

**fischertechnik** 

**COMPUTING**

Bauanleitung  
Assembly instruction  
Instructions de montage  
Bouwhandleiding  
Instrucciones de construcción  
Manual de montagem



**ROBO STARTER**  
8 MODELS

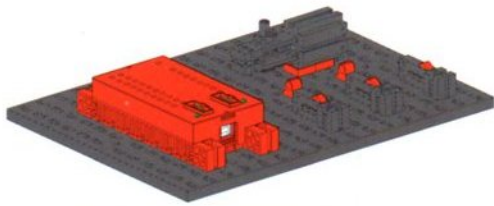


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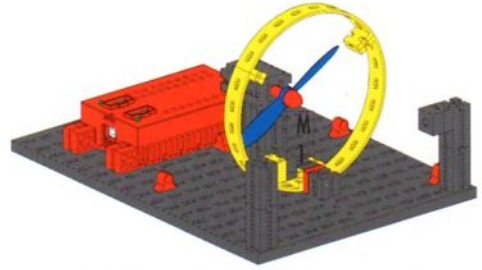
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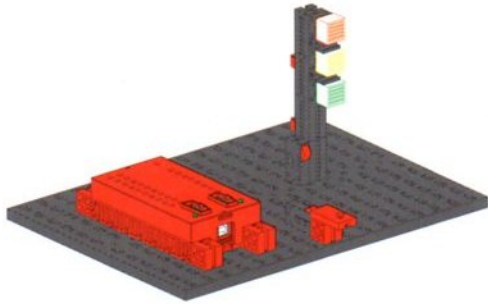
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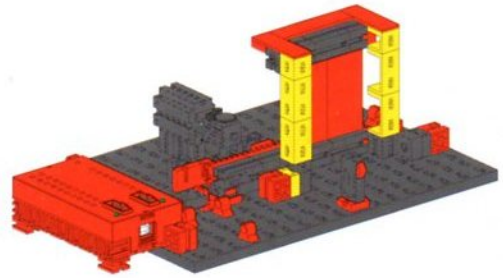
Motorsteuerung / Motor control / Commande de moteur /  
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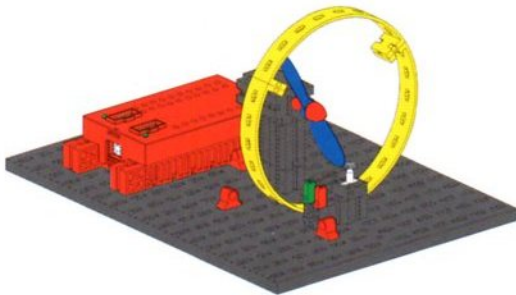
Händetrockner / Hand dryer / Sèche-mains / Handdroger /  
Secador de manos / Secador para as mãos . . . . . S. / p. 5



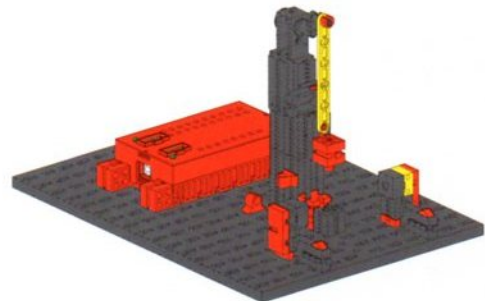
Ampel / Traffic light / Feu de circulation /  
Verkeerslicht / Semáforo / Semáforo . . . . . S. / p. 7



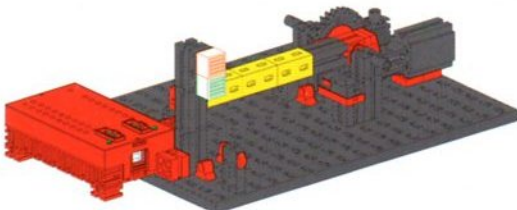
Schiebetür / Sliding door / Porte coulissante /  
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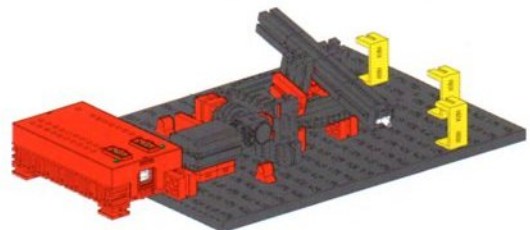
Temperaturregelung / Temperature control / Réglage de la  
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Stanzmaschine / Stamping press / Machine à estamper /  
Stansmachine / Cortadora de chapas / Máquina de punçonar . . . . . S. / p. 15

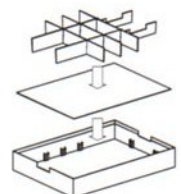


Parkhausschranke / Car park barrier / Barrière de parking /  
Slagboom van parkeergarage / Barrera del aparcamiento /  
Barreira do estacionamento . . . . . S. / p. 18



Schweißroboter / Welding robot / Robot de soudage / Lasrobot /  
Robot de soldadura / Robô de soldagem . . . . . S. / p. 22

Sortiervorschlag für Aufbewahrungssystem / Storage suggestion for storage system / Suggestion de classement pour le système de stockage /  
Sorteervoorstel voor bewaarsysteem / Propuesta de clasificación para almacenamiento / Proposta de divisão caixa 1 para sistema de conservação



**Einzelteilübersicht**  
**Spare parts list**  
**Liste des pièces détachées**

	31053 2x
	31058 1x
	31061 1x
	31078 1x
	31082 1x
	31124 1x
	31336 17x
	31337 17x
	31360 1x
	31390 1x
	31391 1x
	31555 2x
	31690 1x
	31848 1x
	31981 2x
	31982 7x

	32064 7x
	32293 1x
	32879 6x
	32881 5x
	32882 3x
	32985 1x
	35031 1x
	35049 4x
	35053 2x
	35054 3x
	35063 1x
	35066 1x
	35072 1x
	35073 2x
	35079 1x
	35084 1x

**Onderdelenoverzicht**  
**Lista da piezas**  
**Resumo de peça individual**

	35085 1x
	35088 1x
	35945 1x
	35969 5x
	36134 1x
	36264 1x
	36299 4x
	36334 1x
	36437 1x
	36443 1x
	36532 2x
	36559 1x
	37157 1x
	37237 4x
	37238 2x
	37468 2x

	37636 1x
	37679 4x
	37681 1x
	37783 3x
	37869 2x
	37875 1x
	38216 4x
	38242 2x
	38416 2x
	38423 2x
	38428 3x
	38464 1x
	38545 1x

- 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.

- 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!

- Alle onderdelen, vooral de bewegende delen, kunnen, indien noodzakelijk, onderhouden en gereinigd worden.
- Es necesario limpiar y mantener en buen estado todas las diferentes piezas - especialmente las piezas móviles.
- Caso necessário, todas as peças individuais, especialmente peças móveis, tem que ser submetidas à manutenção e ser limpas.

- Let op  
U kunt zich bezeren aan bouwstenen met scherpe randen of punten!
- Attenzione  
Esiste il pericolo di lesione con i pezzi di costruzione che hanno bordi e punte spigolosi necessari per la funzionalità del pezzo!
- Atenção  
Perigo de ferimentos em peças componentes com cantos vivos e pontas obrigatórios para o funcionamento!



# Montagetipps Tips for assembly Tuyaux pour le montage

# Montagetipps Consejos para el montaje "Dicas" para montagem

Kabel und Stecker  
Plugs and cables  
Fiches et des câbles

Stekkers en cables  
Enchufes en cables  
Cabos e contatos

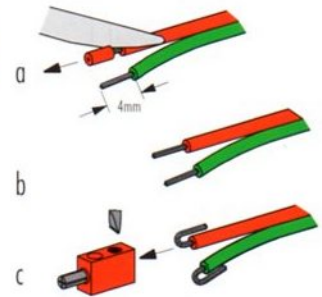
1

3 x 30 cm  
3 x 20 cm  
2 x 25 cm

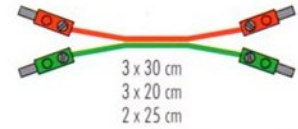
2



3



4



9V ... / 0,1 A

Kugellampe  
Bulb lamp  
Lampe sphérique  
Bolle lamp  
Lâmpoda sferica  
Lâmpoda esférica



9V ... / 0,15 A

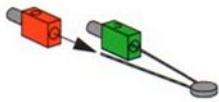
Linslampe  
Lens tip lamp  
Ampoule lentille  
Lenslampje  
Lampoda lenticolare  
Lâmpoda de formato lenticular

Fototransistor Fototransistor  
Phototransistor Fototransistores  
Phototransistor Fototransistor

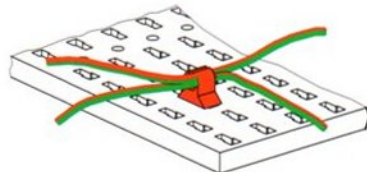


9V ...

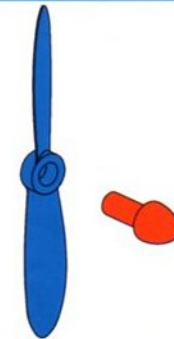
Achtung: Beim Anschluß auf richtige Polung achten. Rot = +  
Caution: Make sure the terminals are connected correctly. Red = +  
Attention: lors du raccordement, veiller à ce que la polarisation soit exacte, rouge = +  
Pas op: let bij het aansluiten op de juiste polariteit, rood = +  
Atención: al conectar, procurar que los polos estén correctamente colocados, roja = +  
Atenção: Por ocasião da conexão atentar para a polaridade correta. Vermelho = +



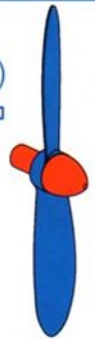
NTC 1.5 kΩ



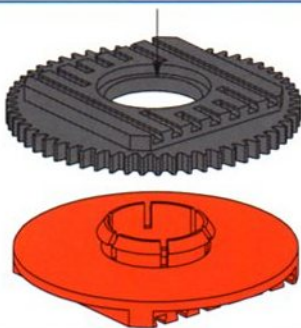
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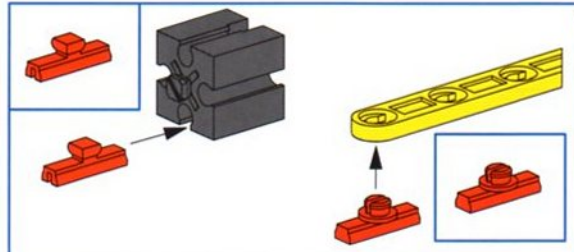
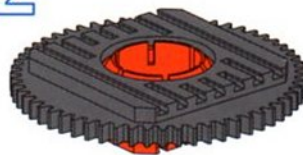
2



1



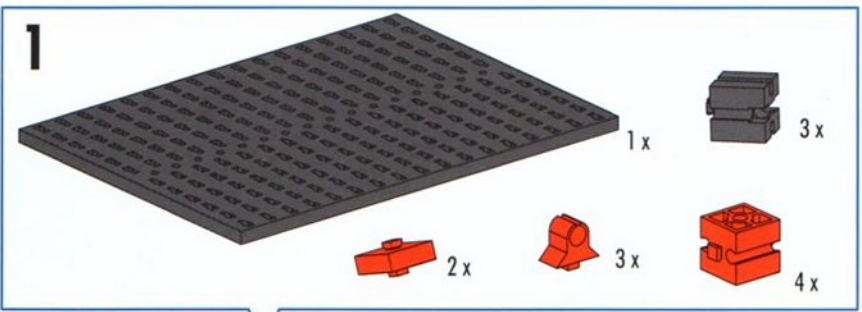
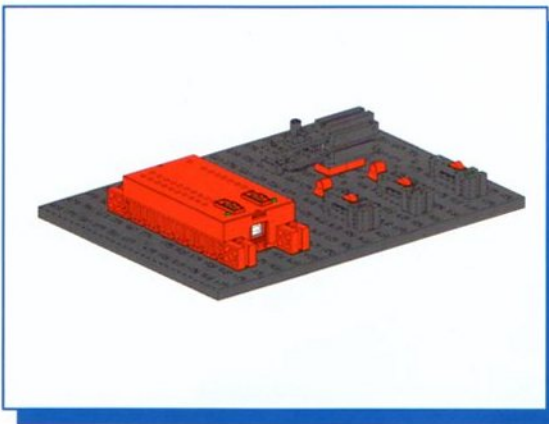
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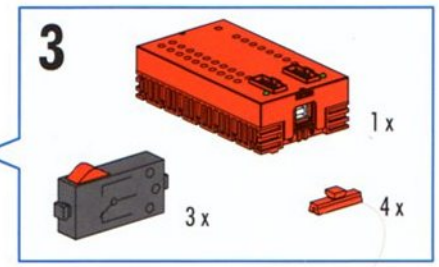
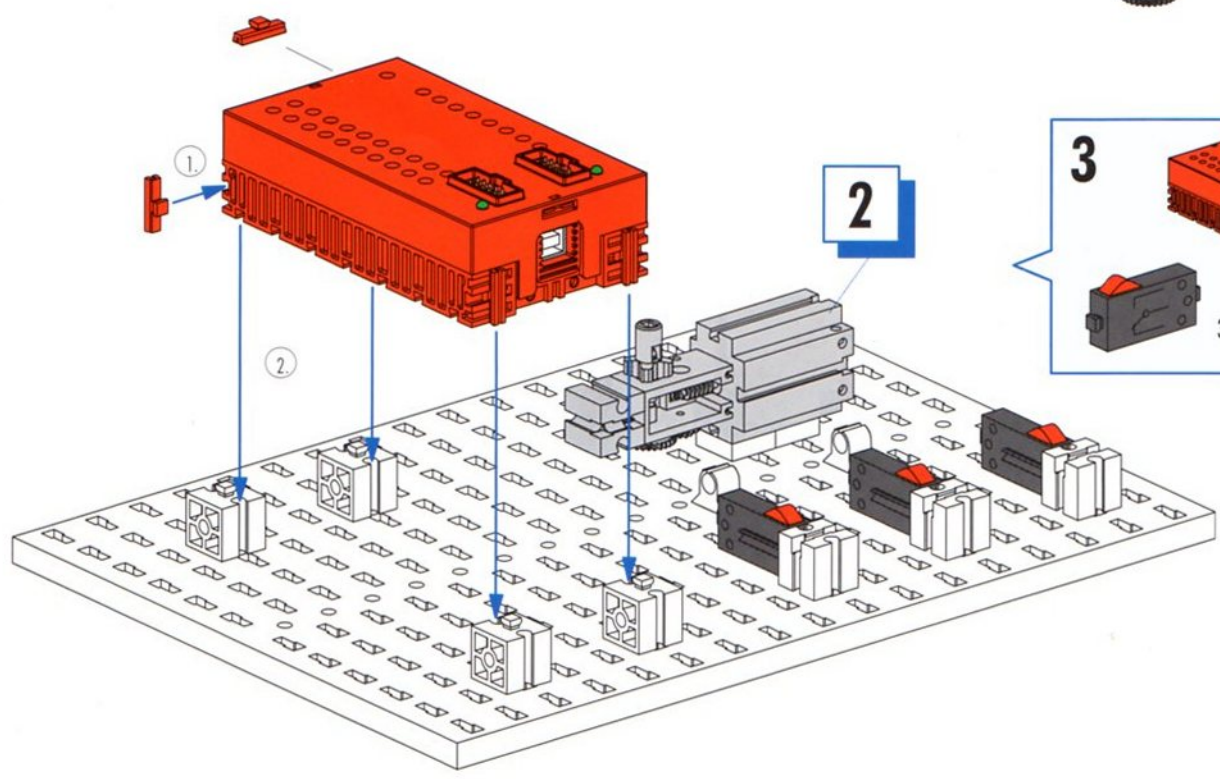
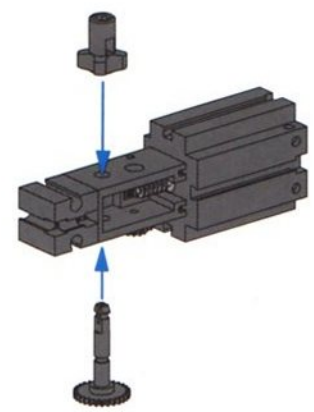
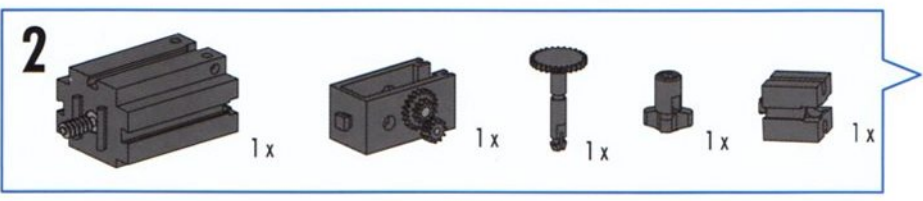
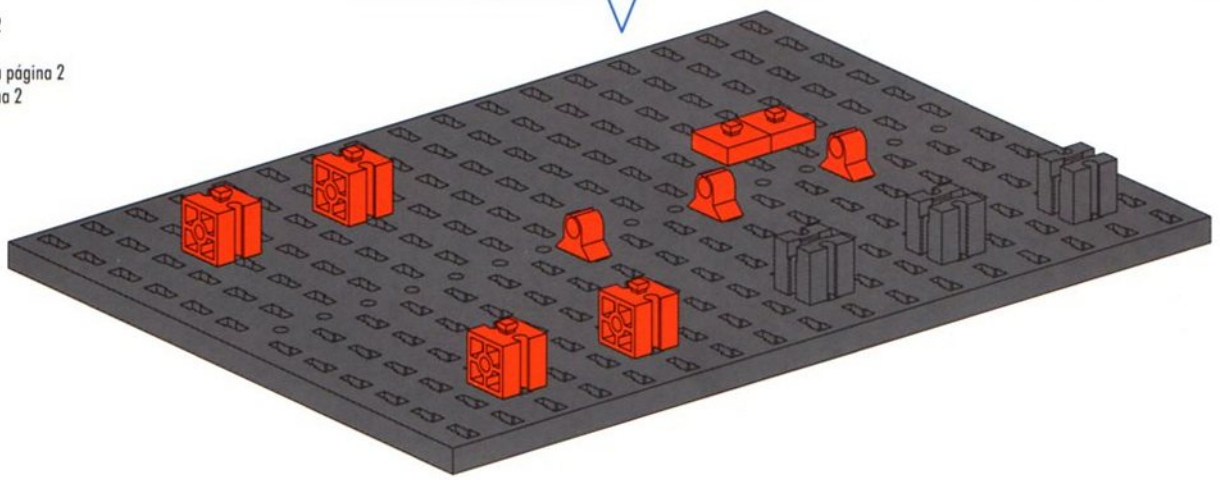
- Alle elektrischen Bauteile (Sensoren, Motoren, Lampen, Ventile) dürfen ausschließlich an Stromversorgungen von Fischertechnik angeschlossen werden (z.B. Energy Set Art.-Nr. 30182; Accu Set Art.-Nr. 34969).
- No electrical components (sensors, motors, lamps, and valves) are to be connected to any other power supply than that provided by Fischertechnik (e.g. Energy Set, product no. 30182, Accumulator Set, product no. 34969).
- Tous les composants électriques (Capteurs, moteurs, lampes, vannes) ne doivent être branchés aux alimentations électriques uniquement que par la société Fischertechnik (par exemple: Set énergie Art.-Nr. 30182, Accu Set Art.-Nr. 34969).
- Alle elektrische componenten (sensoren motoren, lampen, kleppen) mogen uitsluitend op stroomvoorzieningen van Fischertechnik worden aangesloten. (bijv. Energy Set art.nr. 30182, Accu Set art.nr. 34969).
- Todos los componentes eléctricos (sensores, motores, luces, válvulas) deben conectarse a la alimentación de corriente de la técnica Fischer exclusivamente (p.ej. Energy Set Art.-Nº. 30182, Accu Set Art.-Nº. 34969).
- Todas as peças componentes elétricas (sensores, motores, lâmpadas, válvulas) só podem ser exclusivamente conectadas em abastecimentos de corrente da Fischertechnik (p.ex. Energy Set Nº de prod. 30182, Accu Set Nº de prod. 34969).

Motorsteuerung  
Motor control  
Commande de moteur

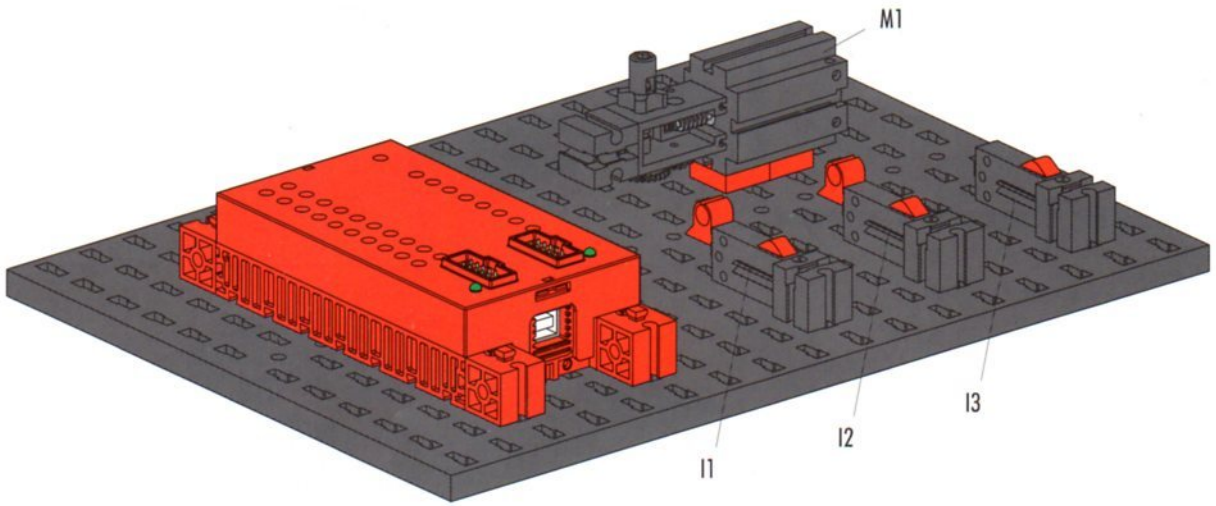
Motorbesturing  
Mando de motor  
Controle do motor



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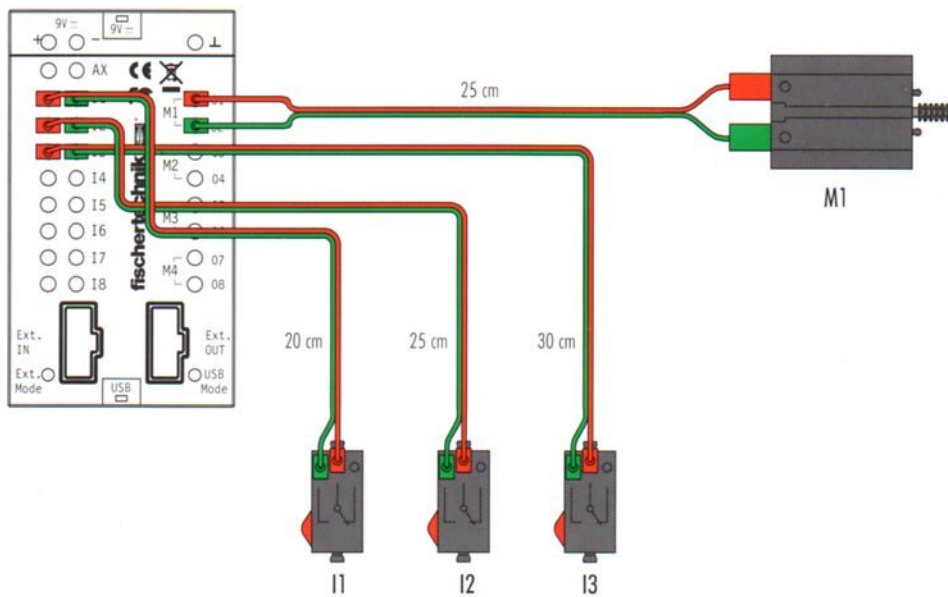






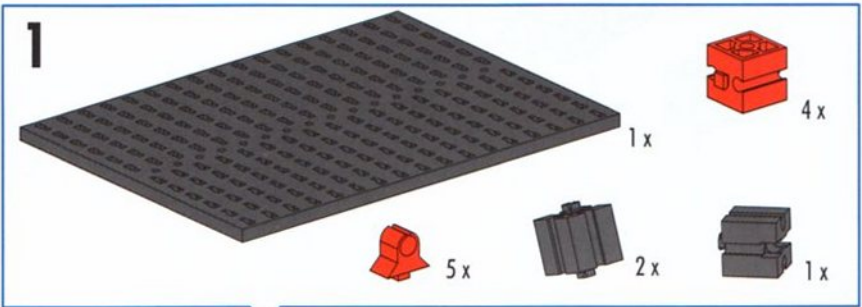
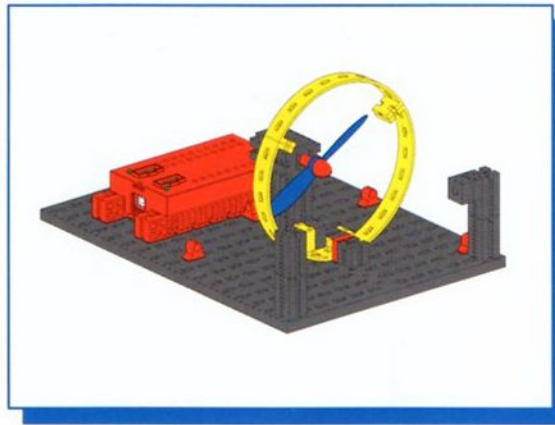
Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação

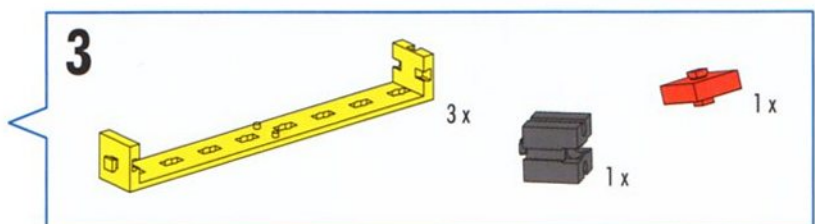
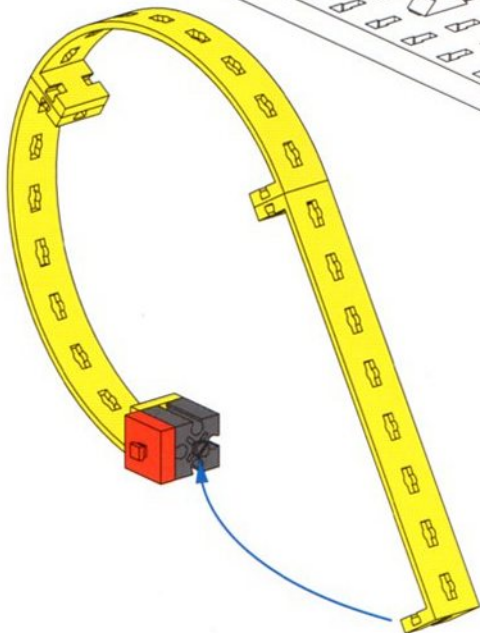
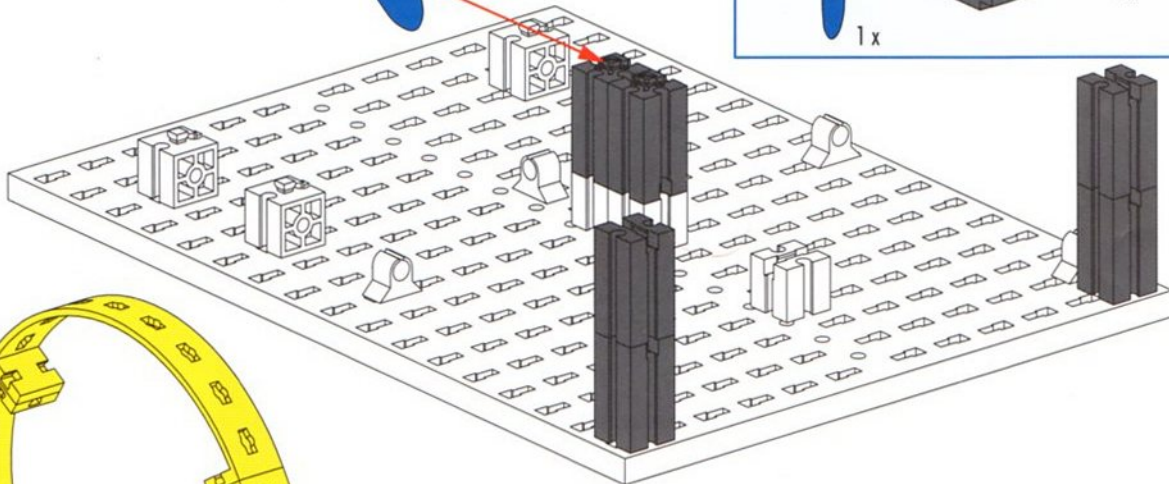
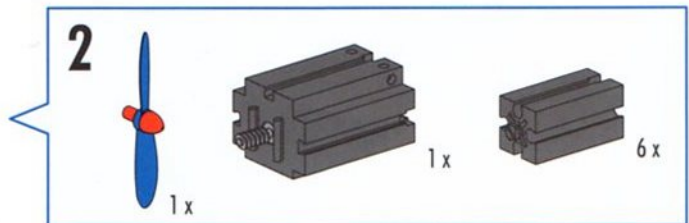
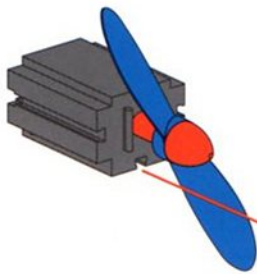
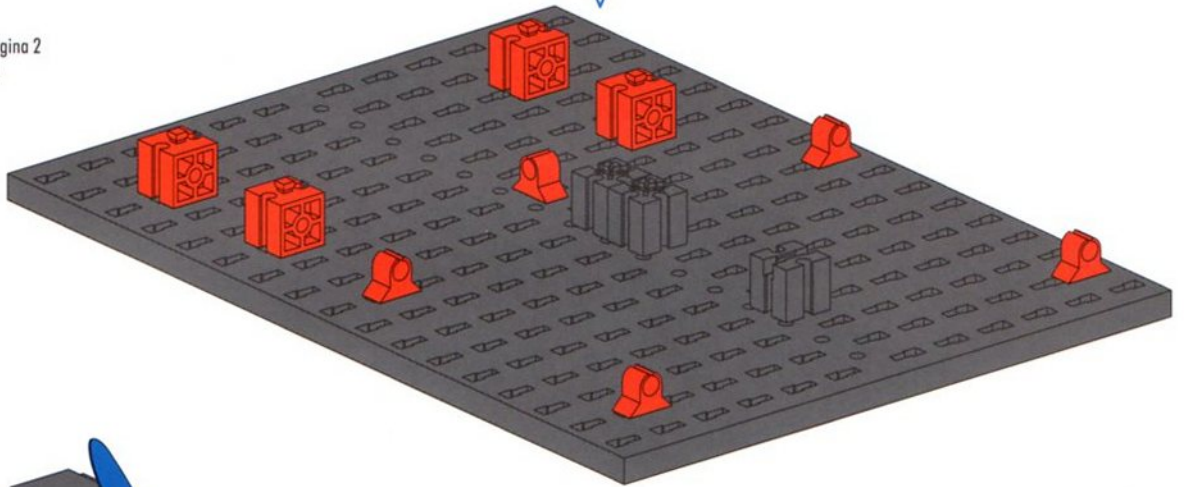


Händetrockner  
Hand dryer  
Sèche-mains

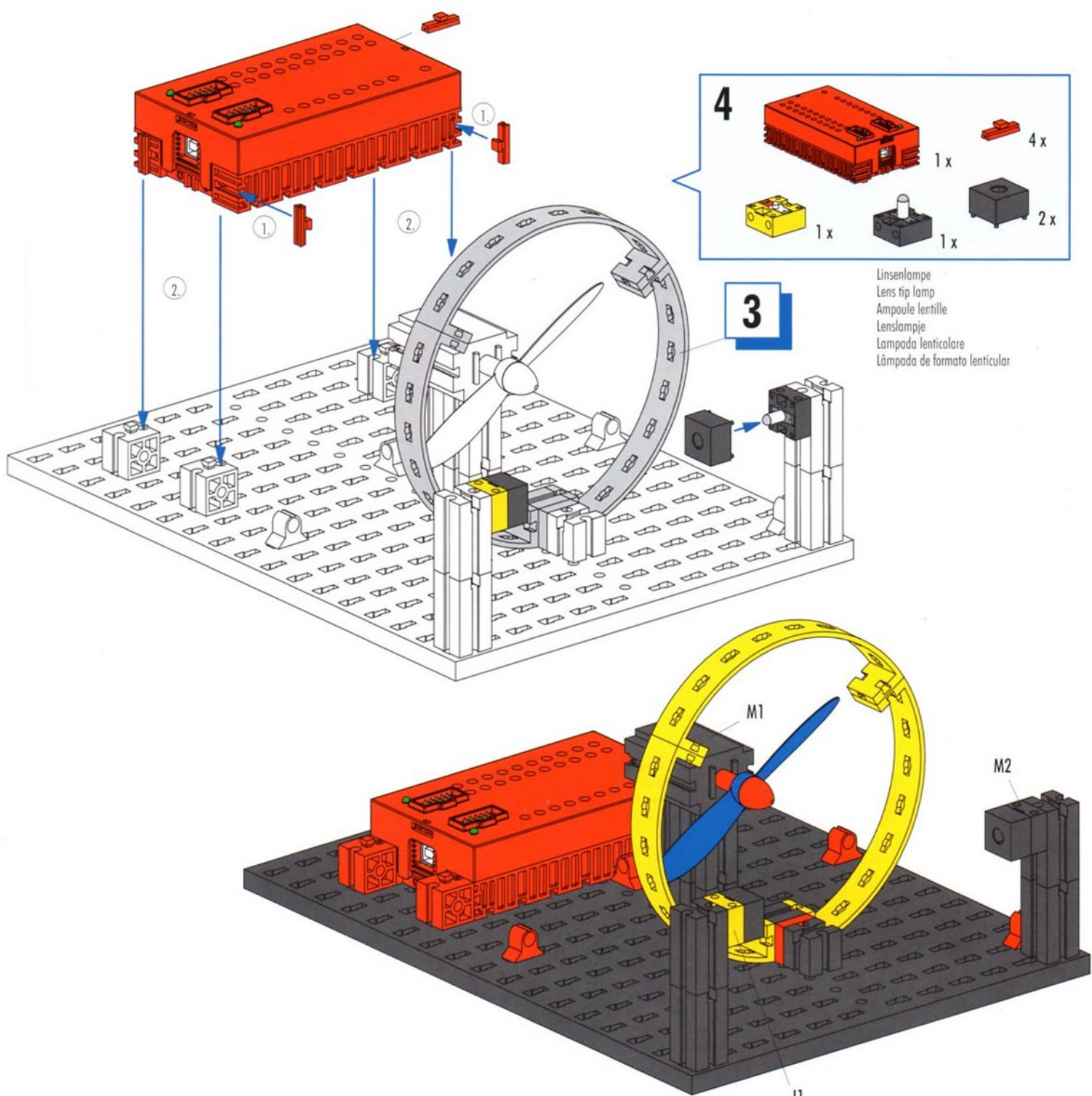
Handendroger  
Secador de manos  
Secador para as mãos



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"Dicas" para montagem - Página 2







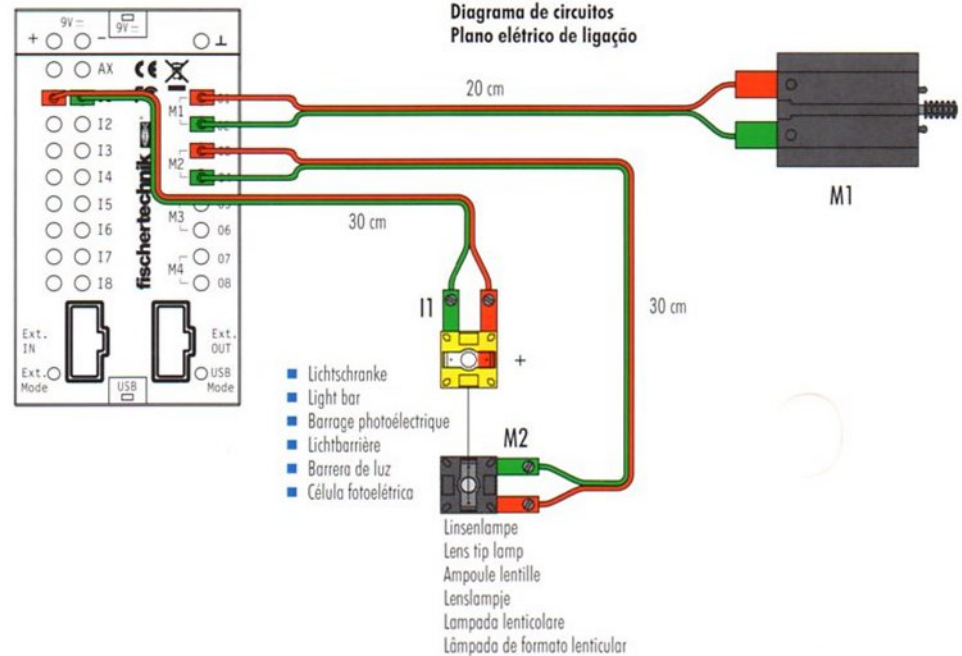
- 4**
- 1 x
  - 4 x
  - 1 x
  - 1 x
  - 2 x

Linsenlampe  
 Lens tip lamp  
 Ampoule lentille  
 Lenslampje  
 Lampada lenticolare  
 Lâmpada de formato lenticular

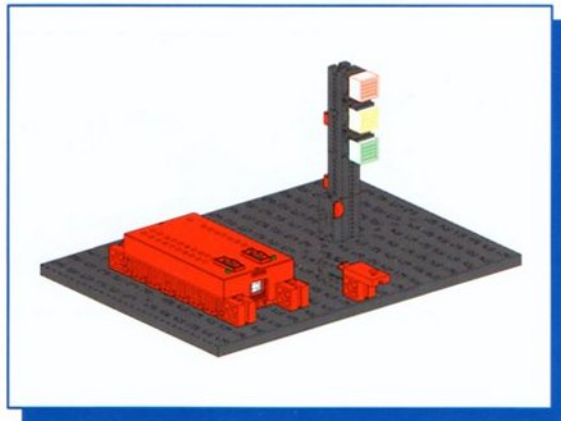
**3**

Schaltplan  
 Circuit diagram  
 Plan électrique

Schakelschema  
 Diagrama de circuitos  
 Plano elétrico de ligação

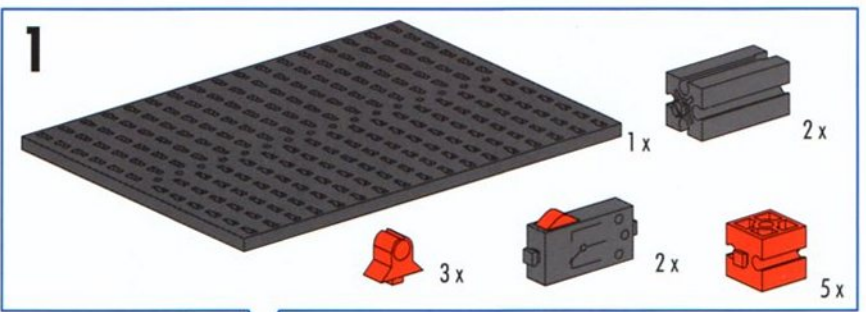




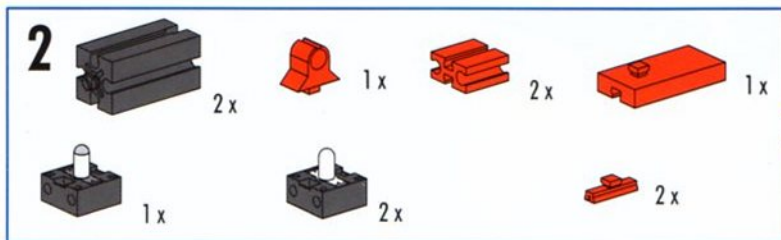
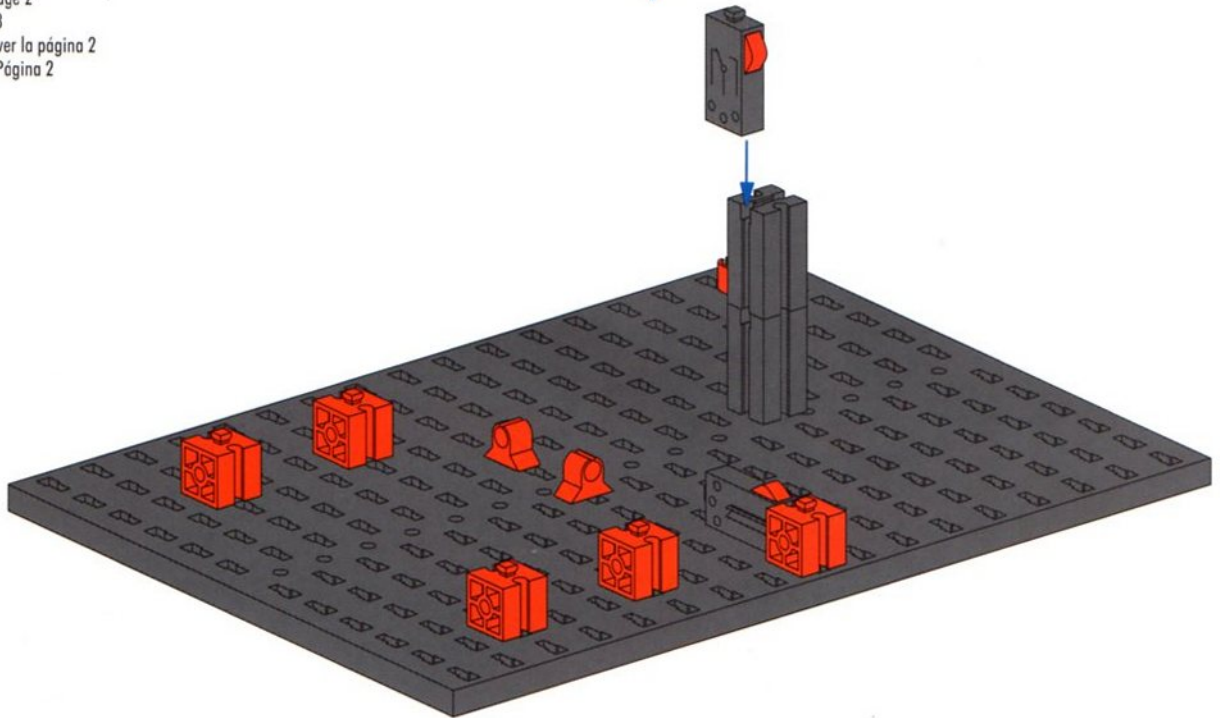


**Ampel**  
Traffic light  
Feu de circulation

**Verkeerslicht**  
Semáforo  
Semáforo

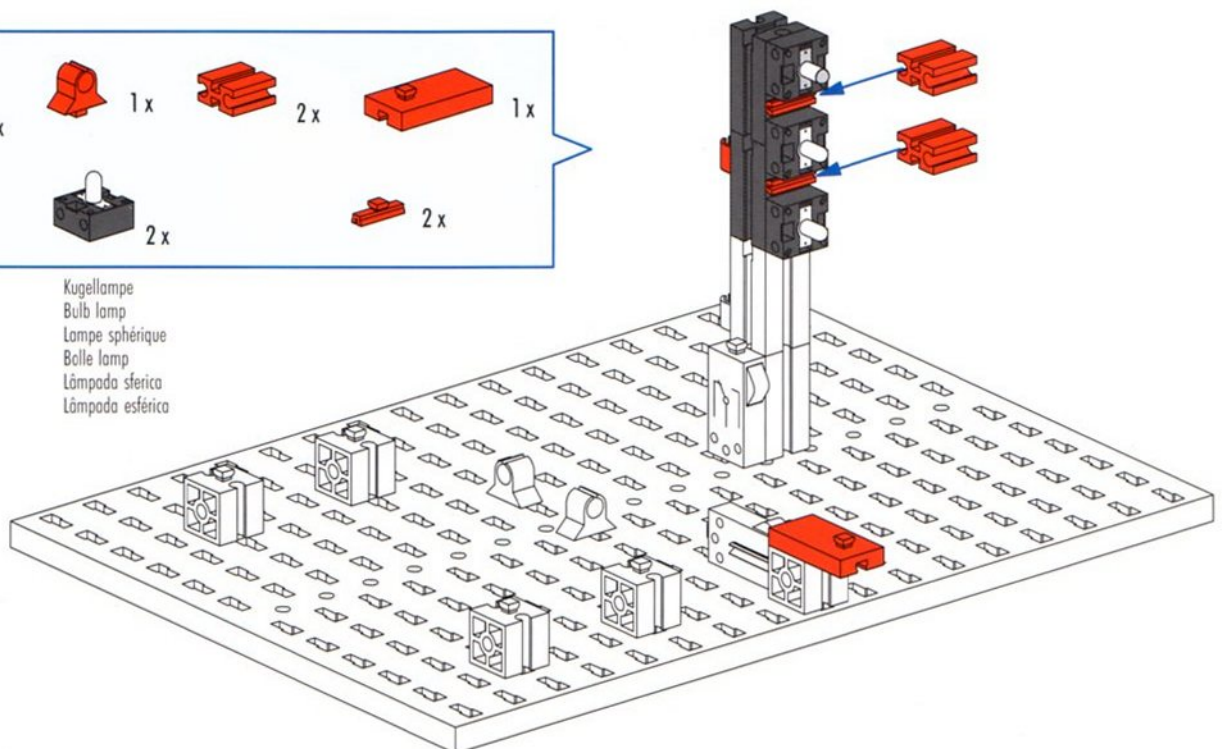


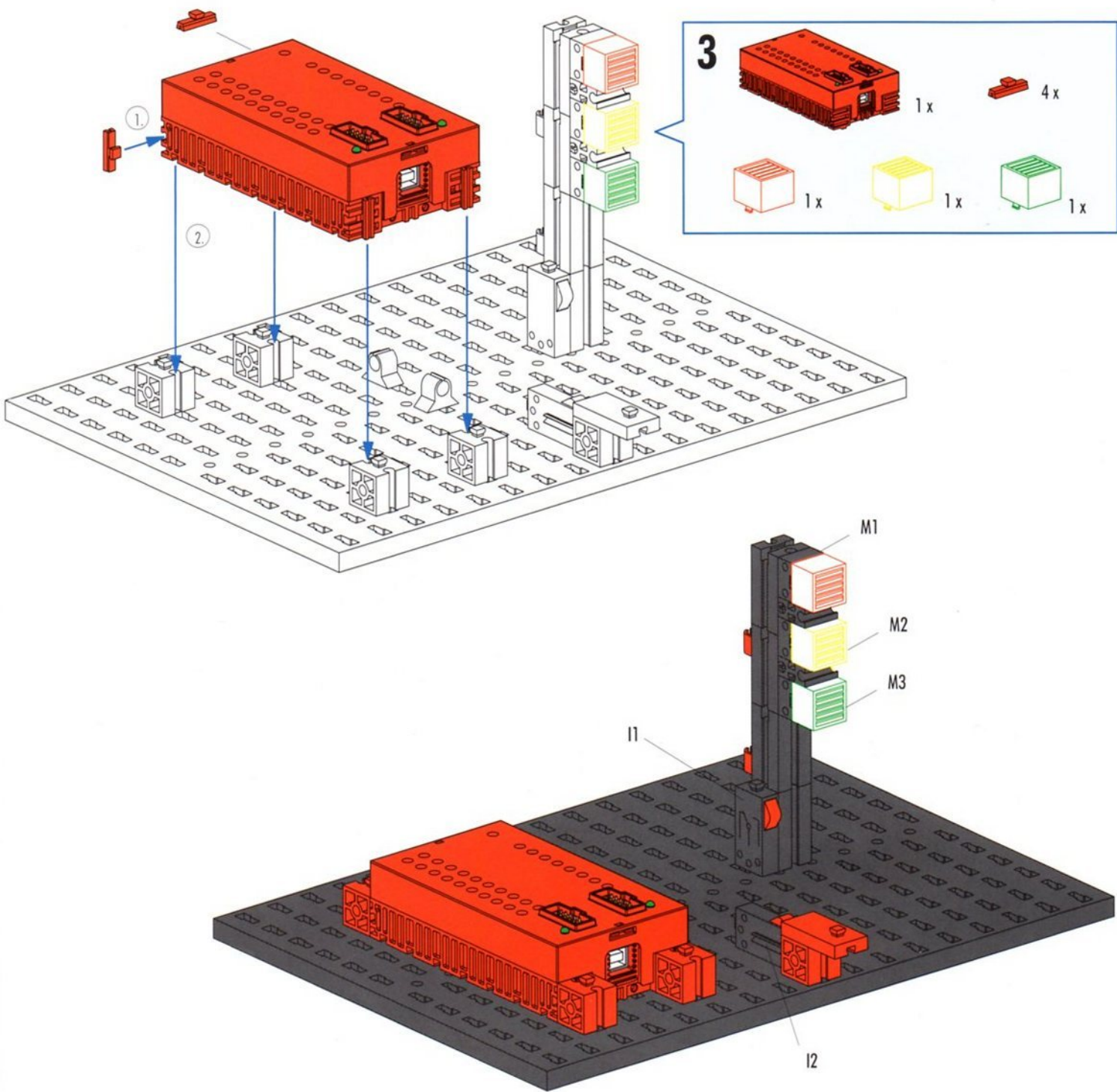
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Linsenlampe  
Lens tip lamp  
Ampoule lentille  
Lenspompje  
Lampada lenticolare  
Lâmpada de formato lenticular

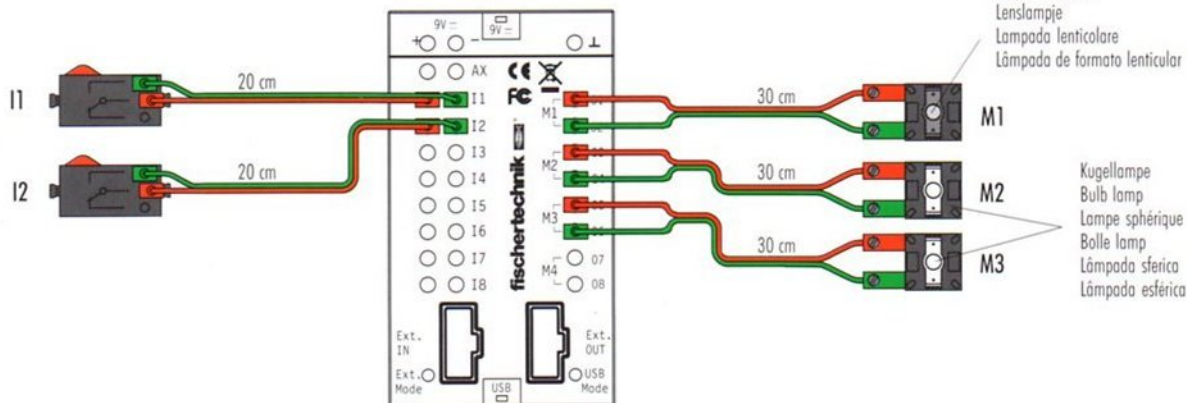
Kugellampe  
Bulb lamp  
Lampe sphérique  
Bolle lamp  
Lâmpada sferica  
Lâmpada esférica



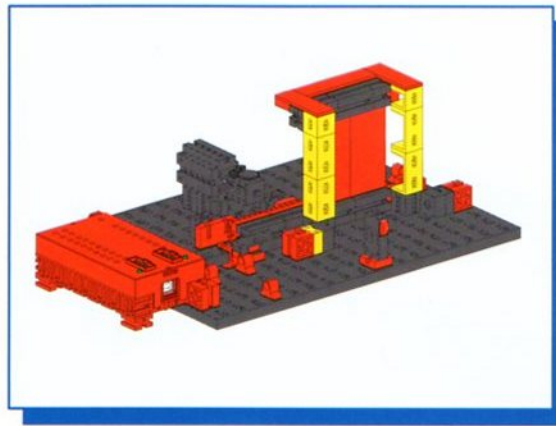


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Circuit diagram  
Plan électrique

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Diagrama de circuitos  
Plano elétrico de ligação



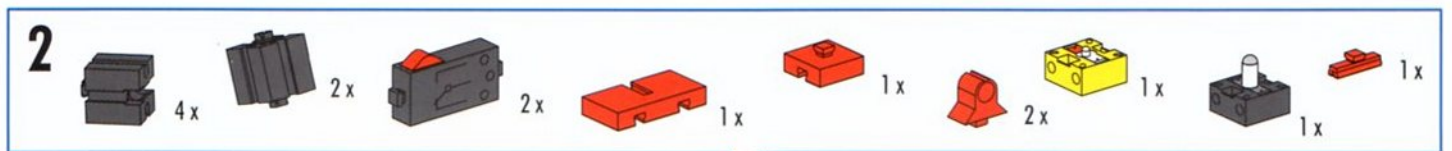
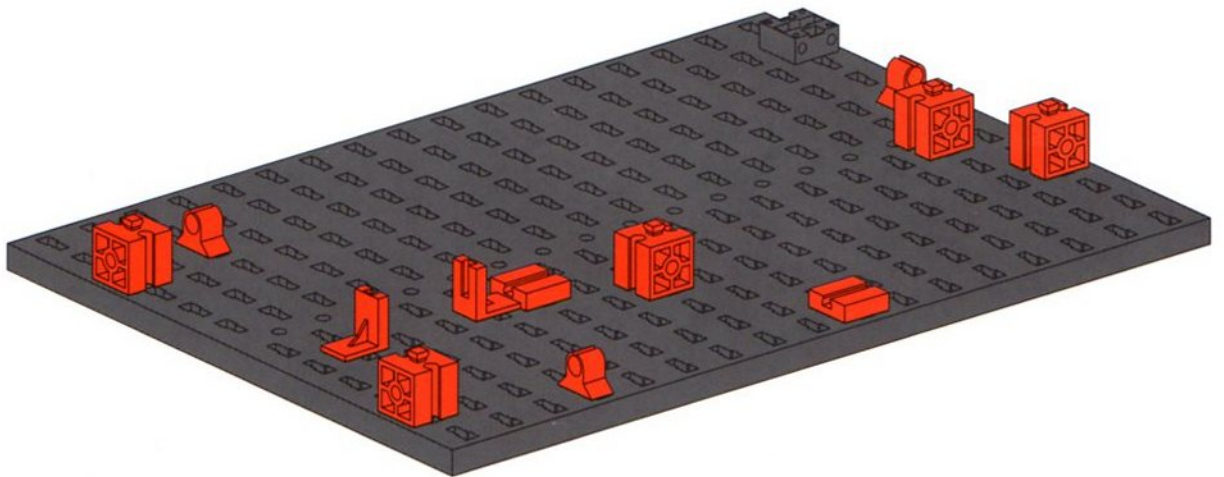
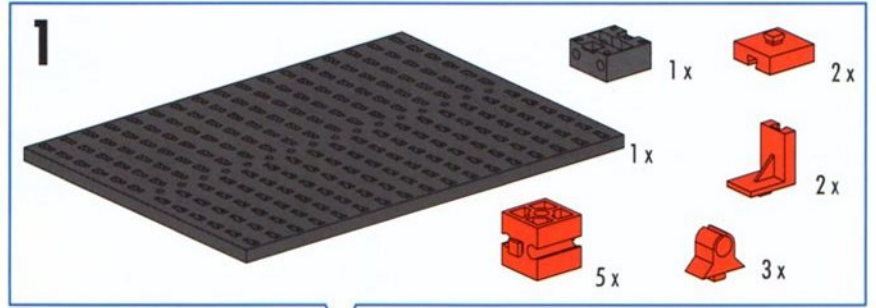




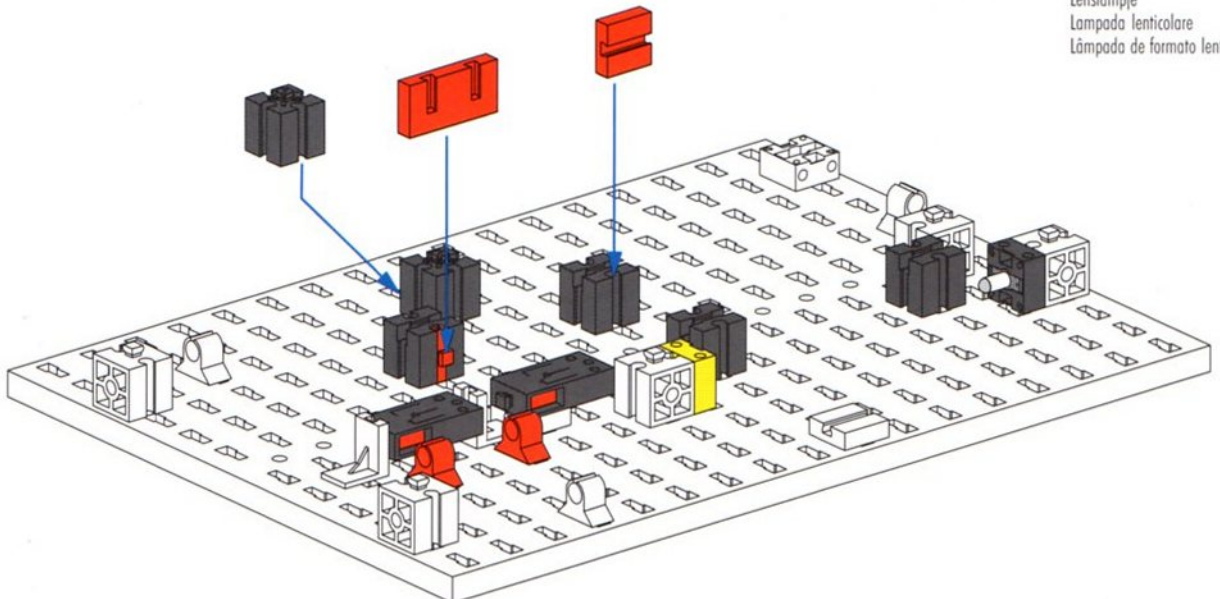
Schiebetür  
Sliding door  
Porte coulissante

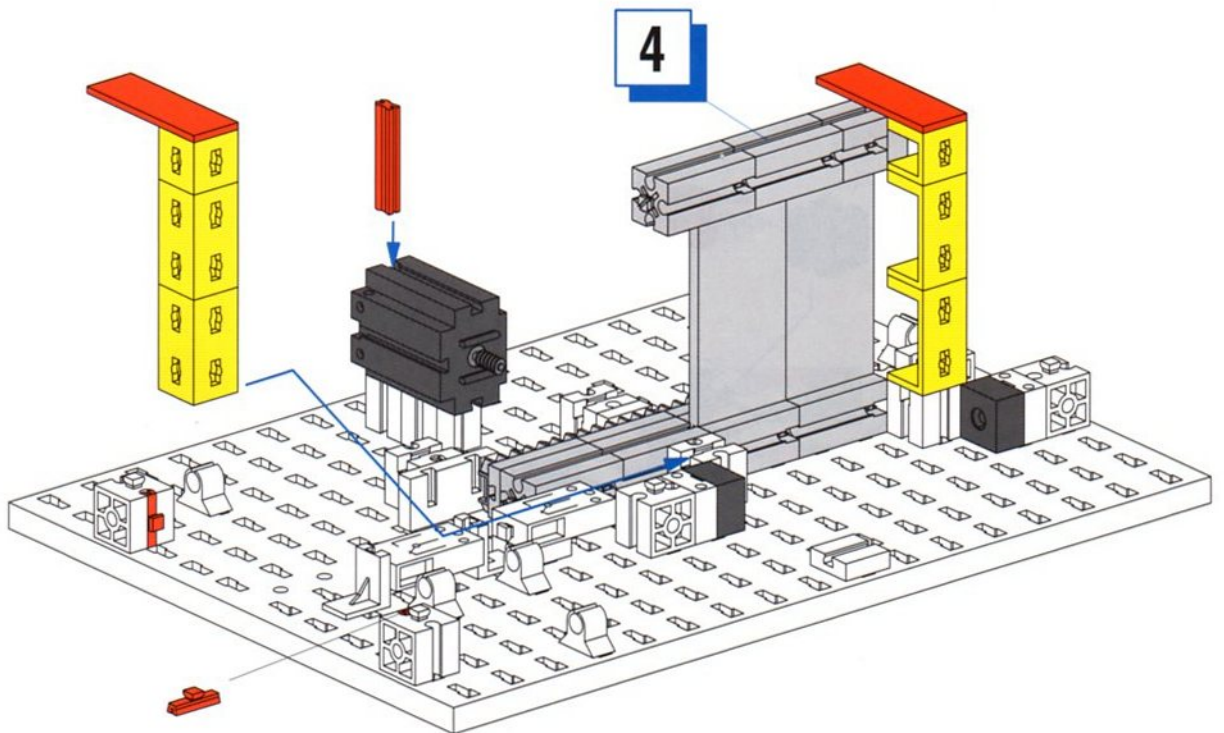
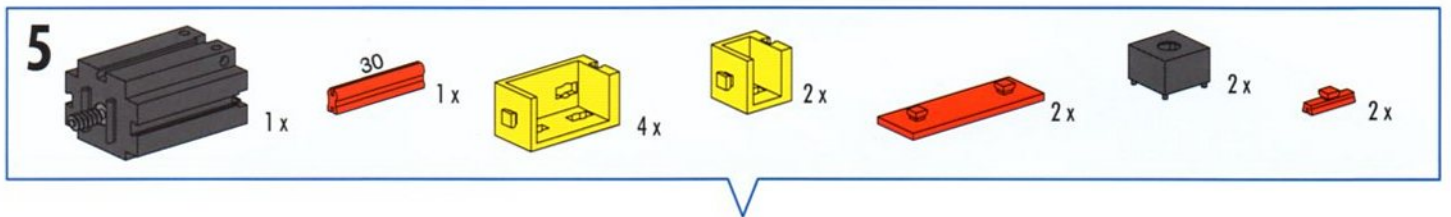
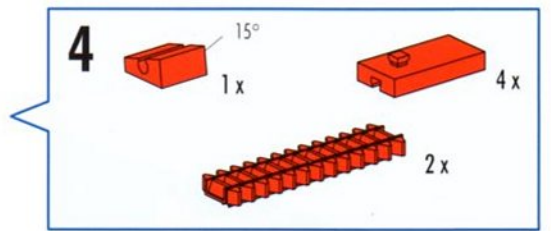
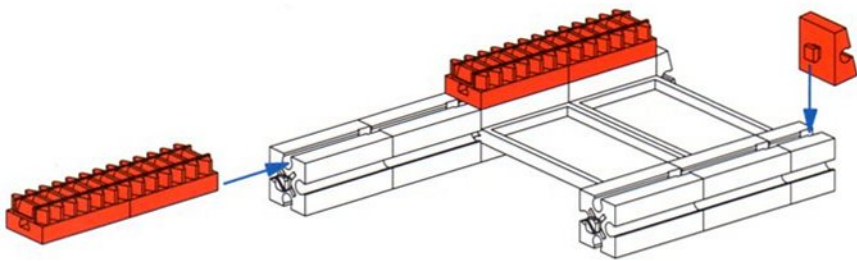
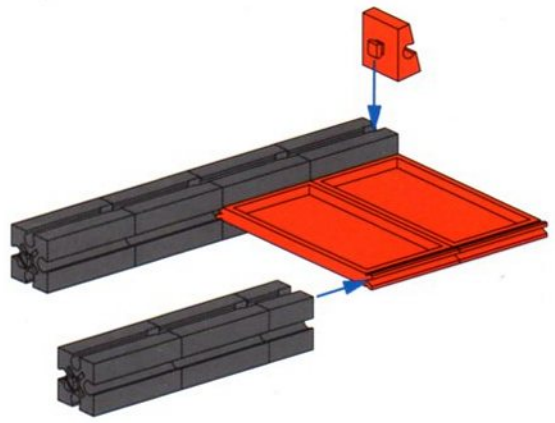
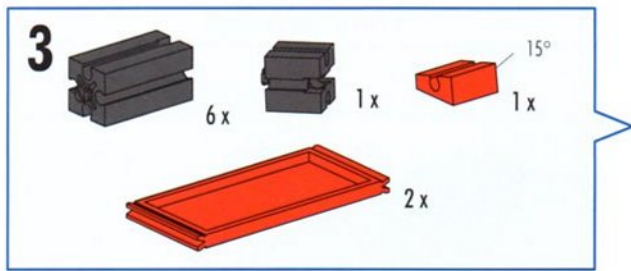
Schuijfeur  
Puerta corrediza  
Porta corrediça

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"Dicas" para montagem - Página 2

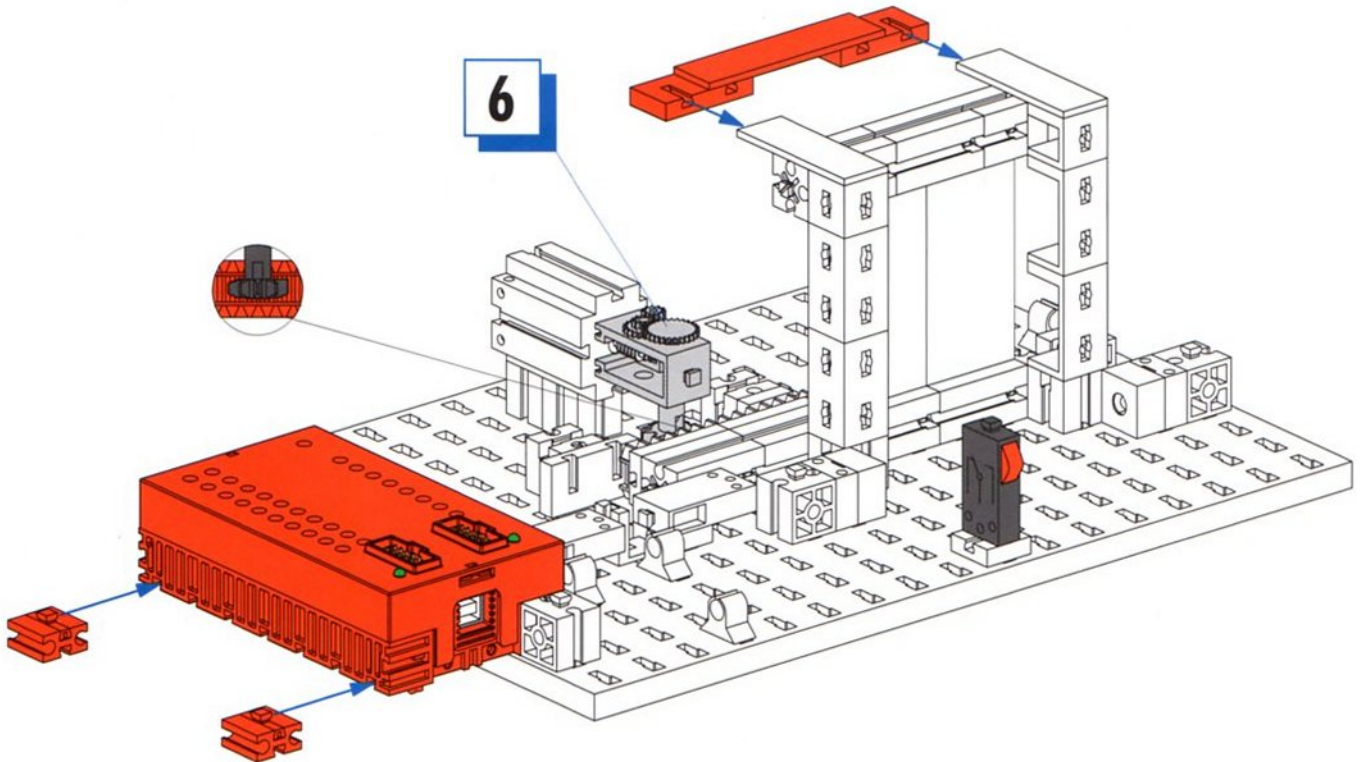
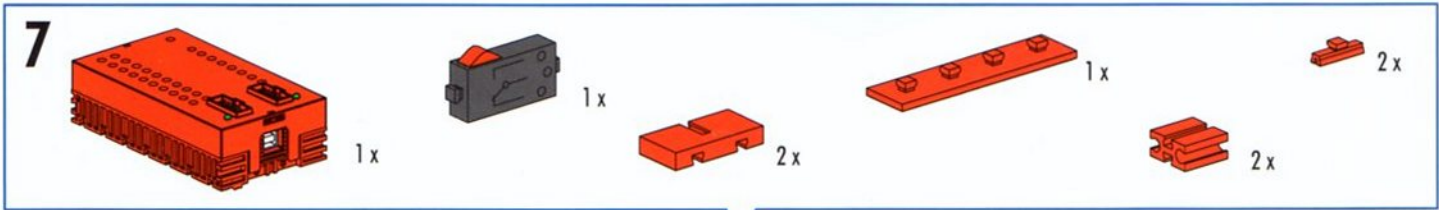
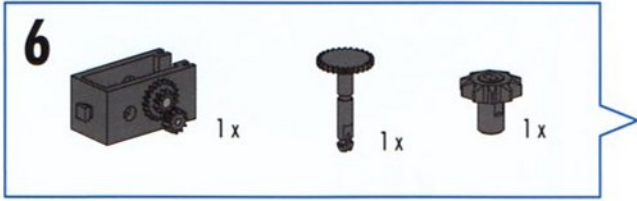


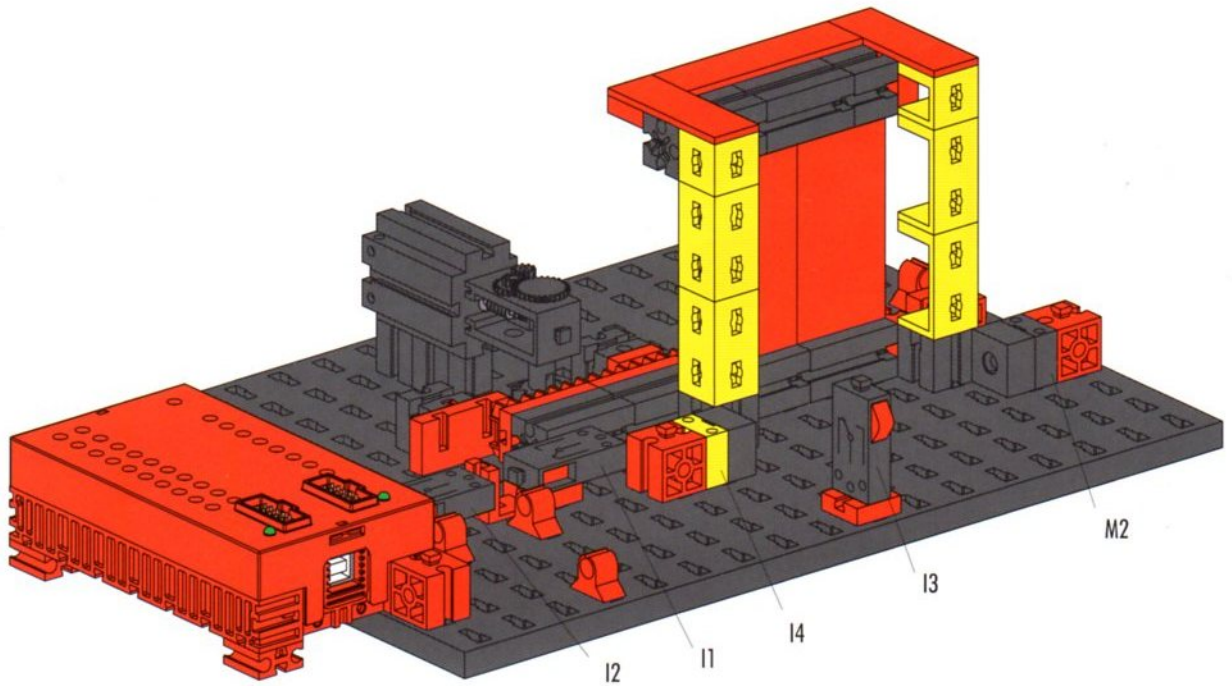
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Lens tip lamp  
Ampoule lentille  
Lenslampje  
Lampada lenticolare  
Lâmpada de formato lenticular





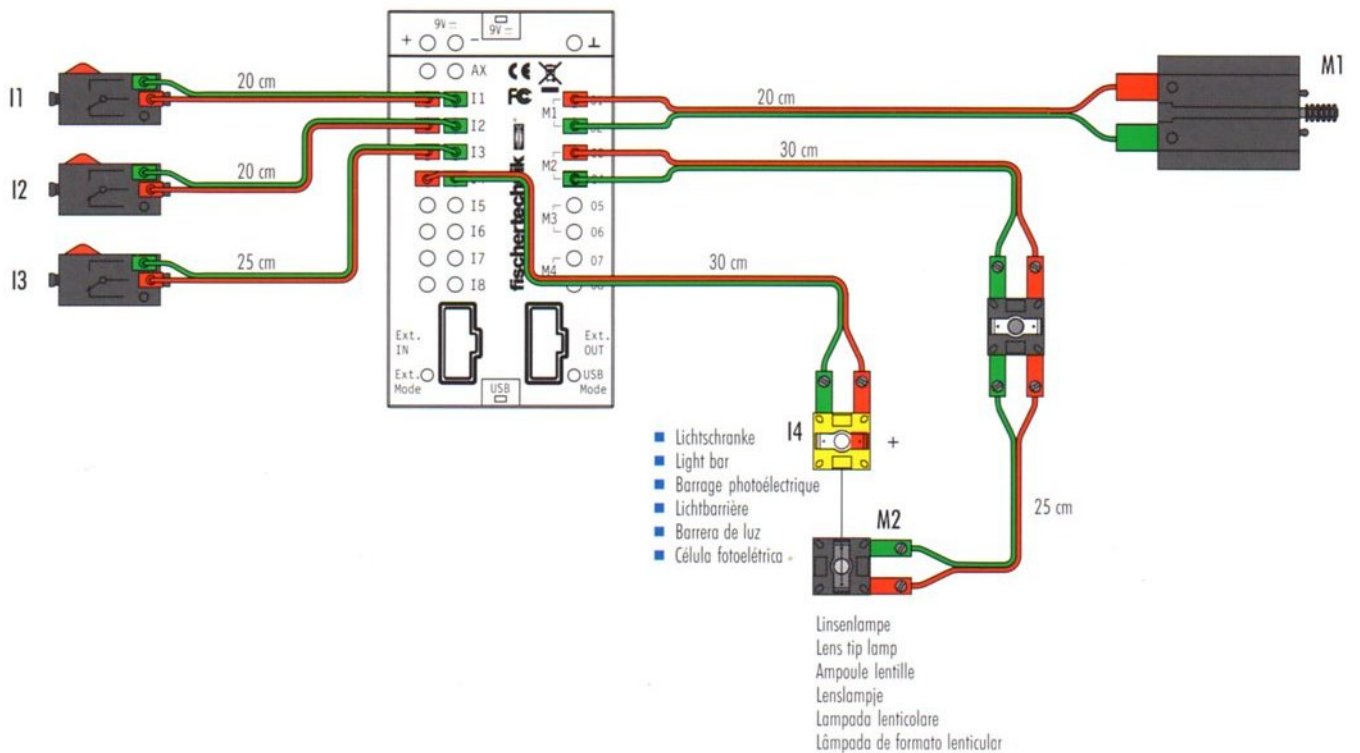






Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação





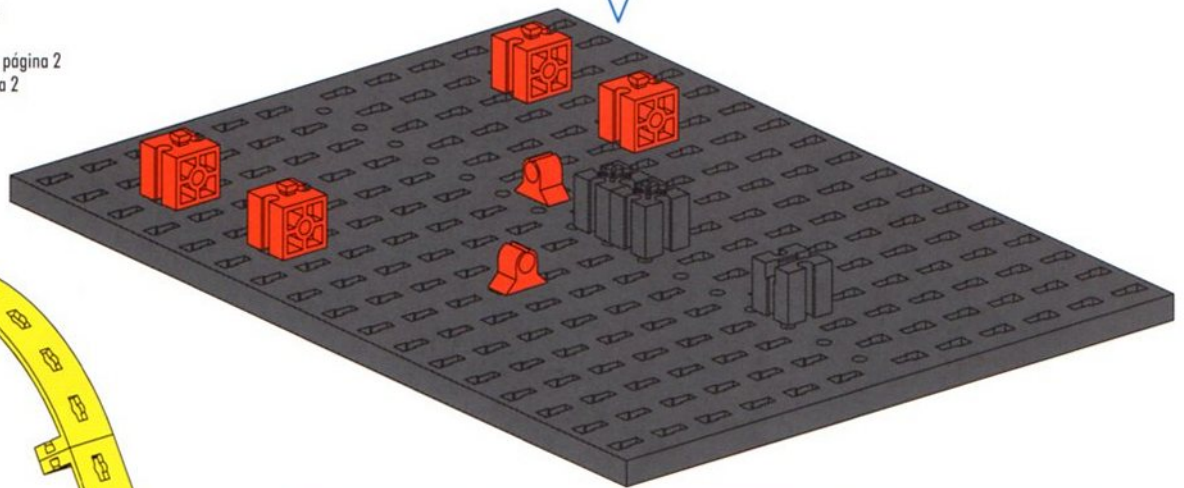
Temperaturregelung  
 Temperature control  
 Réglage de la température

Temperatuurregeling  
 Regulación de la temperatura  
 Regulagem da temperatura

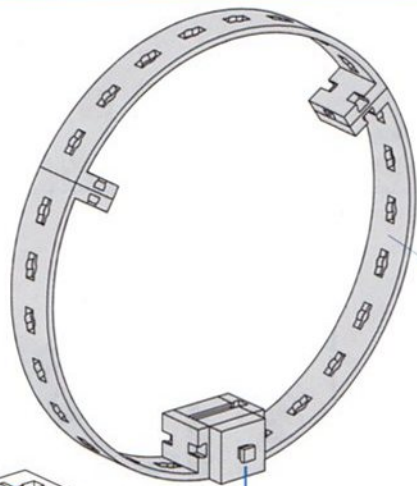
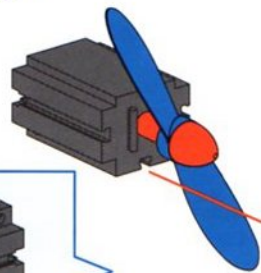
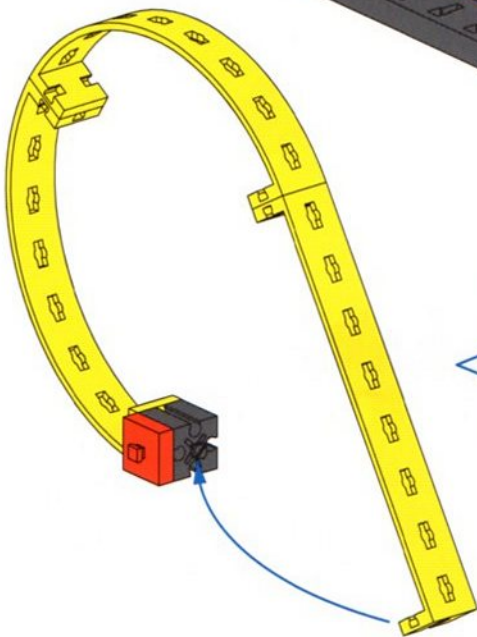


**1**

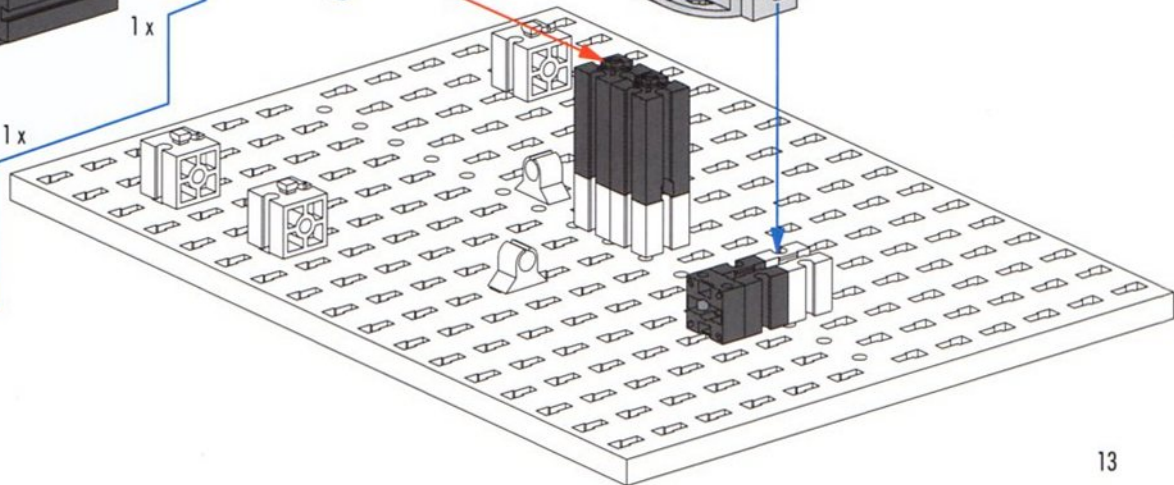
Montagetipps Seite 2  
 Tips for assembly Page 2  
 Tuyaux pour le montage page 2  
 Montagetips zie bladzijde 3  
 Consejos para el montaje, ver la página 2  
 "Dicas" para montagem - Página 2

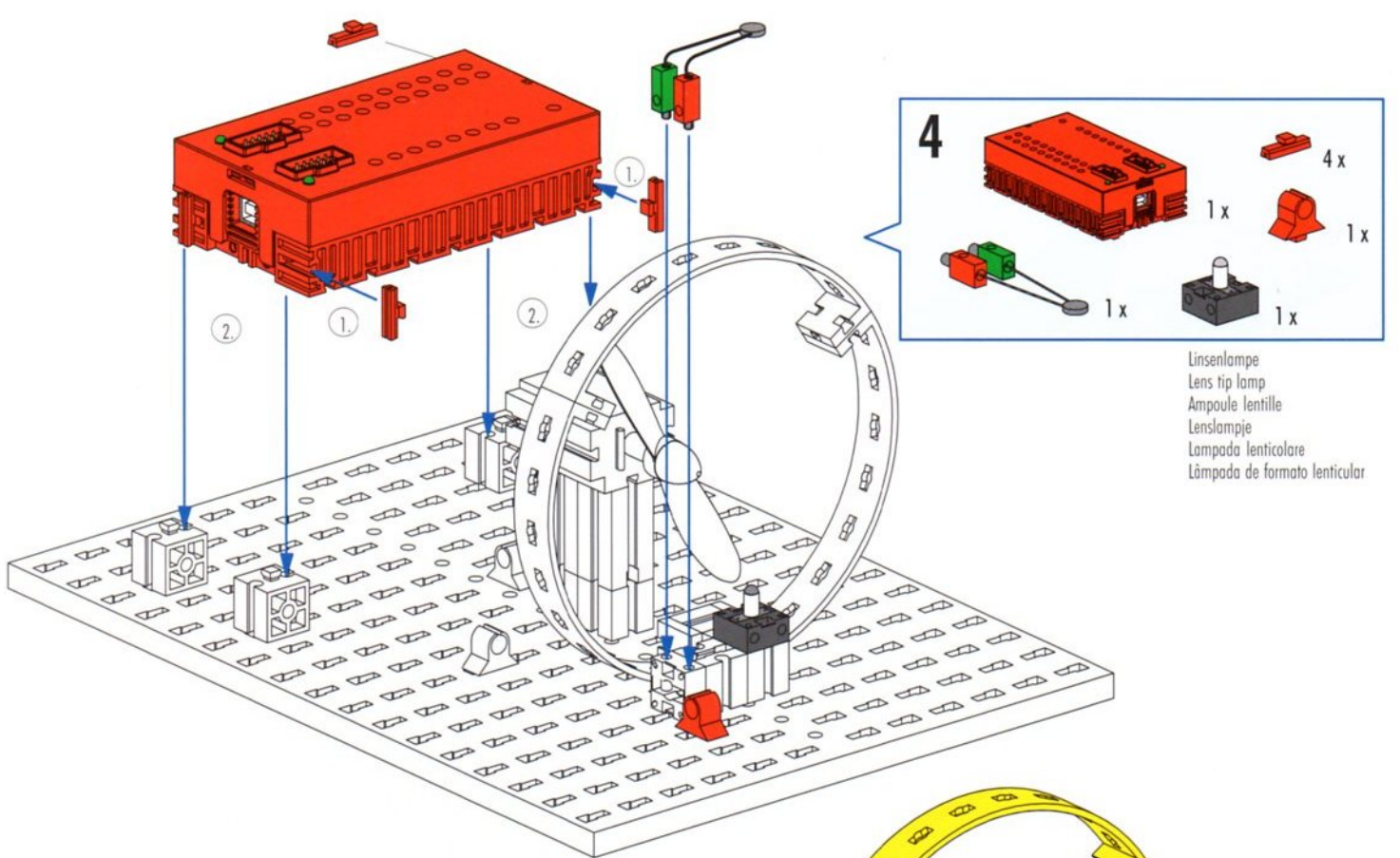


**2**



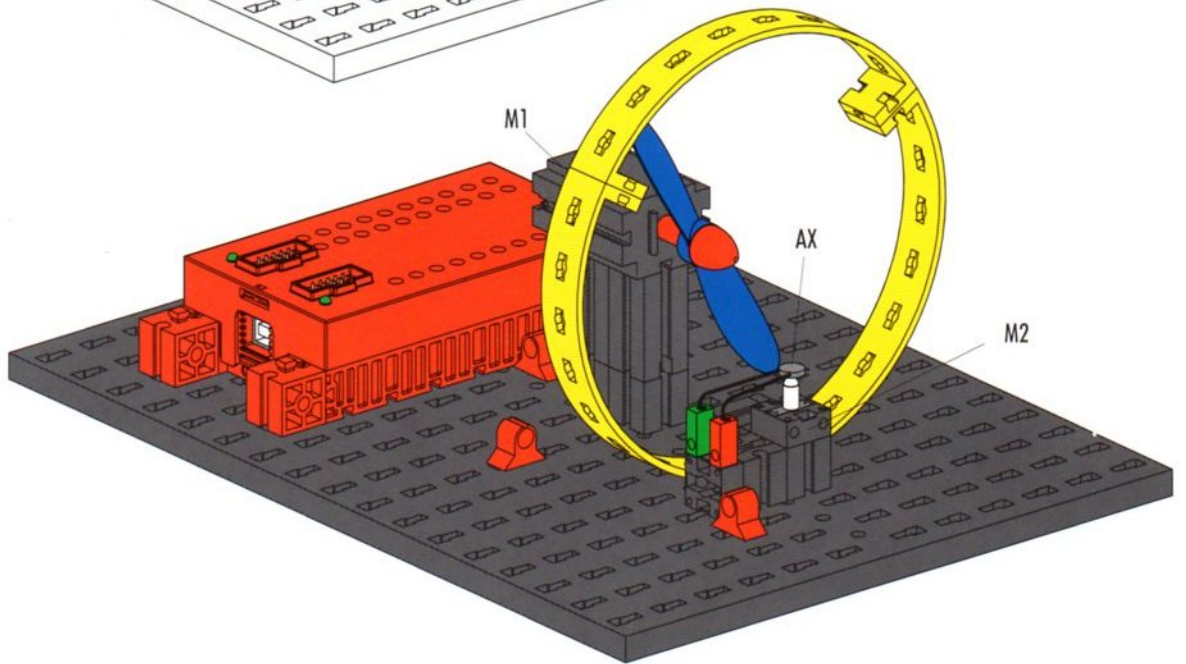
**3**





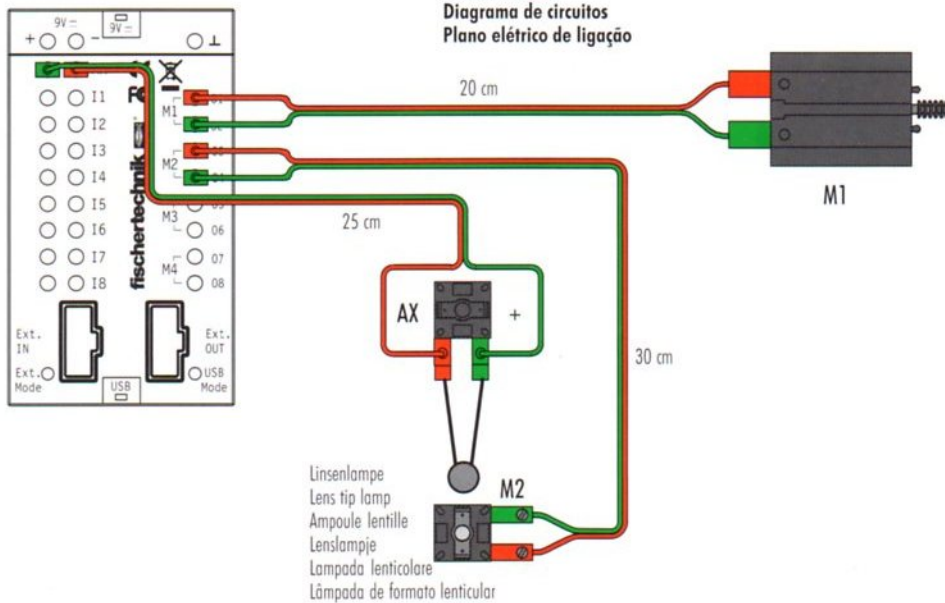
4  
 4 x  
 1 x  
 1 x  
 1 x  
 1 x

Linse Lampe  
 Lens tip lamp  
 Ampoule lentille  
 Lenslampje  
 Lampada lenticolare  
 Lâmpada de formato lenticular

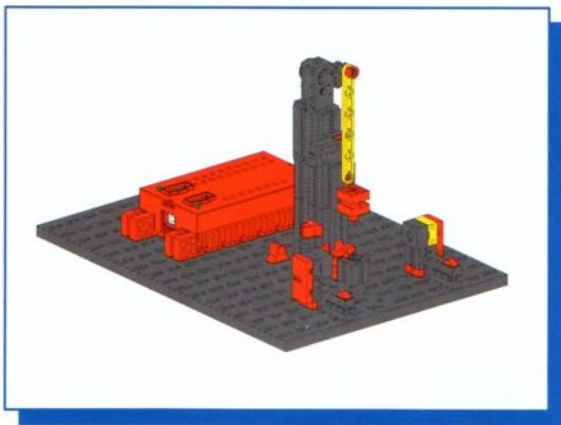


Schaltplan  
 Circuit diagram  
 Plan électrique

Schakelschema  
 Diagrama de circuitos  
 Plano elétrico de ligação

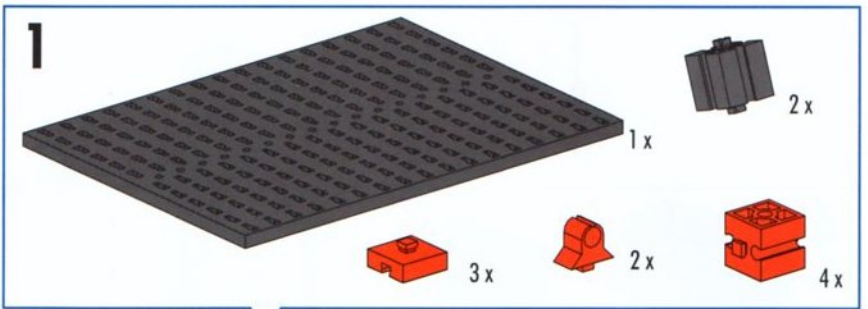




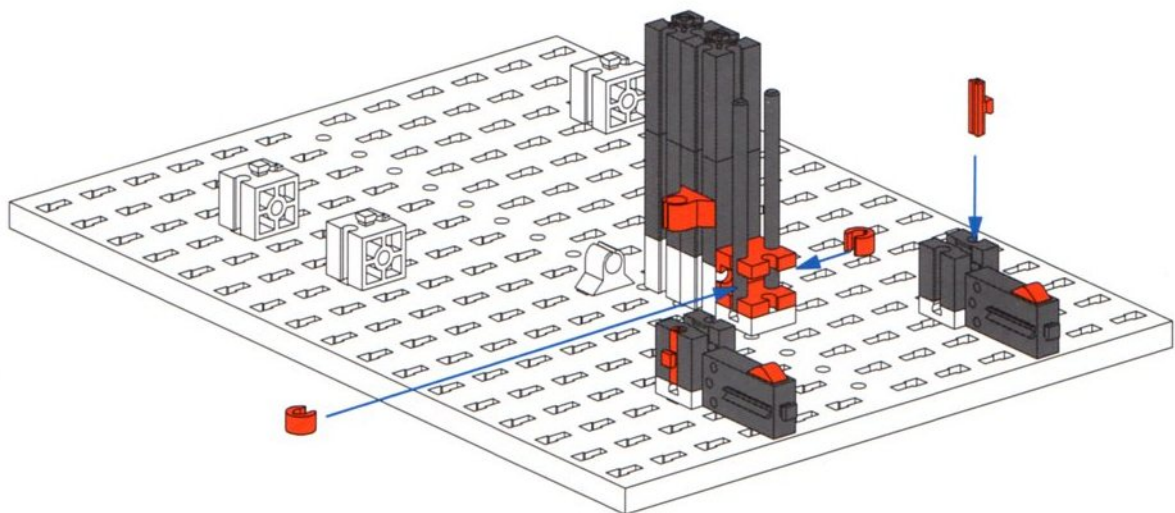
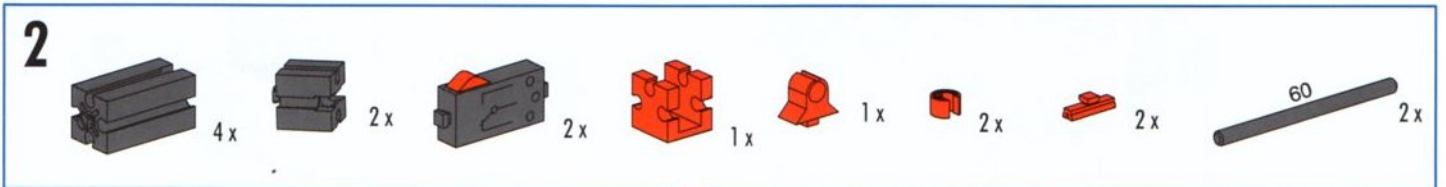
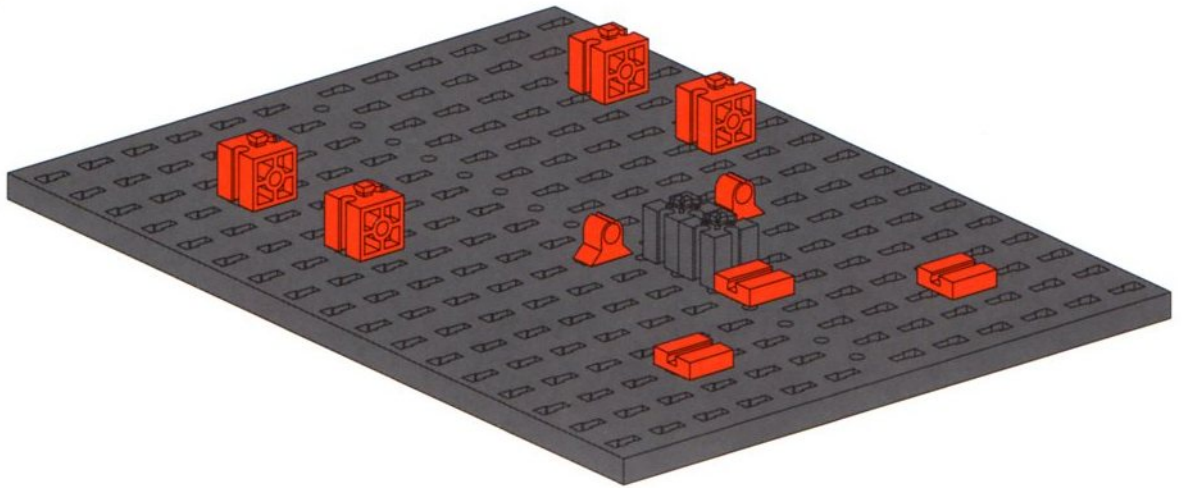


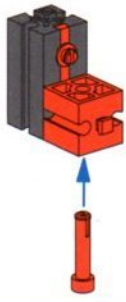
**Stanzmaschine**  
**Stamping press**  
**Machine à estamer**

**Stansmaschine**  
**Cortadora de chapas**  
**Máquina de puncionar**



Montagetipps Seite 2  
 Tips for assembly Page 2  
 Tuyaux pour le montage page 2  
 Montagetips zie bladzijde 3  
 Consejos para el montaje, ver la página 2  
 "Dicas" para montagem - Página 2



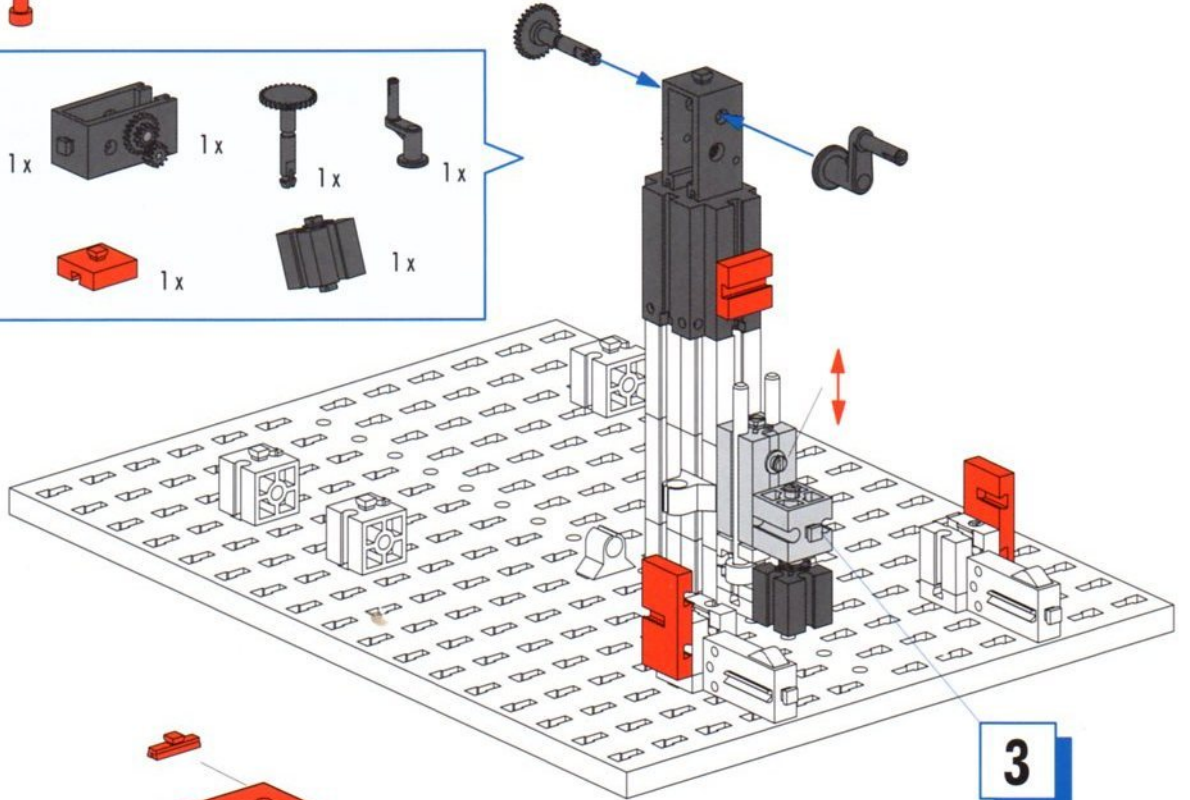


**3**

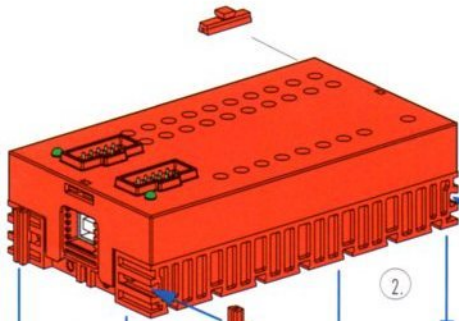
- 1x grey motor
- 1x red component
- 1x red pin
- 1x red bush

**4**

- 1x grey motor
- 1x grey motor
- 1x grey gear
- 1x grey L-shaped part
- 2x red component
- 1x red component
- 1x grey component

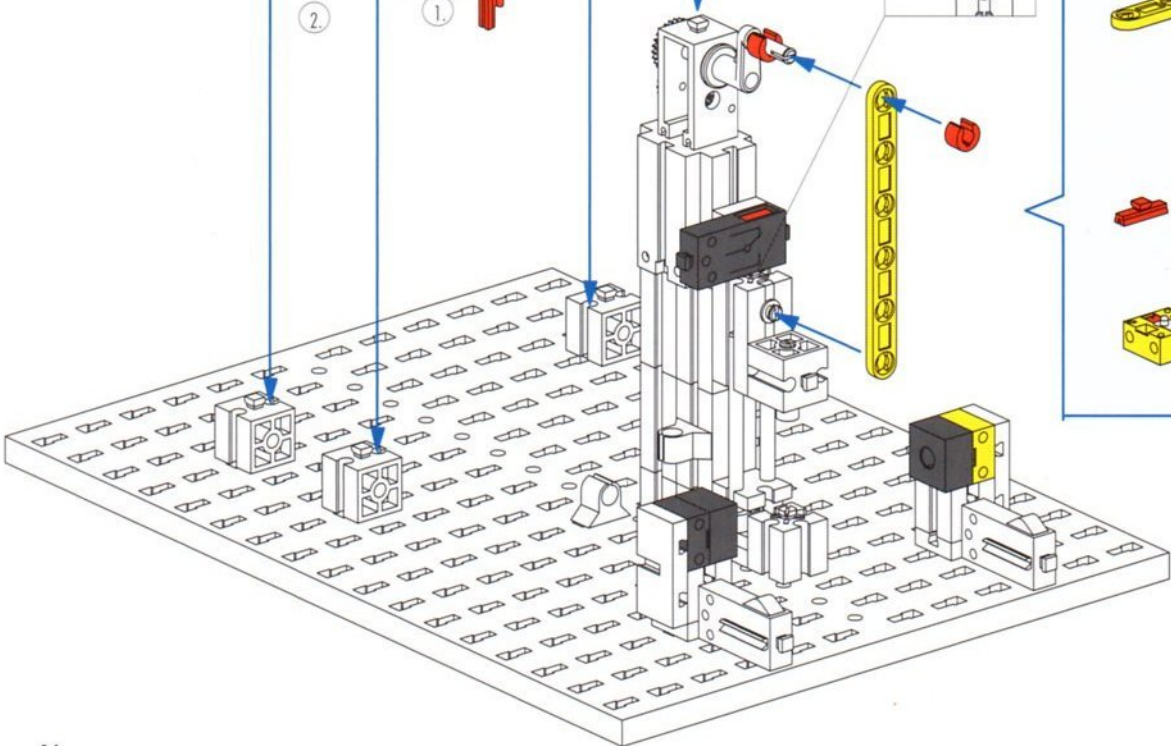


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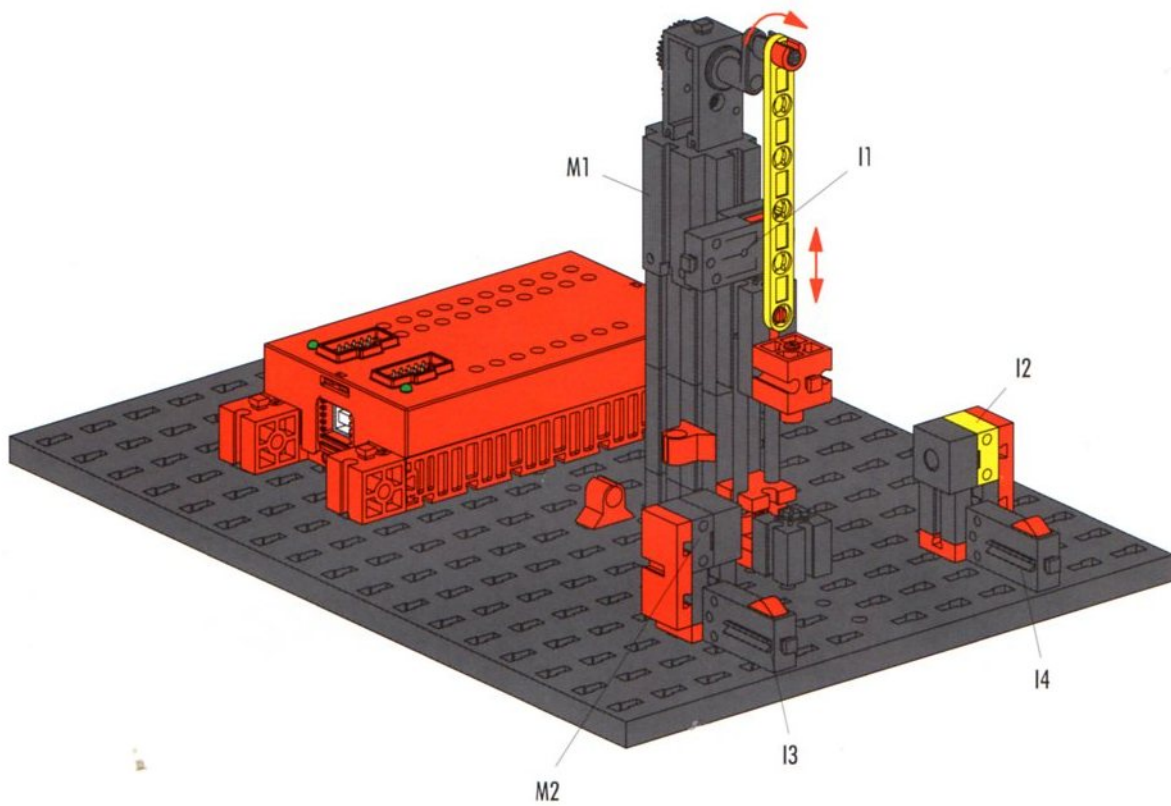
**5**

- 1x grey component
- 2x red bush
- 1x yellow beam (75)
- 1x red power supply unit
- 4x red component
- 2x grey component
- 1x yellow component
- 1x grey component



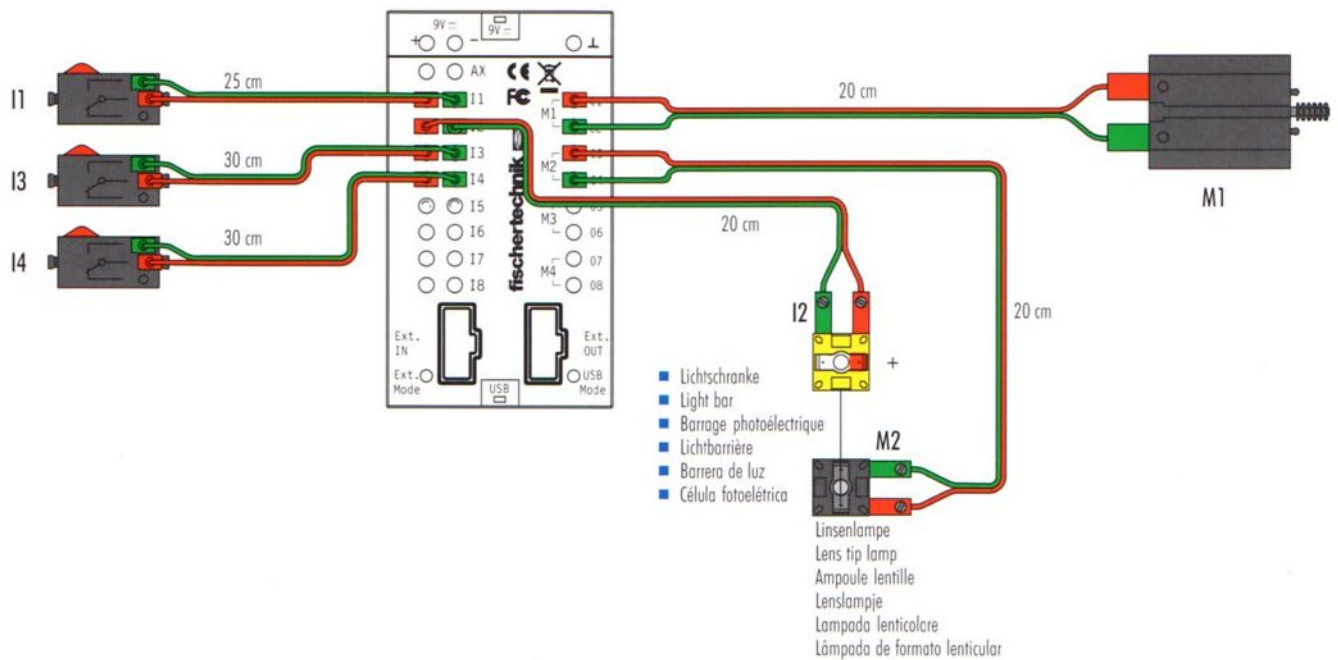
Linsenlampe  
 Lens tip lamp  
 Ampoule lentille  
 Lenslampje  
 Lampada lenticolare  
 Lámpada de formato lenticular

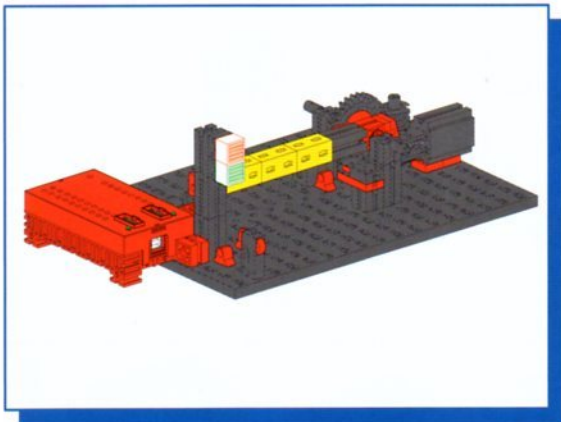




Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação

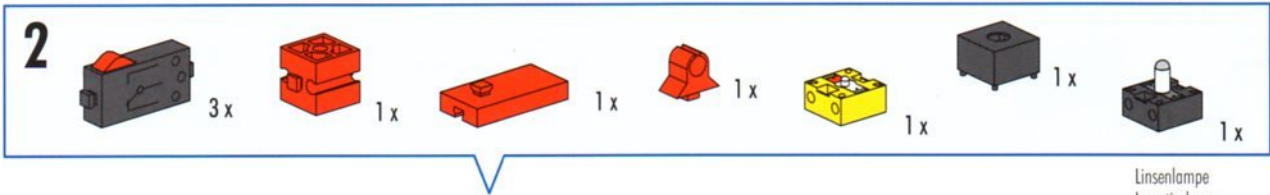
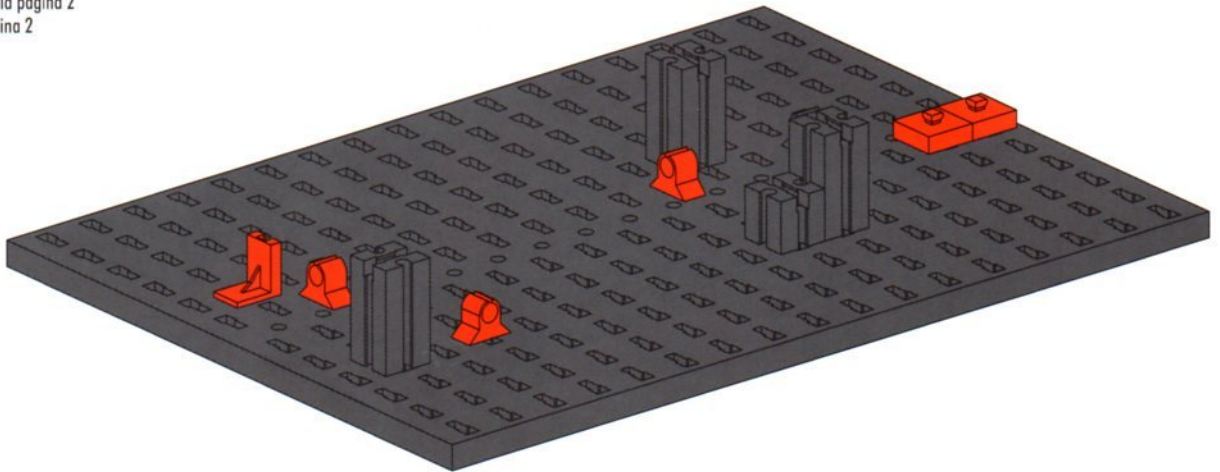
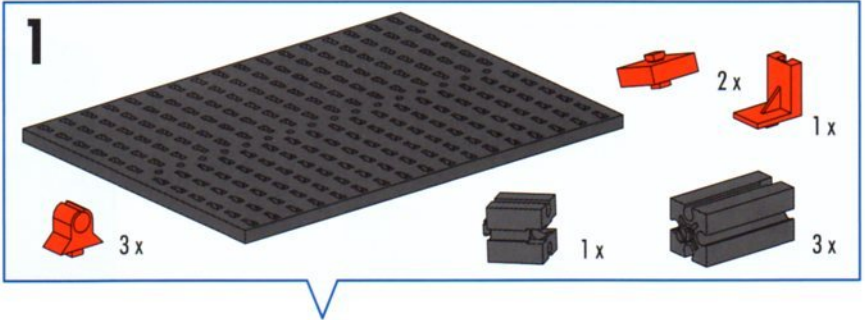




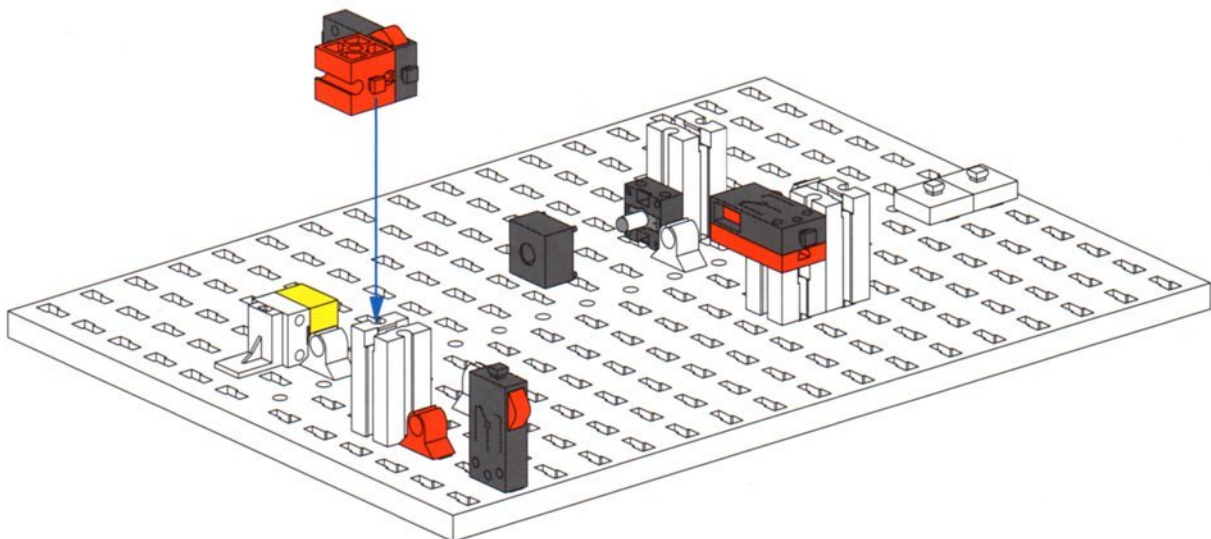
**Parkhausschranke**  
**Car park barrier**  
**Barrière de parking**

**Slagboom van parkeergarage**  
**Barrera del aparcamiento**  
**Barreira do estacionamento**

Montagetipps Seite 2  
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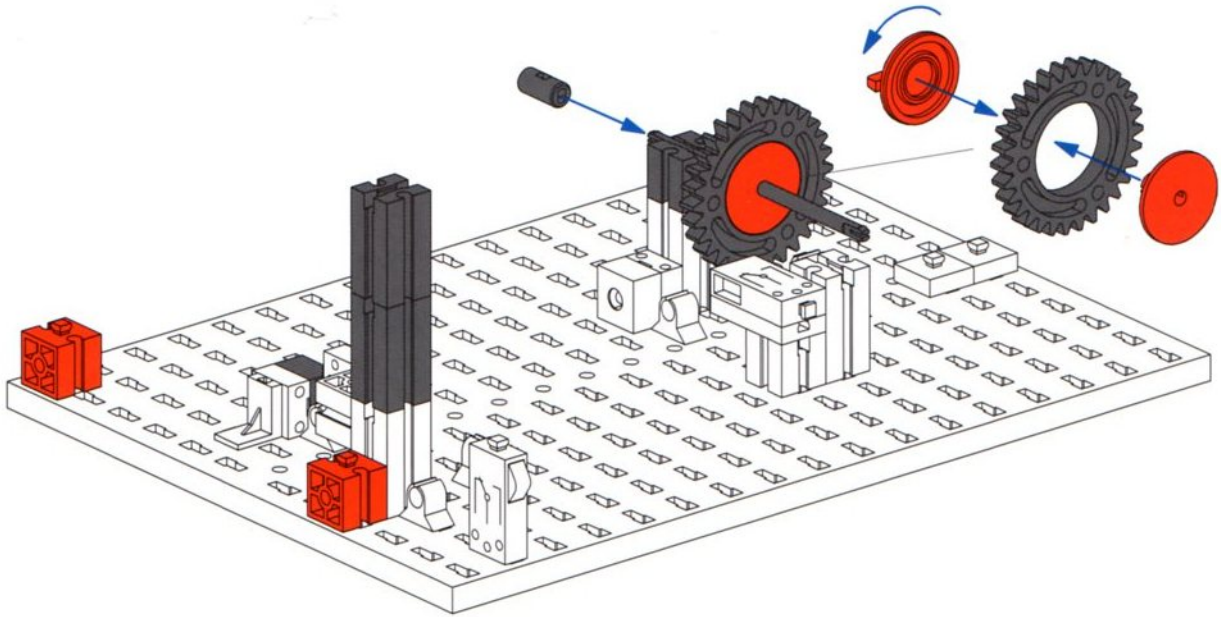
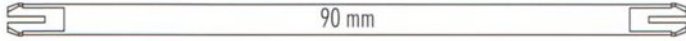
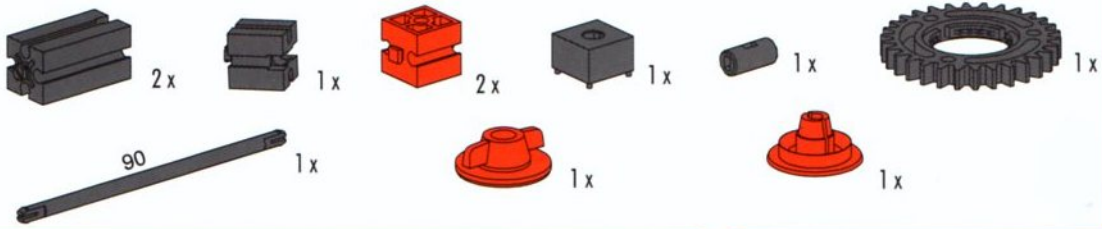


Linsenlampe  
 Lens tip lamp  
 Ampoule lentille  
 Lenslampje  
 Lampada lenticolare  
 Lâmpada de formato lenticular





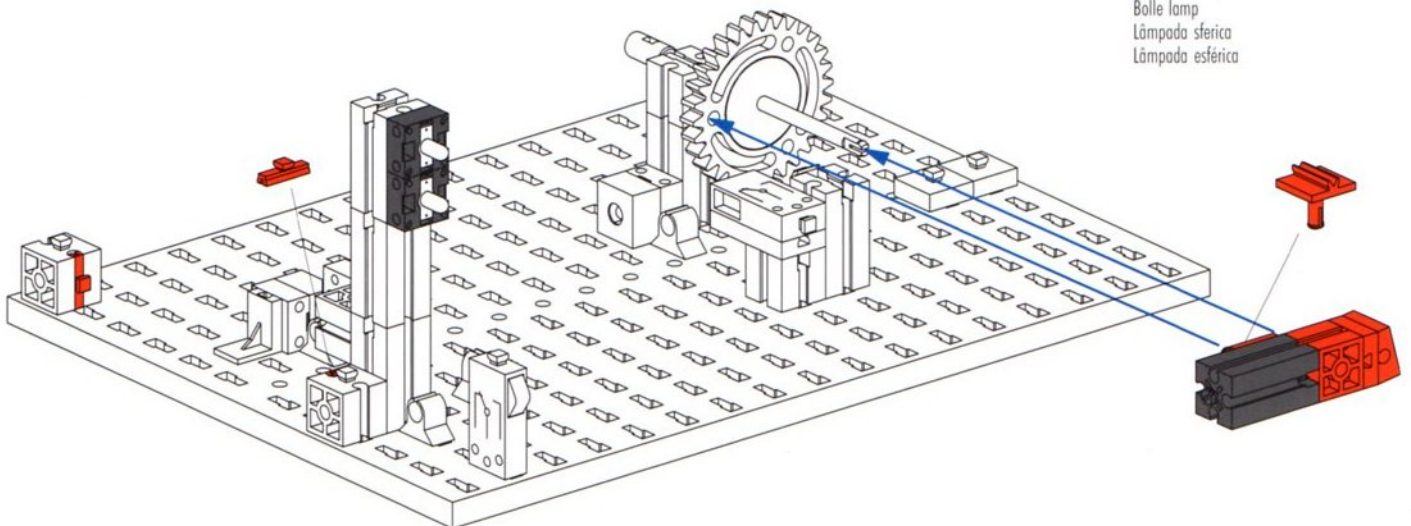
3



4

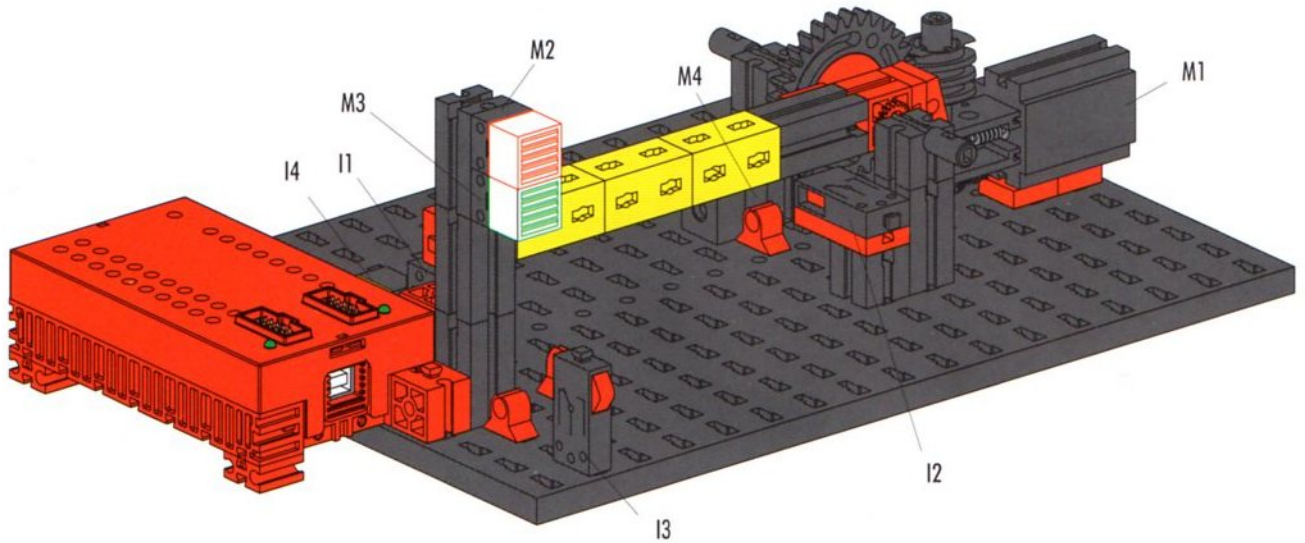


Kugellampe  
Bulb lamp  
Lampe sphérique  
Bolle lamp  
Lâmpada sferica  
Lâmpada esférica



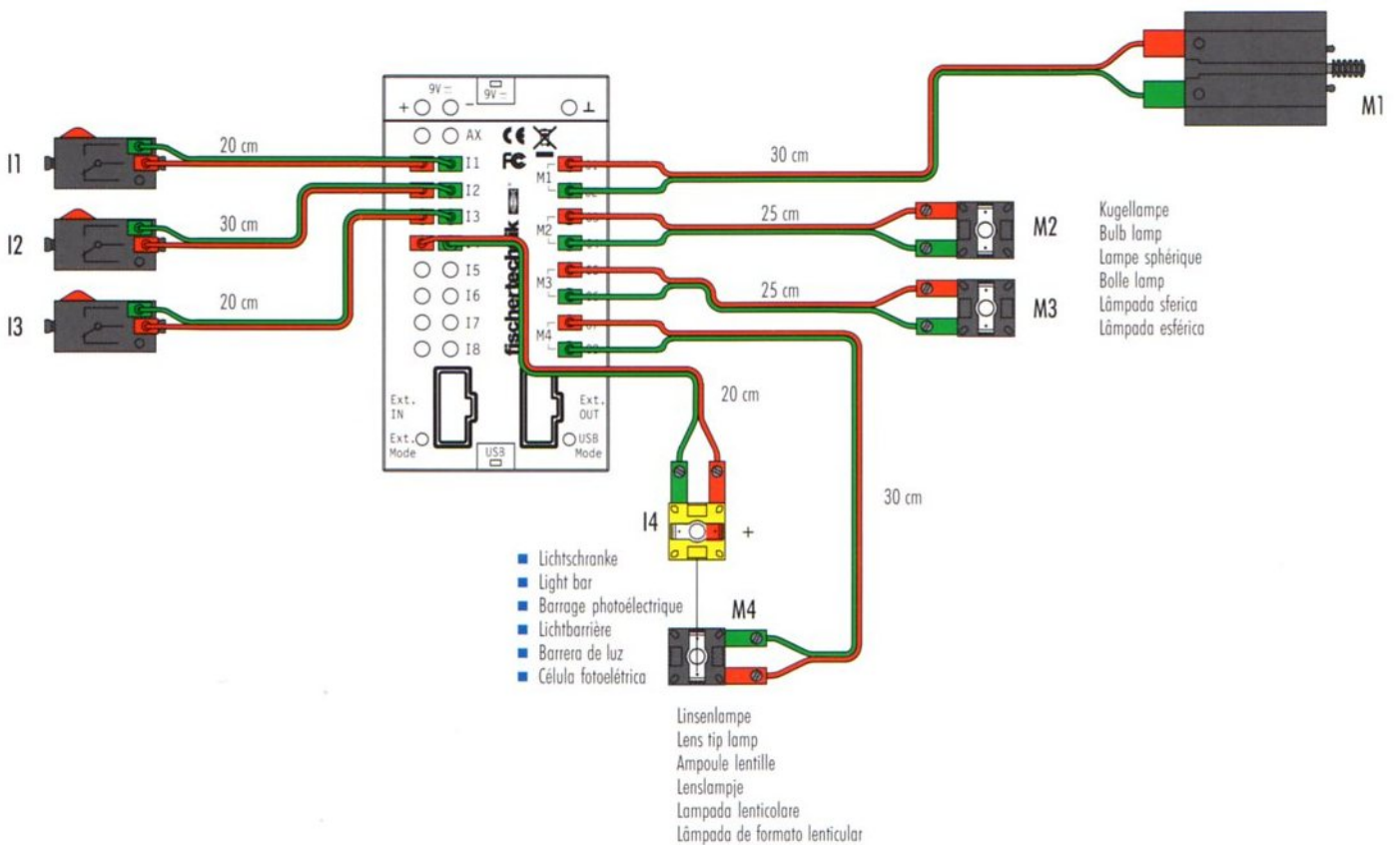






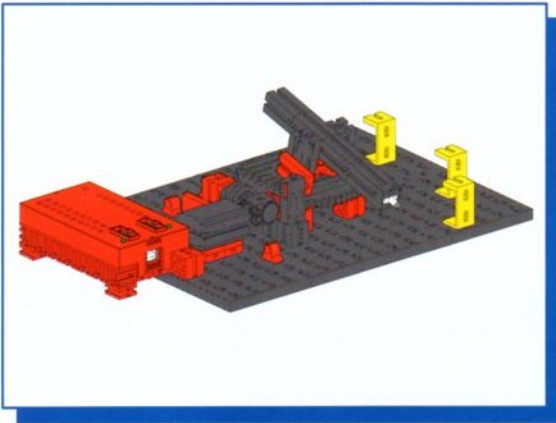
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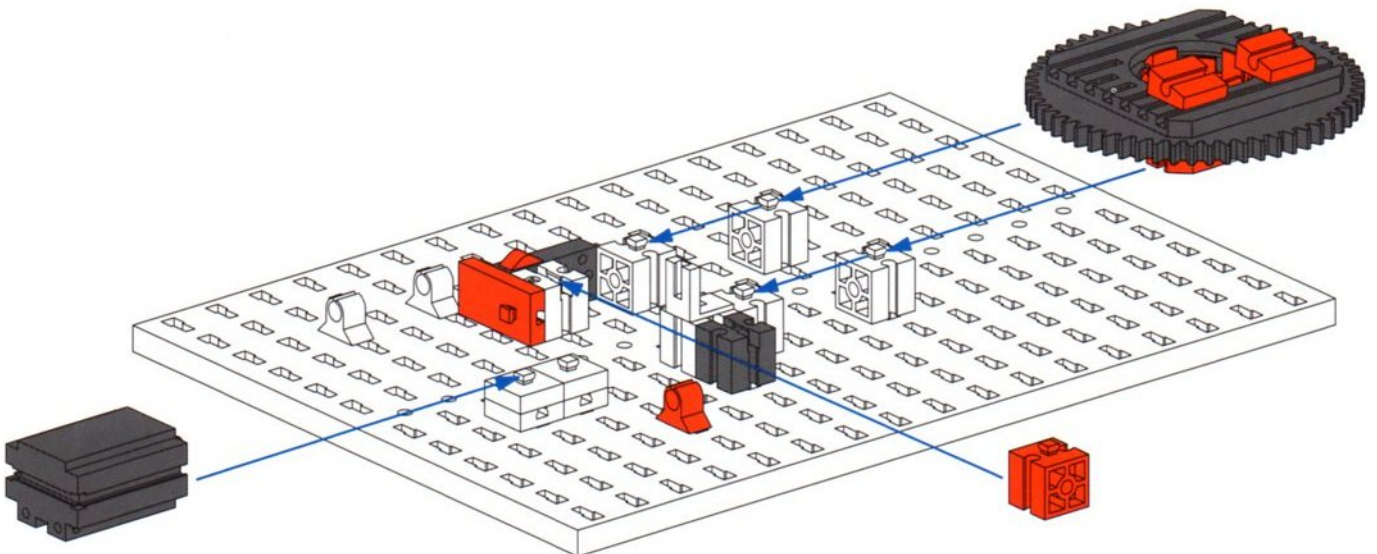
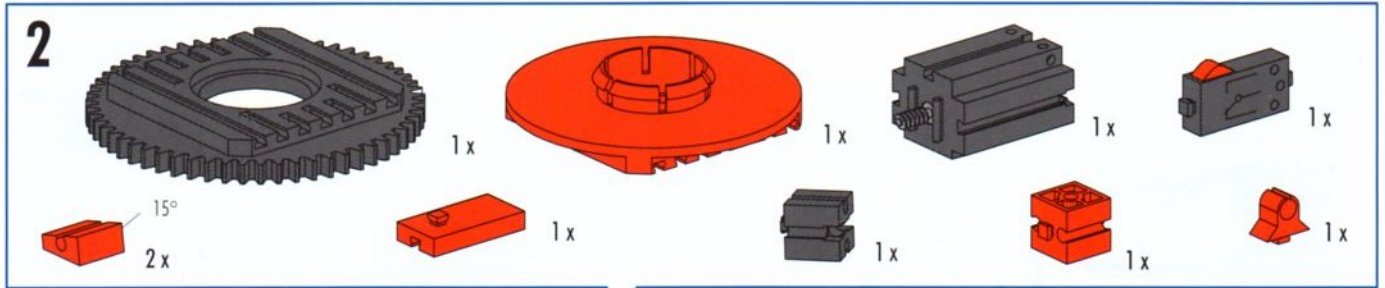
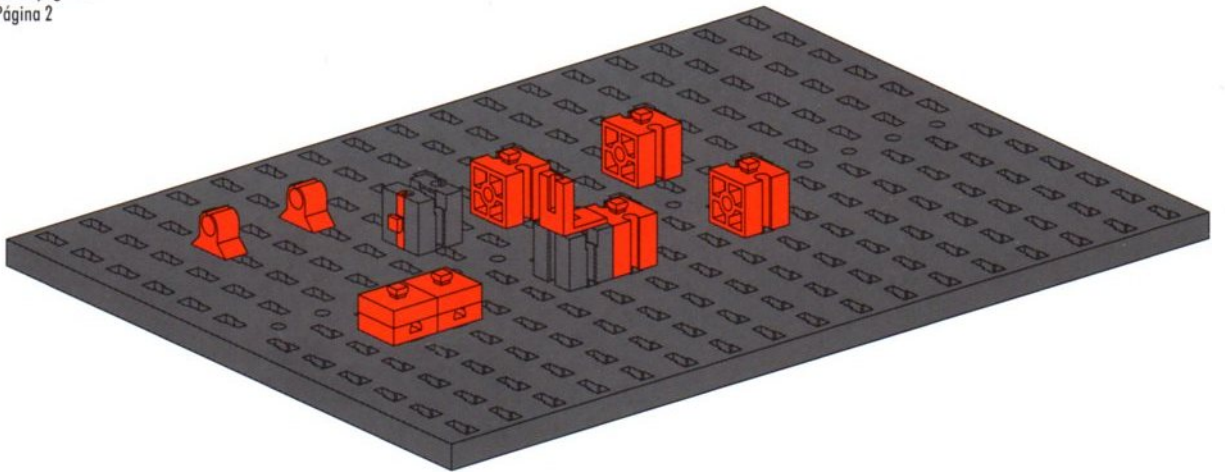
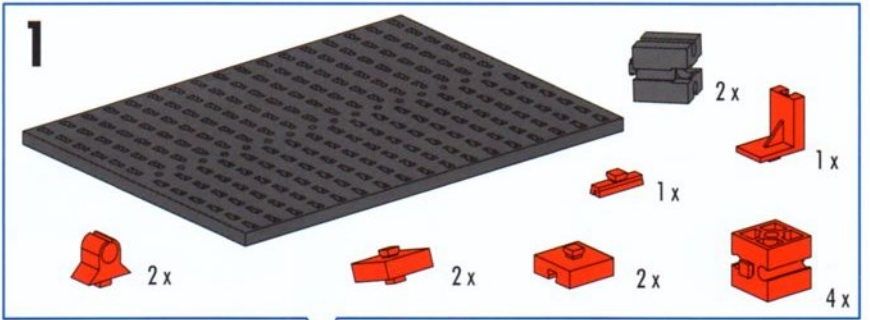


Schweißroboter  
Welding robot  
Robot de soudage

Lasrobot  
Robot de soldadura  
Robô de soldagem

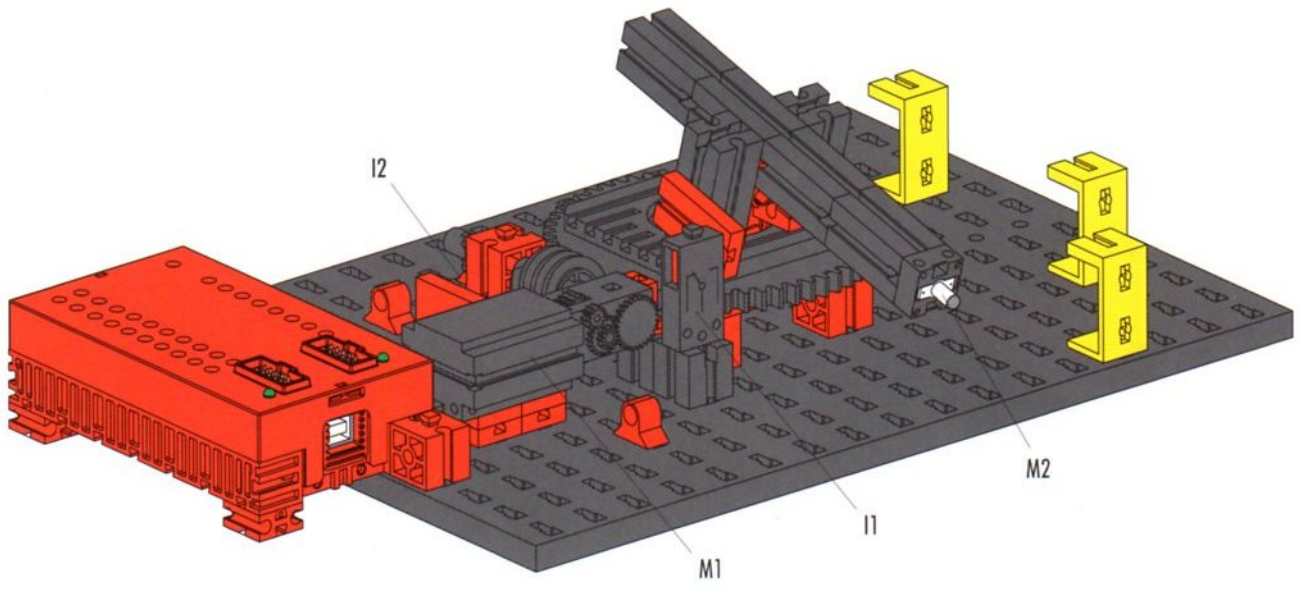


Montagetipps Seite 2  
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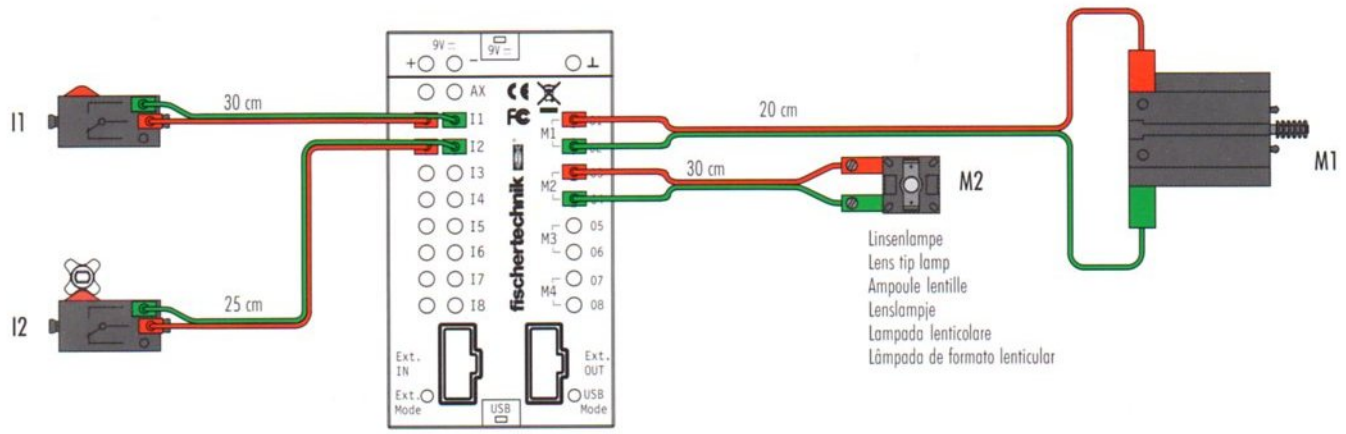






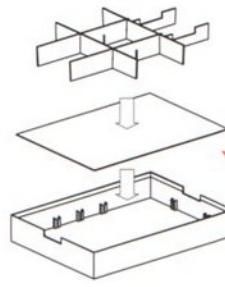
Schaltplan  
 Circuit diagram  
 Plan électrique

Schakelschema  
 Diagrama de circuitos  
 Plano elétrico de ligação






Sortiervorschlag Box 1 für Aufbewahrungssystem Art.-Nr. 94828  
 Storage suggestion box 1 for storage system Art No. 94828  
 Suggestion de classement Boîte 1 pour le système de stockage Art n° 94828  
 Sorteervoorstel box 1 voor bewaarsysteem art.-nr. 94828  
 Propuesta de clasificación Caja 1 para almacenamiento Art. N° 94828  
 Proposta de divisão caixa 1 para sistema de conservação n.º de art. 94828



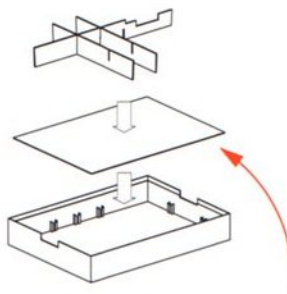
Zum Ausschneiden und Einlegen  
 For cutting out and inserting  
 À découper et à poser  
 Uitsnijpen en aanbrengen  
 Para cortar y montar  
 Para cortar e colocar

 <p>5 x 35 969</p> <p>2 x 36 532</p> <p>1 x 35 084</p> <p>1 x 35 079</p> <p>1 x 35 085</p>	<p>1 x 31 061</p> <p>1 x 31 124</p> <p>2 x 31 981</p> <p>7 x 31 982</p>	<p>1 x 31 058</p> <p>1 x 35 031</p> <p>1 x 36 264</p> <p>1 x 37 636</p>
<p>1 x 31 082</p> <p>1 x 31 082</p> <p>1 x 31 134</p> <p>3 x 37 783</p>	<p>2 x 35 073</p> <p>1 x 35 088</p> <p>1 x 35 945</p> <p>1 x 37 157</p> <p>1 x 35 063</p>	<p>1 x 31 078</p> <p>1 x 32 293</p> <p>1 x 35 072</p>
<p>1 x 38 216</p> <p>1 x 38 216</p> <p>2 x 38 216</p>	<p>1 x 31 690</p> <p>1 x 36 334</p> <p>1 x 31 848</p> <p>4 x 37 679</p>	<p>2 x 31 053</p> <p>1 x 35 066</p> <p>1 x 38 416</p> <p>1 x 38 416</p> <p>1 x 38 416</p>



Box 1 Robo Starter

Sortiervorschlag Box 2 für Aufbewahrungssystem Art.-Nr. 94828  
 Storage suggestion box 2 for storage system Art No. 94828  
 Suggestion de classement Boîte 2 pour le système de stockage Art n° 94828  
 Sorteervoorstel box 2 voor bewaarsysteem art.-nr. 94828  
 Propuesta de clasificación Caja 2 para almacenamiento Art. N° 94828  
 Proposta de divisão caixa 2 para sistema de conservação n.º de art. 94828



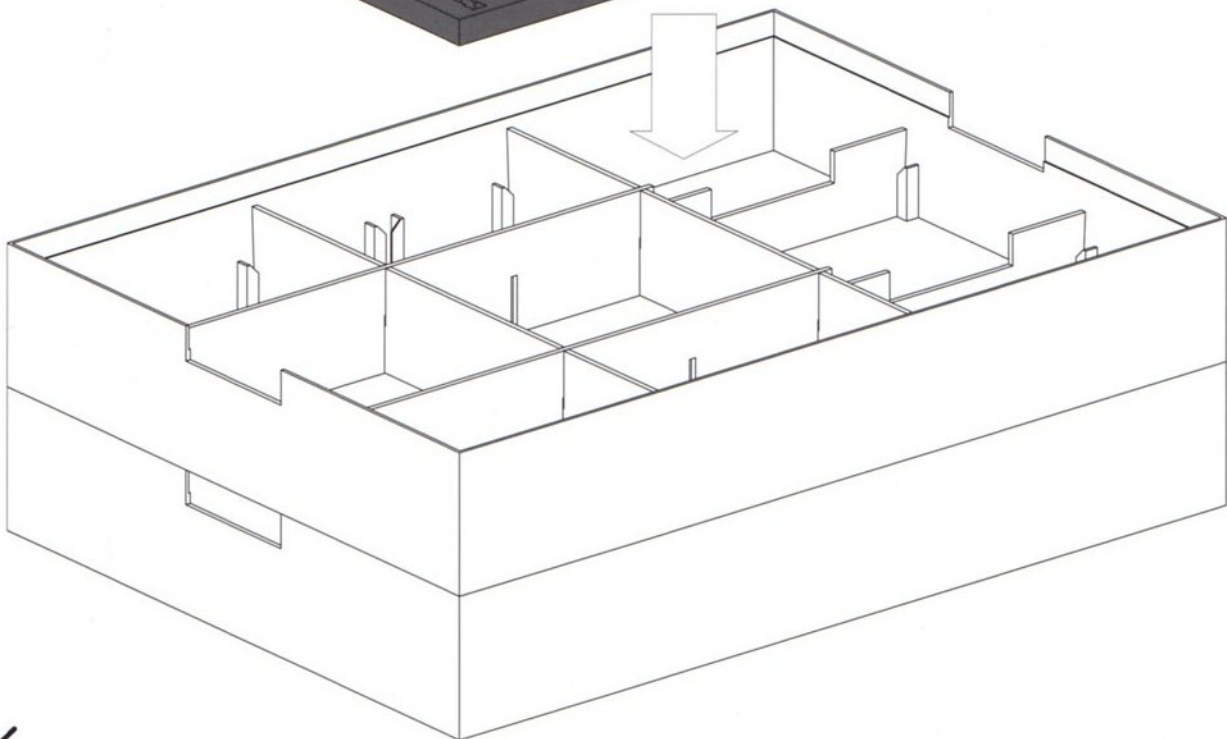
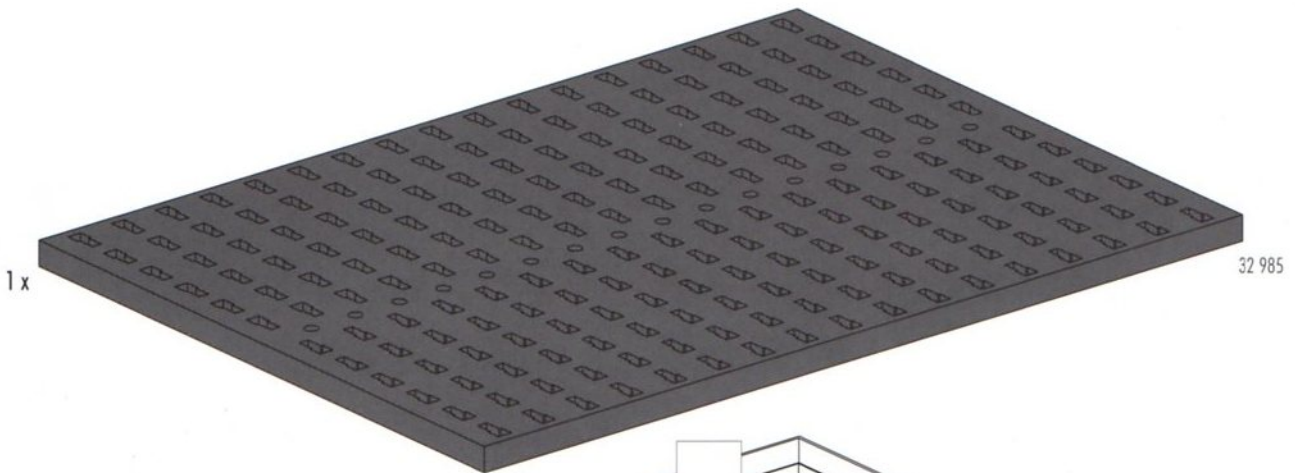
Zum Ausschneiden und Einlegen  
 For cutting out and inserting  
 A découper et à poser  
 Uittknippen en aanbrengen  
 Para cortar y montar  
 Para cortar e colocar








Empfohlene Aufbewahrung:	2 x Aufbewahrungssystem Art.-Nr. 94 828
Recommended storage:	2 x storage system Art No. 94828
Stockage conseillé :	2 x système de stockage Art n° 94828
Bewaaradvies:	2 x bewaarsysteem art.-nr. 94828
Consejos para guardar el producto:	2 x almacenamiento Art. N° 94828
Conservação recomendada:	2 x sistema de conservação n.º de art. 94828



#### ■ Hinweise zum Umweltschutz

Die elektrischen und elektronischen Bauteile dieses Baukastens (z. B. Motoren, Lampen, Sensoren) gehören nicht in den Hausmüll. Sie müssen am Ende ihrer Lebensdauer an einem Sammelpunkt für das Recycling von elektrischen und elektronischen Geräten abgegeben werden. Das Symbol auf dem Produkt, der Verpackung oder der Anleitung weist darauf hin.

#### ■ Instructions for Environmental Protection

Do not put the electrical and electronic components of this construction kit such as motors, lights and sensors in the household waste. At the end of their service life, take them to a collection point for the recycling of electrical and electronic devices. The symbol on the product, packaging or the instructions shows this.

#### ■ Remarques de protection de l'environnement

Les composants électriques et électroniques de ce coffret (par ex. moteurs, lampes, capteurs) ne doivent pas être jetés avec les ordures ménagères. Lorsqu'elles ne sont plus utilisables, il faut les remettre auprès d'un centre de collecte spécialisé dans le recyclage des appareils électriques et électroniques. Le symbole sur le produit, l'emballage ou la notice d'instructions le signale.

#### ■ Bescherming van het milieu

De elektrische en elektronische onderdelen van deze module (bijv. motoren, lampen, sensoren) behoren niet bij het huisvuil. Aan het einde van hun levensduur moeten ze worden ingeleverd bij een verzamelplaats voor de recycling van elektrische en elektronische apparaten. Het symbool op het product, de verpakking of de gebruiksaanwijzing wijst je daar ook op.

#### ■ Notas con respecto a la protección del medio ambiente

Los componentes eléctricos y electrónicos de esta unidad modular (p. ej. motores, lámparas, sensores) no han de tirarse a la basura casera. Al final de su vida útil tienen que ser entregados en un puesto colector para el reciclaje de aparatos eléctricos y electrónicos. El símbolo sobre el producto, el embalaje o las instrucciones lo señala.

#### ■ Instruções para a proteção do meio ambiente

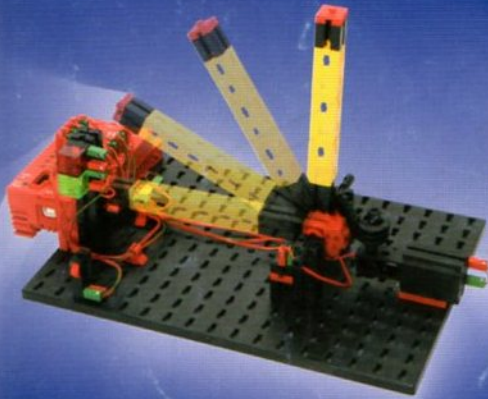
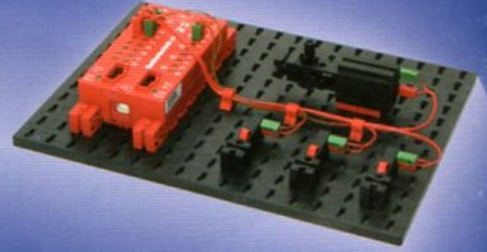
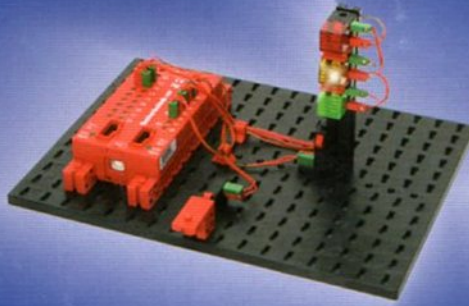
Os componentes elétricos e eletrônicos deste módulo (p.ex. motores, lâmpadas, sensores) não pertencem ao lixo doméstico. Eles devem ser entregues, no final da sua vida útil, num posto de coleta para a reciclagem de aparelhos elétricos e eletrônicos. O símbolo no produto, na embalagem ou no manual indica isto.





**fischertechnik** 

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Fax: +49 74 43/12-45 91  
E-Mail: [info@fischertechnik.de](mailto:info@fischertechnik.de)  
[www.fischertechnik.de](http://www.fischertechnik.de)



**ROBO STARTER**  
8 MODELS