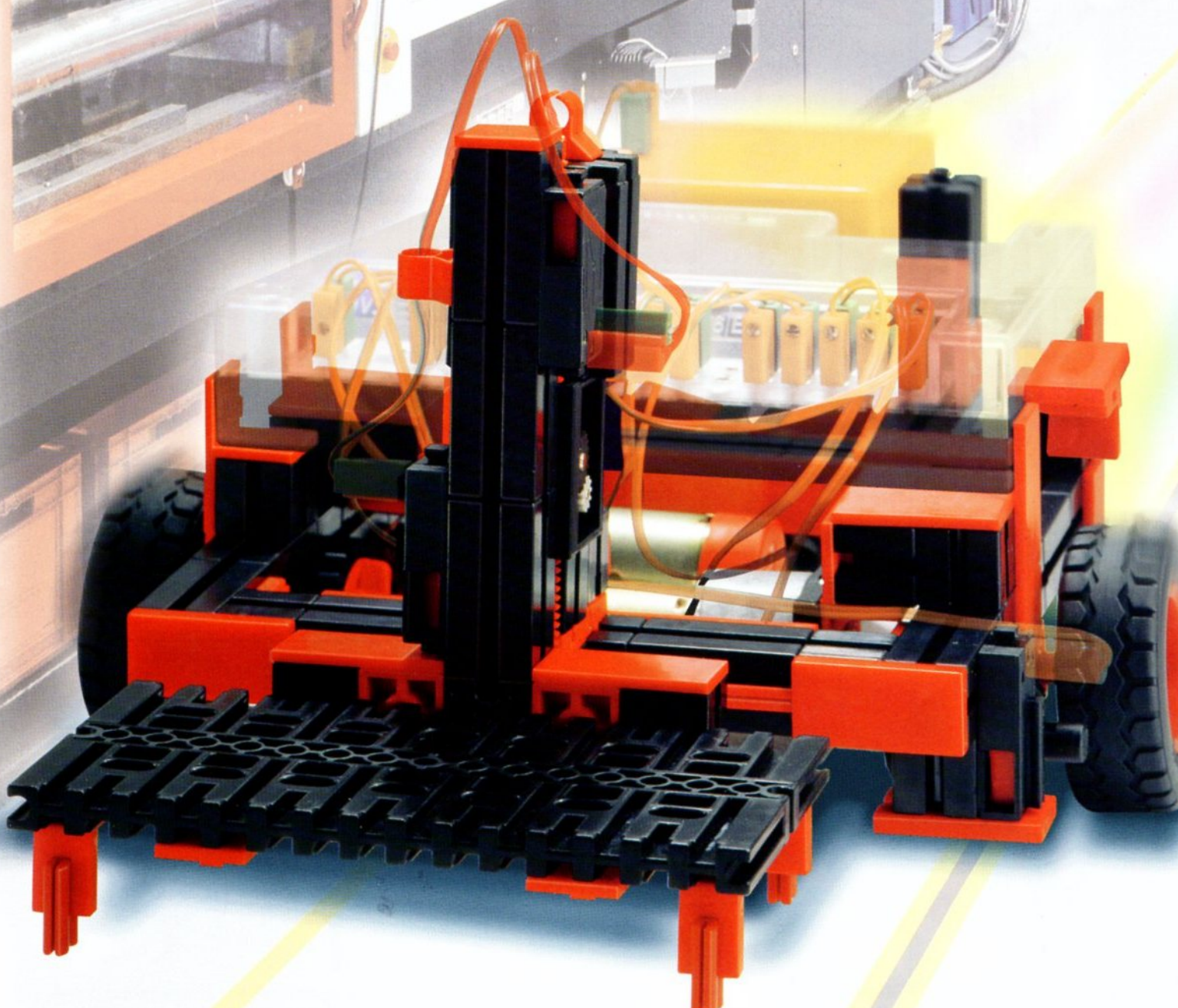


# Mobile Robots II

**6**  
models

  
COMPUTING



**fischertechnik**<sup>®</sup>



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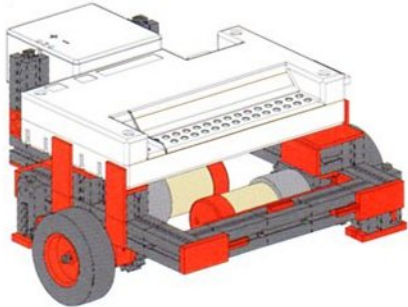
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**Contenido**  
**Conteúdo**

Einzelteilübersicht / Spare parts list / Liste des pièces détachées /  
Onderdelenoverzicht / Lista da piezas / Resumo de peça individual

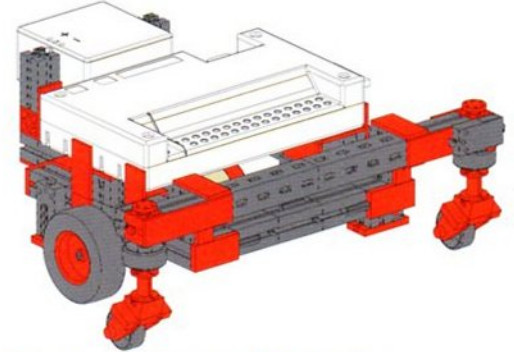
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Montagehilfen und Hinweise / Assembly aids and instructions / Aides de montage et instructions /  
Montagehulpmiddelen en aanwijzingen / Ayudas de montaje e instrucciones / Montagens e indicações

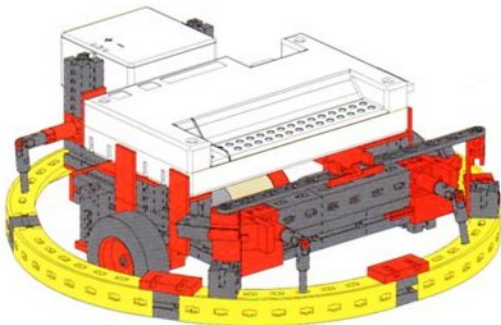
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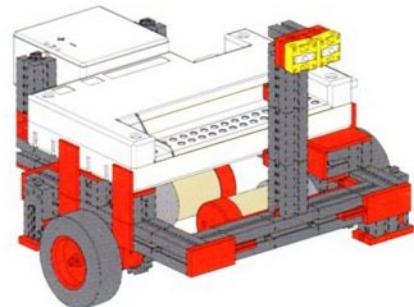
Basismodell / Basic Model / Maquette de base /  
Basismodel / Modelo básico / Modelo básico 4



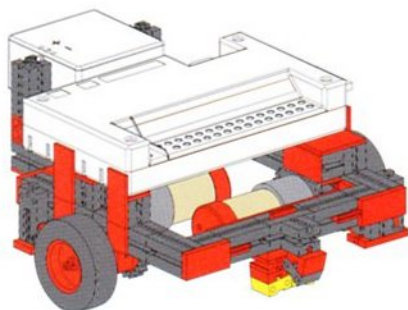
Roboter mit Kantenerkennung / Robot with  
Edge Detection / Robot avec détection des  
bords / Robots met kantherkenning / Robot  
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reconhecimento de bordas 10



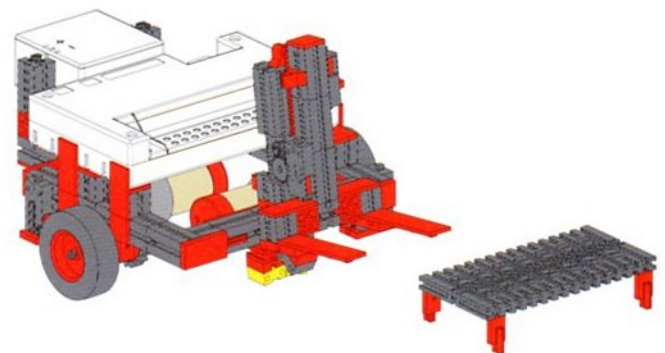
Roboter mit Hinderniserkennung / Robot with  
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Lichtsucher / Light Finder /  
Chercheur de lumière / Lichtzoeker /  
Detector de luz / Identificador de luz 22

































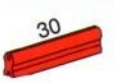














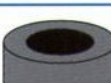






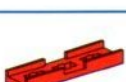





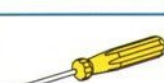












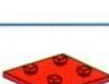




Spurensucher / Tracker / Chercheur de piste /  
Sporzoeker / Detector de pistas / Rastreador 24



FTS – Fahrerloses Transportsystem / Driverless  
Transport System / FTS – Système de transport sans  
chauffeur / FTS – Transportsysteem zonder bestuurder /  
FTS – Sistema de transporte sin conductor /  
FTS – Sistema de transporte sem condutor 26

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

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

 60°	31010 2x	 7,5°	32071 4x	 45	35064 4x		37157 2x		38428 6x
 30°	31011 8x		32293 1x	 60	35065 2x		37237 4x		38464 2x
	31016 2x		32321 1x		35073 2x		37272 1x		38473 4x
	31021 2x		32330 7x		35090 2x		37351 1x		77312 1x
	31058 2x		32850 2x		35129 1x		37457 1x		78238 2x
 15	31060 22x		32879 22x		35214 2x		37468 6x		104574 2x
 30	31061 7x		32881 22x		35945 4x		37679 6x		105195 1x
	31124 3x		32882 7x		35969 4x		37783 6x		105196 2x
	31336 24x		32883 2x		35971 8x		37875 1x		
	31337 24x		32913 2x		35972 4x		38216 1x		
	31597 2x		35031 2x		36134 2x		38240 1x		
	31668 1x		35033 2x	 4	36323 2x		38241 16x		
	31690 2x		35054 6x		36443 1x		38242 2x		
	31848 2x		35055 6x		36574 6x		38245 2x		
	31982 17x		35061 6x		36920 1x		38246 9x		
	31983 4x		35062 2x		36921 2x		38259 2x		
	32064 10x	 30	35063 2x	 75	36923 2x		38423 14x		

**Montagehilfen und Hinweise**  
**Assembly aids and instructions**  
**Aides de montage et instructions**

**Montagehulpmiddelen en aanwijzingen**  
**Ayudas de montaje e instrucciones**  
**Montagens e indicações**

Kabel und Stecker  
Plugs and cables  
Fiches et des câbles

**1**

4 x 15 cm  
8 x 23 cm

Stekkers en cables  
Enchufes en cables  
Cabos e contactos

**3**

4mm

**2**

3cm 3cm

**4**

4 x 15 cm  
8 x 23 cm

**1**

9 V ...

**2**

2x

**1**

**2**

**1**

**2**

4x

- Alle elektrischen Bauteile (Sensoren, Motoren, Lampen) 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 and lamps) 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) 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) 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) 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) 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).

- 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!

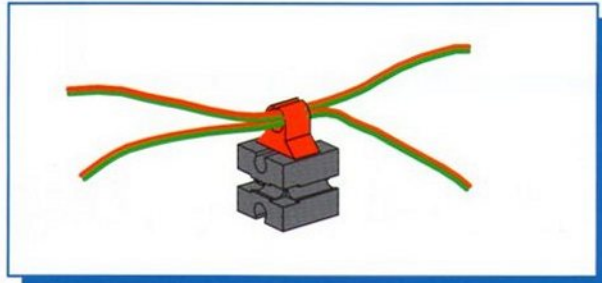
**■ Atenção**  
Perigo de ferimentos em peças componentes com cantos vivos e pontas obrigatórios para o funcionamento!







**Montagehilfen und Hinweise**  
**Assembly aids and instructions**  
**Aides de montage et instructions**


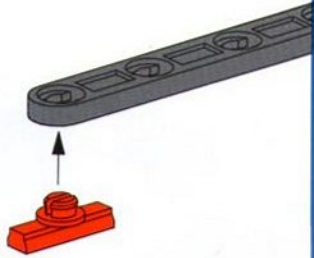

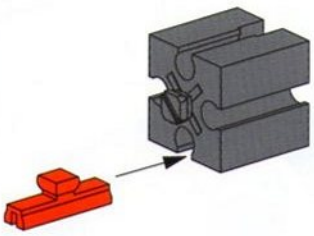
**Montagehulpmiddelen en aanwijzingen**  
**Ayudas de montaje e instrucciones**  
**Montagens e indicações**

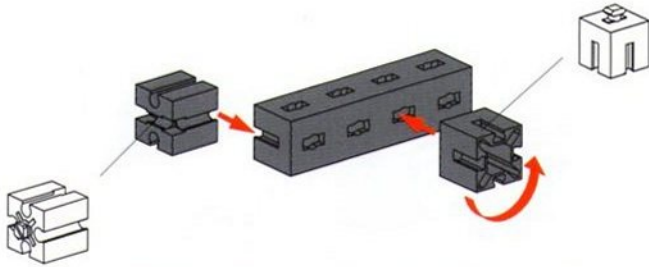
<p>Fototransistor          Phototransistor          Phototransistor</p>	<p>Fototransistor          Fototransistores          Fototransistor</p>	<p>Achtung: Beim Anschluß auf richtige Polung achten. Rot = +          Caution: Make sure the terminals are connected correctly. Red = +          Attention: 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 = +</p>
	<p>9V ...</p>	

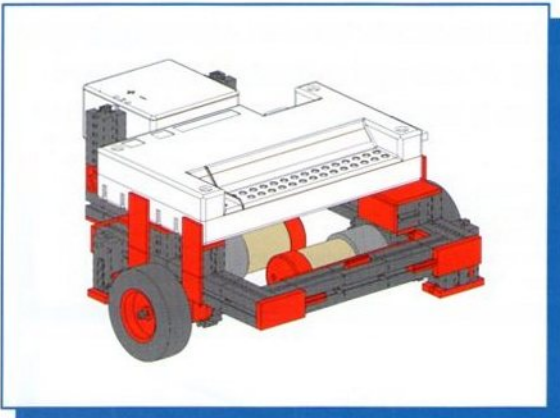
		<p>Linsenlampe          Lens tip lamp          Ampoule lentille          Lenslampje          Lampada lenticolare          Lâmpada de formato lenticular</p>
	<p>9V ... / 0,15 A</p>	



<p>7,5°</p> 	<p>30°</p> 	<p>60°</p> 
		

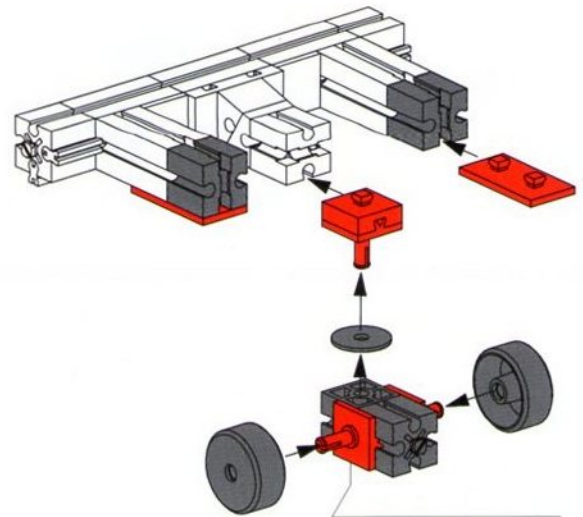
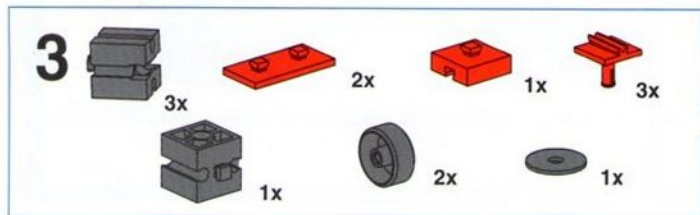
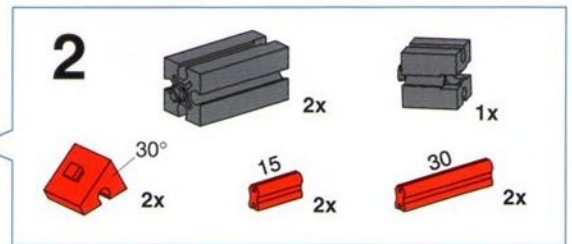
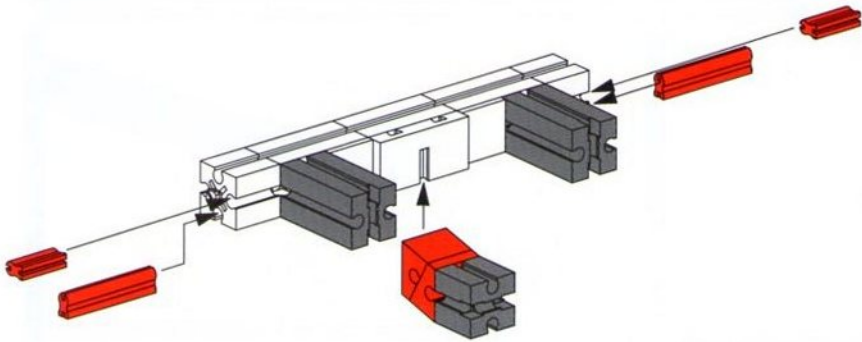
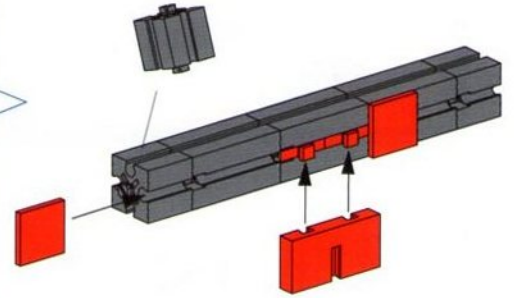
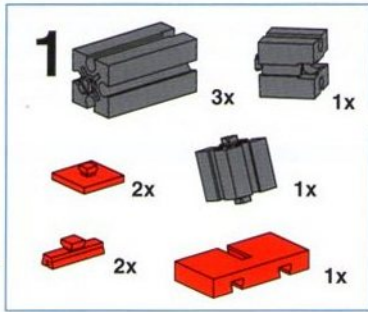
	
	



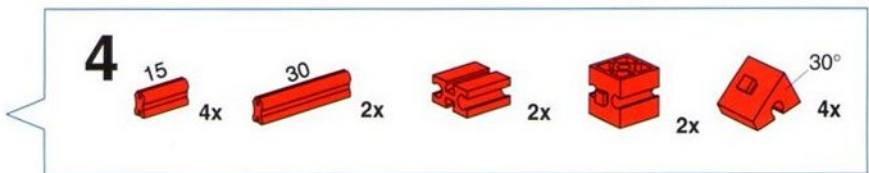
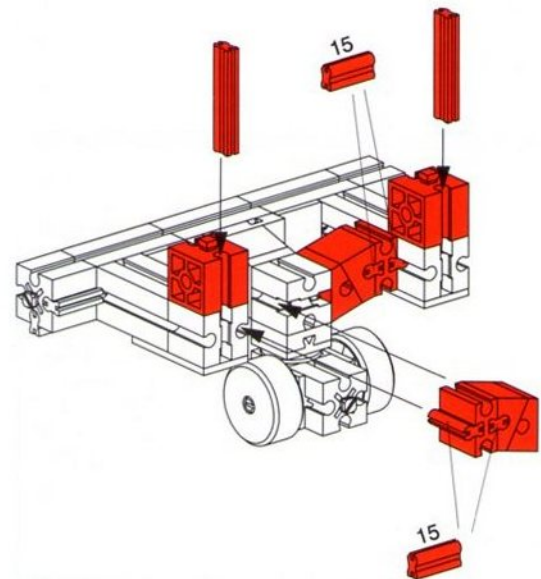


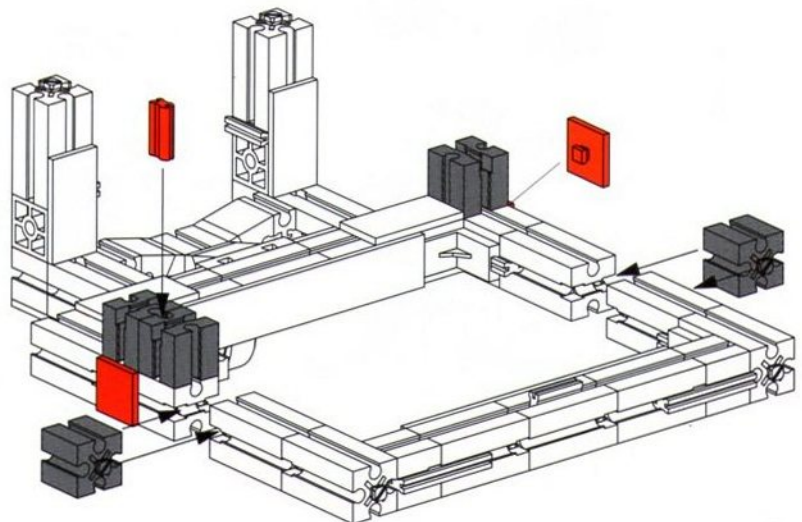
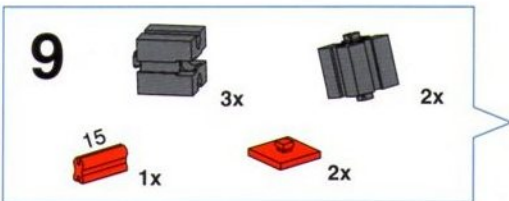
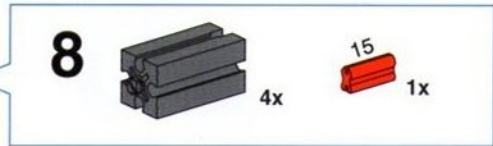
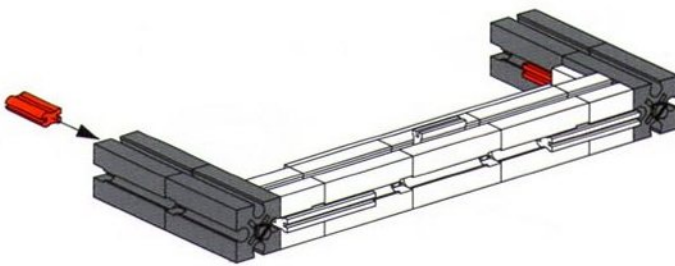
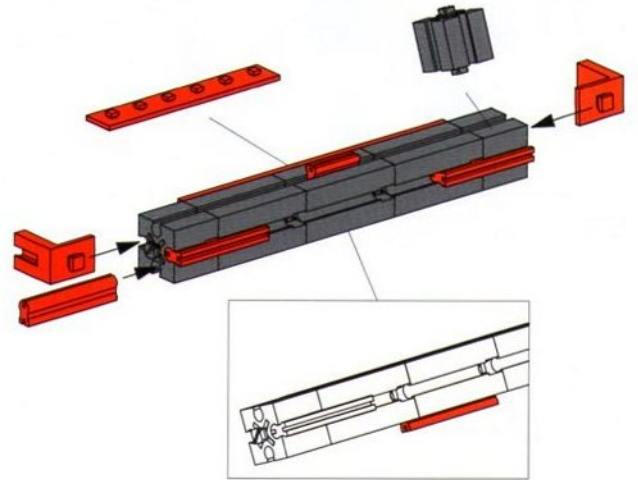
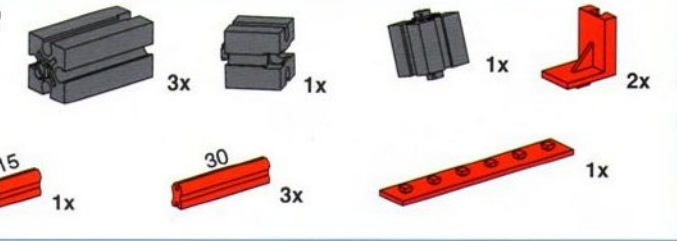
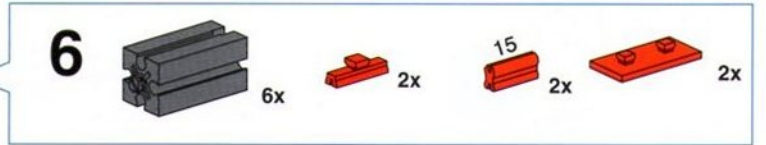
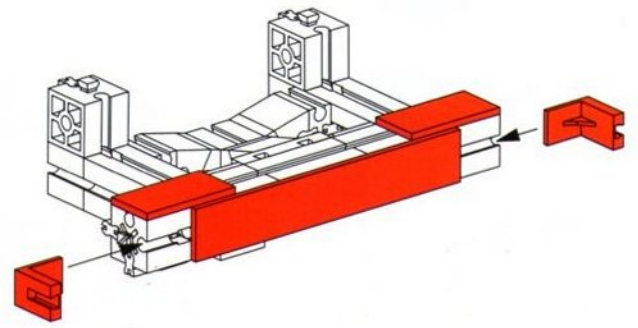
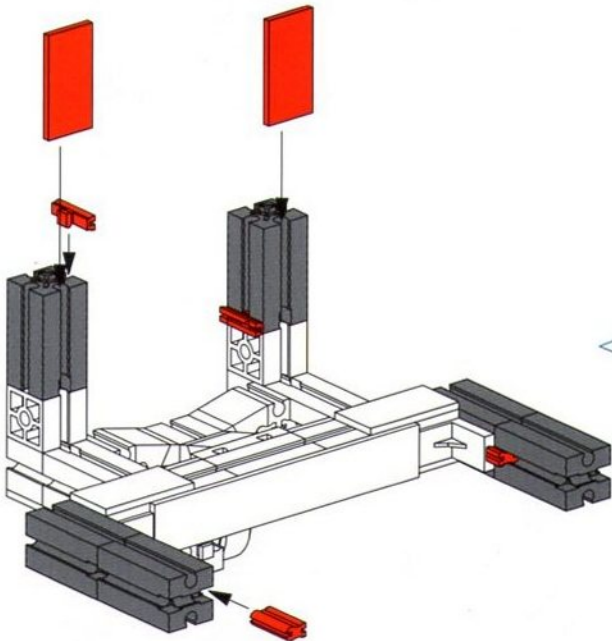
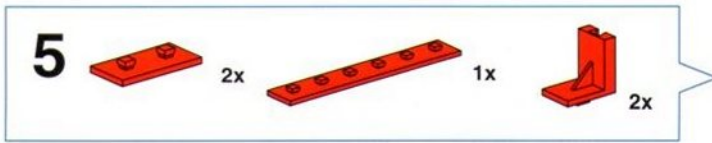
**Basismodell  
Basic Model  
Maquette de base**

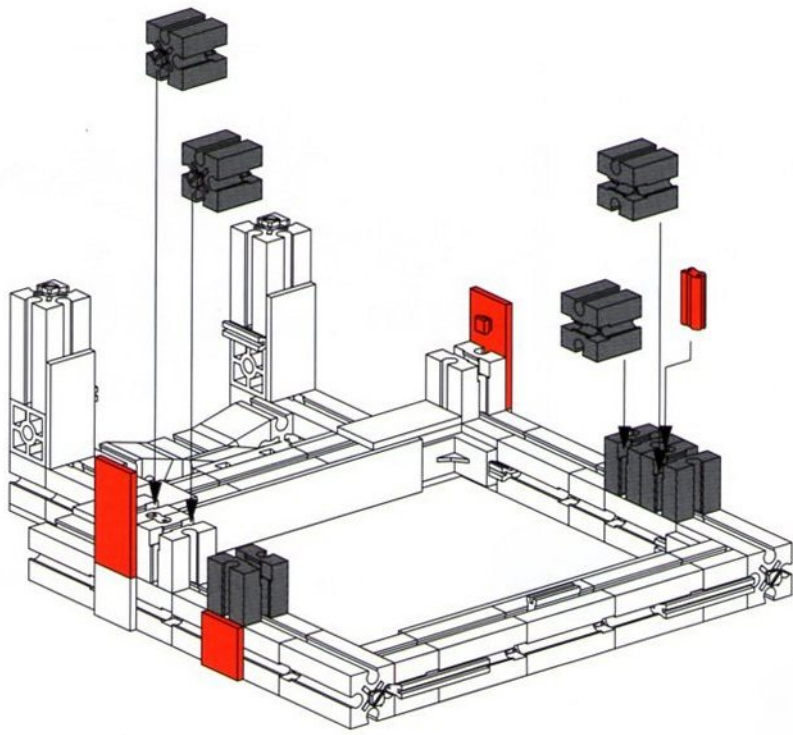
**Basismodel  
Modelo básico  
Modelo básico**



Große Bohrung  
Large drilling  
Alésage large  
Grote boring  
Perforación grande  
Orificio grande

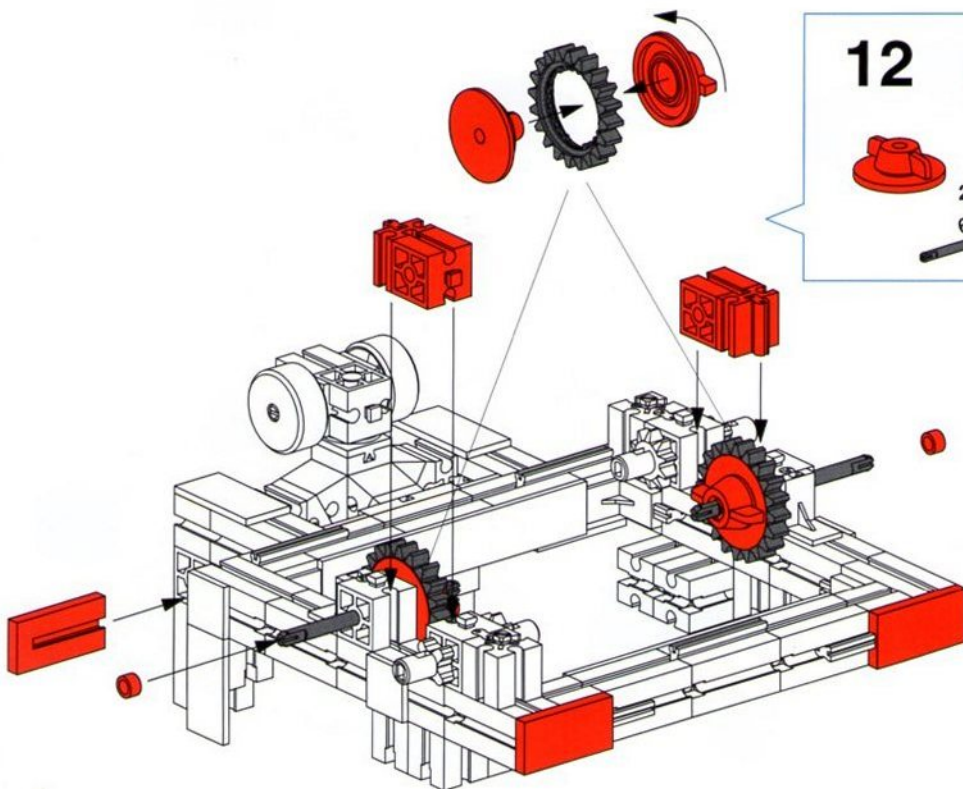
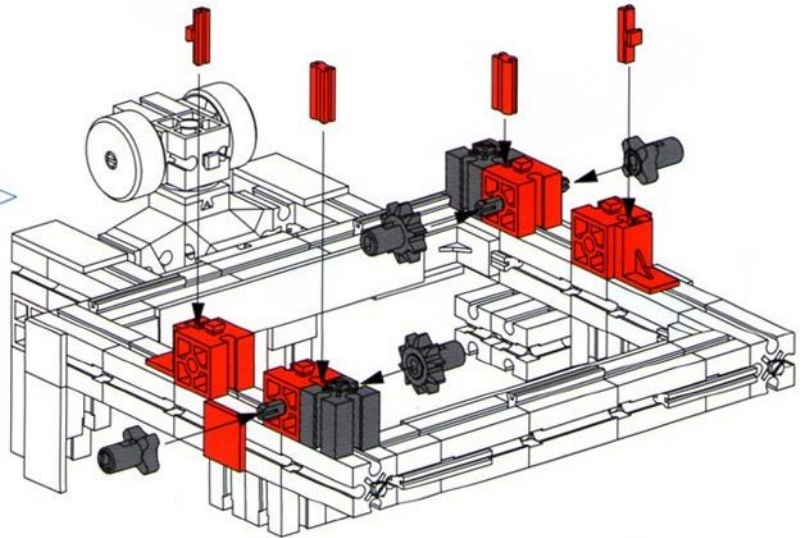






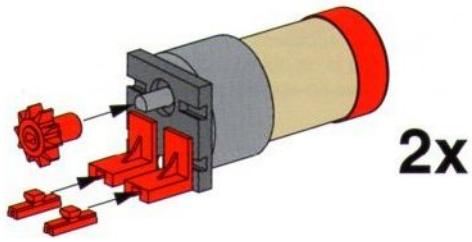
- 10**
- 7x [Grey 2x3 Technic Brick]
  - 1x [Red 1x5 Technic Brick]
  - 2x [Red 1x3 Technic Brick]
  - 1x [Red 1x2 Technic Brick]

- 11**
- 4x [Red 2x3 Technic Brick]
  - 2x [Grey 2x3 Technic Brick]
  - 2x [Red L-shaped Technic Brick]
  - 1x [Red 1x2 Technic Brick]
  - 2x [Grey 30-length Technic Pin]
  - 2x [Grey Technic Axle Connector]
  - 2x [Grey Technic Axle Connector]
  - 2x [Red 1x5 Technic Brick]
  - 2x [Red 1x3 Technic Brick]
- 30

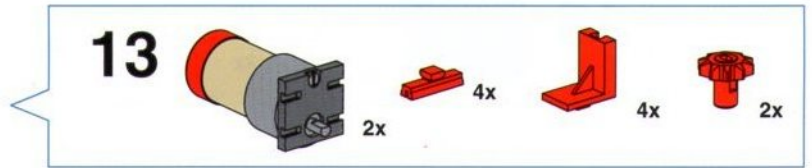


- 12**
- 2x [Red 2x3 Technic Brick]
  - 2x [Red 2x3 Technic Brick]
  - 2x [Red 1x5 Technic Brick]
  - 2x [Red 1x3 Technic Brick]
  - 2x [Red 1x2 Technic Brick]
  - 2x [Red 1x2 Technic Brick]
  - 2x [Red 1x2 Technic Brick]
  - 2x [Grey 24-tooth Technic Gear]
  - 2x [Red 1x2 Technic Pin]
  - 2x [Grey 60-length Technic Pin]
  - 3x [Red 1x5 Technic Brick]
- 60

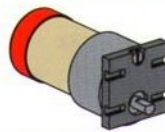




2x



13



2x



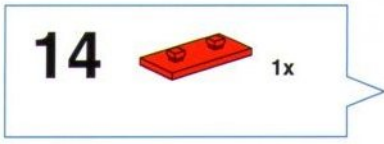
4x



4x



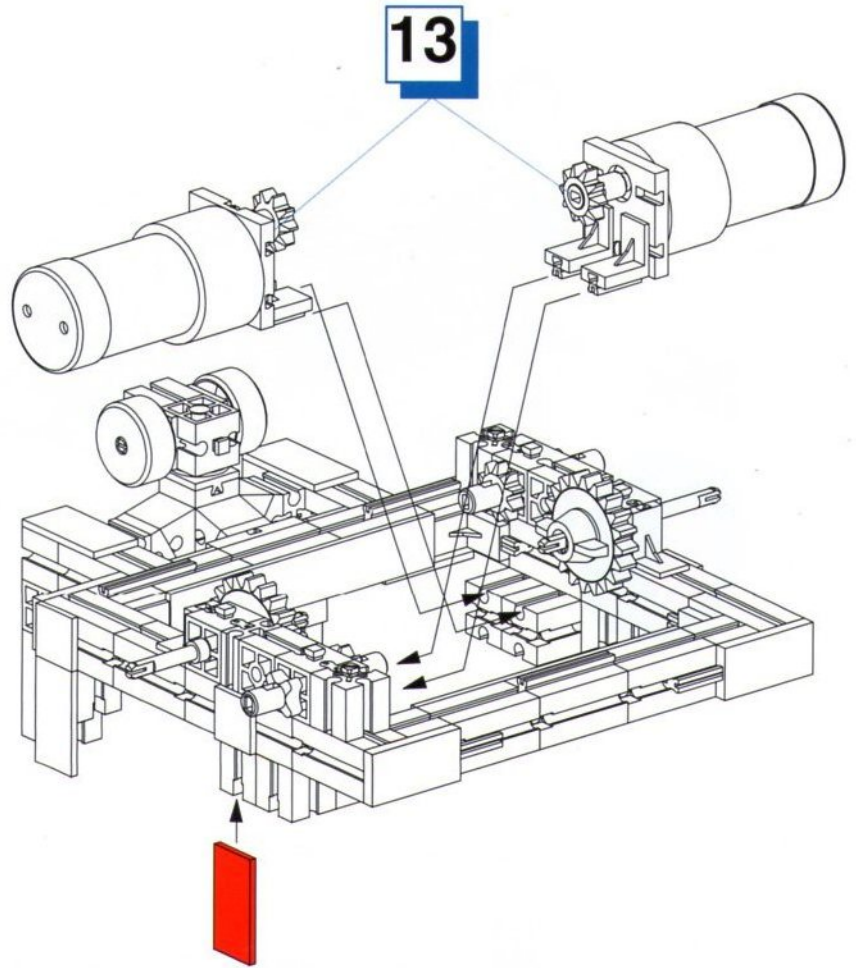
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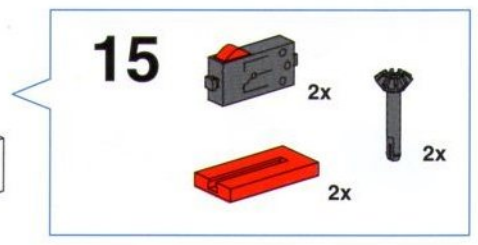
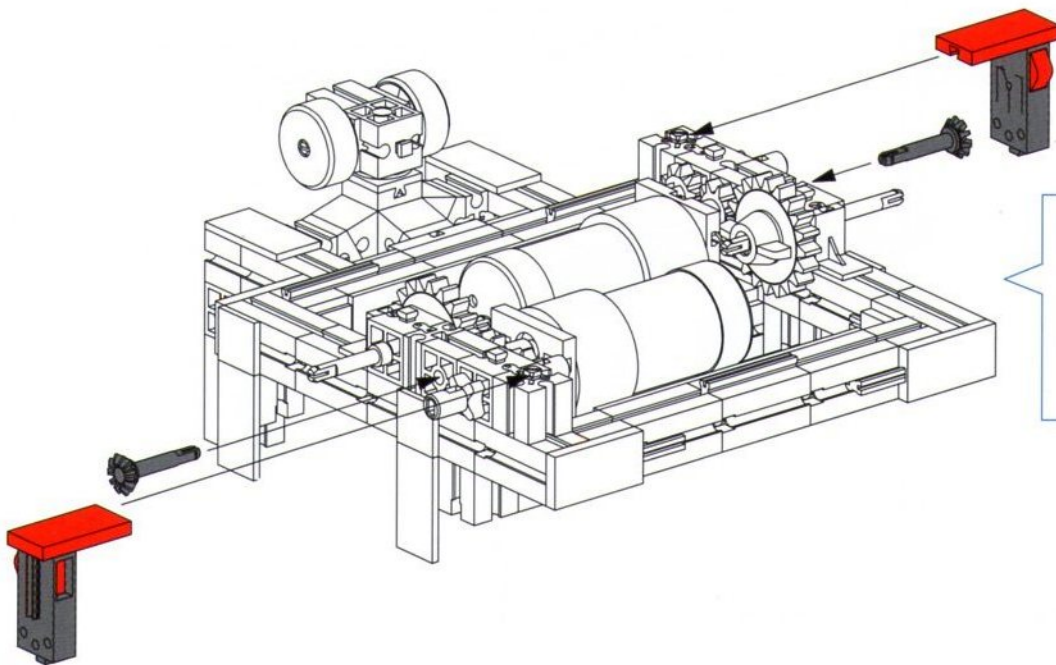
14



1x



13



15



2x



2x



2x

**16**

2x



2x



3x



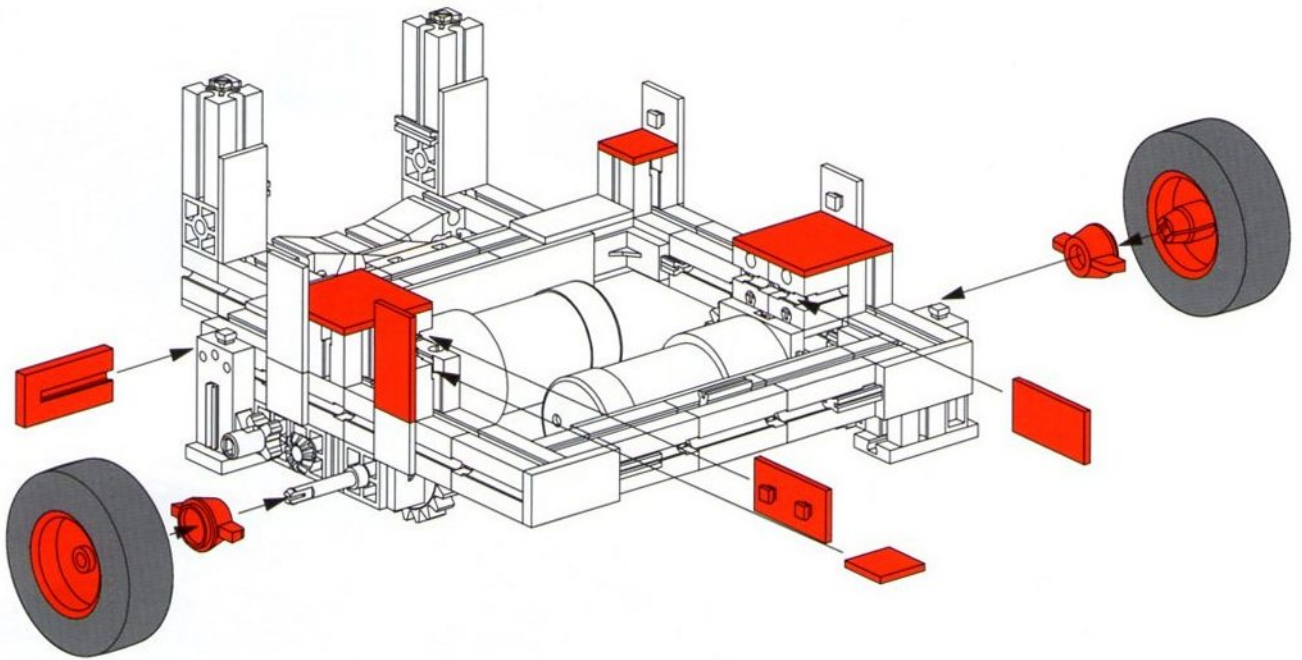
2x



2x



2x



- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
- L'interface intelligente (réf. 30402) n'est pas contenue dans le kit
- Intelligent Interface (art.-nr. 30402) niet in de bouwdoos opgenomen
- El Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (N° de prod. 30402) não contido no sistema de construção por blocos

**17**

1x



1x



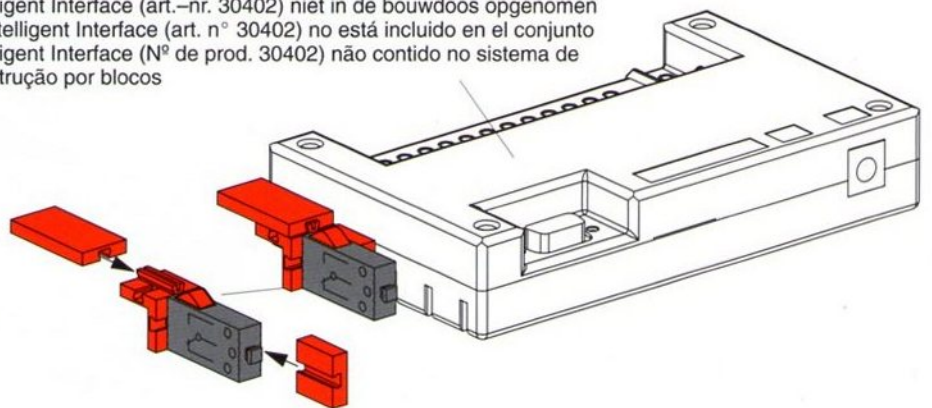
1x



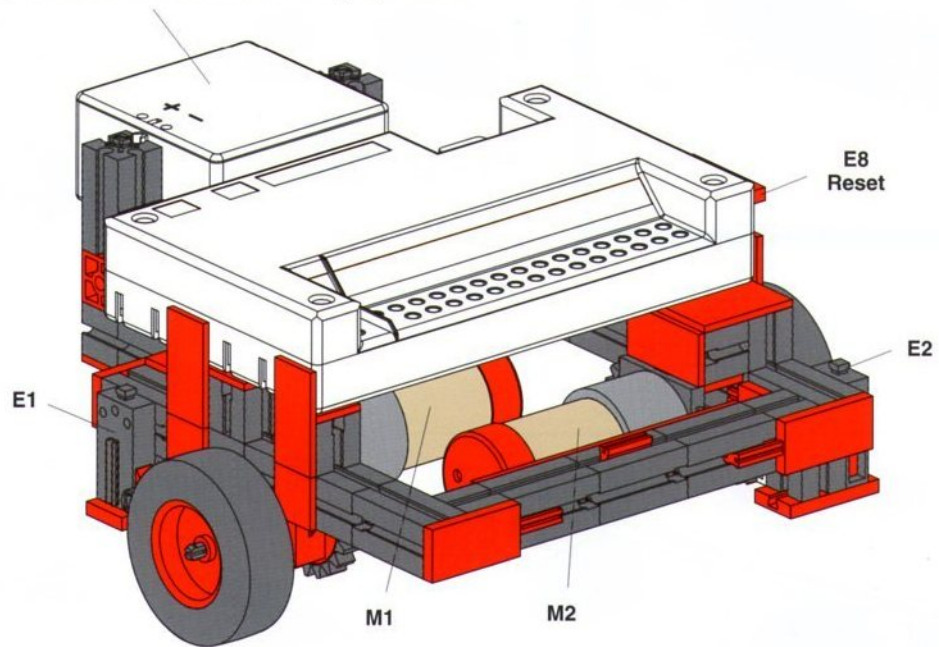
1x



1x

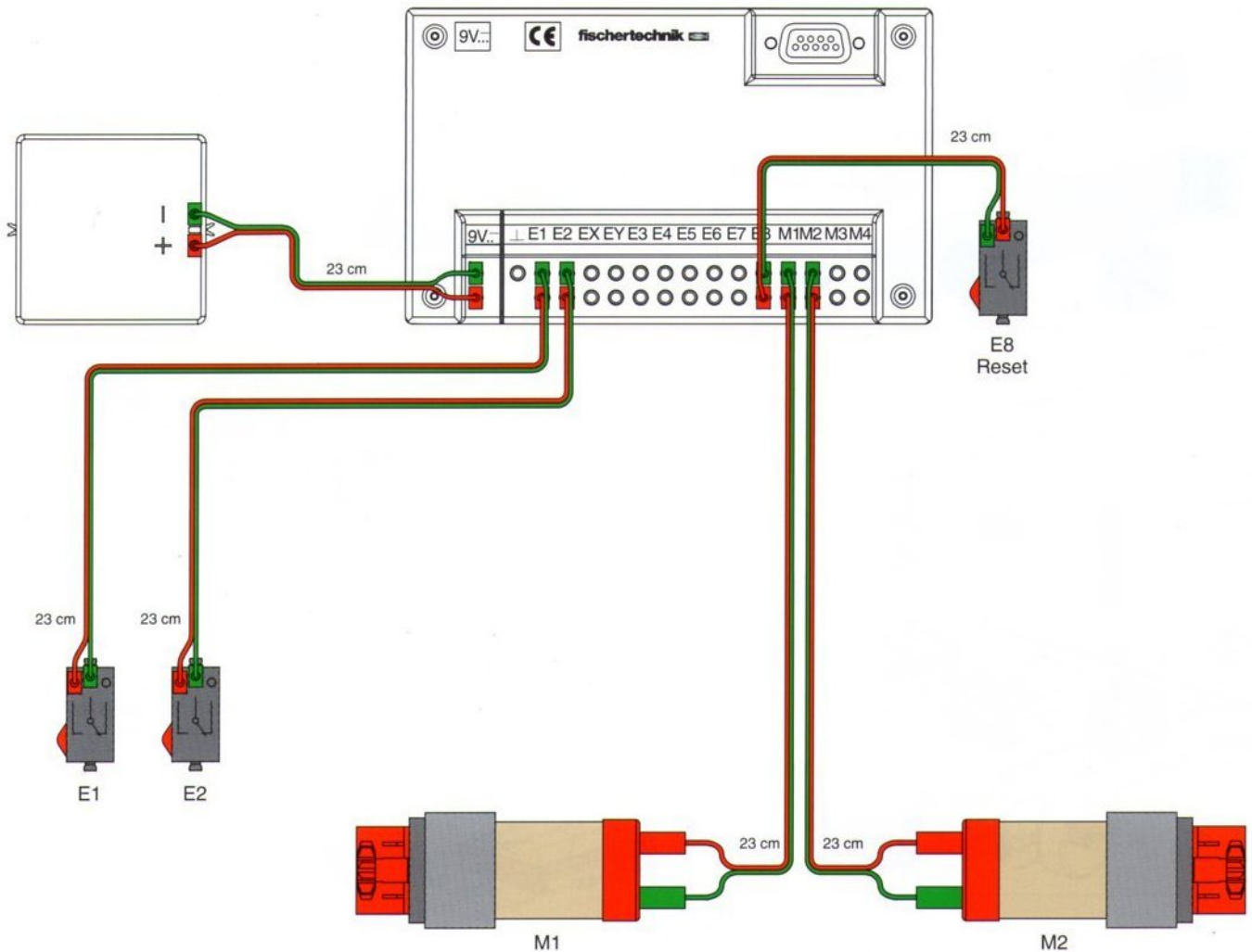


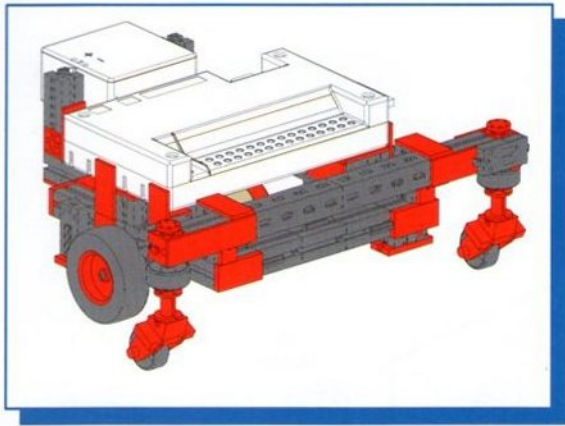
- Accu Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Accu Set (Art. No. 34969) not included in the modular kit
- Accu Set (réf. 34969) n'est pas contenue dans le kit
- Accu Set (art.-nr. 34969) niet in de bouwdoos opgenomen
- Accu Set (art. n° 34969) no está incluido en el conjunto
- Accu Set (Nº de prod. 34969) não contido no sistema de construção por blocos



**Elektrischer Schaltplan**  
**Circuit diagram**  
**Plan électrique**

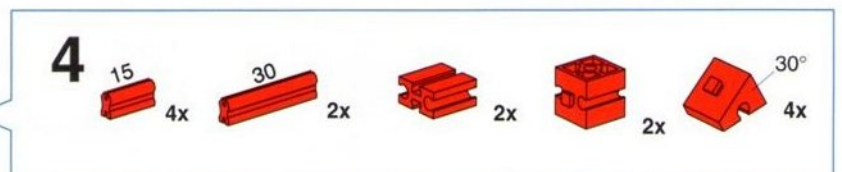
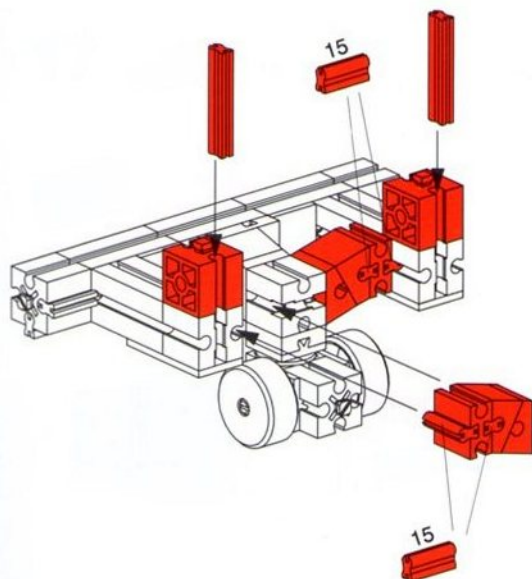
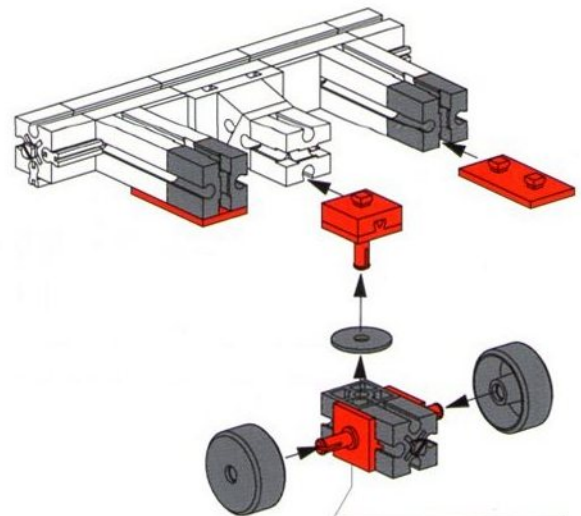
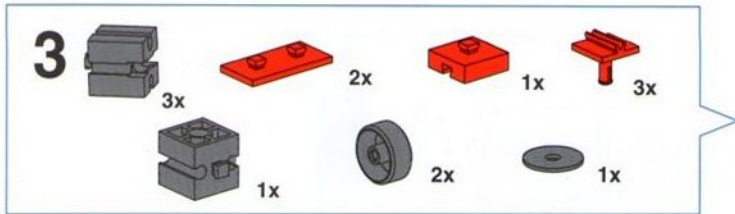
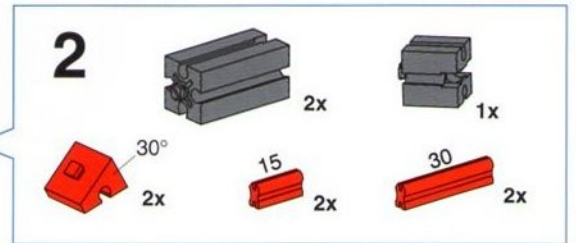
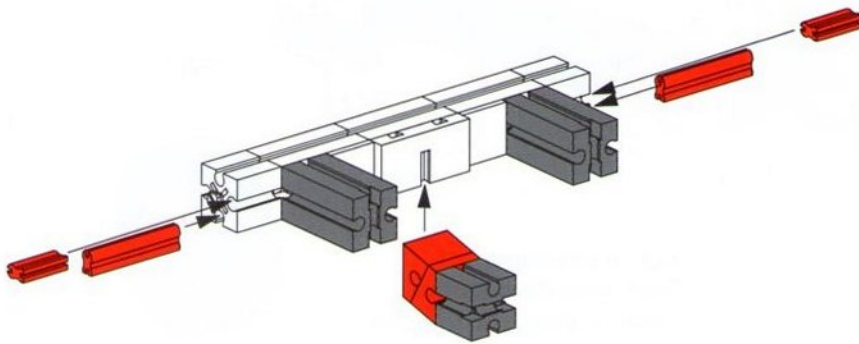
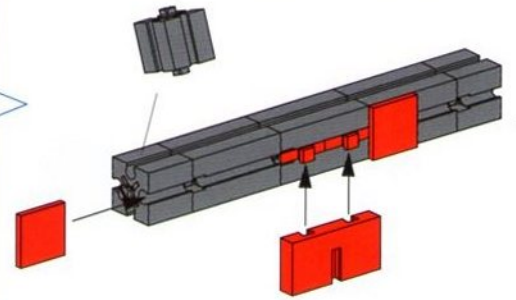
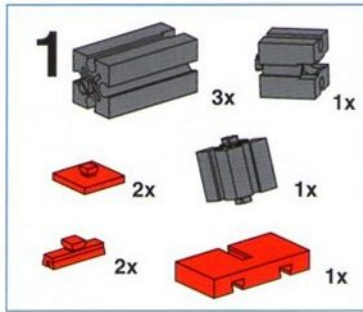
**Schakelschema**  
**Diagrama de circuitos**  
**Plano elétrico de ligação**






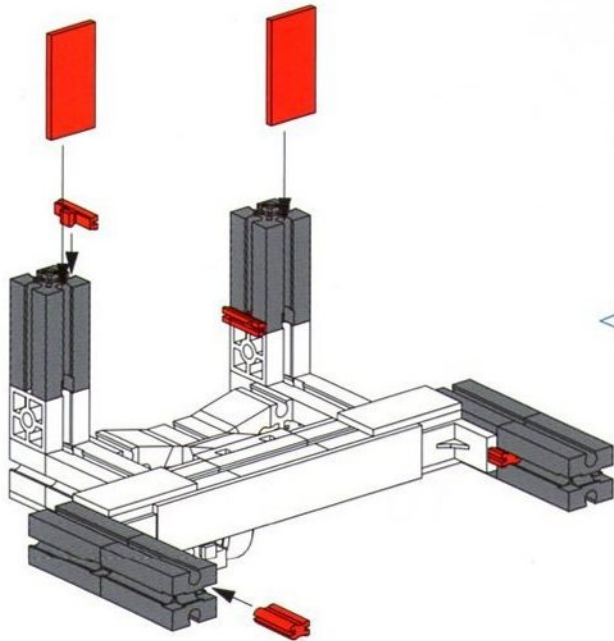
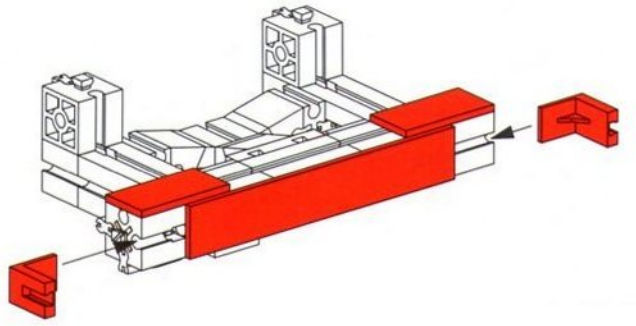






Roboter mit Kantenerkennung  
 Robot with Edge Detection  
 Robot avec détection des bords





Robots met kantherkenning  
 Robot con detección de bordes  
 Robô com reconhecimento de bordas






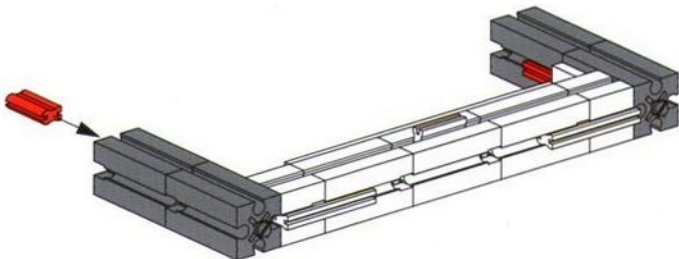
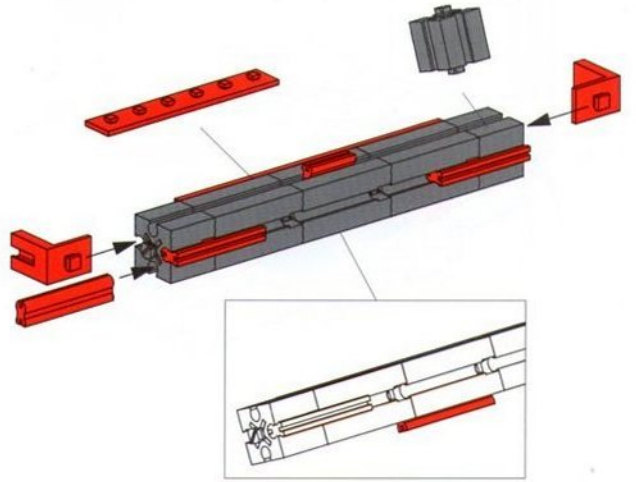
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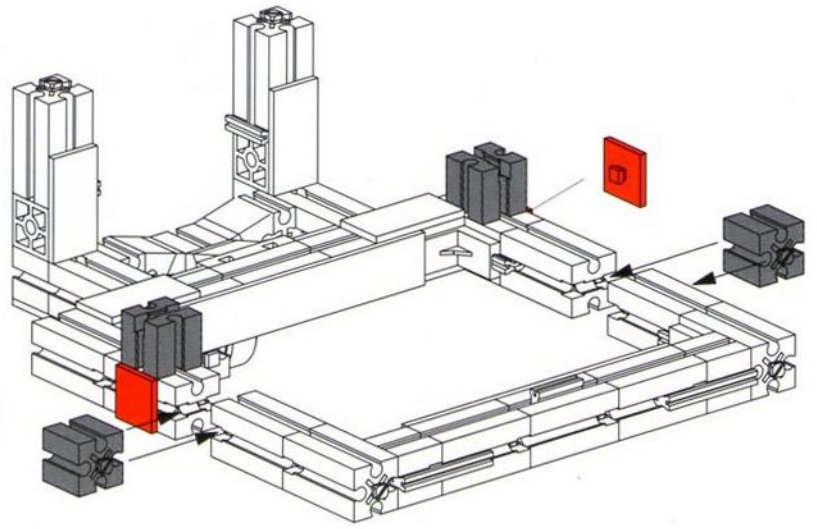
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**7**  3x  1x  1x  2x

 1x  3x  1x

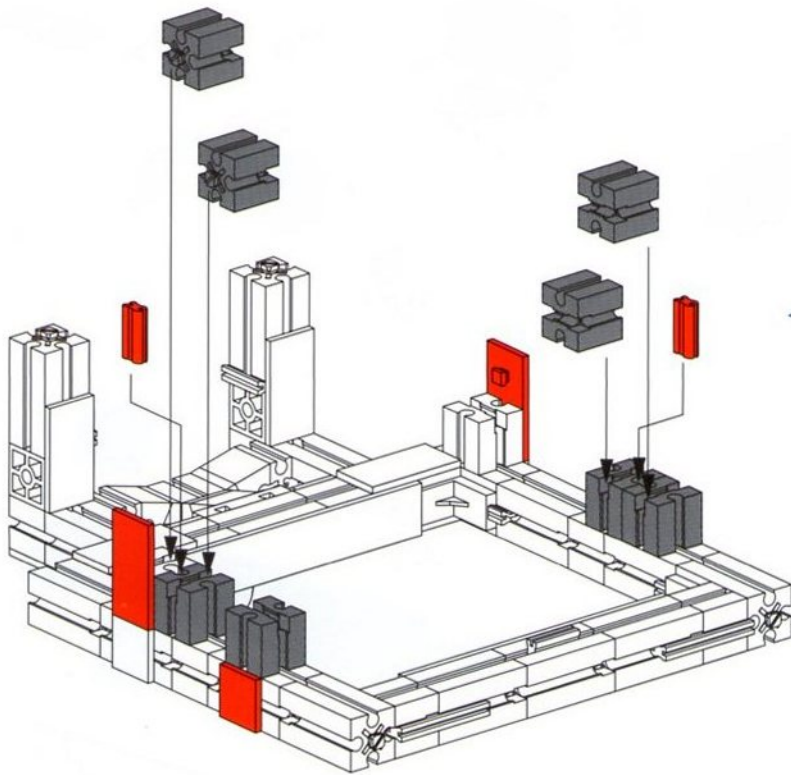


**8**  4x  2x



**9**

- 2x [Grey 2x3 Technic Brick]
- 2x [Grey 2x3 Technic Brick with Grooves]
- 2x [Red 1x2 Technic Plate]

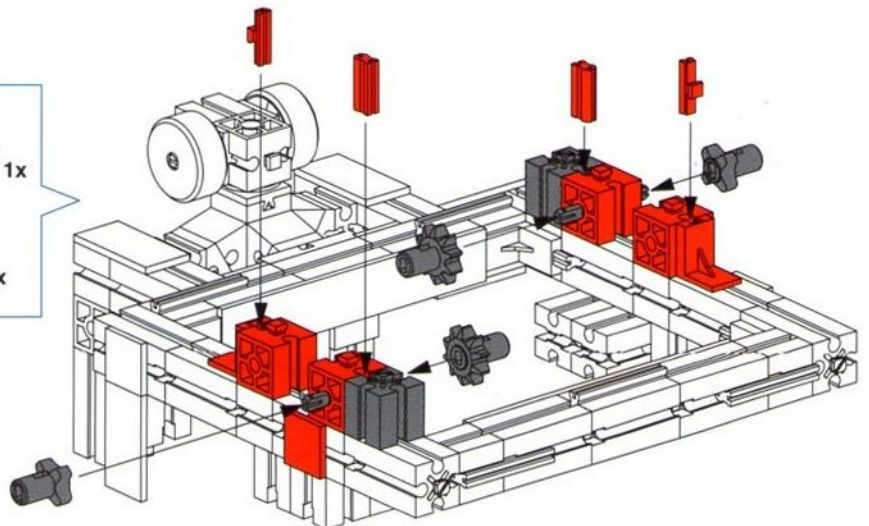
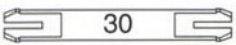


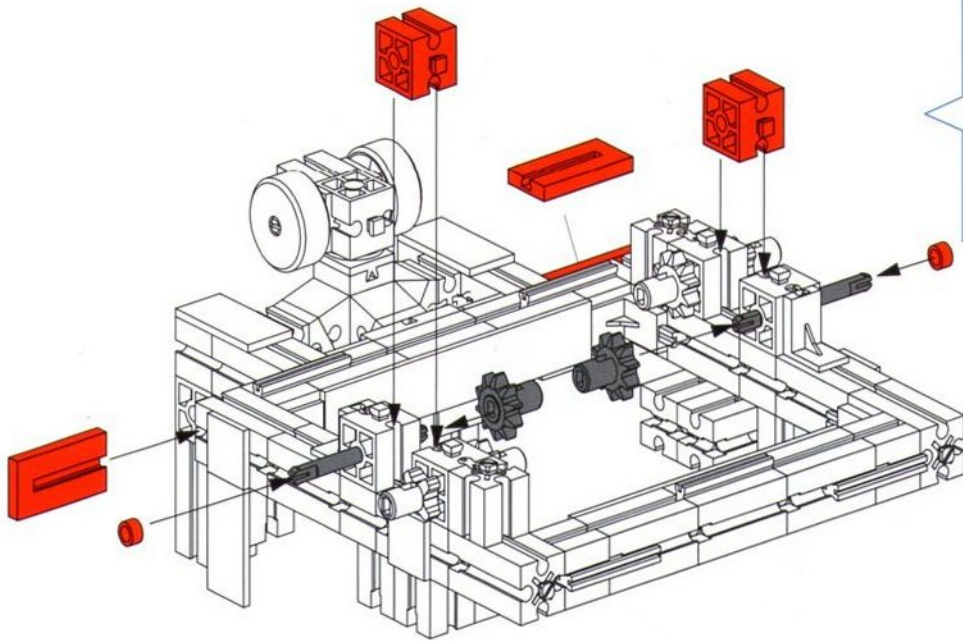
**10**

- 8x [Grey 2x3 Technic Brick]
- 2x [Red 1x5 Technic Plate]
- 2x [Red 1x3 Technic Plate]
- 1x [Red 1x2 Technic Plate]

**11**

- 4x [Red 2x3 Technic Brick]
- 2x [Grey 2x3 Technic Brick with Grooves]
- 2x [Red 1x3 Technic Plate]
- 1x [Red 1x2 Technic Plate]
- 2x [Grey 30mm Technic Pin]
- 2x [Grey 1x2 Technic Pin]
- 2x [Grey 1x2 Technic Pin]
- 2x [Red 1x5 Technic Plate]
- 2x [Red 1x3 Technic Plate]

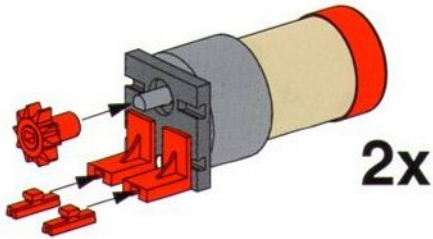




**12**

- Red 2x3 Technic Brick with Hole: 2x
- Red 1x3 Technic Beam: 2x
- Grey Technic Pin: 2x
- Grey Technic Pin with Friction Ridge: 2x
- Red Technic Pin: 2x

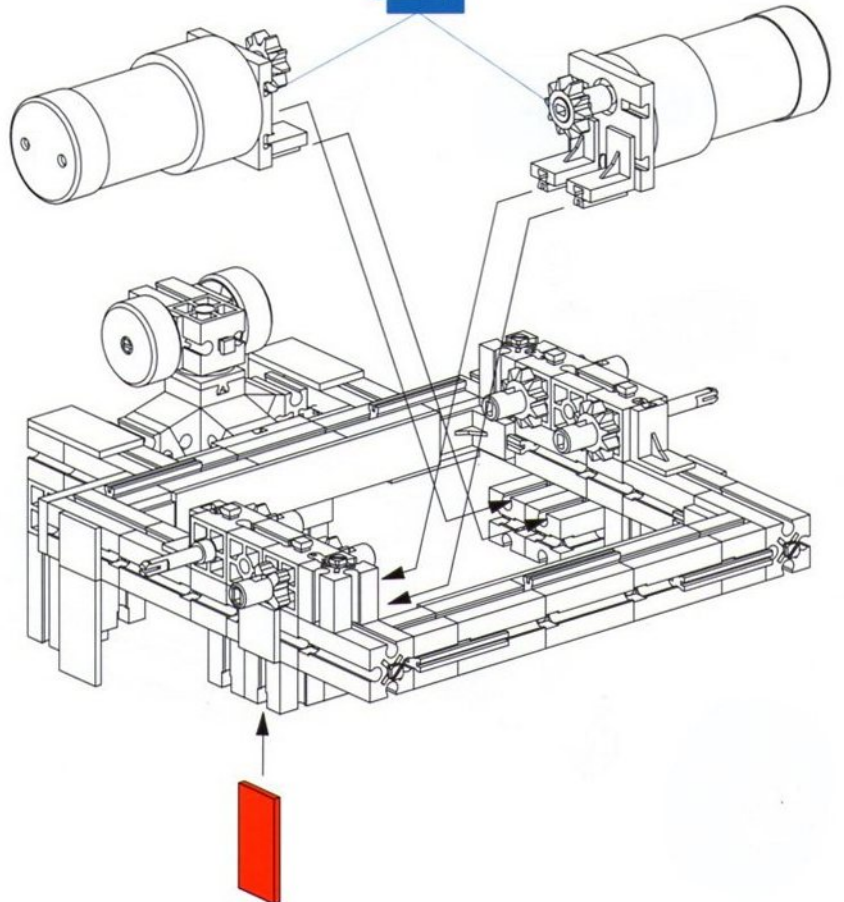
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**13**

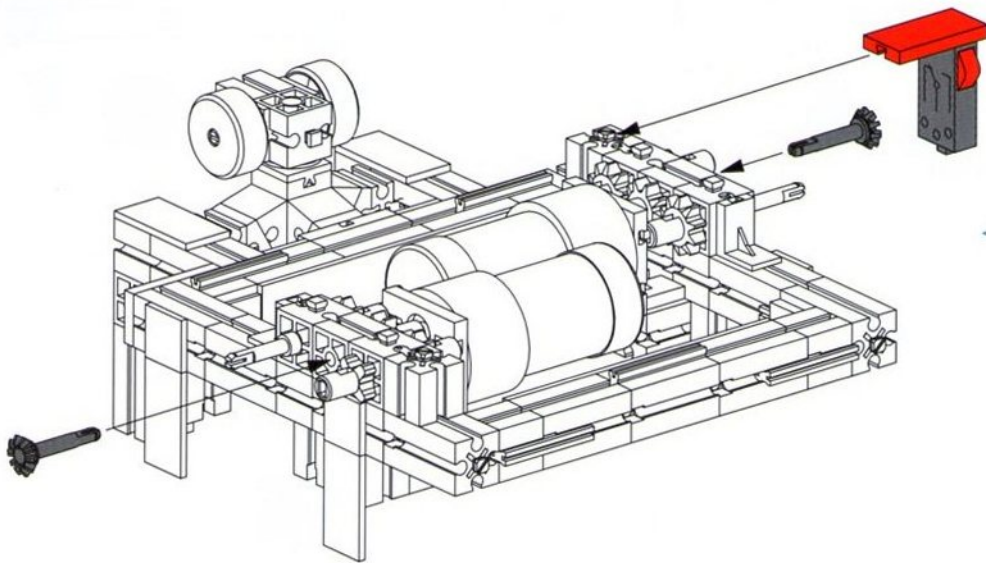
- Motor with Gear: 2x
- Red 1x2 Technic Beam: 4x
- Red L-shaped Technic Bracket: 4x
- Red Technic Pin with Friction Ridge: 2x

**13**



**14**

- Red 1x3 Technic Beam: 1x

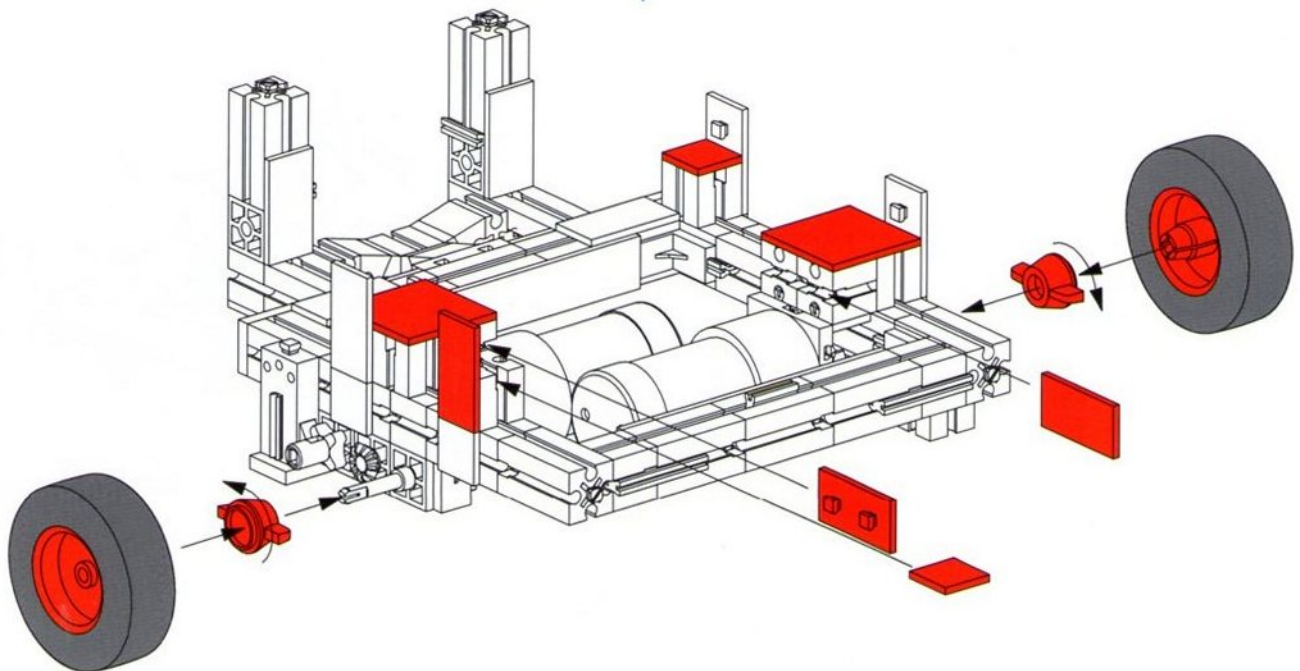


**15**

- 1x Grey Technic axle with gear
- 2x Grey Technic axle
- 1x Red 1x3 Technic brick

**16**

- 2x Grey Technic wheel
- 2x Red Technic axle with bush
- 3x Red 1x3 Technic brick
- 2x Red 1x2 Technic brick
- 2x Red 1x4 Technic brick

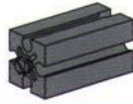




17



2x



2x



2x



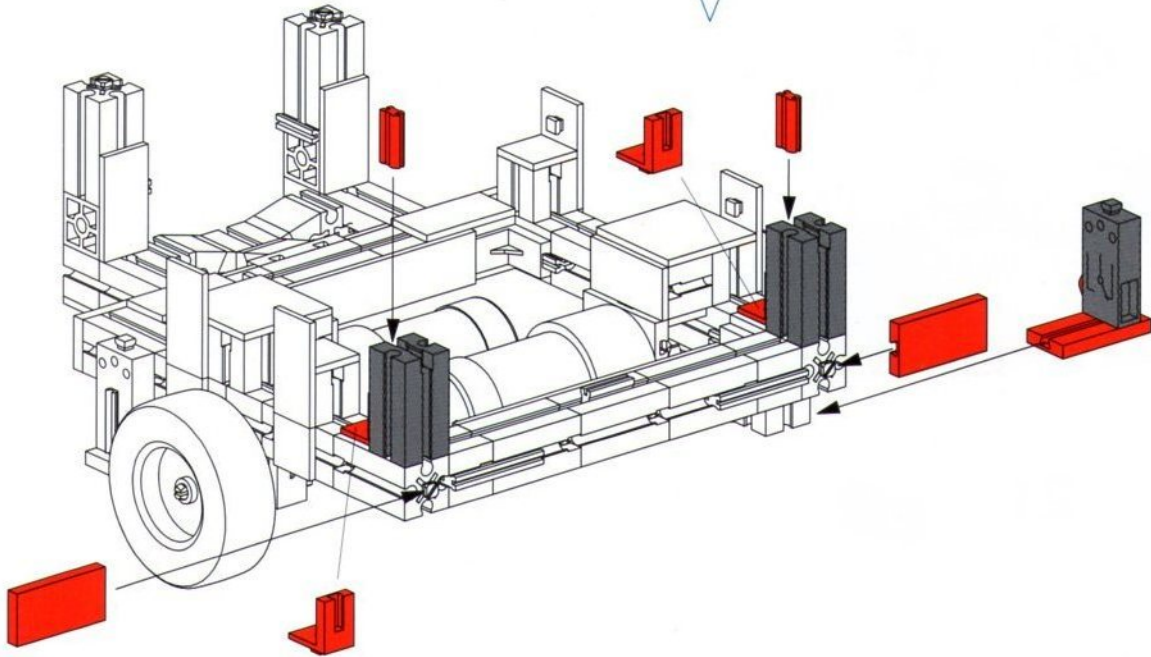
2x



1x



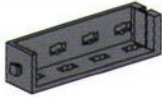
3x



18



2x



2x



3x



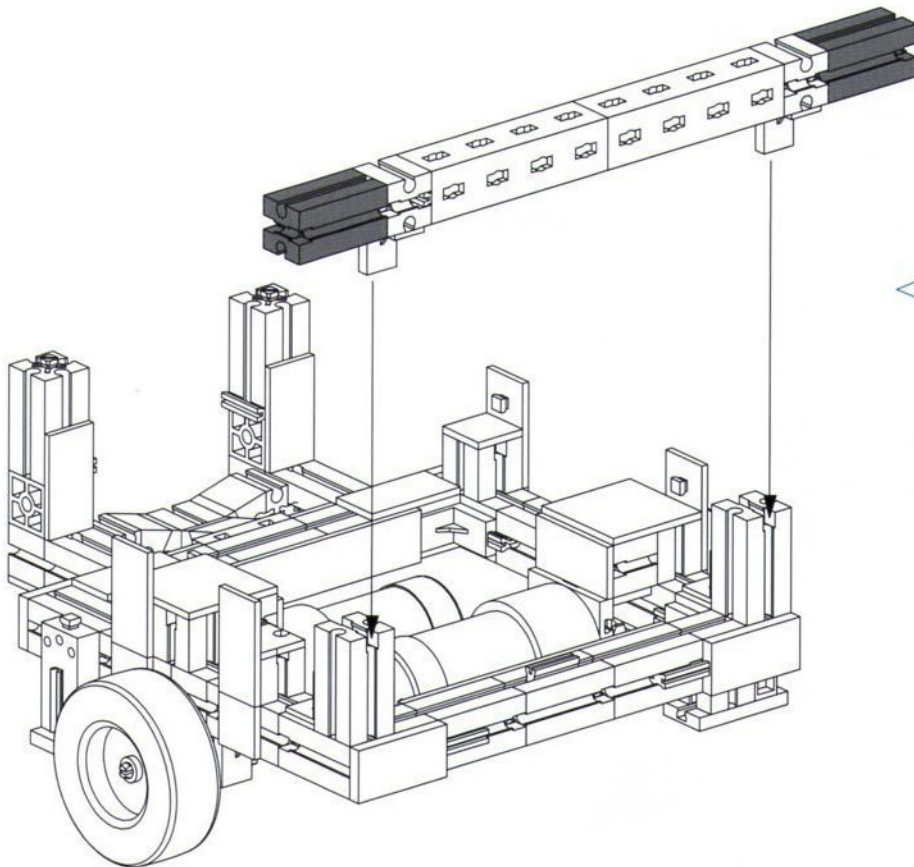
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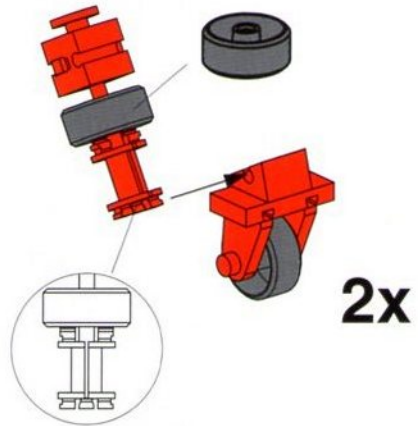
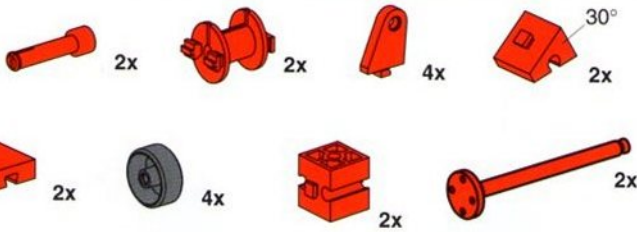
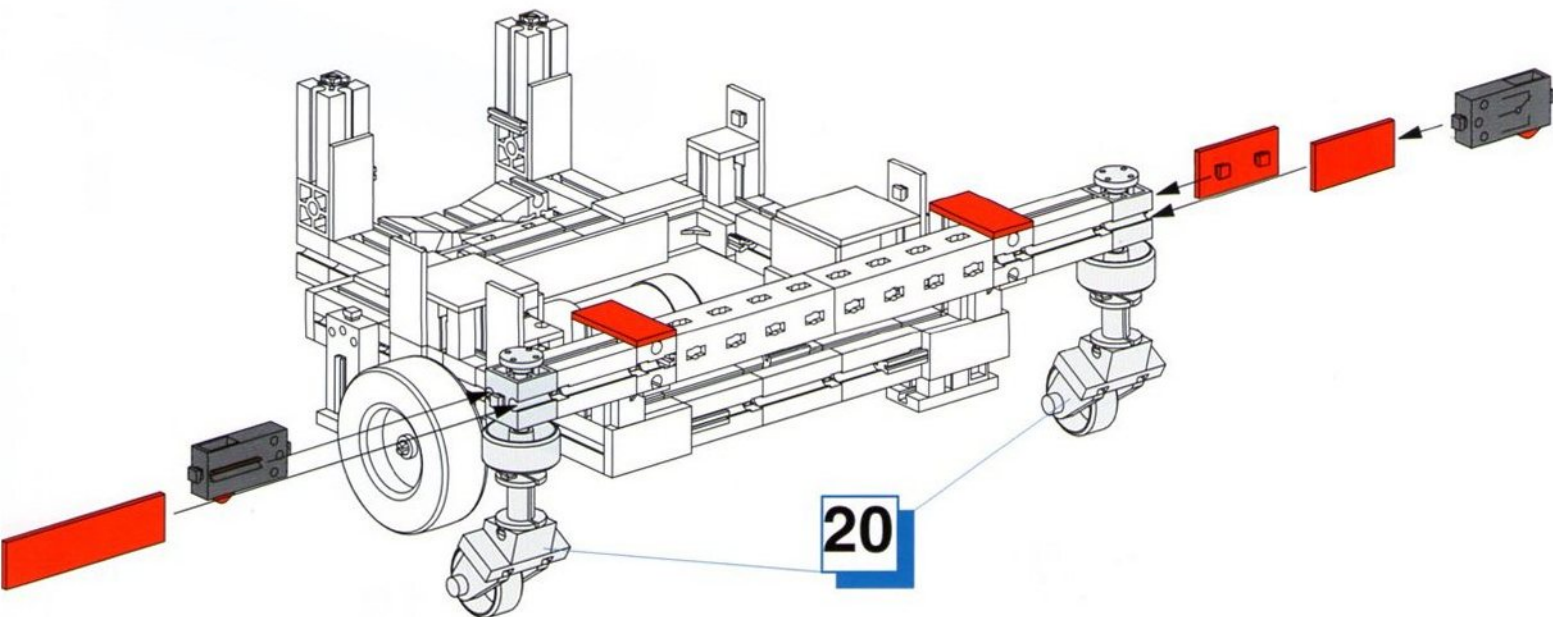


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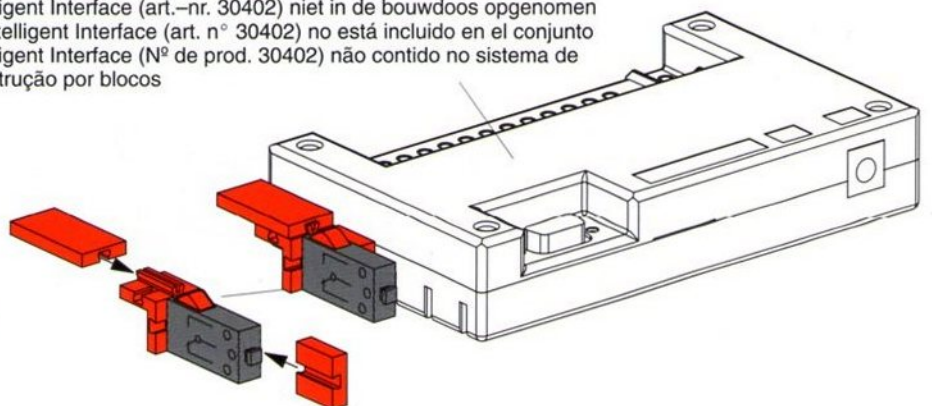
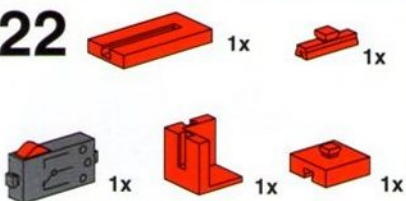


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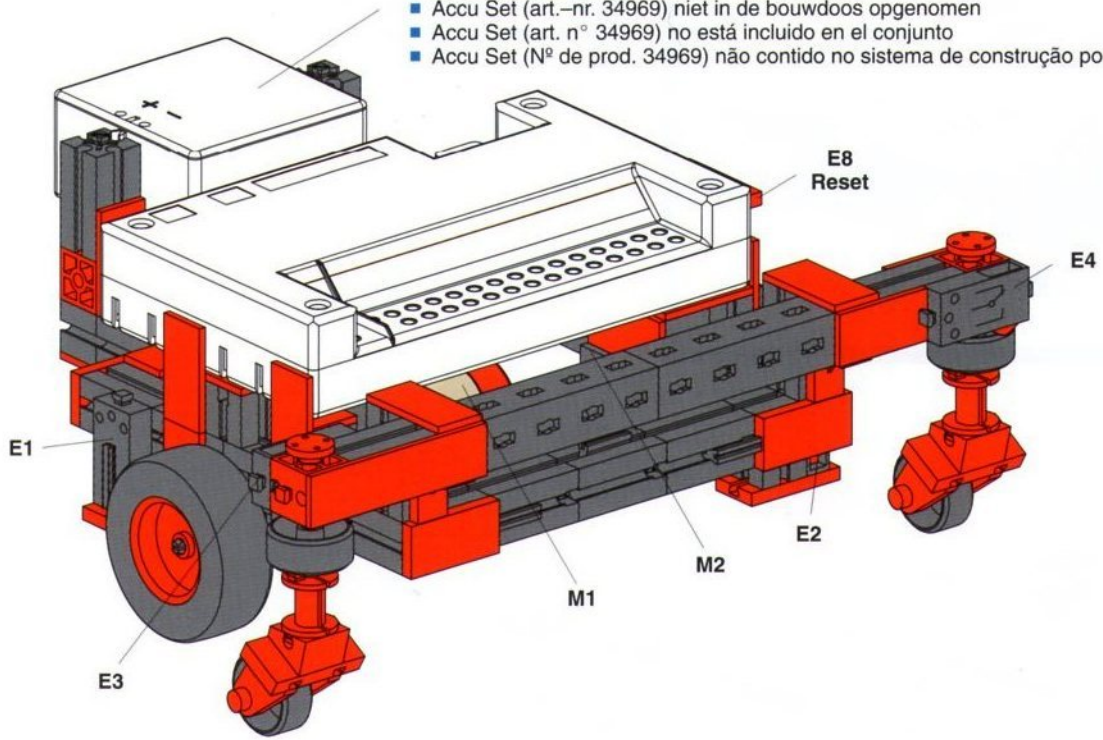


**20****2x****21****20**

- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
- L'interface intelligente (réf. 30402) n'est pas contenue dans le kit
- Intelligent Interface (art.-nr. 30402) niet in de bouwdoos opgenomen
- El Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (Nº de prod. 30402) não contido no sistema de construção por blocos

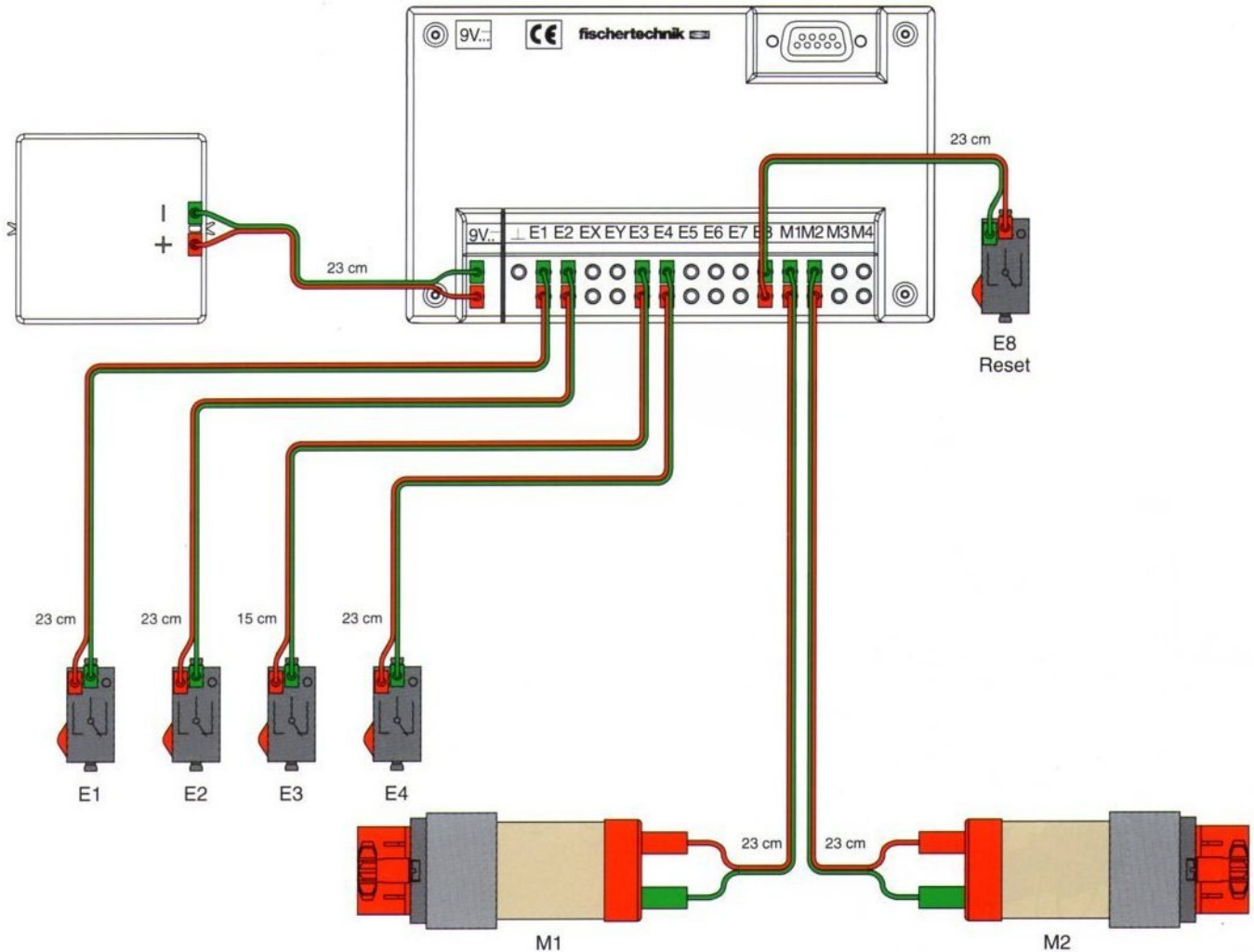
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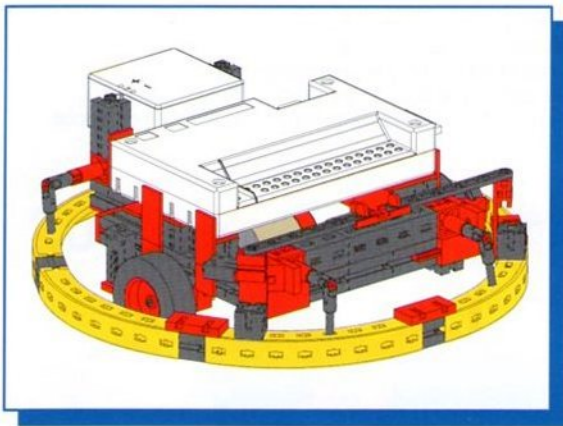
- Accu Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Accu Set (Art. No. 34969) not included in the modular kit
- Accu Set (réf. 34969) n'est pas contenue dans le kit
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Elektrischer Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação



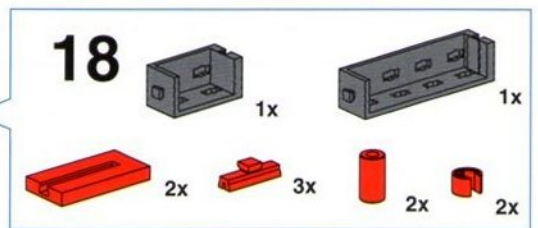
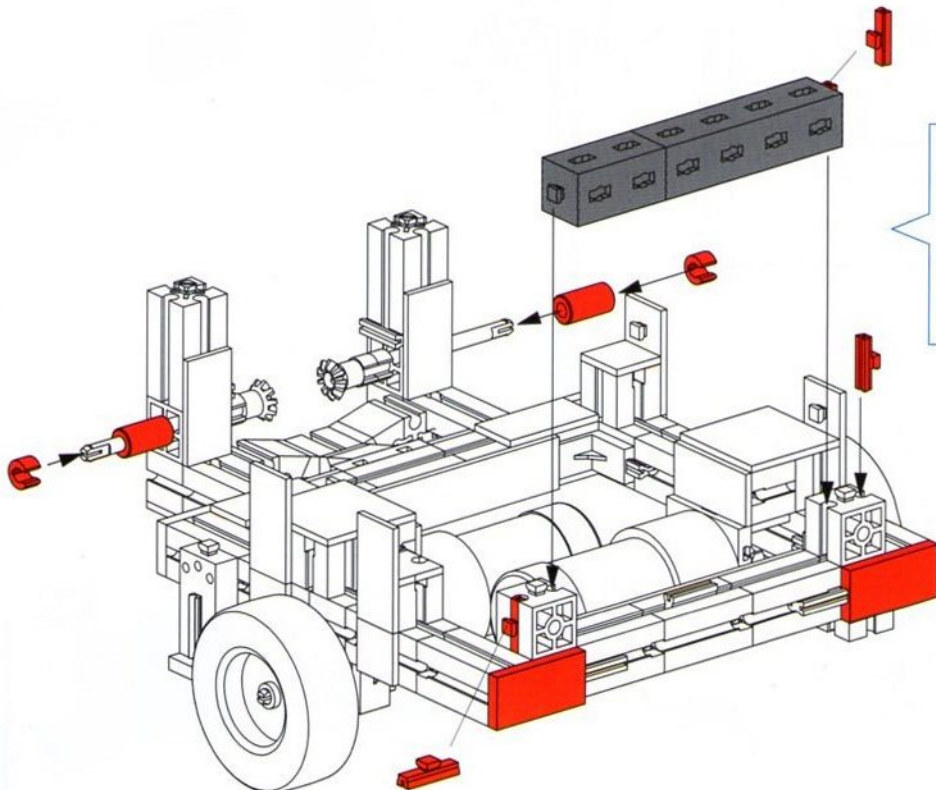
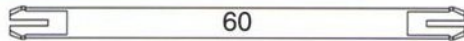
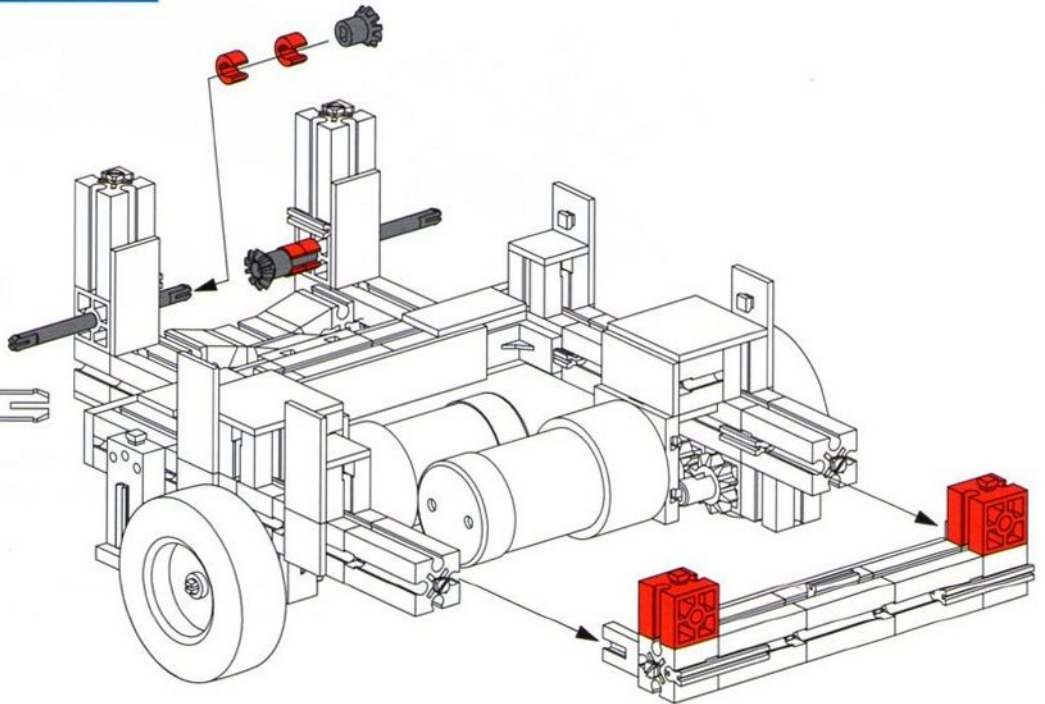
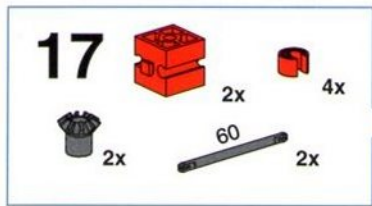


Roboter mit Hinderniserkennung  
 Robot with Obstacle Detection  
 Robot avec détection des obstacles

Robots met hindernisherkenning  
 Robot con detección de obstáculos  
 Robô com reconhecimento de obstáculos

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19



2x



2x



2x



2x



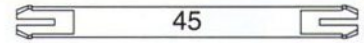
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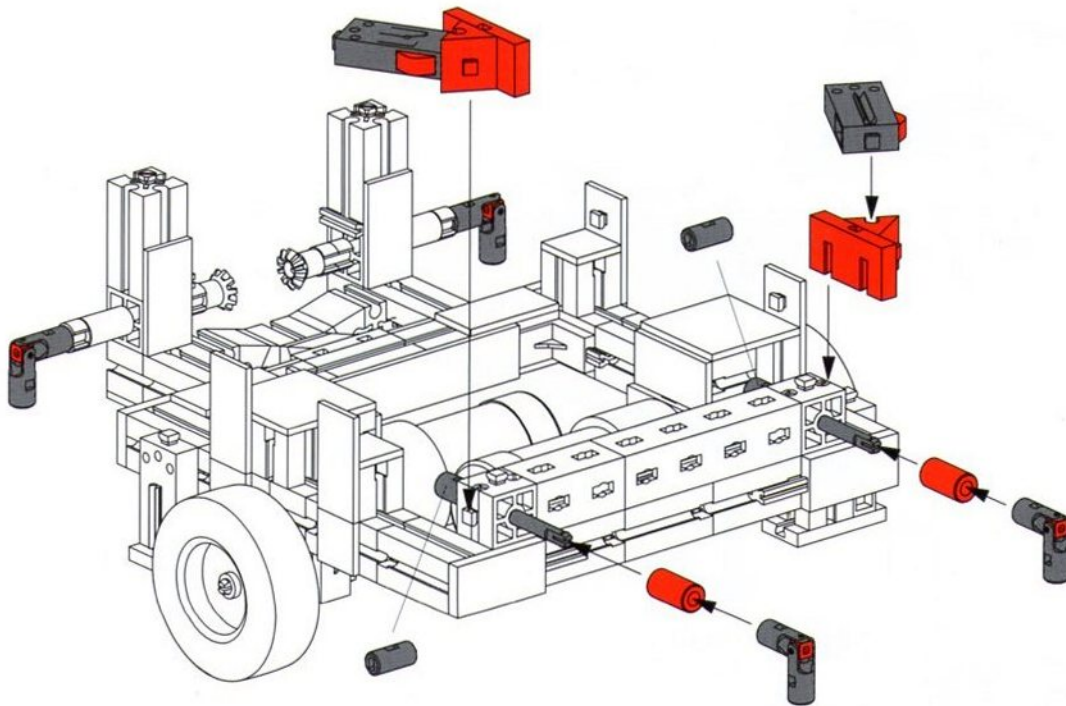
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2x



45



20



1x



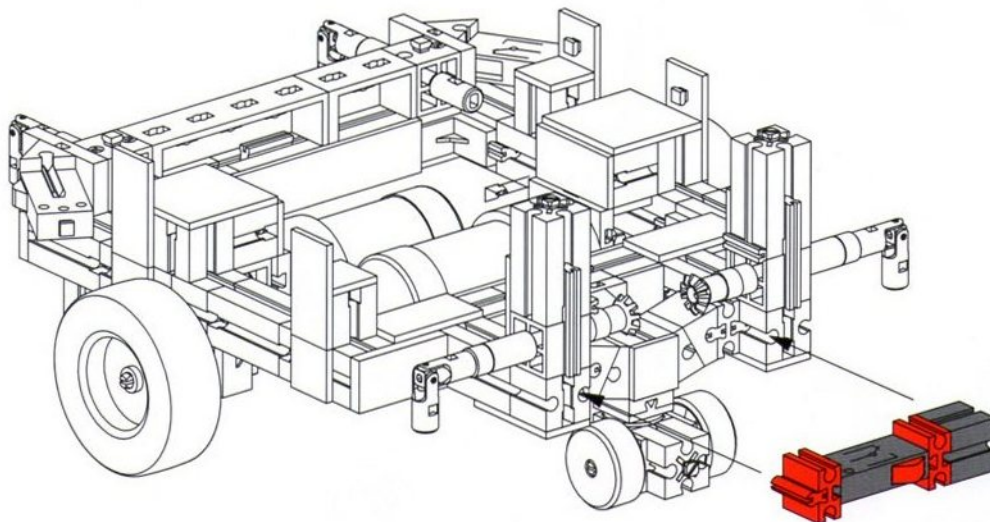
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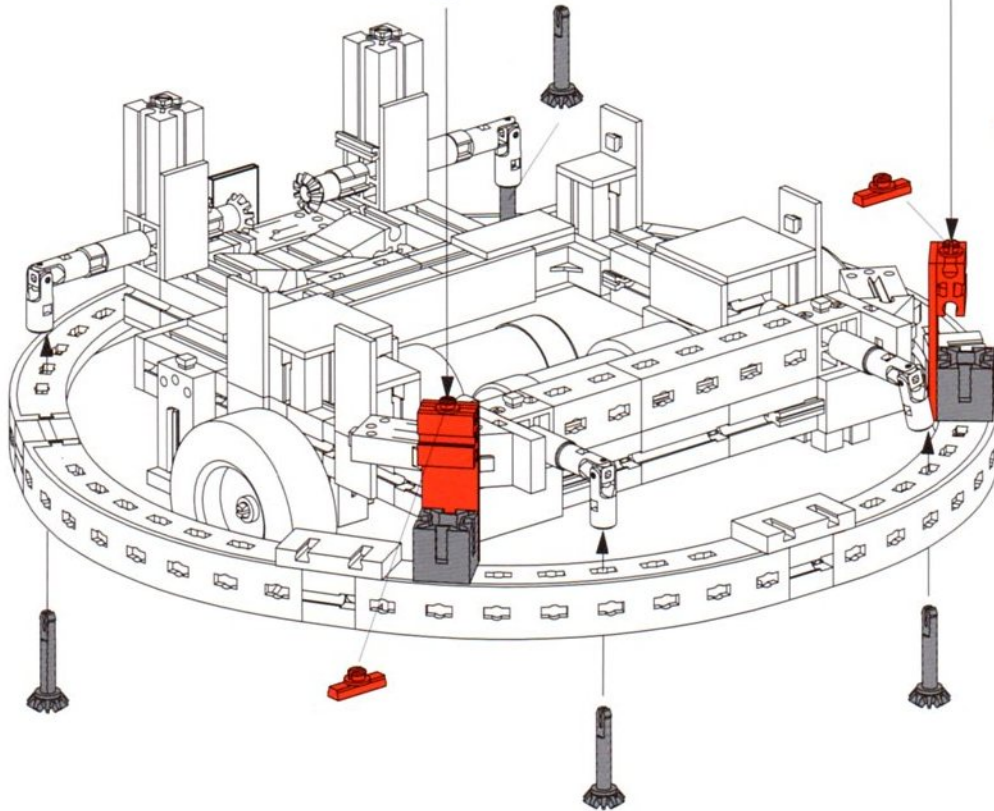
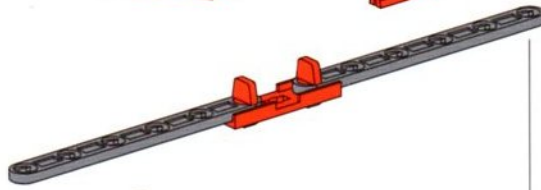
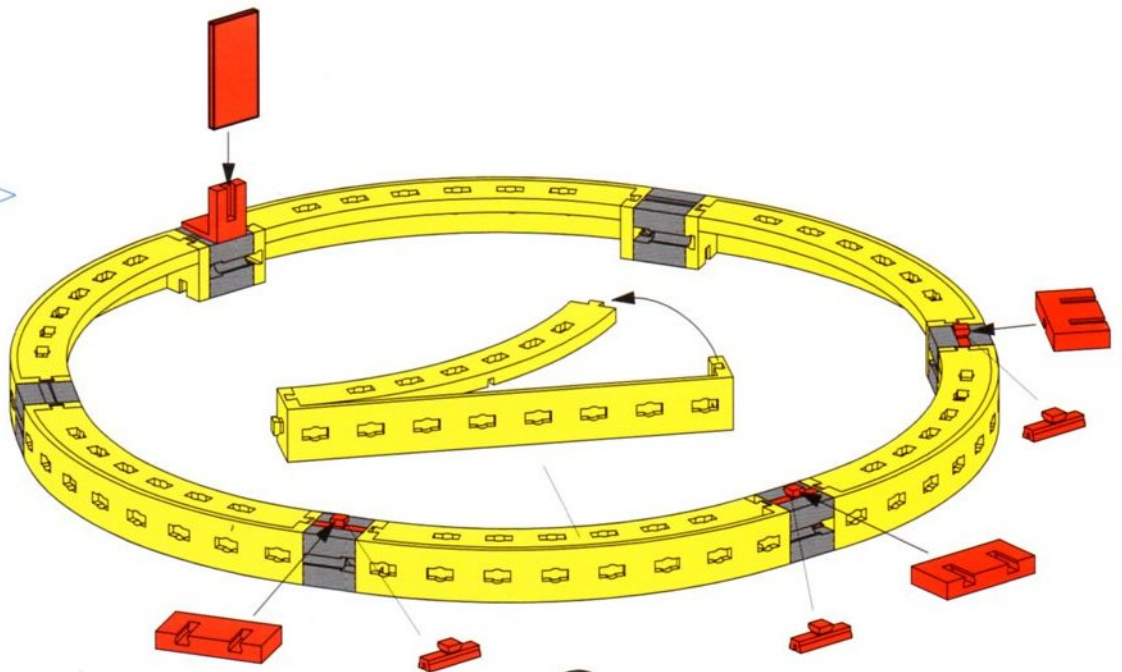
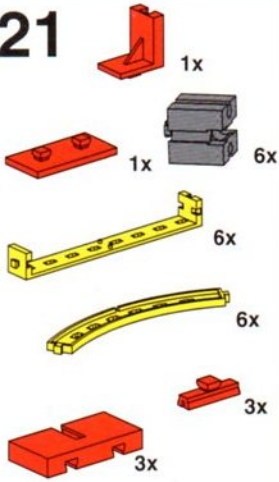
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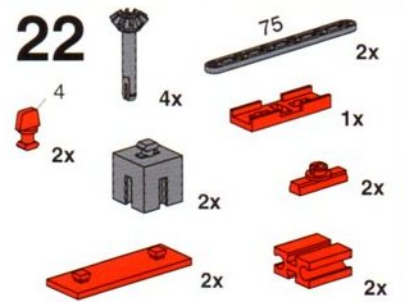
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# 21

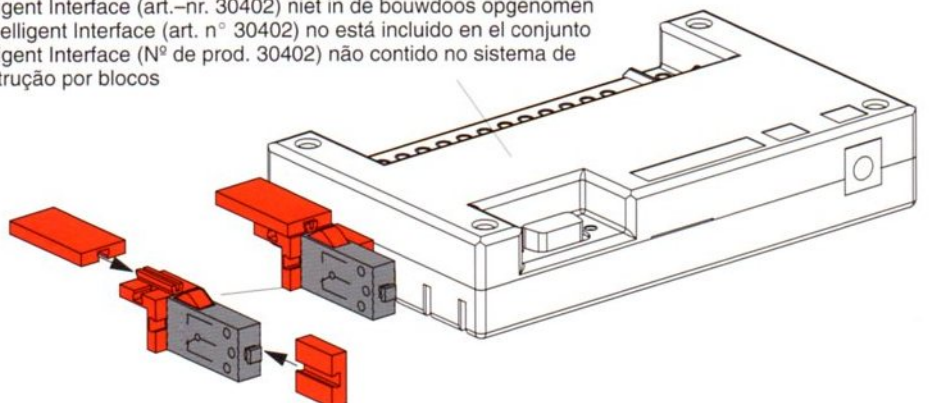
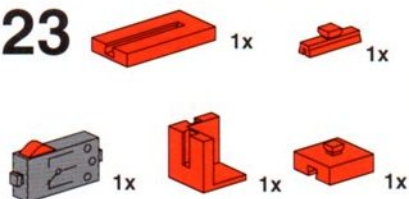


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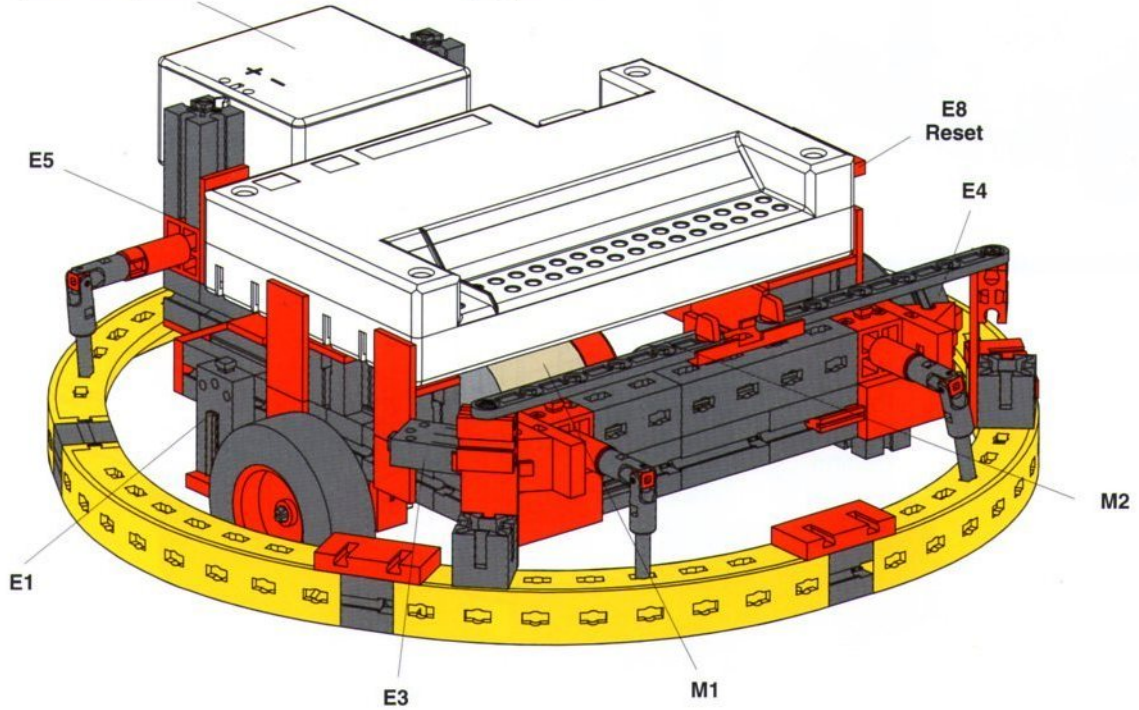


- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
- L'interface intelligente (réf. 30402) n'est pas contenue dans le kit
- Intelligent Interface (art.-nr. 30402) niet in de bouwdoos opgenomen
- El Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (Nº de prod. 30402) não contido no sistema de construção por blocos

# 23

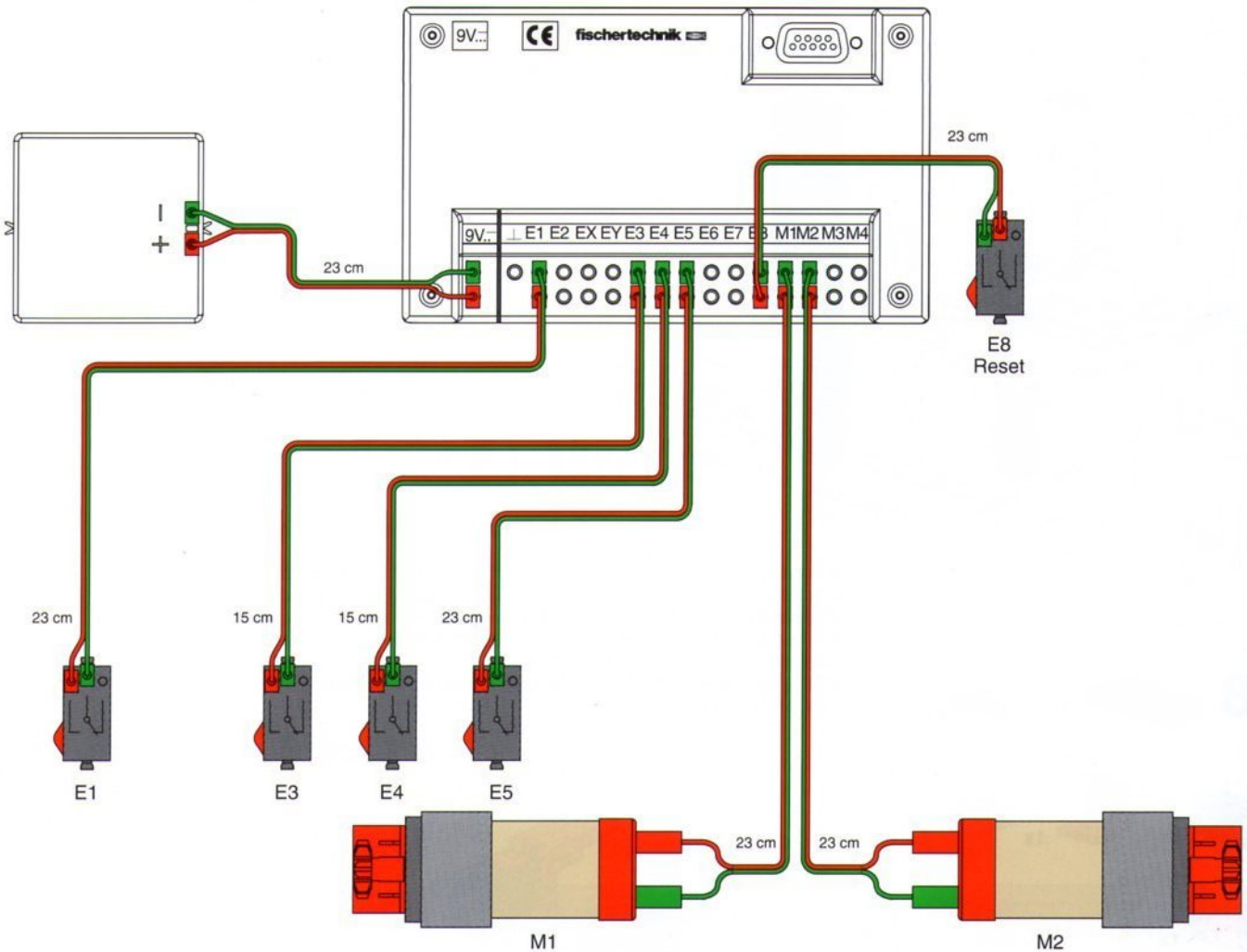


- Accu Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Accu Set (Art. No. 34969) not included in the modular kit
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- Accu Set (art. n° 34969) no está incluido en el conjunto
- Accu Set (Nº de prod. 34969) não contido no sistema de construção por blocos



Elektrischer Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação





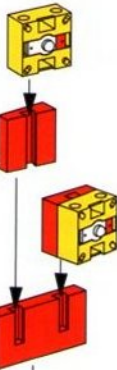
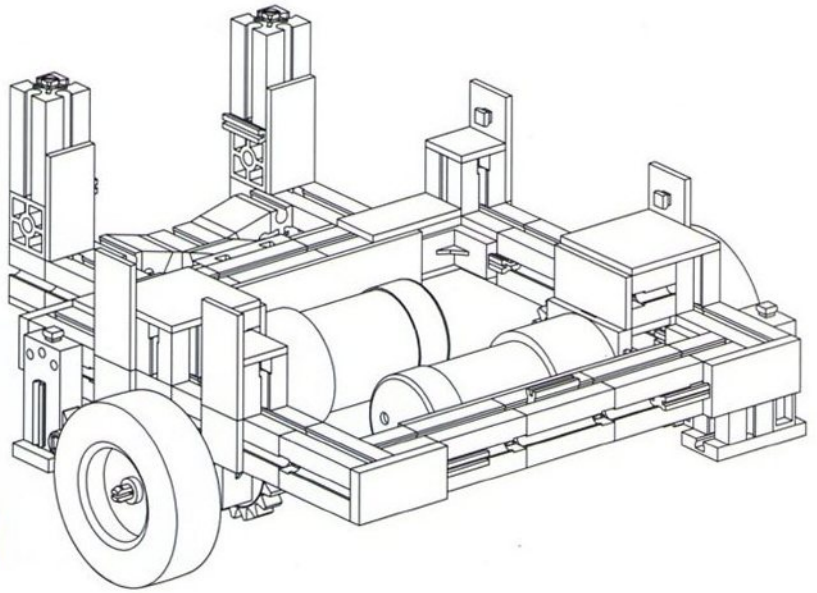
Lichtsucher  
Light Finder  
Chercheur de lumière

Lichtzoeker  
Detector de luz  
Identificador de luz

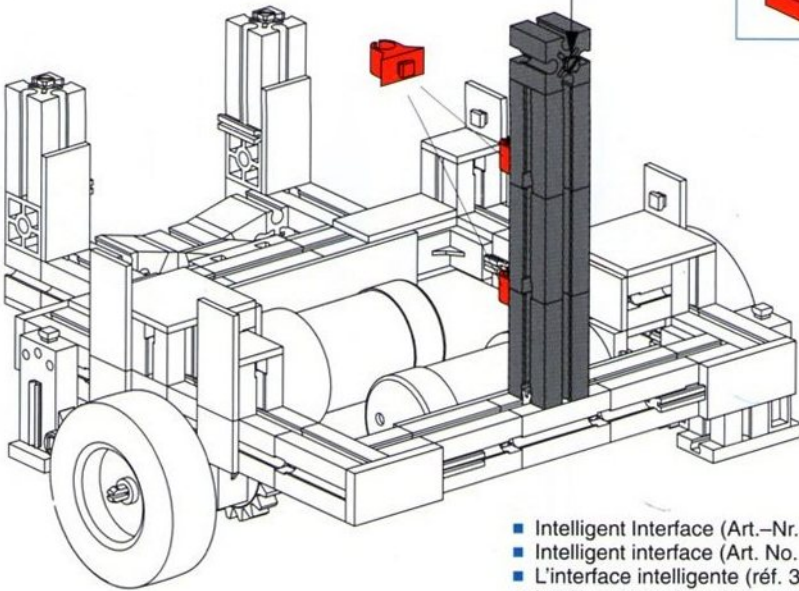
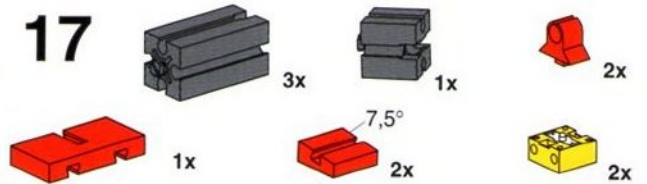
1-16

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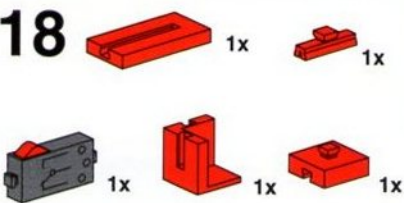
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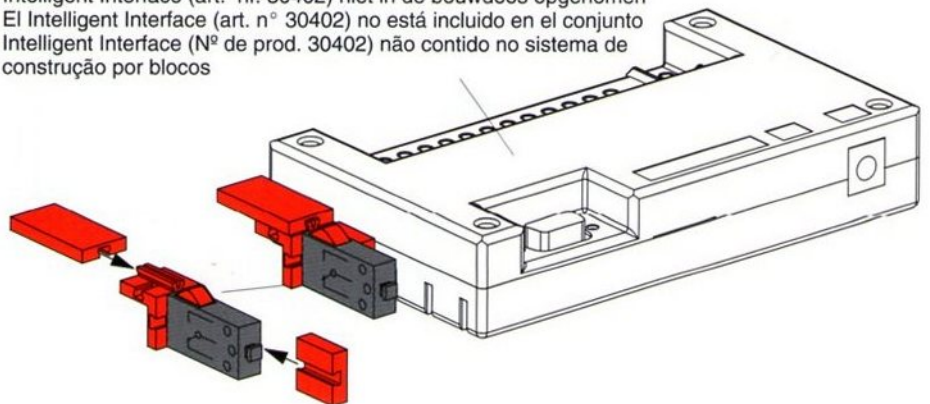
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18

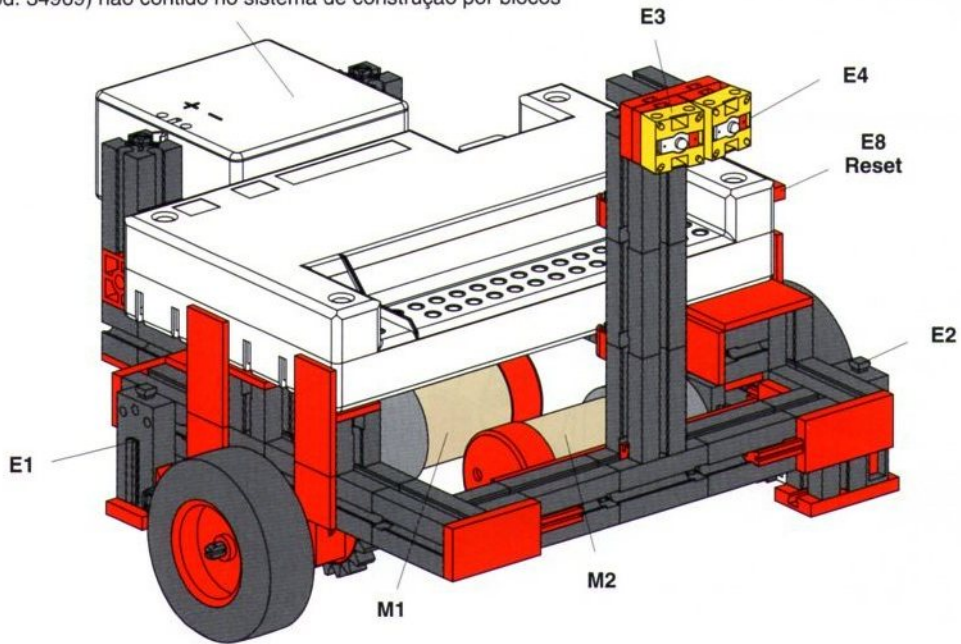


- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
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- El Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (Nº de prod. 30402) não contido no sistema de construção por blocos



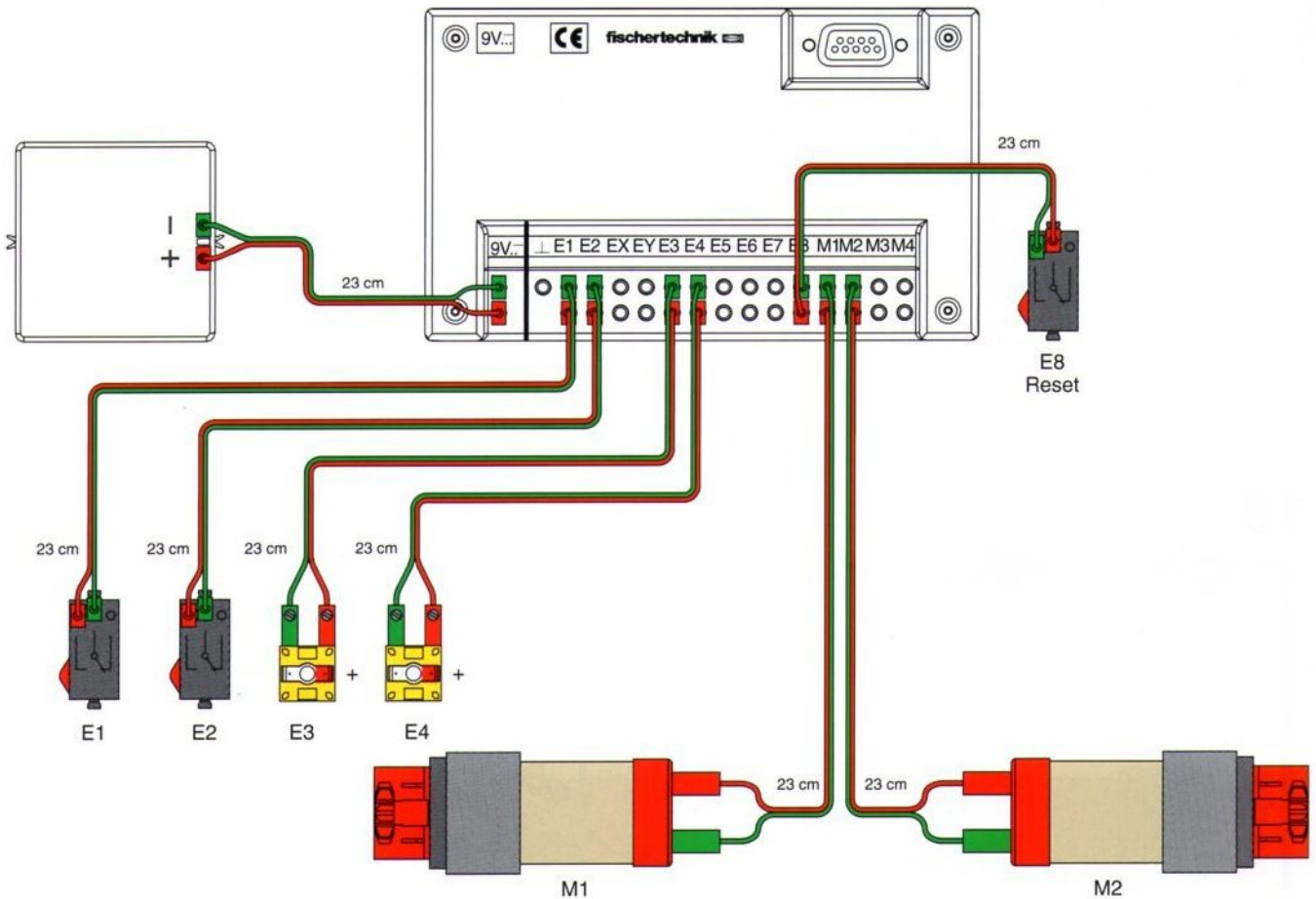


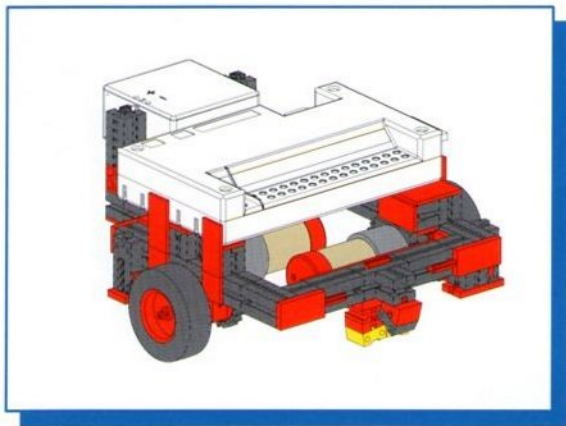
- Accu Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Accu Set (Art. No. 34969) not included in the modular kit
- Accu Set (réf. 34969) n'est pas contenue dans le kit
- Accu Set (art.-nr. 34969) niet in de bouwoos opgenomen
- Accu Set (art. n° 34969) no está incluido en el conjunto
- Accu Set (N° de prod. 34969) não contido no sistema de construção por blocos



**Elektrischer Schaltplan**  
Circuit diagram  
Plan électrique

**Schakelschema**  
Diagrama de circuitos  
Plano elétrico de ligação



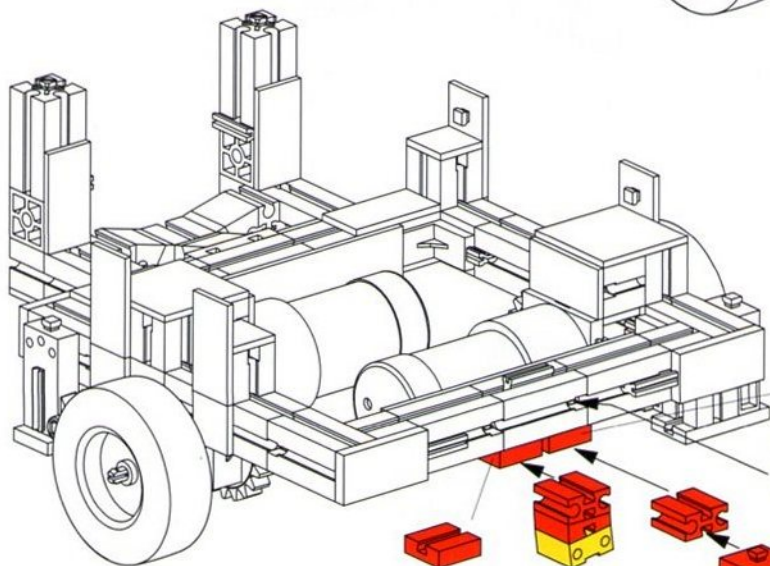
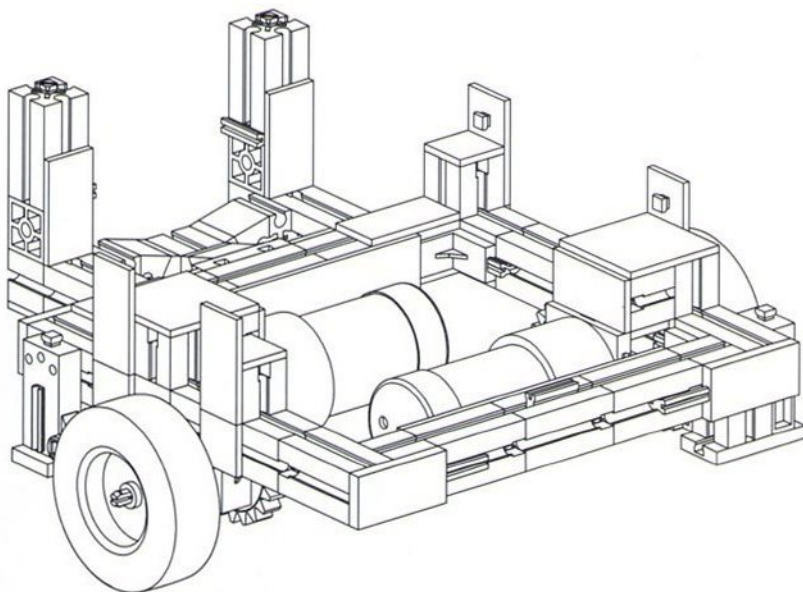


Spurensucher  
Tracker  
Chercheur de piste




Spoorzoeker  
Detector de pistas  
Rastreador



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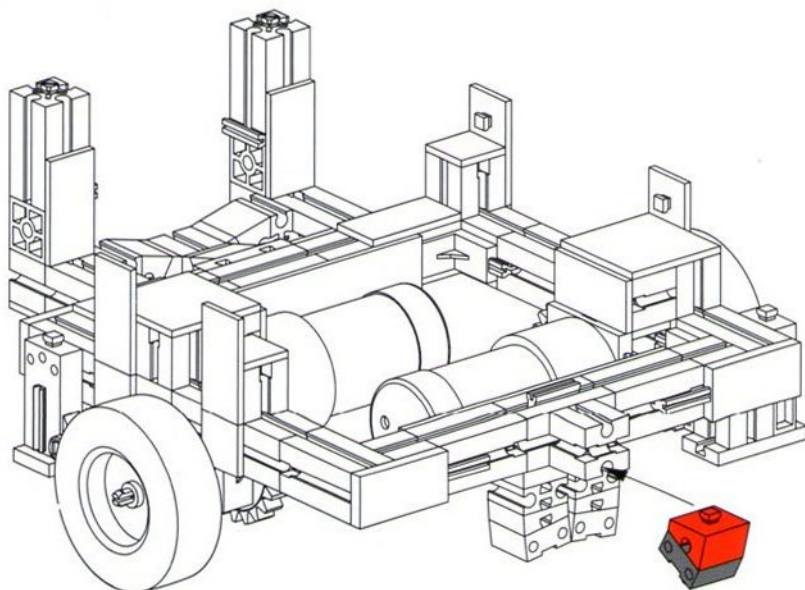
**17**

 2x
  2x
  7,5° 2x

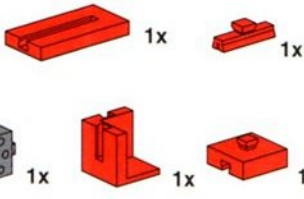
 2x
  1x

**18**

 30° 1x
  1x

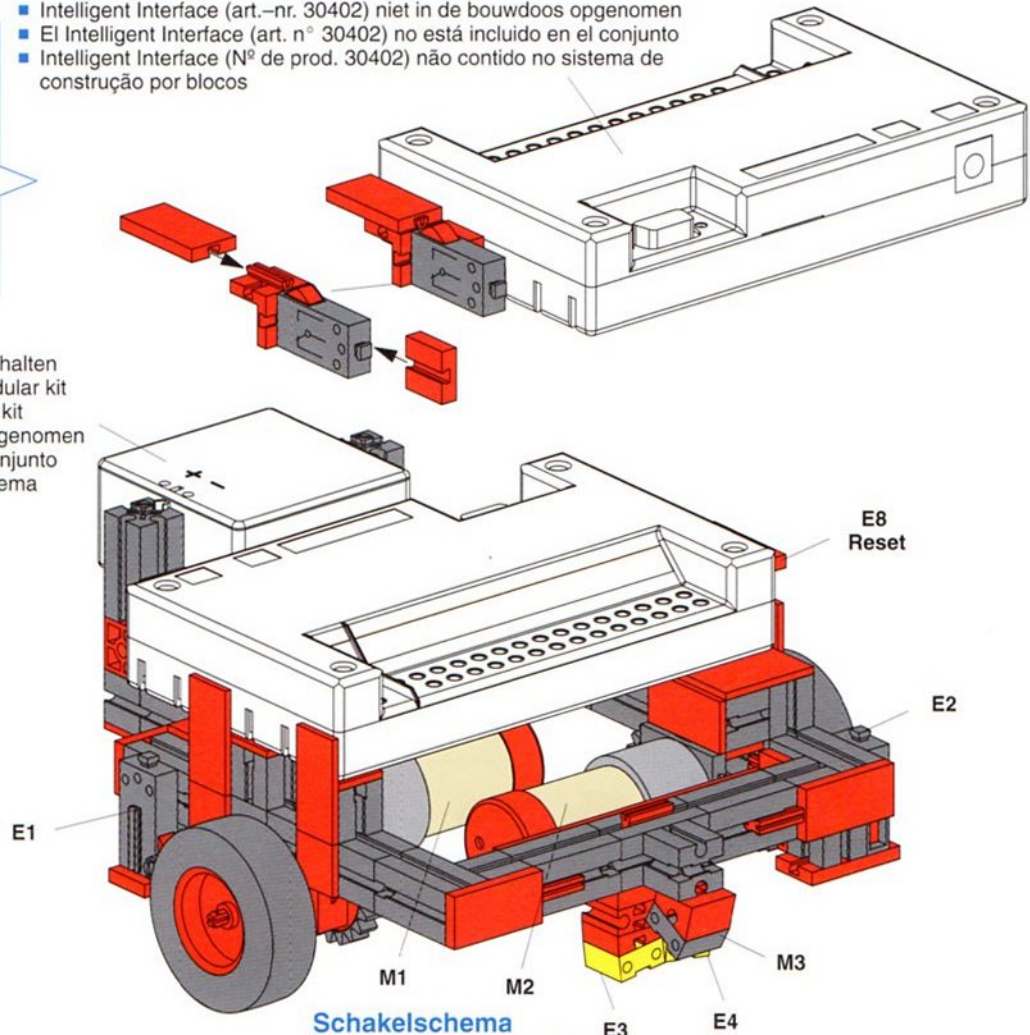


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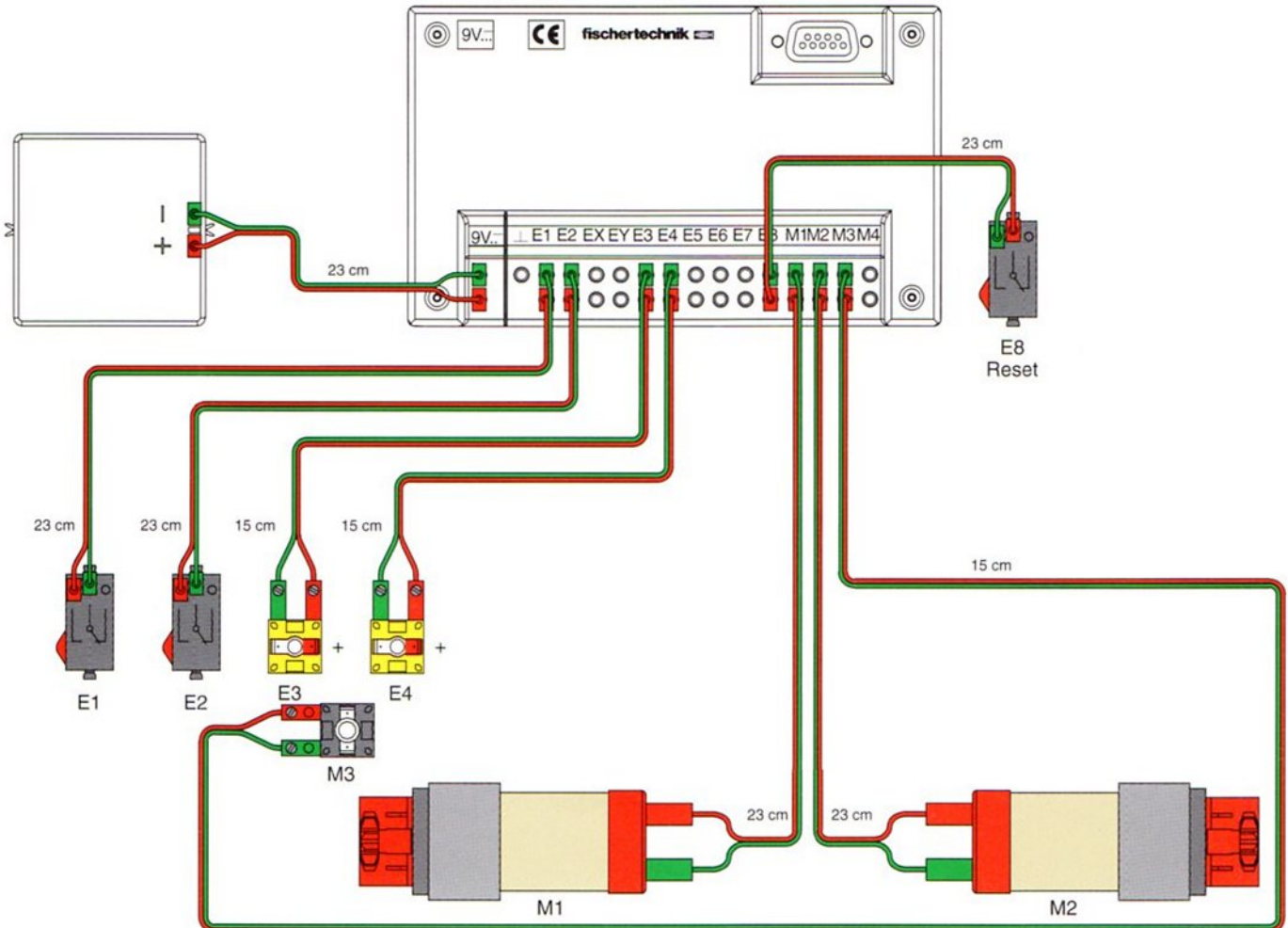
- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
- L'interface intelligente (réf. 30402) n'est pas contenue dans le kit
- Intelligent Interface (art.-nr. 30402) niet in de bouwdoos opgenomen
- EI Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (N° de prod. 30402) não contido no sistema de construção por blocos

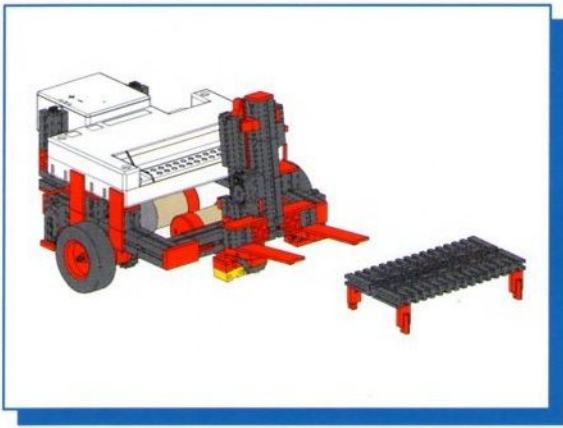
- Akku Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Akku Set (Art. No. 34969) not included in the modular kit
- Akku Set (réf. 34969) n'est pas contenue dans le kit
- Akku Set (art.-nr. 34969) niet in de bouwdoos opgenomen
- Akku Set (art. n° 34969) no está incluido en el conjunto
- Akku Set (N° de prod. 34969) não contido no sistema de construção por blocos



Elektrischer Schaltplan  
Circuit diagram  
Plan électrique

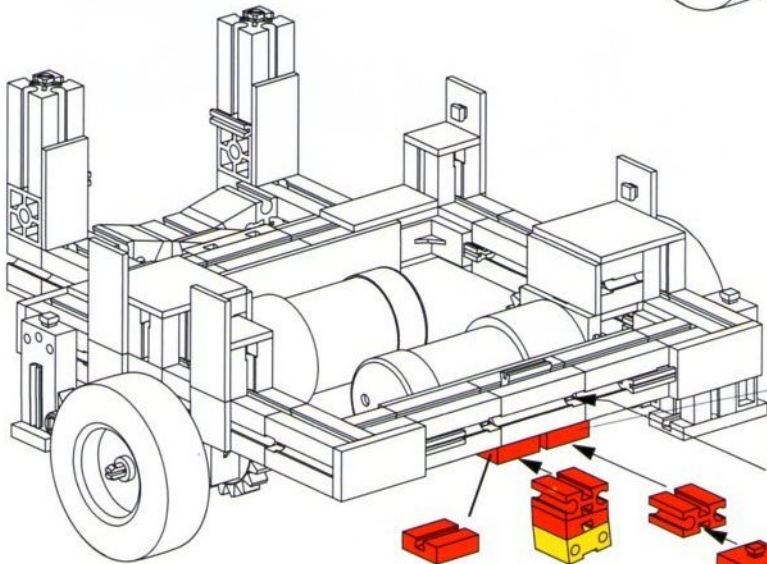
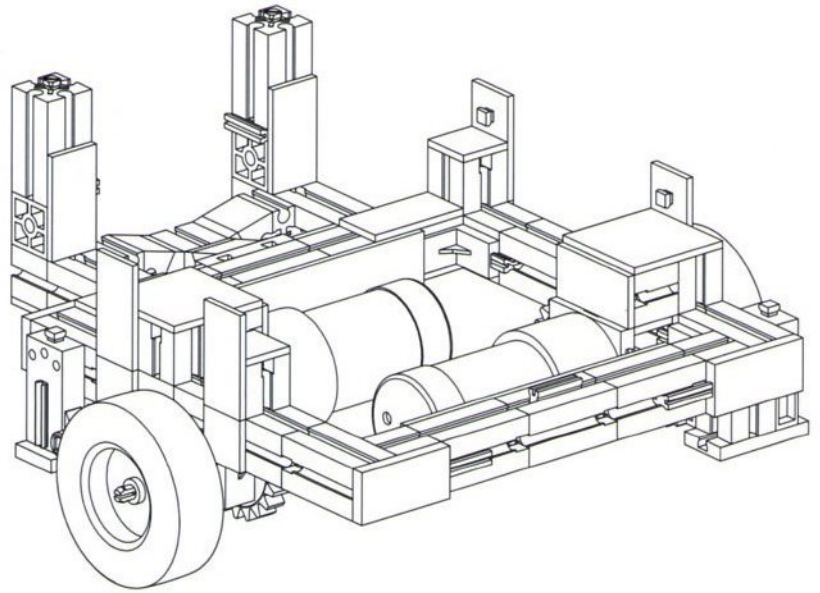
Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação










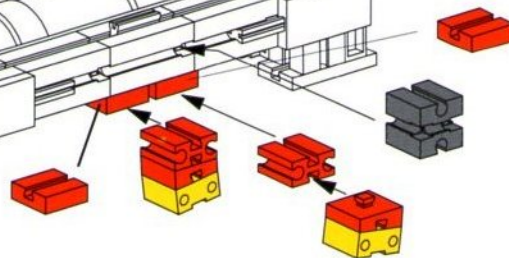
**1–16**

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 Page 4  
 Bladzijde 4  
 Página 4  
 Pagina 4





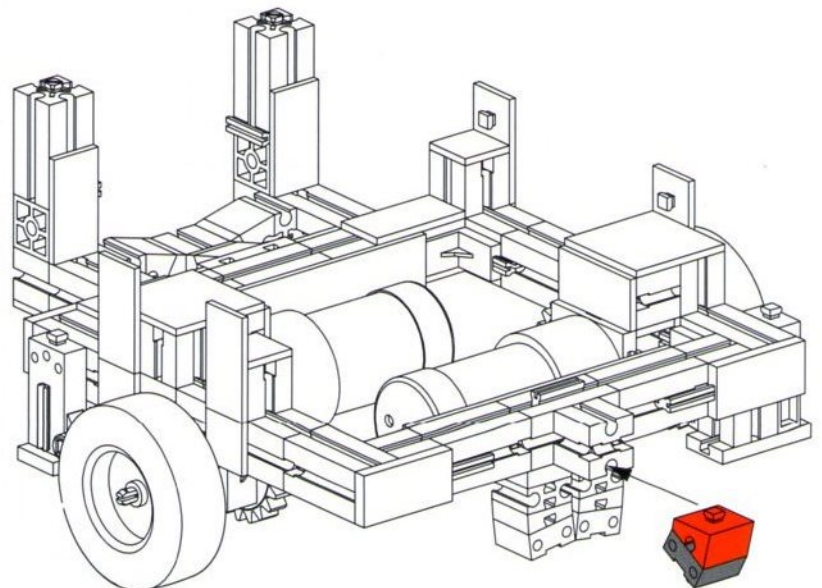
**17**

-  2x
-  2x
-  7,5° 2x
-  2x
-  1x

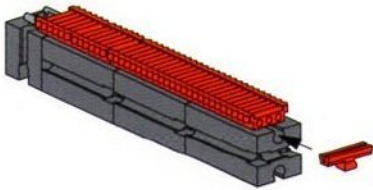
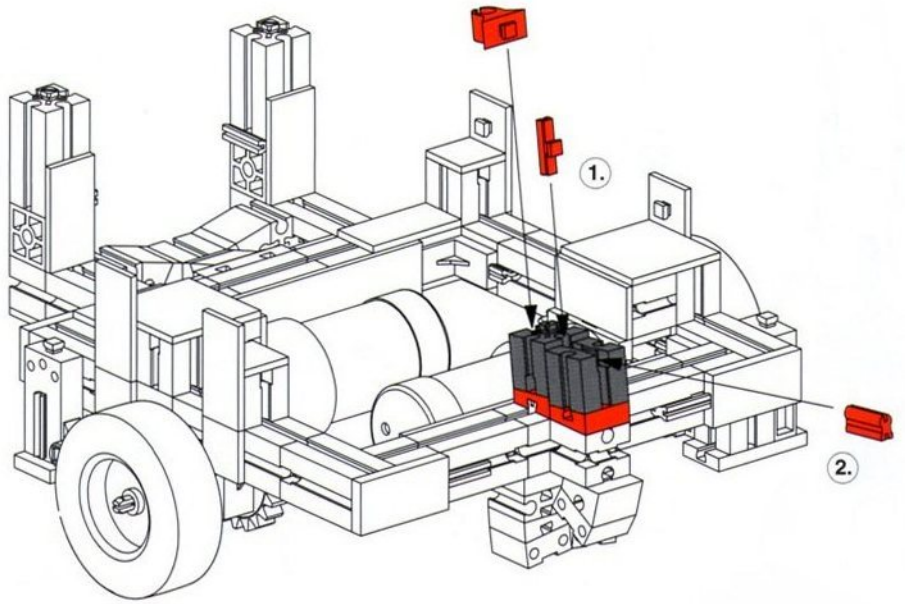
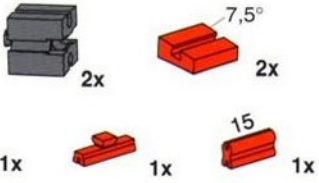


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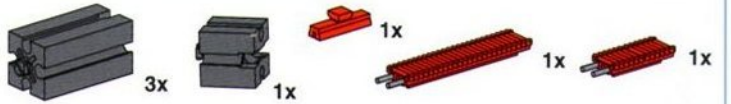
-  30° 1x
-  1x



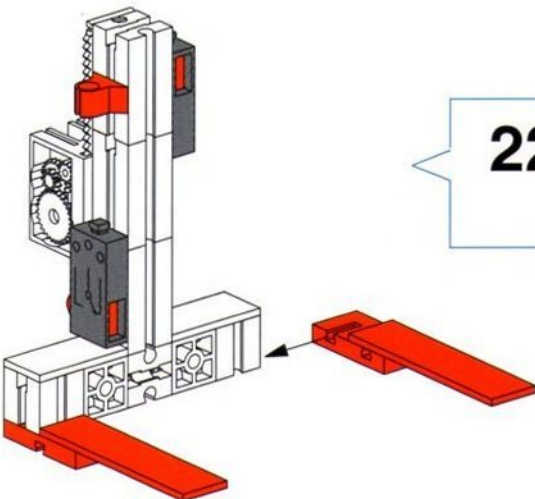
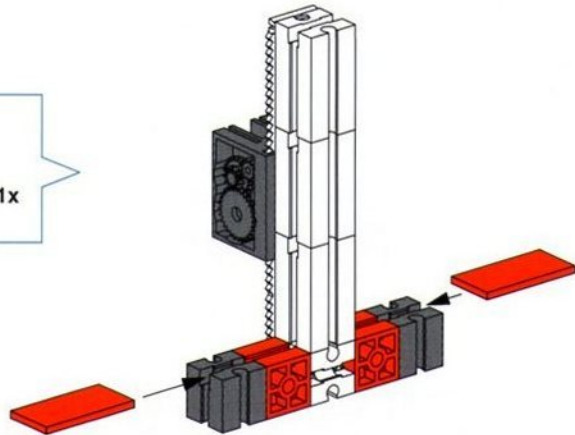
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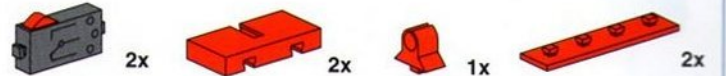
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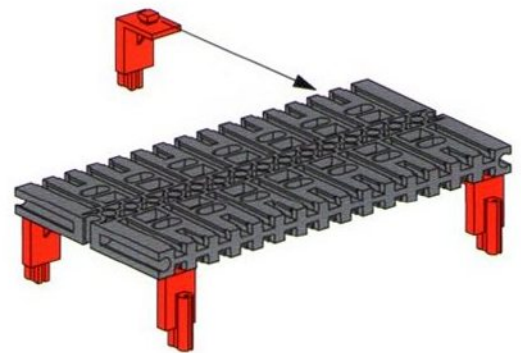
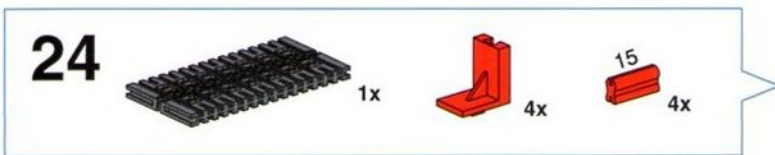
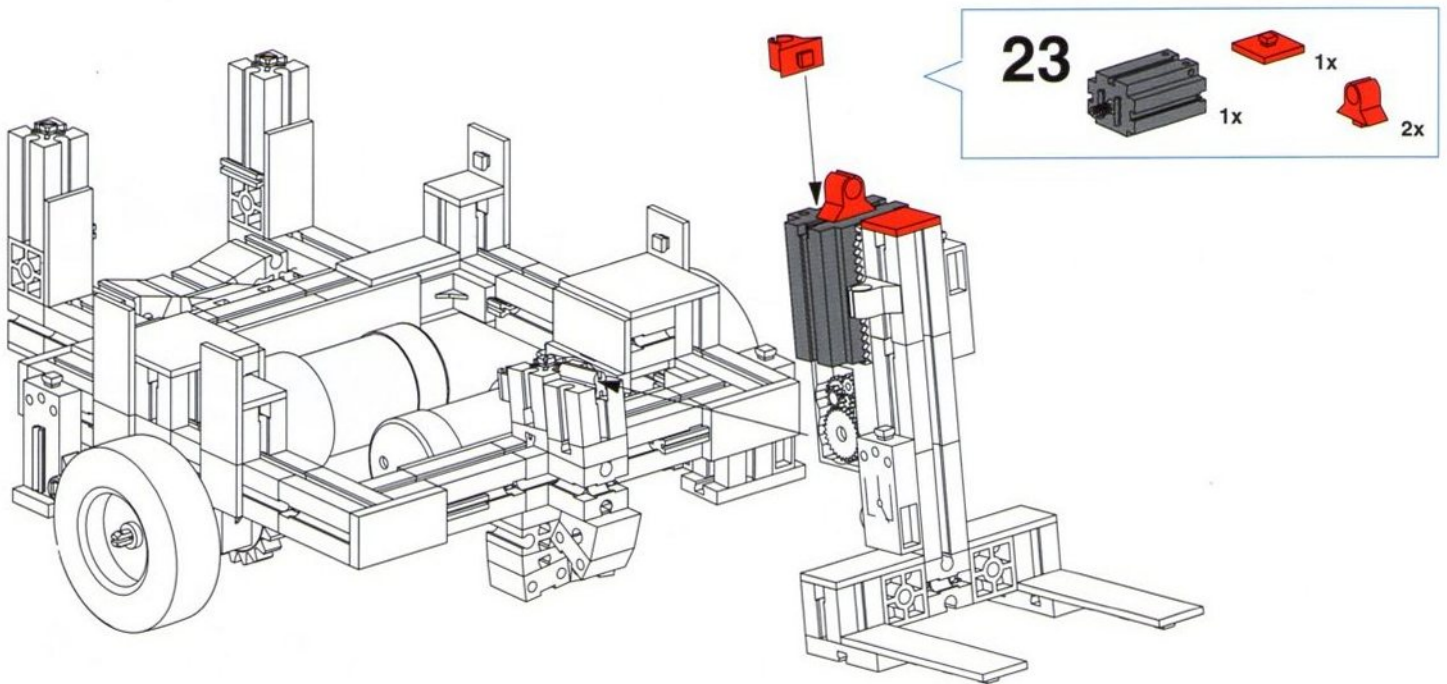


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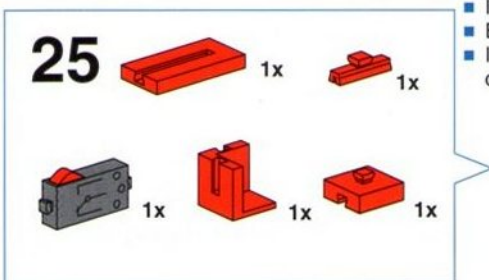


22

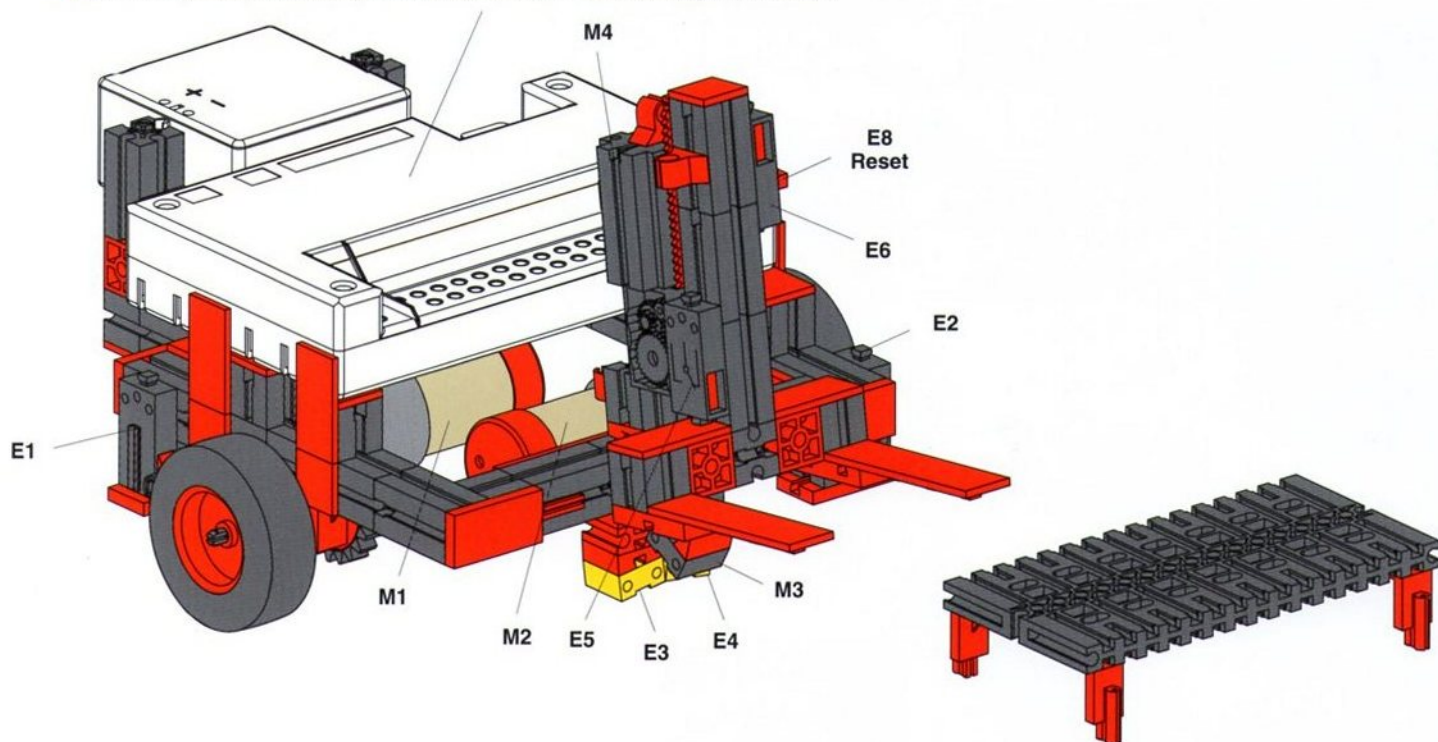




- Intelligent Interface (Art.-Nr. 30402) nicht im Baukasten enthalten
- Intelligent interface (Art. No. 30402) not included in the modular kit
- L'interface intelligente (réf. 30402) n'est pas contenue dans le kit
- Intelligent Interface (art.-nr. 30402) niet in de bouwdoos opgenomen
- El Intelligent Interface (art. n° 30402) no está incluido en el conjunto
- Intelligent Interface (Nº de prod. 30402) não contido no sistema de construção por blocos

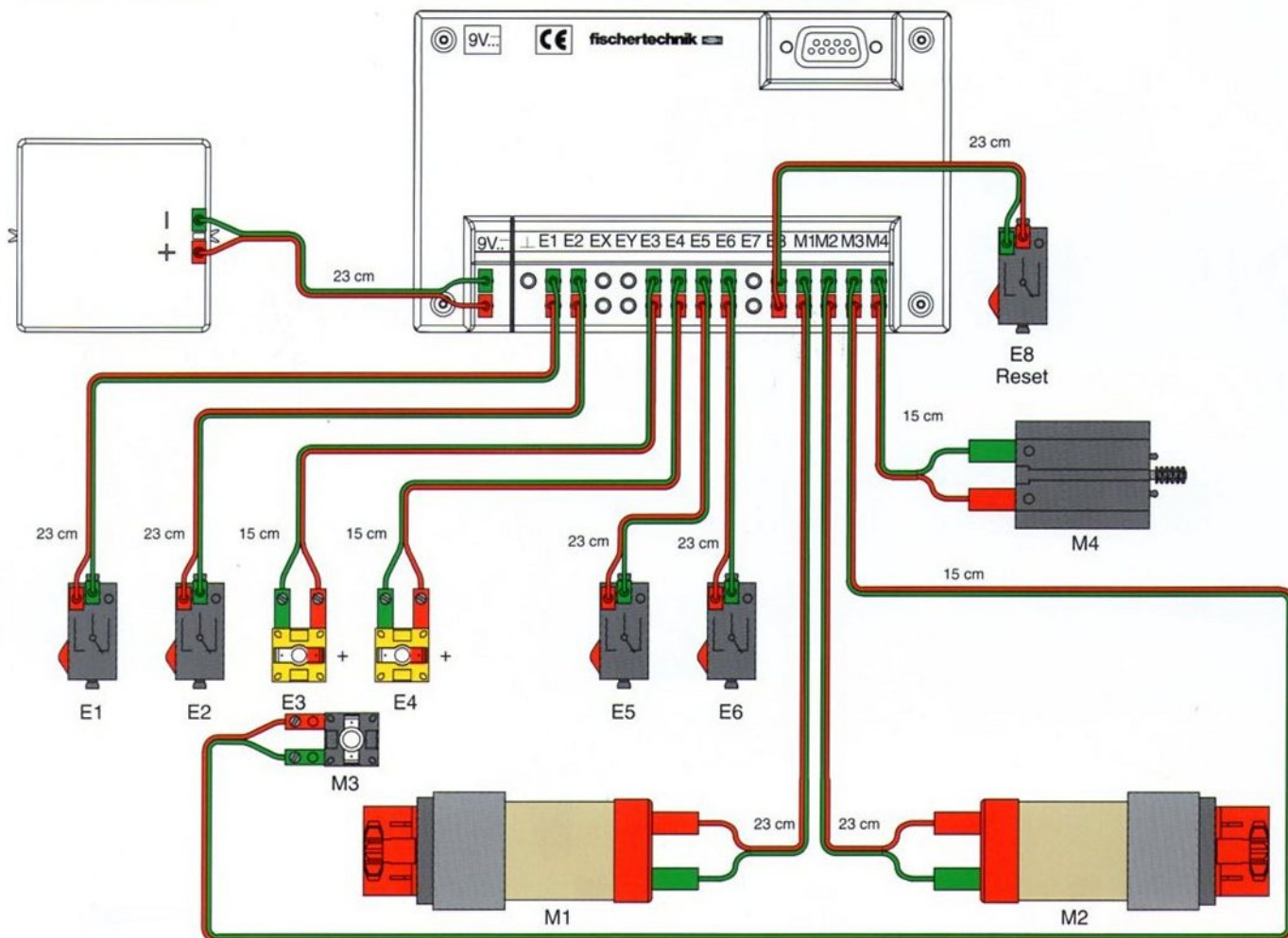


- Accu Set (Art.-Nr. 34969) nicht im Baukasten enthalten
- Accu Set (Art. No. 34969) not included in the modular kit
- Accu Set (réf. 34969) n'est pas contenue dans le kit
- Accu Set (art.-nr. 34969) niet in de bouwdoos opgenomen
- Accu Set (art. n° 34969) no está incluido en el conjunto
- Accu Set (Nº de prod. 34969) não contido no sistema de construção por blocos



Elektrischer Schaltplan  
Circuit diagram  
Plan électrique

Schakelschema  
Diagrama de circuitos  
Plano elétrico de ligação

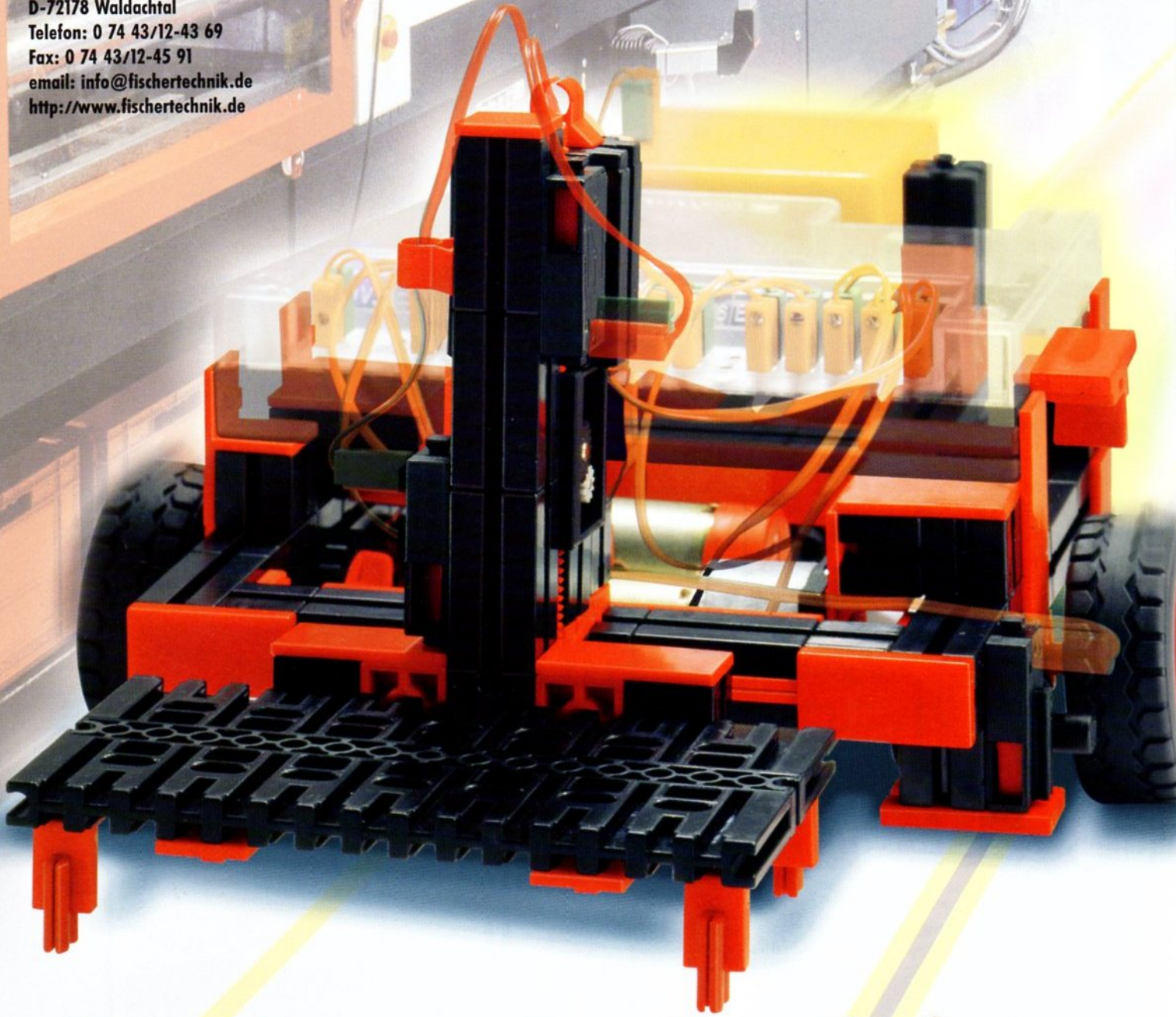


# Mobile Robots II

**6**  
models

  
**COMPUTING**

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