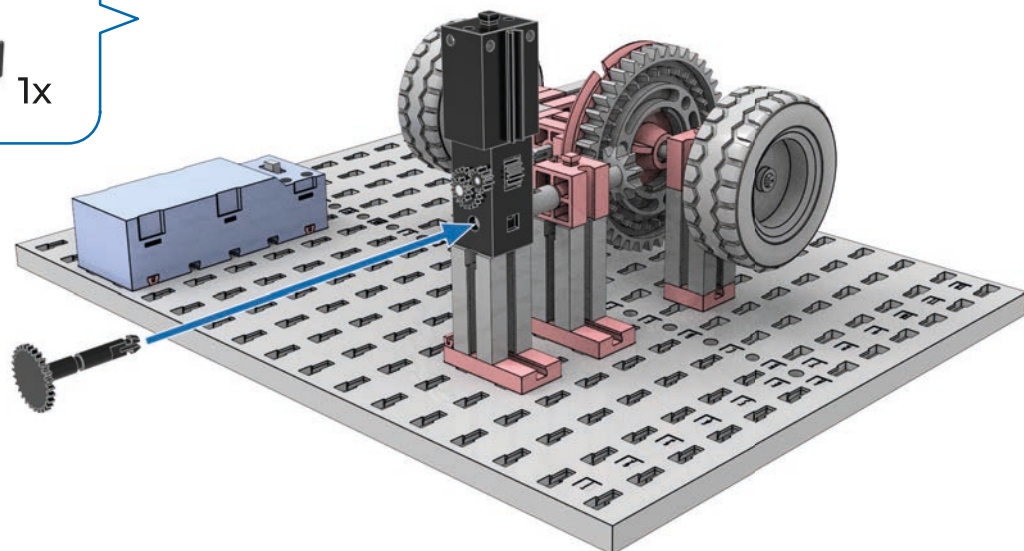
1x



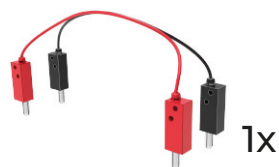
1x



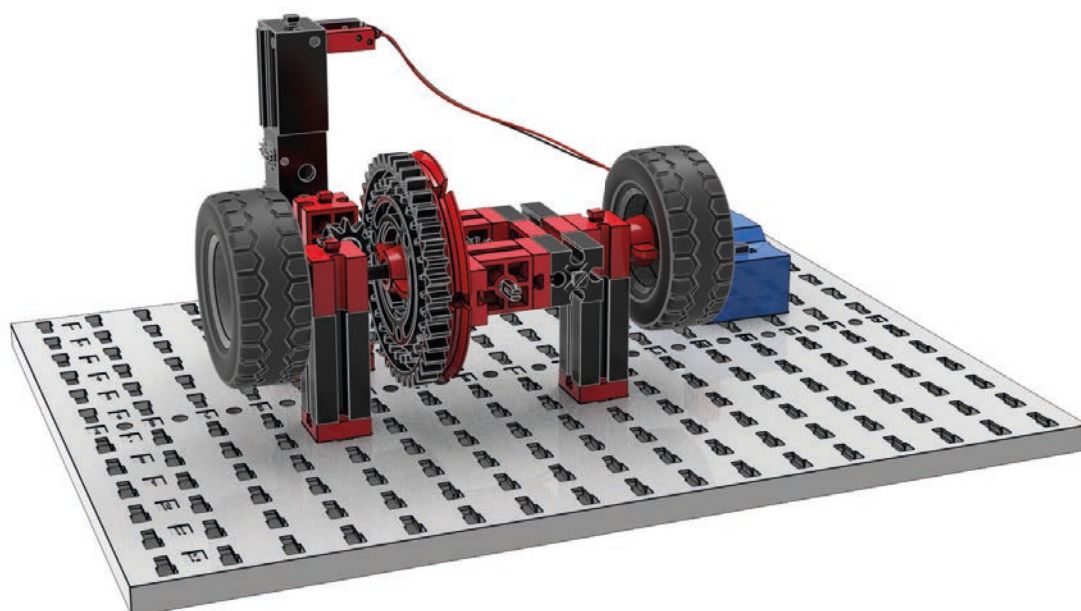
1x

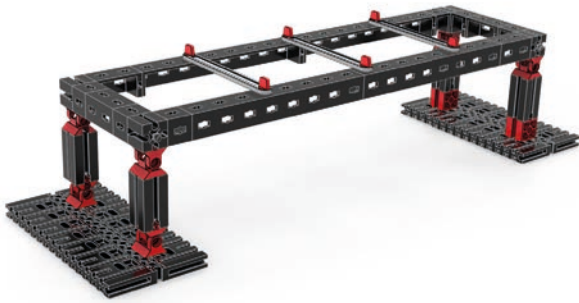


11

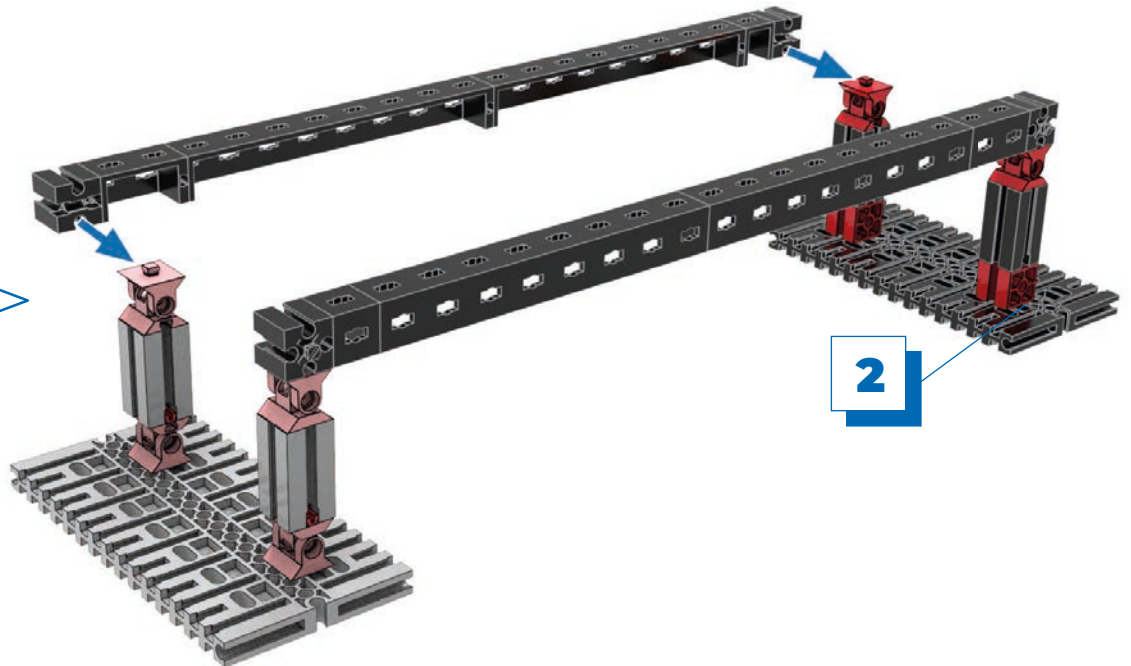
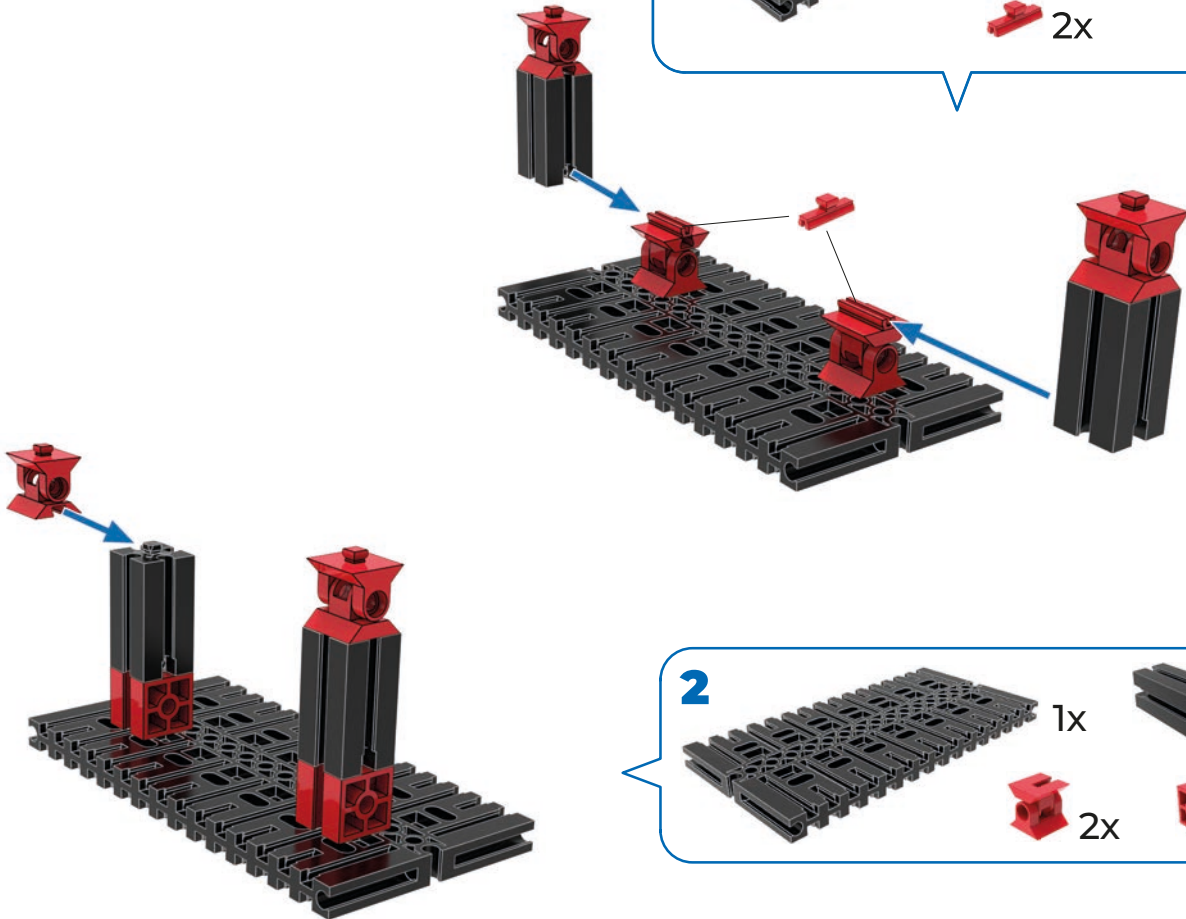
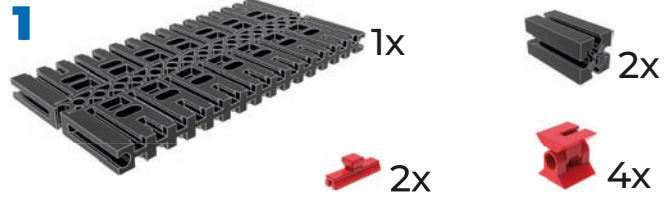


1x





Brücke
Bridge
Pont
Brug
Puente
Ponte
Понтовый мост
桥梁



4

2x

2x

2x

15

3x

4

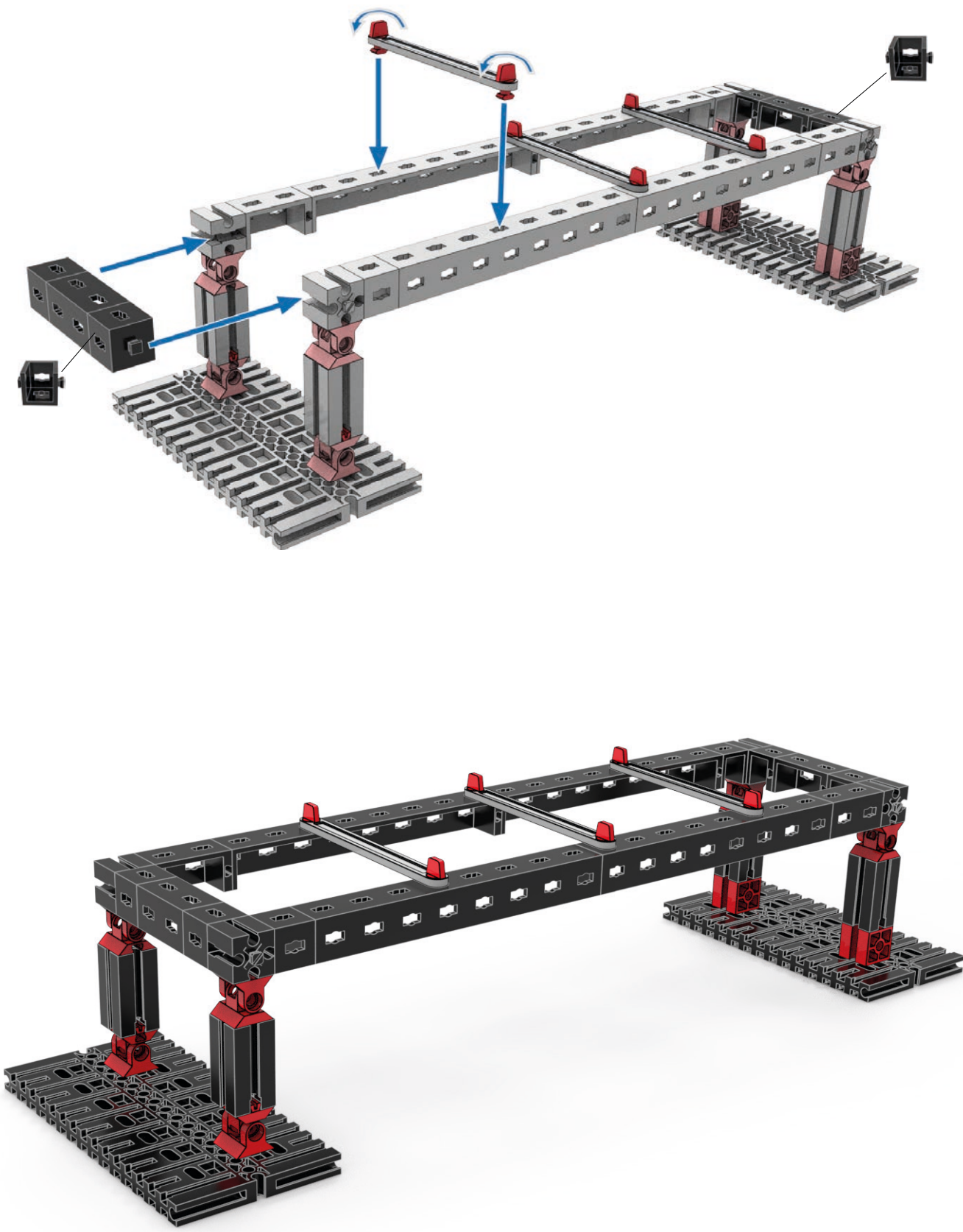
6x

!

6

4

≠



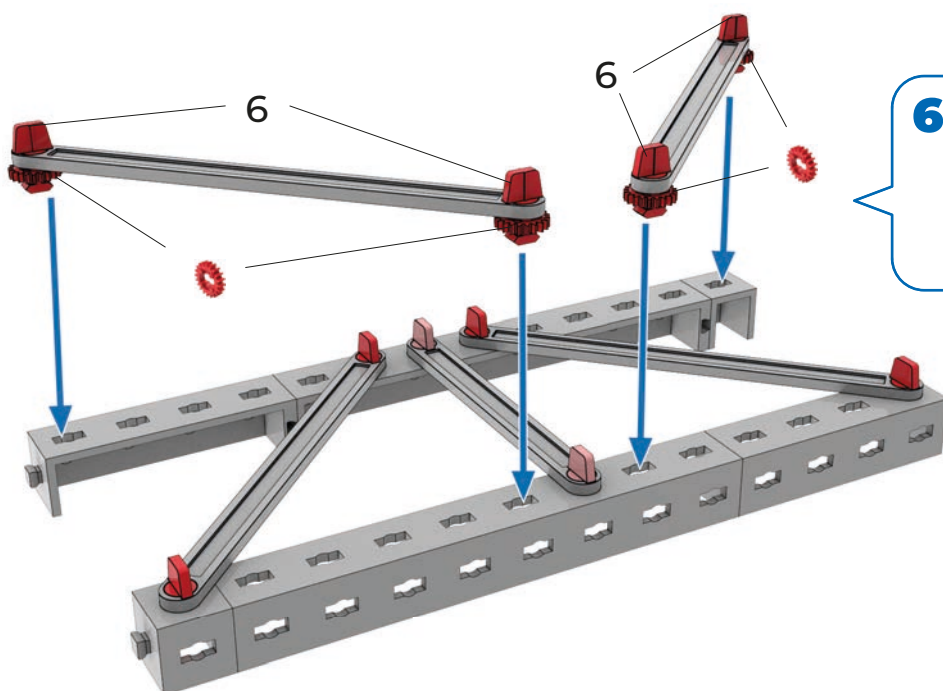
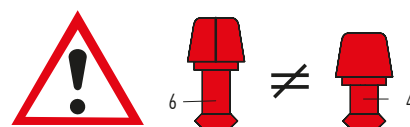
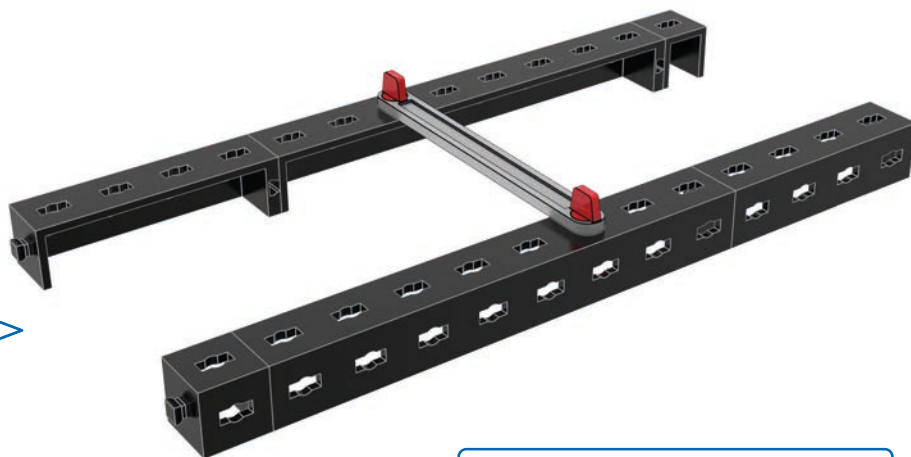
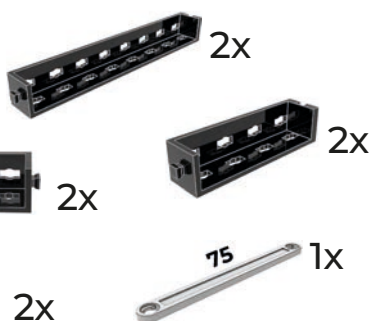


Brücke mit Unterzug
Bridge with downstand beam
Pont avec poutre
Brug met ligger
Puente con viga
Ponte com viga
Ponte con trave
Мост с балкой
 下梁桥

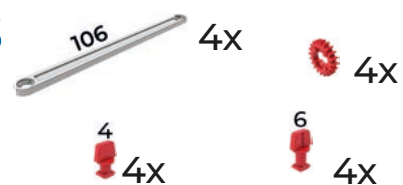
1-4

Seite 77
 Page 77
 Page 77
 Bladzijde 77
 Página 77
 Pagina 77
 Pagina 77
 Страница 77
 页次 77

5



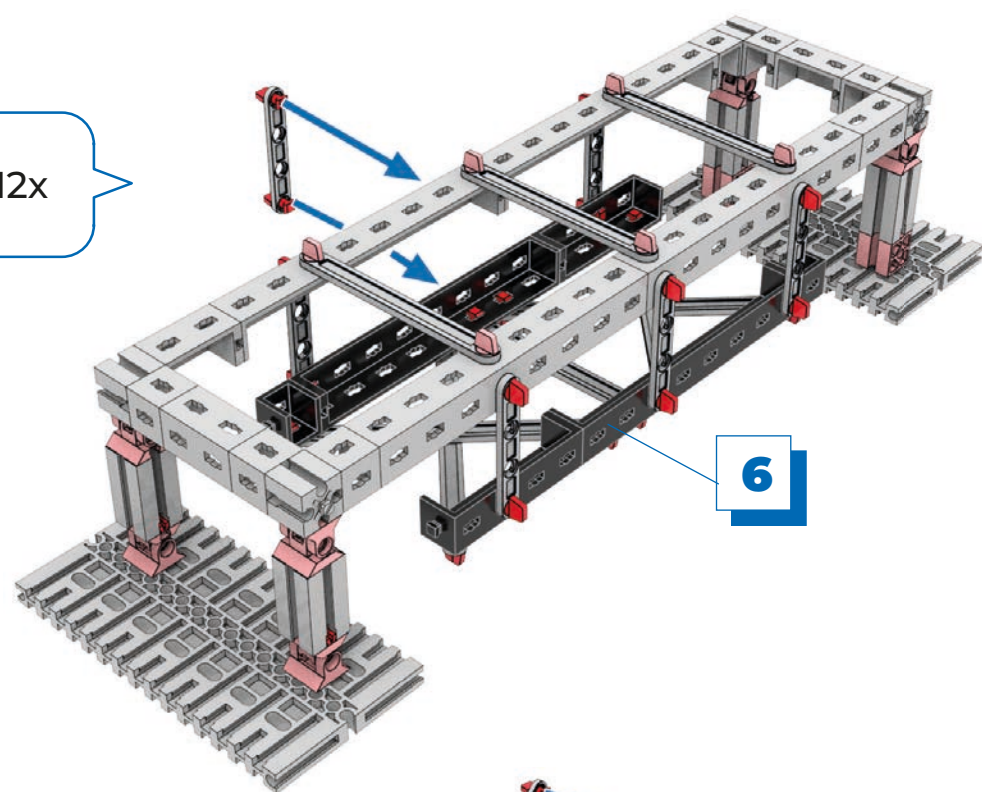
6



7

45 6x

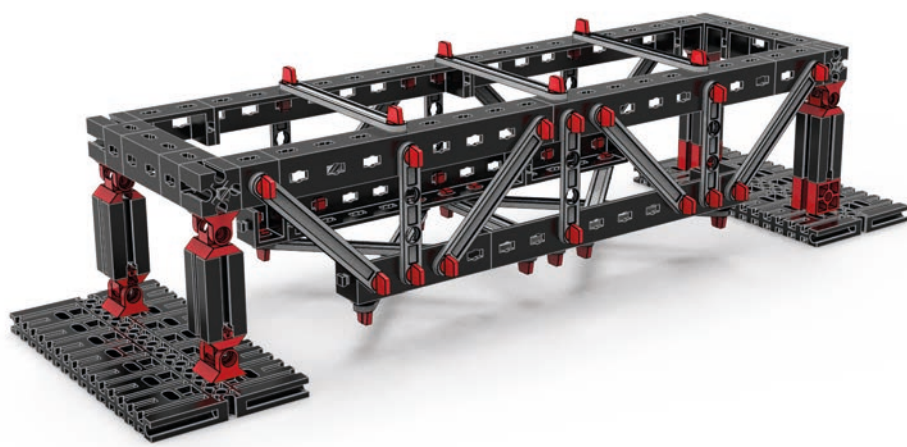
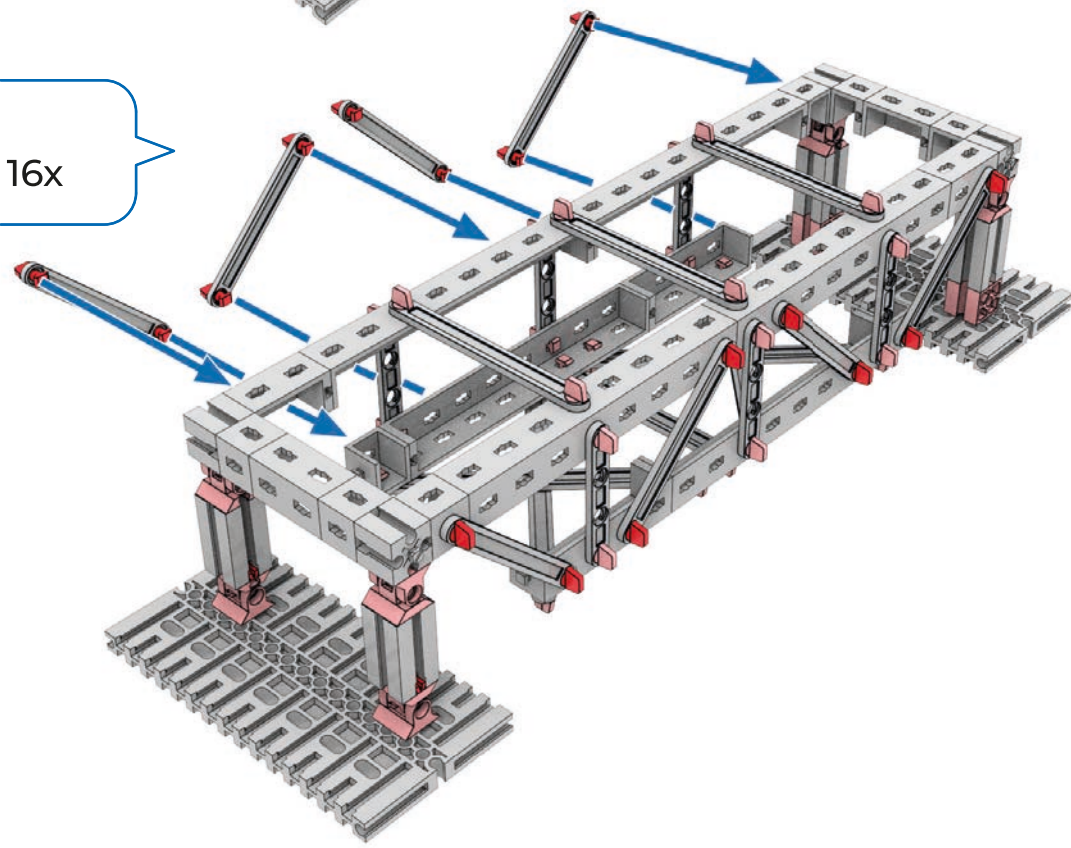
4 12x

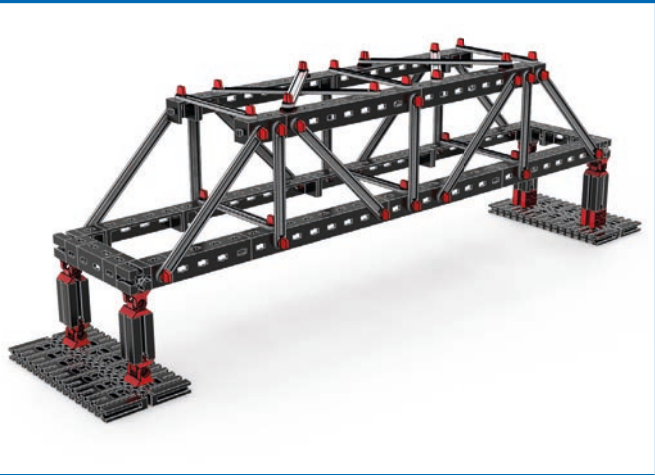


8

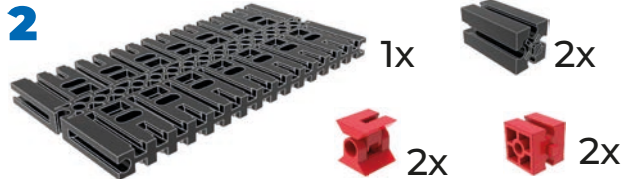
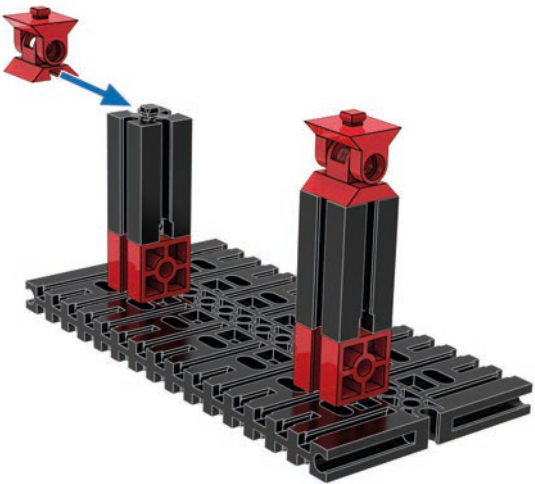
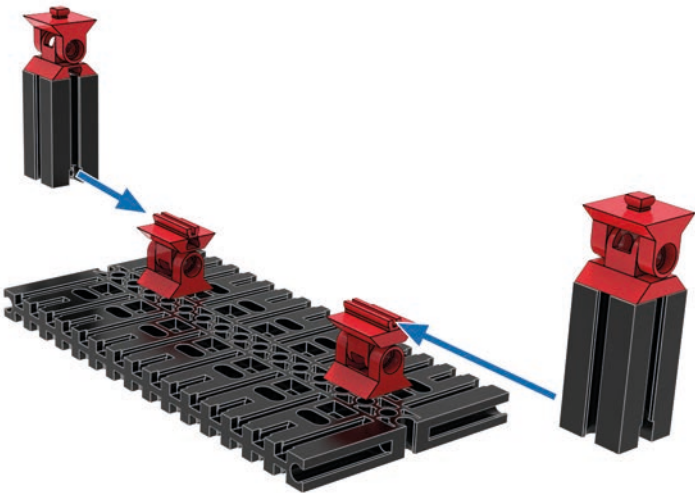
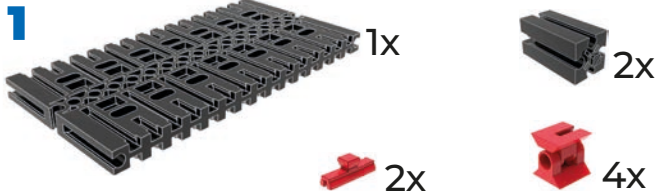
63,6 8x

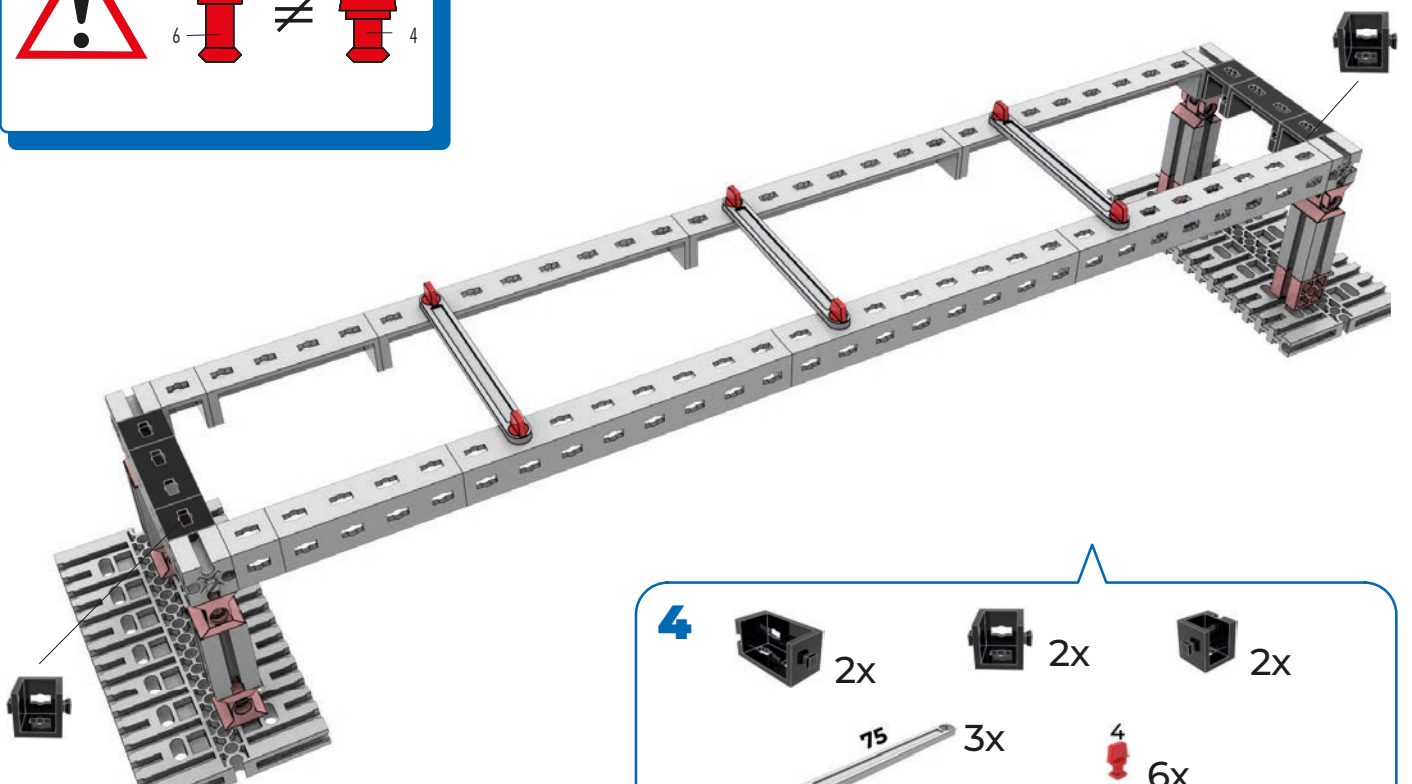
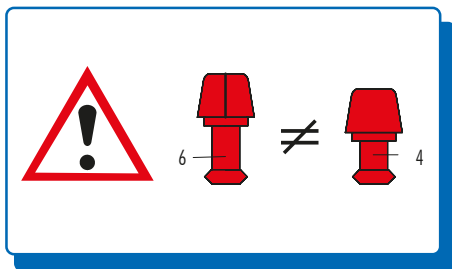
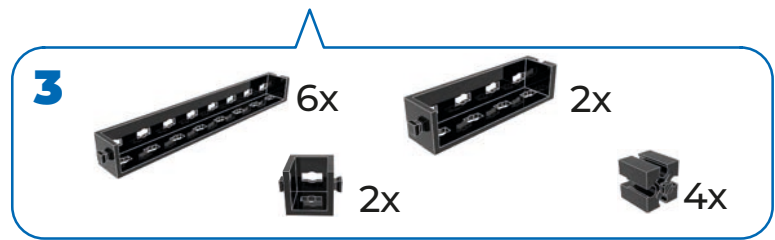
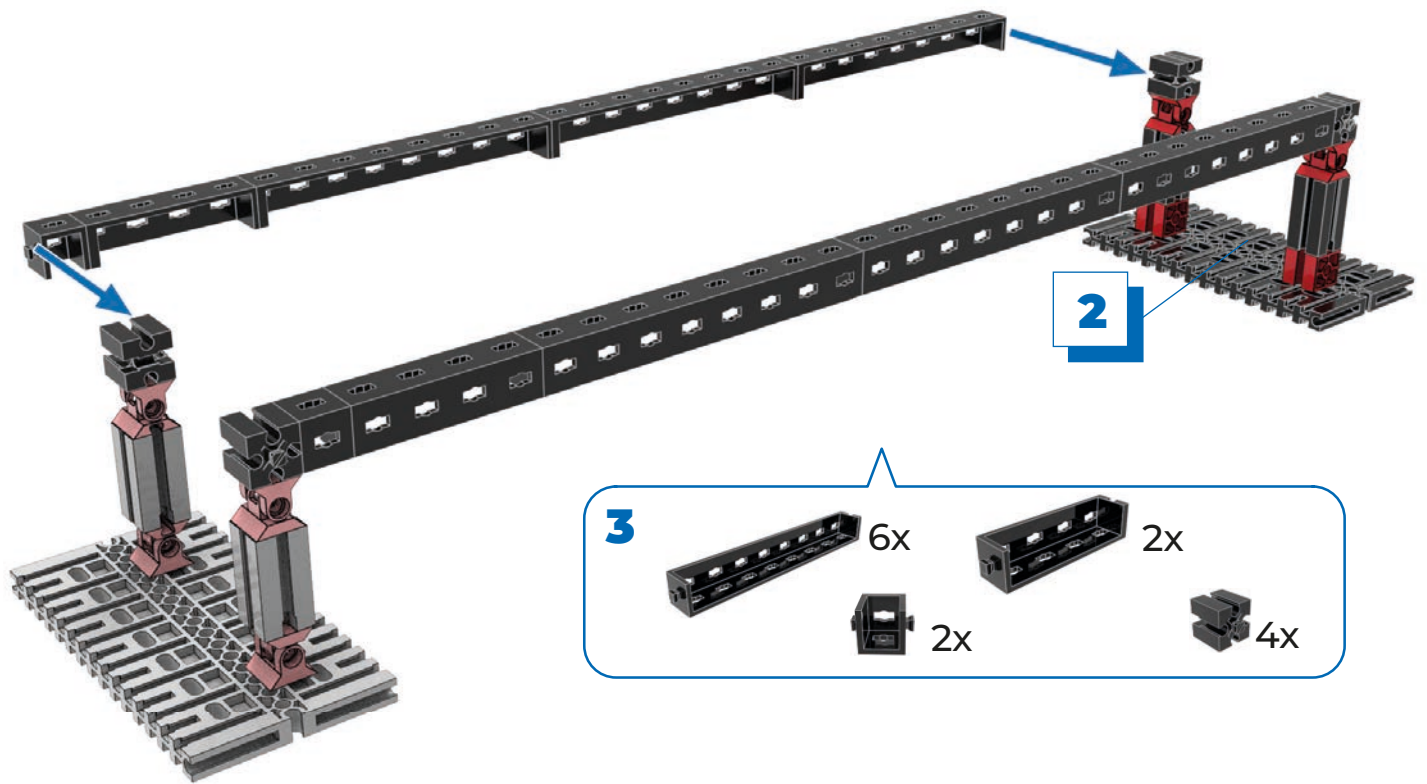
4 16x





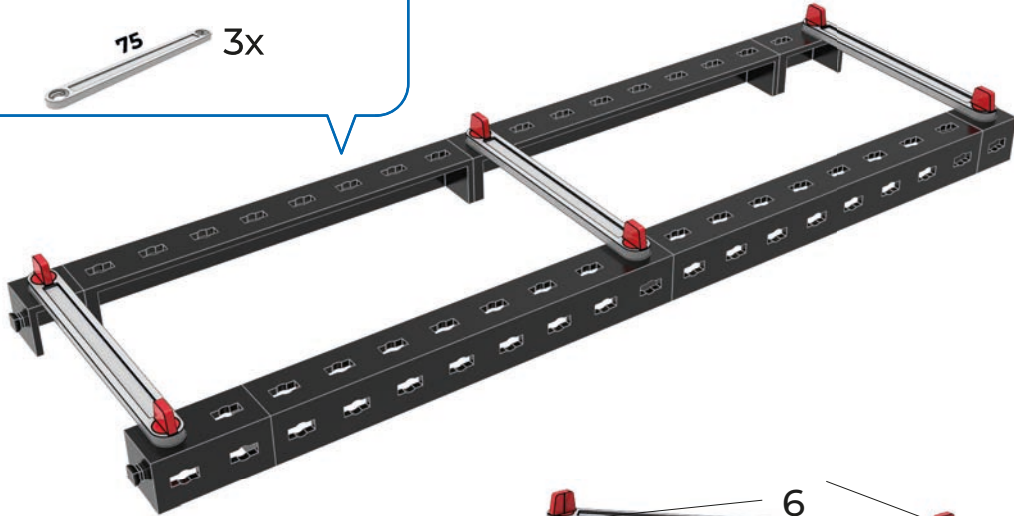
Brücke mit Oberzug
Bridge with upper beam
Pont avec traction supérieure
Brug met bovenbouw
Puente con superestructura
Ponte com superstrutura
Ponte con sovrastruttura
Ферменный мост
 上桥梁





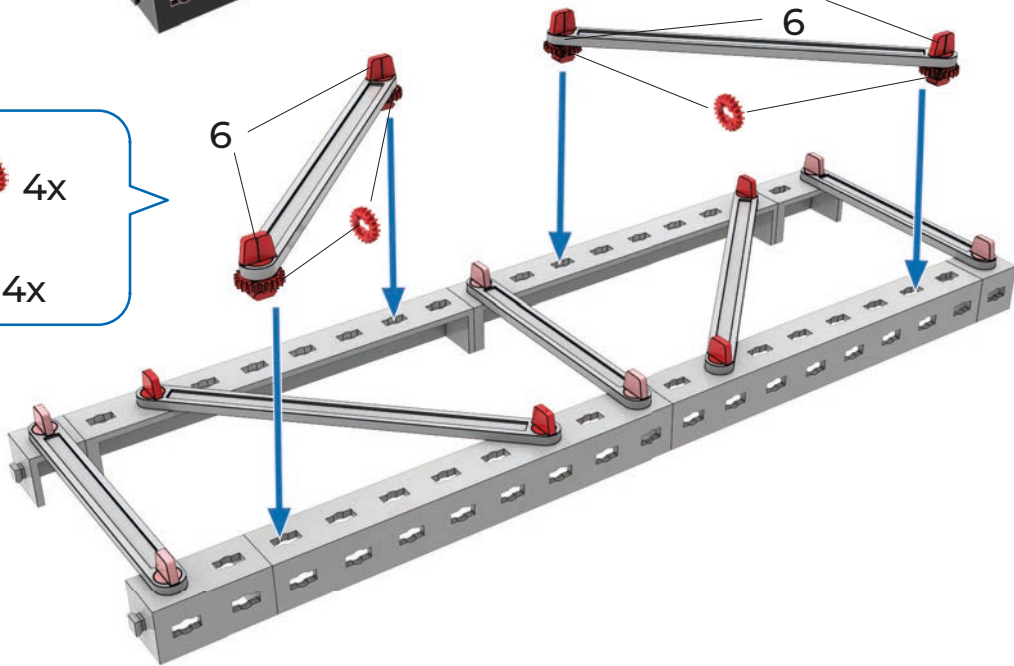
5

 4x
 2x
 2x
 4
6x
 3x



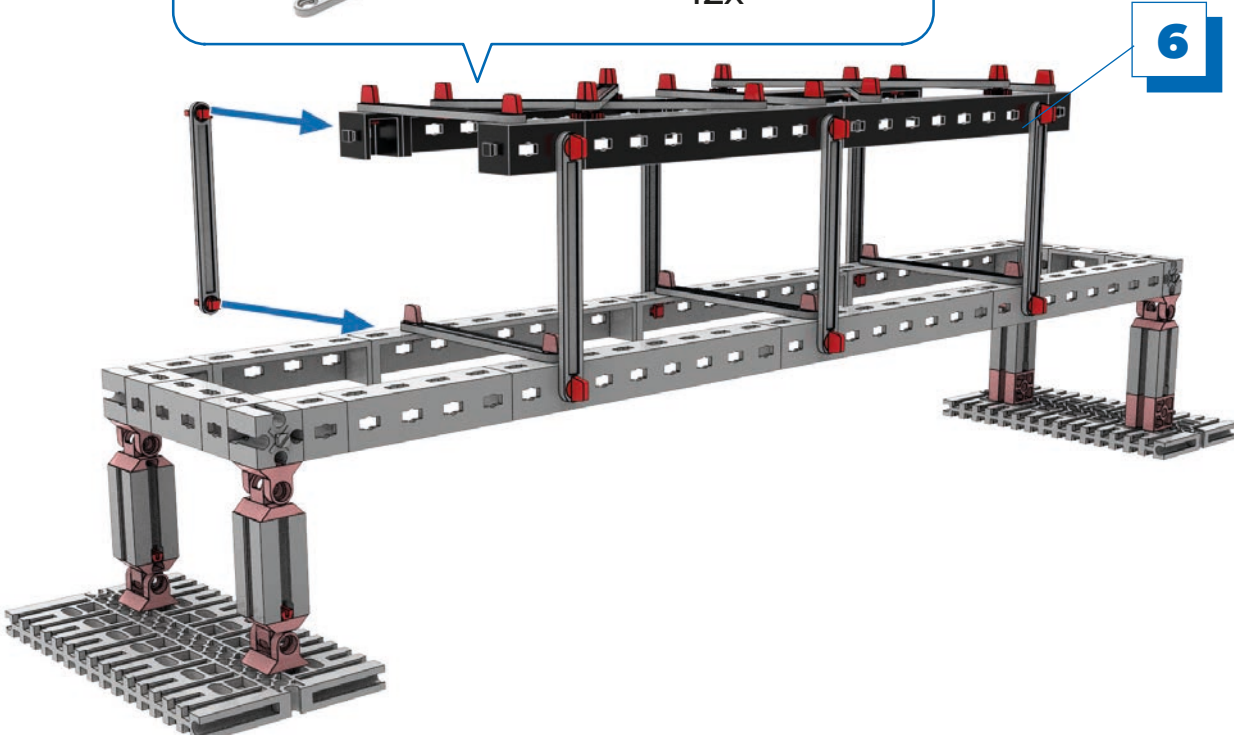
6

 4x
 4x
 4x
 4x



7

 6x
 12x



6

8

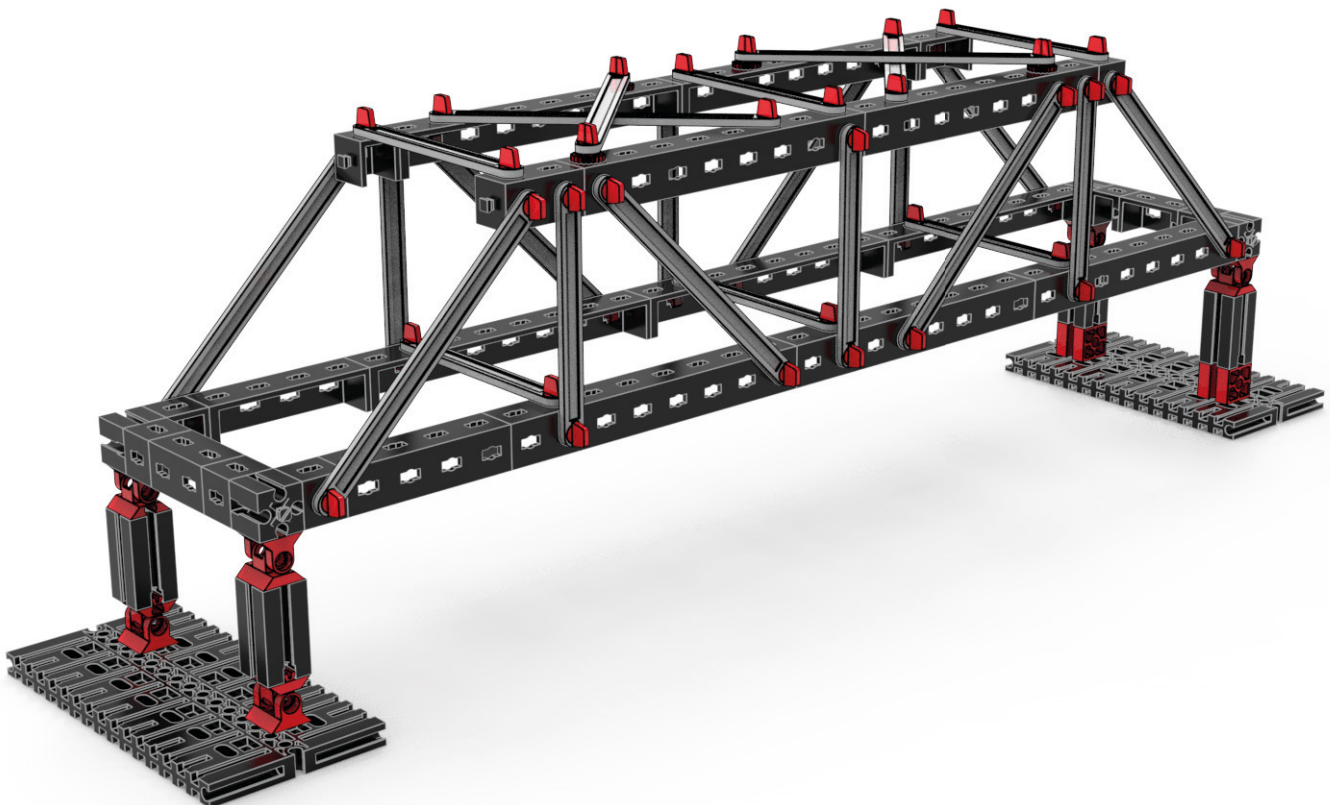
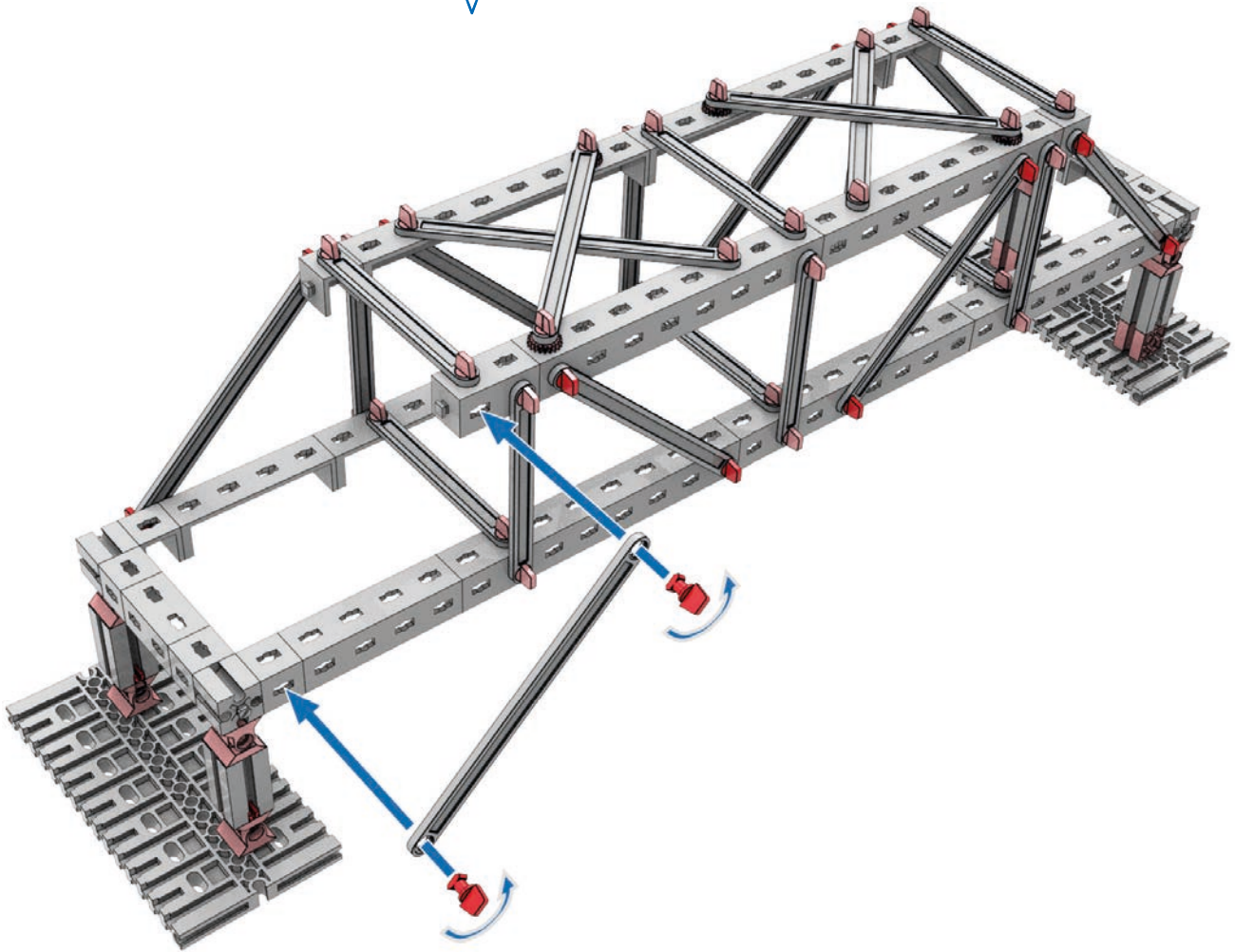


8x

4



16x





Fachwerk
Half-timbering
Colombage
Vakwerk
Media madera
Semimembrulhamento
Graticcio
Прочный каркас
 半木结构梁

1



2x



1x



1x



1x



2



2x



2x



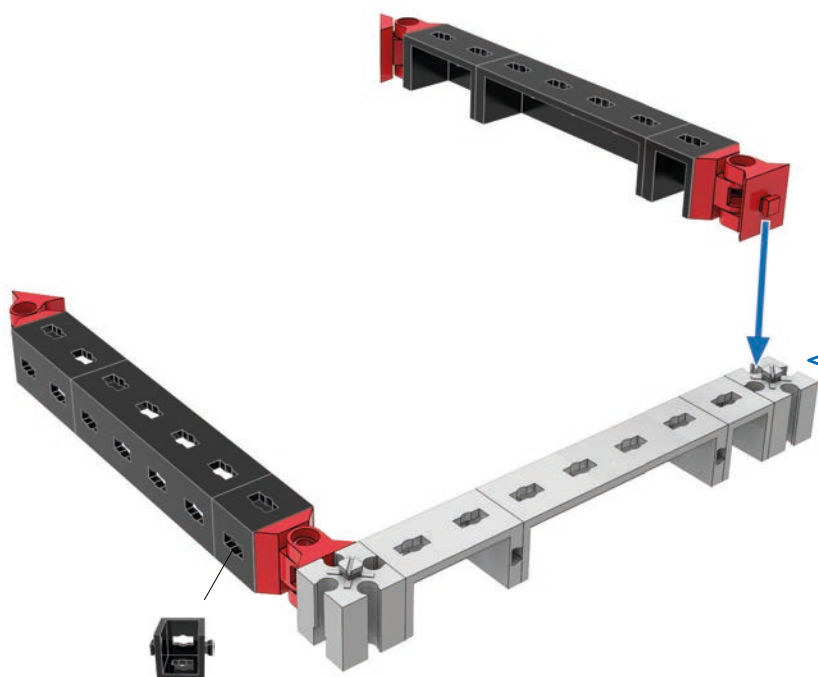
1x



1x



4x



3



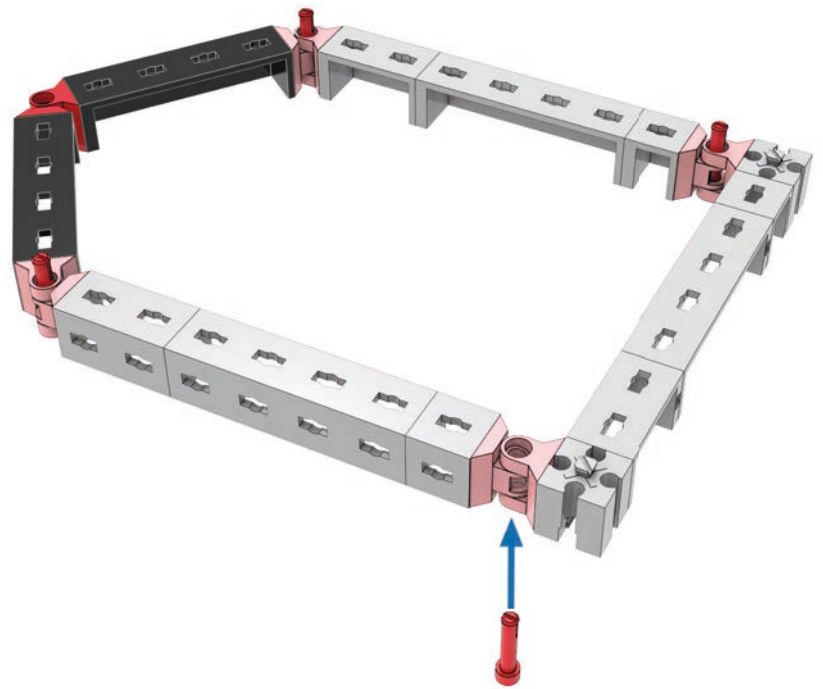
1x



2x



4x



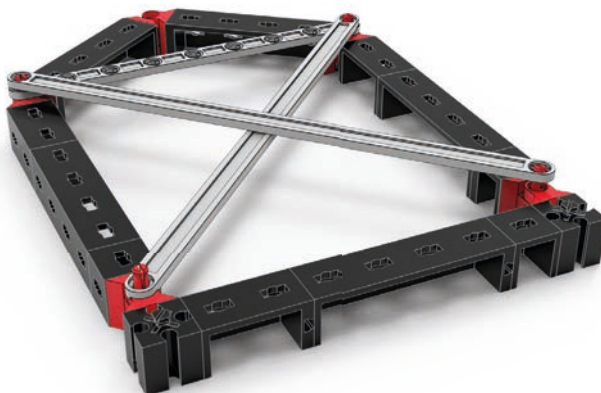
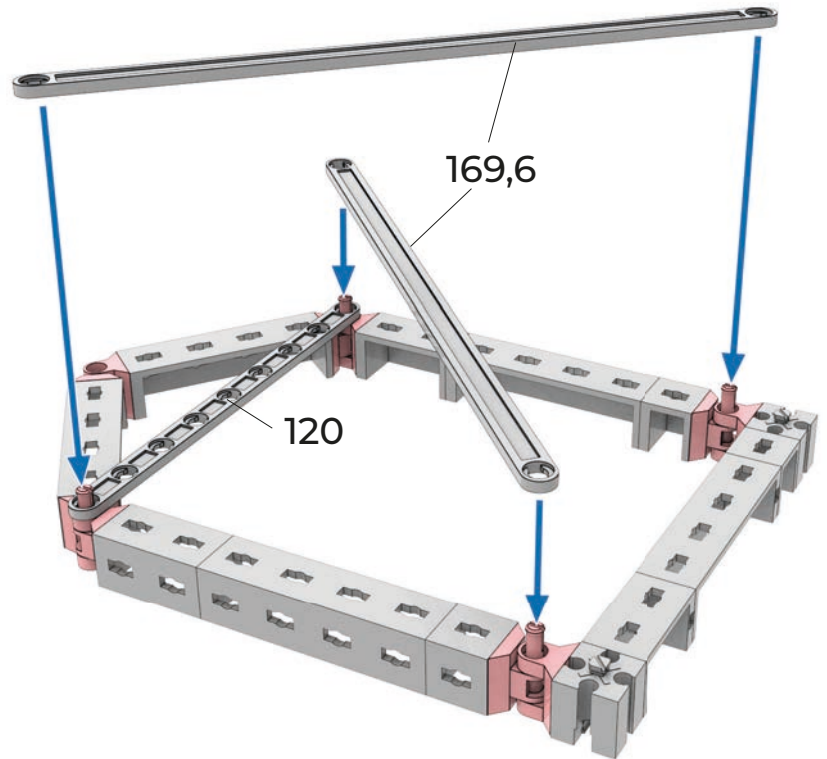
4

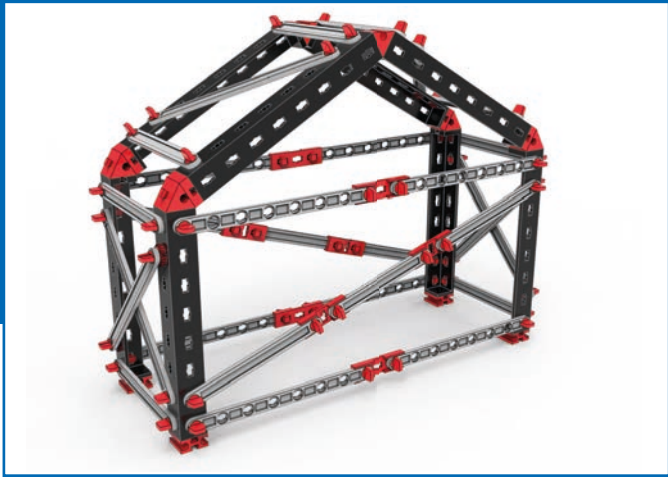


2x



1x





Fachwerkhaus
Half-timbered house
Maison à colombages
Vakwerkhuis
Casa con centramado de madera
Casa em meia esquadria
Casa a graticcio
Каркасный дом
 半木结构的房子

1



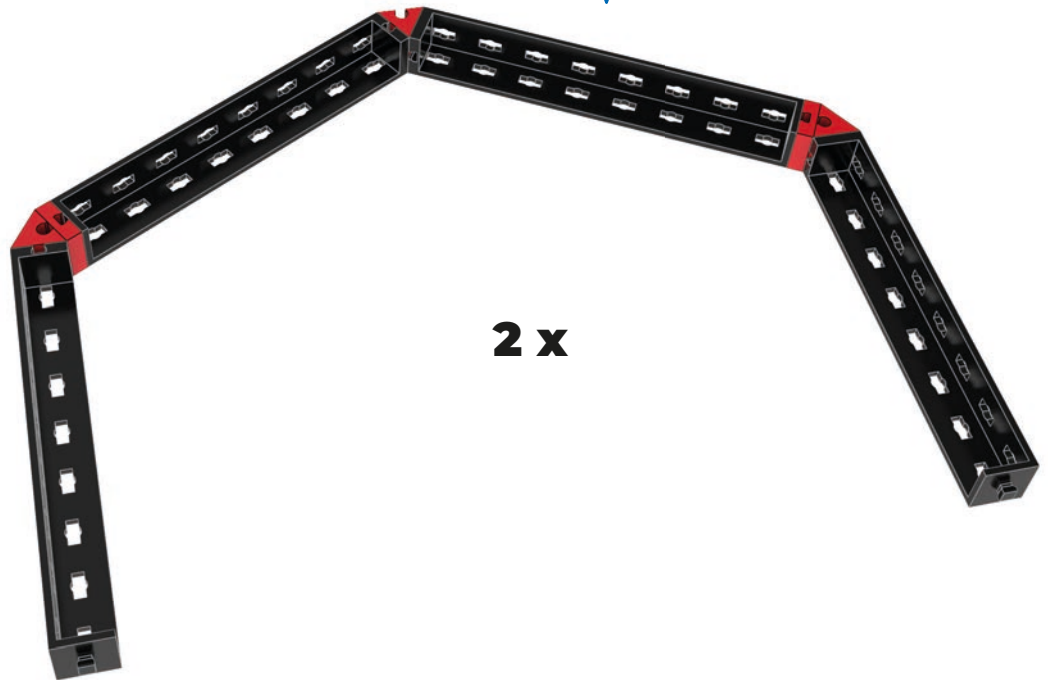
8x



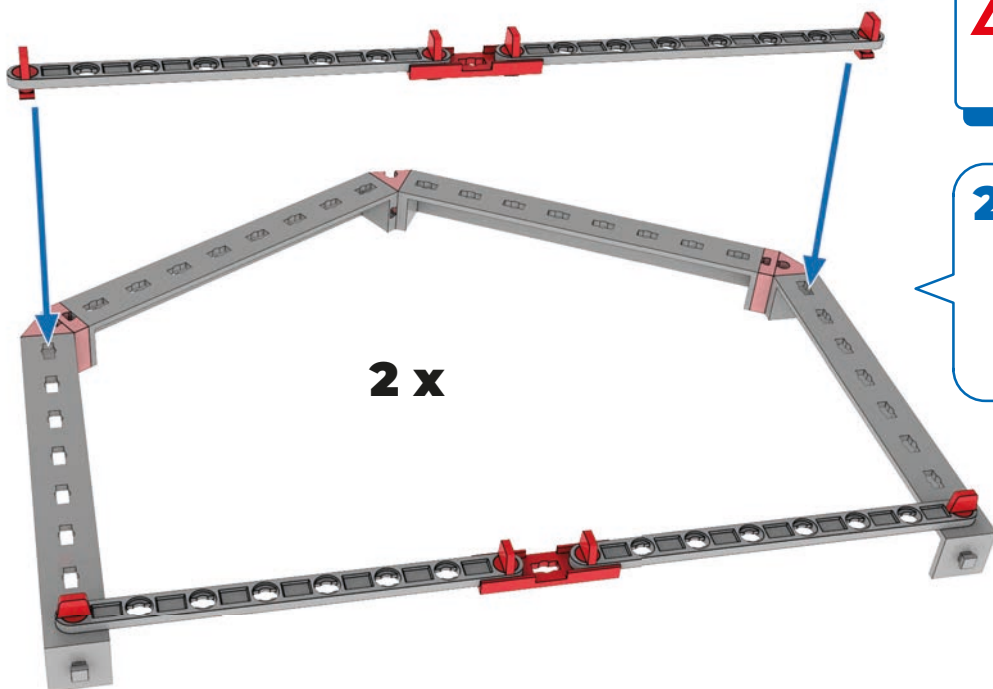
60°
6x



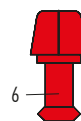
4x



2 x

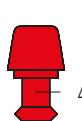


2 x



6

≠



4

2



105

8x



4x



4

16x

3

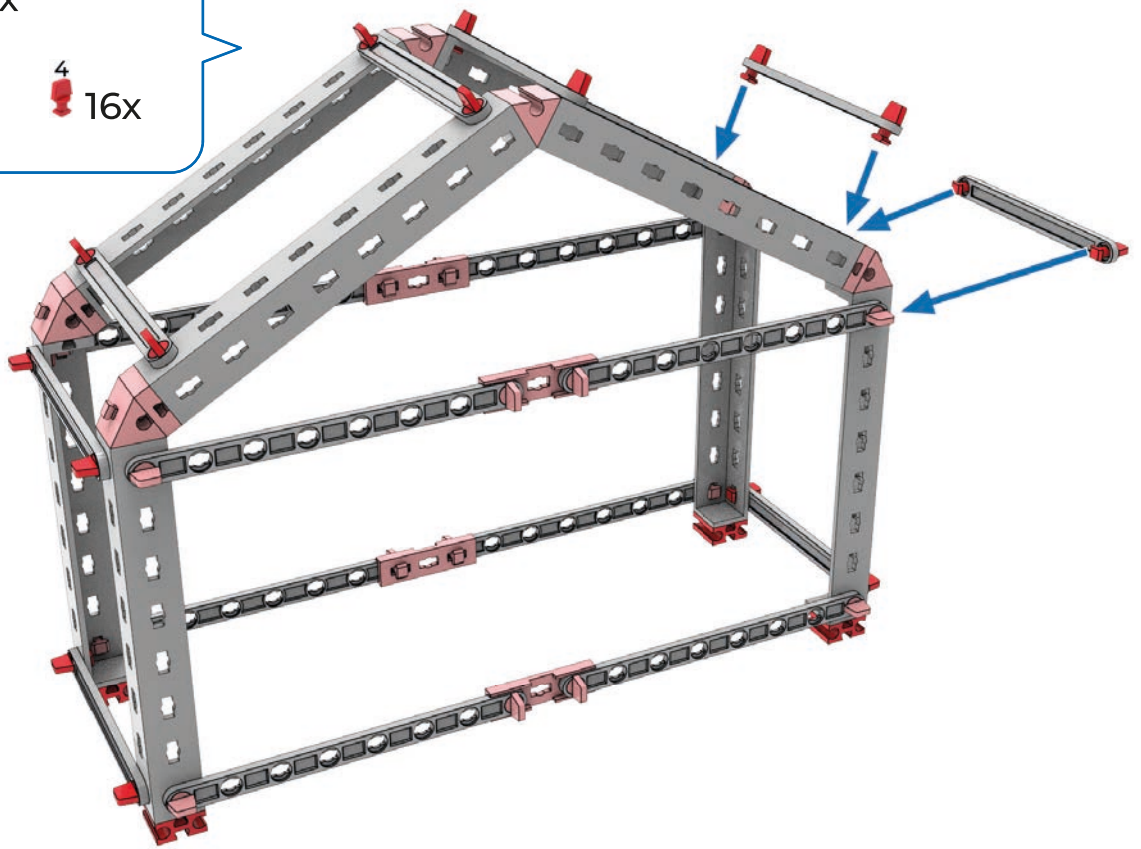
15

8x

4x

4

16x



4

106

6x

4x

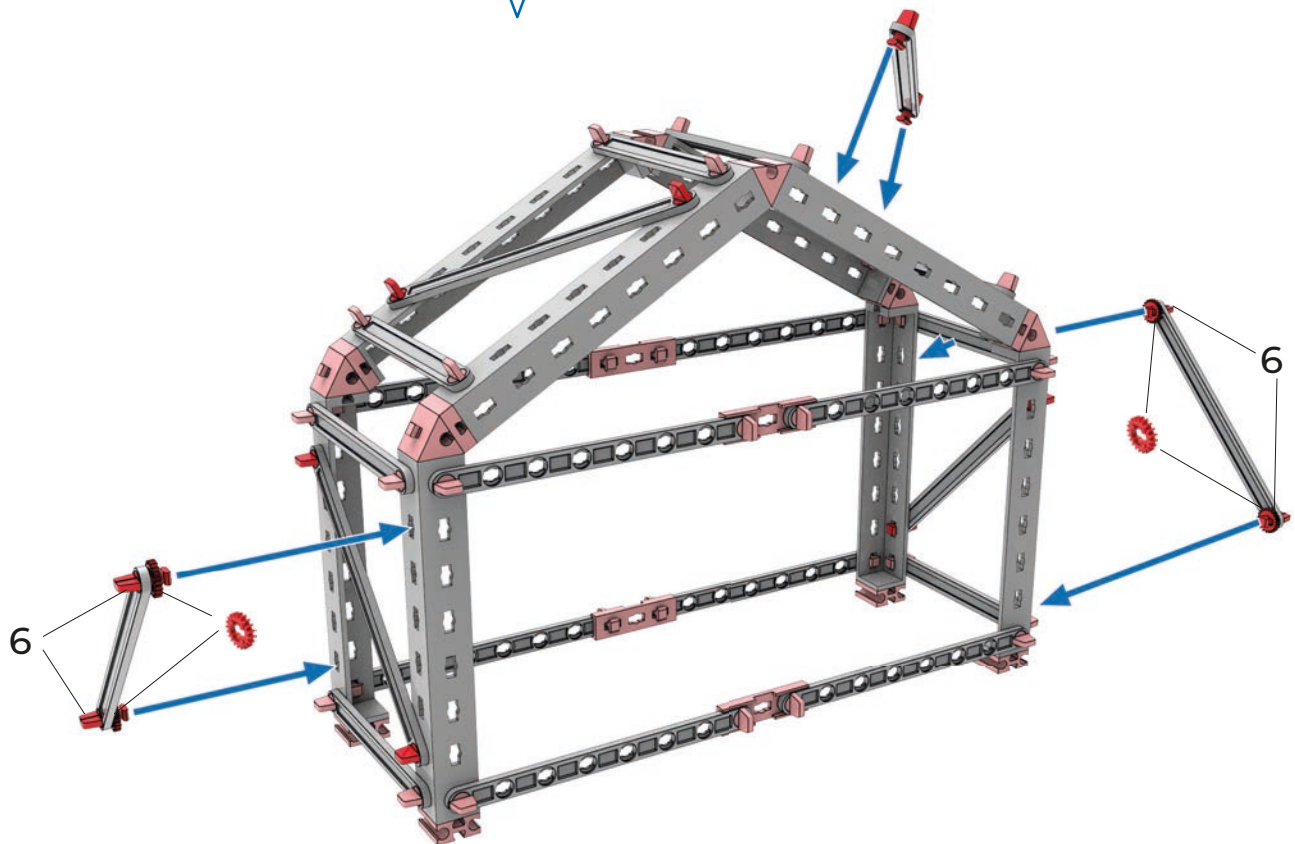
4

8x

4x

6

4x



5



4x



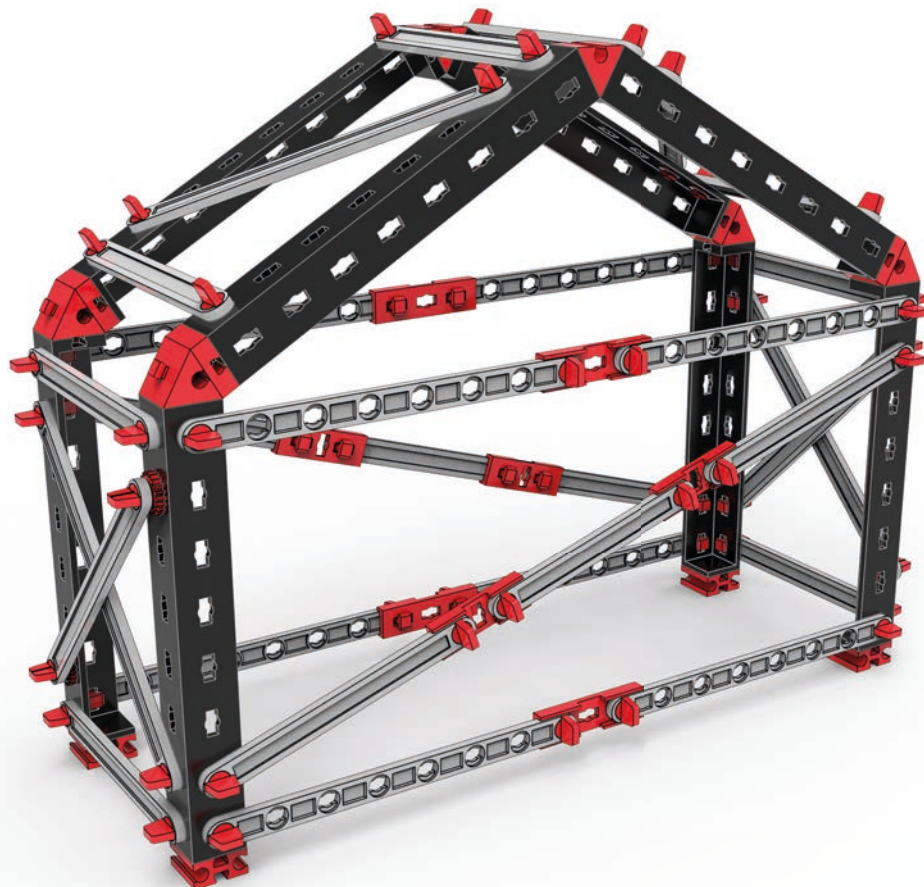
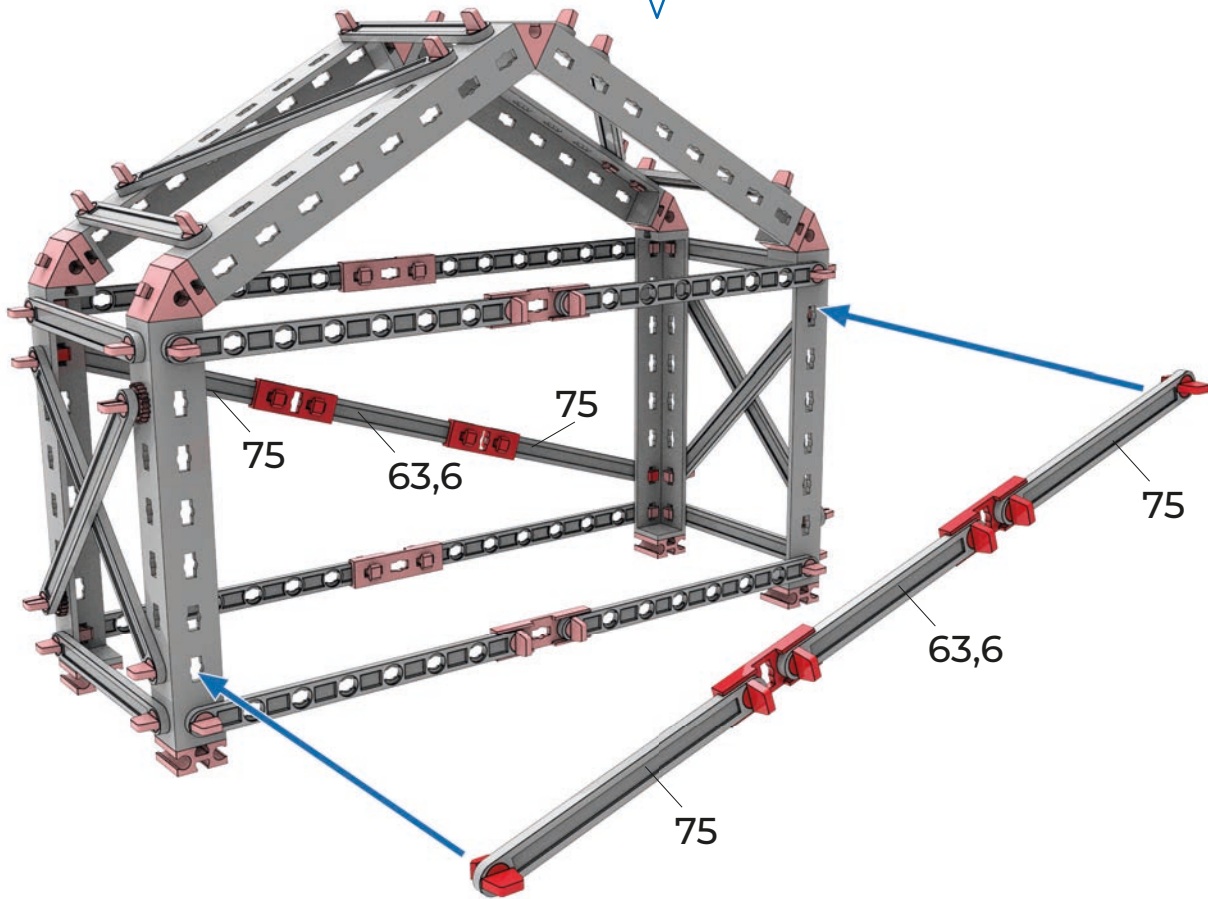
2x



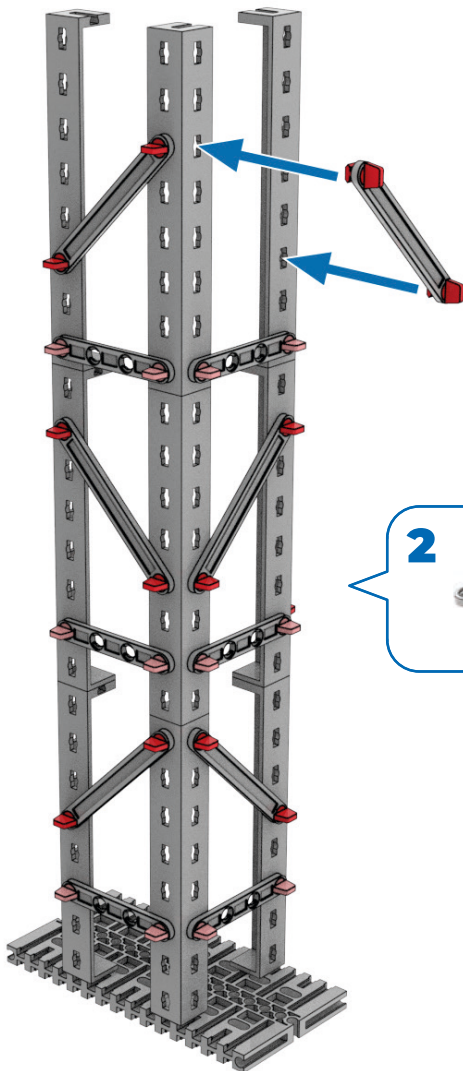
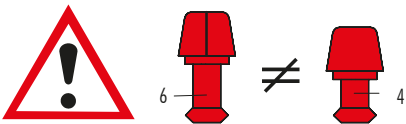
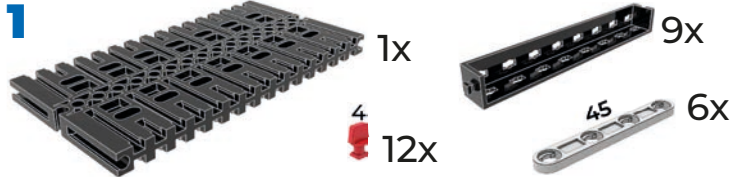
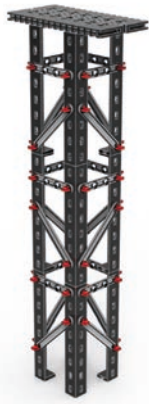
4x



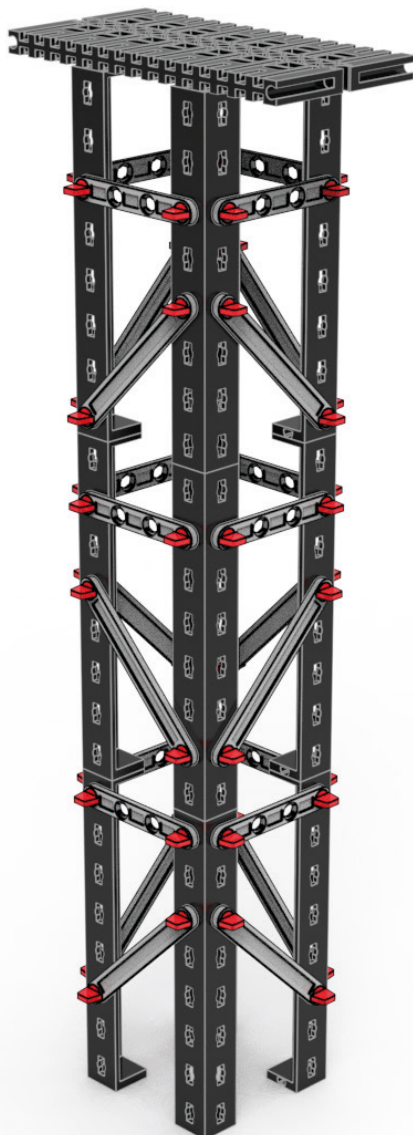
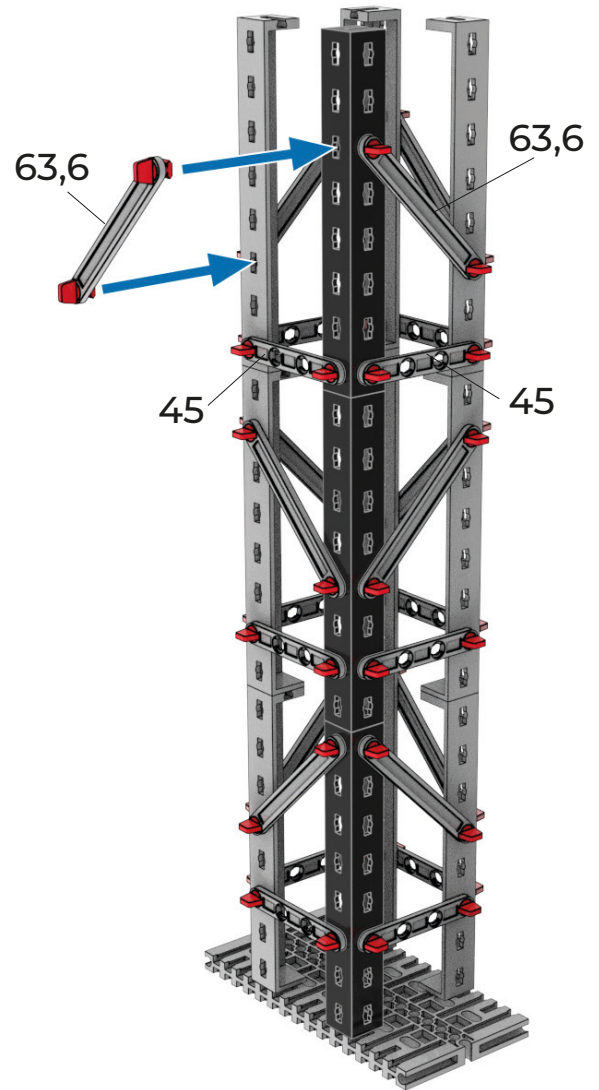
12x



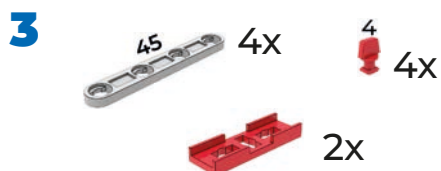
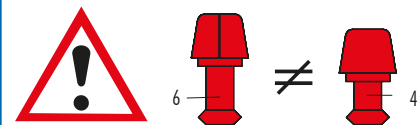
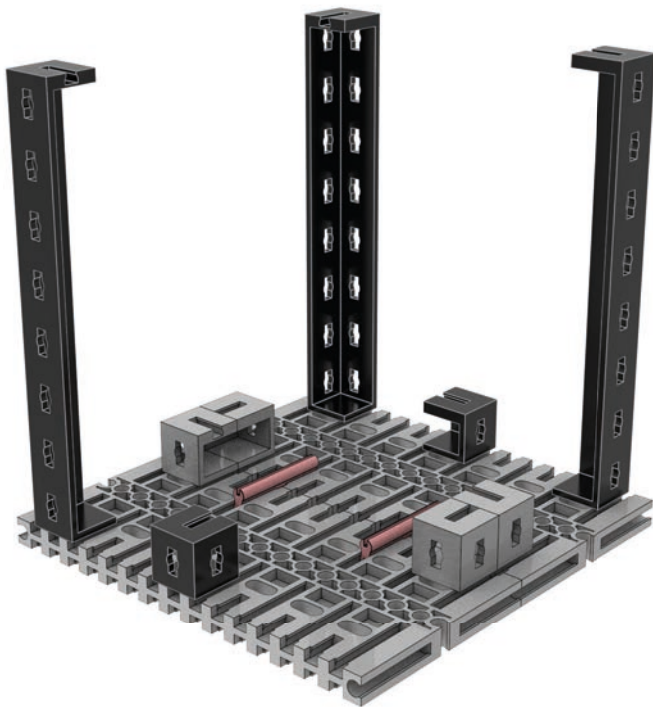
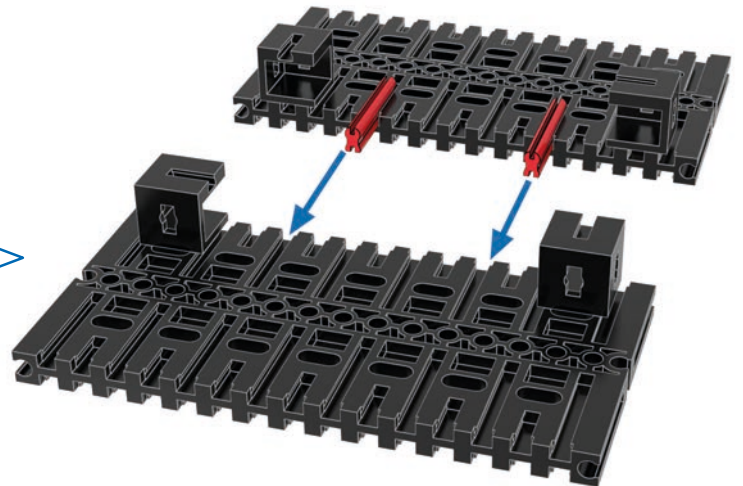
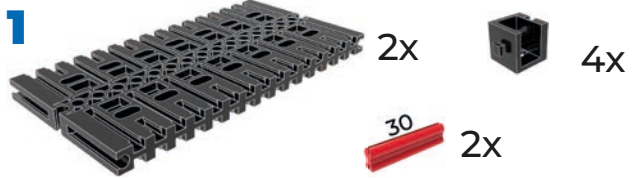
Turm
 Tower
 Tour
 Toren
 Torre
 Torre
 Torre
 Башня
 塔楼

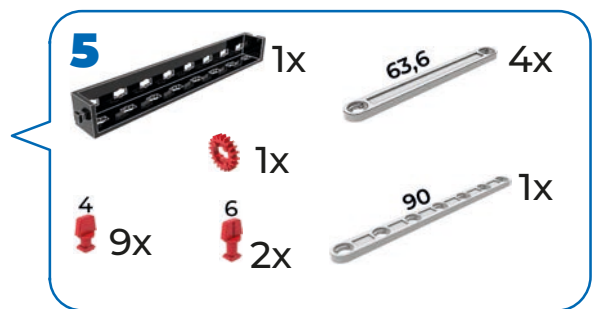
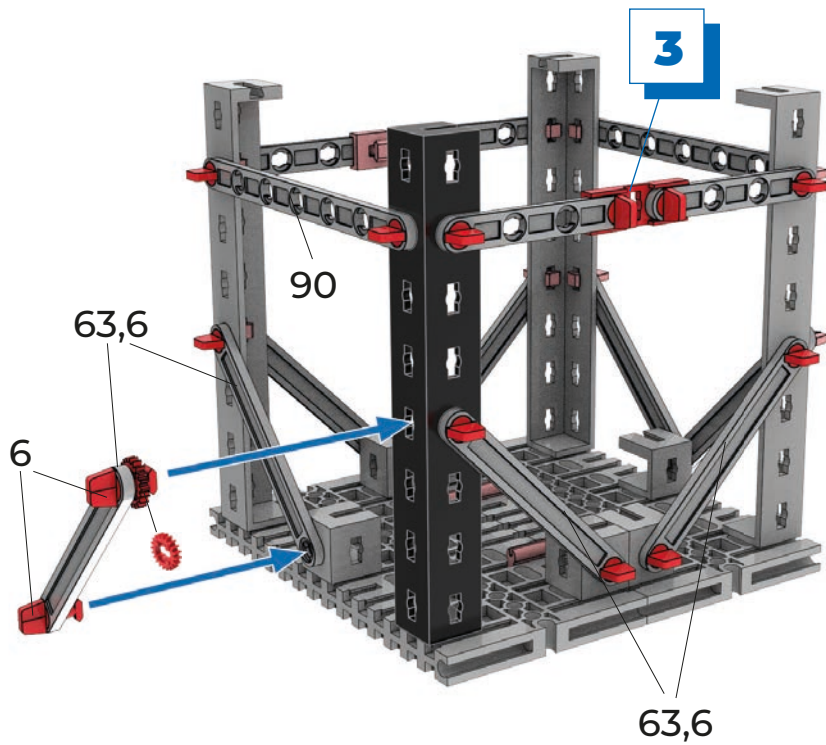
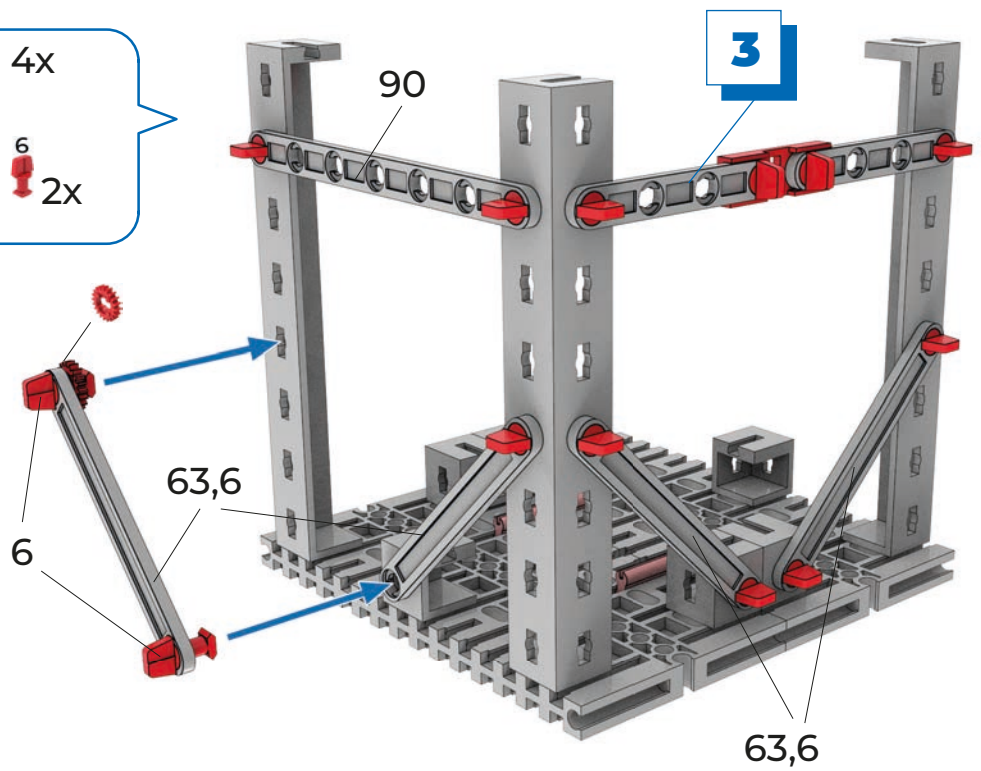
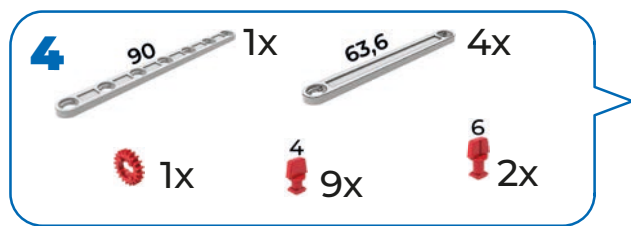


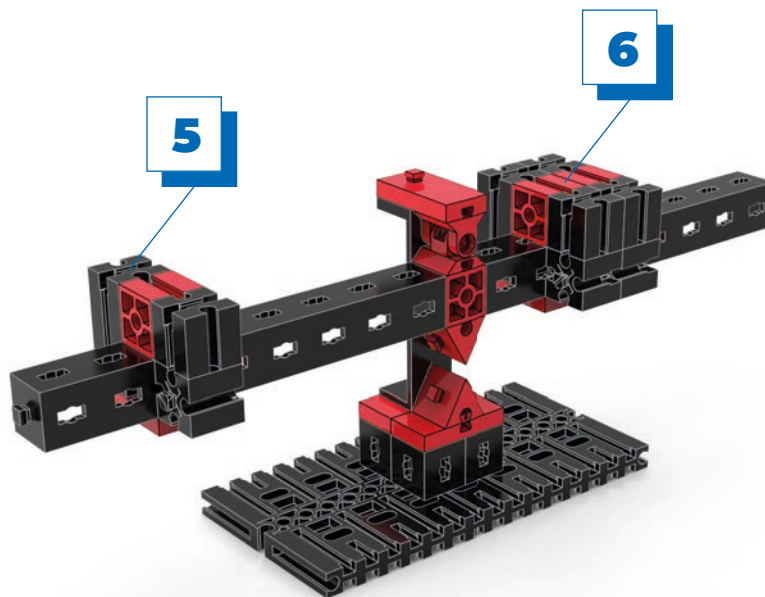
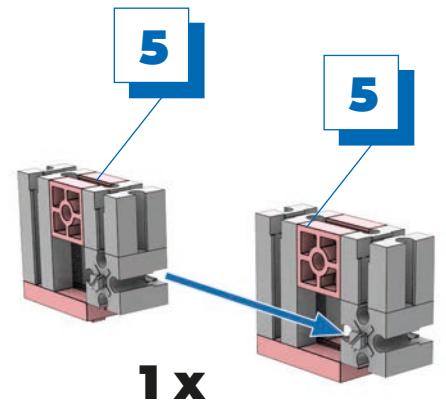
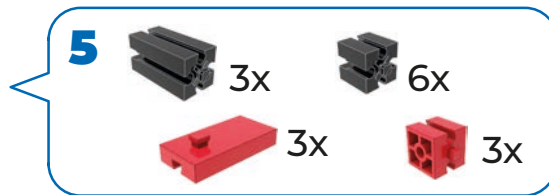
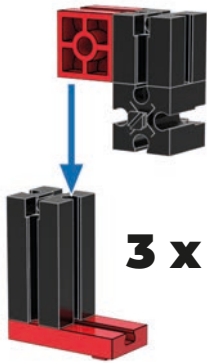
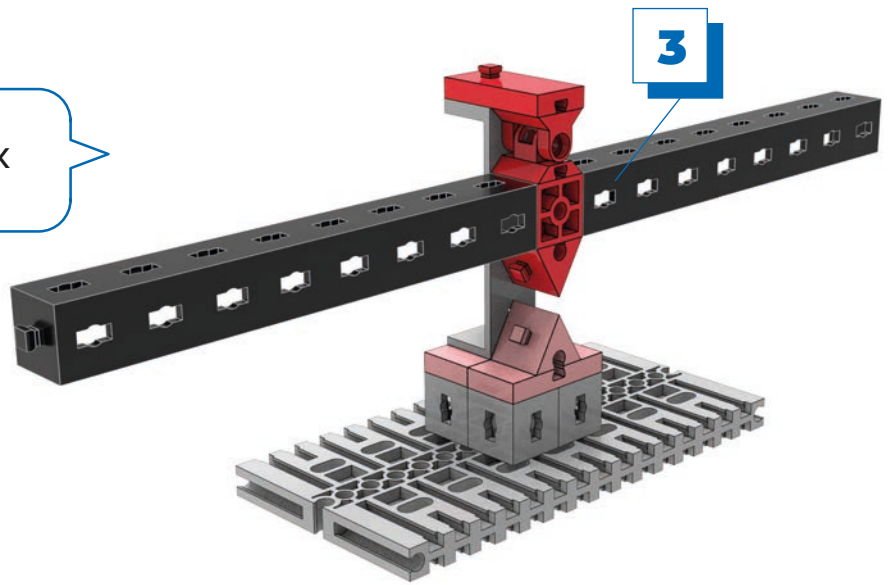
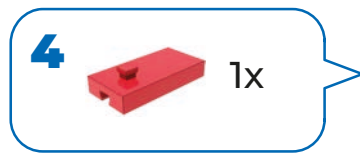
3



Tisch
Table
Table
Tabel
Cuadro
Tabela
Tabella
Стол
表



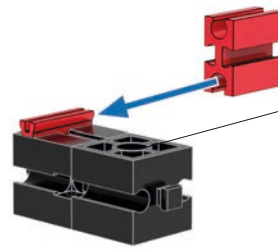




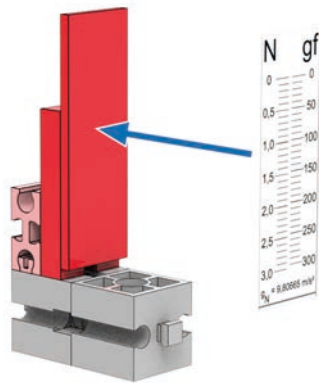


Federwaage
Spring scale
Balance à ressort
Lente schaal
Báscula de resorte
Escala de mola
Scala a molla
пружинные весы
春天的尺度

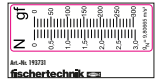
1  1x  1x  1x  1x




 Große Bohrung
 Large drilling
 Alésage large
 Grote boring
 Perforación grande
 Orificio grande
 Grande foro
 Большое отверстие
 大孔

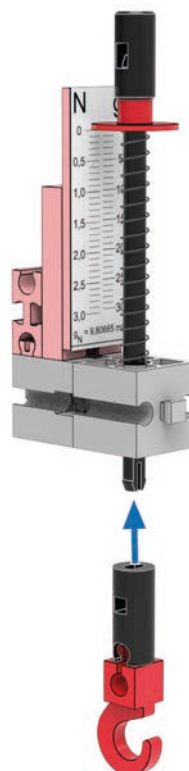
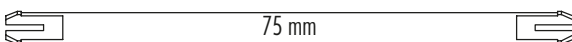


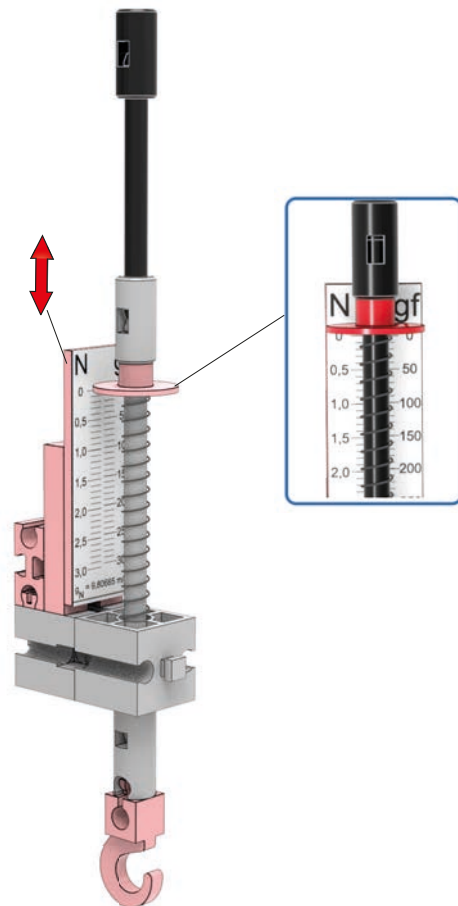
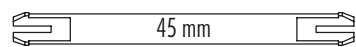
2  1x  1x  1x



fischertechnik

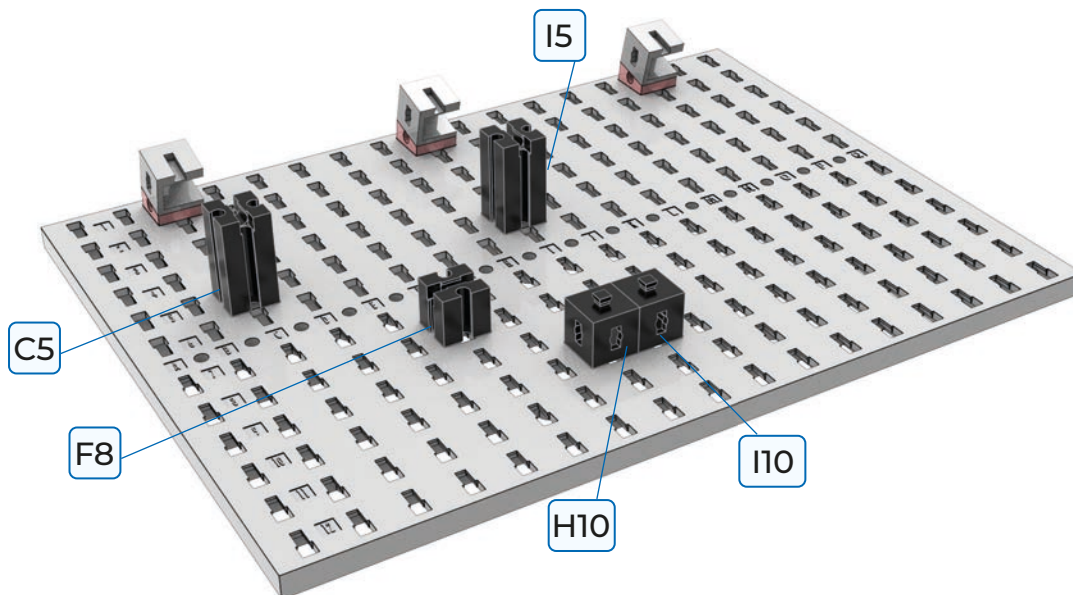
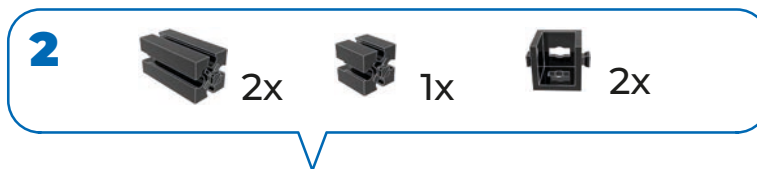
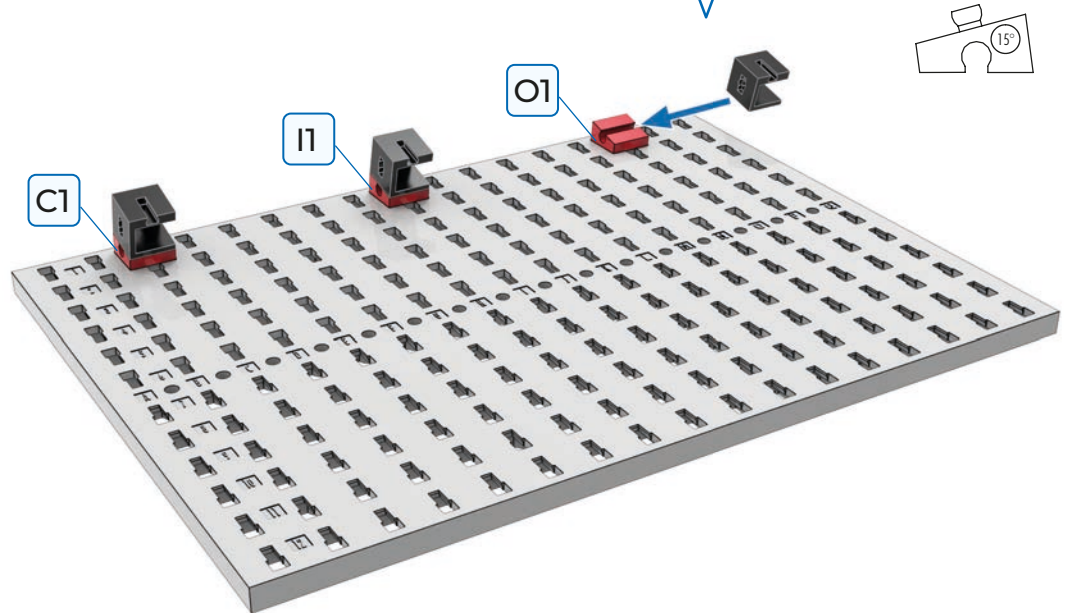
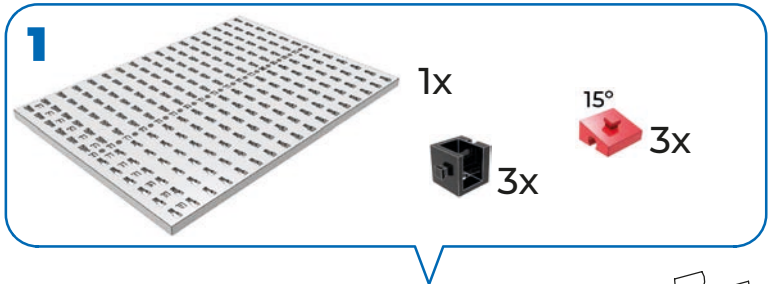
3  1x  1x  1x  1x  1x  1x



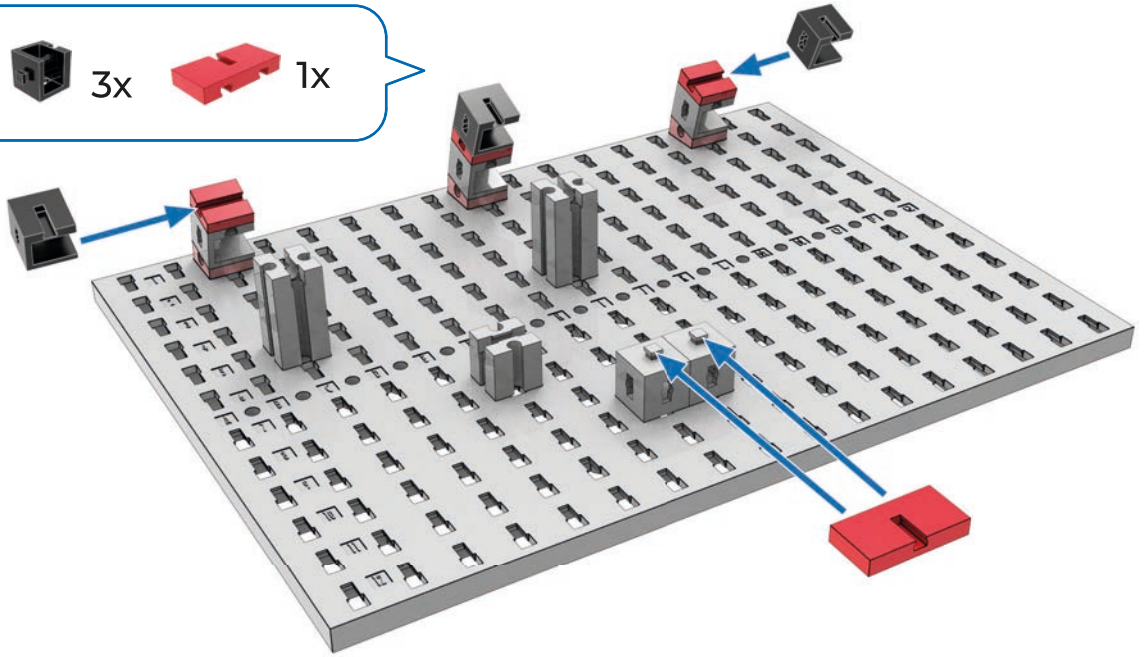




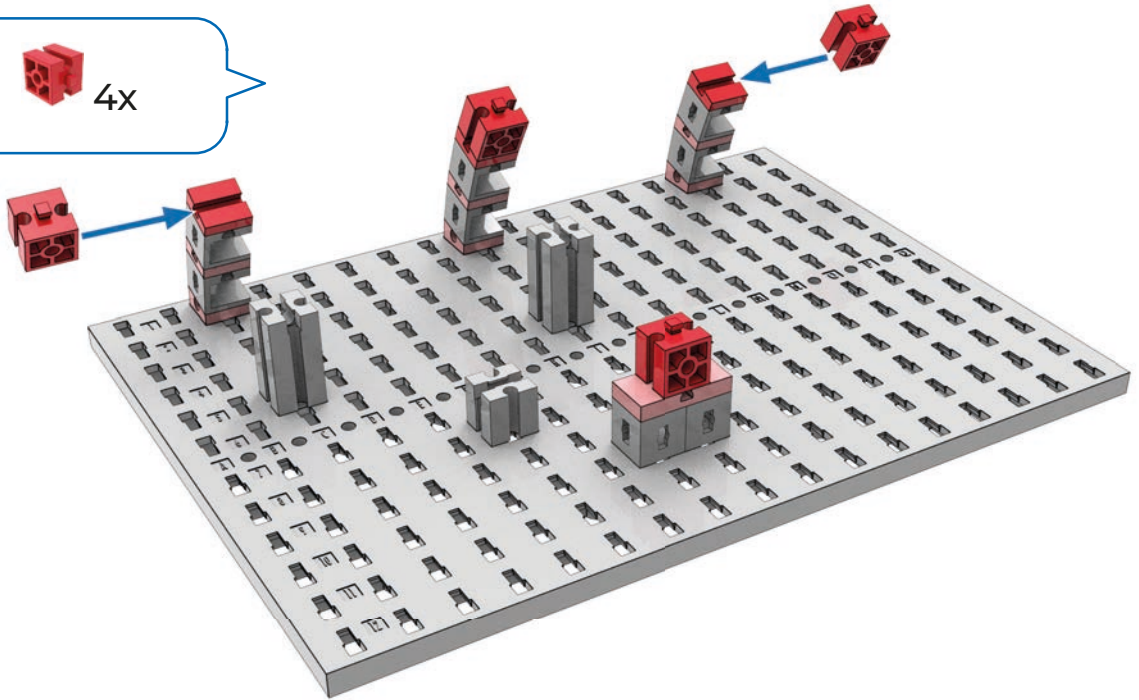
Scheibenwischer - gleichläufig
Windshield wiper - concurrent
Essuie-glace - synchronisé
Ruitenwissers - gelijklopend
Limpiaparabrisas - concurrente
Limpador de pára-brisas - concorrentes
Tergicristalli - concorrenti
Стеклоочистители ветрового стекла - одновременные
并行雨刮器



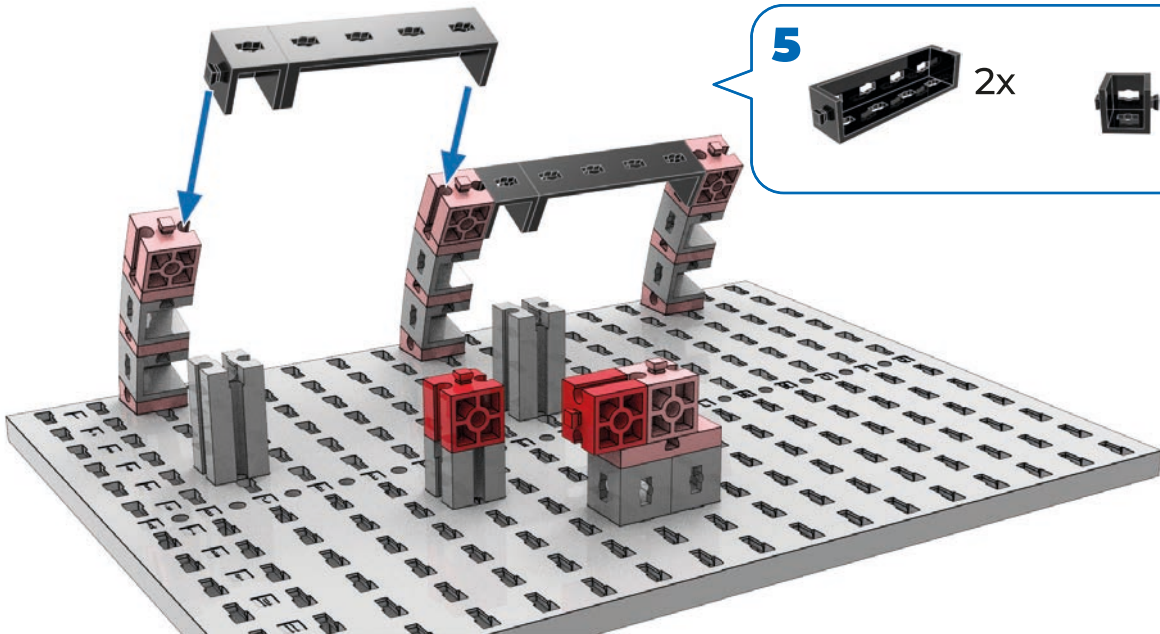
- 3** 7,5° 3x 3x 1x

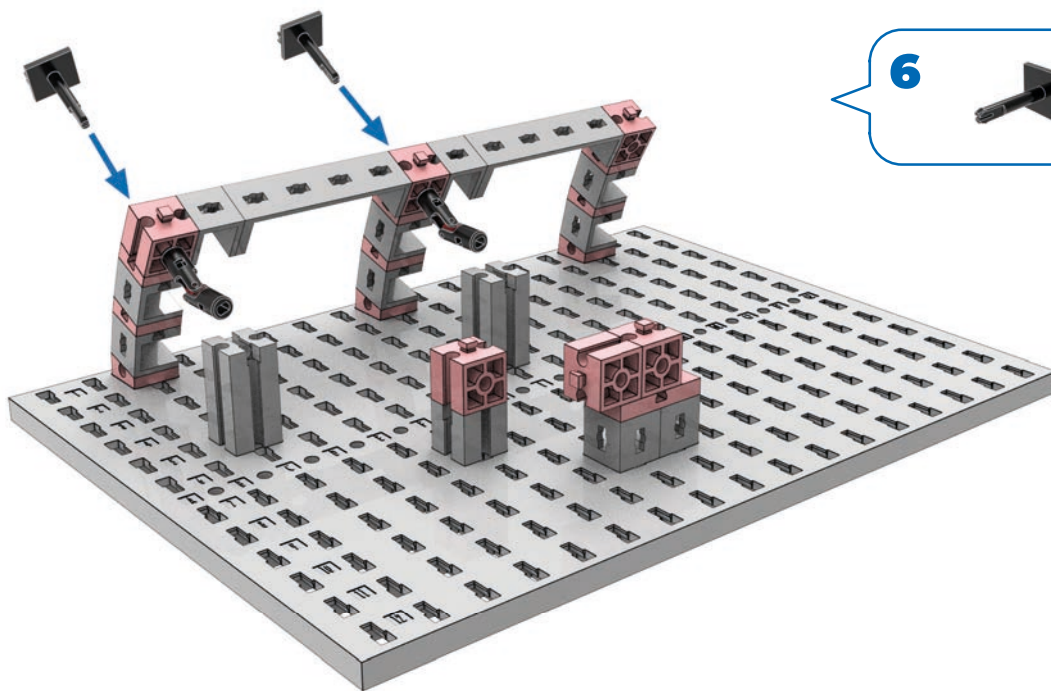


- 4** 7,5° 3x 4x



- 5** 2x 2x 2x





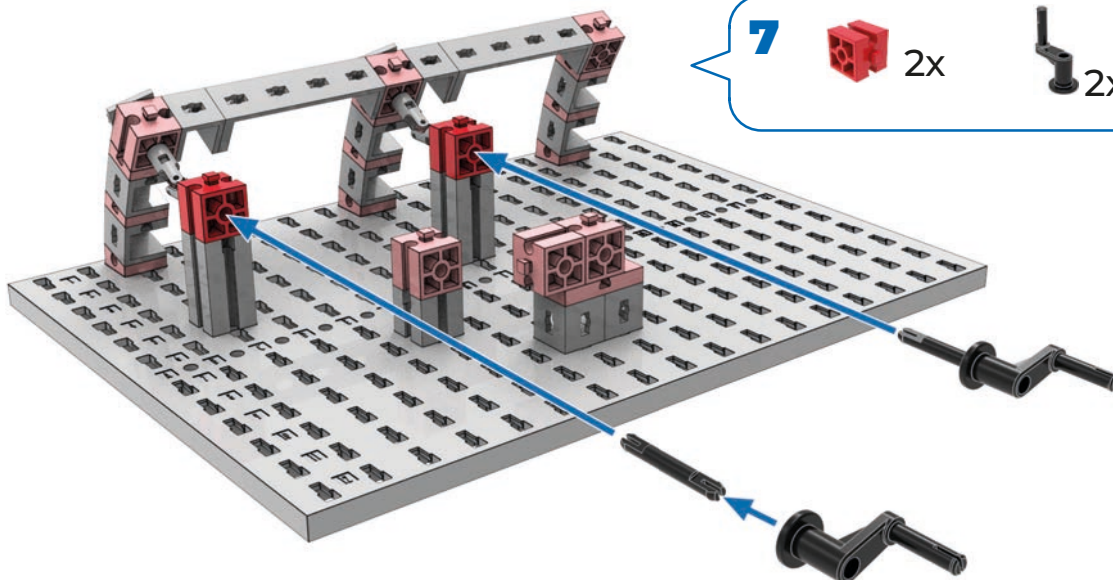
6



2x



2x



7



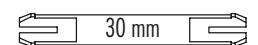
2x



2x



2x



8



2x



1x



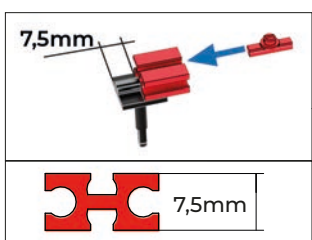
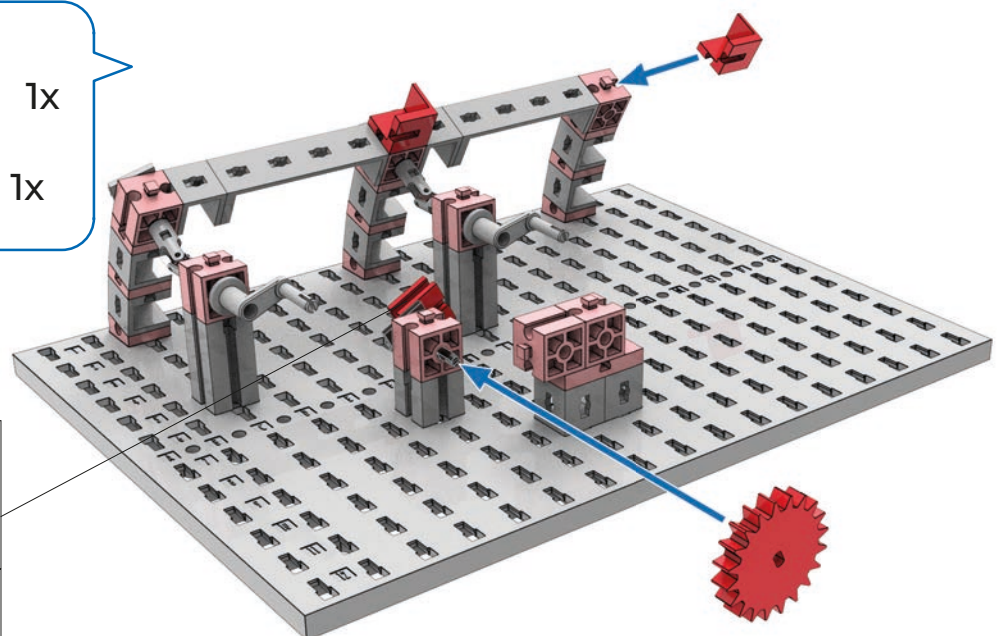
1x



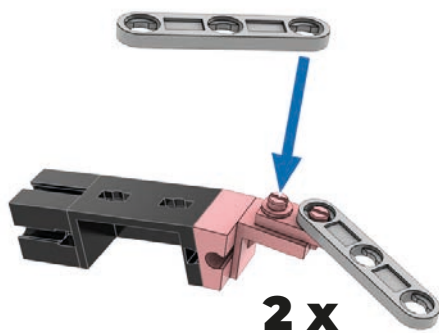
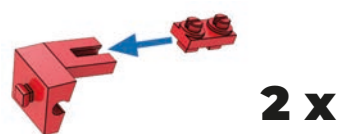
1x



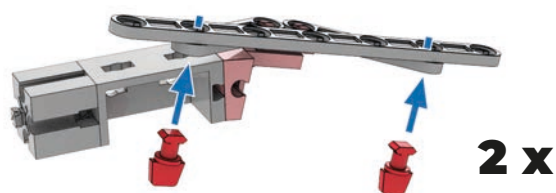
1x



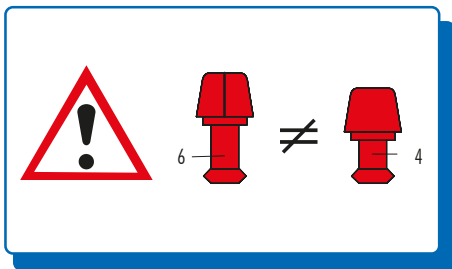
9 15° 2x 2x 2x



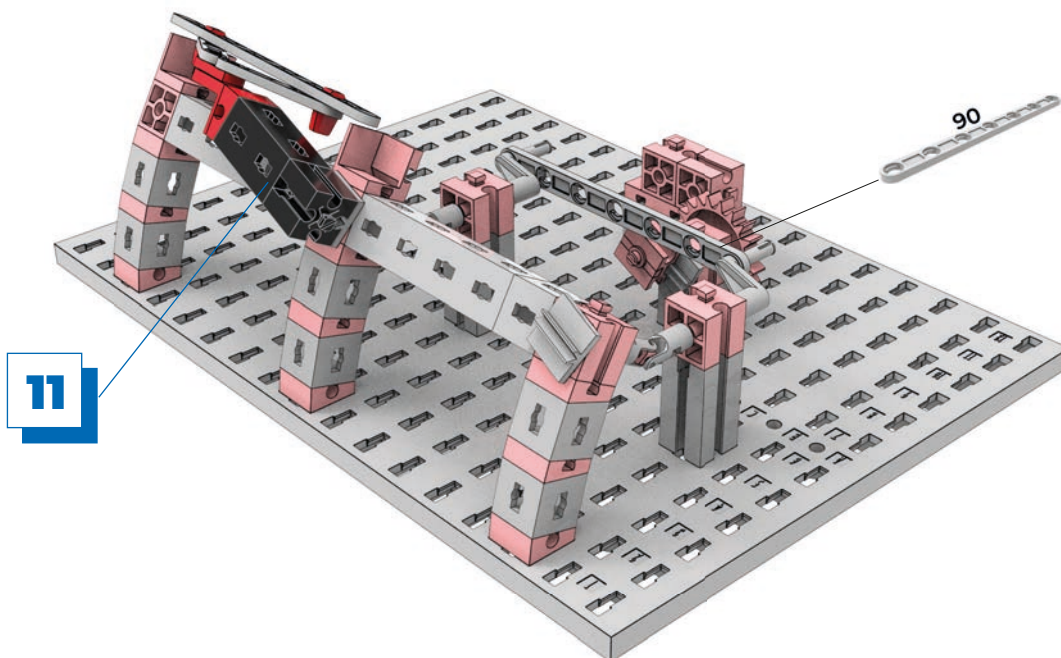
10 2x 2x 30 4x

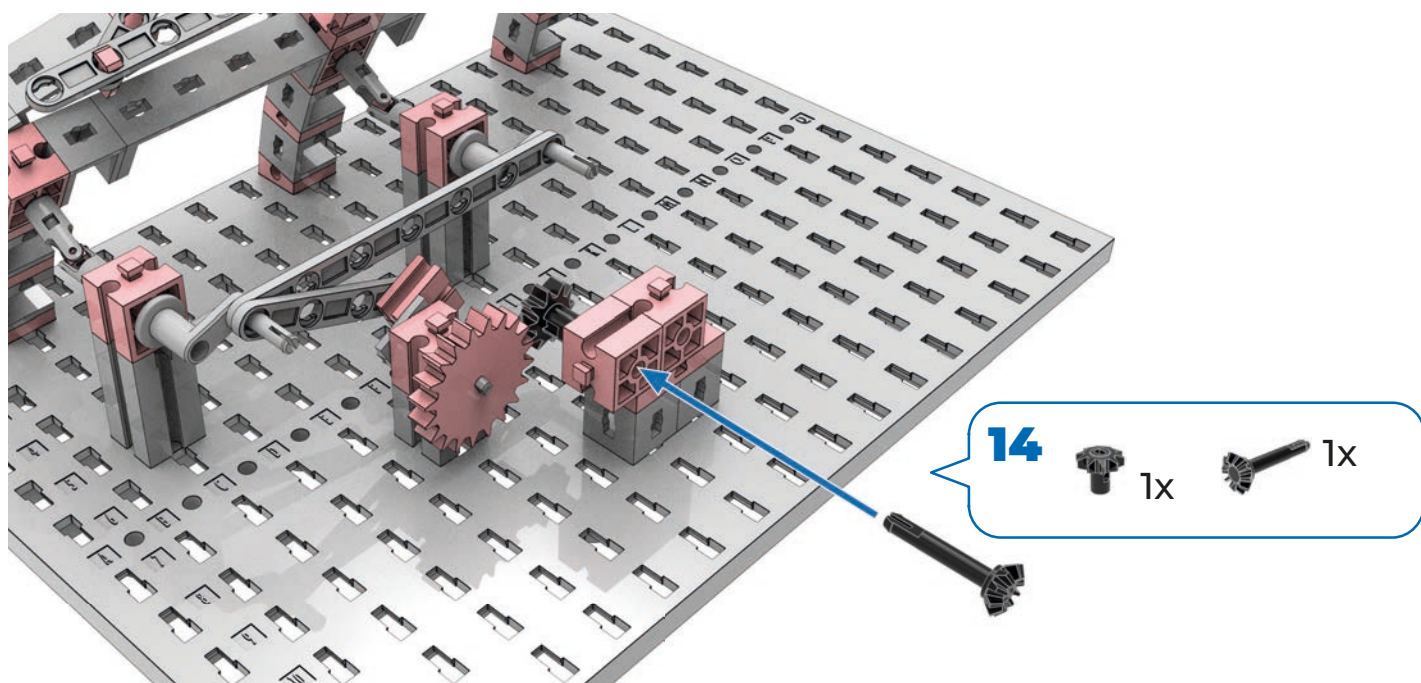
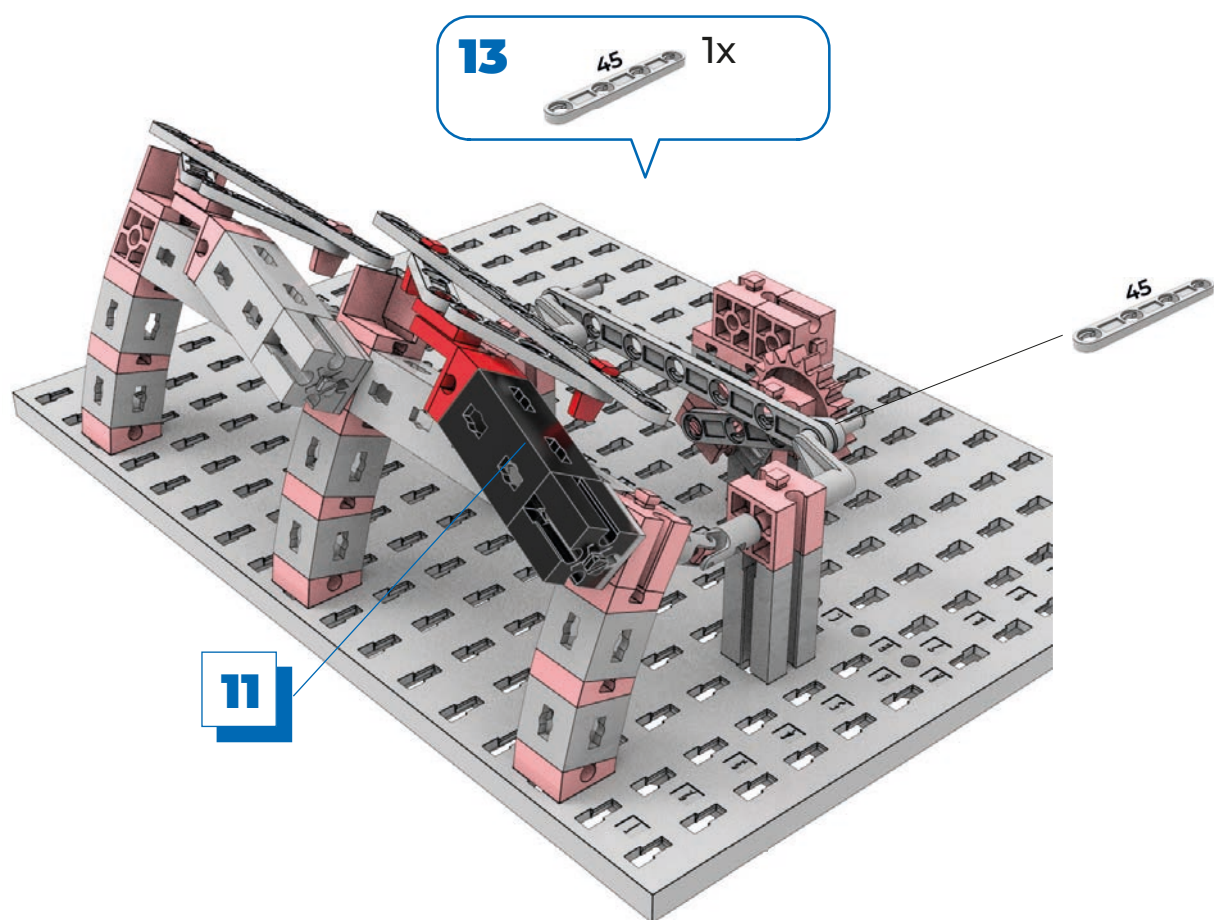


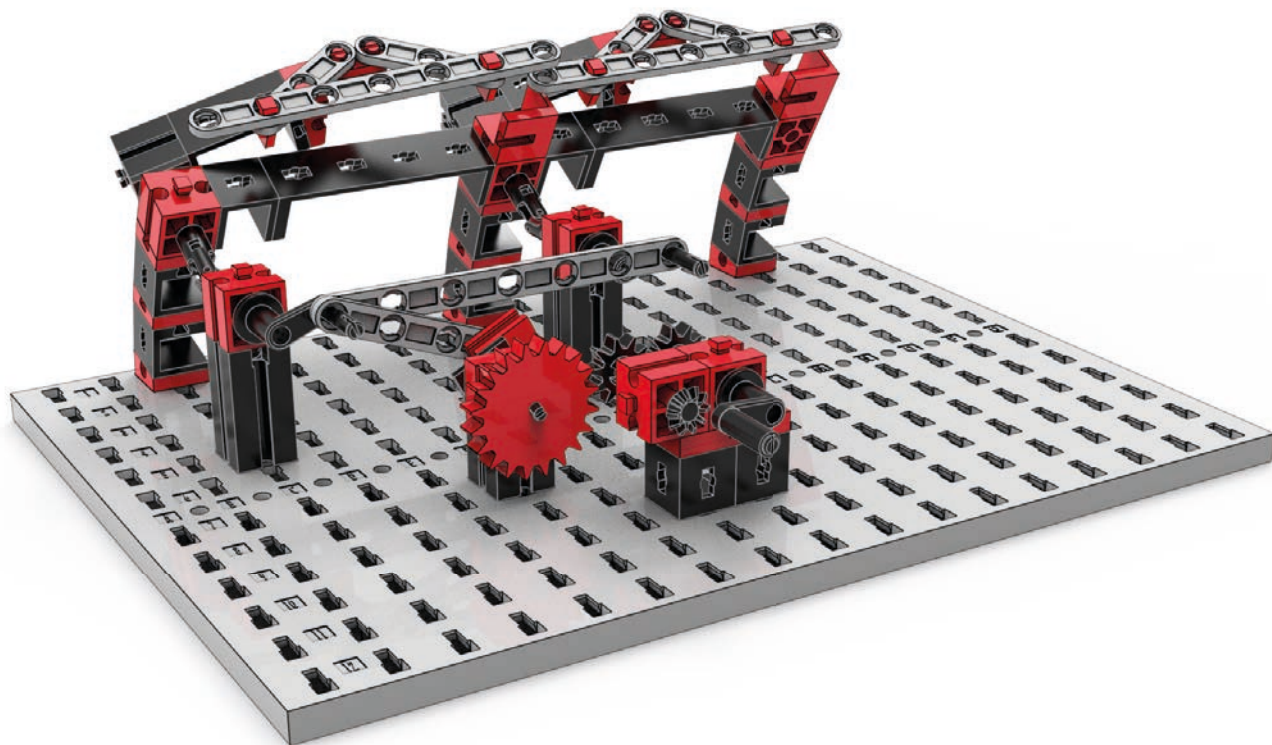
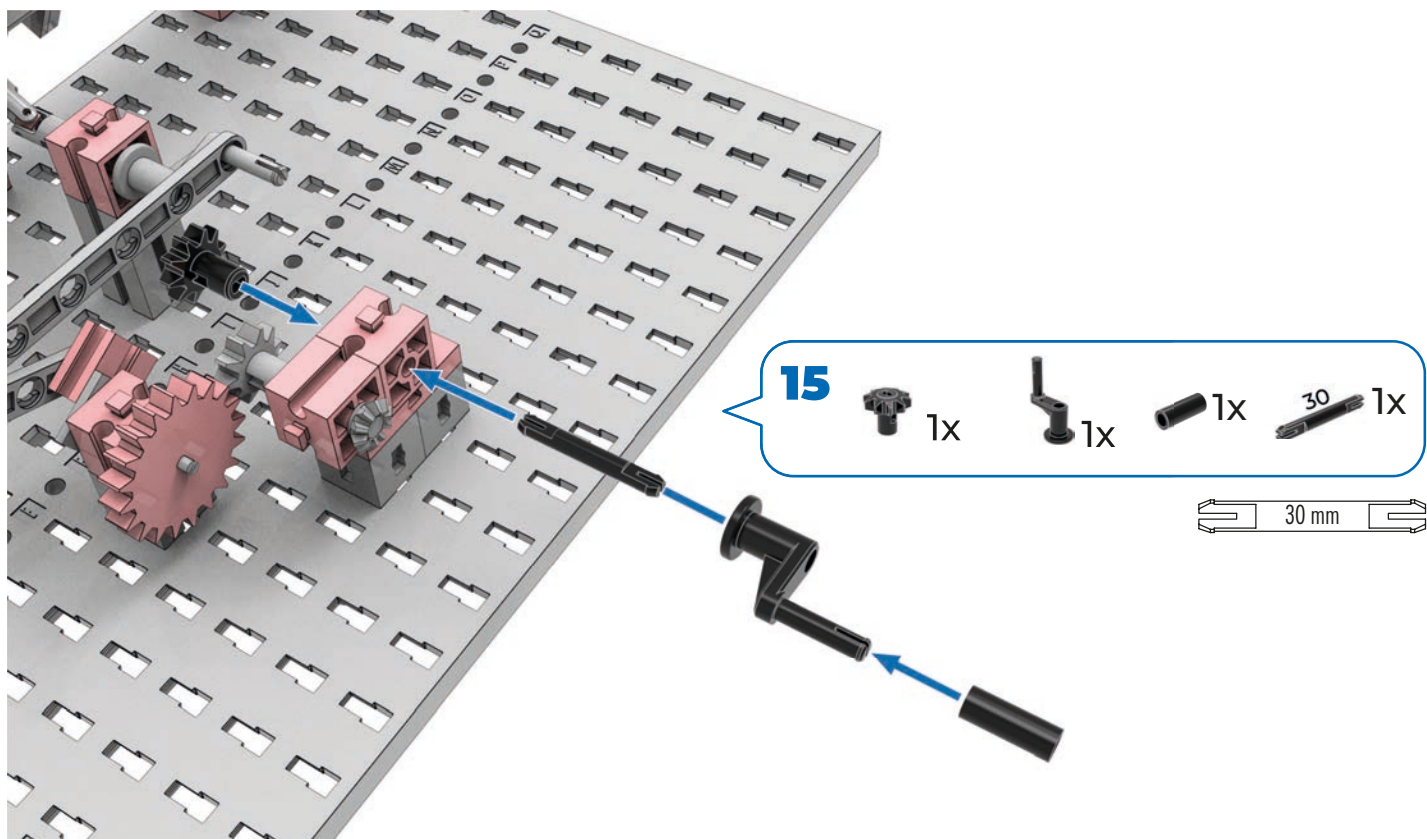
11 90 2x 4 4x



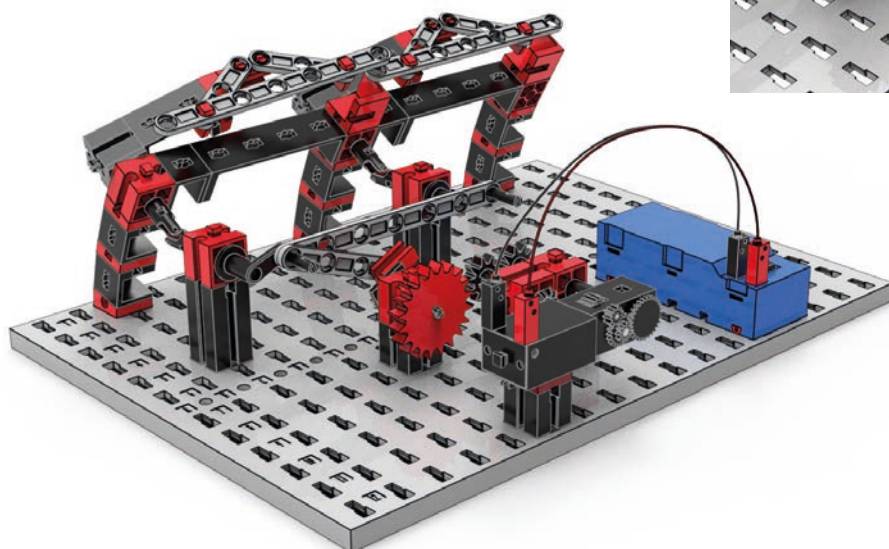
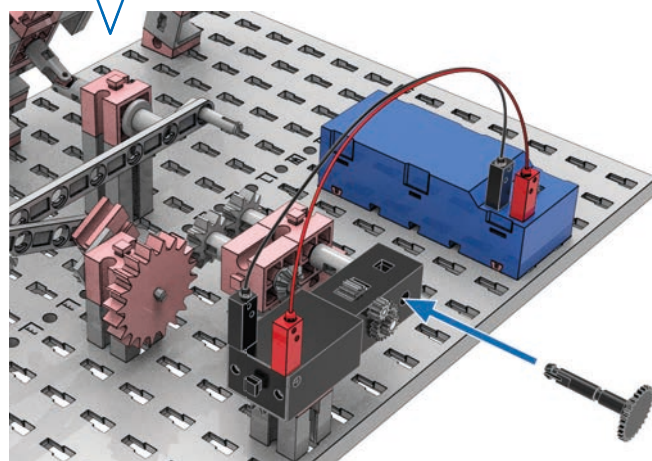
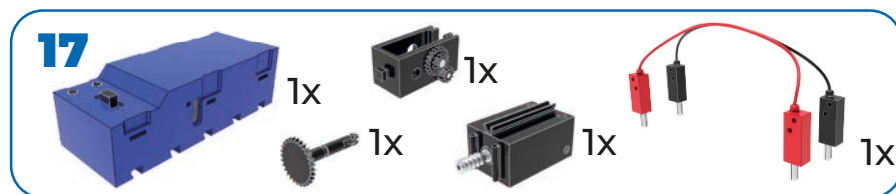
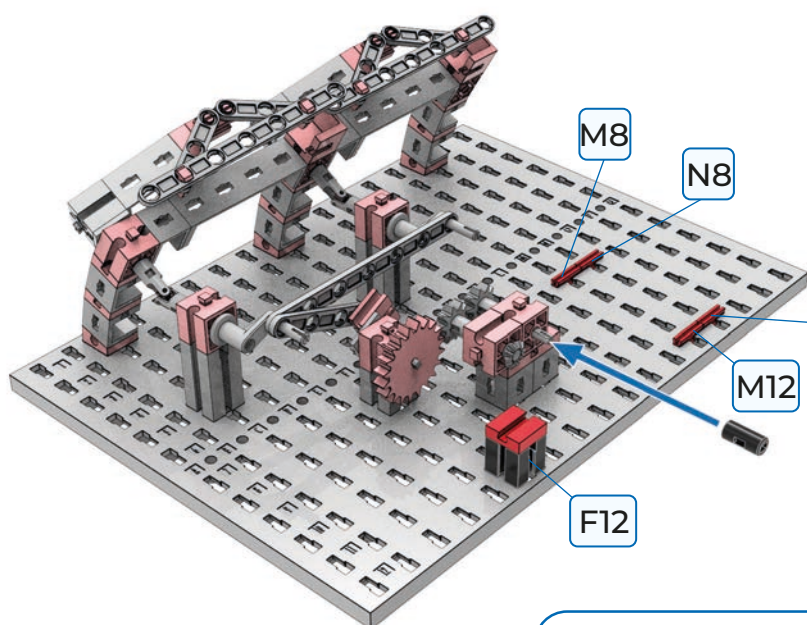
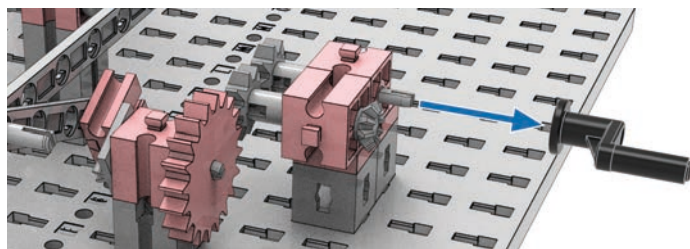
12 90 1x

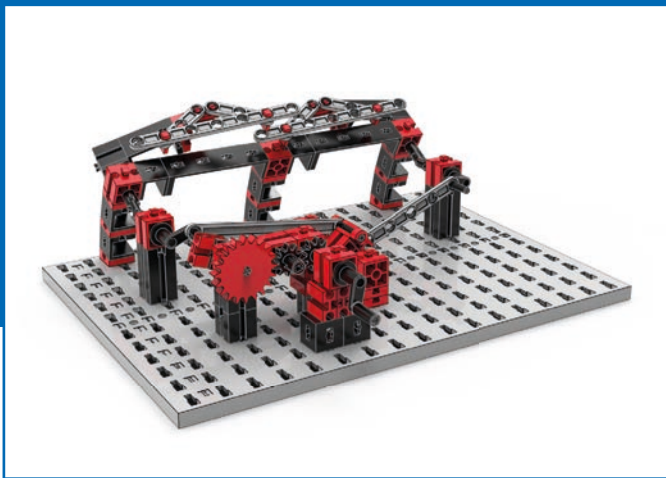




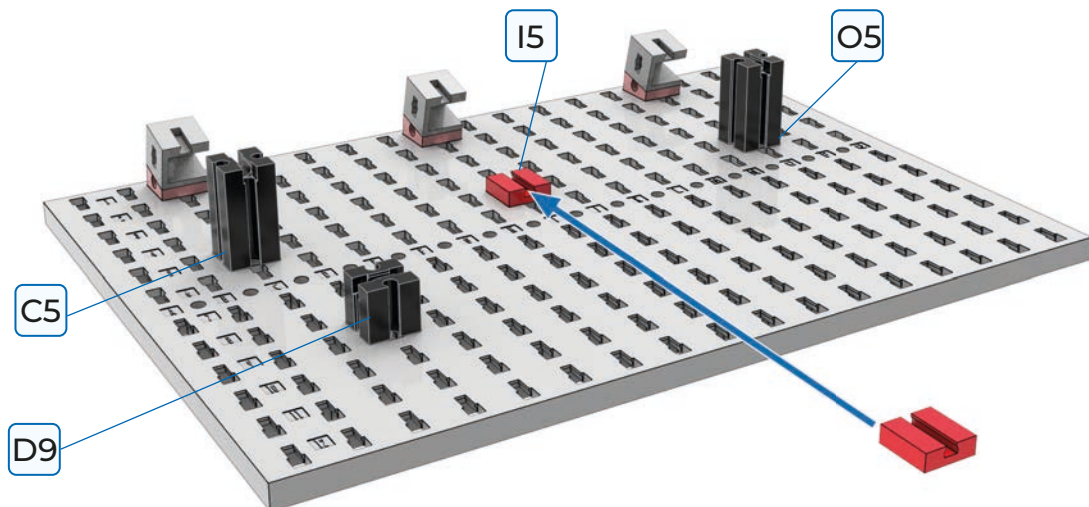
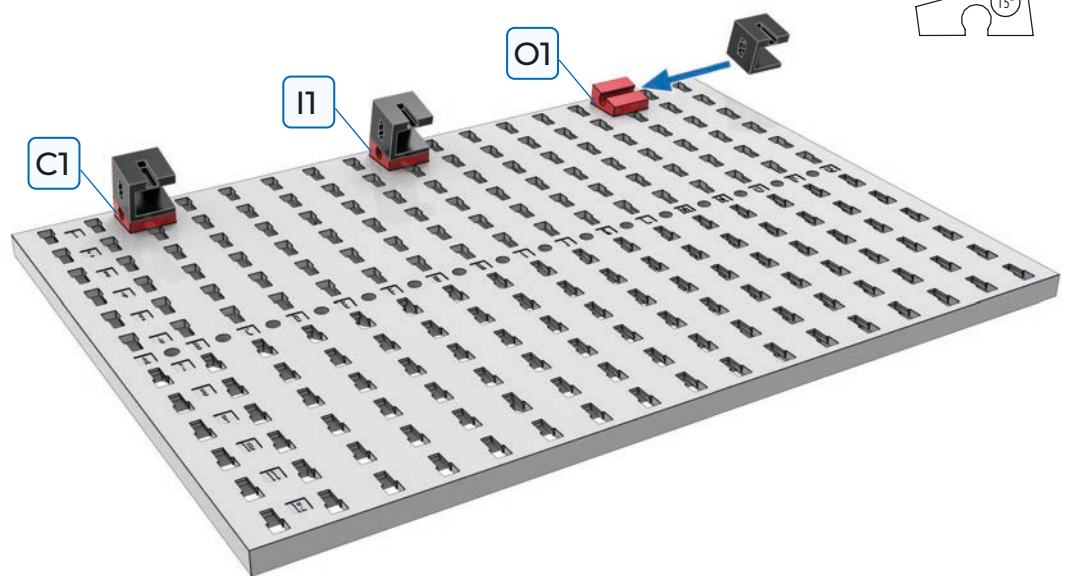
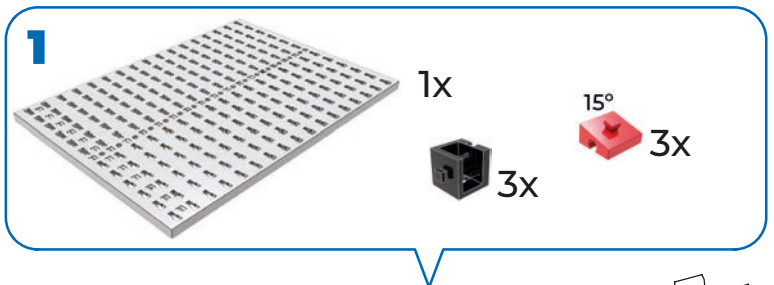


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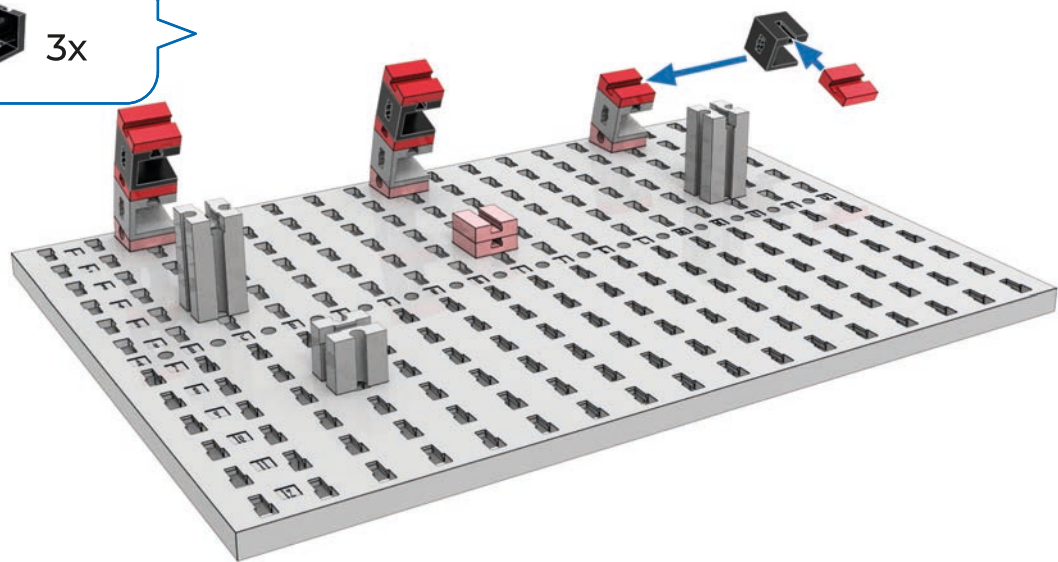
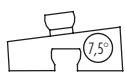




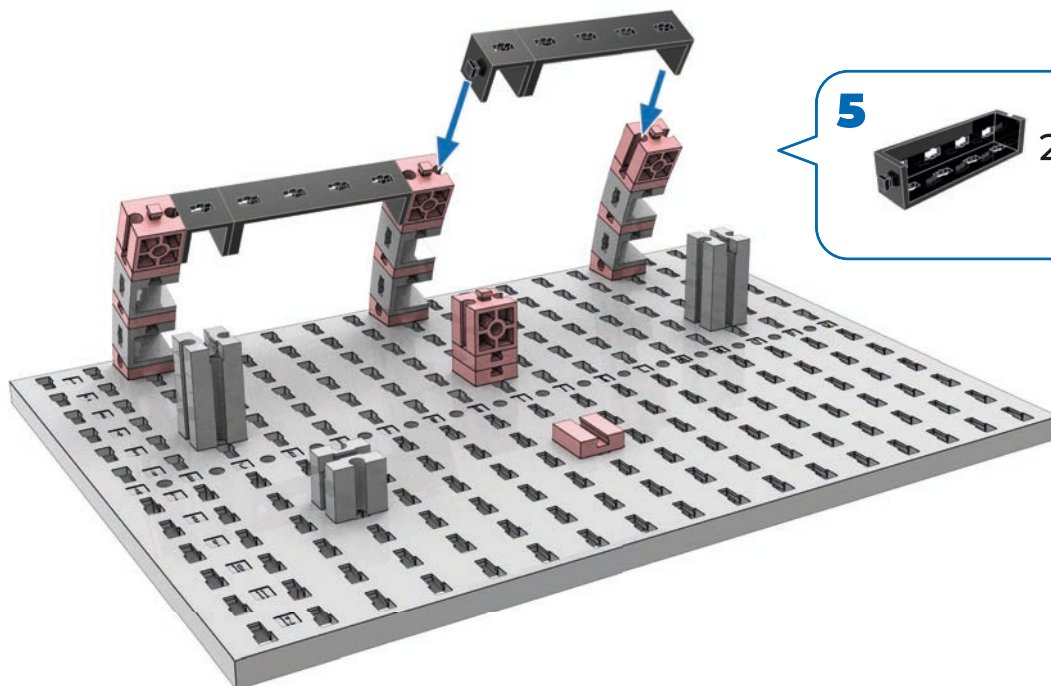
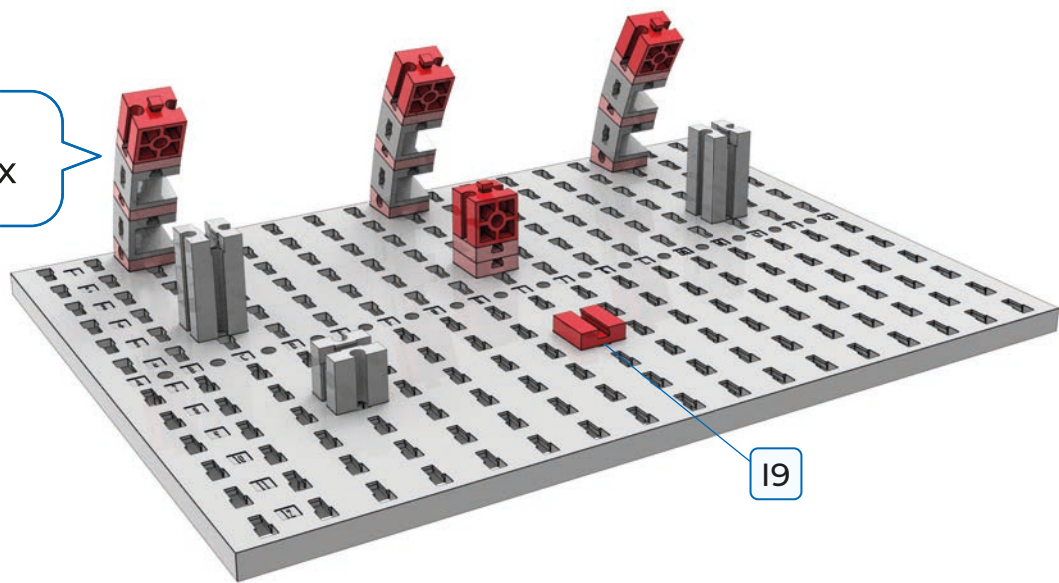
Scheibenwischer - gegenläufig
Windshield wiper - counterrotating
Essuie-glace - à contre-sens
Ruitenwisser - tegengesteld draaiend
Limpiaparabrisas - contra-rotación
Limpador de pára-brisas - contra-rotativo
Tergicristalli - controrotanti
Стеклоочистители ветрового стекла - ротивовращающиеся
对刮式雨刮器



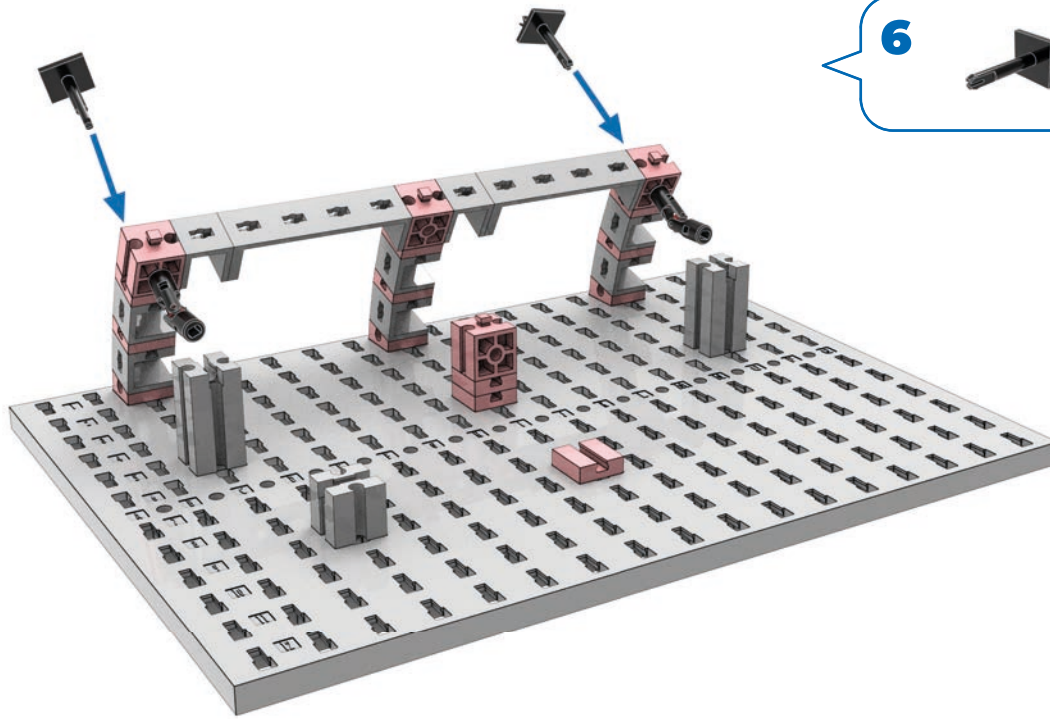
3 7,5° 6x 3x



4 1x 4x



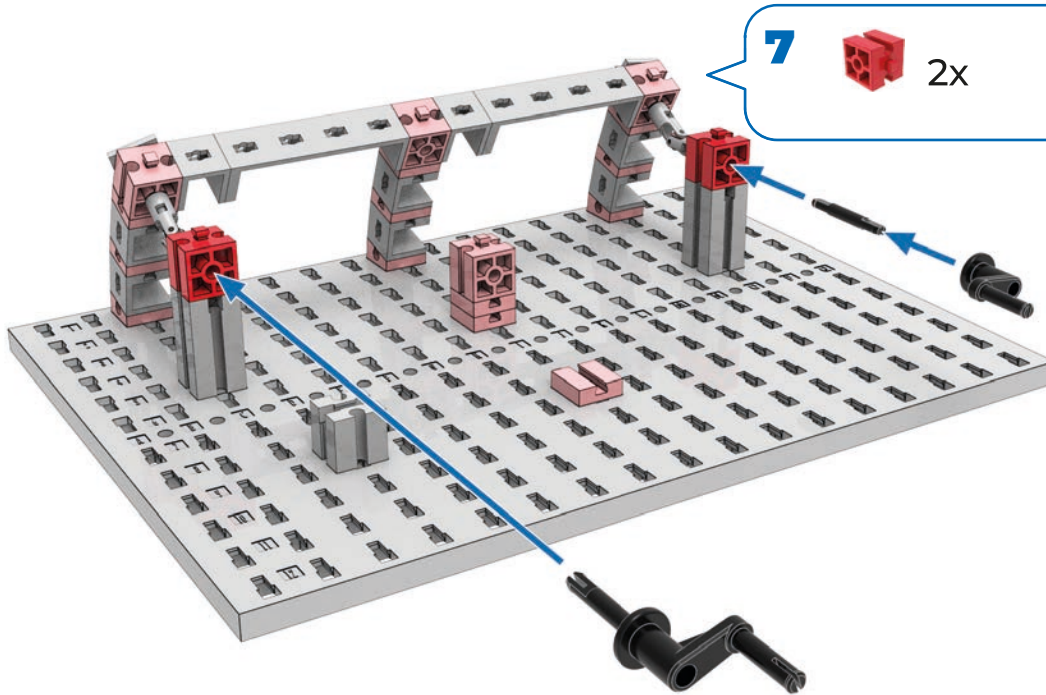
5 2x 2x



6

2x

2x



7

2x

2x

2x

30 mm

8

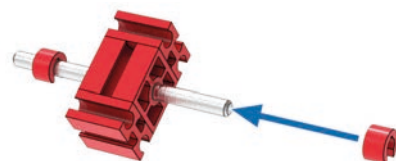
1x

60 1x

2x

2x

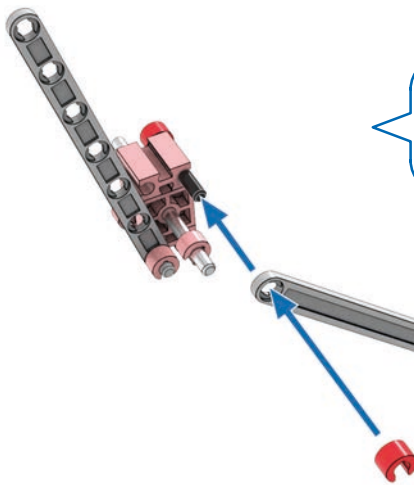
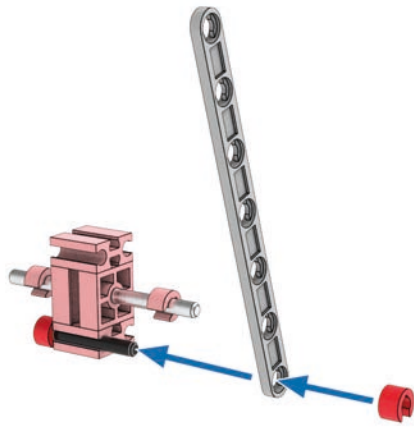
60 mm



9

30 1x 90 1x 2x

30 mm

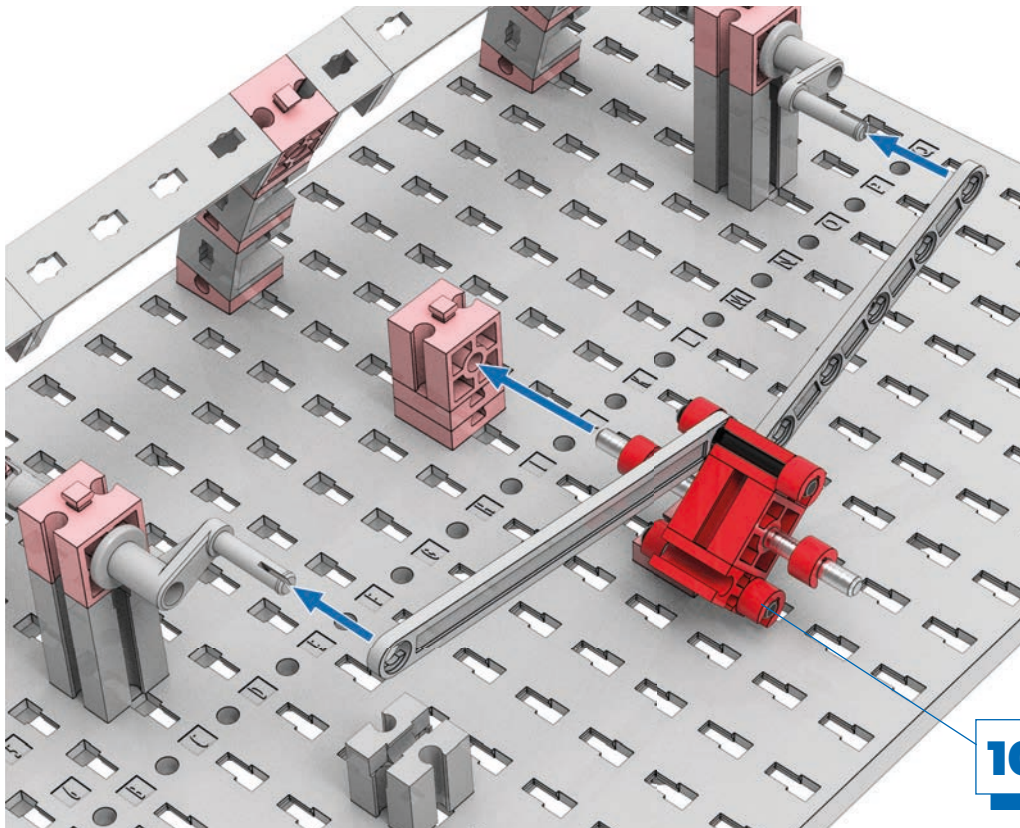


10

84,8 1x 2x 30 1x

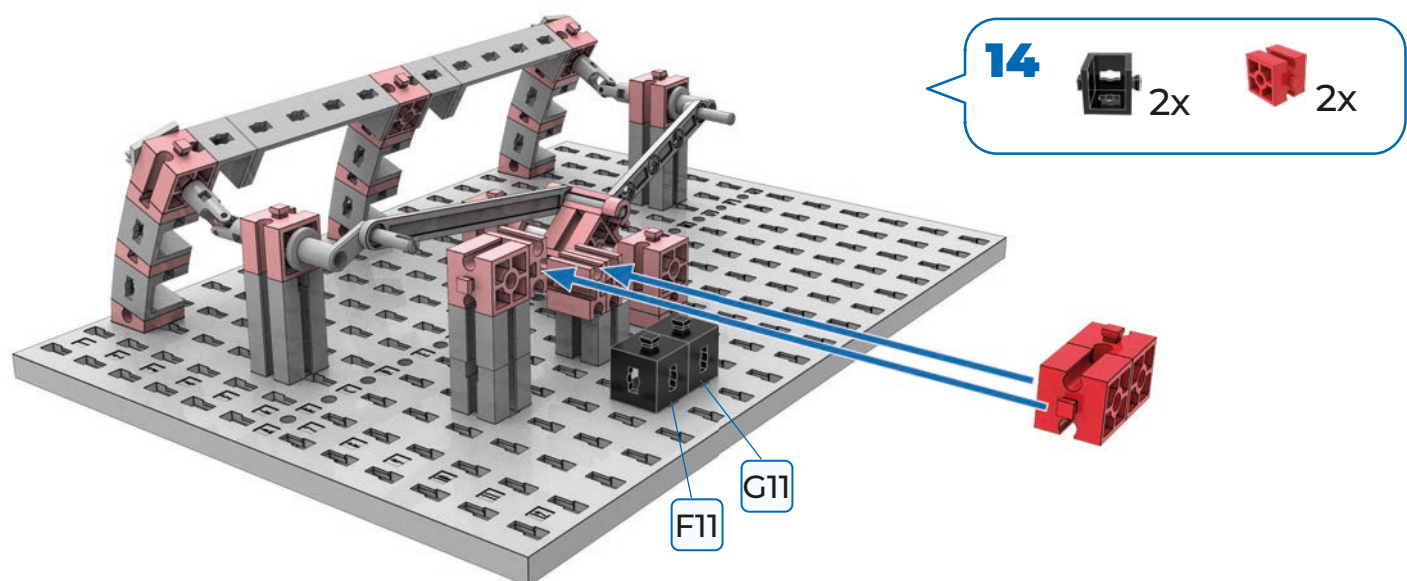
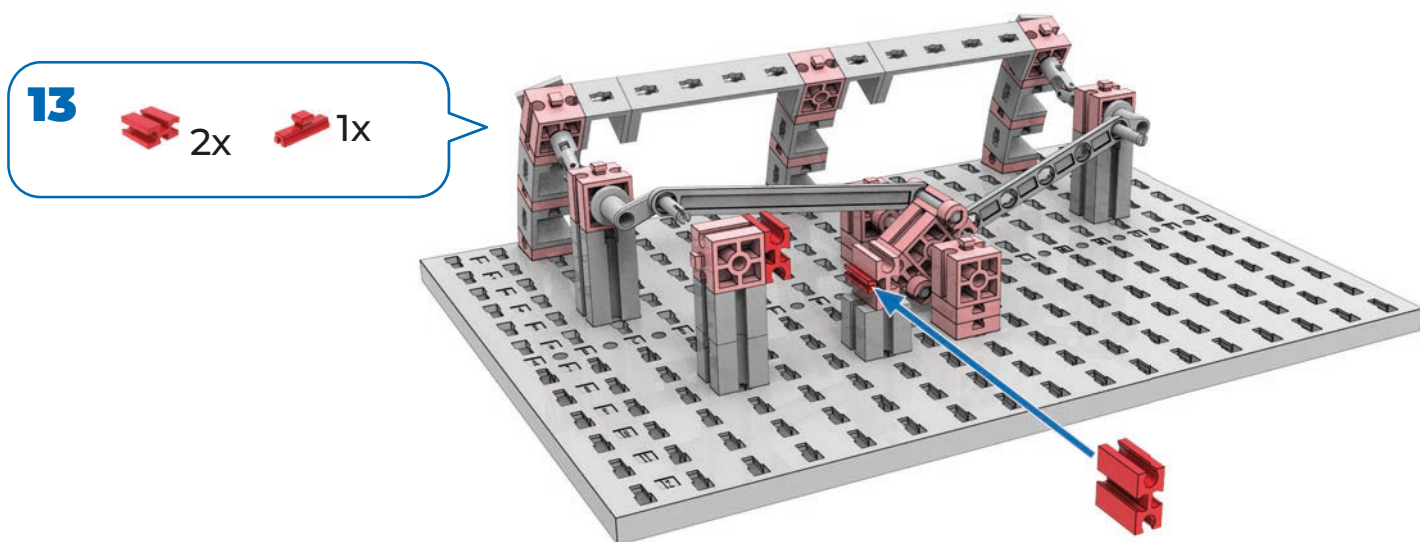
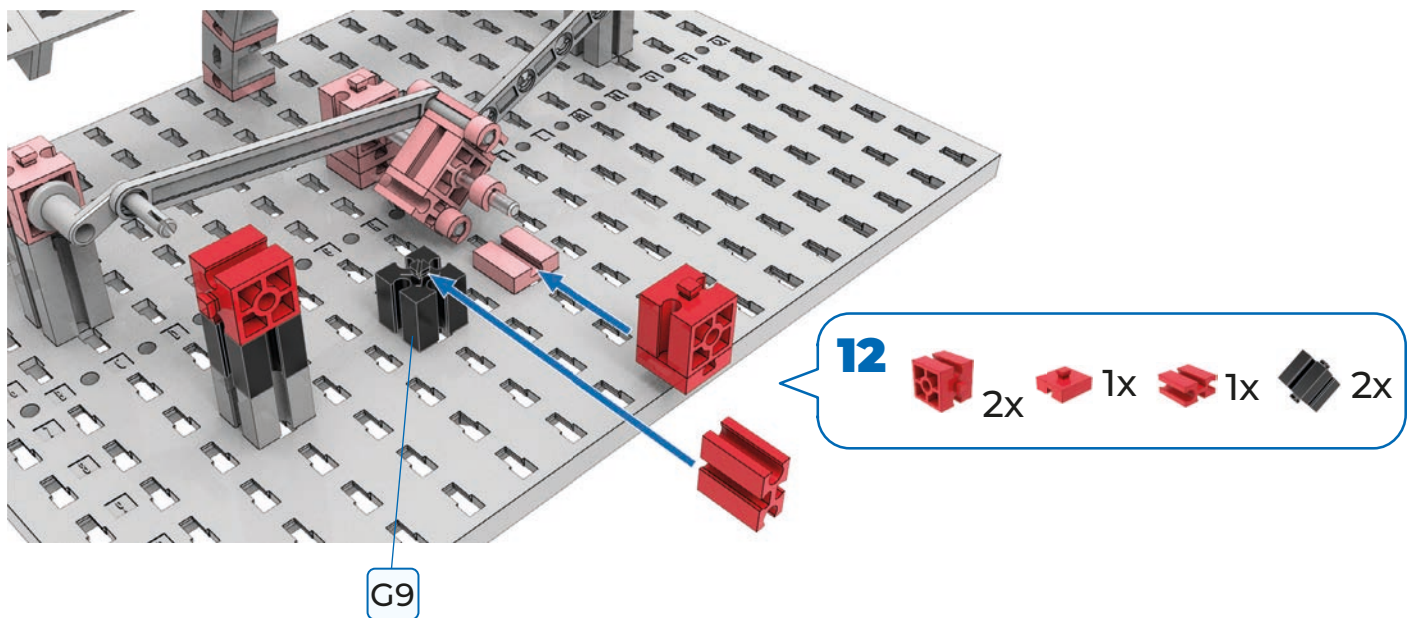
30 mm

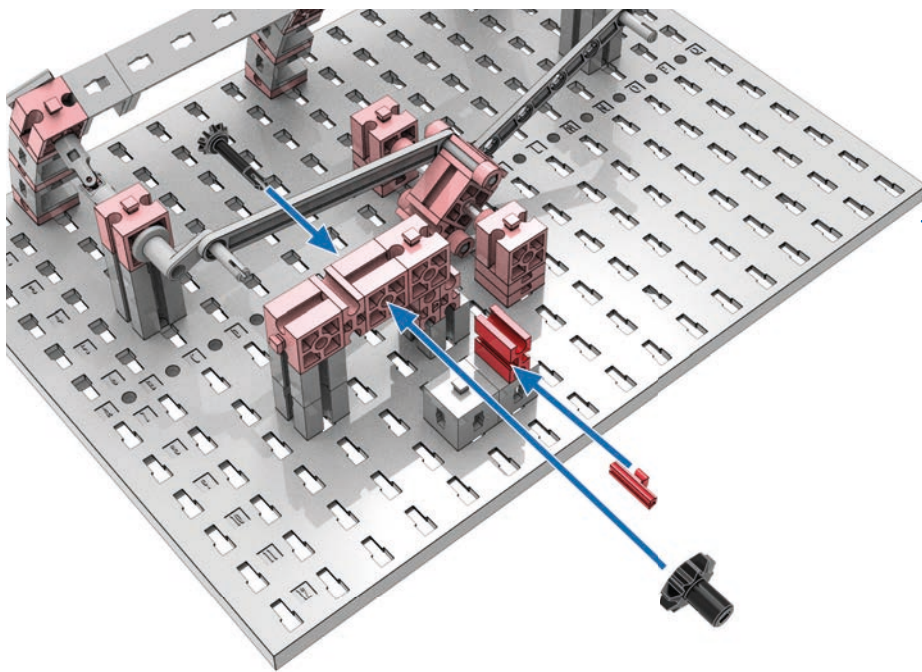
84,8



11

10





15



1x



1x



1x



1x

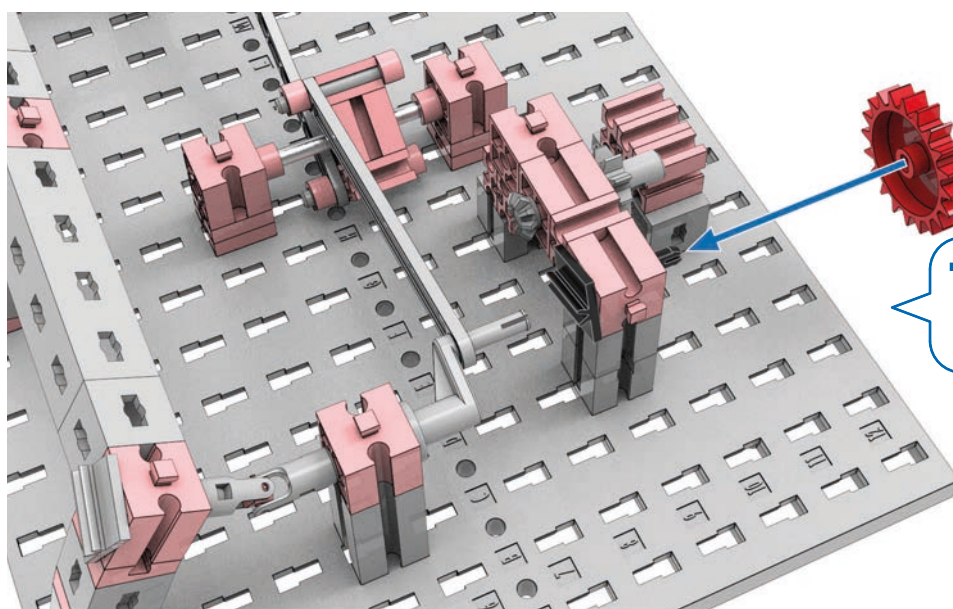
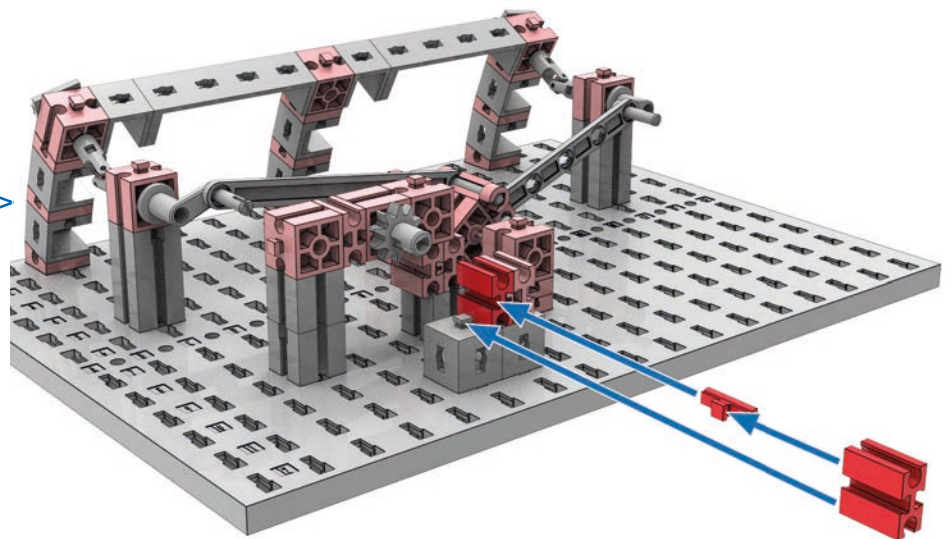
16



2x



1x



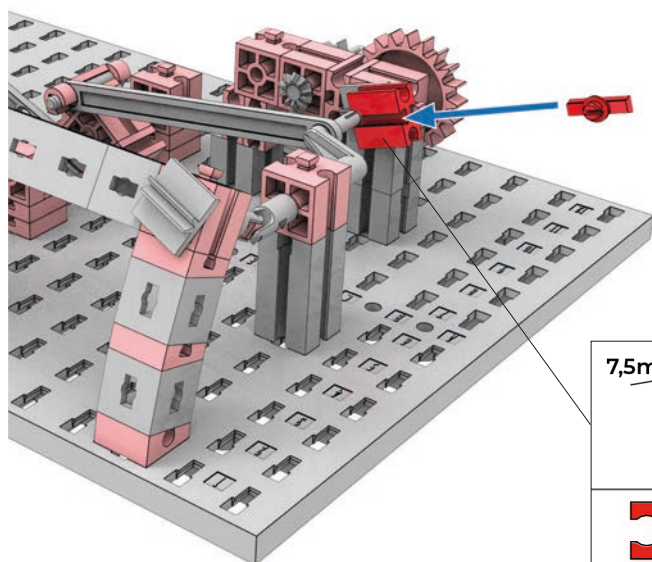
17



1x



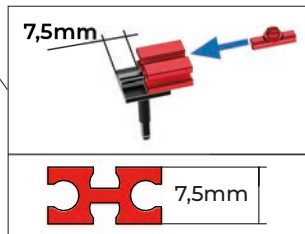
1x



18

1x

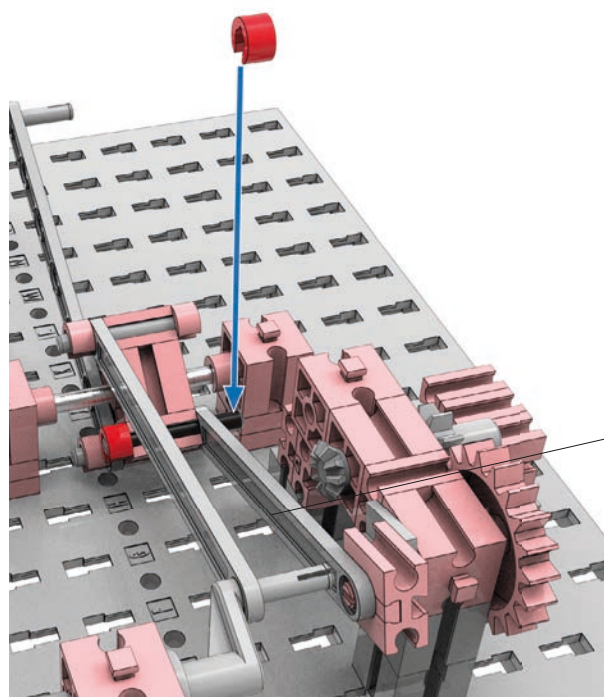
1x



7,5mm



7,5mm



19

2x

15

1x

30

1x

30 mm



15

20

30

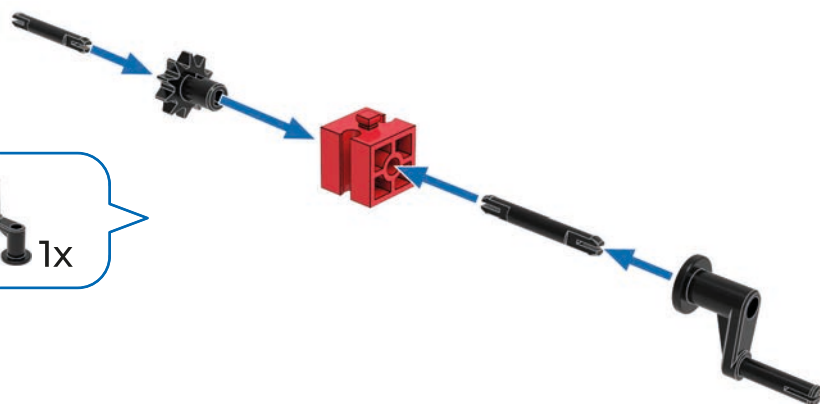
2x

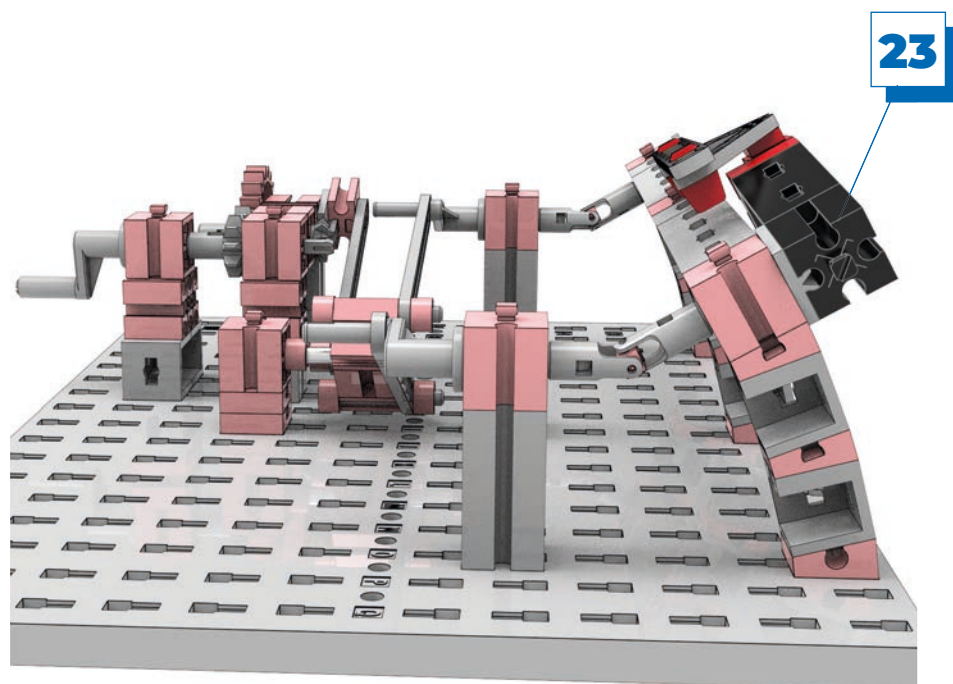
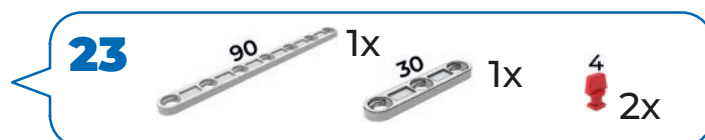
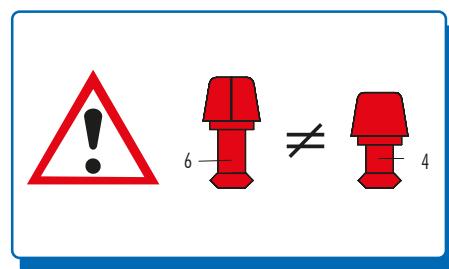
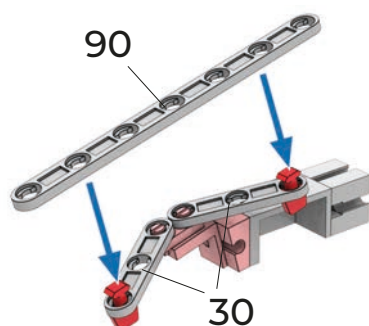
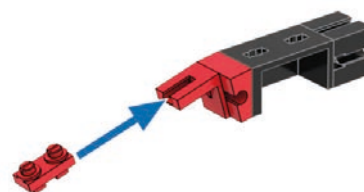
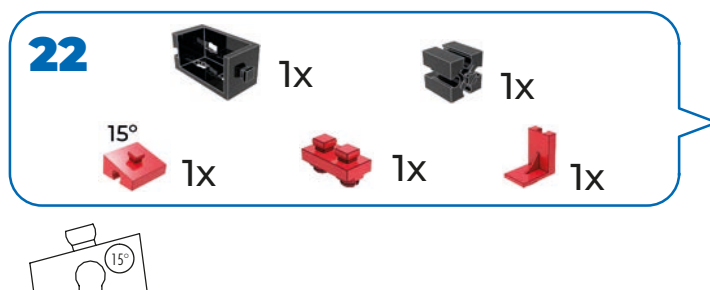
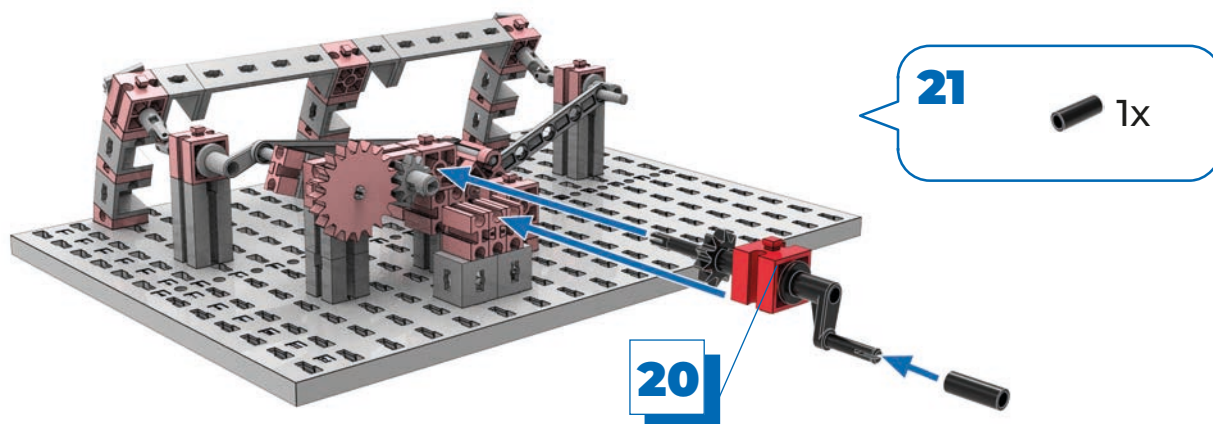
1x

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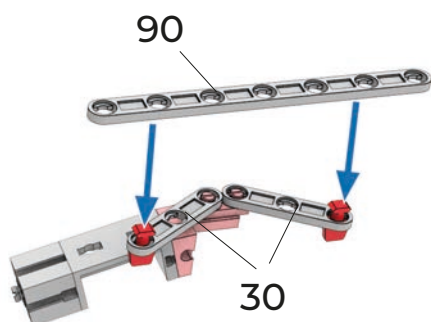
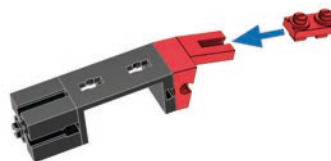
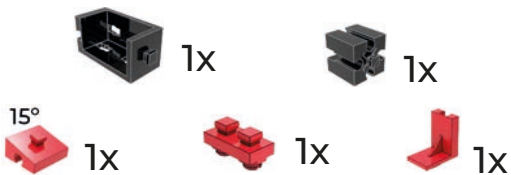
1x

30 mm





25

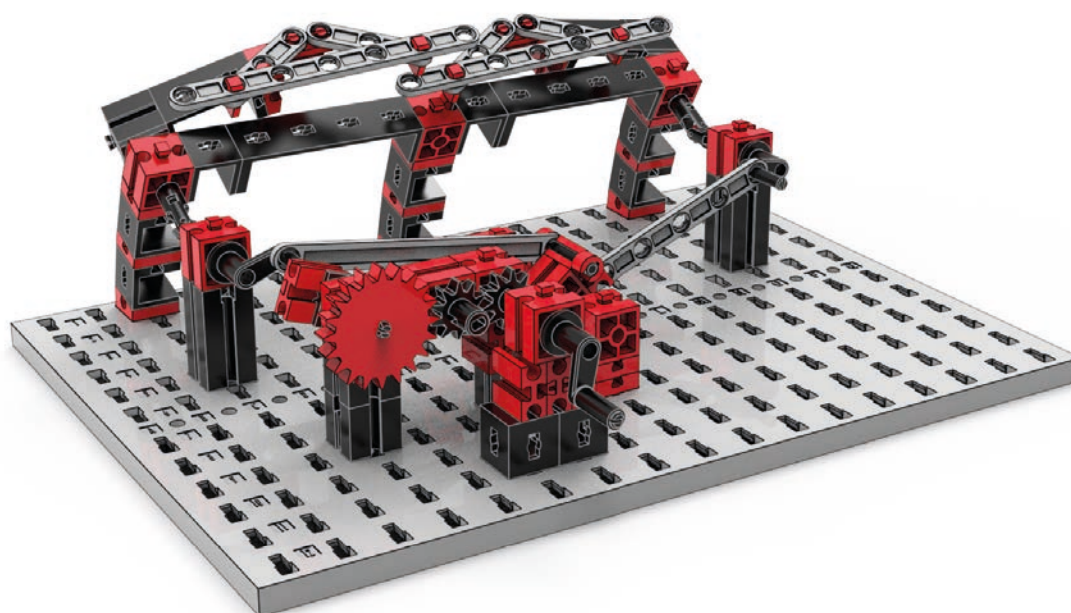
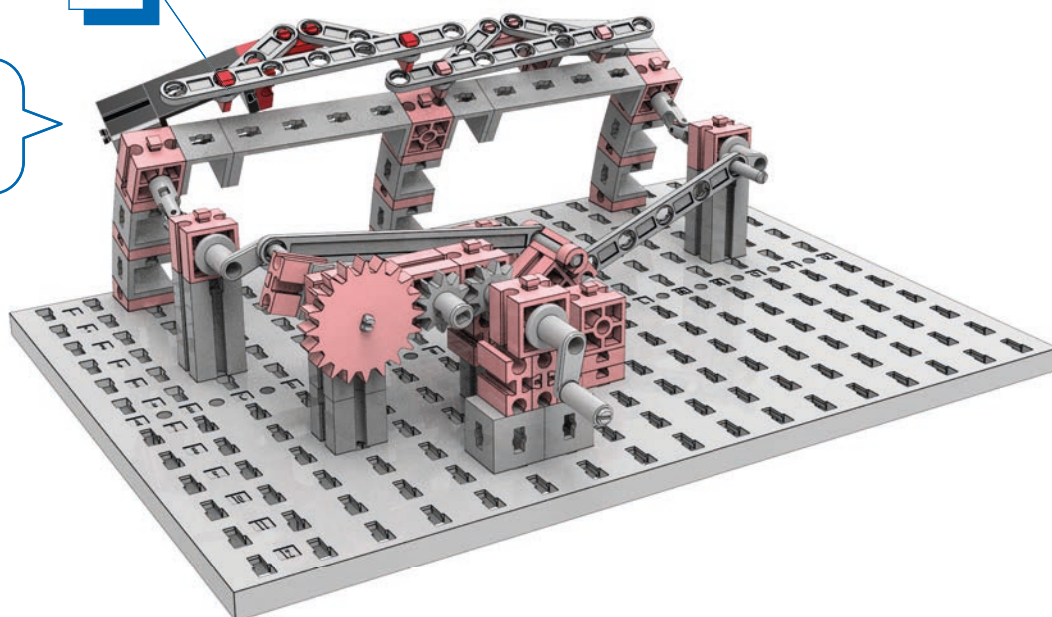


26

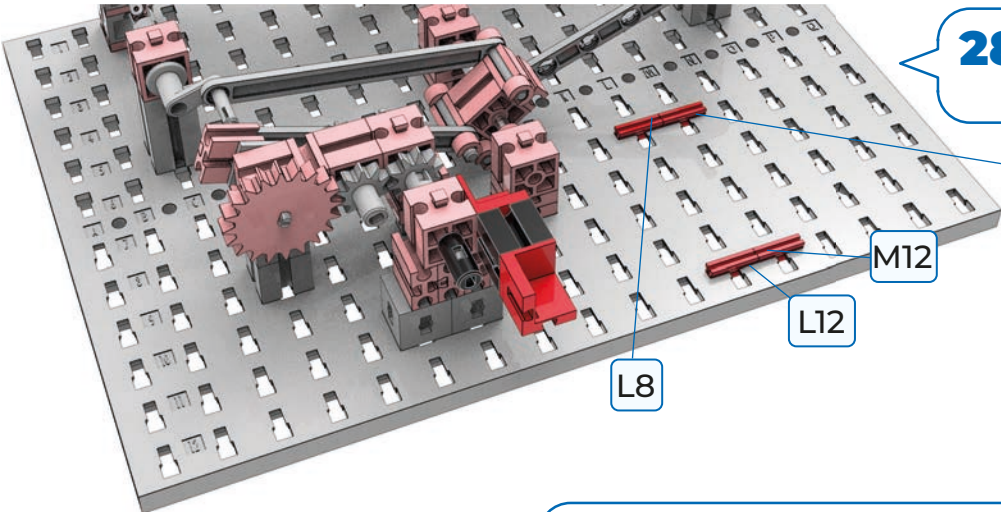
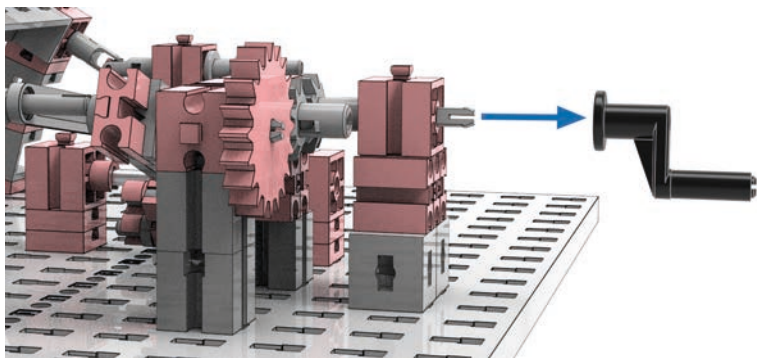


27

26



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28 1x 1x 2x 4x

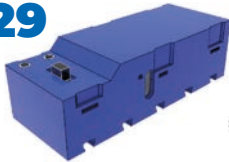
M8

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L8

29



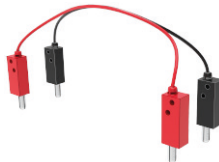
1x

1x

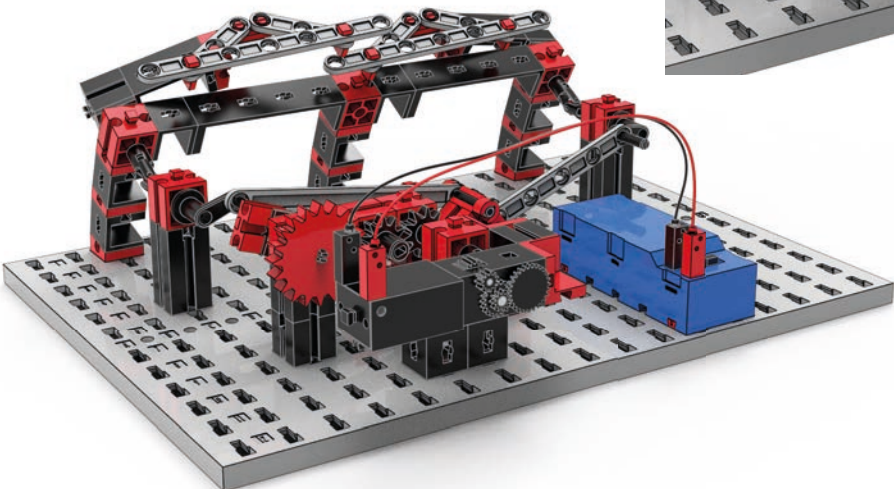
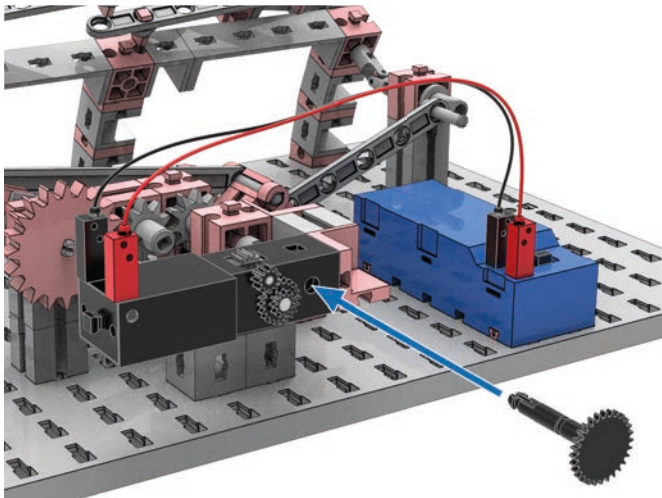
1x



1x



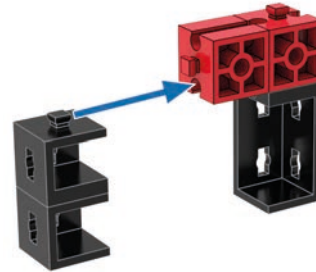
1x

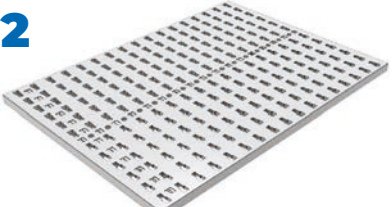


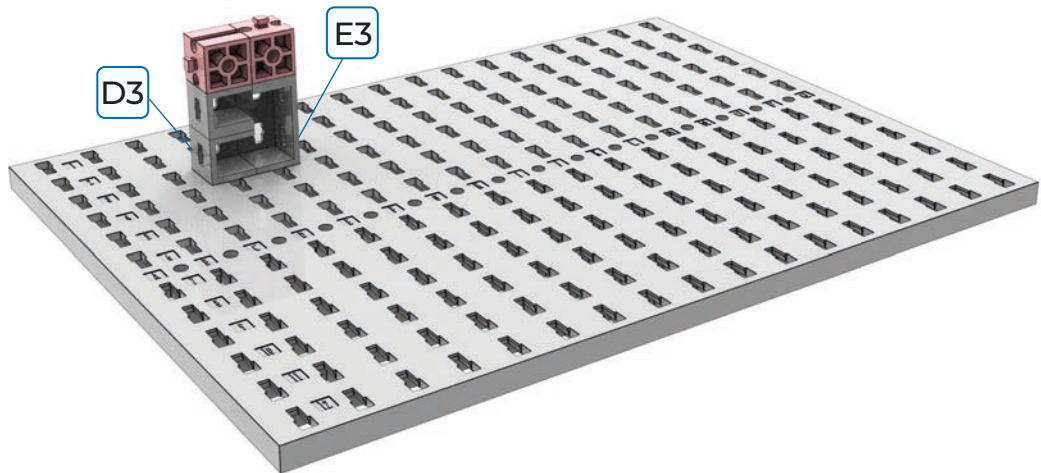


Scheibenwischer - parallel
 Windshield wiper - parallel
 Essuie-glace - parallèle
 Ruitenwisser - parallel
 Limpiaparabrisas - paralelo
 Limpador de pára-brisas - paralelo
 Tergicristalli - paralleli
 Стеклоочиститель ветрового стекла - параллельно
 平行式雨刮器

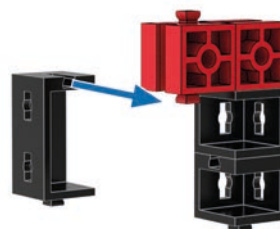
1  2x  1x  1x  1x

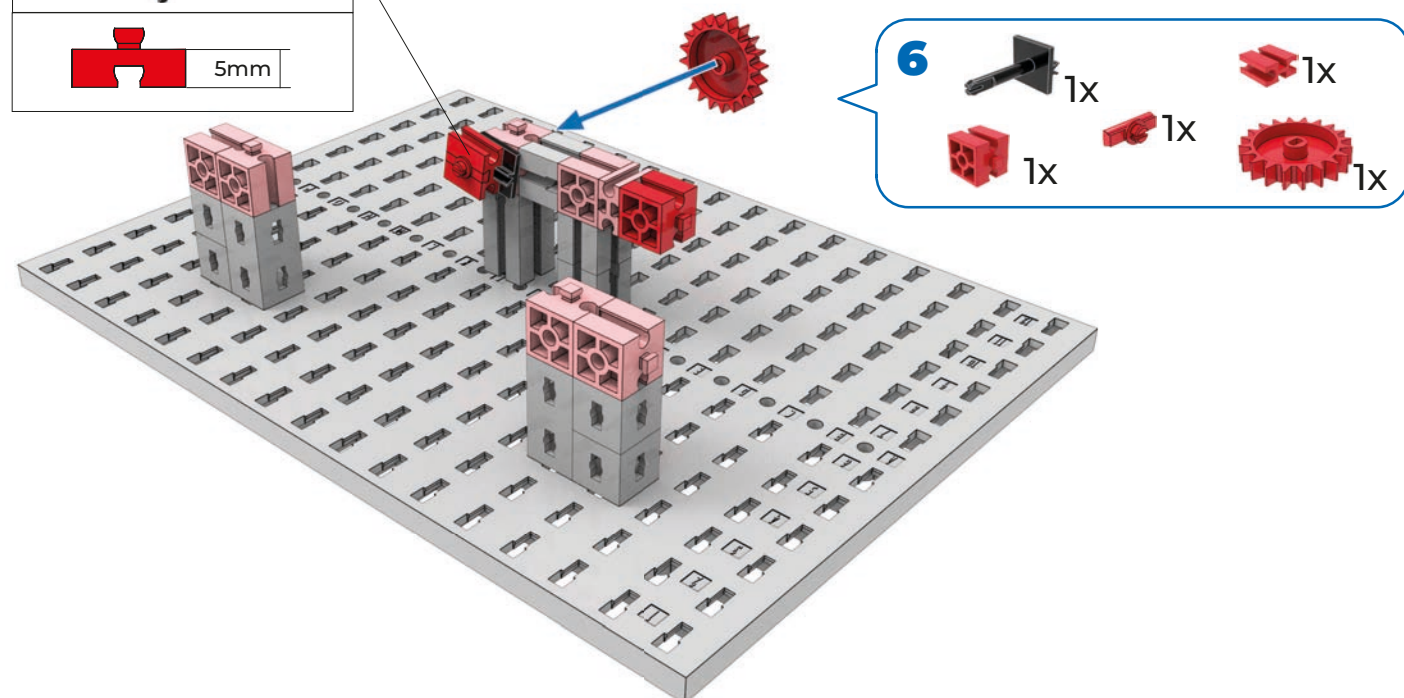
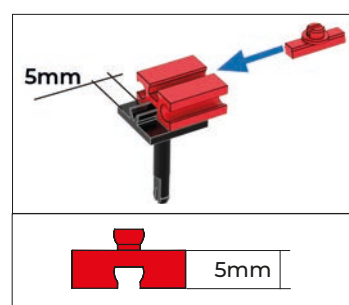
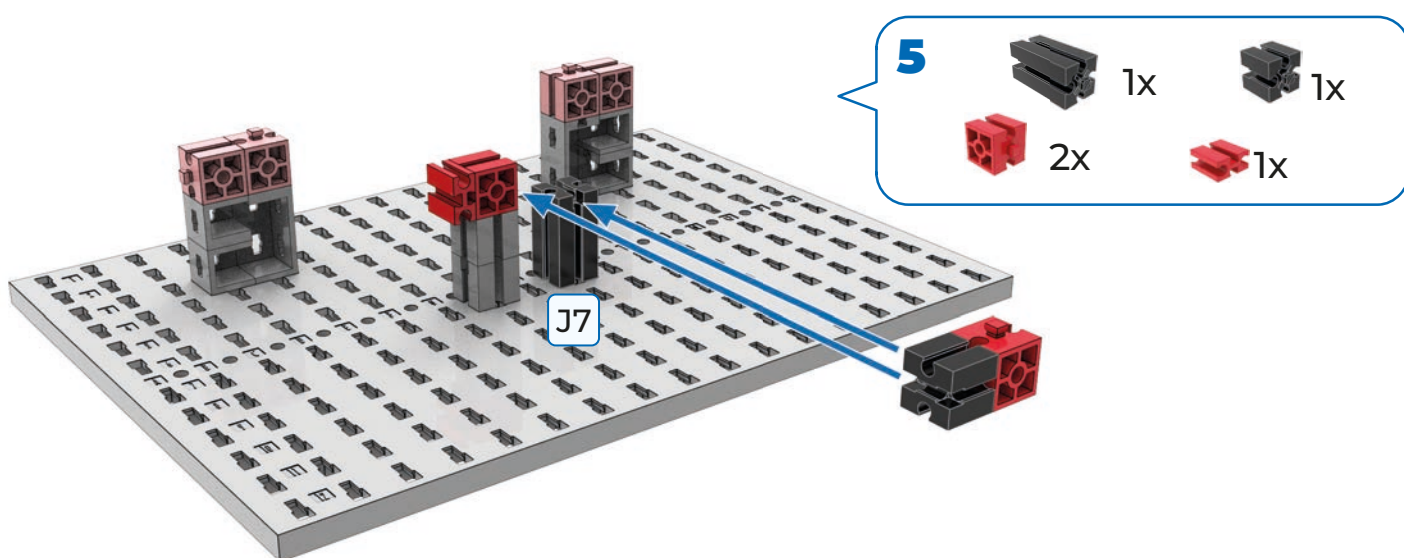
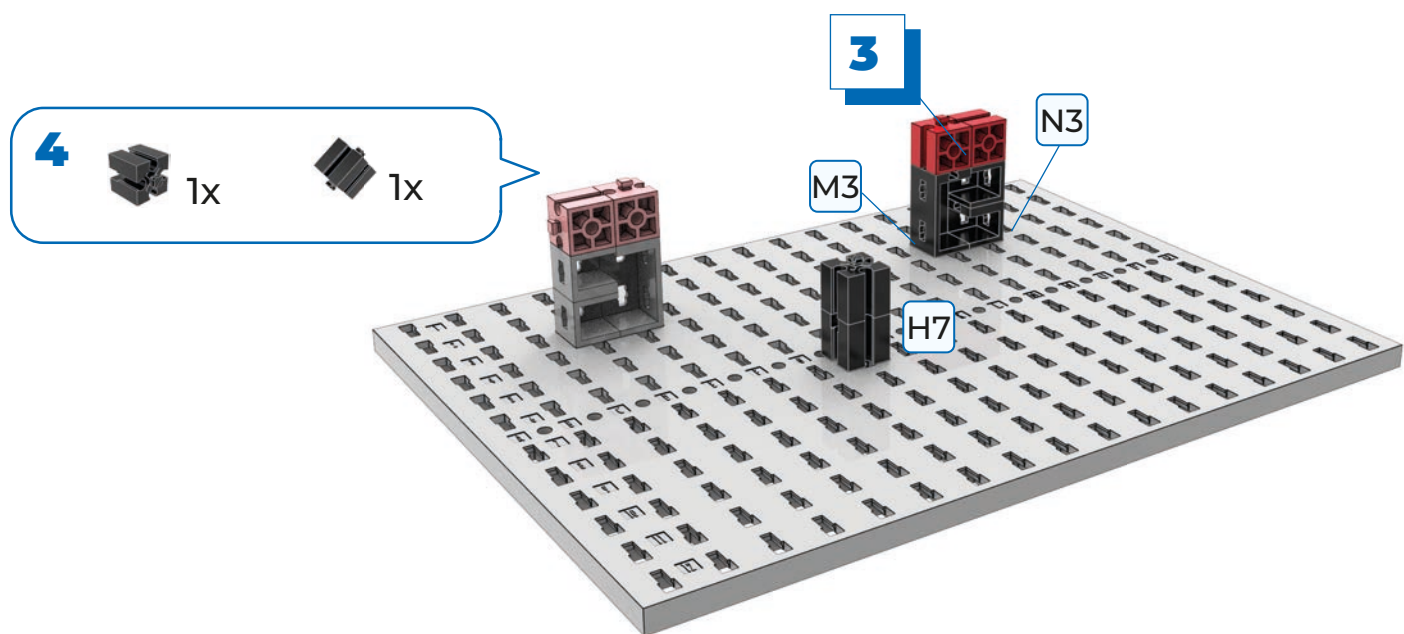


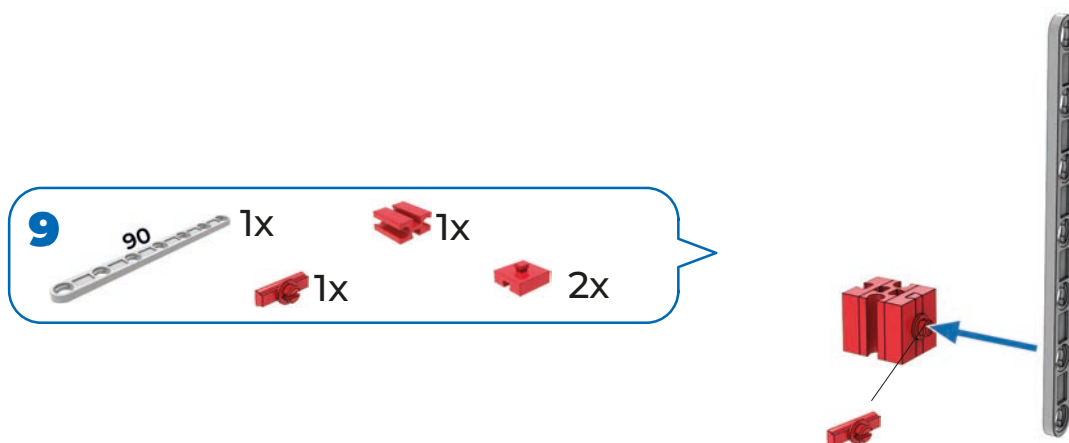
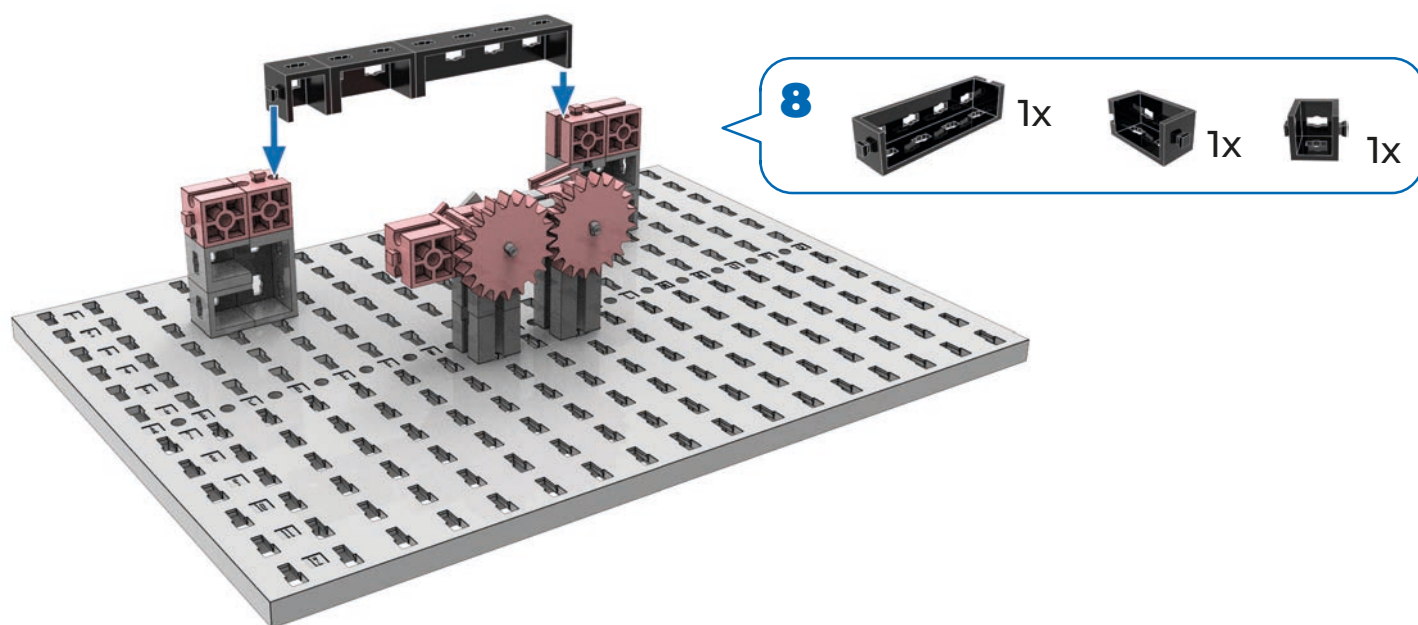
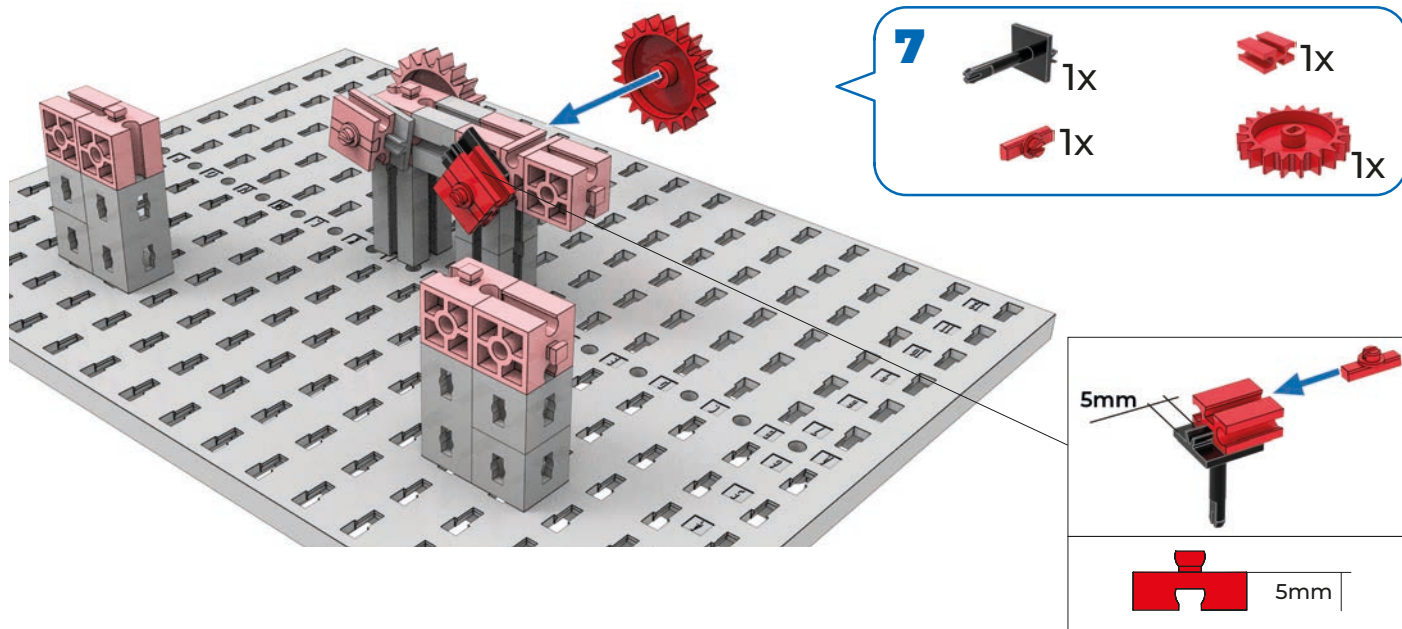
2  1x



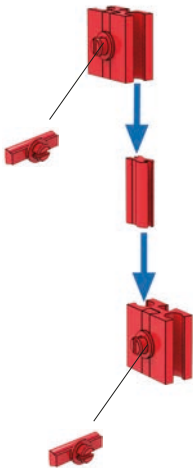
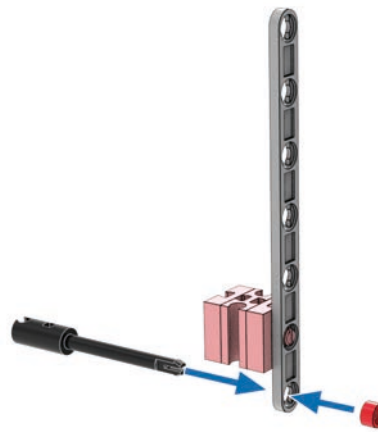
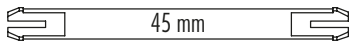
3  2x  1x  1x  1x







10 45 1x 1x 1x

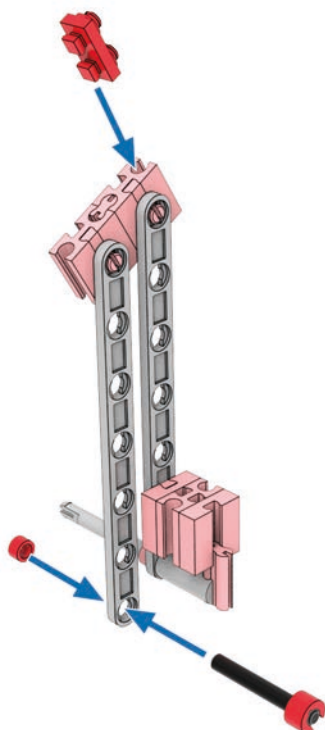


11 15 1x 2x 2x

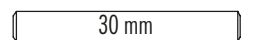
11



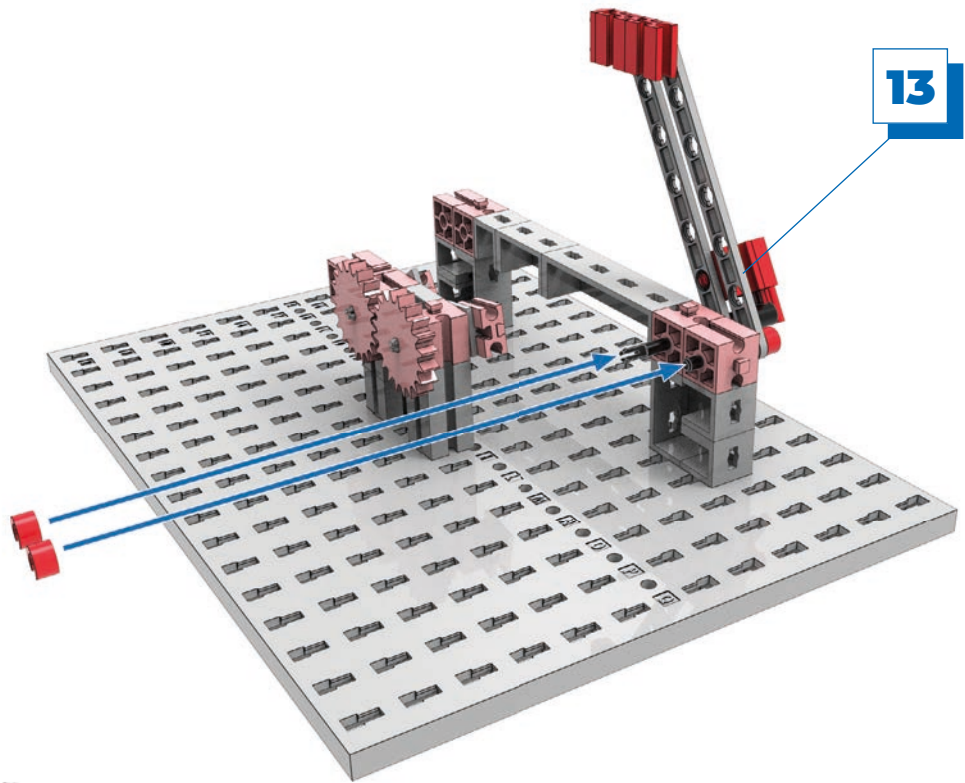
12 90 1x 15 1x



13 30 1x 1x 1x 1x

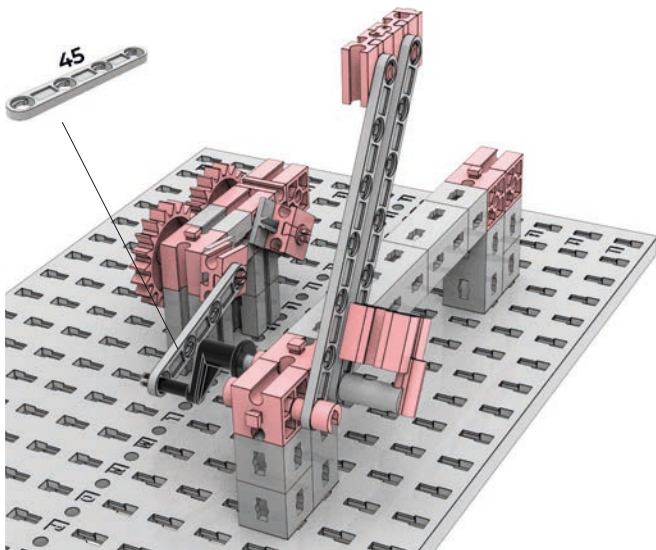


13



14

2x



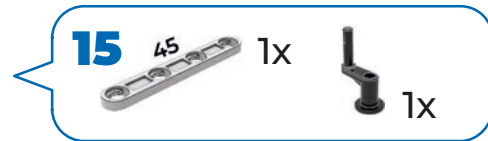
15



1x



1x

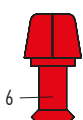
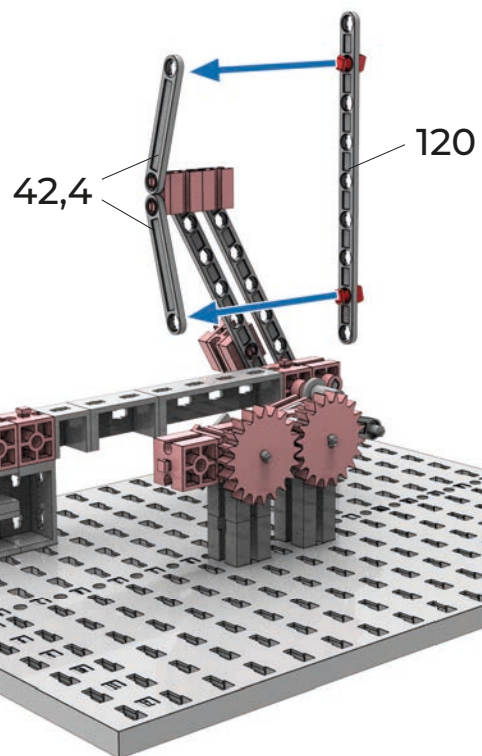


16

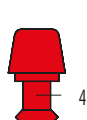
42,4 2x

2x

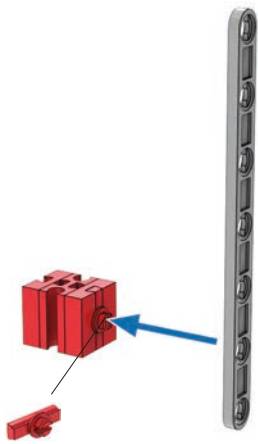
120 1x



≠



4



17

90

1x

1x

1x

2x

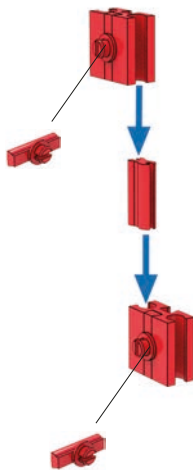
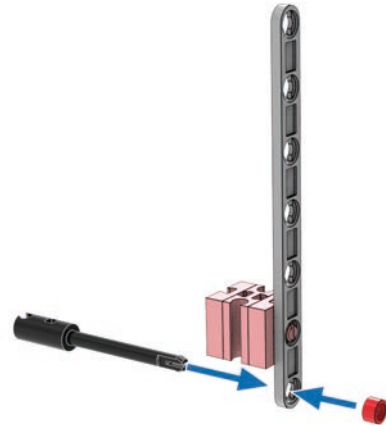
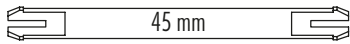
18

45

1x

1x

1x



19

15

1x

2x

2x

19

20

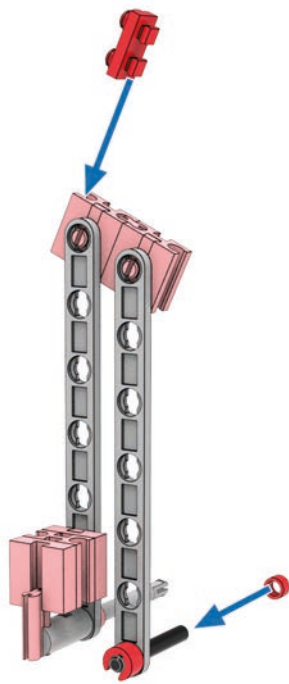
90

1x

15

1x





21



1x



1x



1x



1x

30 mm

22



2x



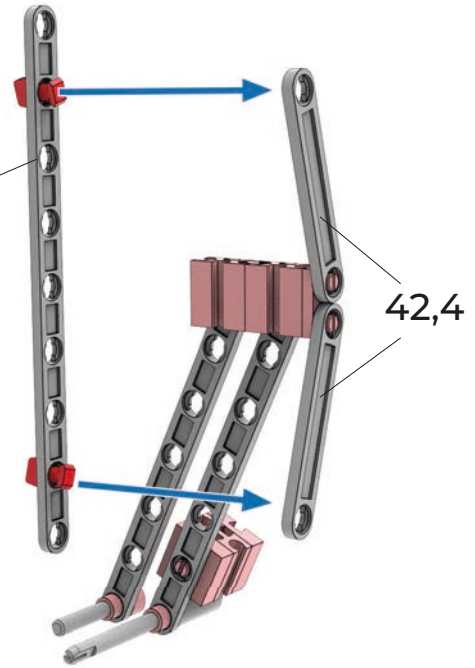
2x



1x

120

42,4



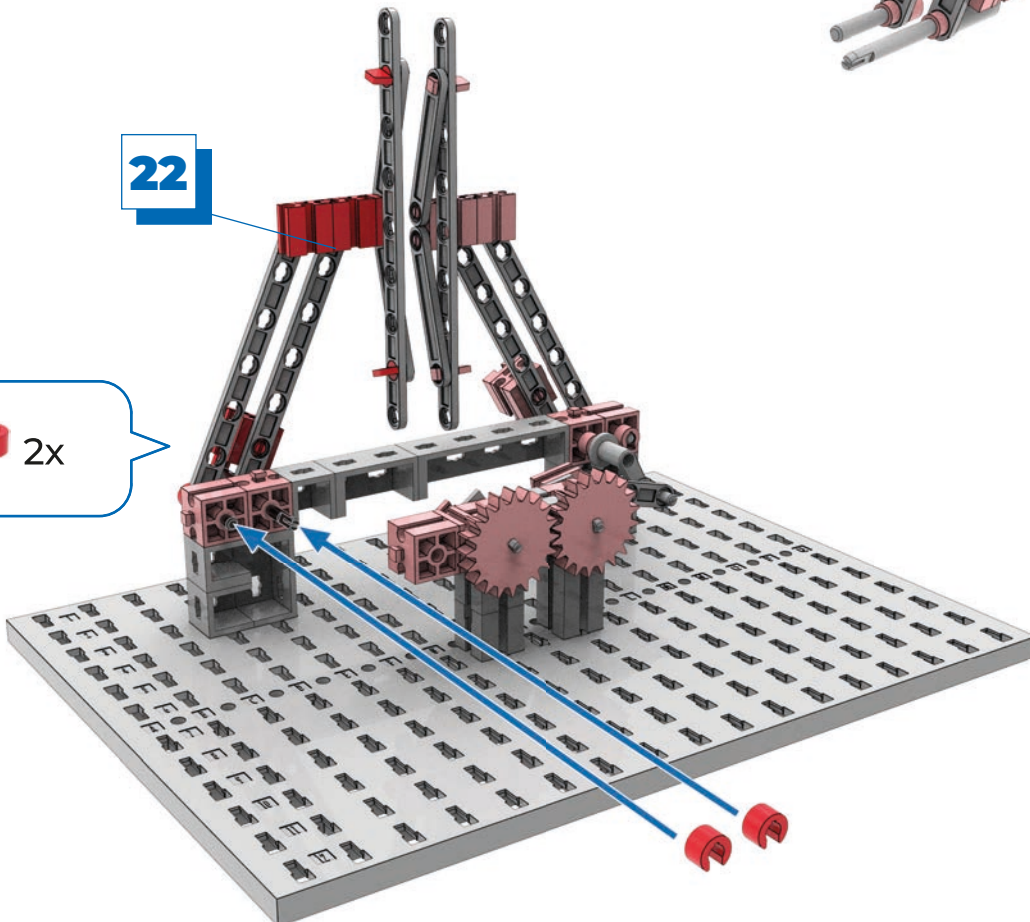
22

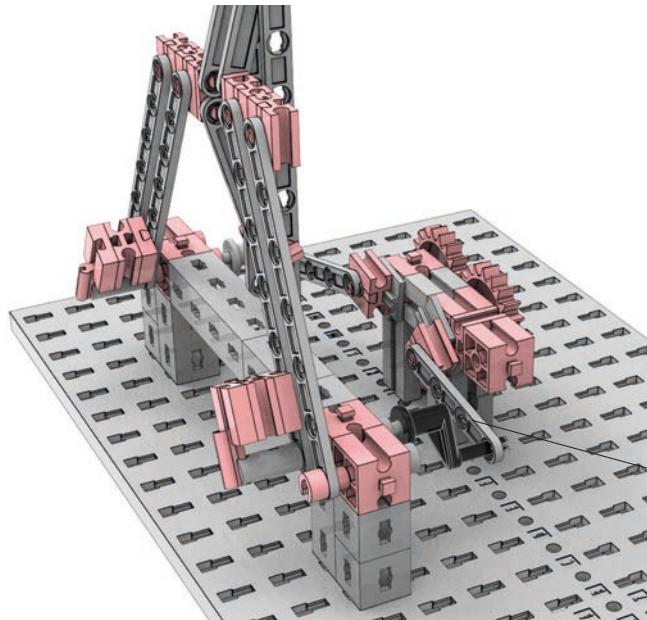


23



2x



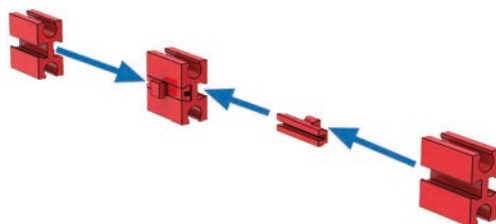
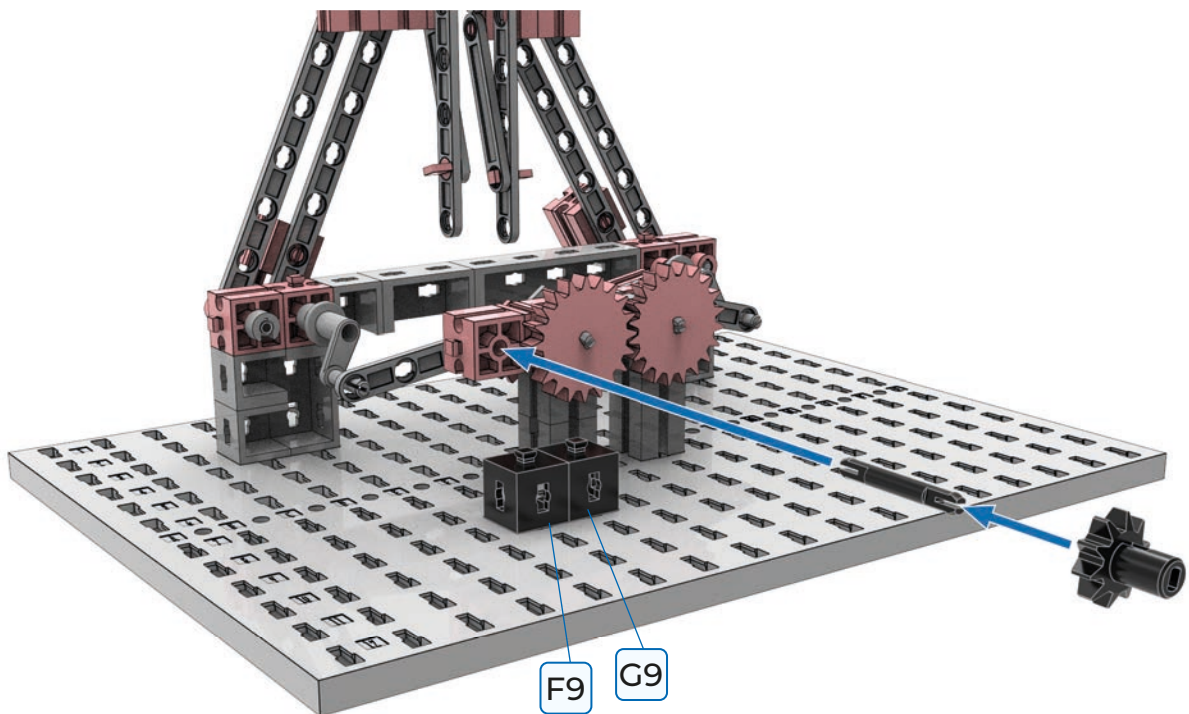


24 45 1x 1x

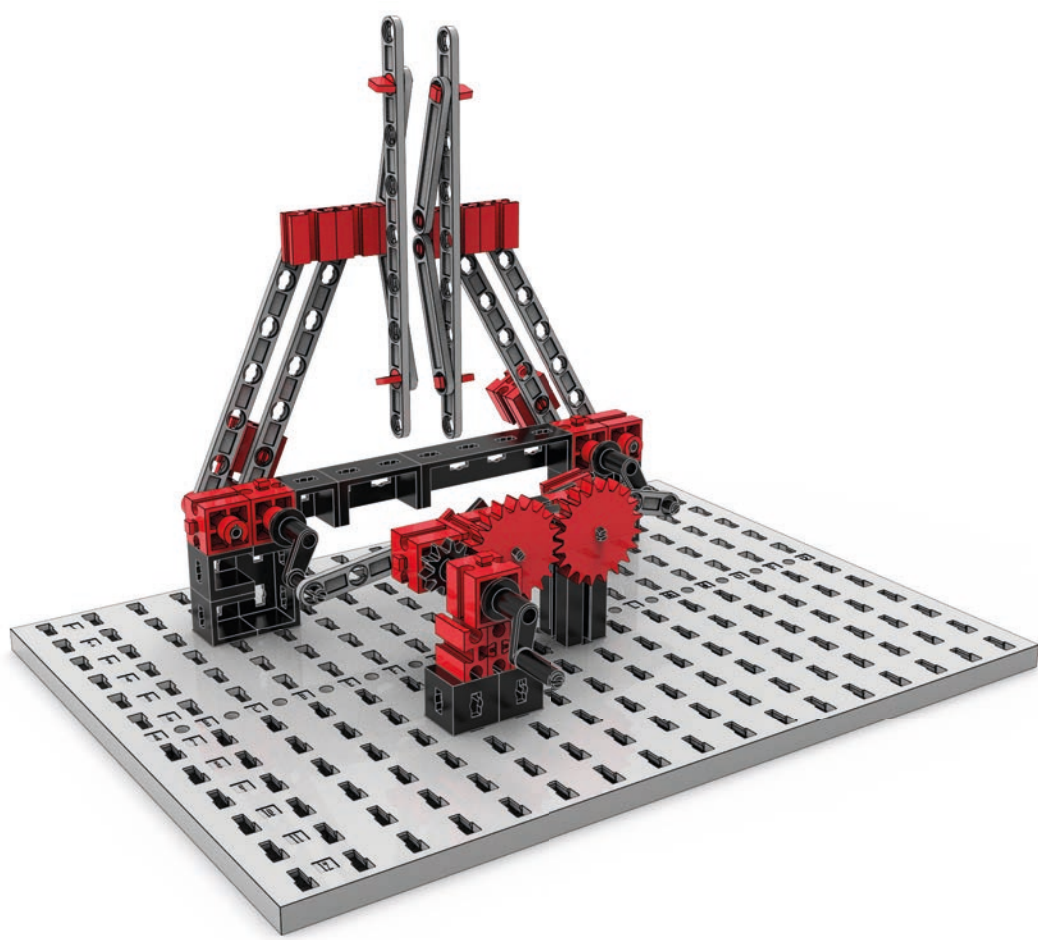
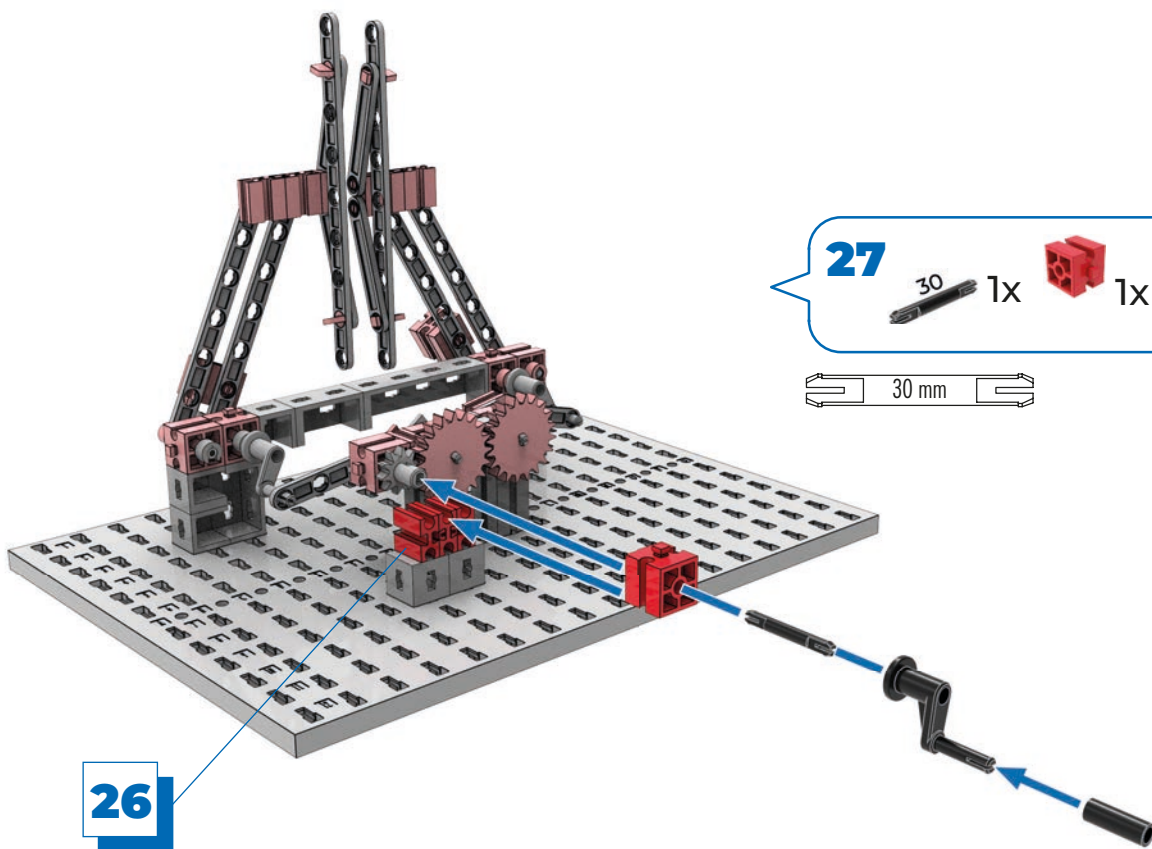


25 30 1x 2x 1x

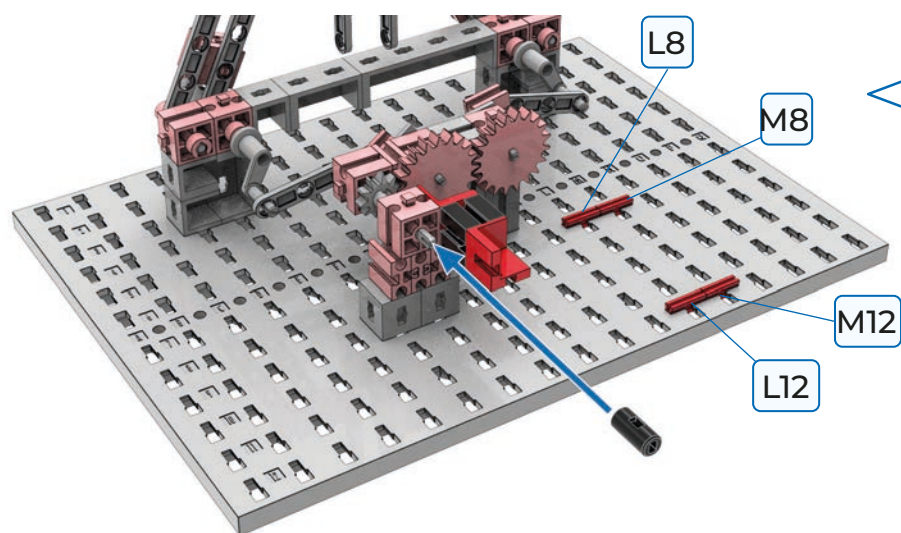
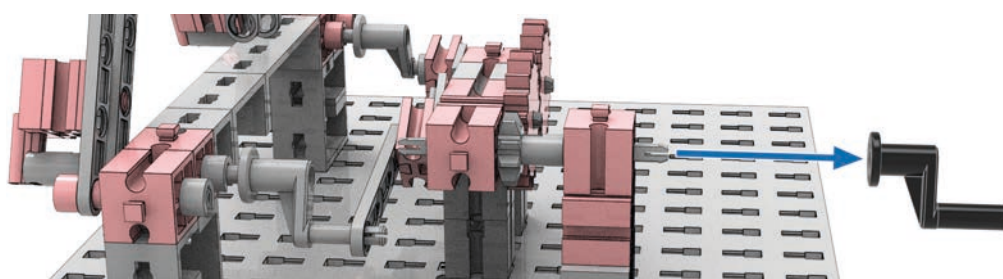
30 mm



26 3x 2x

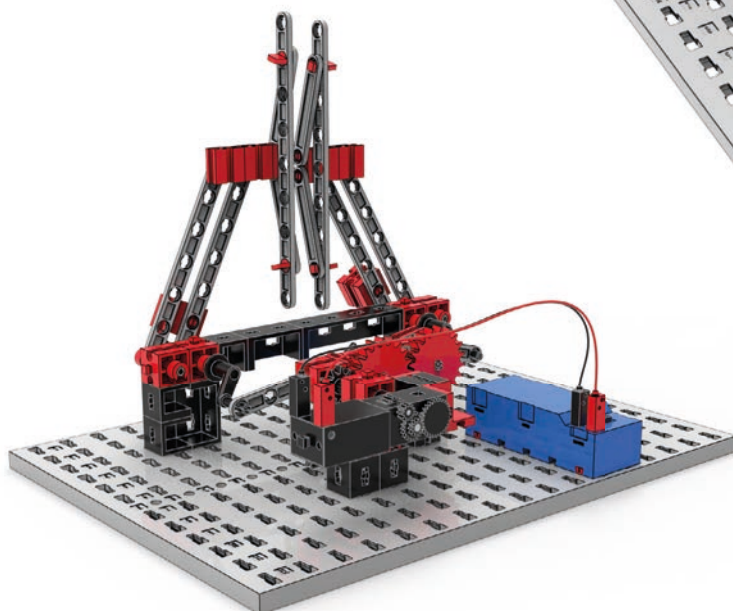
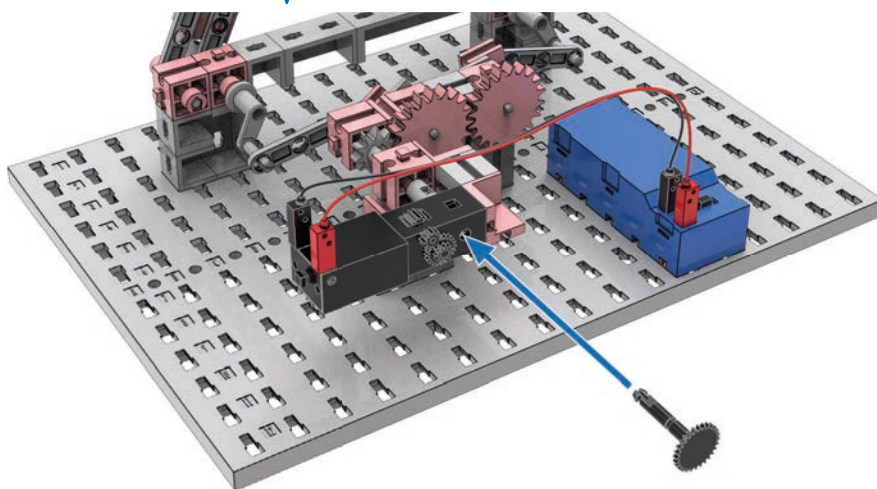


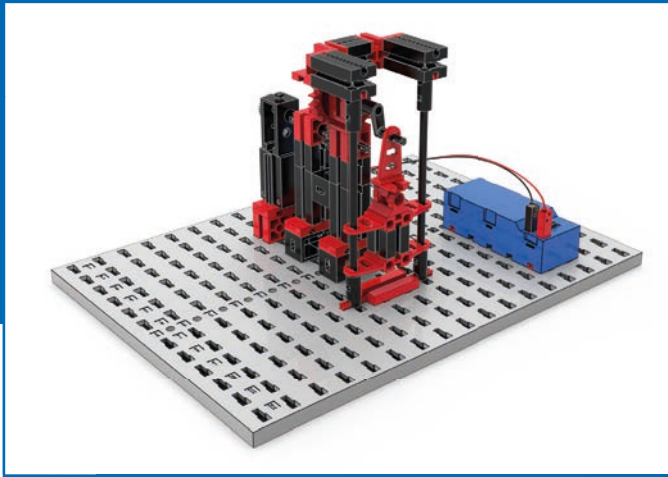
umbauen
modify
modifier
veranderen
modificar
modificar
modificare
переделать
改装



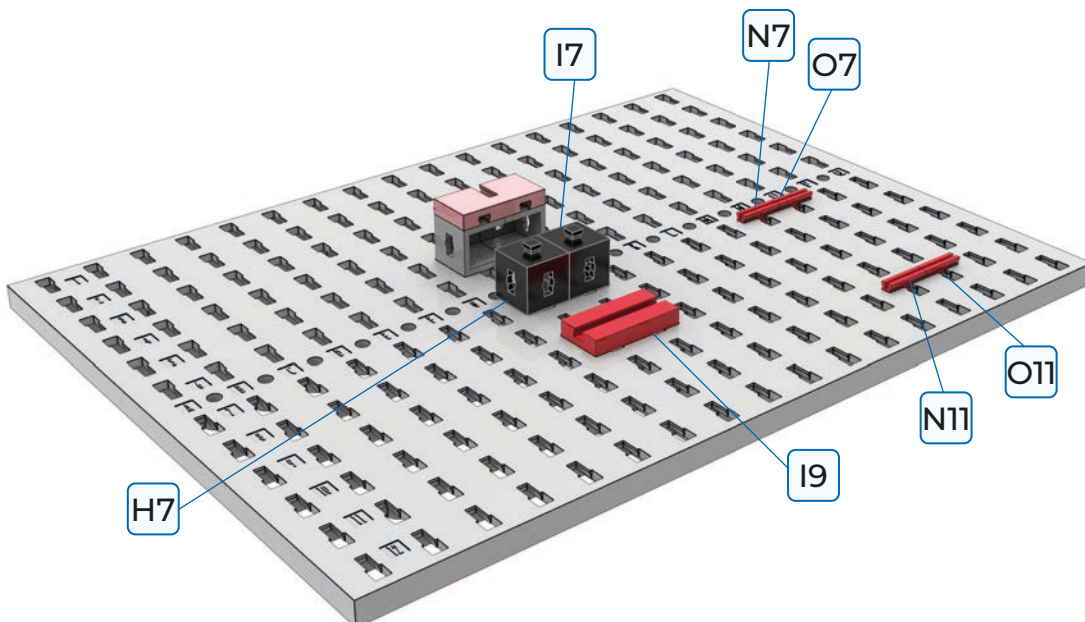
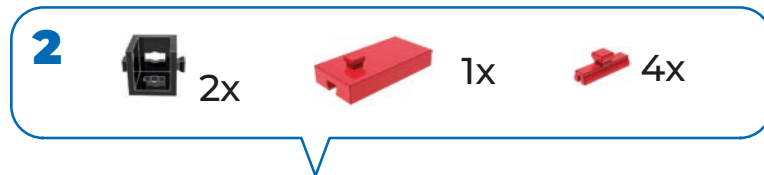
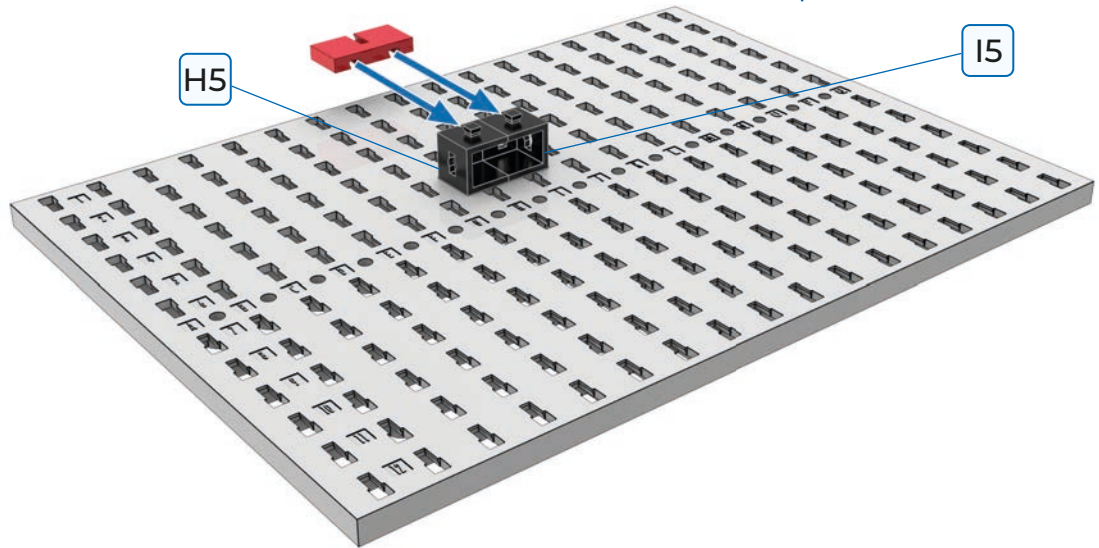
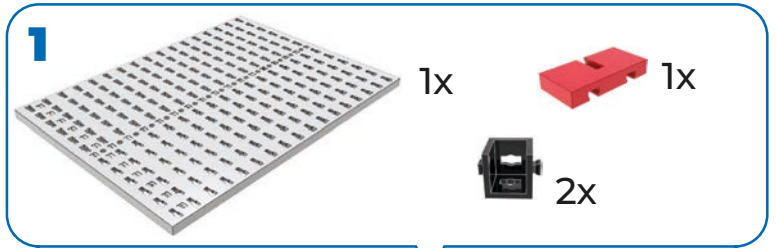
28 1x 2x 1x 4x

29 1x 1x 1x 1x 1x

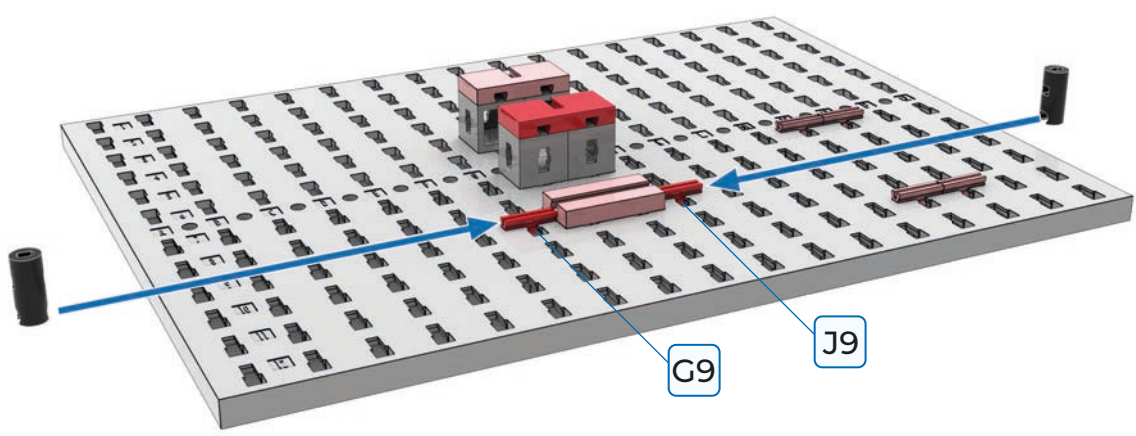




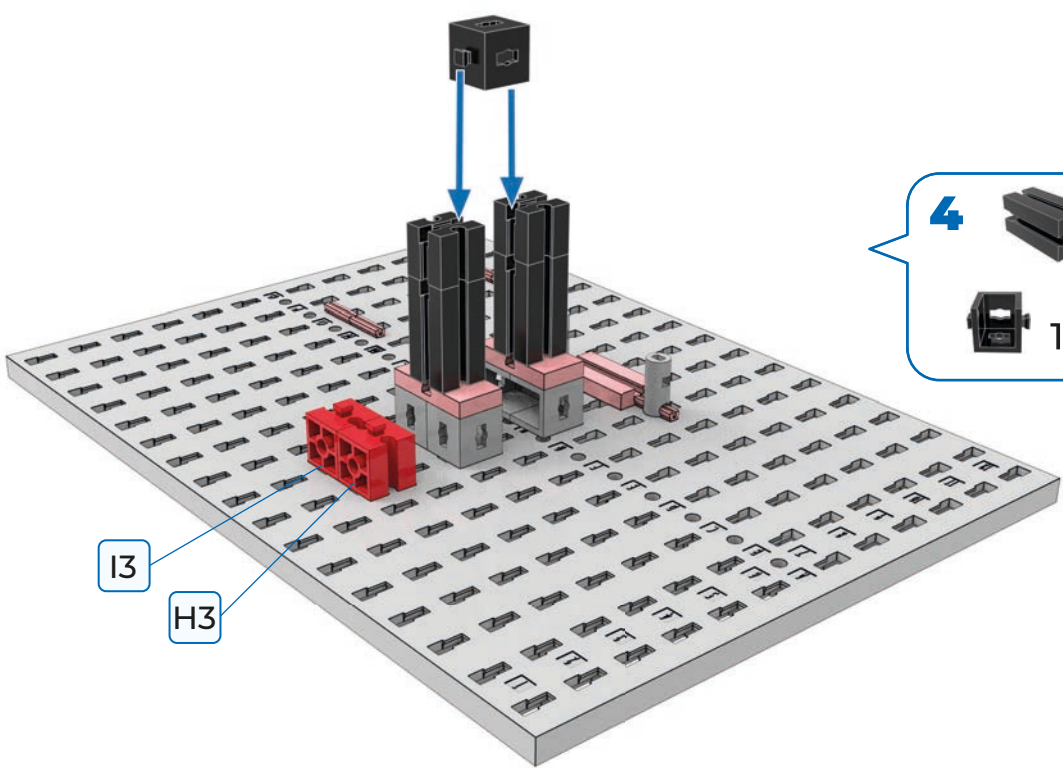
Exzenterpresse
 Eccentric press
 Presse à excentrique
 Excentrische pers
 Prensa excéntrica
 Prensa excêntrica
 Pressa eccentrica
 Эксцентрический пресс
 偏心压力机



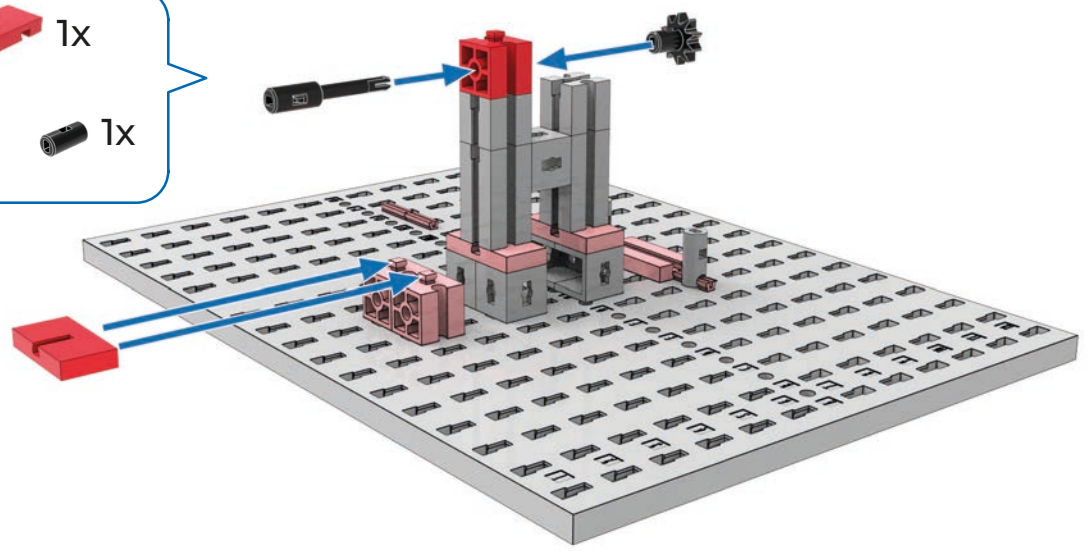
3  1x  2x  2x

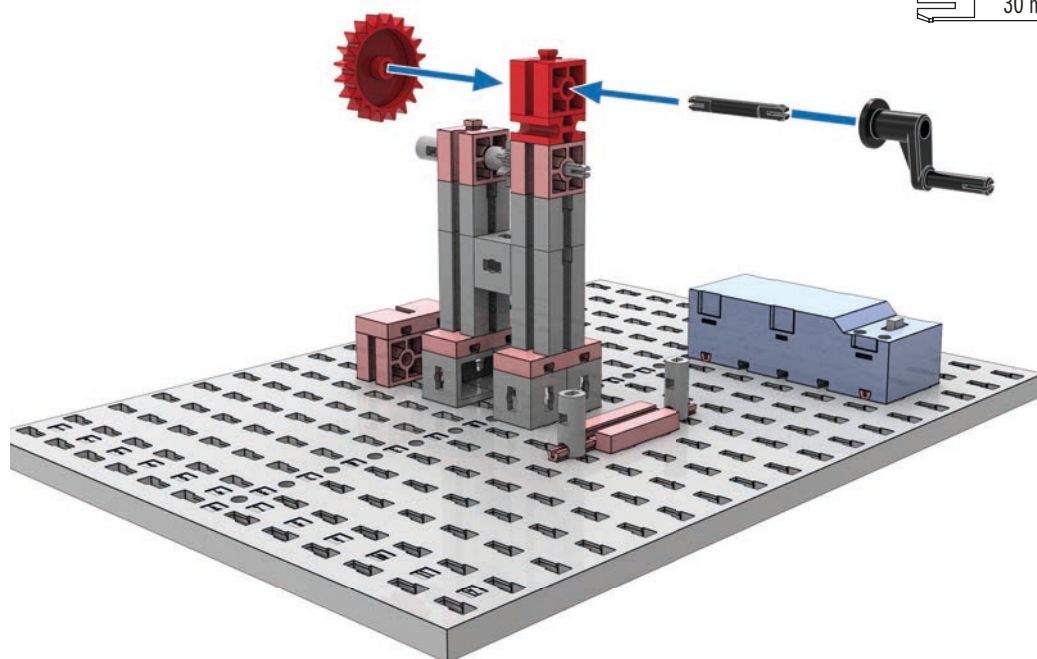
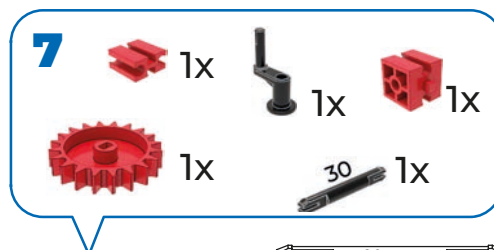
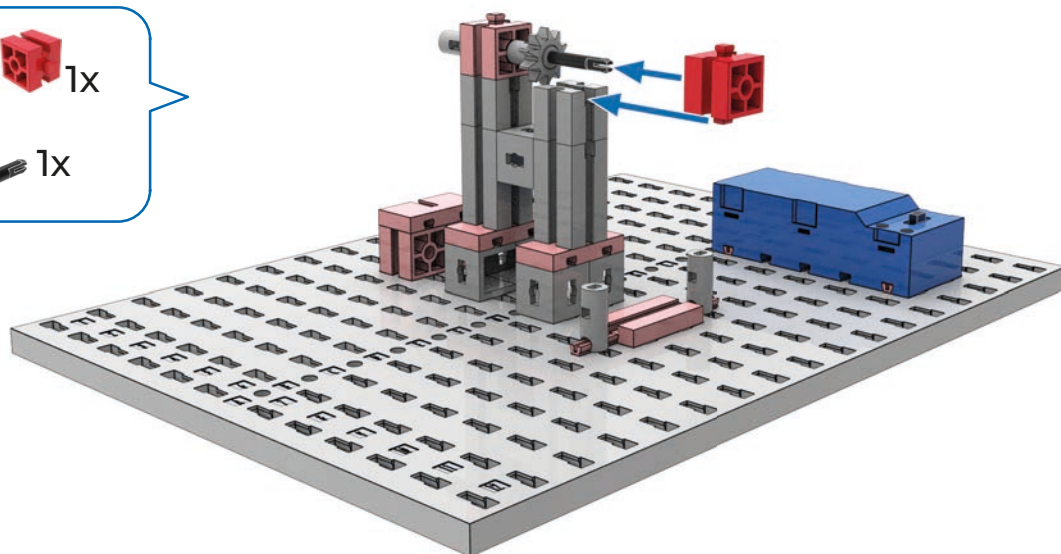
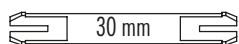
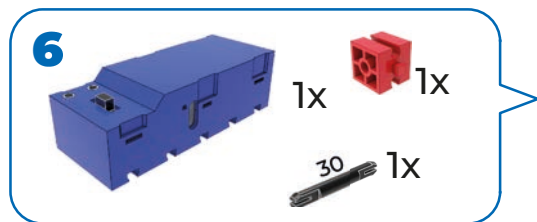


4  2x  2x
 1x  2x



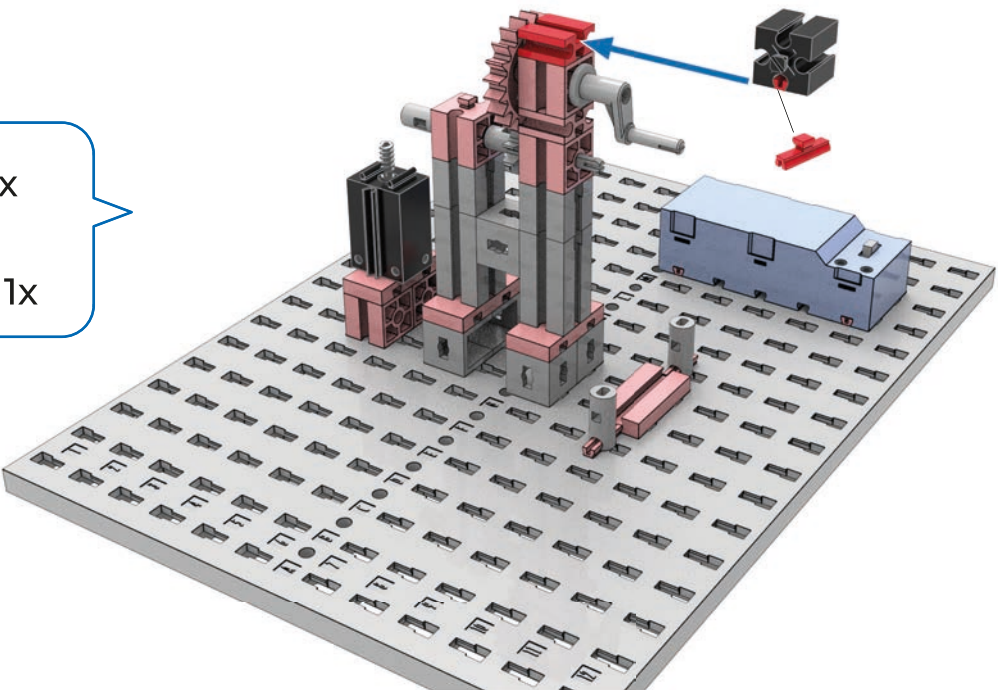
5  1x  1x
 1x  1x  1x





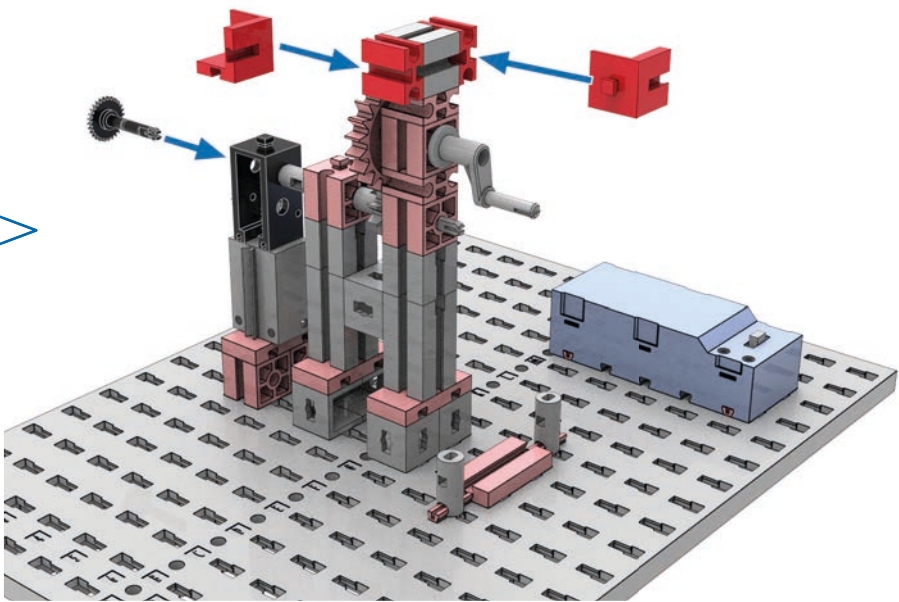
8

	1x		1x
	1x		1x



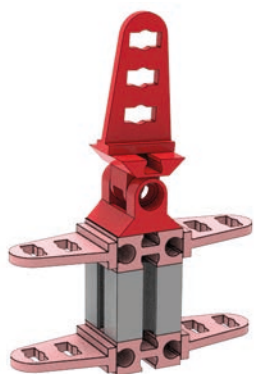
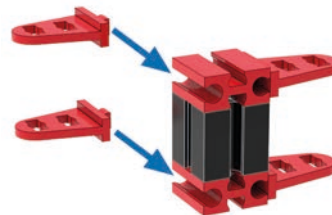
9

	2x		2x
	1x		1x



10

 1x
  2x
  4x

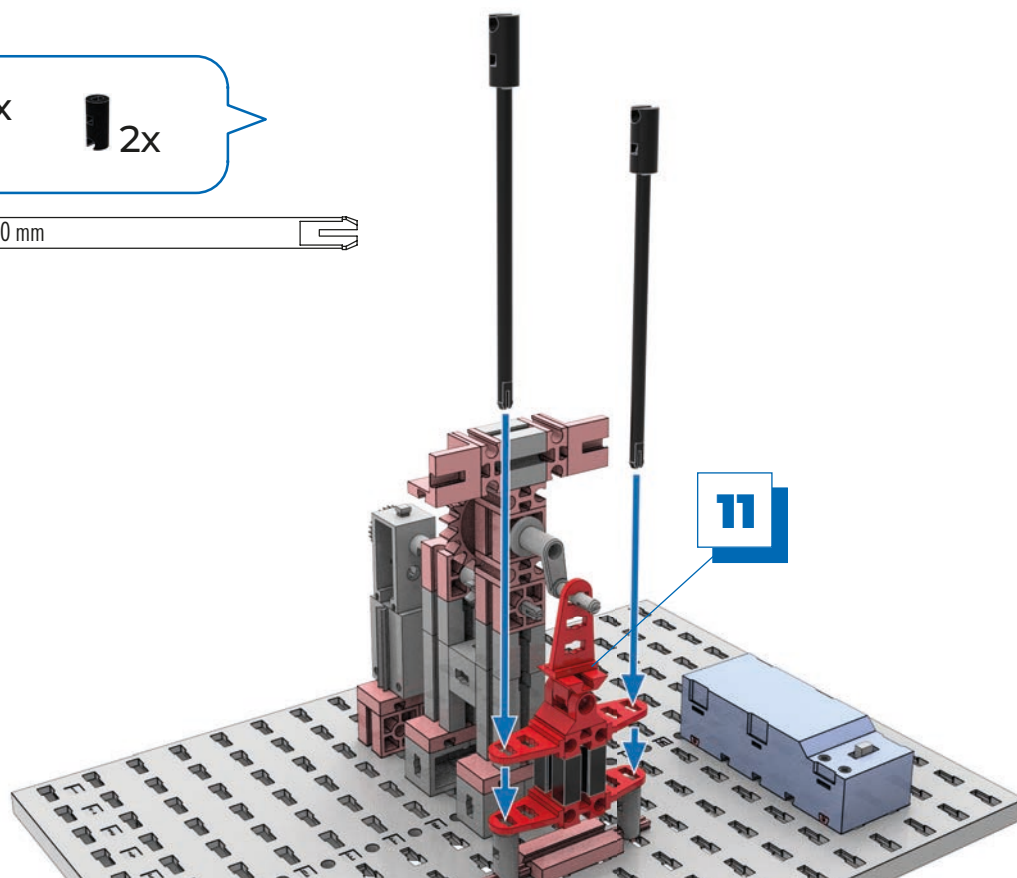
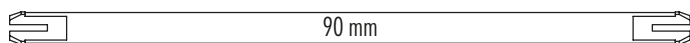


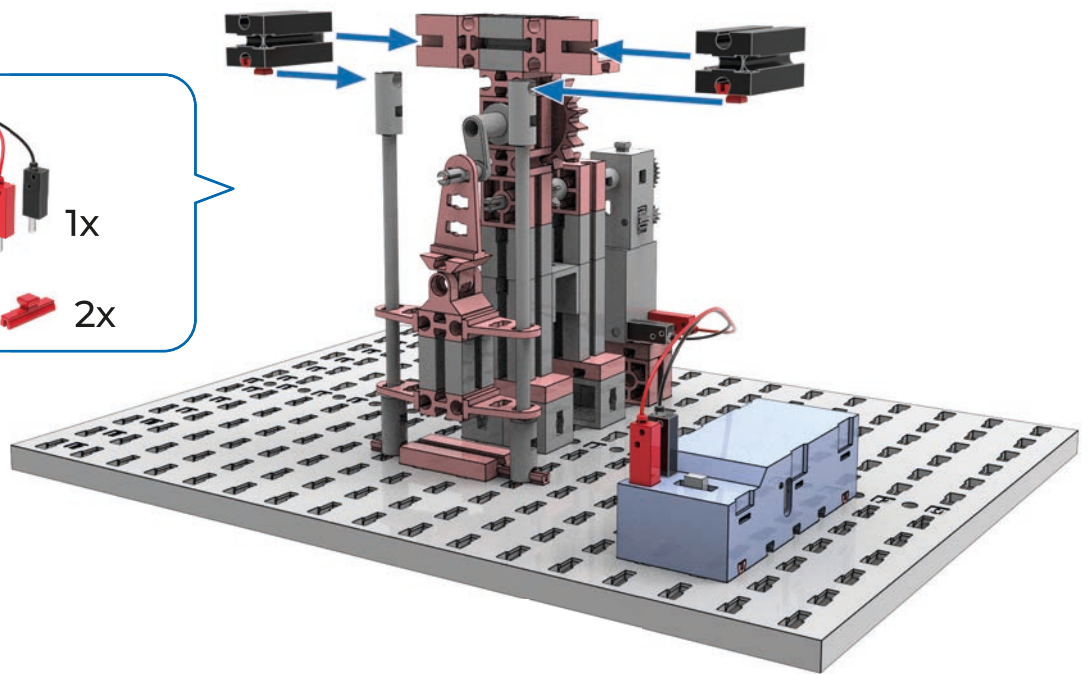
11

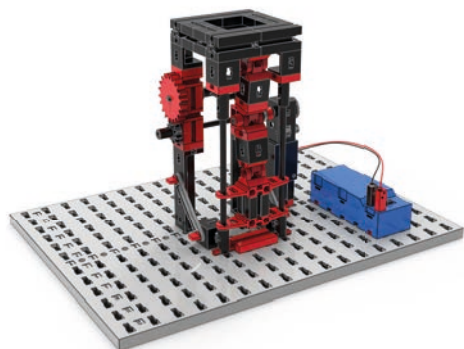
 1x
  1x

12

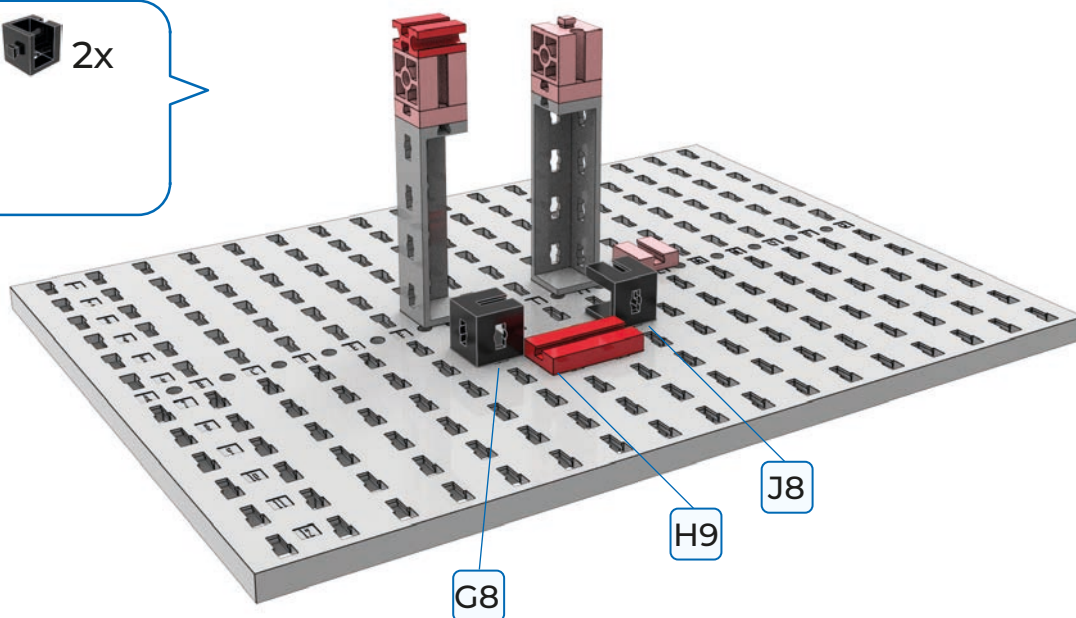
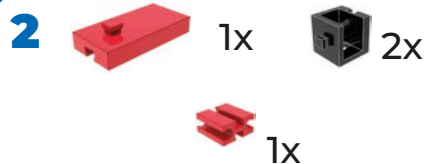
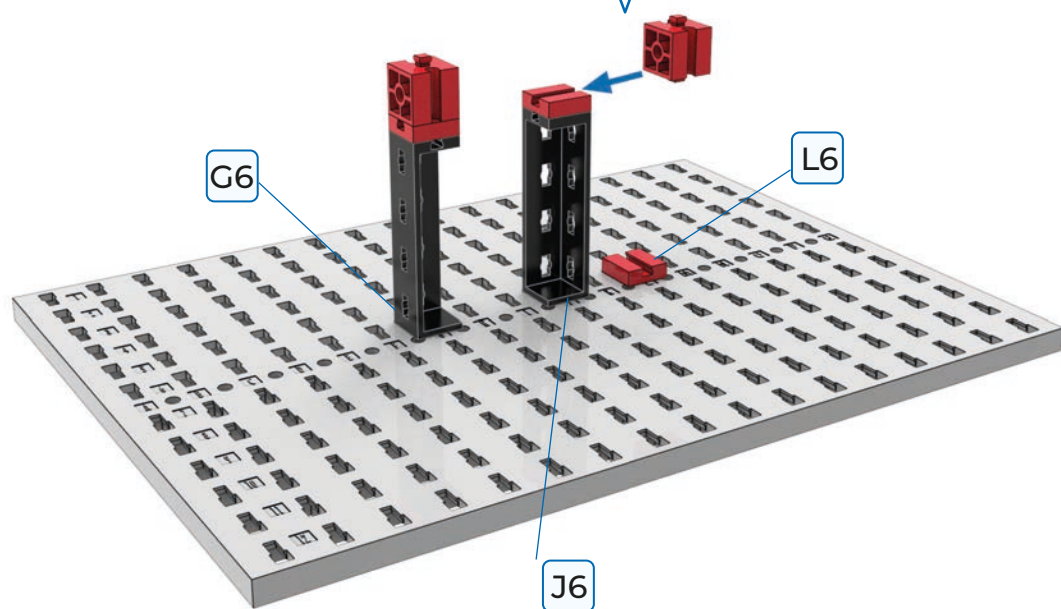
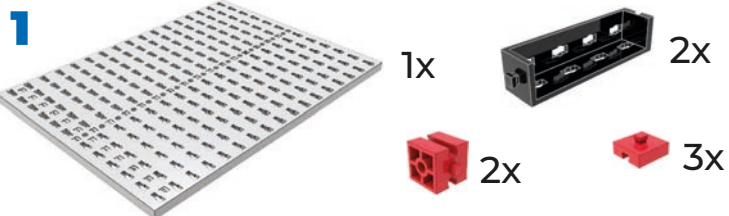
 90 2x
  2x







Kniehebelpresse
 Toggle press
 Presse à genouillère
 Kniehefboompers
 Pulsar el botón
 Alternar a prensa
 Premere il pulsante
 Тумблерное нажатие
 切换式压力机



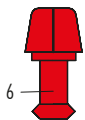
6

4x2,4 2x

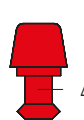
4 4x

2x

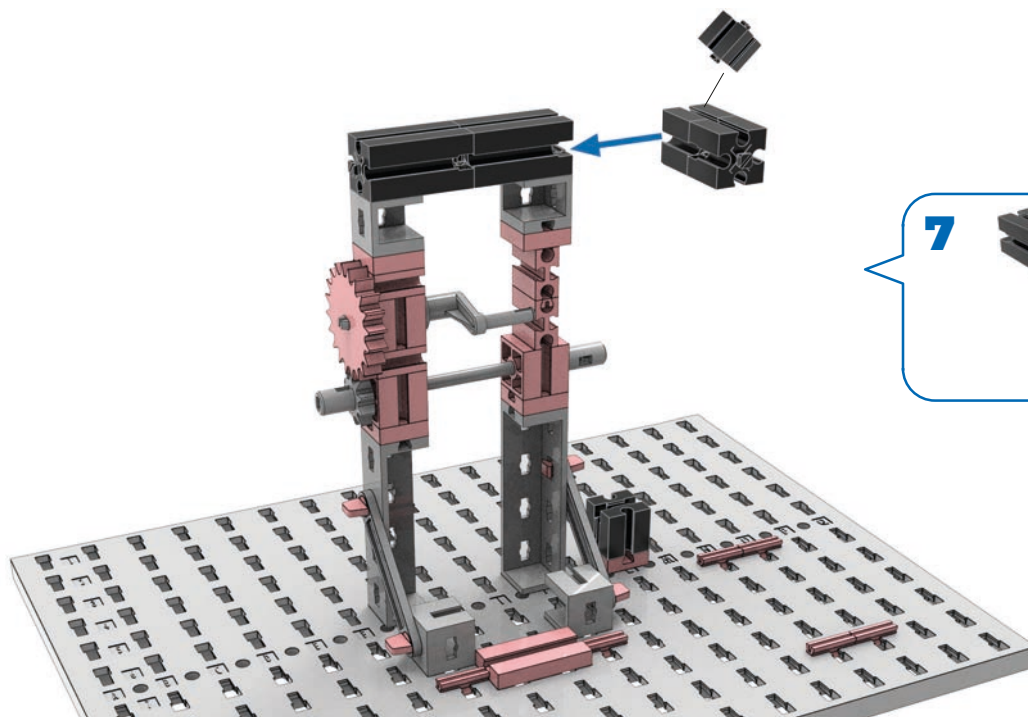
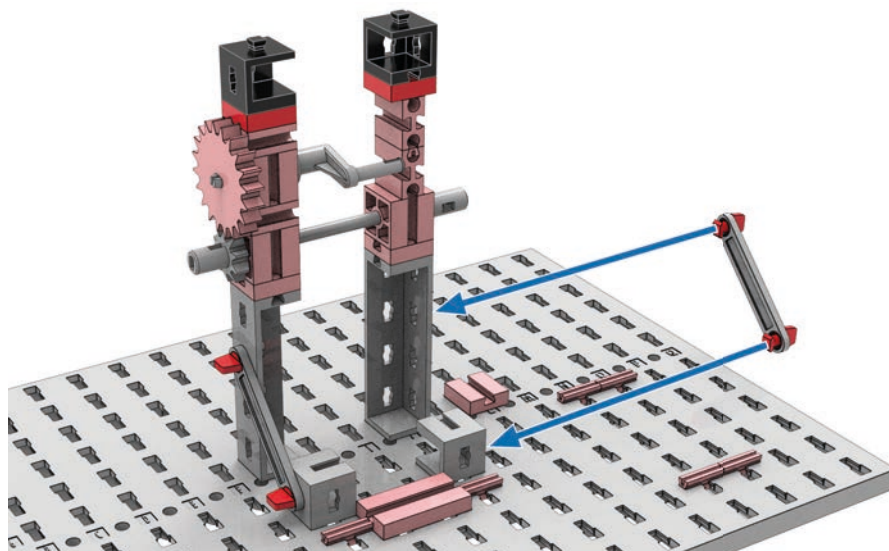
2x



≠



4



7

2x

2x

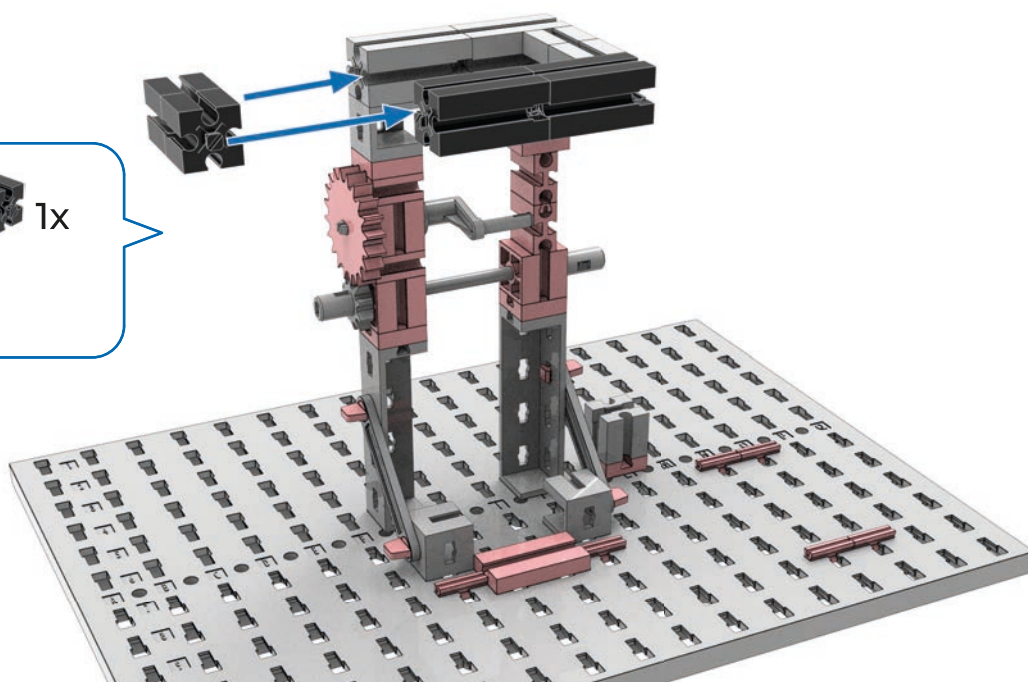
1x

8

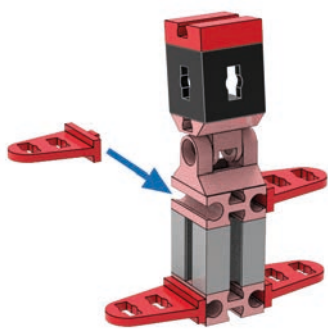
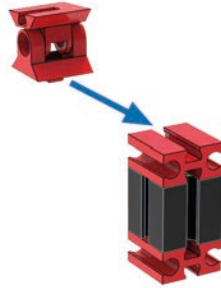
2x

1x

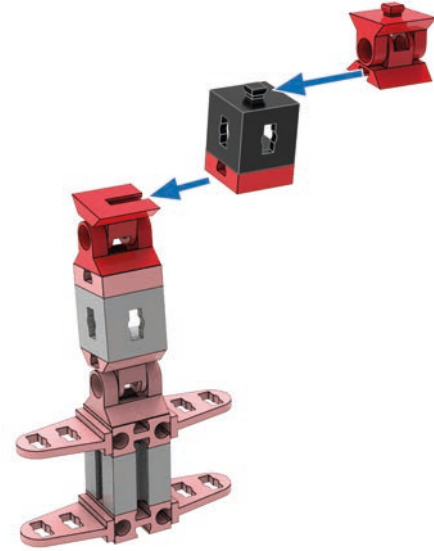
1x



9  1x  2x  1x

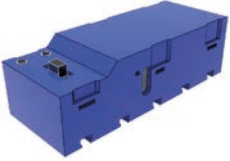


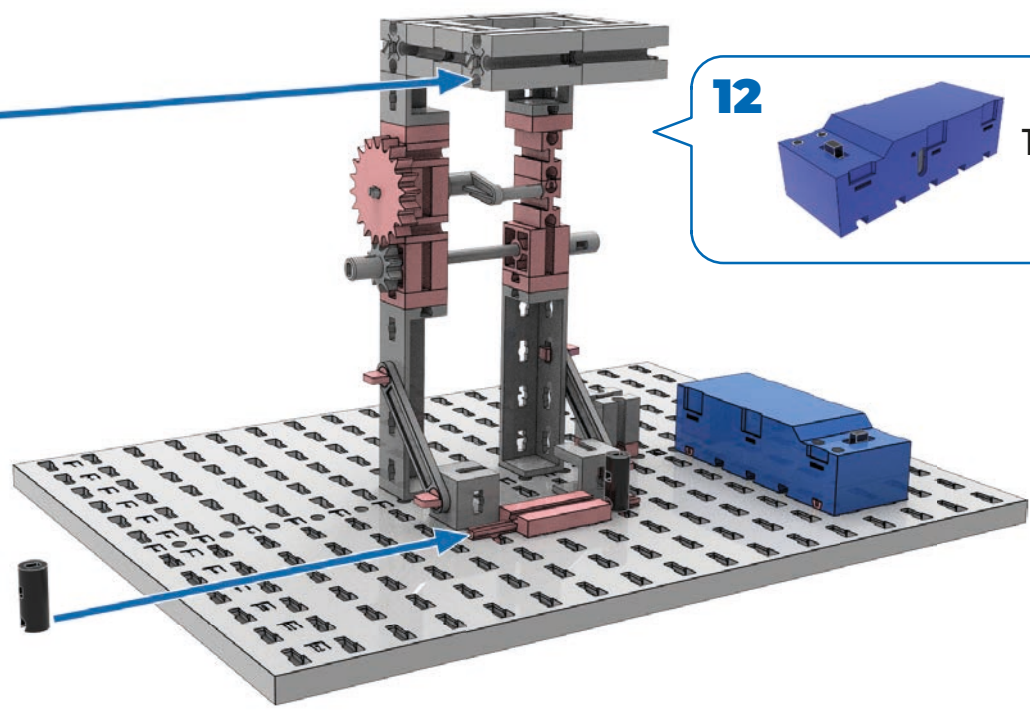
10  1x  4x  1x

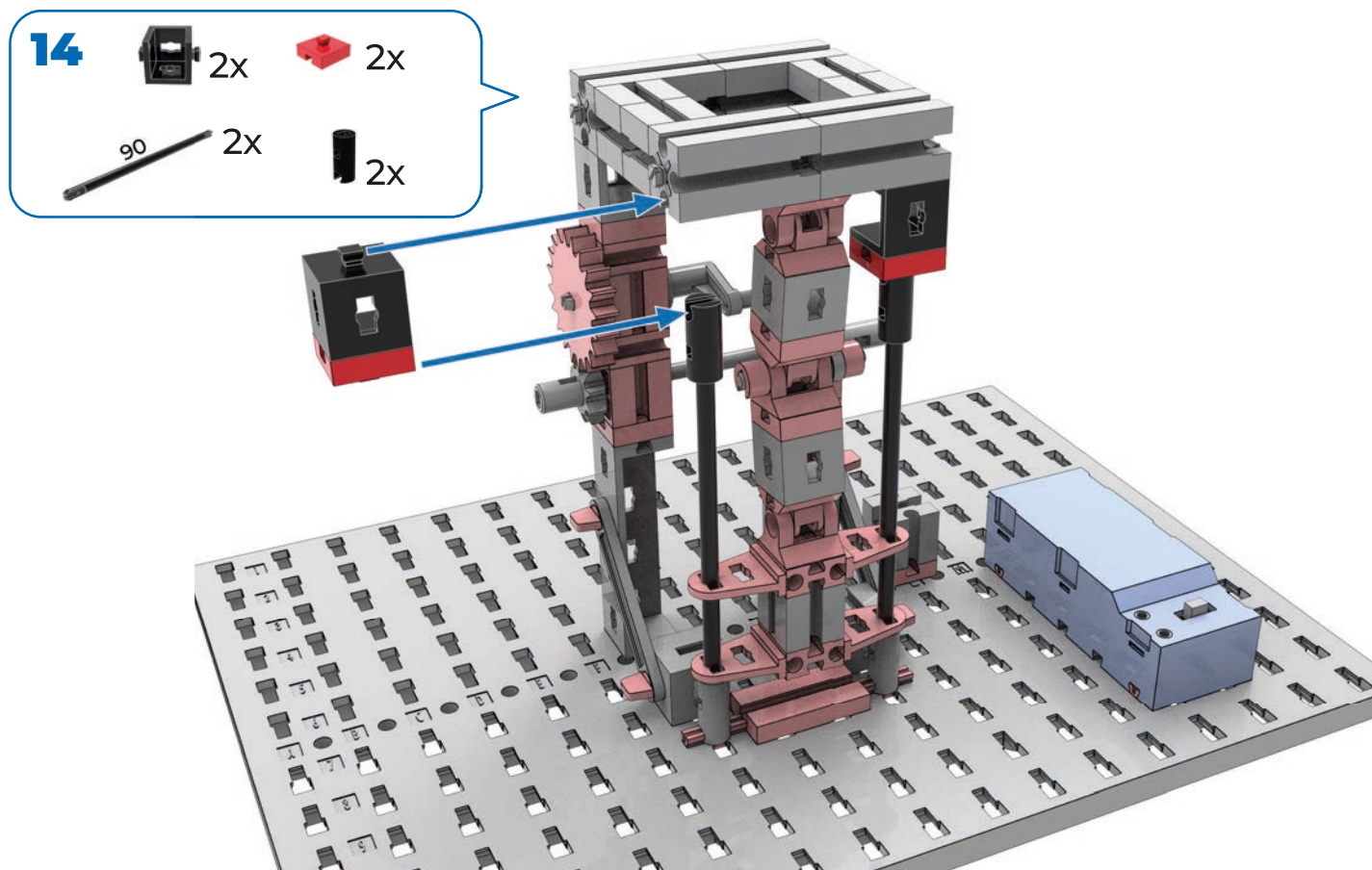
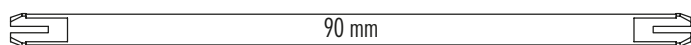
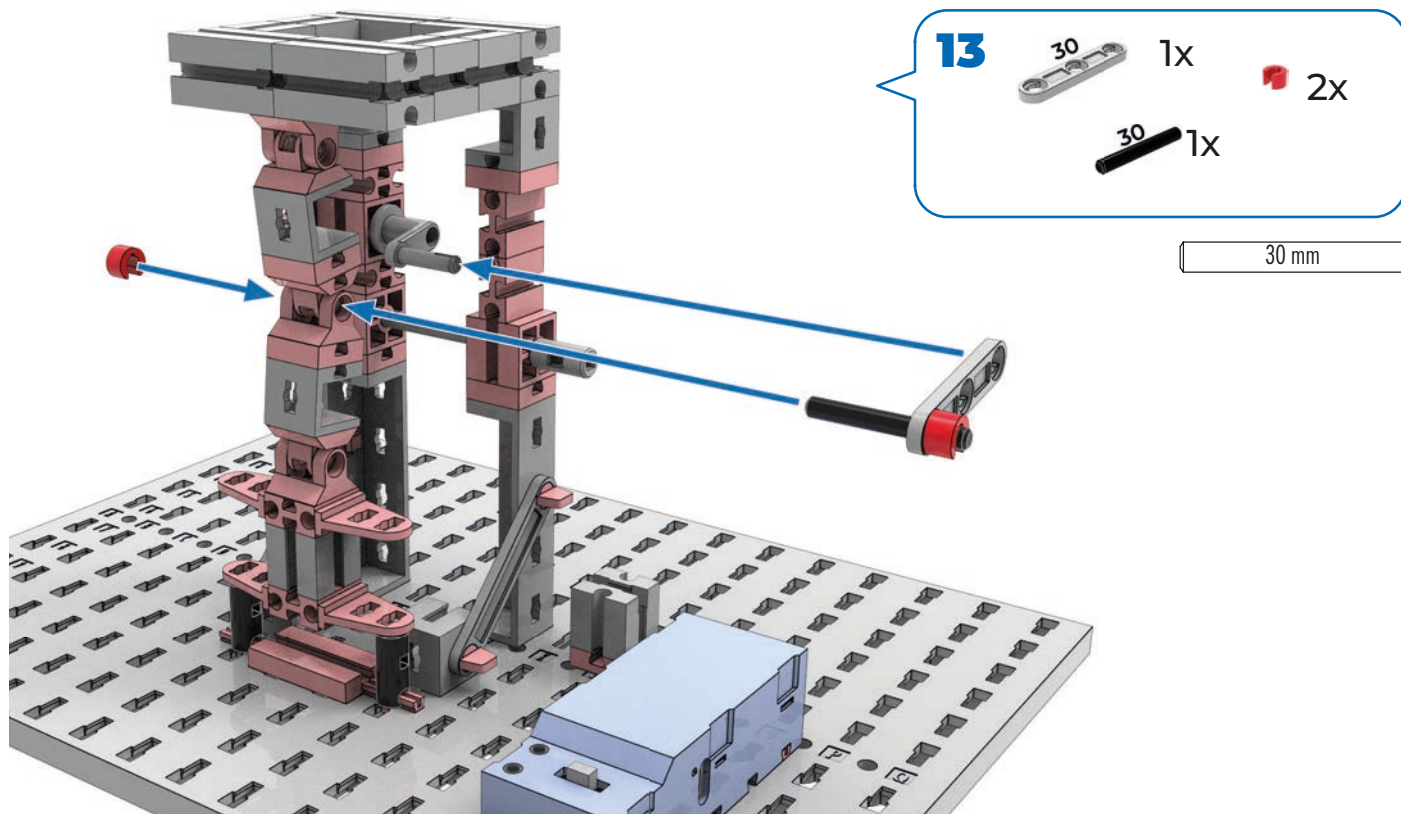


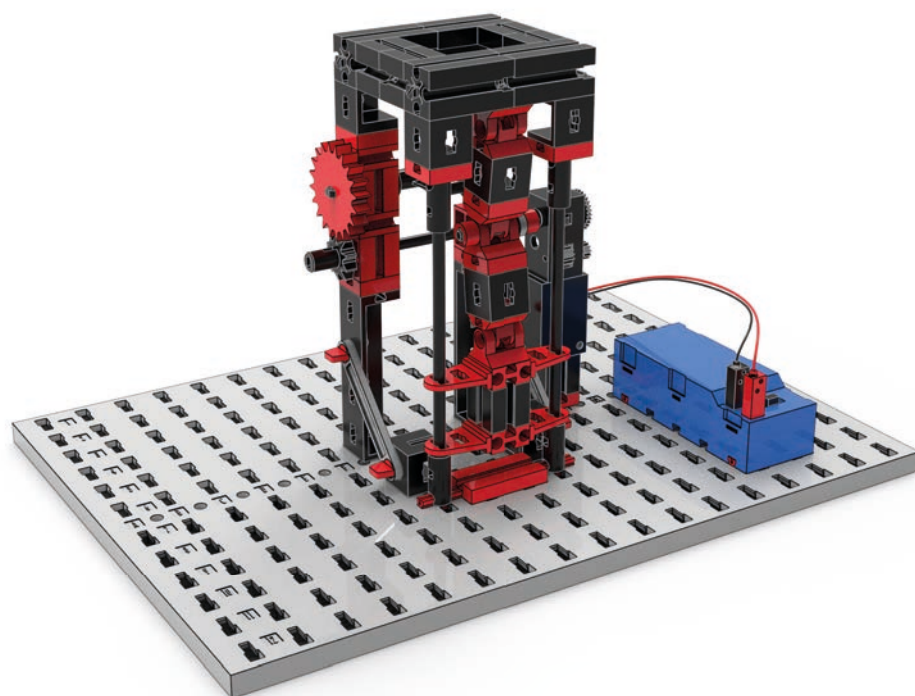
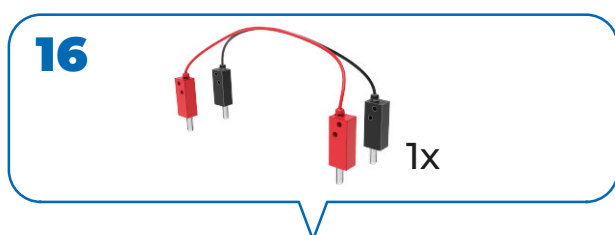
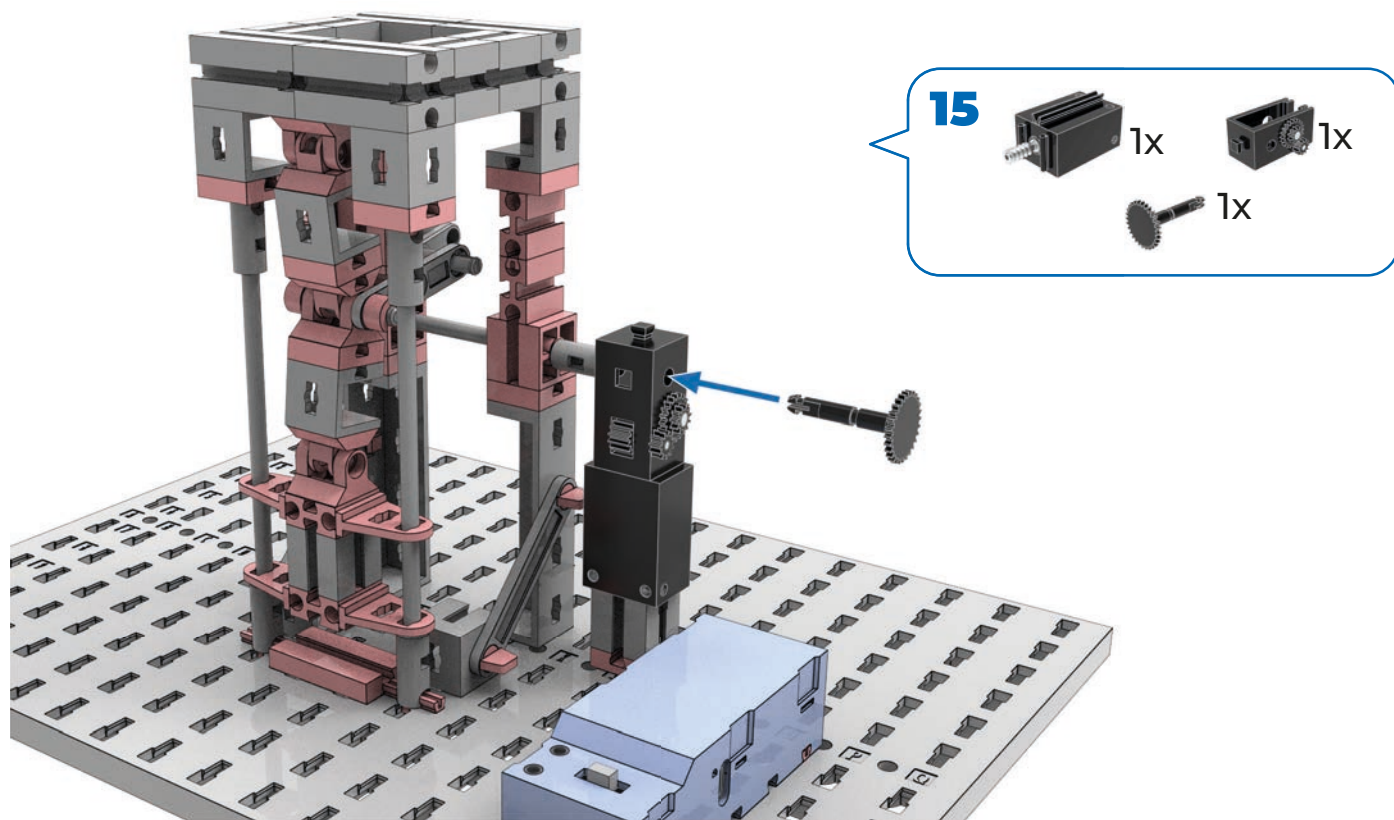
11  1x  1x  2x



12  1x  2x









Schiefe Ebene
Inclined plane
Plan incliné
Hellend vlak
Plano inclinado
Plano inclinado
Piano inclinato
Наклонная плоскость
 斜面

1



1x



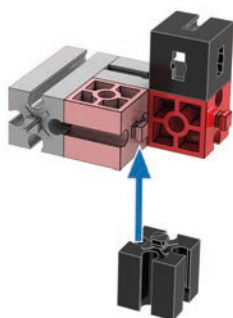
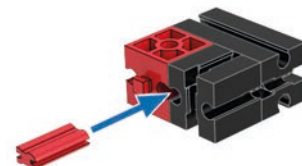
1x



1x



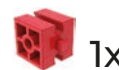
1x



2



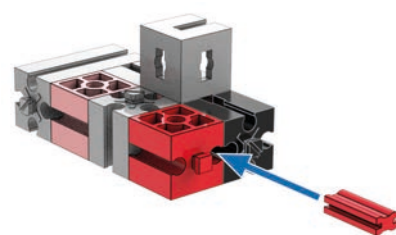
1x



1x



1x



3



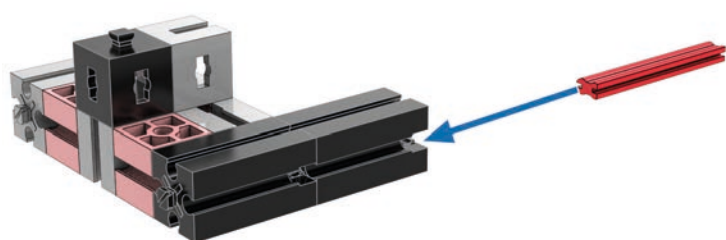
1x



1x



1x



4



2x



1x



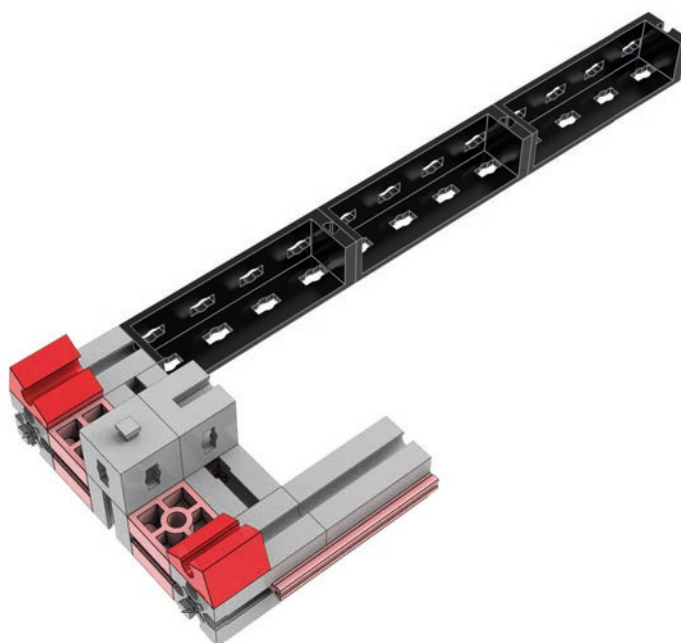
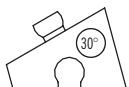
1x

5

30°

2x

3x



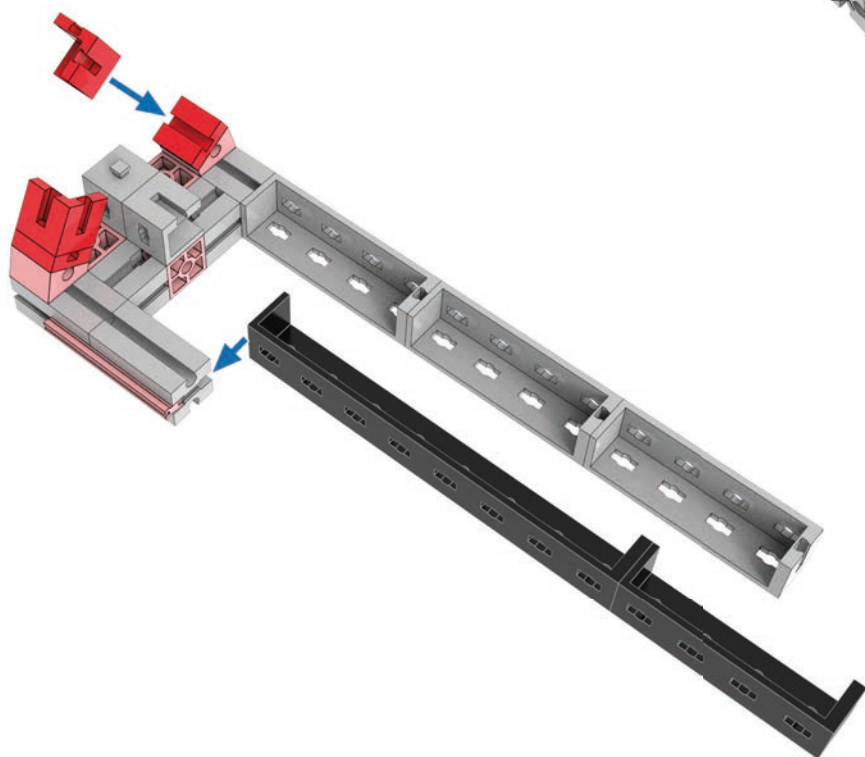
6

1x

2x

1x

2x

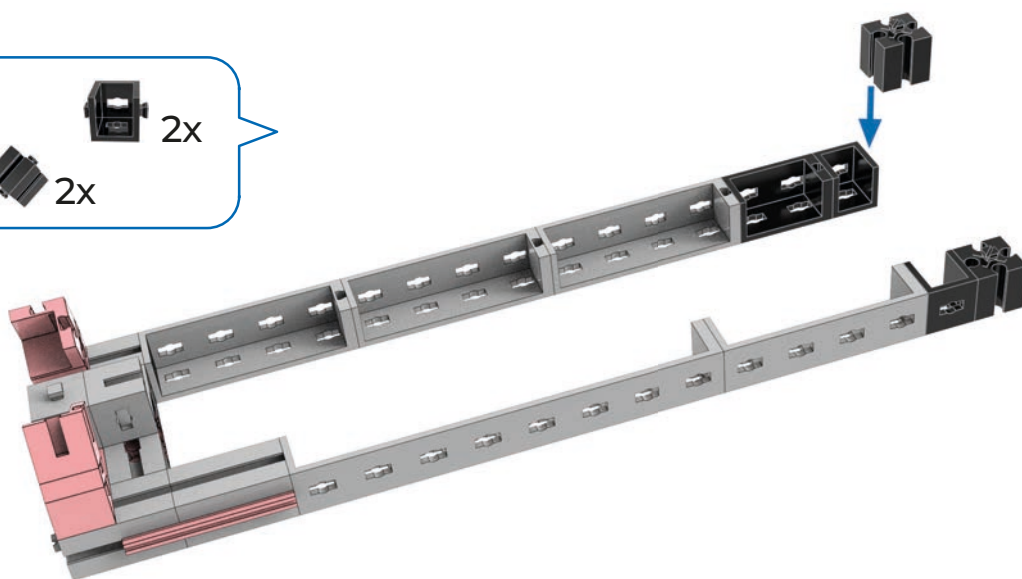


7

1x

2x

2x



8



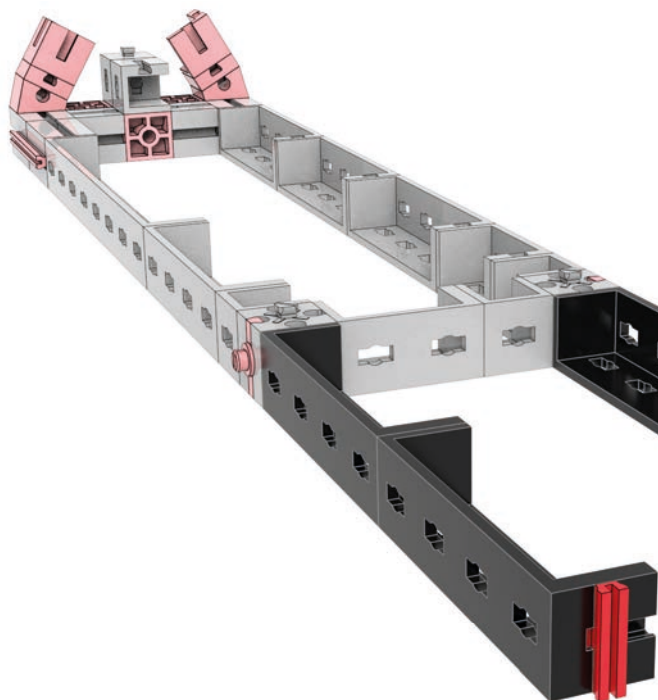
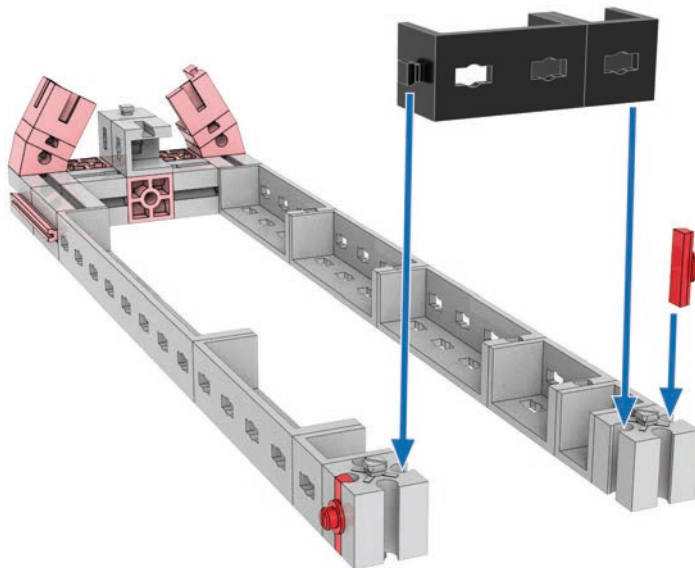
1x



1x



2x



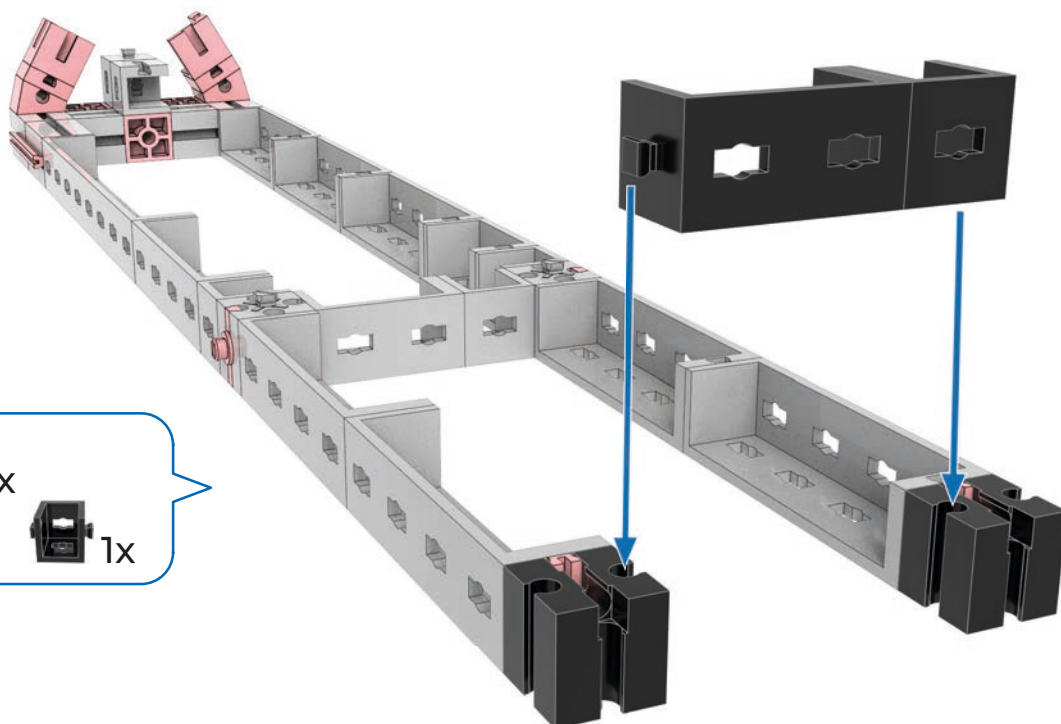
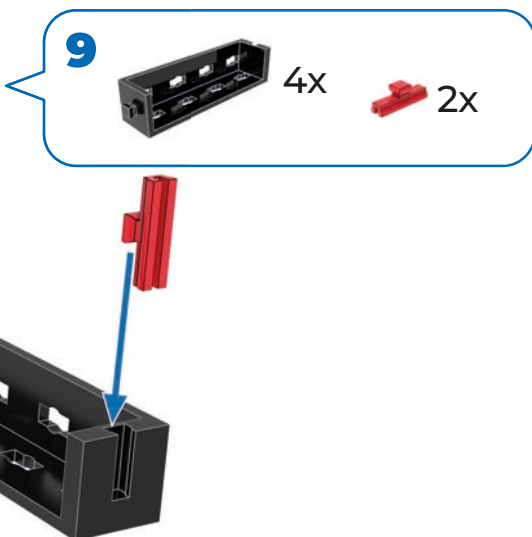
9



4x



2x



10



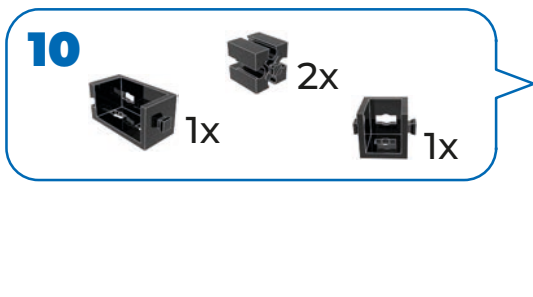
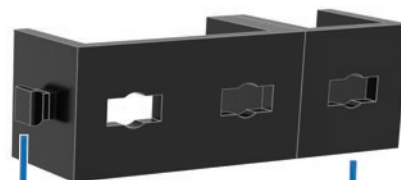
1x

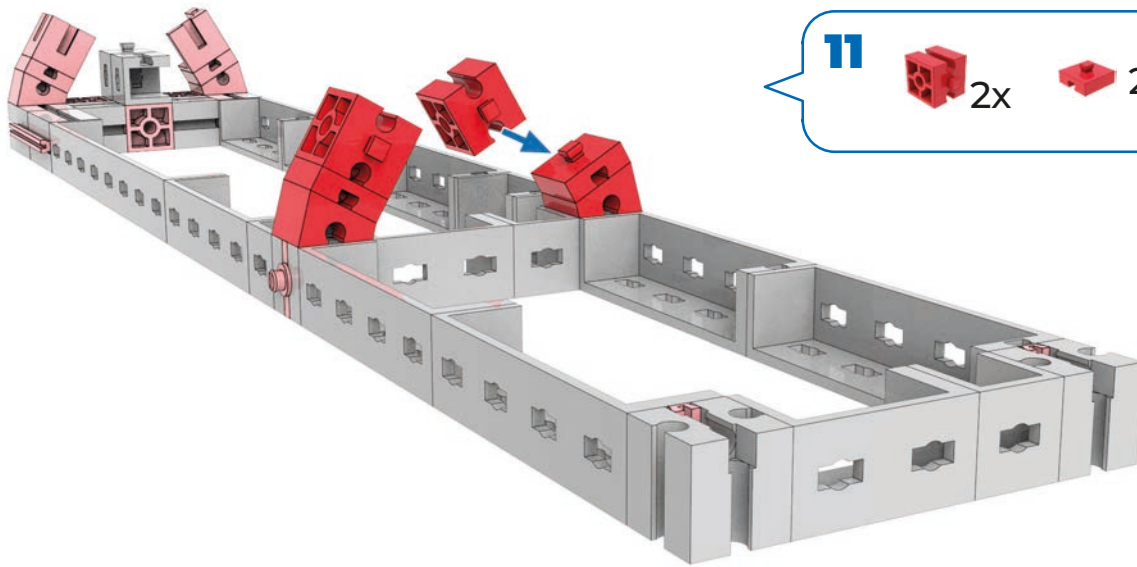


2x



1x





11



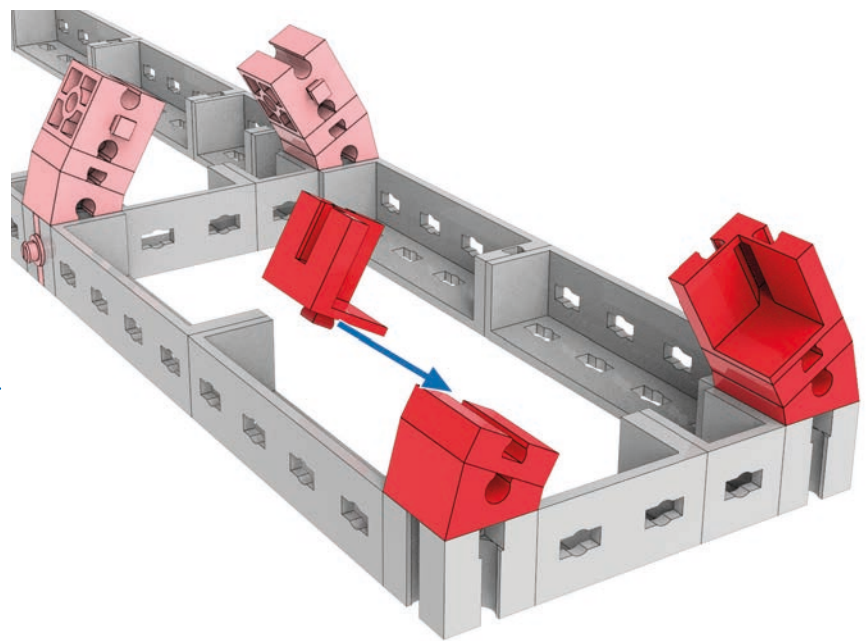
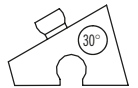
2x



2x



2x



12



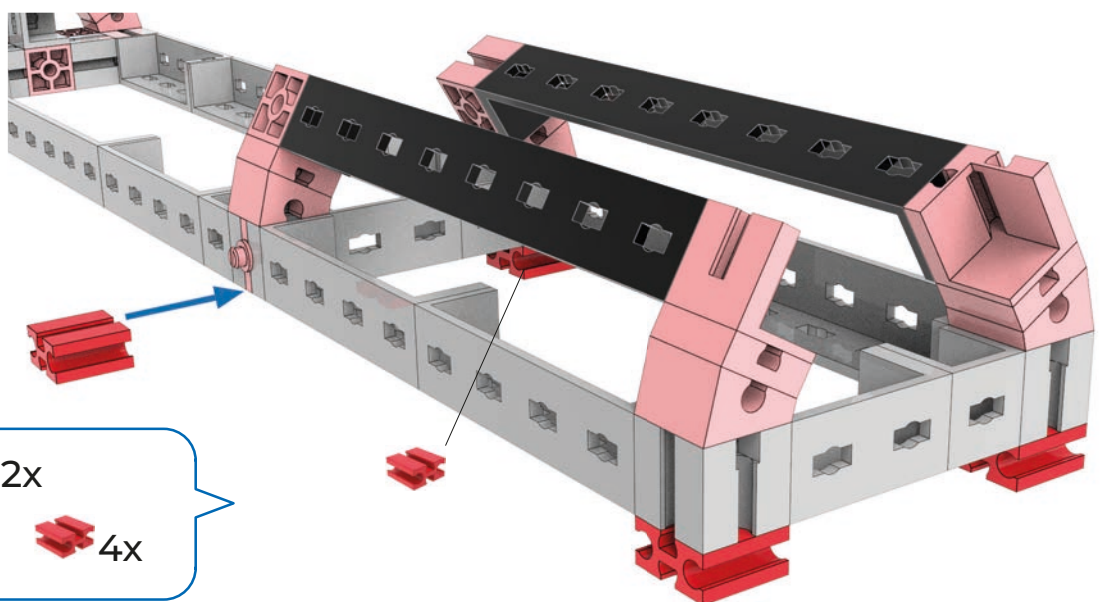
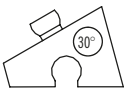
2x



2x



2x



13



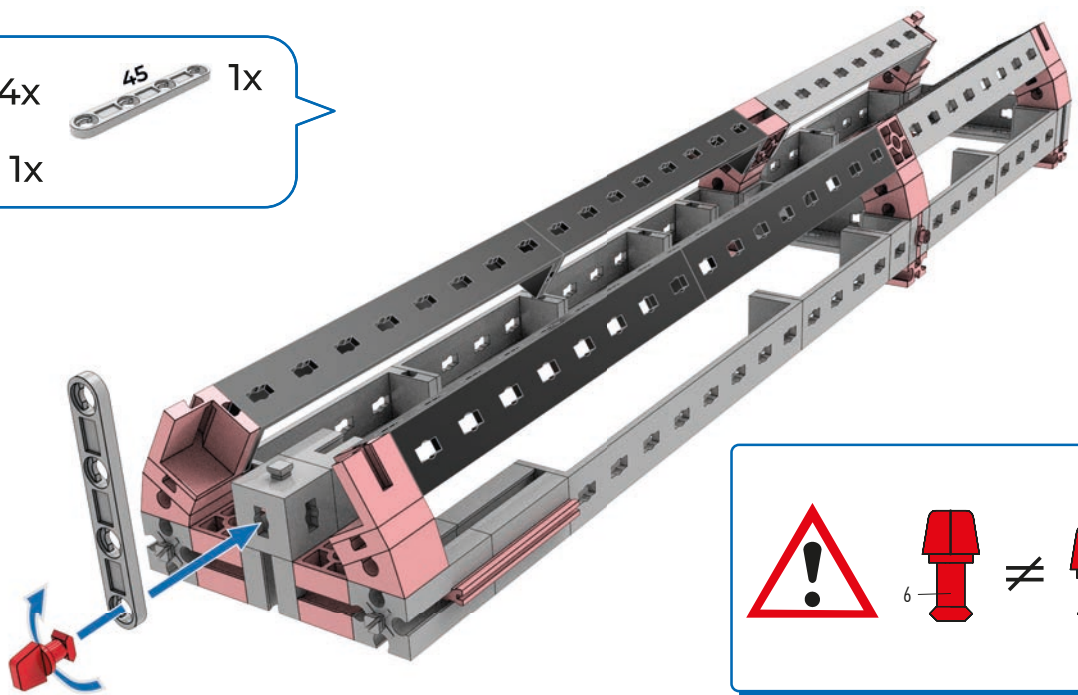
2x

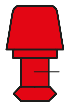


4x

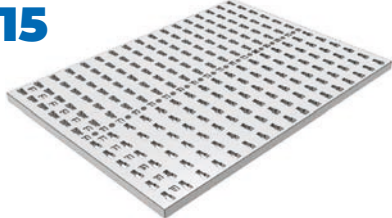
14

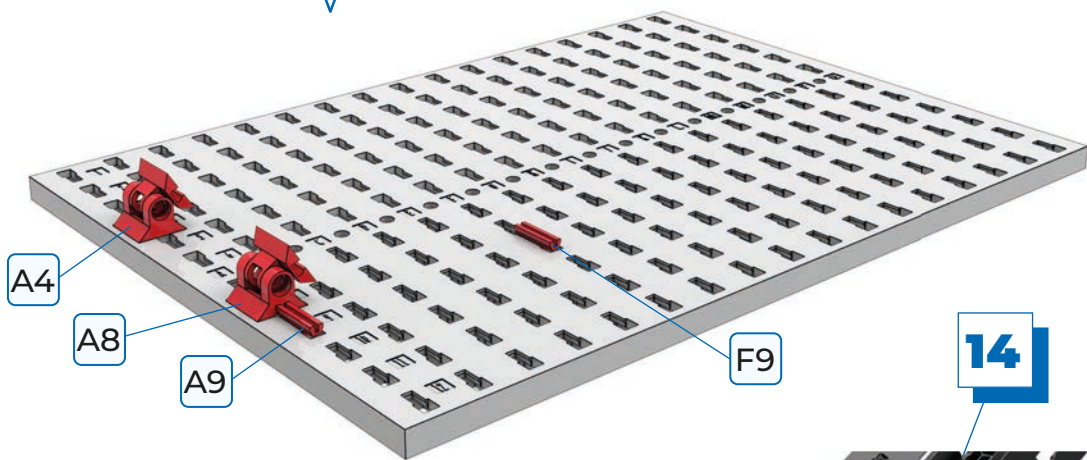
 4x
 1x
 1x



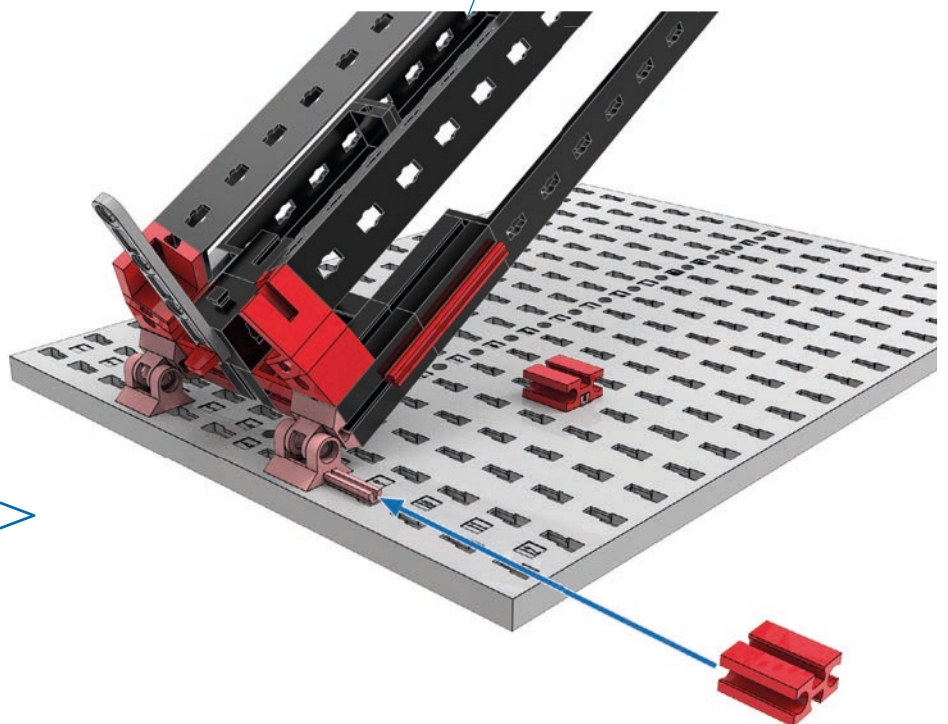

 $\neq$ 

15

 1x
 2x
 2x



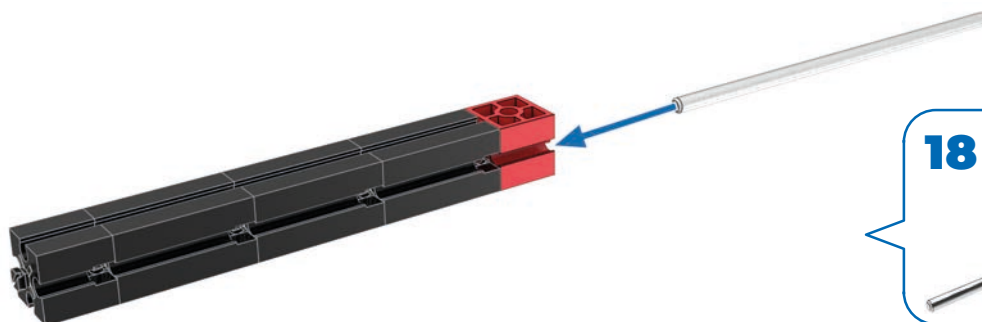
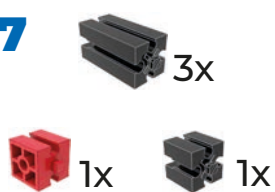
14



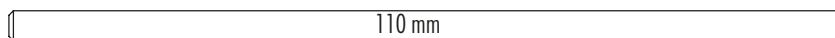
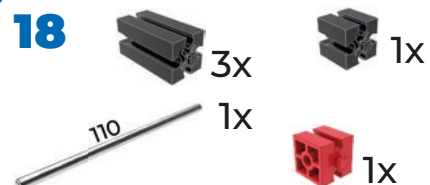
16

 2x

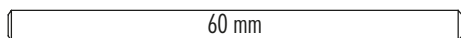
17



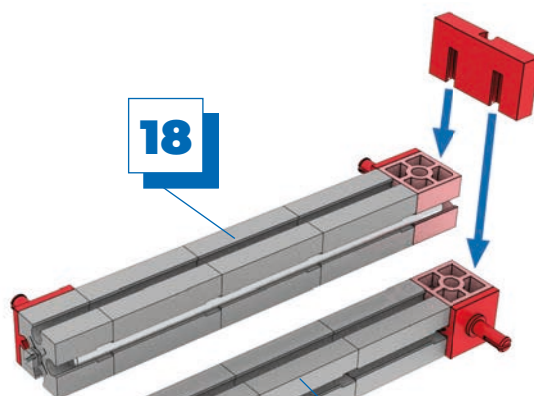
18



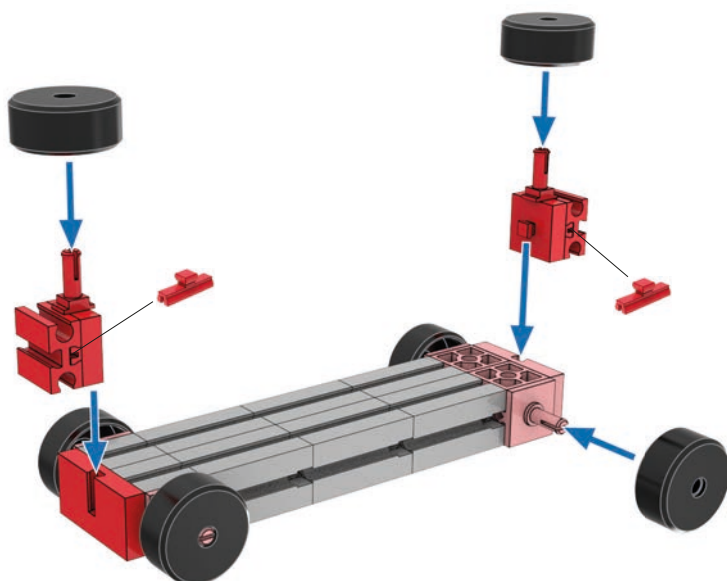
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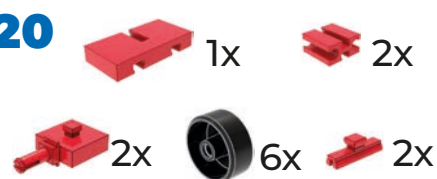
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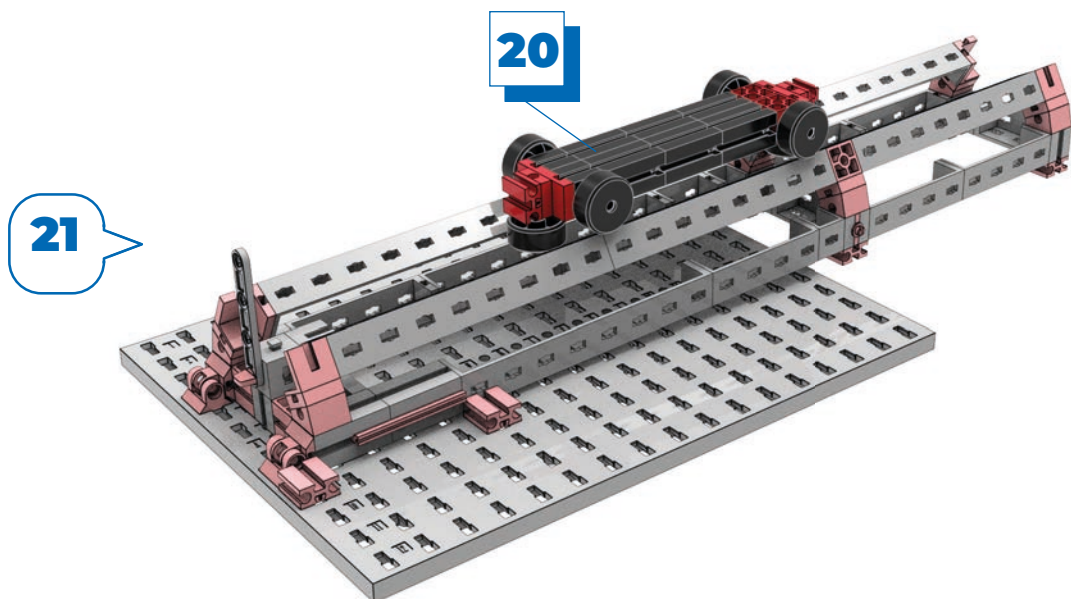


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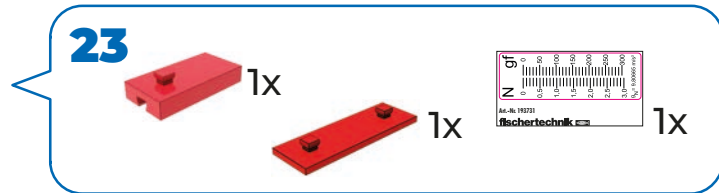
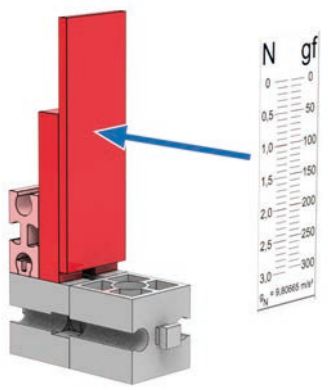
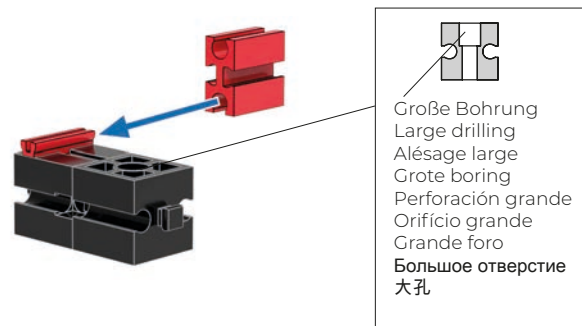
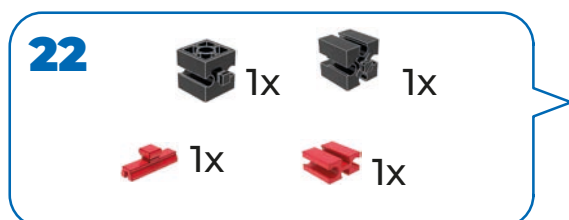


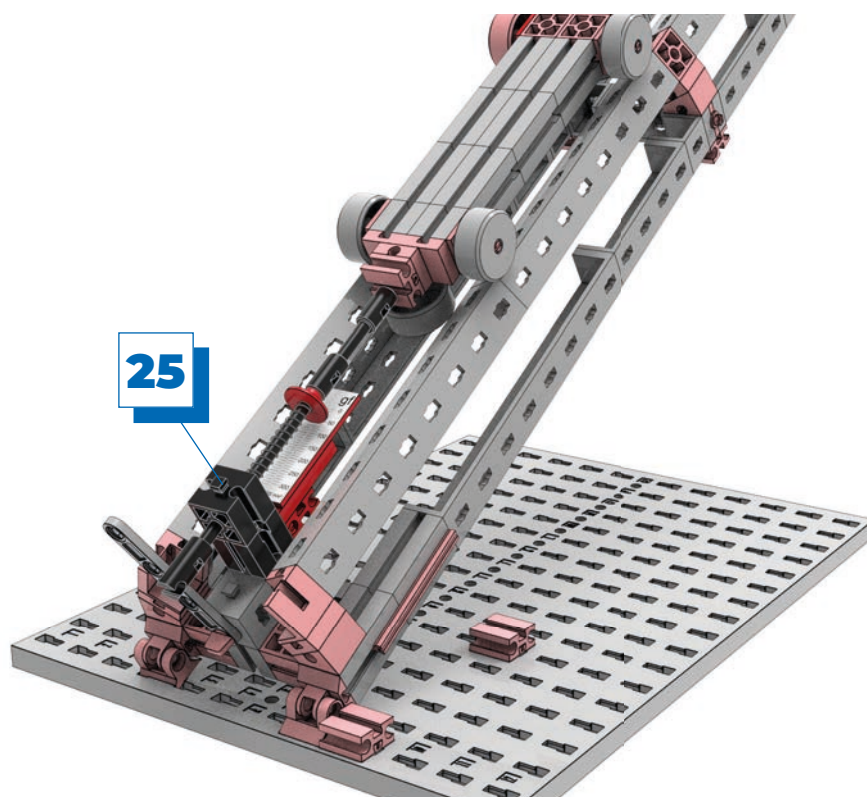
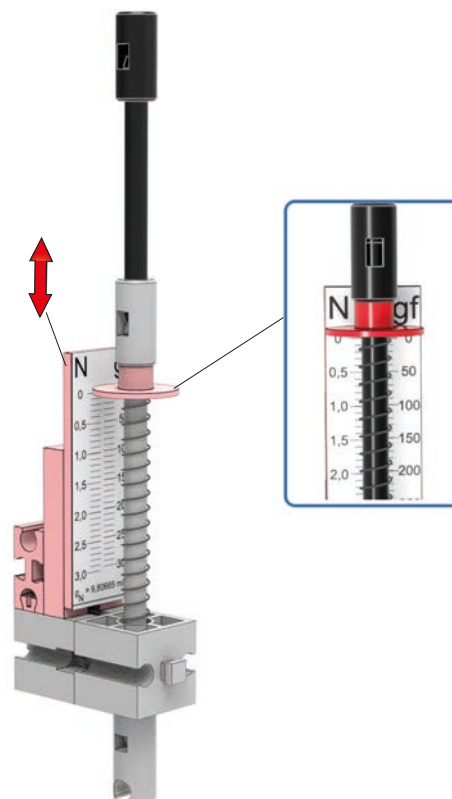
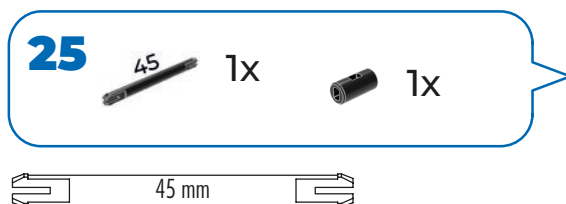
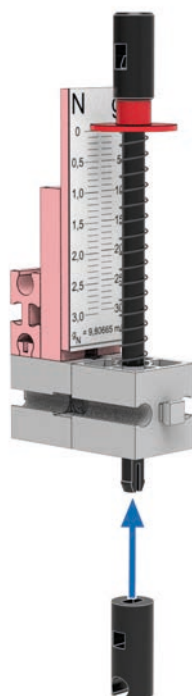
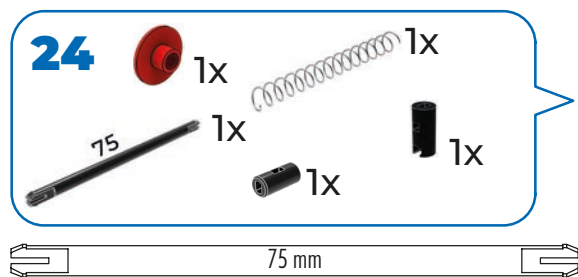
20





Modellvariante / model variant / variante de modèle / modelvariant / variante del modelo /
variante del modelo / variante del modelo / вариант модели / 型号变体

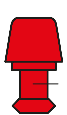




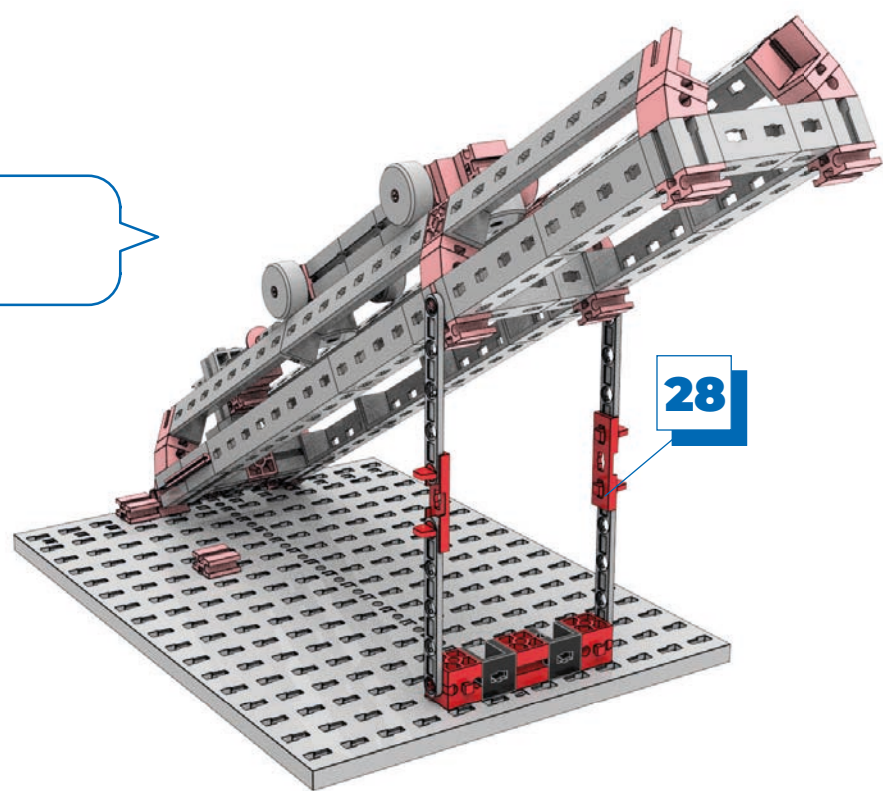
27  3x  2x  2x

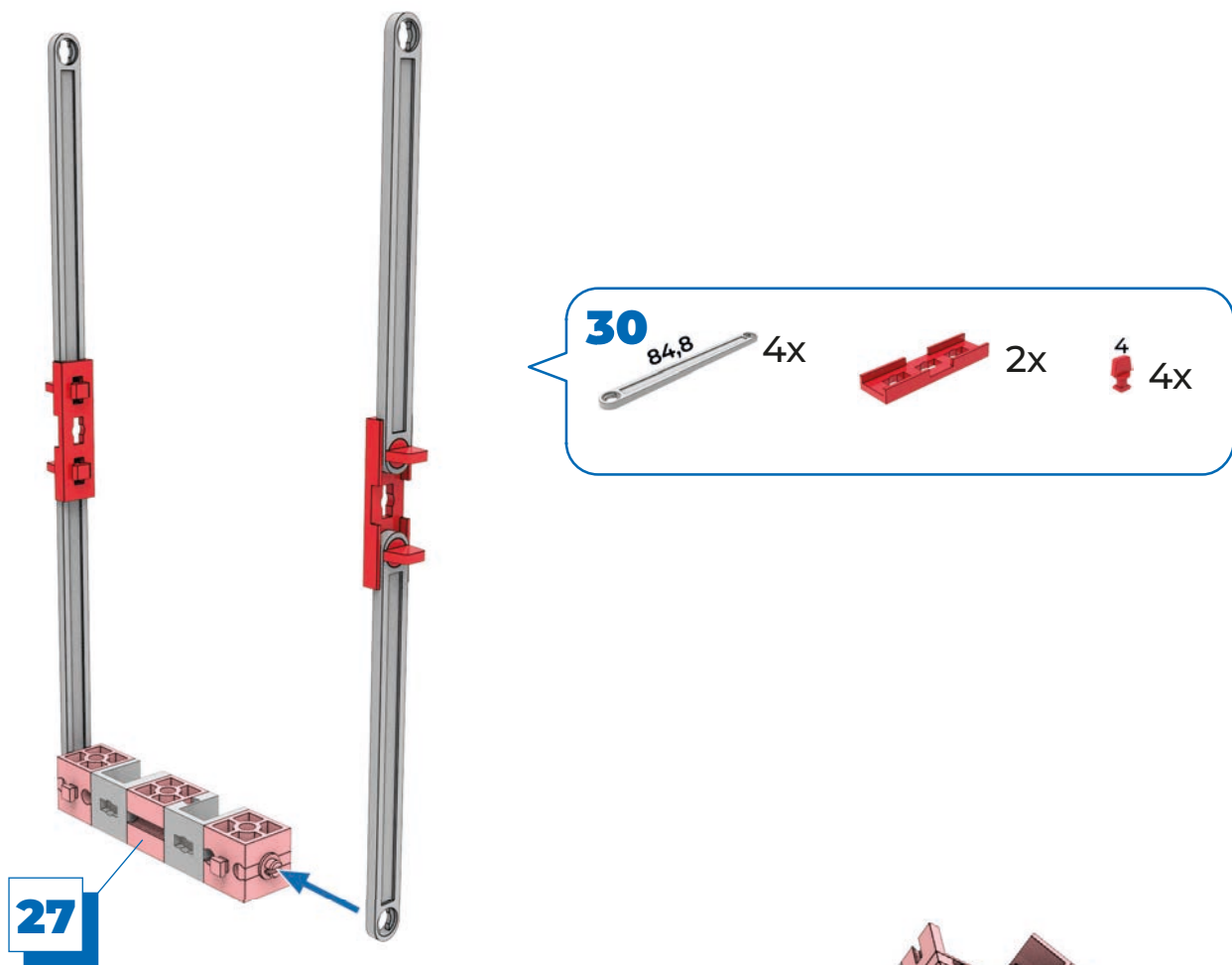


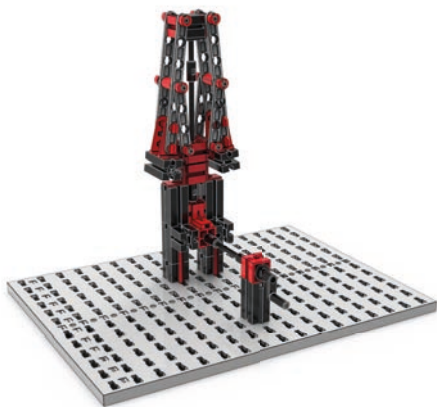
28  4x  2x  4x

  $\neq$ 

29

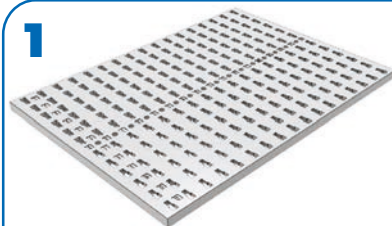






Fliehkraftregler
Centrifugal governor
Régulateur centrifuge
Centrifugaalgouverneur
Regulador de fuerza centrífuga
Regulador de fuerza centrífuga
Regolatore della forza centrifuga
Центробежный регулятор
离心式调速器

1



1x



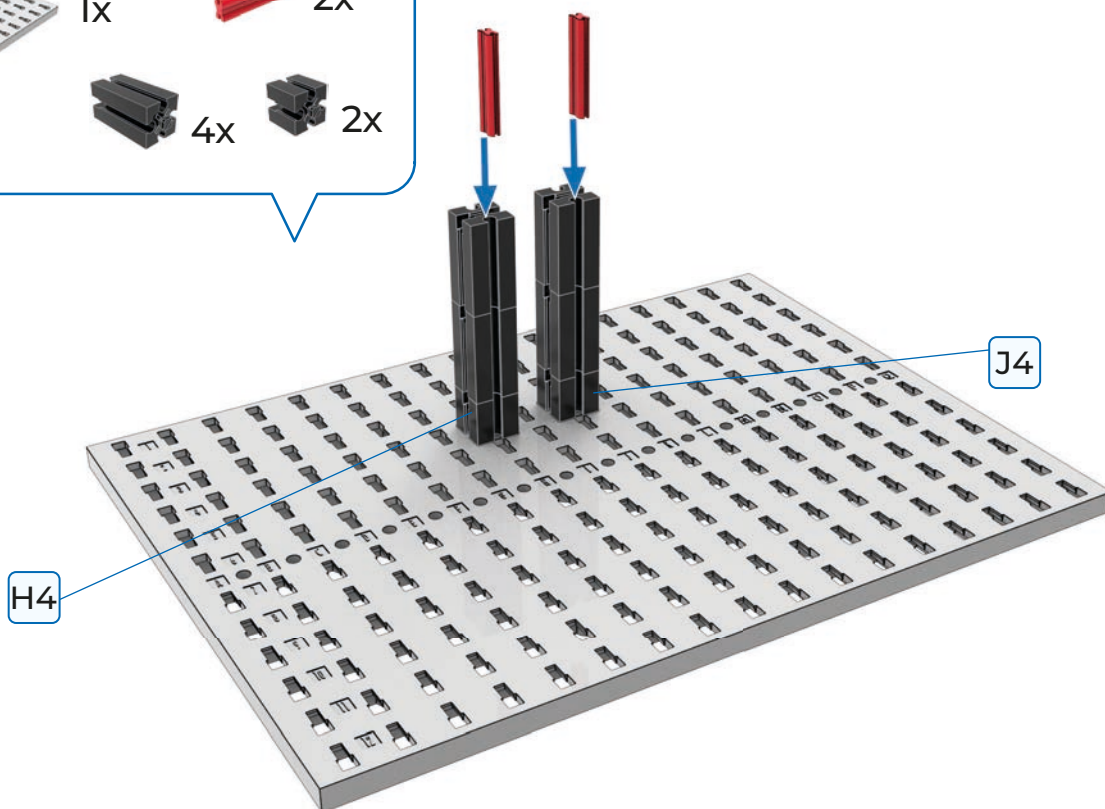
2x



4x



2x



H4

J4

2



1x



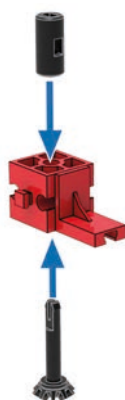
1x

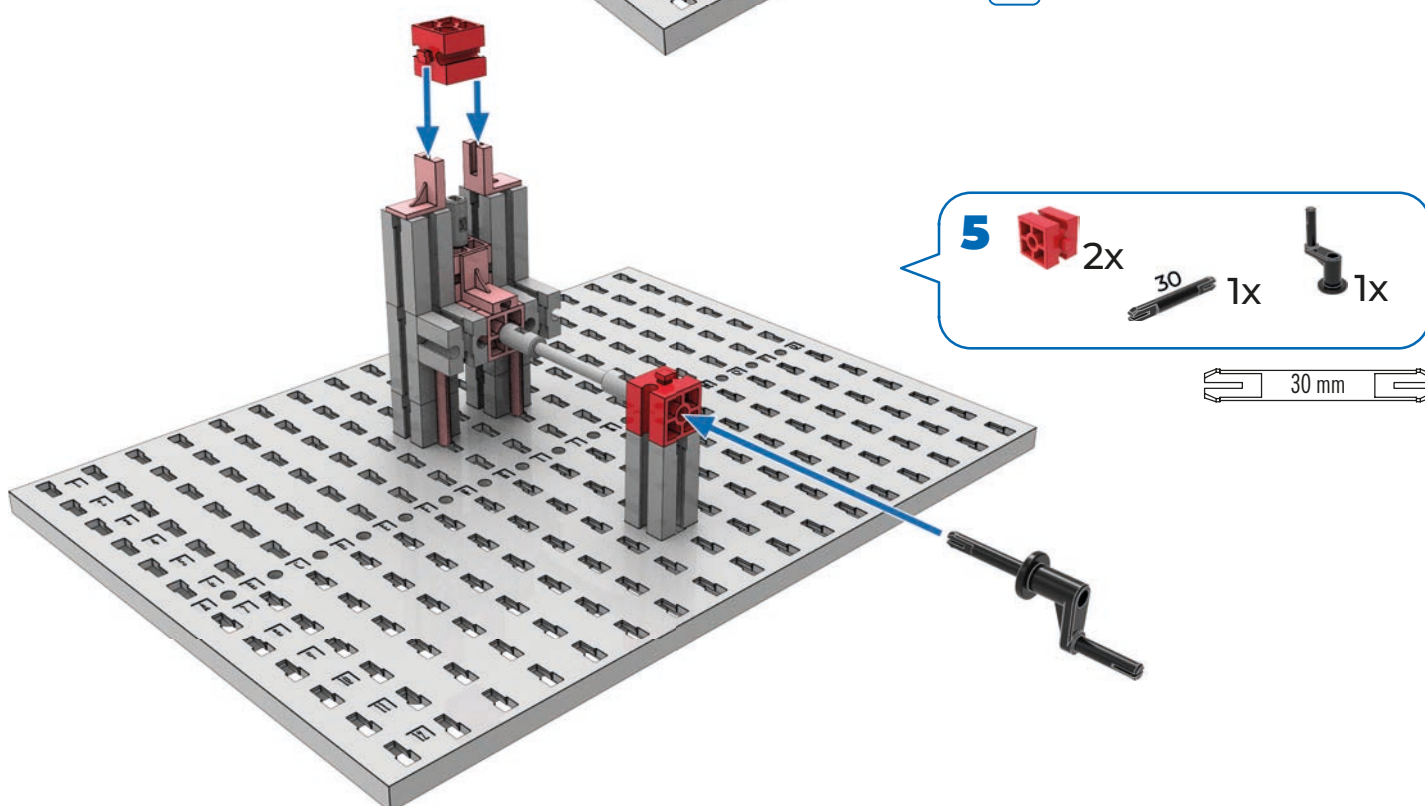
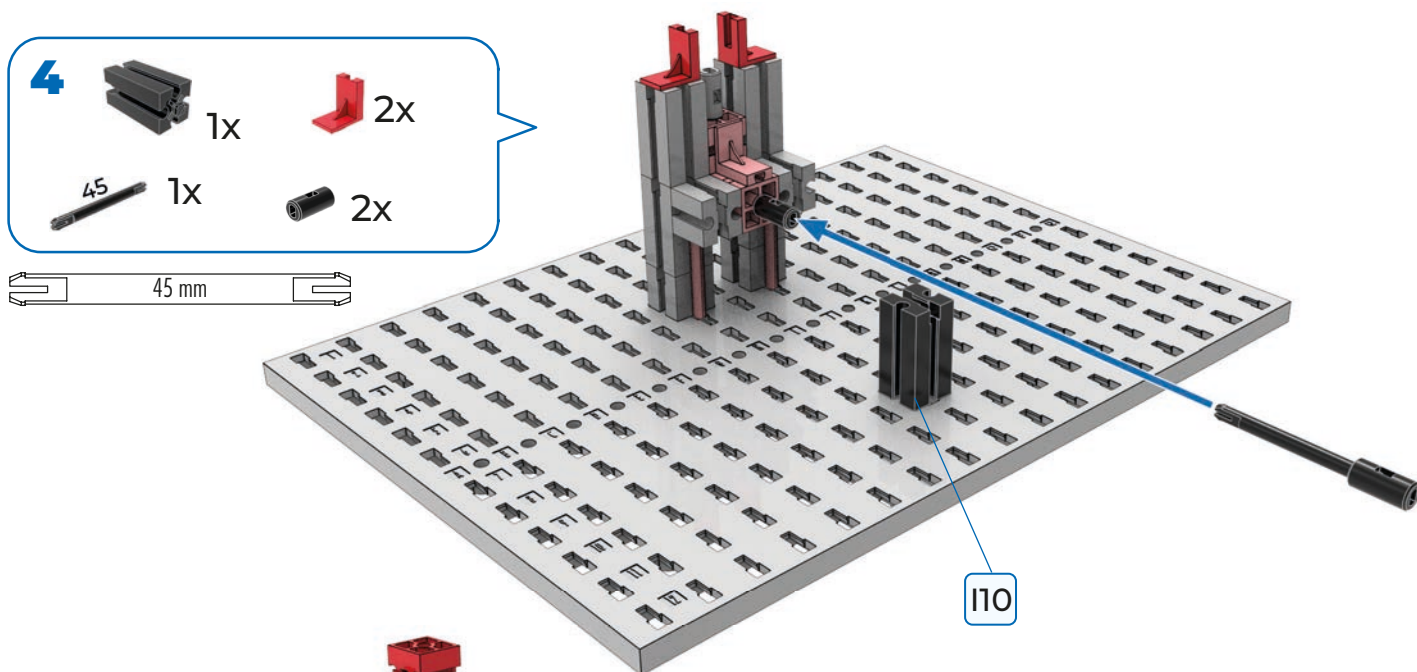
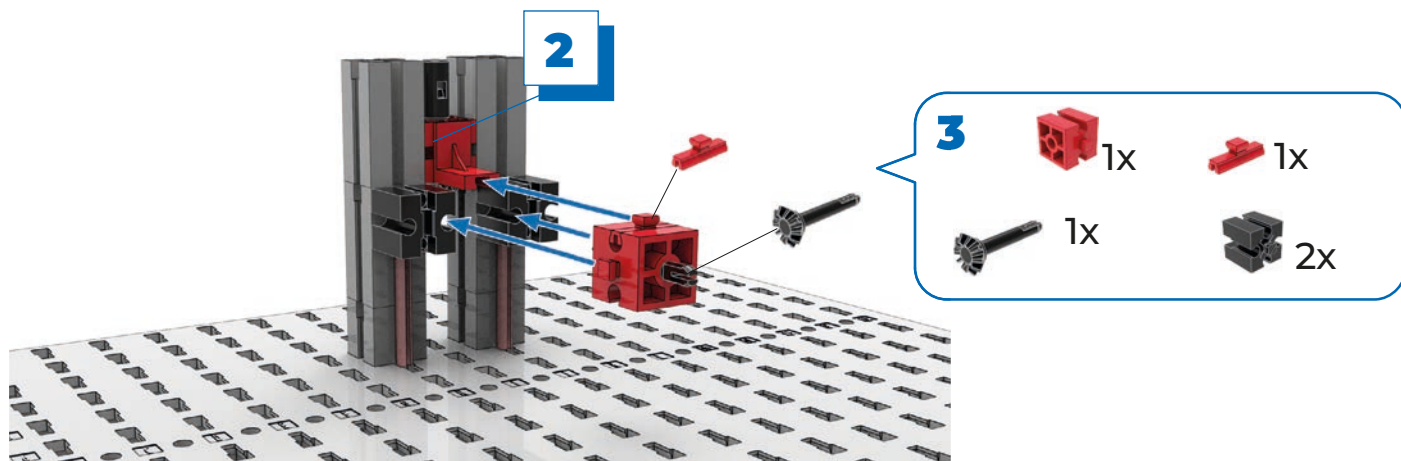


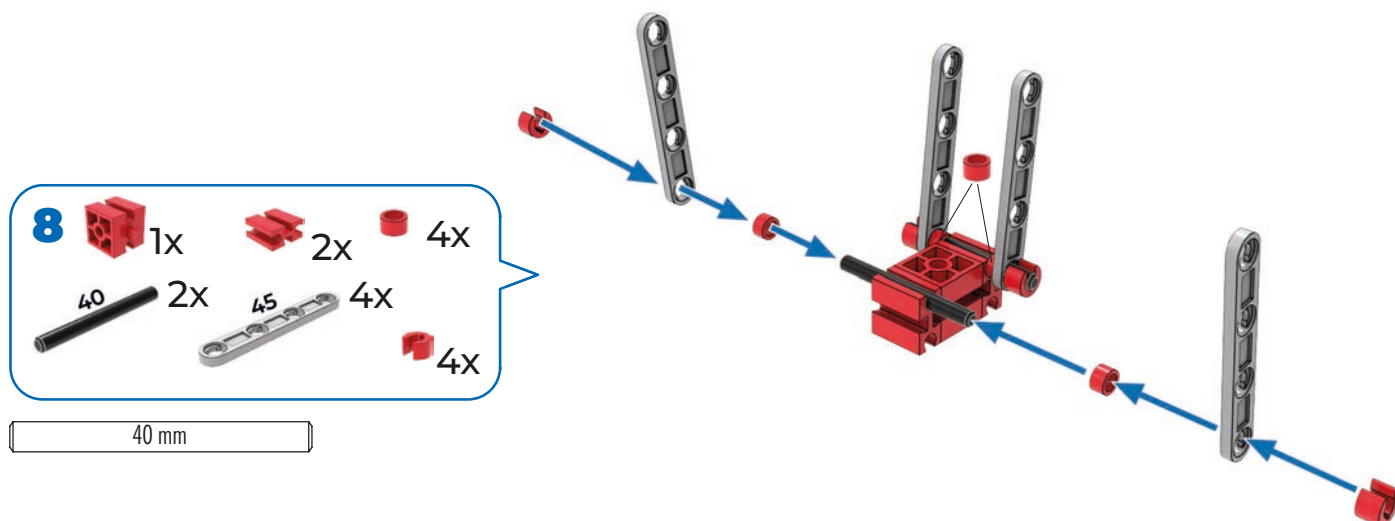
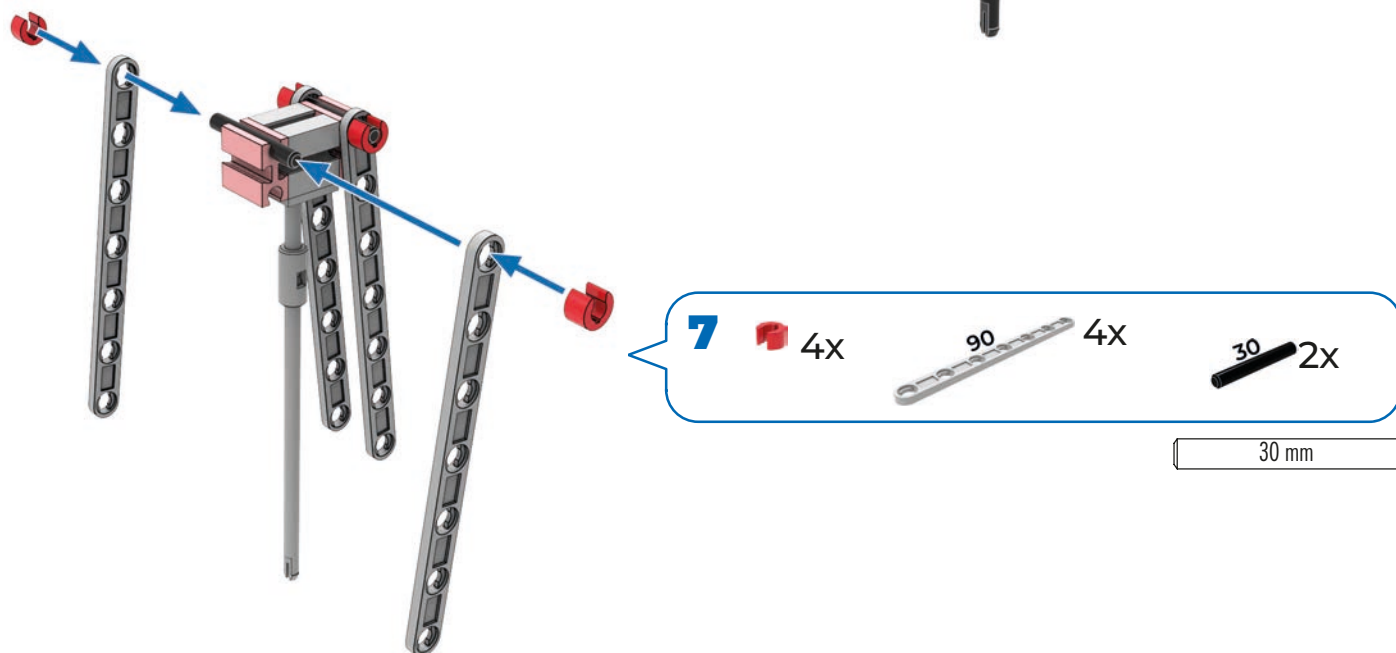
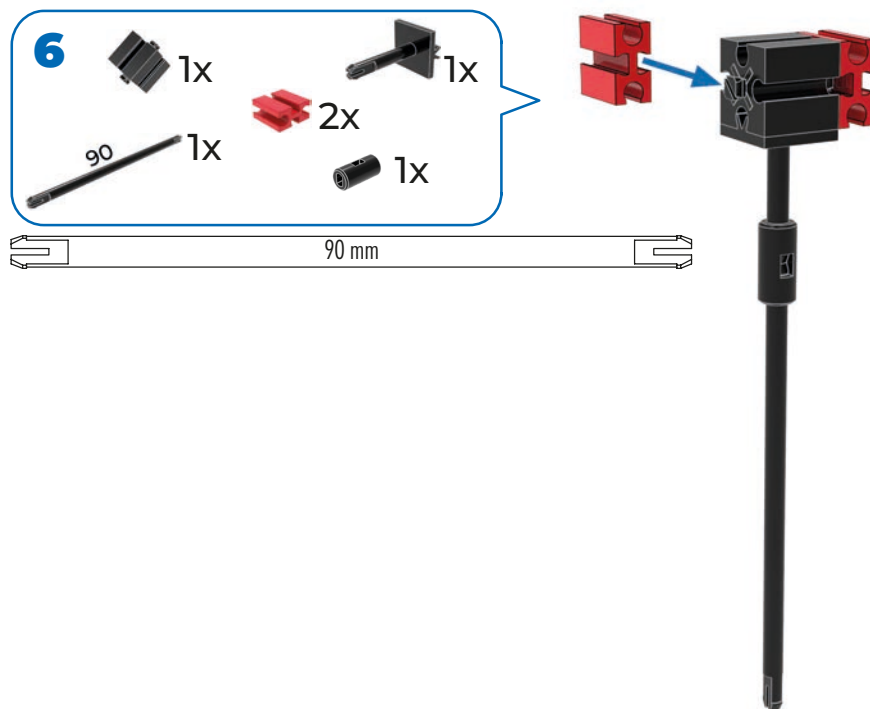
1x



1x



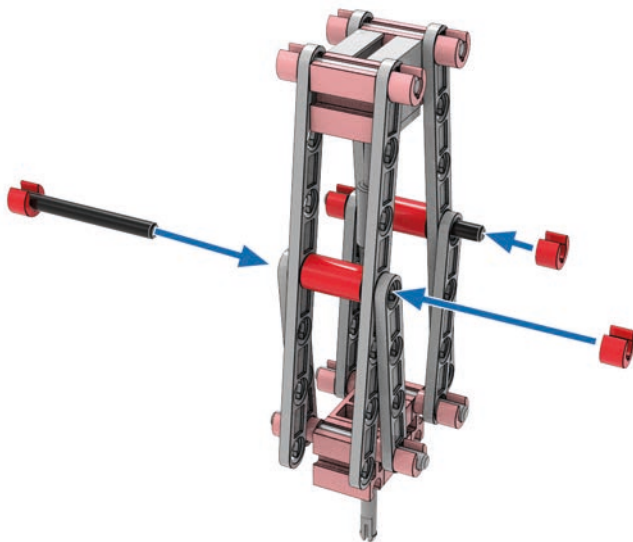
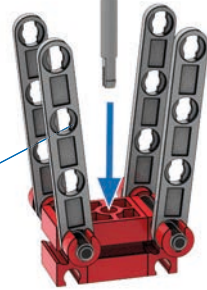




9



8



10  2x  4x  2x

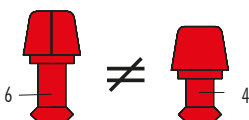
40 mm

11

 2x  4x

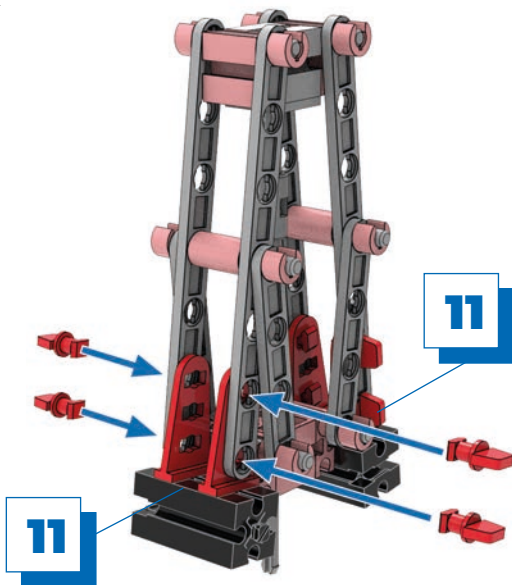


2 x



12

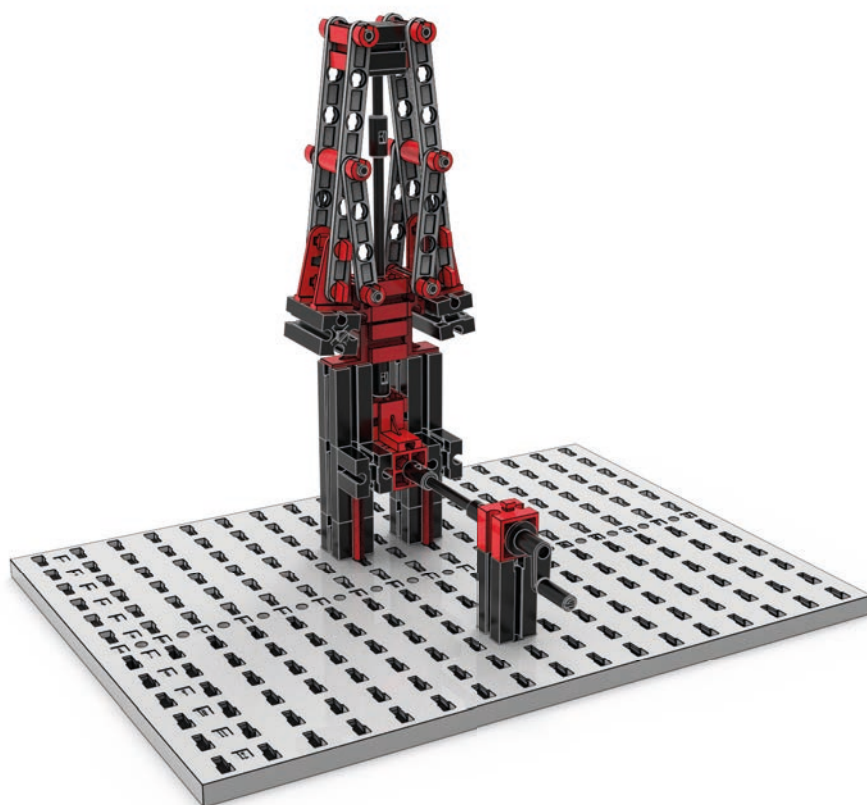
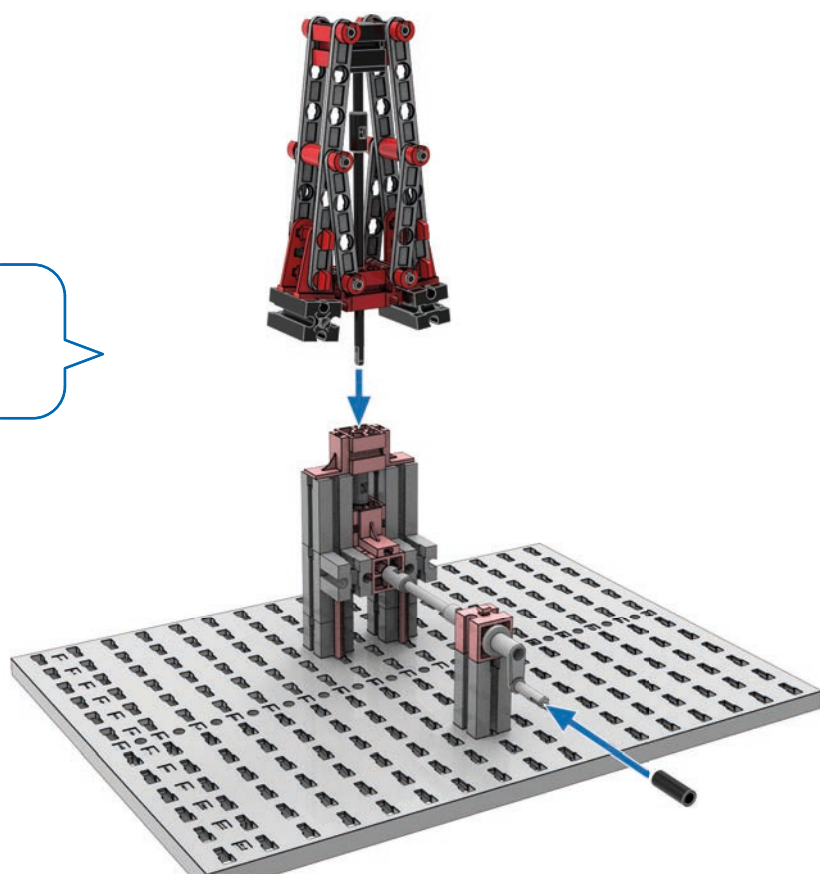
 4  8x



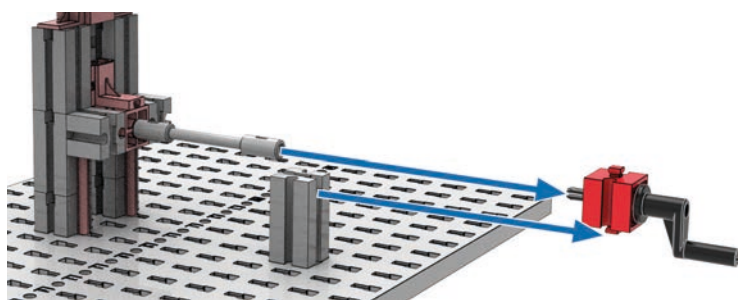
13



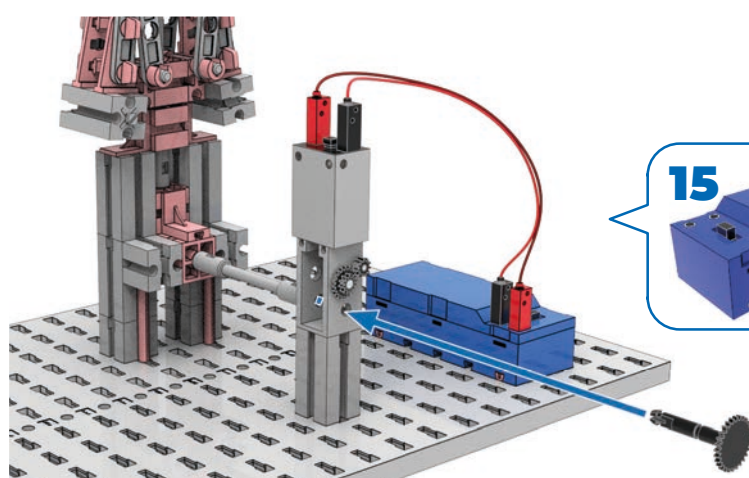
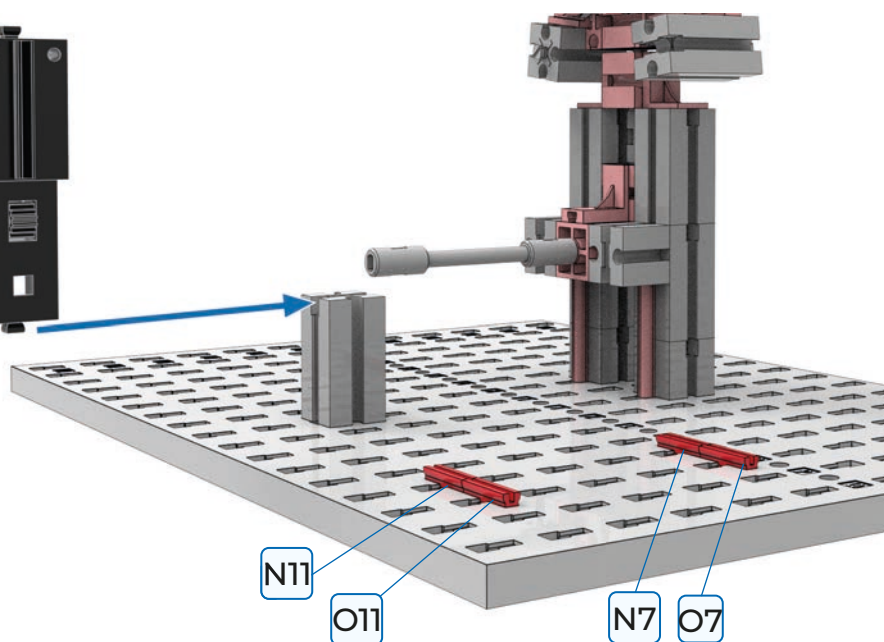
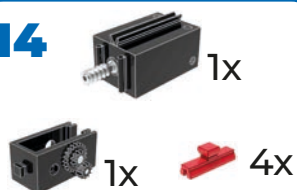
1x



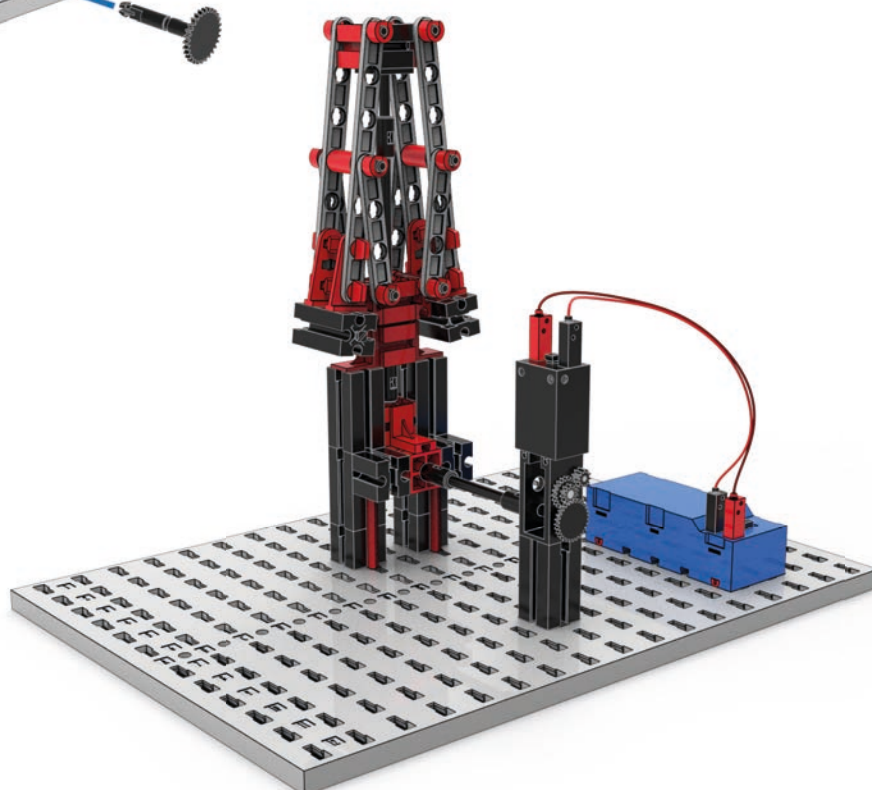
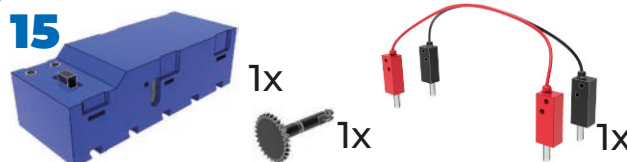
umbauen
modify
modifier
veranderen
modificar
modificar
modificare
переделать
改装



14



15



STEM Mechanics

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