

Technische Modelle Schritt für Schritt

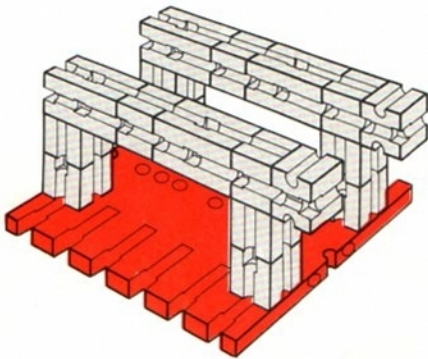
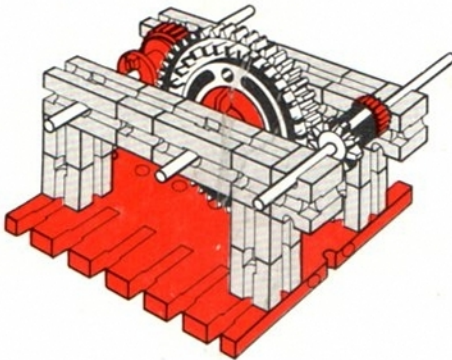
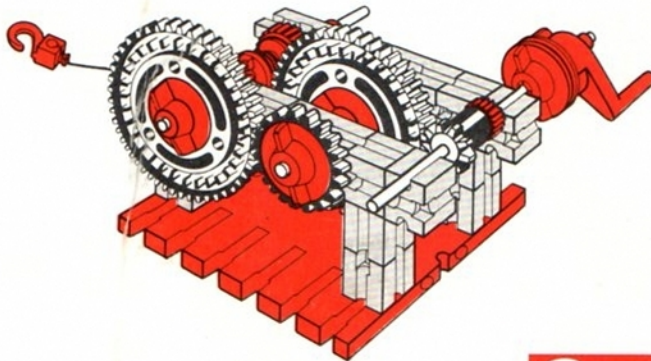


Bild-Bauanleitung
zu den fischertechnik
Lernbaukästen



Technical Models
Step by Step

Maquettes techniques
Etape par Etape



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Bild-Bauanleitung zu den fischertechnik Lernbaukästen

Eine Auswahl von Modellen zeigt die Einsatzmöglichkeiten der einzelnen Bauelemente aus den folgenden Lernbaukästen:

- u-t 1 „Grundbaukasten“
- u-t 2 „Motor und Getriebe“
- u-t 3/1 „Elektrotechnik“
- u-t S „Statik“

Für jedes Modell wird in der Kopfzeile angegeben, welche Baukästen benötigt werden und in welcher Zeit der Auf- und Abbau – einschließlich Einräumen der Bauelemente – erfolgen kann. Die Zeiten können je nach Erfahrung im Umgang mit den Bauelementen variieren.

Die Zeichnungen zeigen das schrittweise Entstehen der Modelle, wobei die jeweils neu hinzukommenden Bauteile zur besseren Übersicht farbig unterlegt sind. Außerdem sind alle für eine Baustufe benötigten Teile mit Angabe der Stückzahl abgebildet.

In roten Linienrahmen werden zusätzliche Hinweise für das Zusammenfügen bestimmter Bauelemente gegeben. Grundsätzliche Hinweise für die Handhabung der Bauteile finden Sie in den blauen Heften, die den Baukästen beigelegt sind.

Bitte achten Sie beim Bau der Modelle besonders auf die unterschiedlichen Zapfen, Nuten und Einschnitte der Bauelemente sowie auf ihre Lage innerhalb des gesamten Aufbaus.

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Technical Models Step by Step

Illustrated Instructions for Educational Construction Kits

A selection of different models illustrates the various applications for individual elements from the following construction kits:

u-t 1	"Basic Kit"	Order No. 5411
u-t 2	Kit "Motor and Gearbox"	Order No. 5412
u-t 3/1	Kit "Electrotechnology"	Order No. 60 039
u-t S	Kit "Statics"	Order No. 60 063

With each model the heading indicates which construction kits are required and the time needed for construction and dismantling, including clearing away of the components.

The drawings show how the models are assembled step by step. To make it more clearly visible, each new component is highlighted in colour. In addition all the parts required for a specific construction stage are shown, together with their respective quantities needed.

Additional information on how to join certain elements together are outlined in red. The blue booklets that are enclosed with the construction kits contain basic details about how to use the components.

When constructing the models particular attention should be paid to the different pins, grooves and recesses in the various construction elements, and their positions within the overall structure.

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Maquettes techniques étape par étape

Instructions de montage illustrées pour les boîtes de construction

Nous avons sélectionné un certain nombre de maquettes illustrant les possibilités d'utilisation des différentes pièces provenant des boîtes de construction suivantes:

u-t 1	«Boîte de base»	référence 5411
u-t 2	«Moteur et boîte de vitesses»	référence 5412
u-t 3/1	«Electrotechnique»	référence 60 039
u-t S	«Statique»	référence 60 063

Pour chaque maquette, le code de la boîte de construction correspondante ainsi que le temps nécessaire au montage et au démontage, y compris le temps de rangement des pièces de construction, sont indiqués en haut de la page.

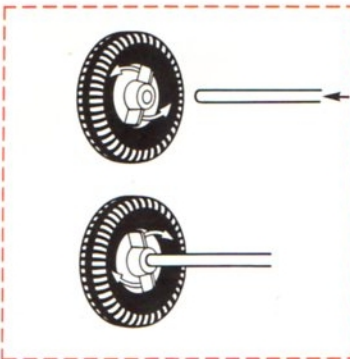
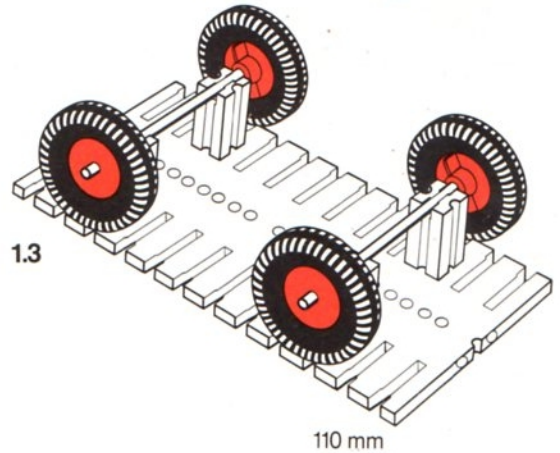
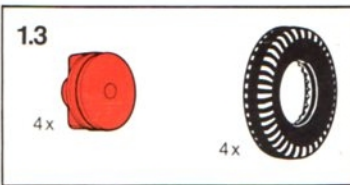
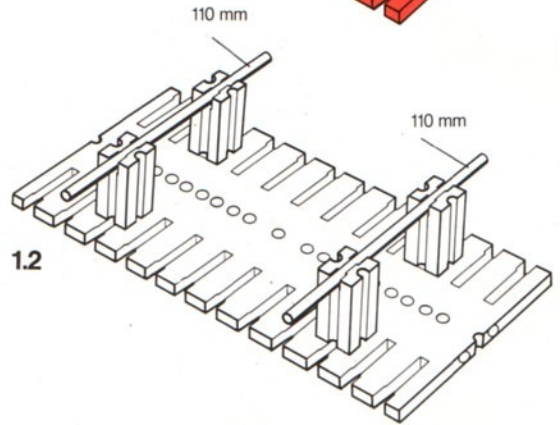
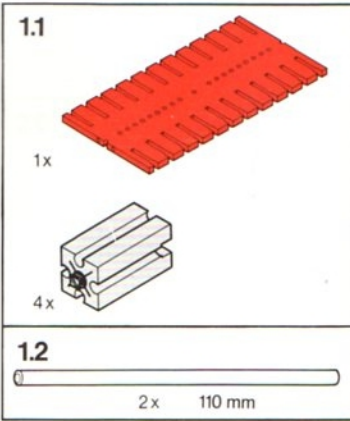
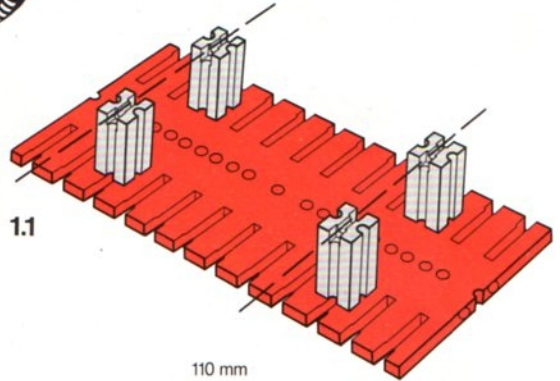
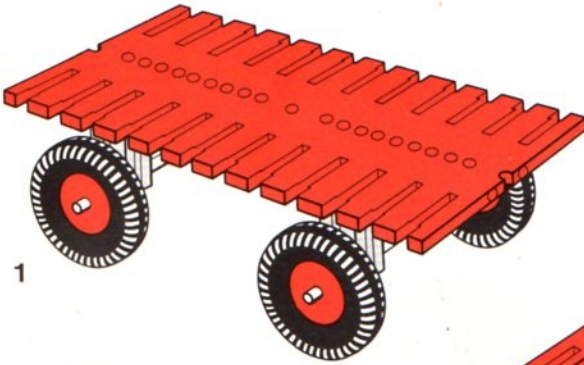
Les dessins illustrent les étapes successives de construction de la maquette; pour une plus grande clarté, toute pièce nouvelle s'ajoutant à l'ensemble est reproduite en couleur. En outre toutes les pièces nécessaires à chaque étape de construction sont dessinées à part avec indication de leur nombre.

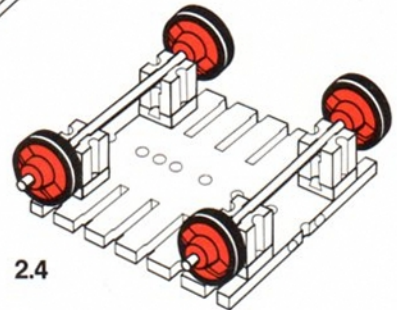
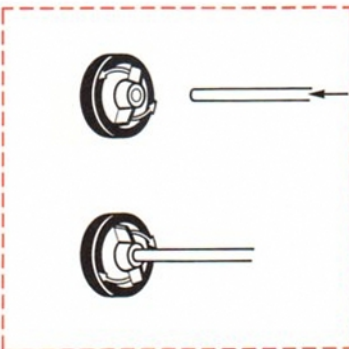
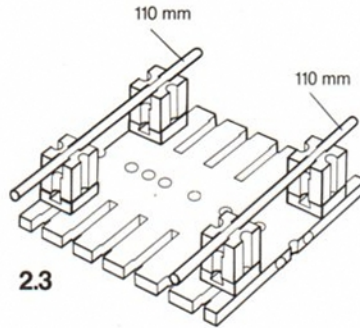
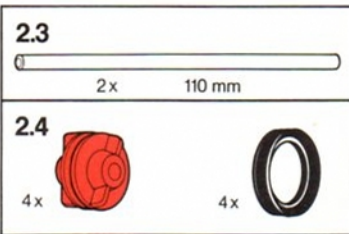
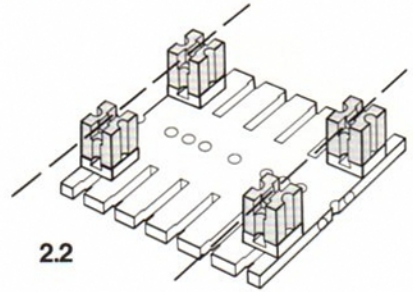
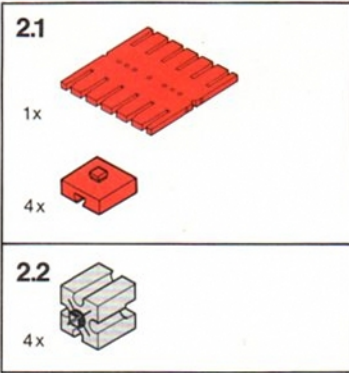
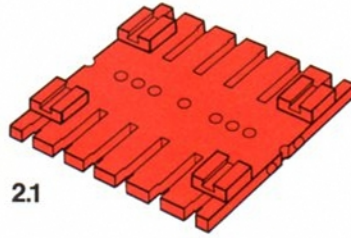
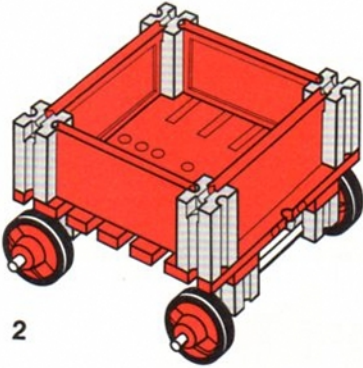
Lorsque des instructions supplémentaires sont nécessaires au montage de certaines pièces, elles sont regroupées dans un encadré rouge. Les recommandations générales concernant la manipulation des éléments sont fournies dans les fascicules bleus livrés avec les boîtes de construction.

Lors du montage d'une maquette, respectez les différentes configurations des rainures, encoches et tenons ainsi que la position adéquate des pièces au sein de la configuration d'ensemble.

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35 Mât		110
36 Pont en arc		116
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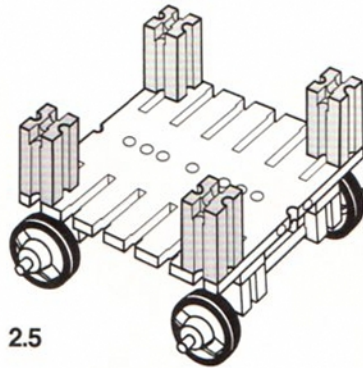
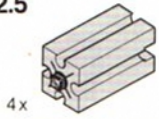




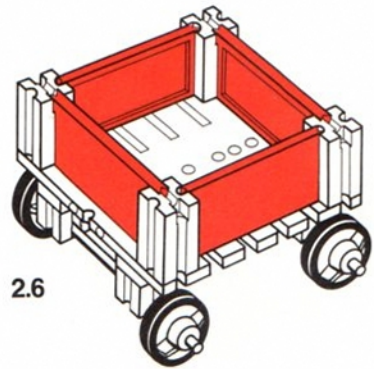
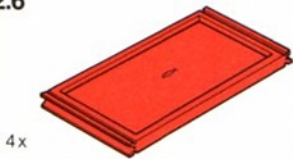
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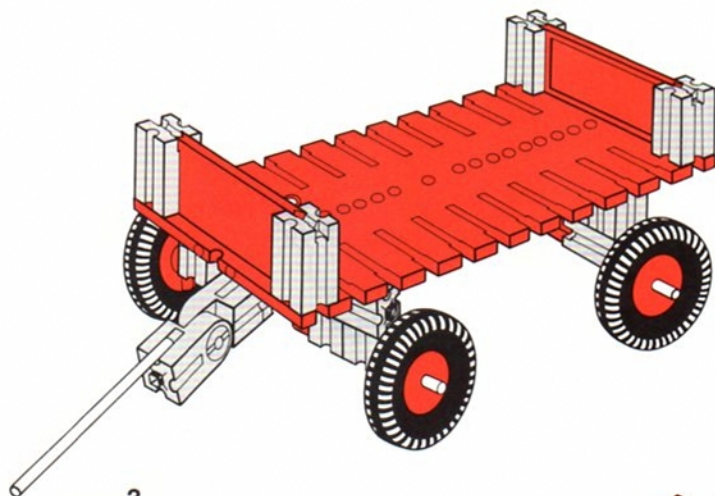


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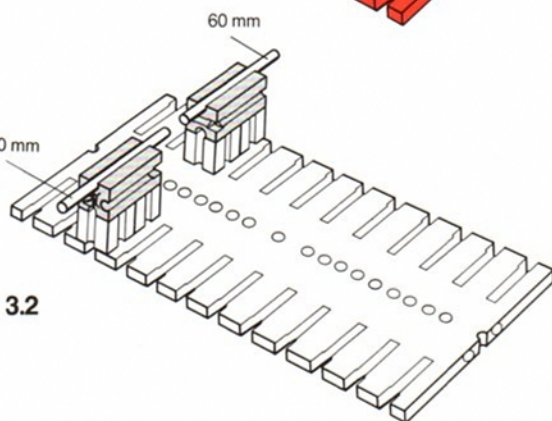
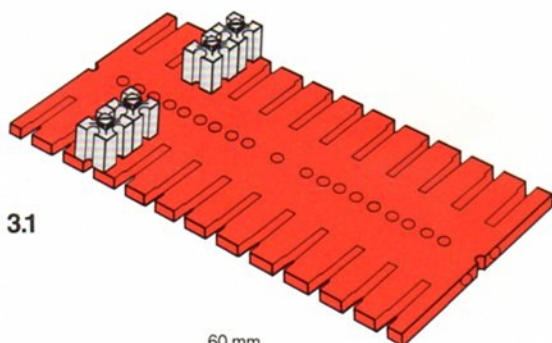
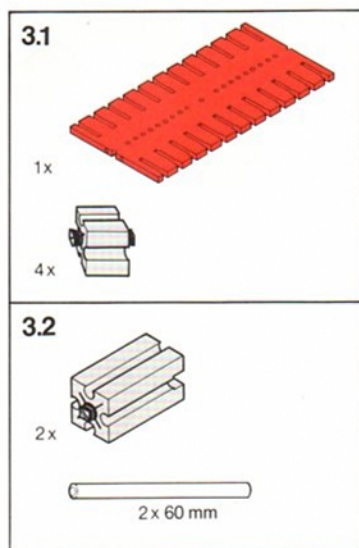


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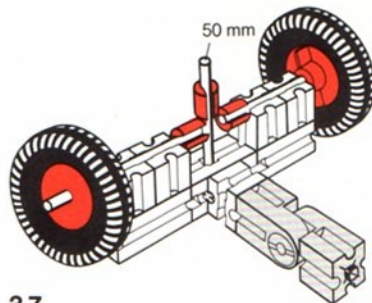
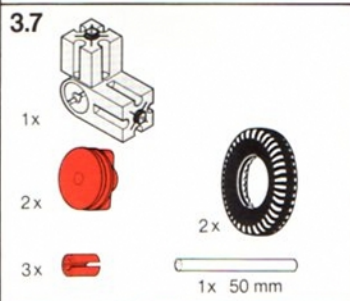
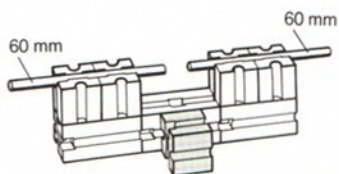
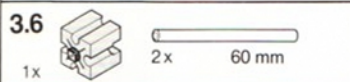
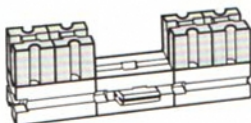
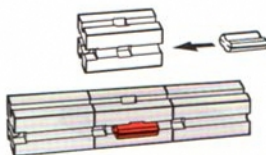
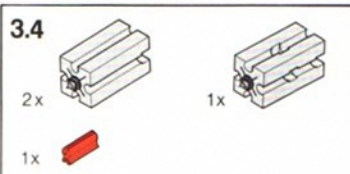
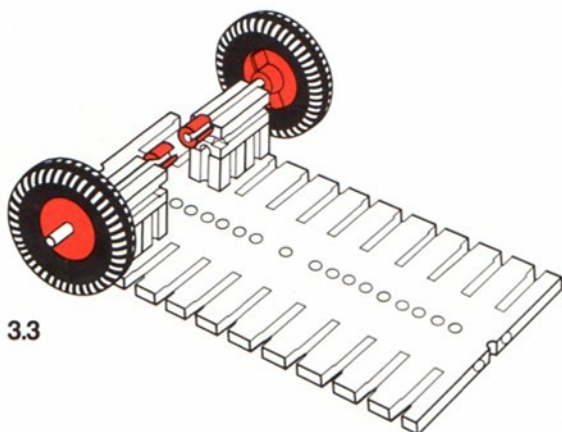
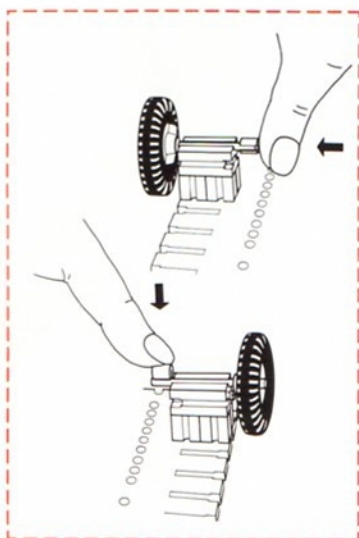
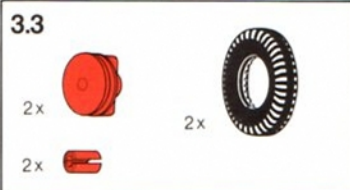


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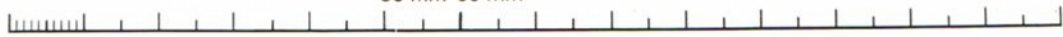


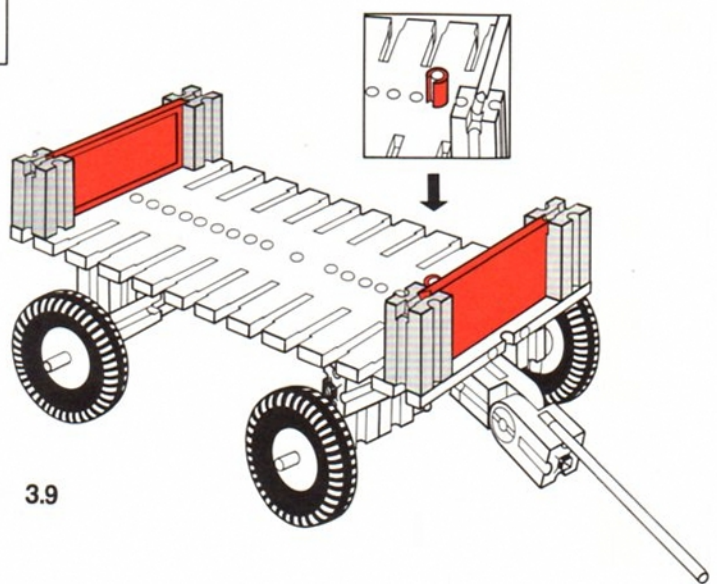
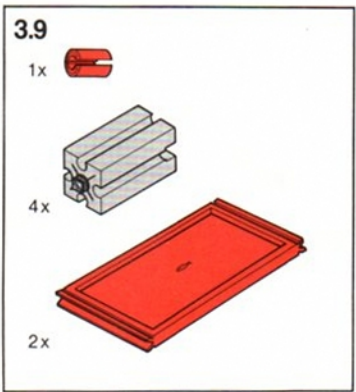
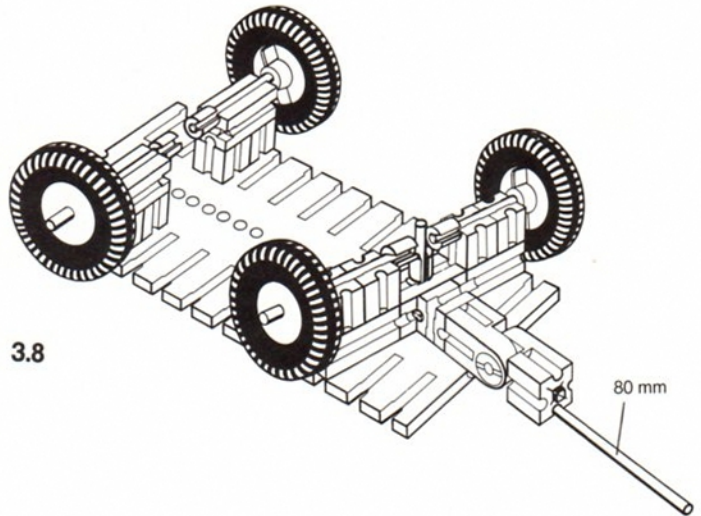
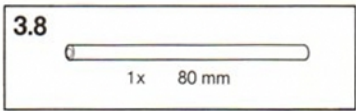
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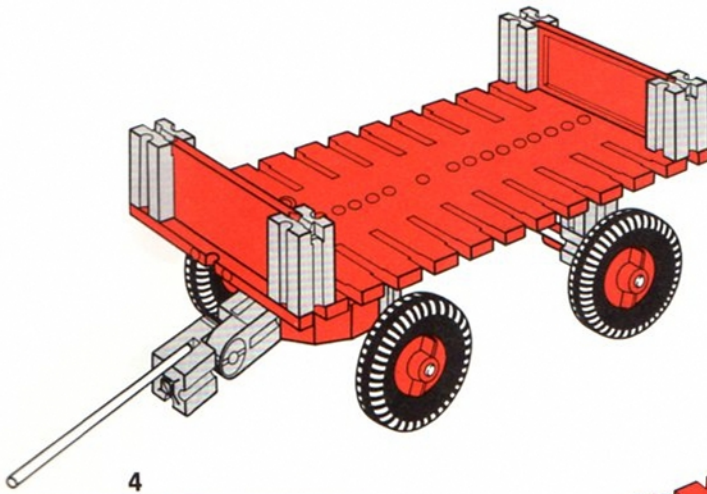




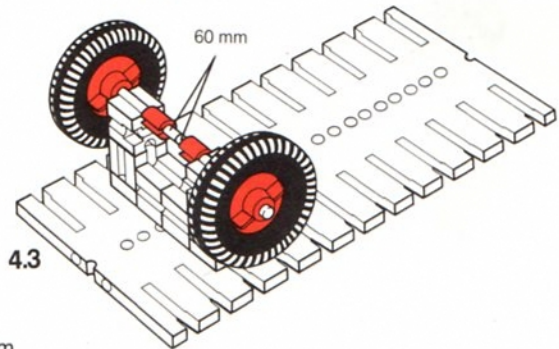
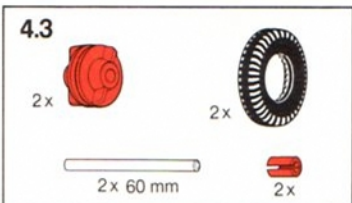
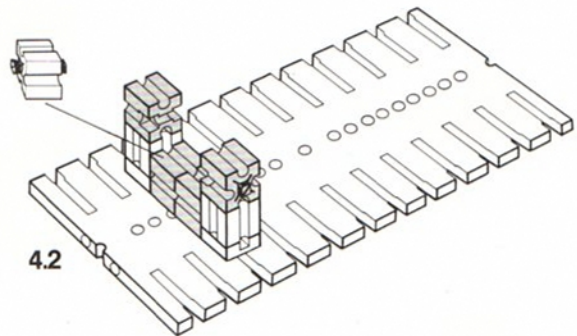
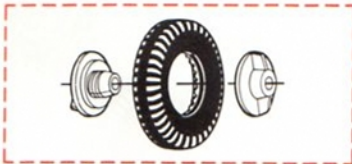
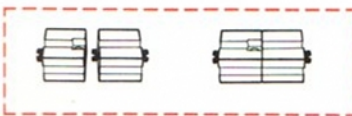
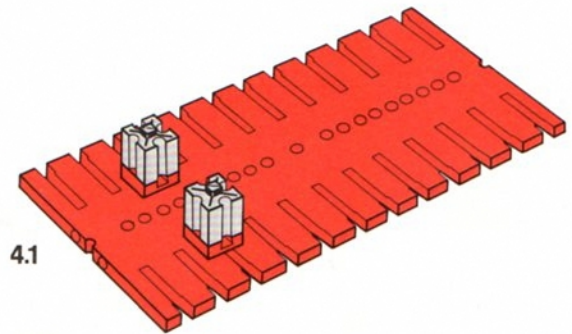
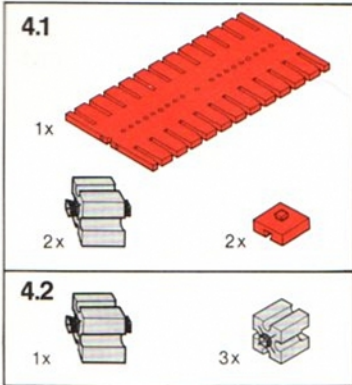
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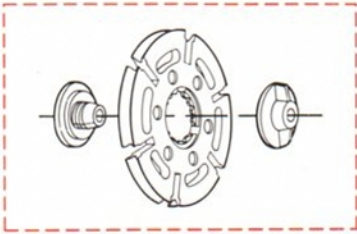





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60 mm



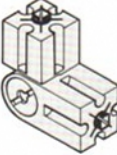









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1x 30 mm 


4.5
2x 


4.6
6x 

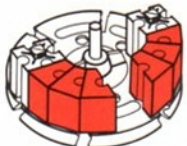
4.7
2x  1x 
1x 


4.8
2x  2x 
2x  2x 50 mm 

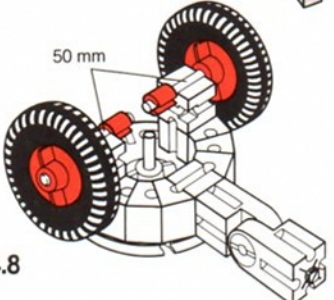
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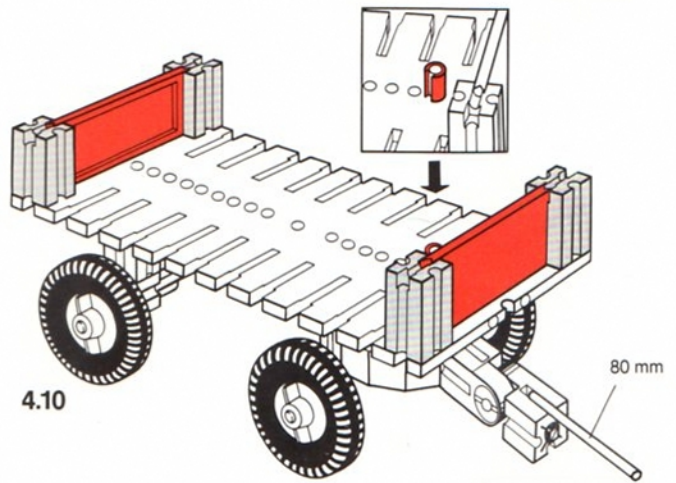
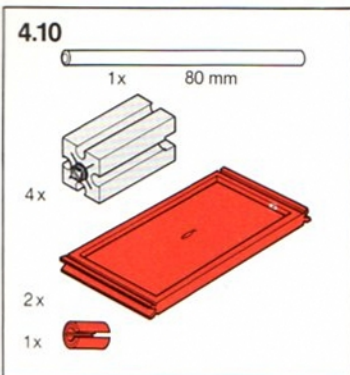
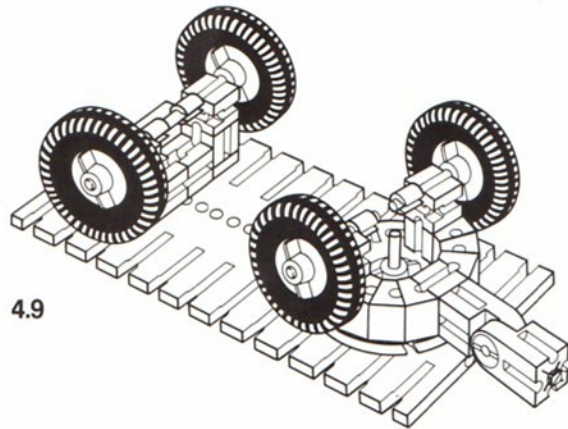
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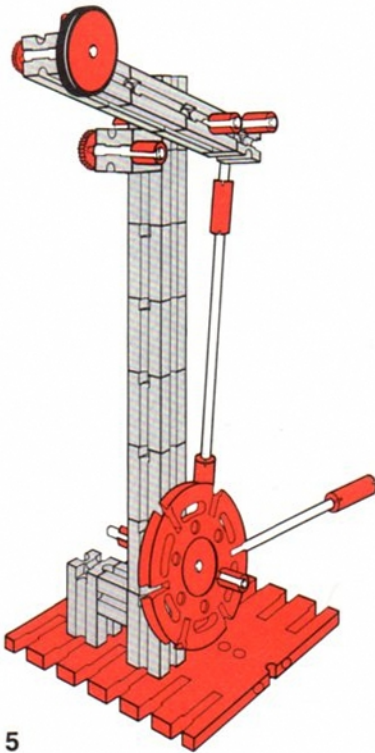
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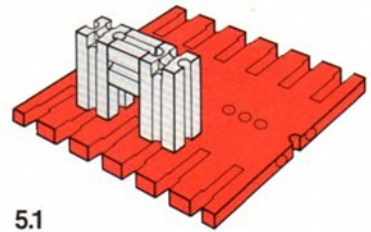
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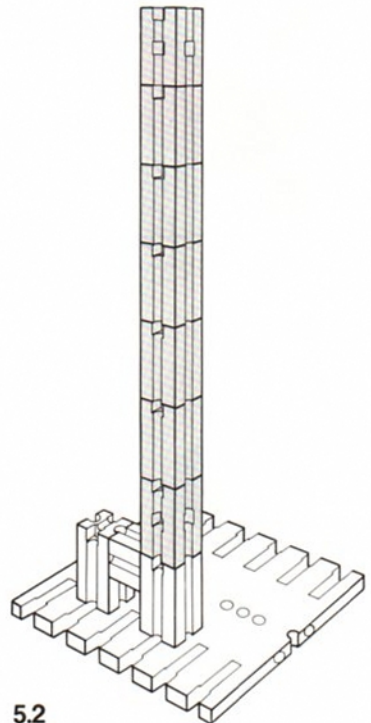
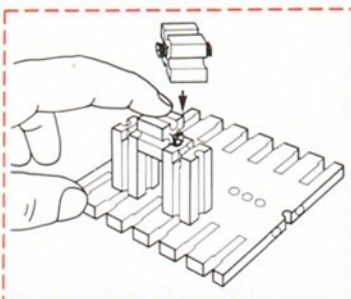
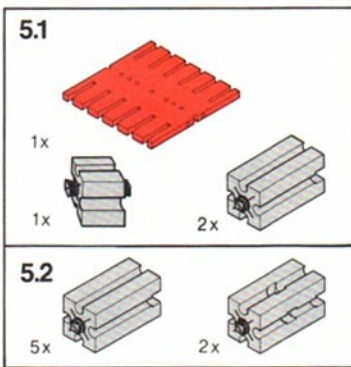




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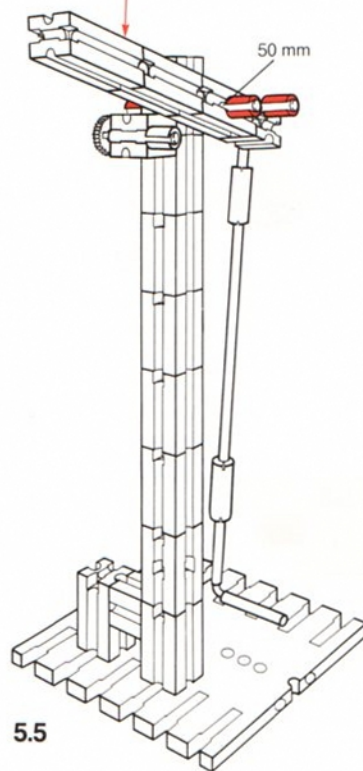
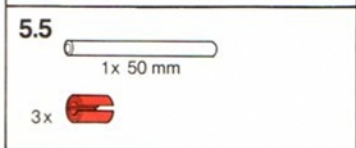
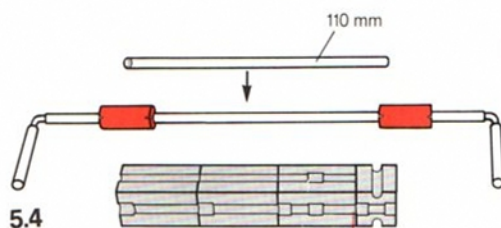
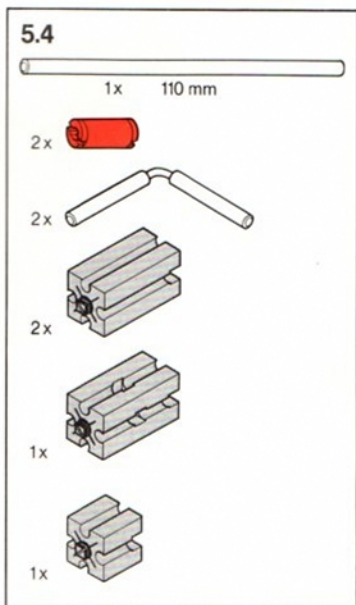
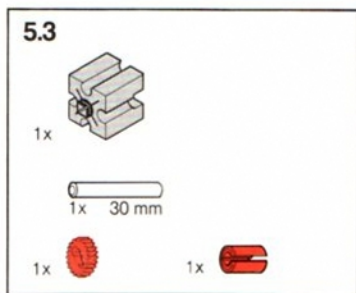


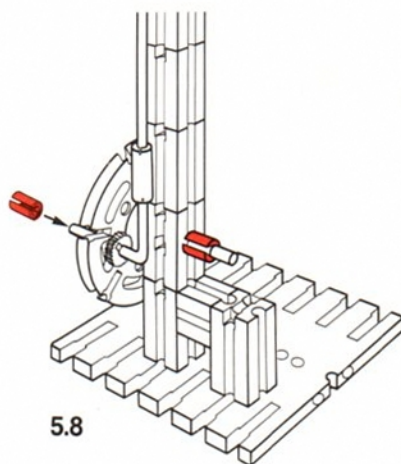
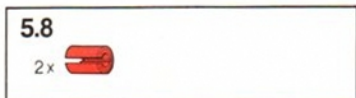
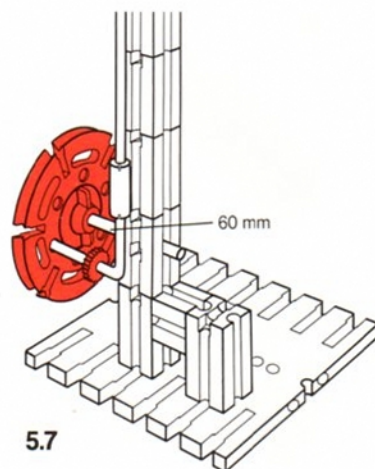
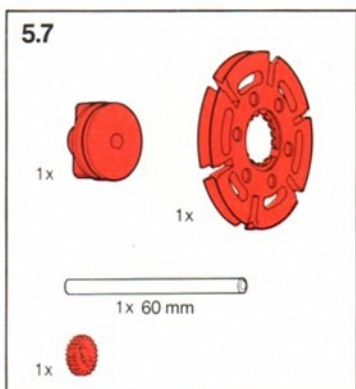
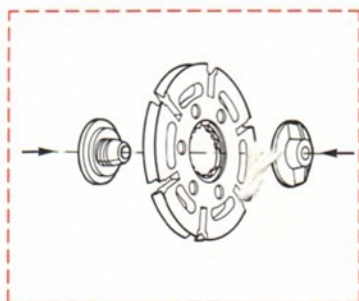
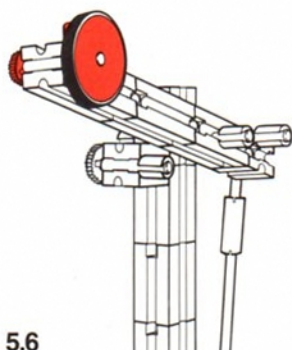
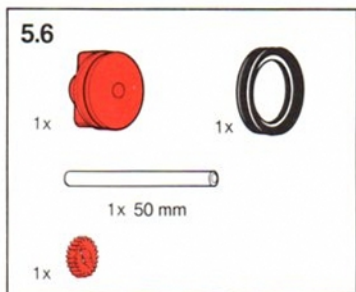
5.1



5.2



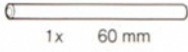




50 mm 60 mm

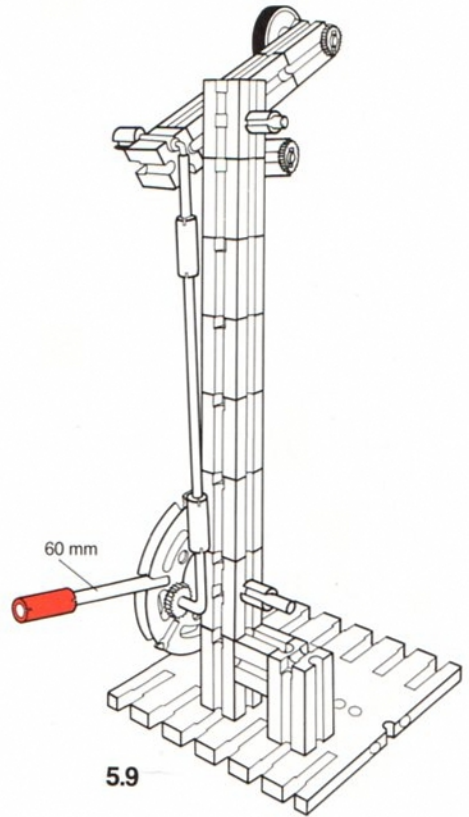


5.9



1x 60 mm

1x

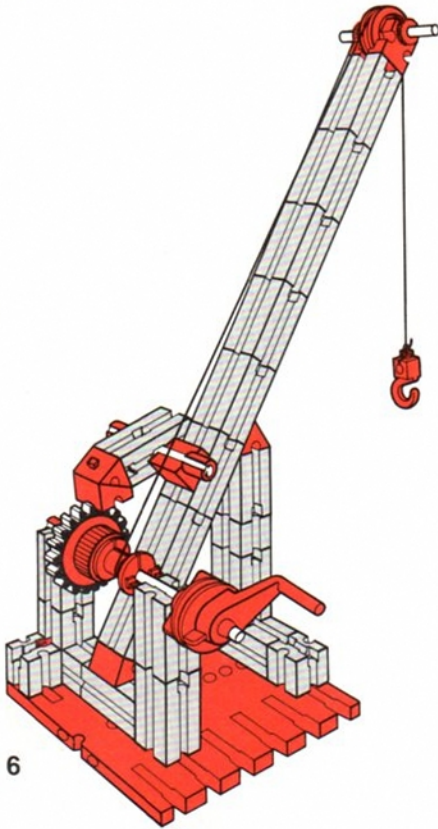


60 mm

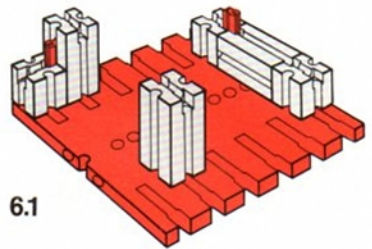
5.9

60 mm



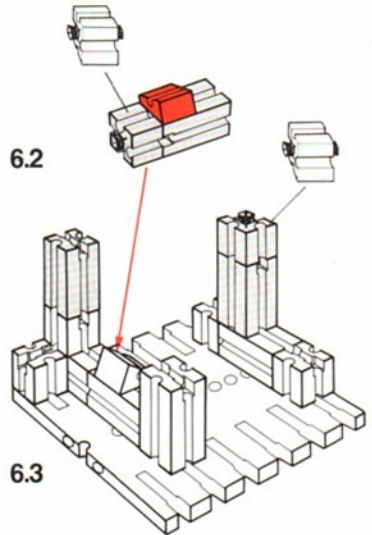


6



6.1

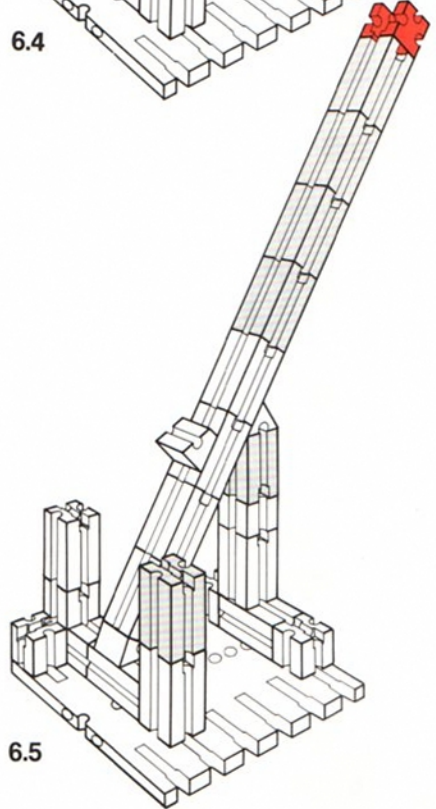
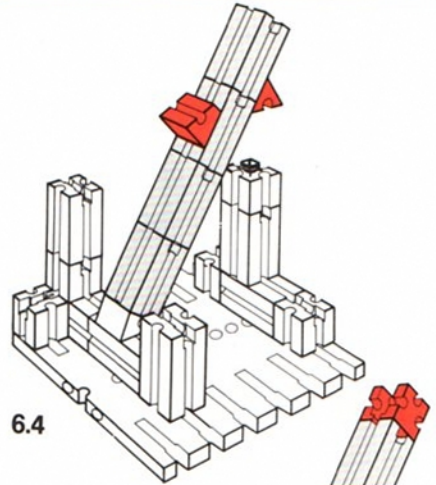
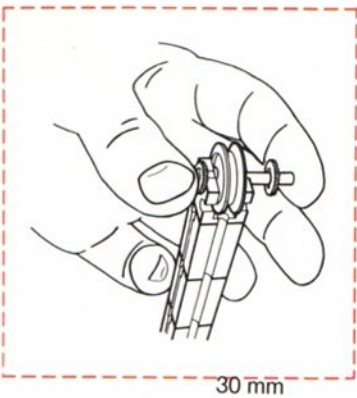
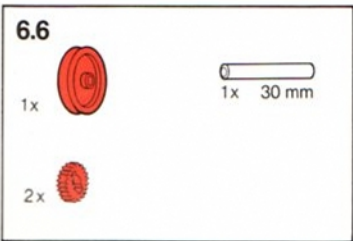
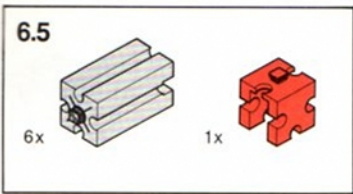
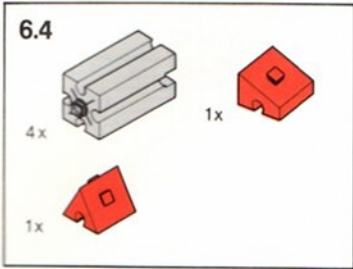
6.1		1x		2x
		3x		3x
6.2		1x		1x
		1x		
6.3		2x		1x



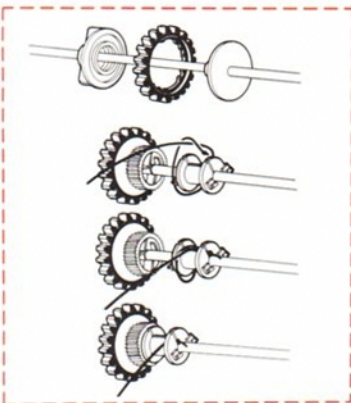
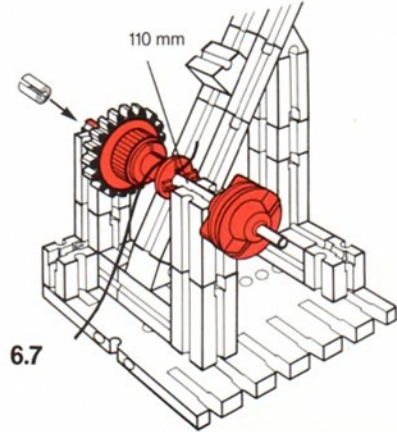
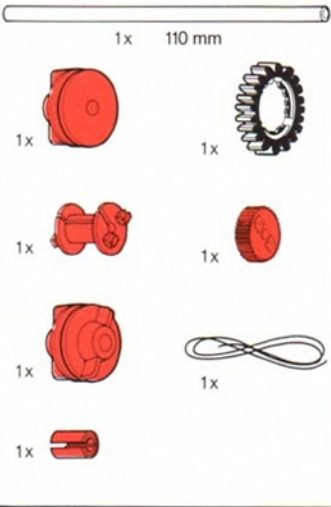
6.2

6.3

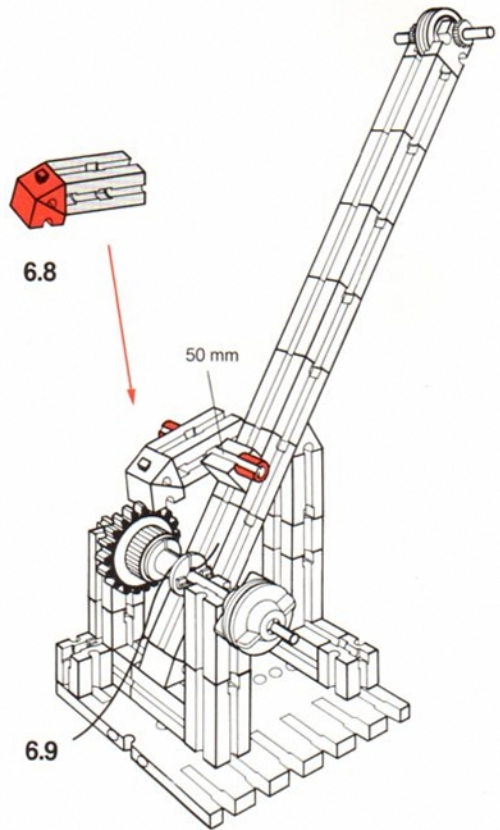
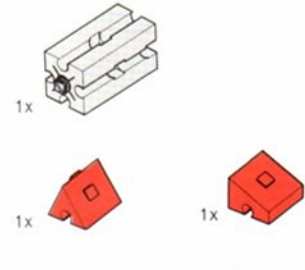




6.7



6.8



6.9



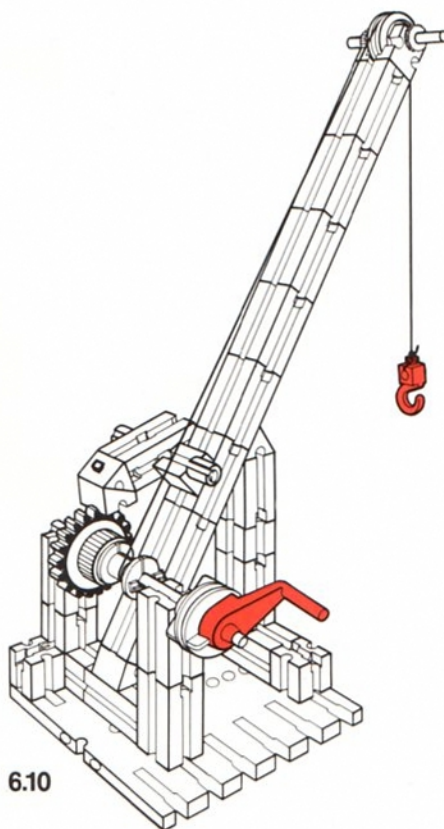
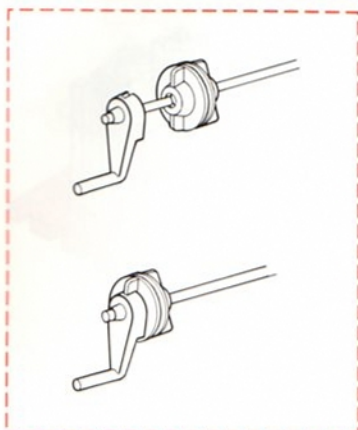
6.10



1x

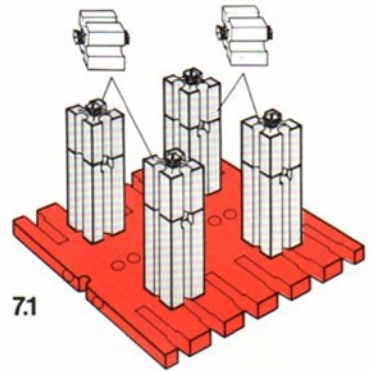
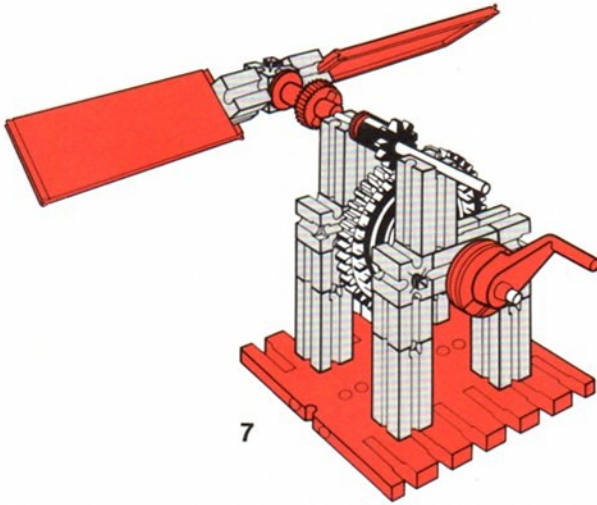


1x

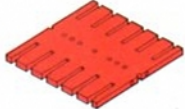



6.10

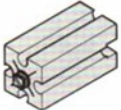





7.1

1x 

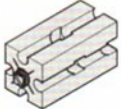
4x 

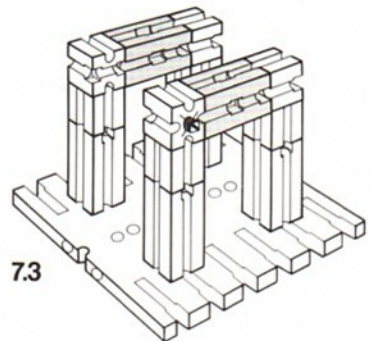
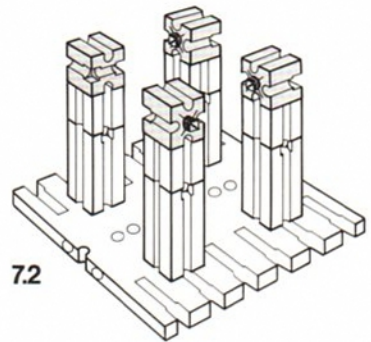
4x 

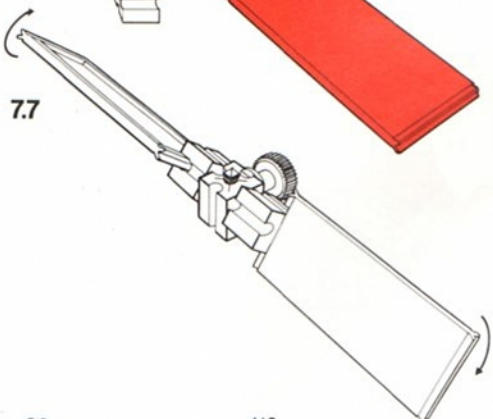
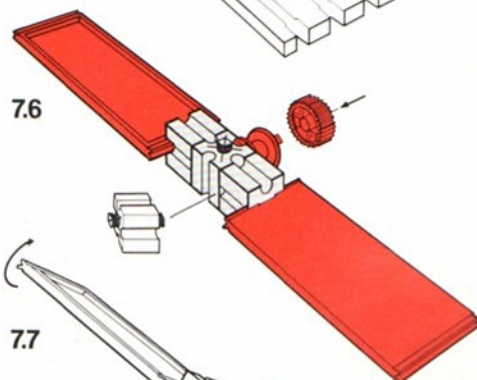
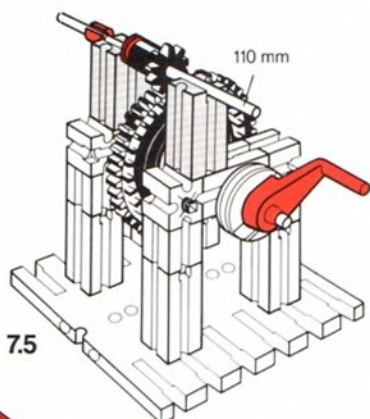
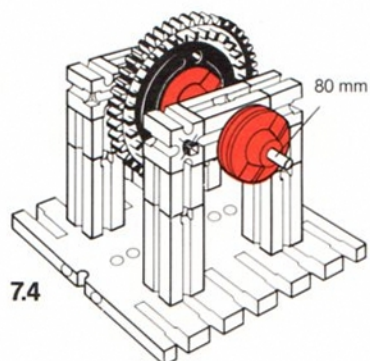
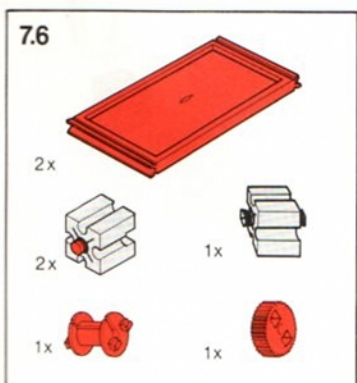
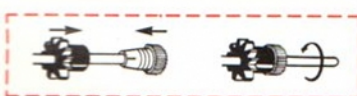
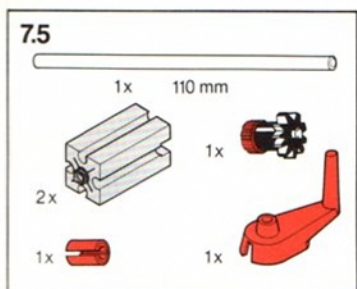
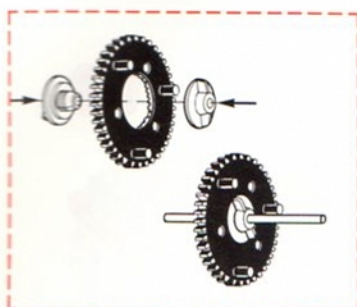
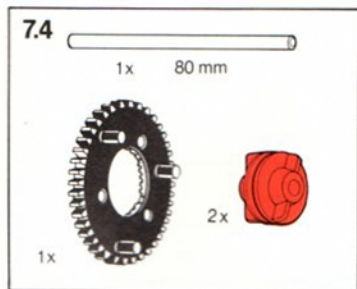
7.2

4x 

7.3

2x 

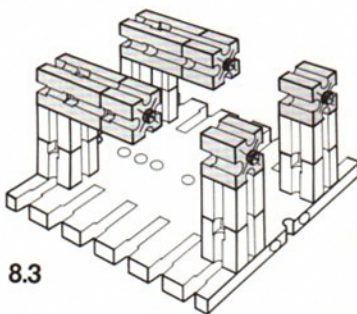
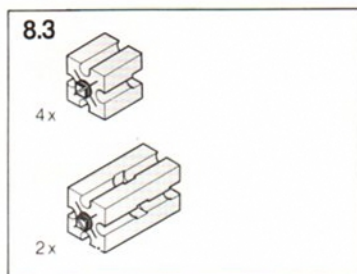
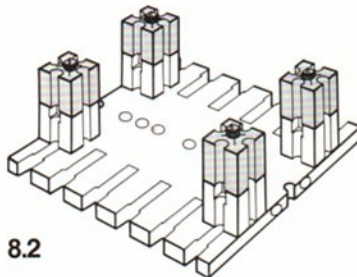
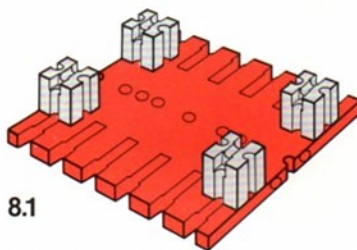
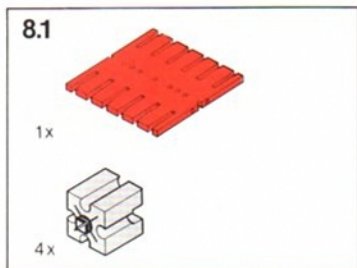
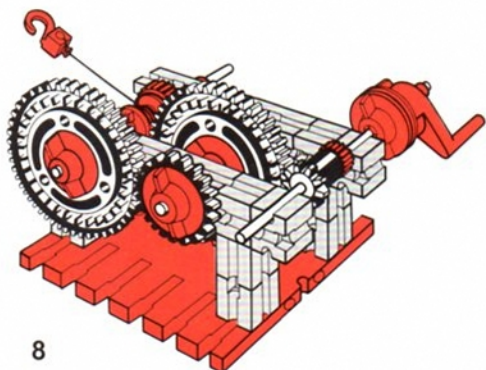




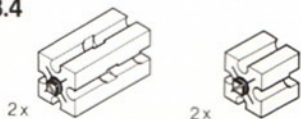
80 mm

110 mm

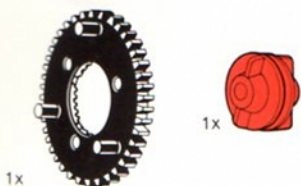
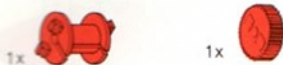
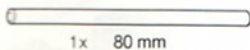




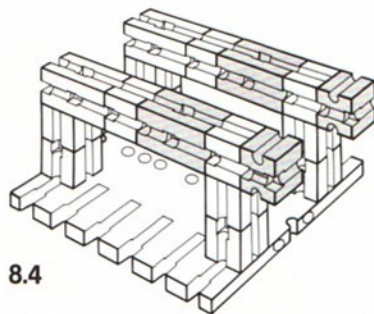
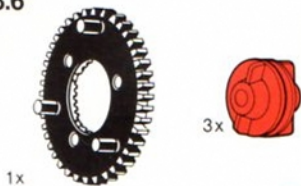
8.4



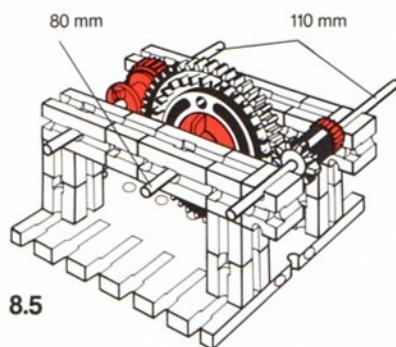
8.5



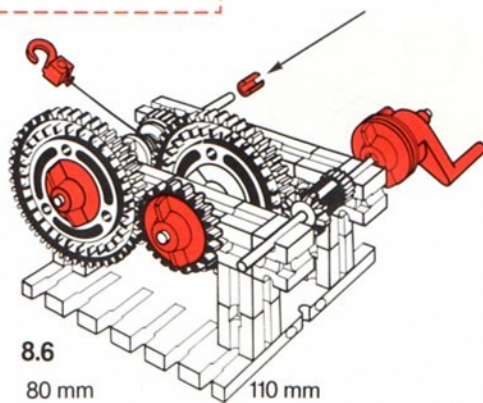
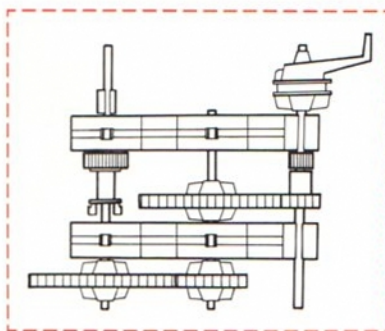
8.6



8.4



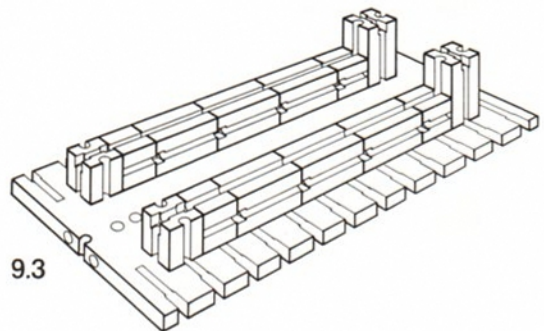
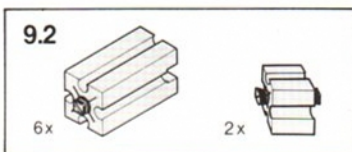
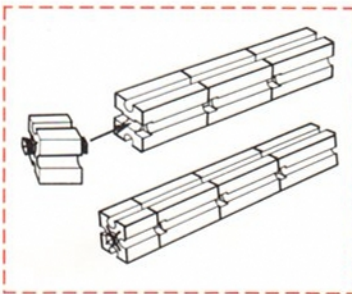
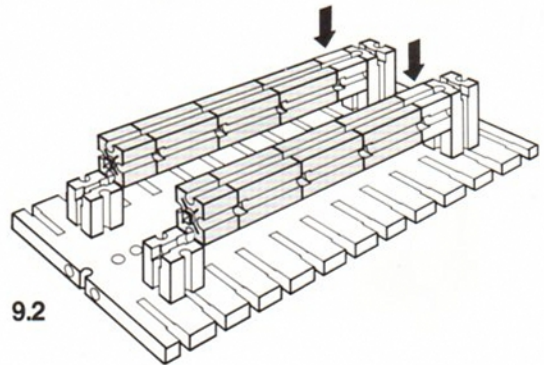
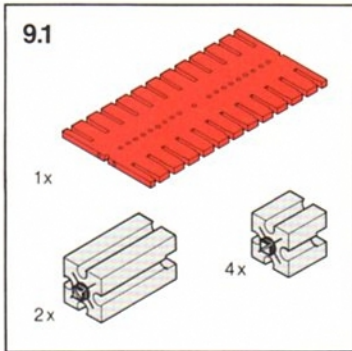
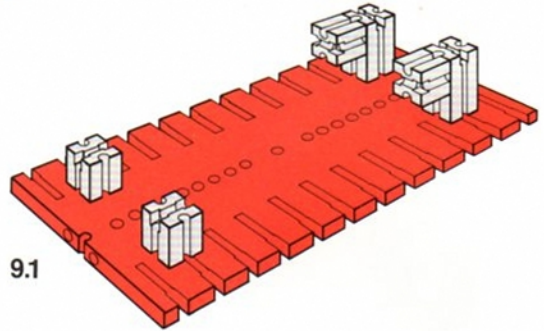
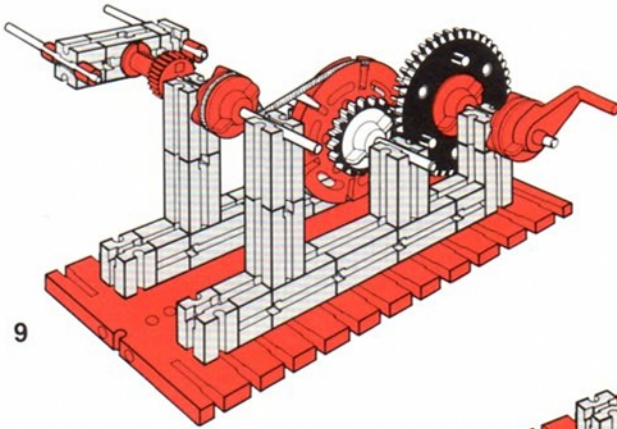
8.5



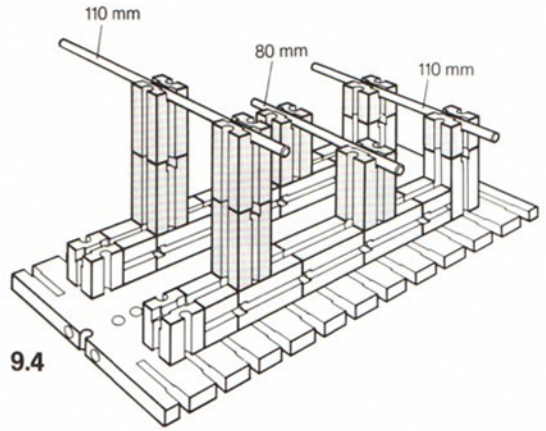
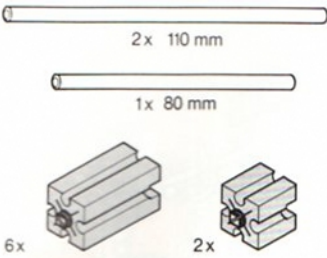
8.6

80 mm 110 mm

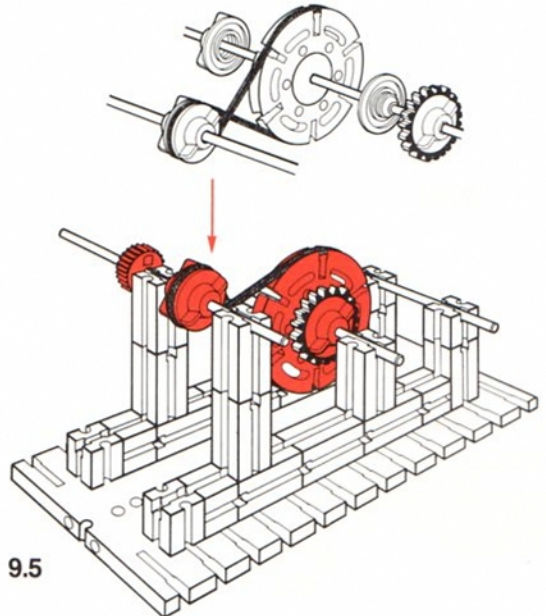
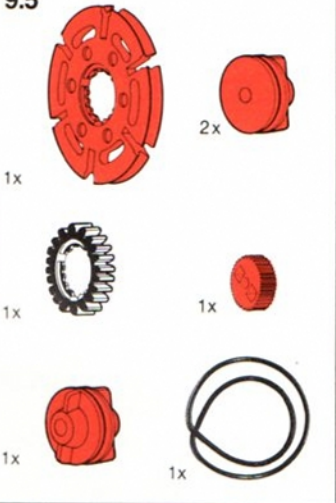


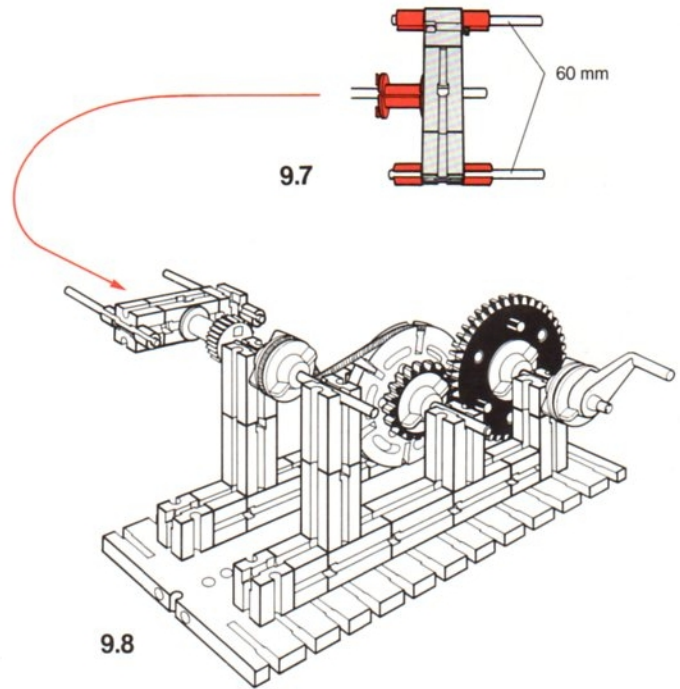
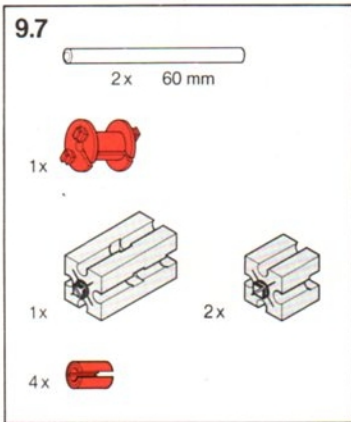
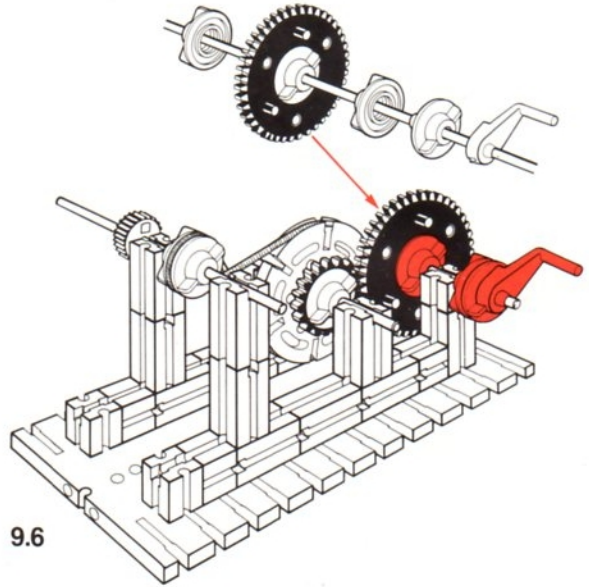
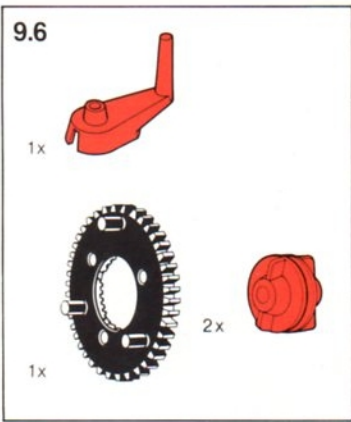


9.4



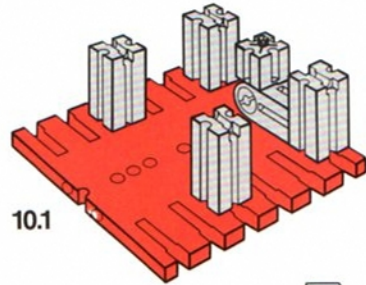
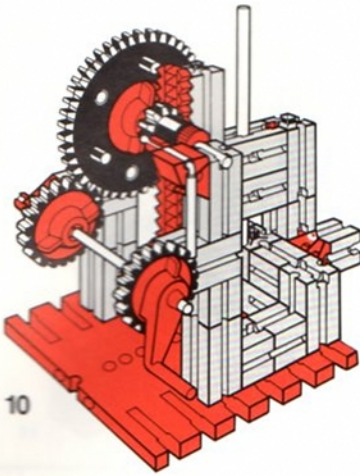
9.5





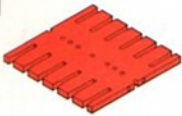
60 mm



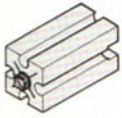


10.1

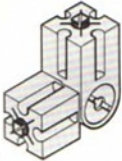
1x



4x



1x



10.2

4x



10.3

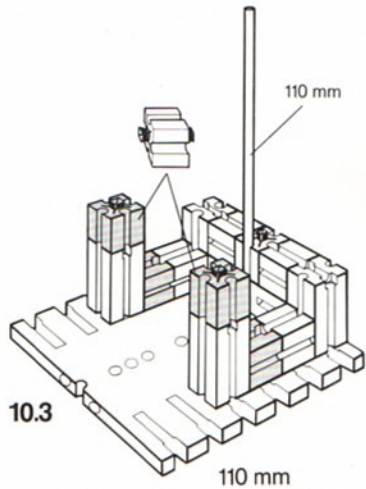
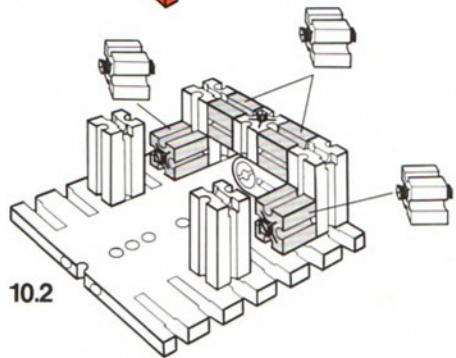
2x

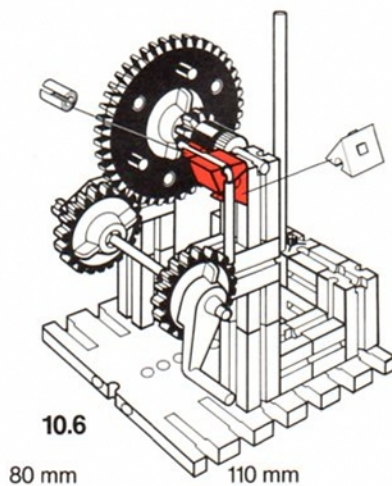
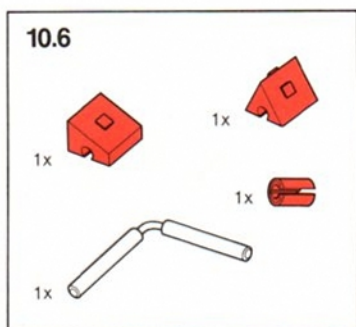
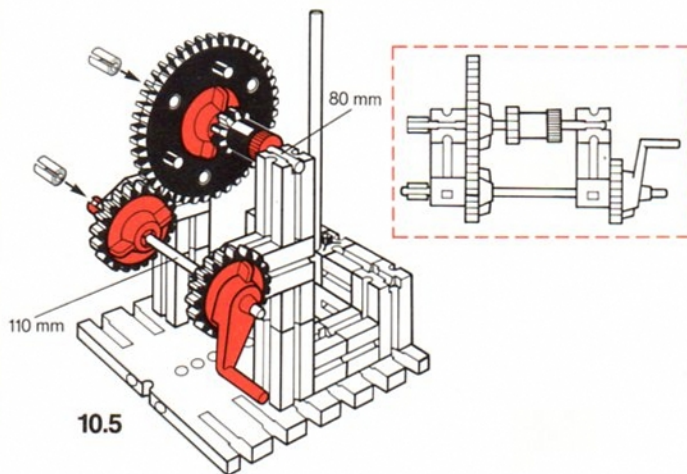
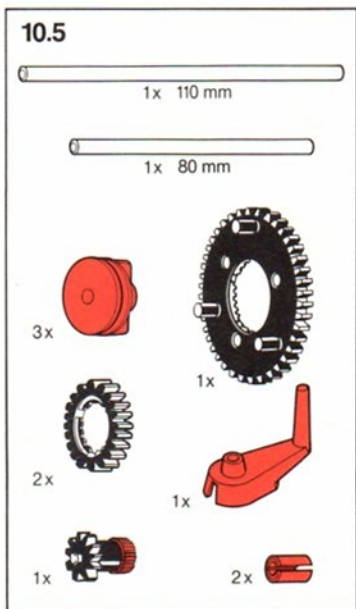
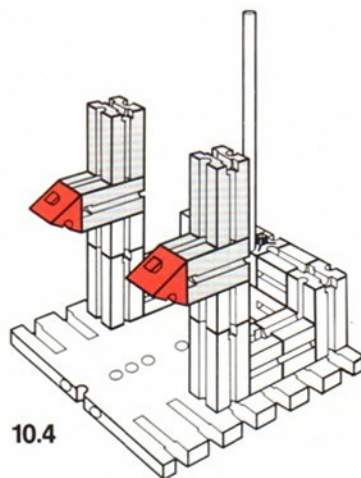
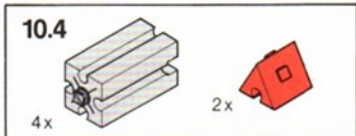


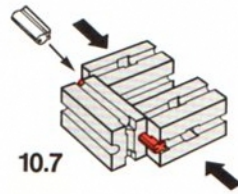
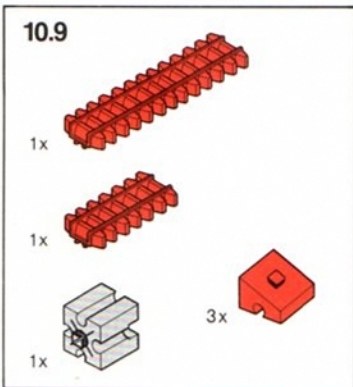
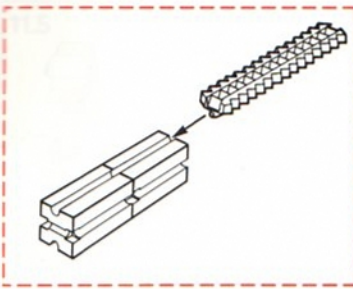
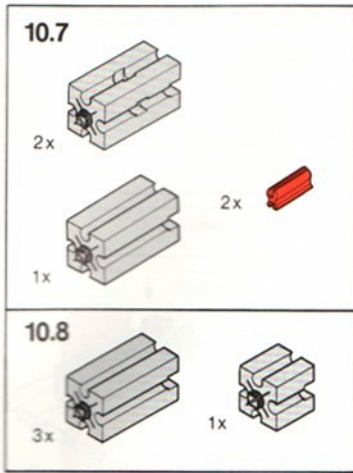
2x



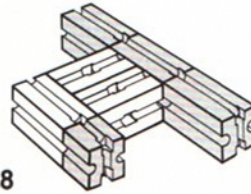
1x 110 mm



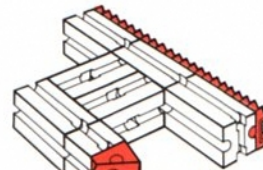




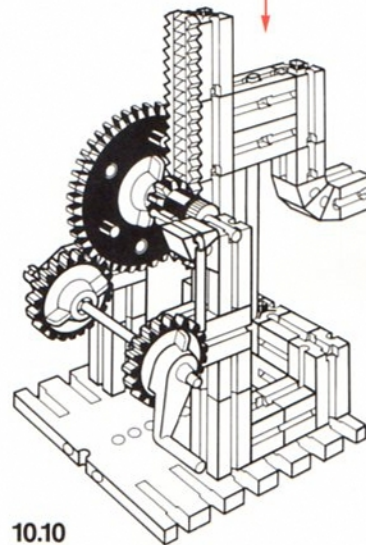
10.7



10.8

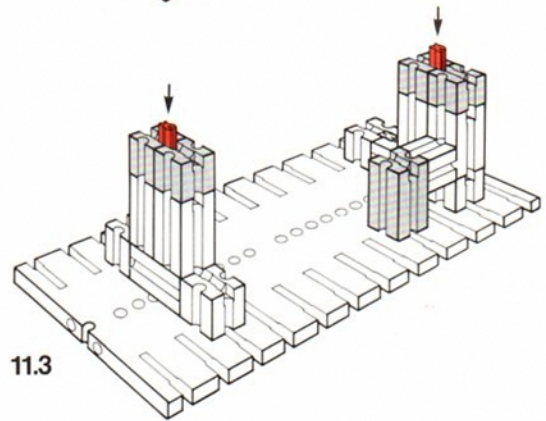
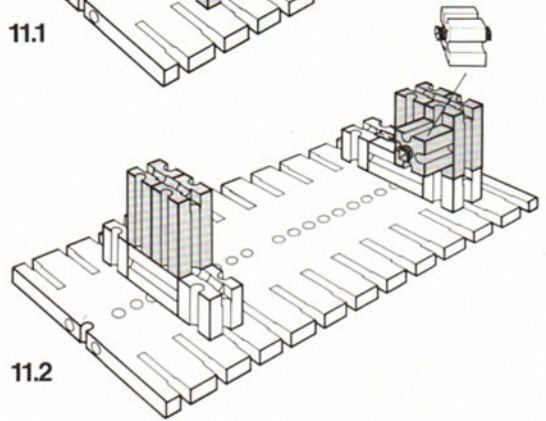
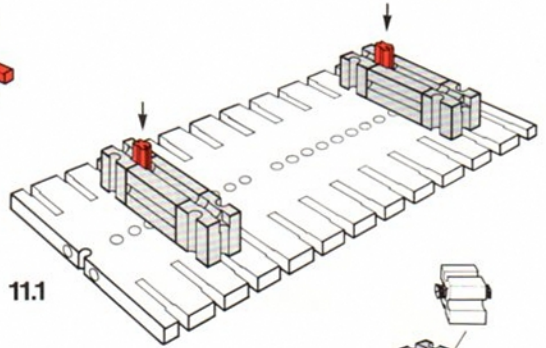
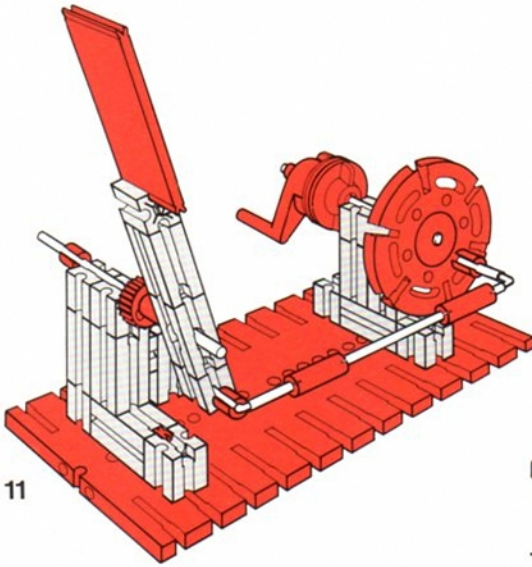


10.9



10.10





11.1

1x

2x

4x

2x

11.2

4x

1x

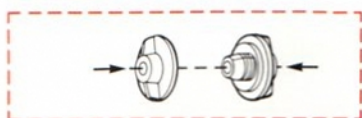
11.3

1x

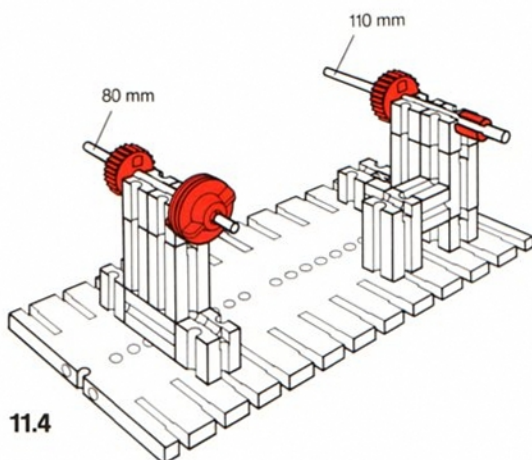
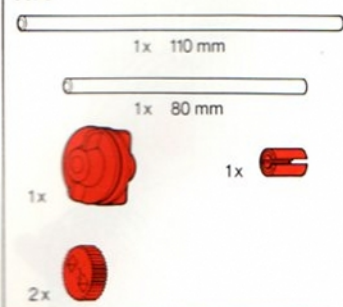
4x

2x

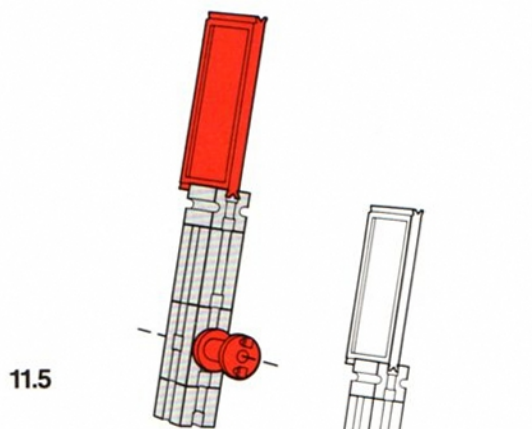
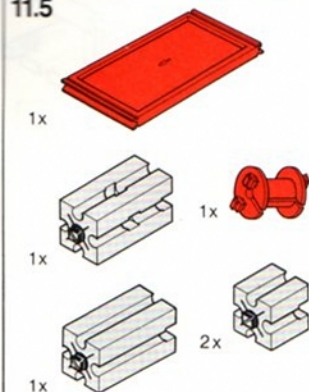




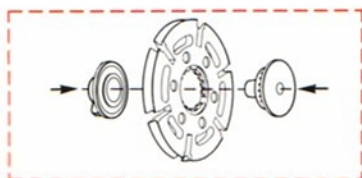
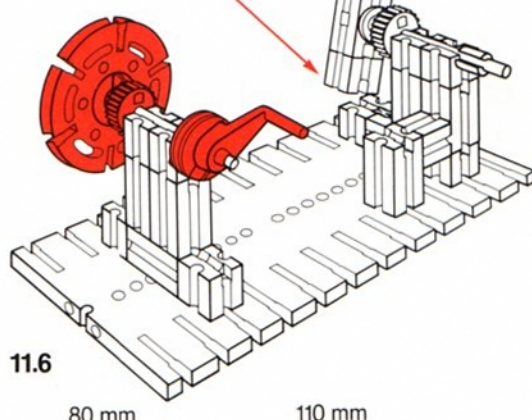
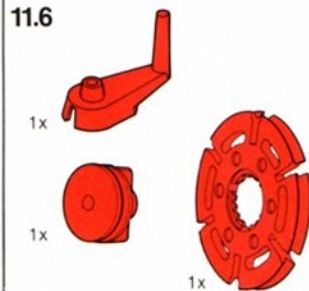
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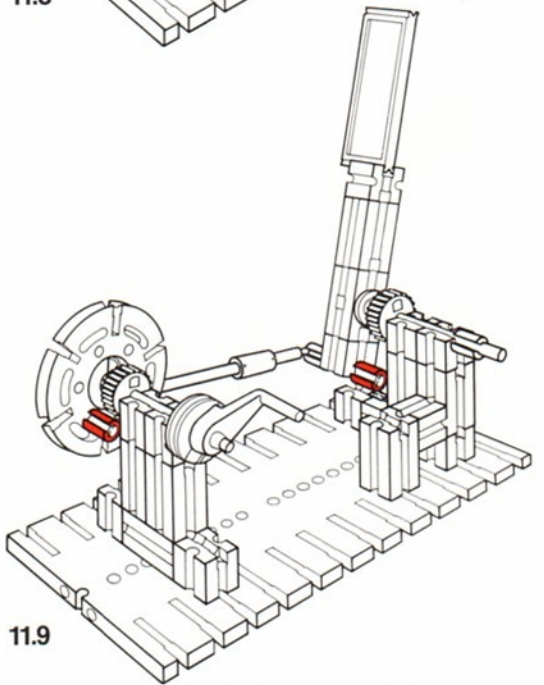
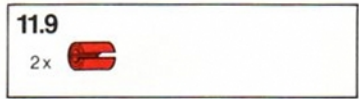
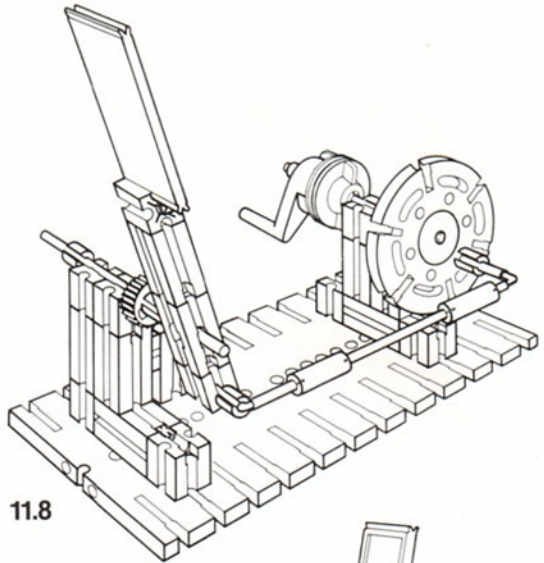
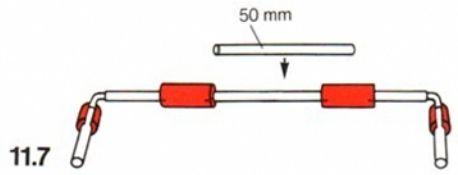
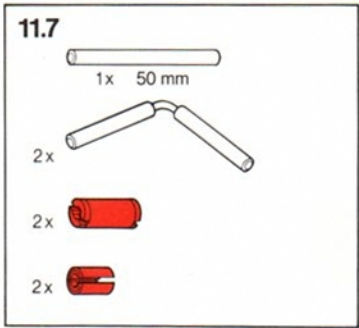


11.5



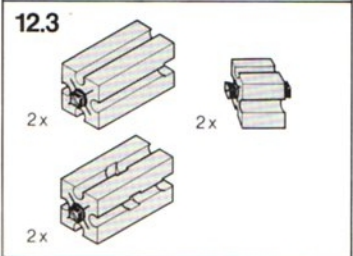
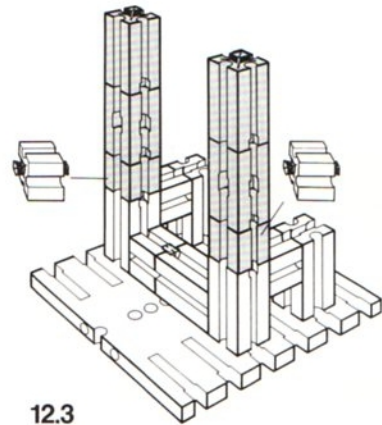
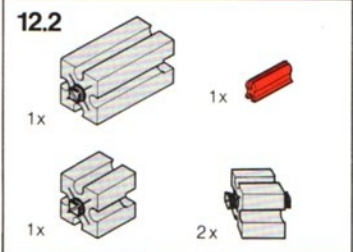
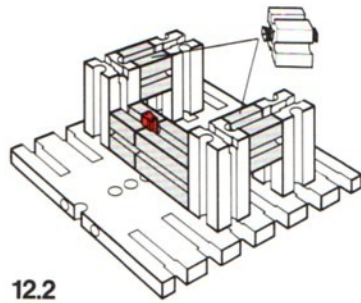
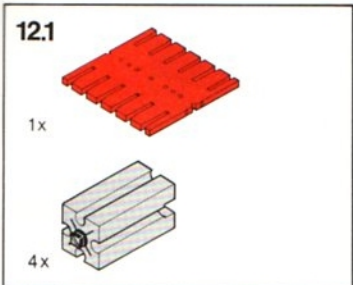
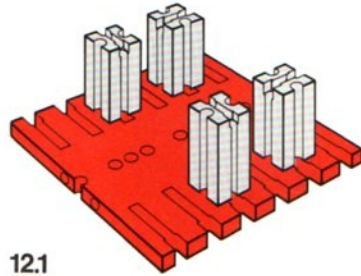
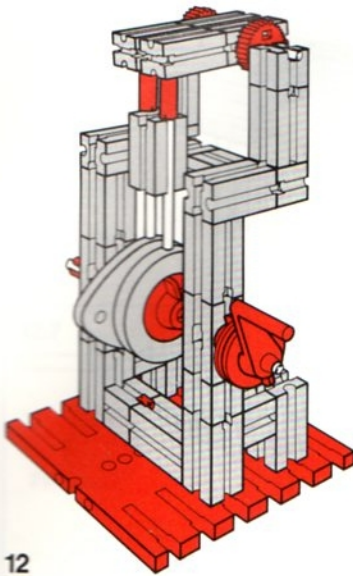
11.6



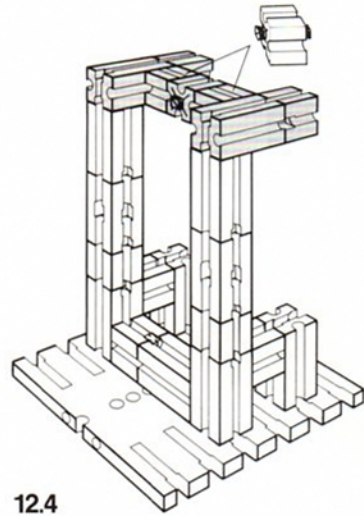
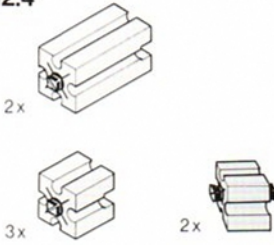


50 mm



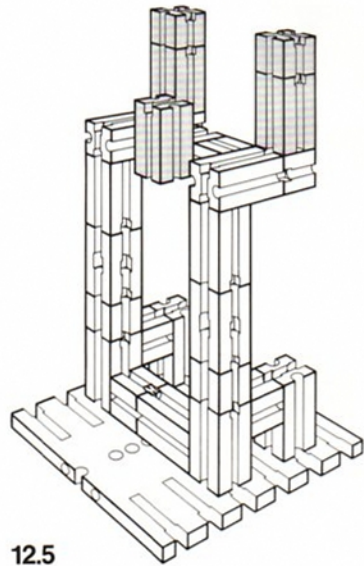
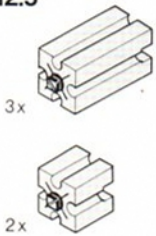


12.4



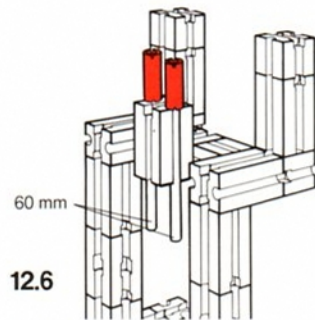
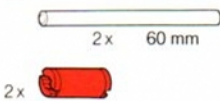
12.4

12.5



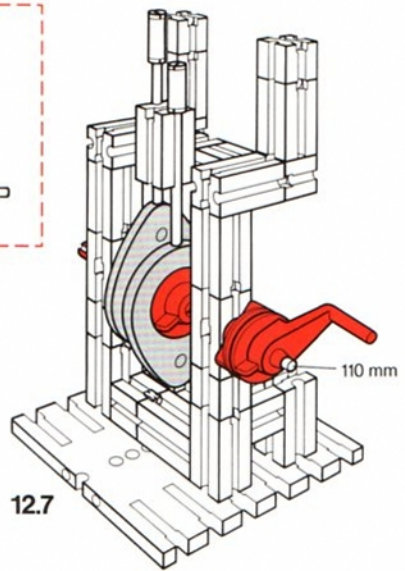
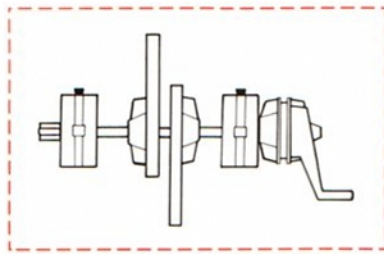
12.5

12.6



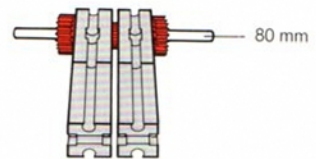
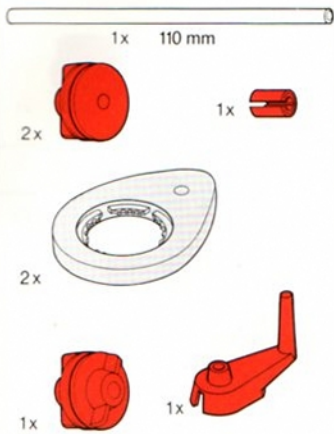
12.6

60 mm



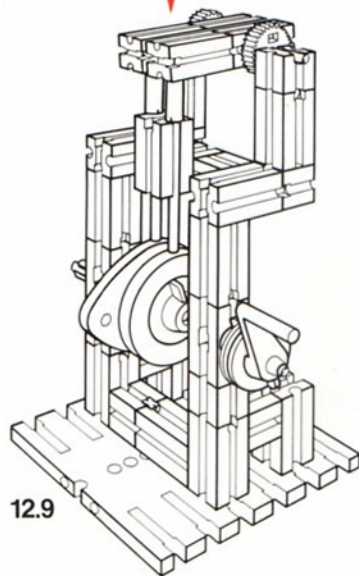
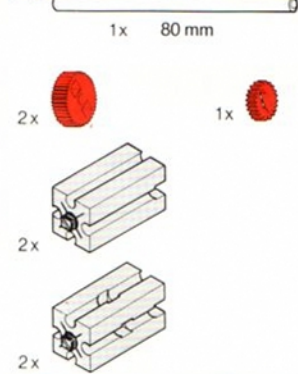
12.7

12.7



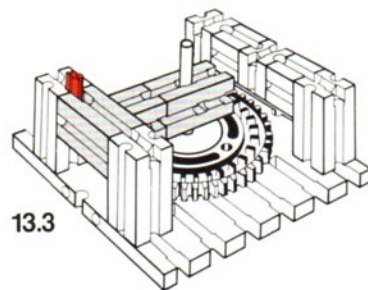
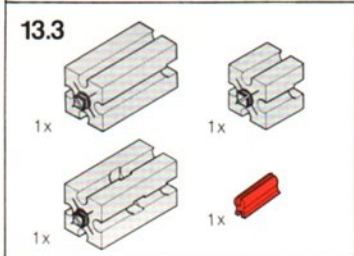
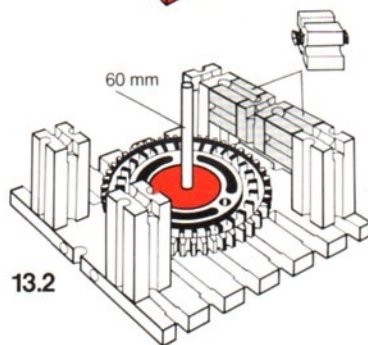
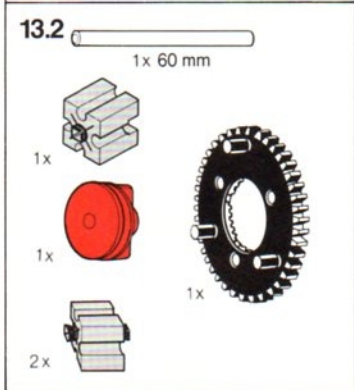
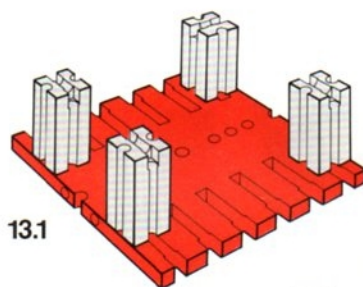
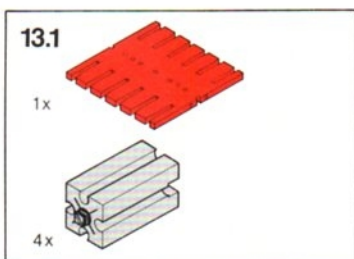
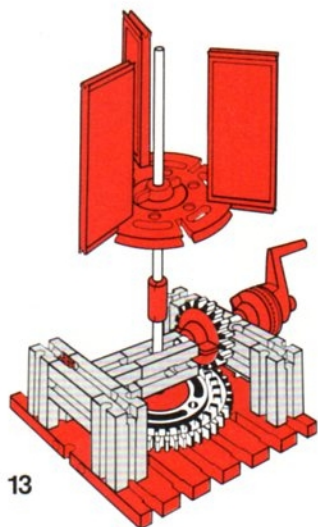
12.8

12.8



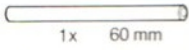
12.9





60 mm

13.4



1x



1x



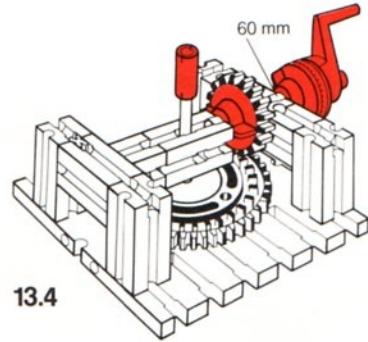
1x



1x



1x



13.4

13.5



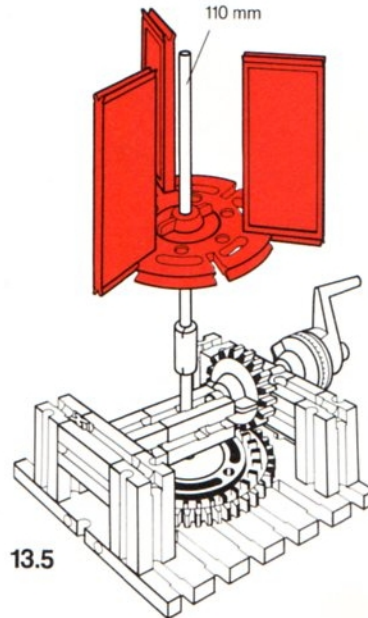
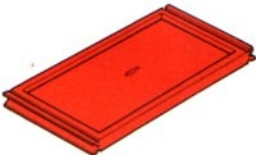
1x



1x



3x

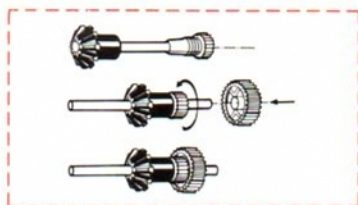
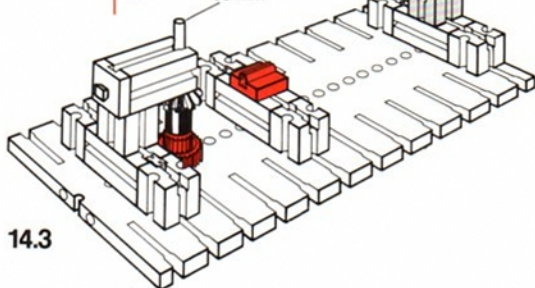
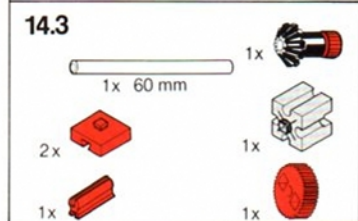
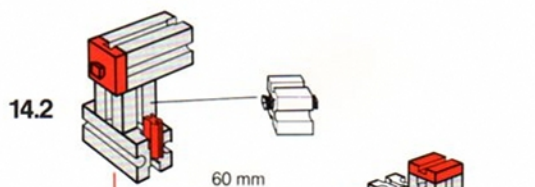
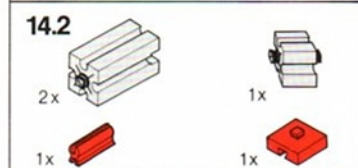
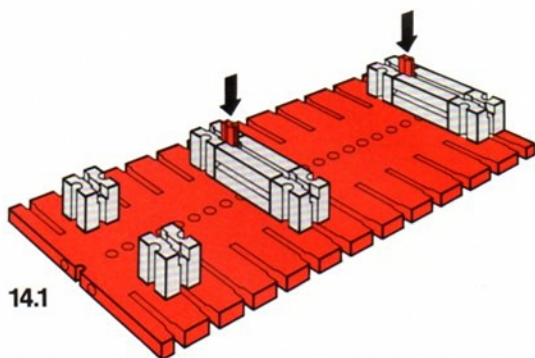
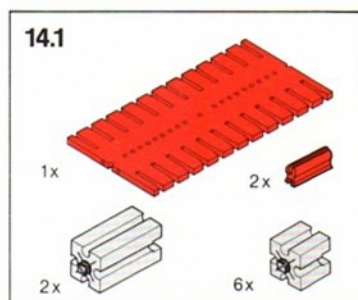
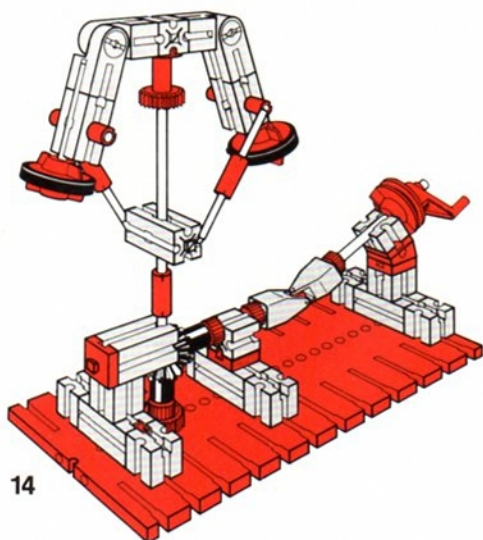


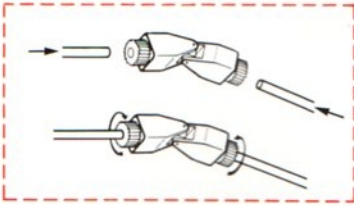
13.5

60 mm

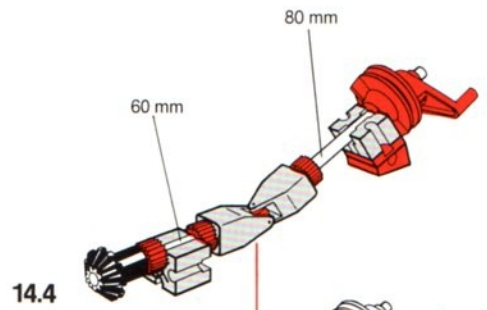
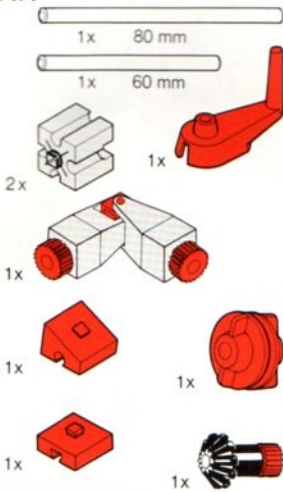
110 mm



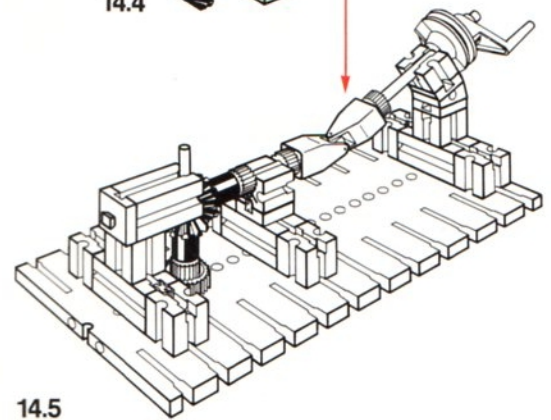




14.4

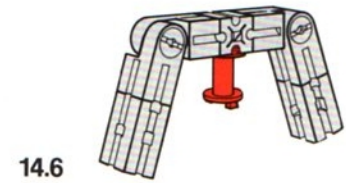
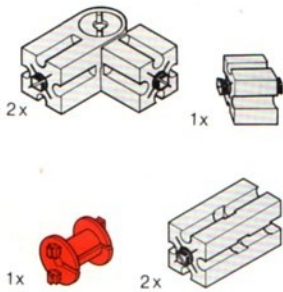


14.4



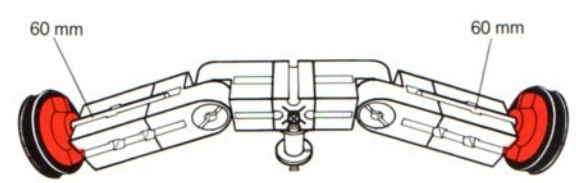
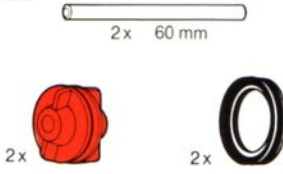
14.5

14.6



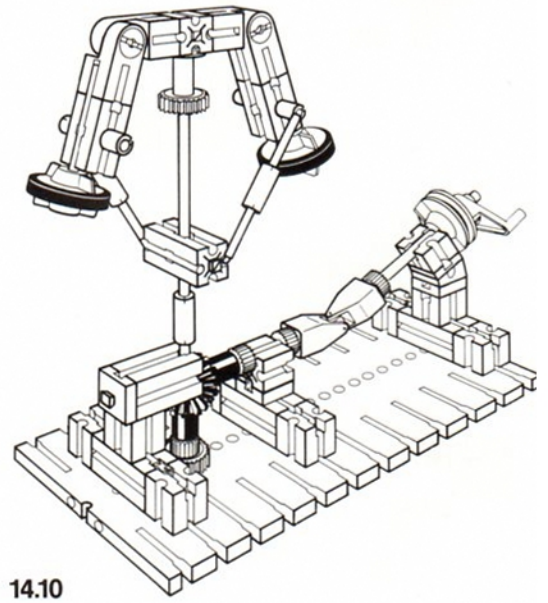
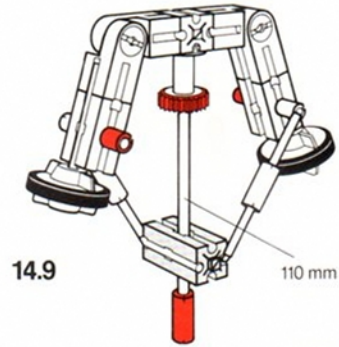
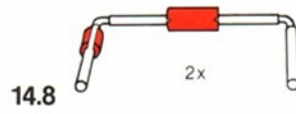
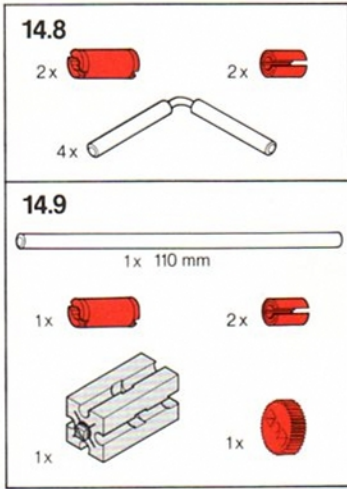
14.6

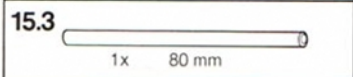
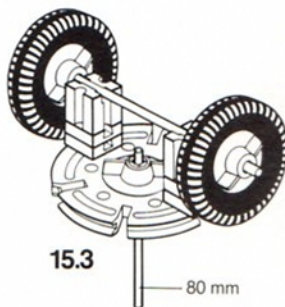
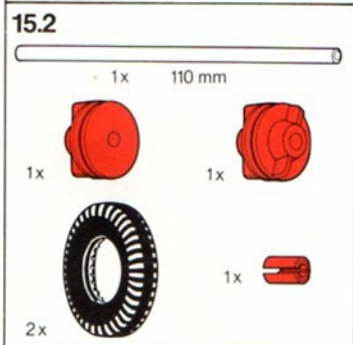
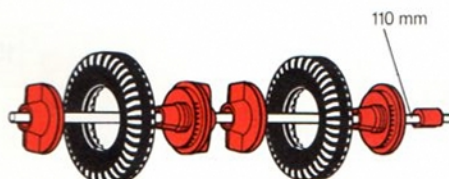
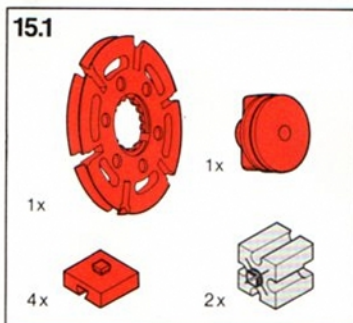
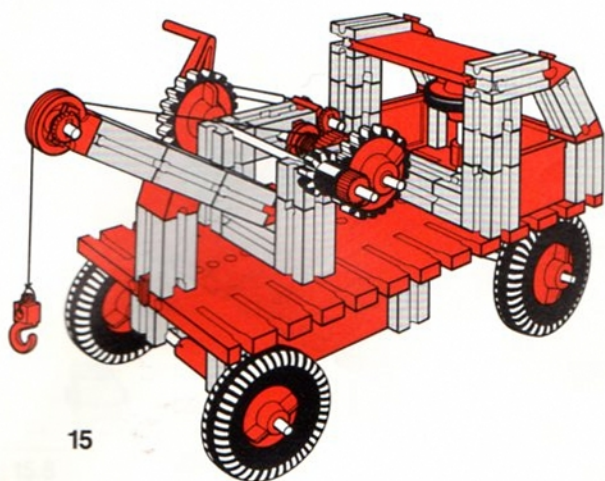
14.7



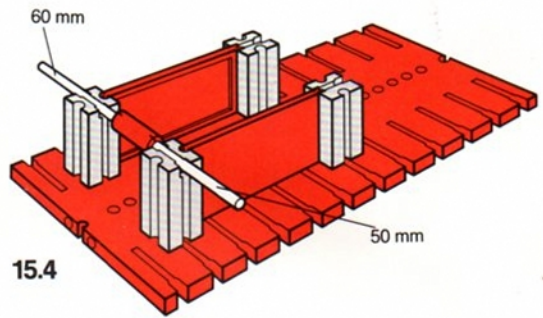
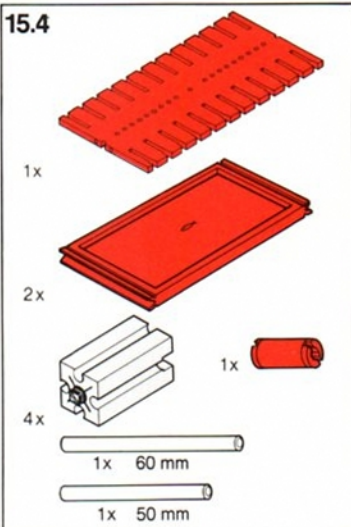
14.7



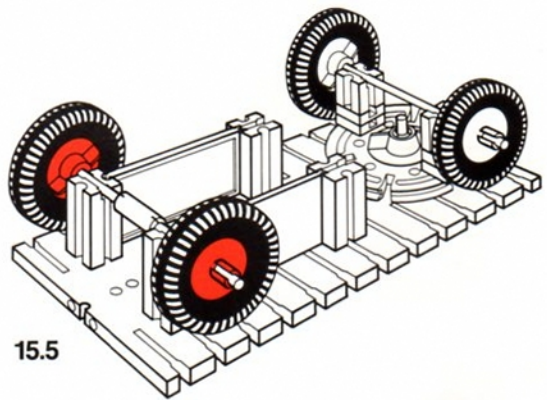
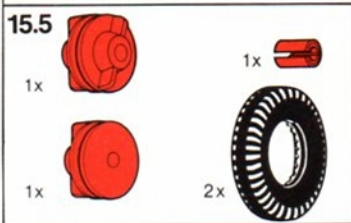




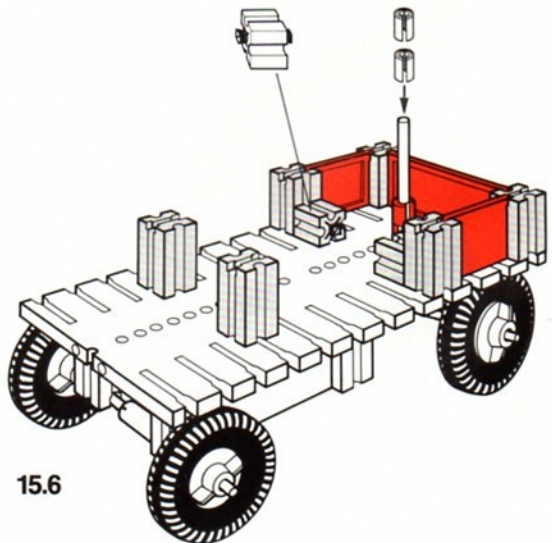
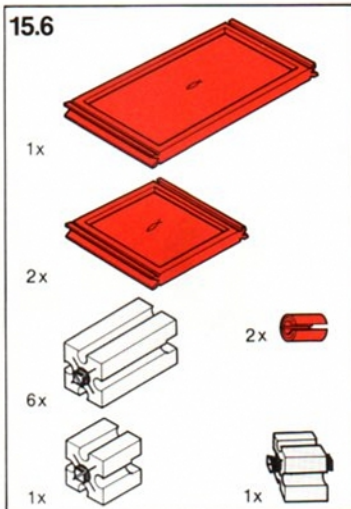
15.4



15.5



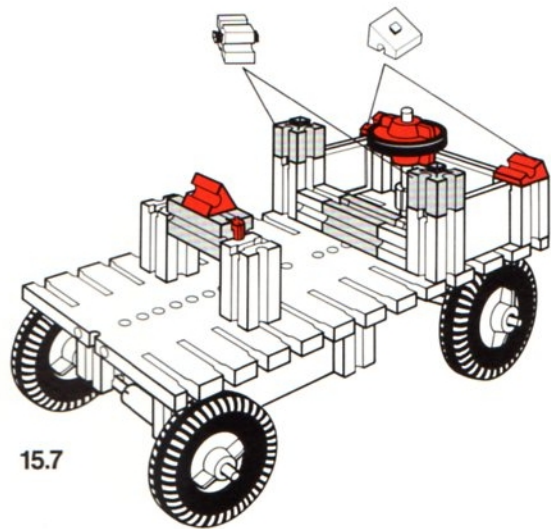
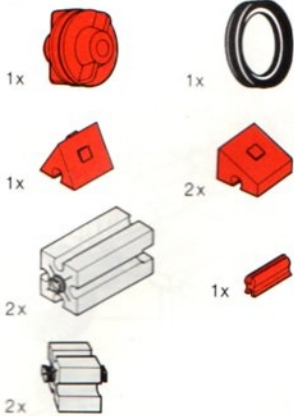
15.6



50 mm 60 mm

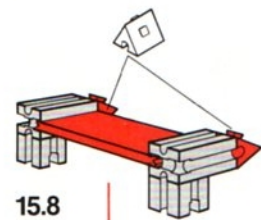
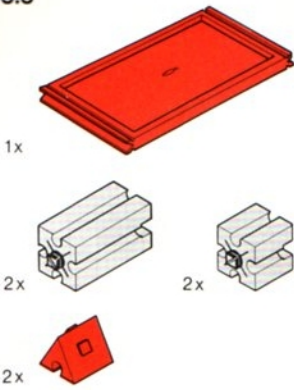


15.7

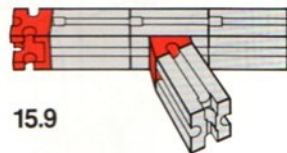


15.7

15.8

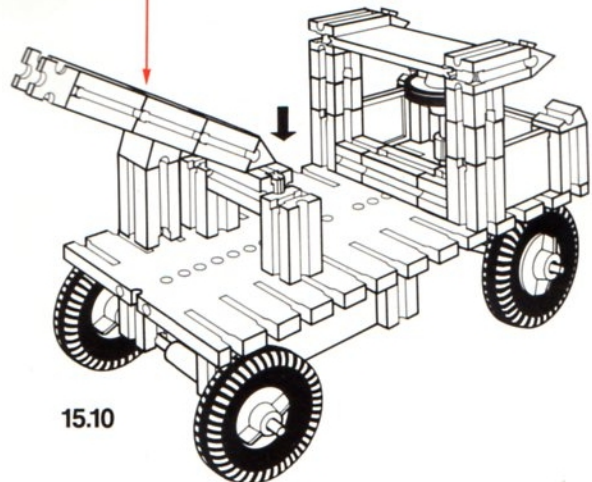
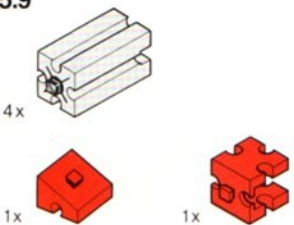


15.8



15.9

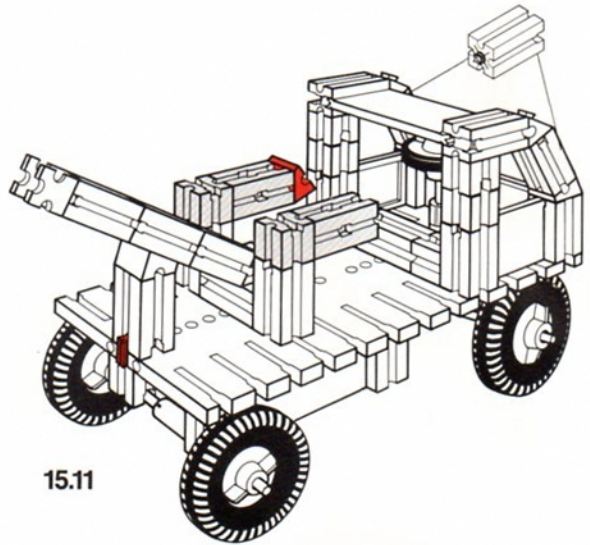
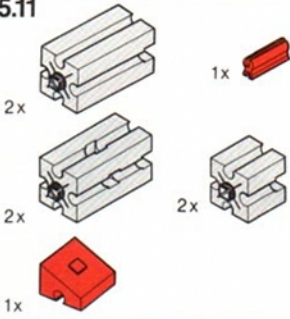
15.9



15.10

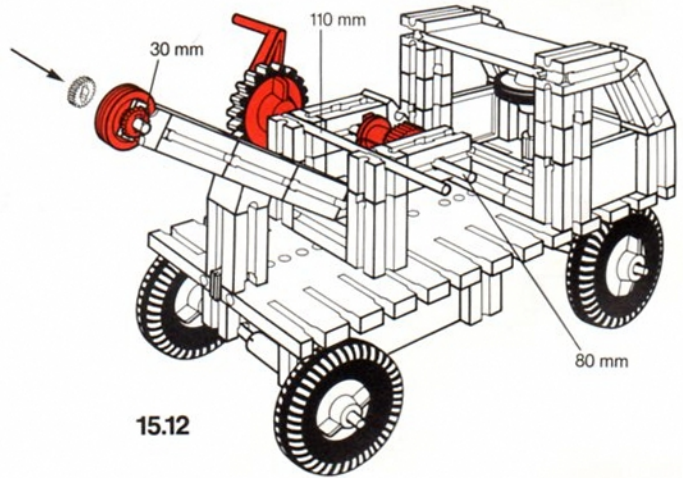
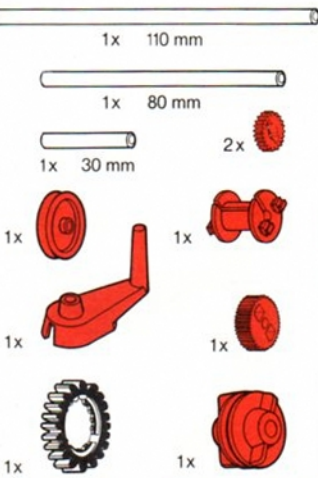


15.11

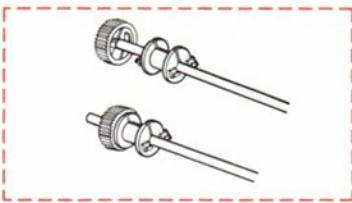


15.11

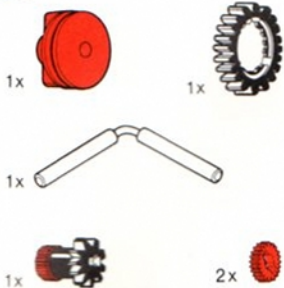
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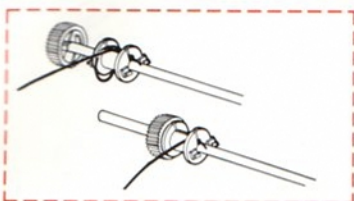
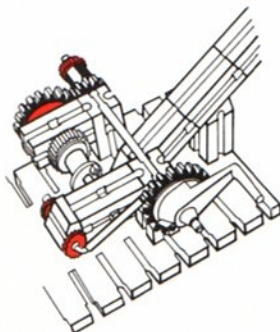
15.12



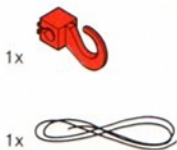
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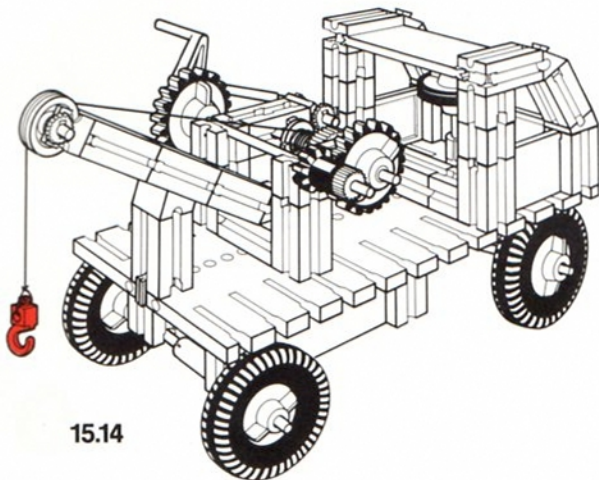
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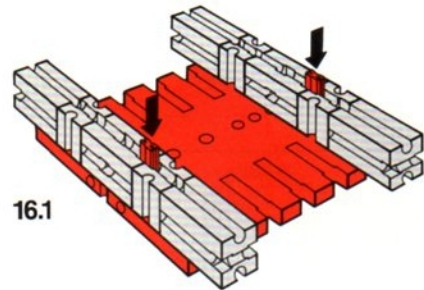
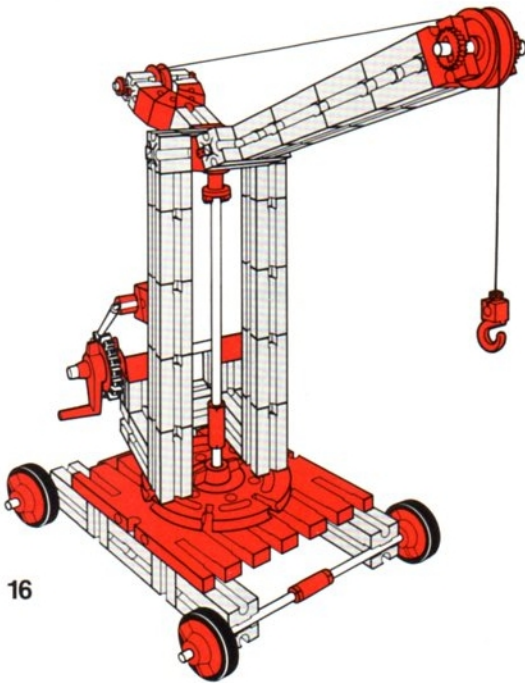


15.14



15.14



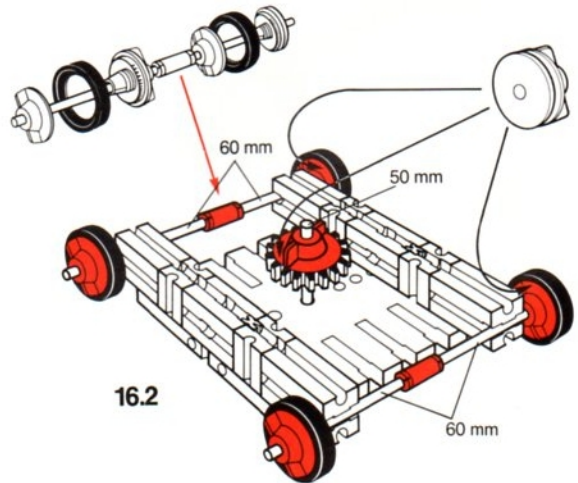


16.1

- 1x [Red base plate]
- 2x [Grey beam]
- 2x [Red pin]
- 4x [Grey beam]
- 4x [Grey beam]

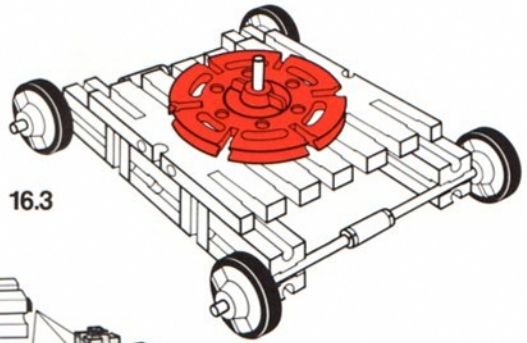
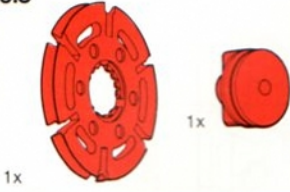
16.2

- 4x 60 mm [Grey axle]
- 1x 50 mm [Grey axle]
- 2x [Red pulley]
- 4x [Black O-ring]
- 3x [Red pulley]
- 1x [Black gear]
- 2x [Red pin]

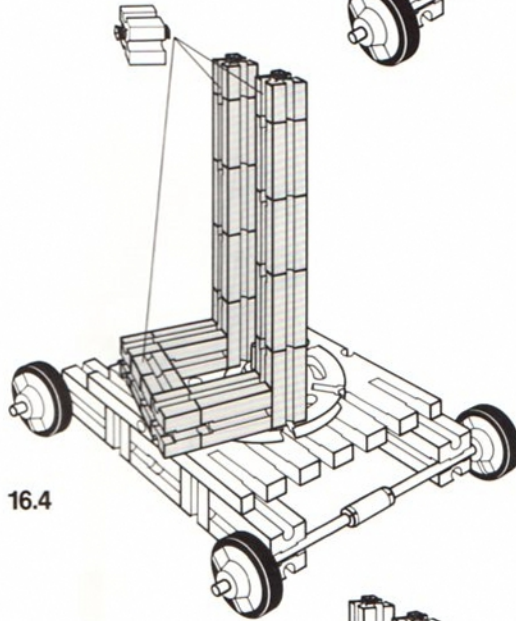
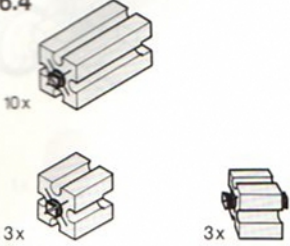


50 mm 60 mm

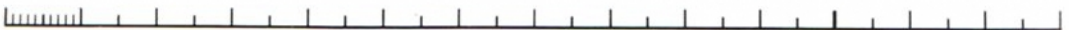
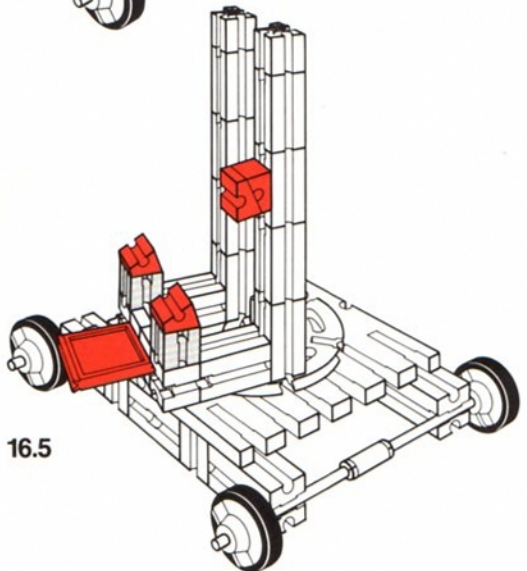
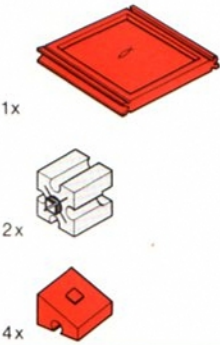
16.3



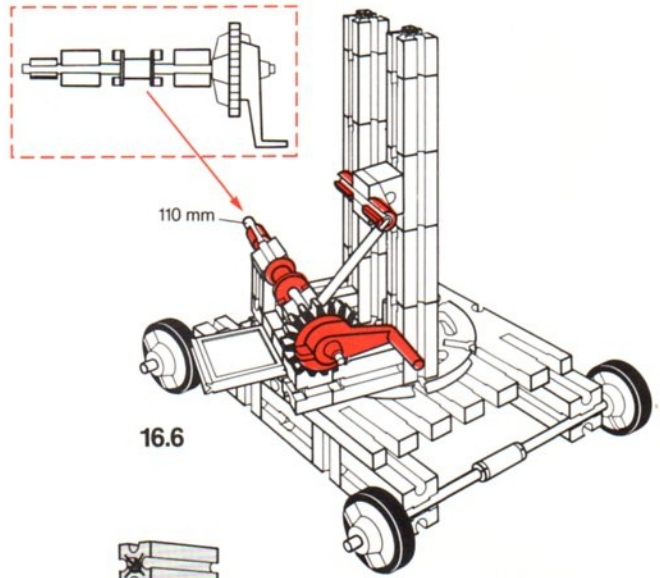
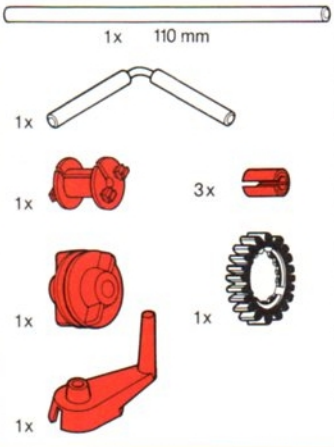
16.4



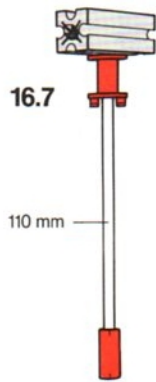
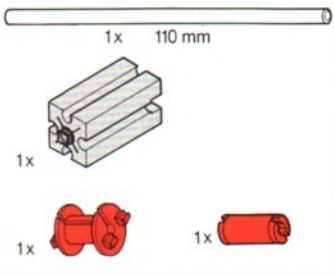
16.5



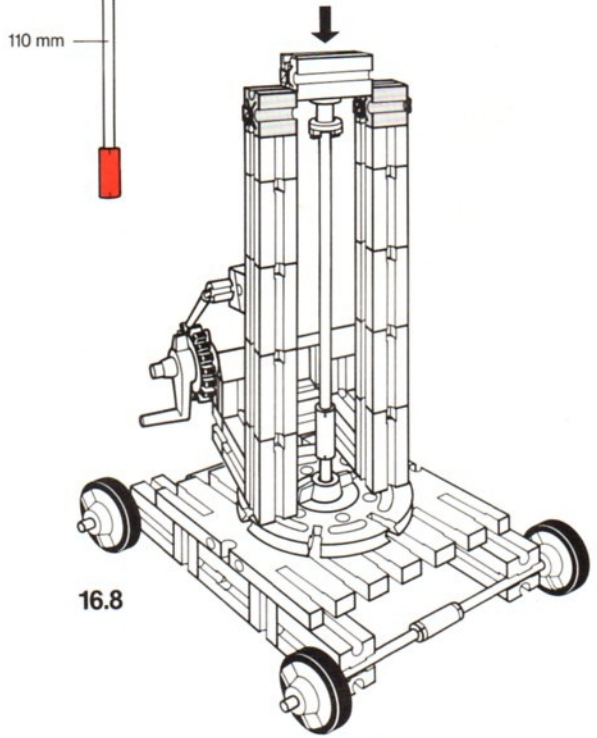
16.6



16.7



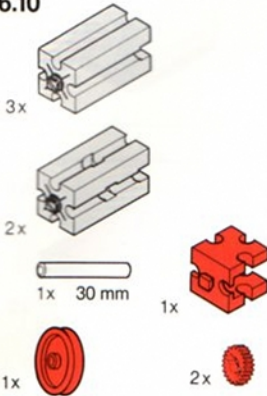
16.8



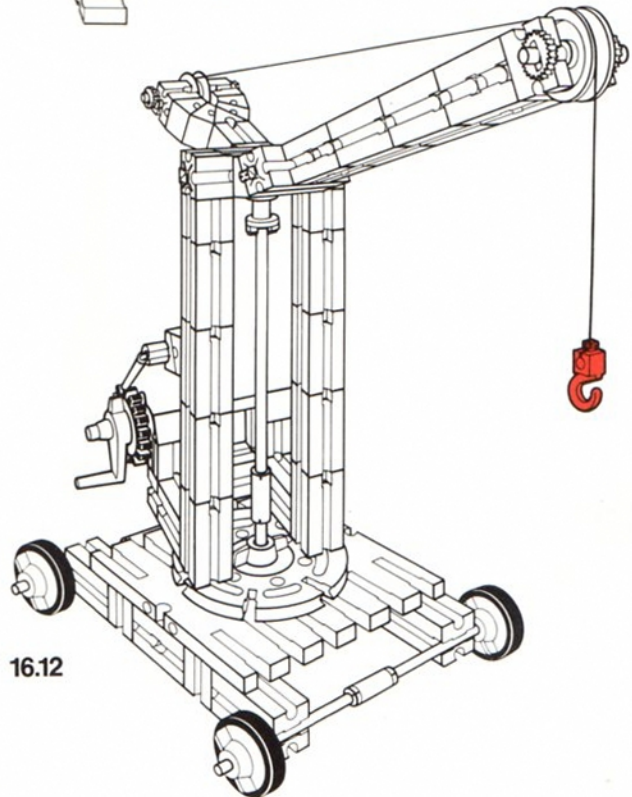
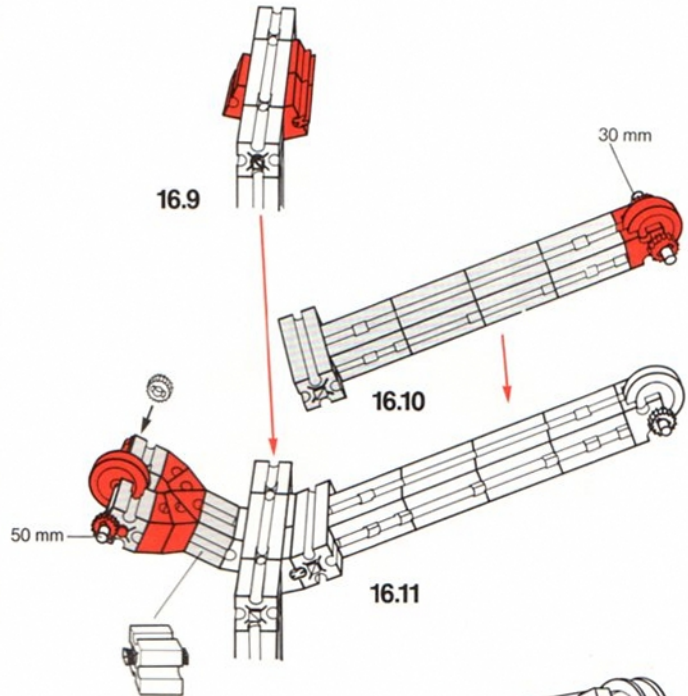
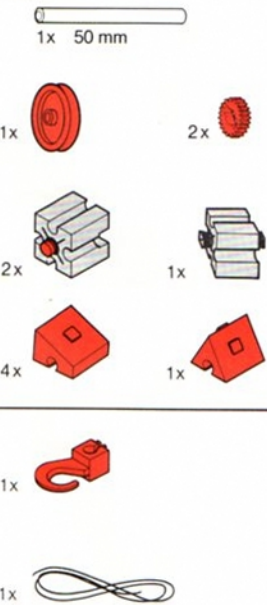
16.9

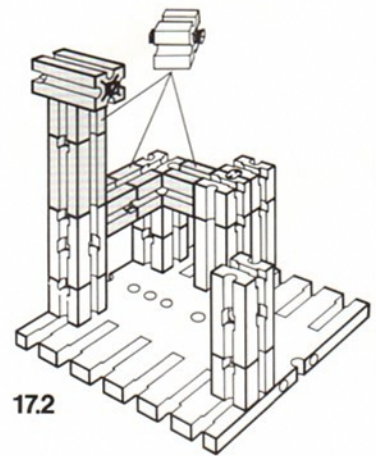
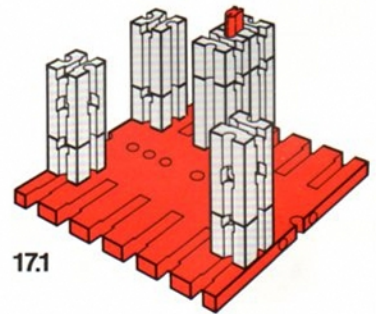
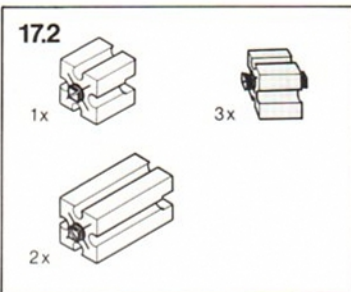
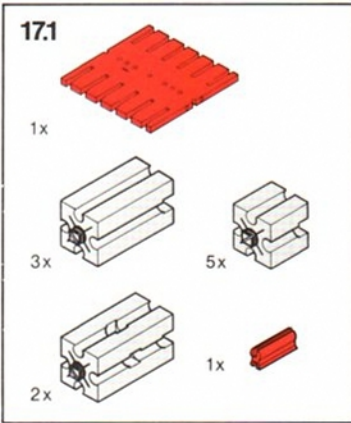
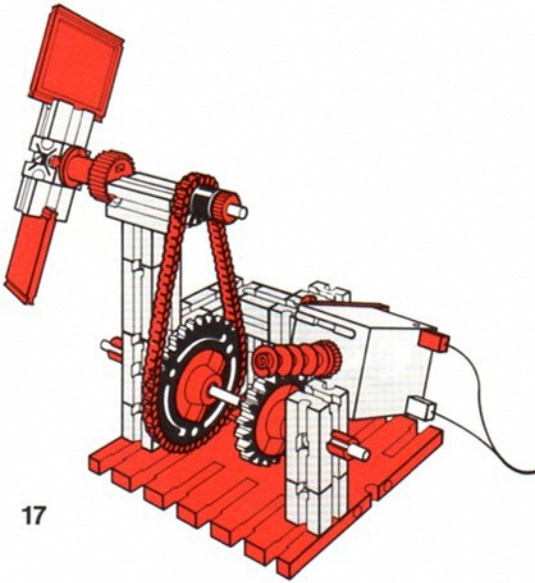


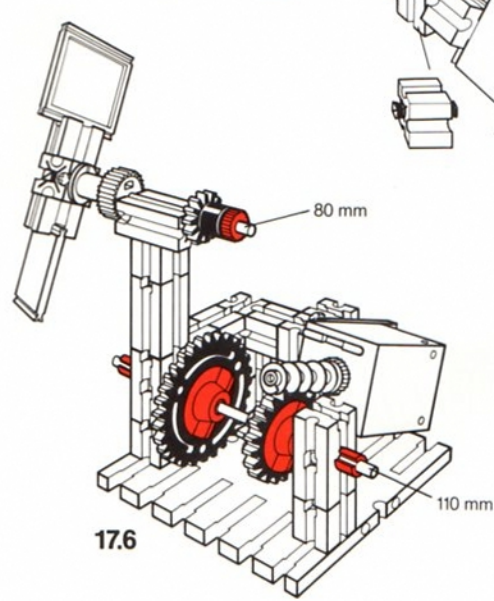
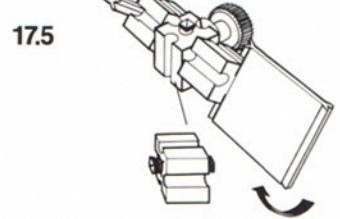
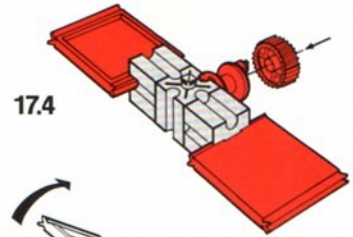
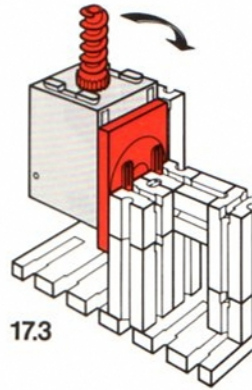
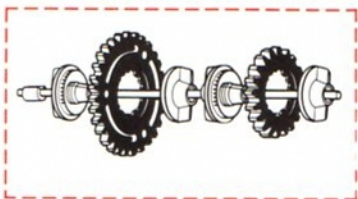
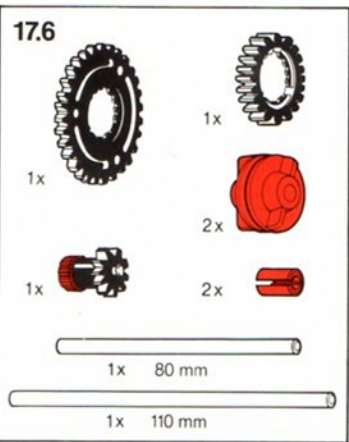
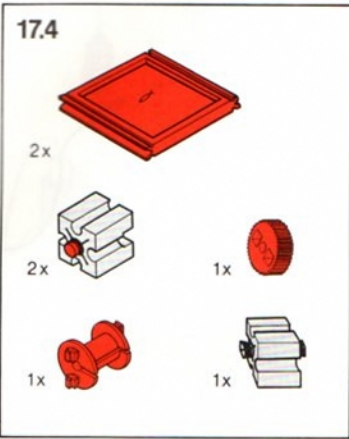
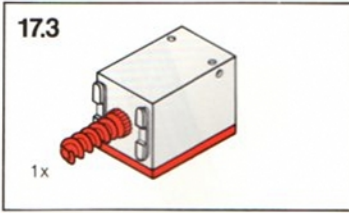
16.10

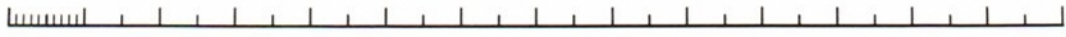
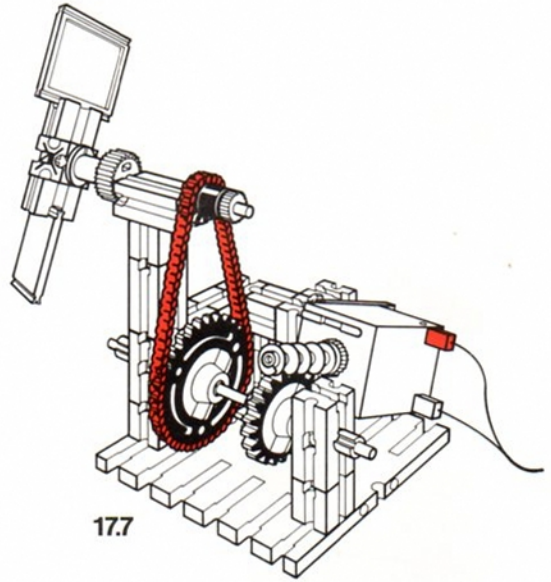
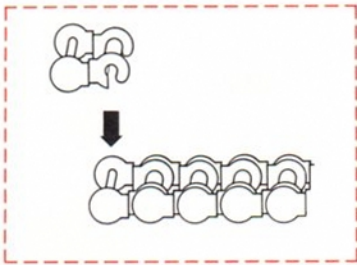
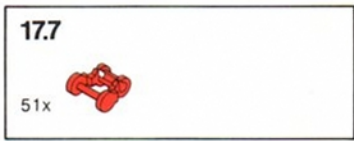


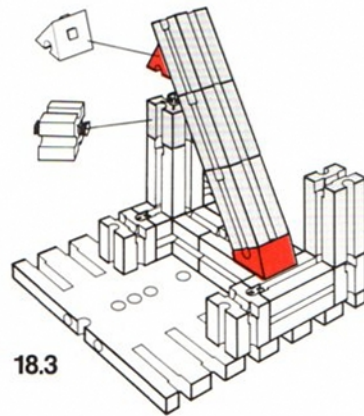
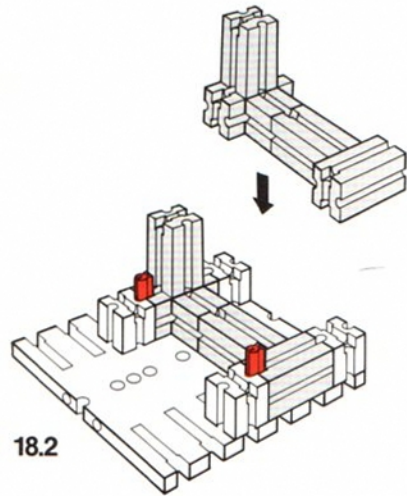
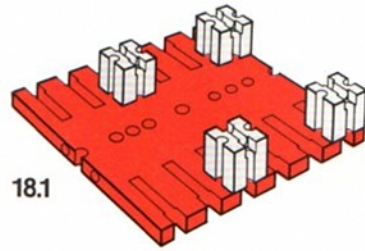
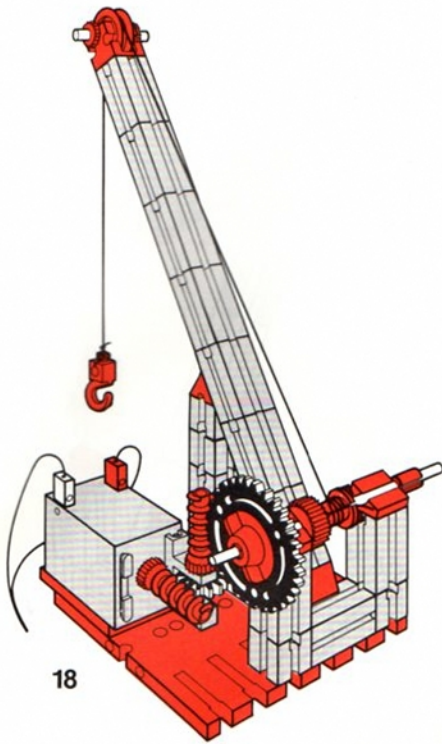
16.11











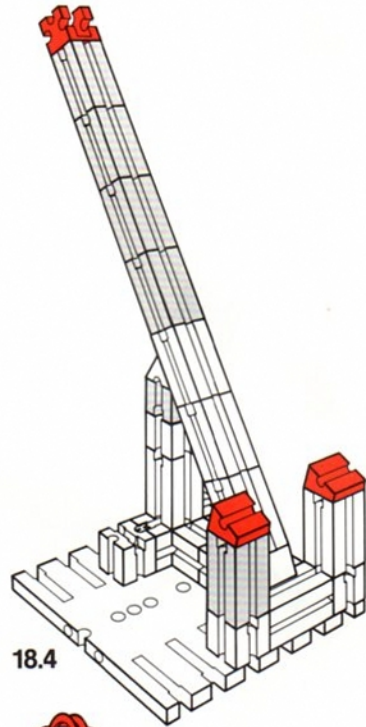
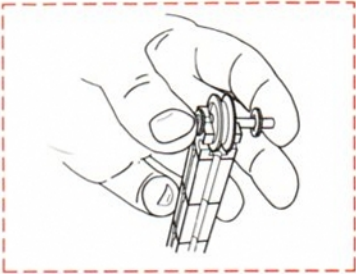
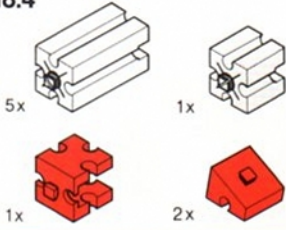
18.1	
1x	
4x	

18.2	
2x	
4x	1x

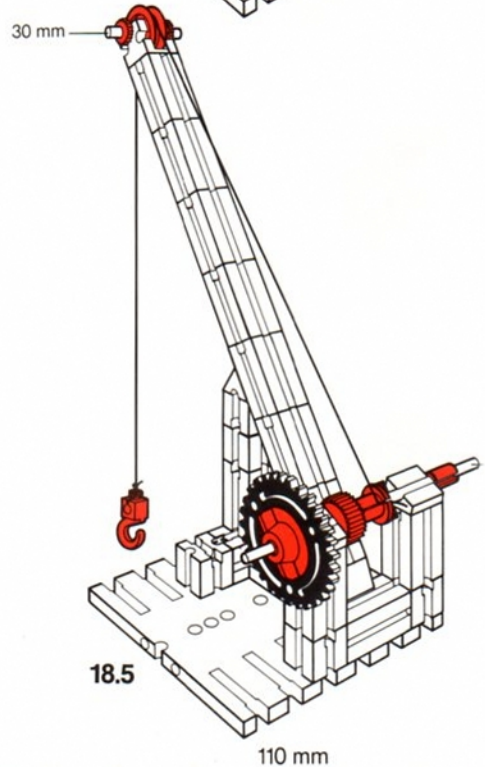
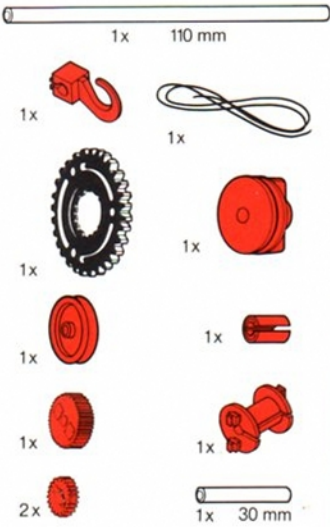
18.3		
1x		1x
4x	1x	

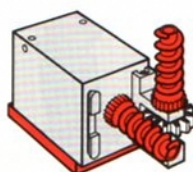
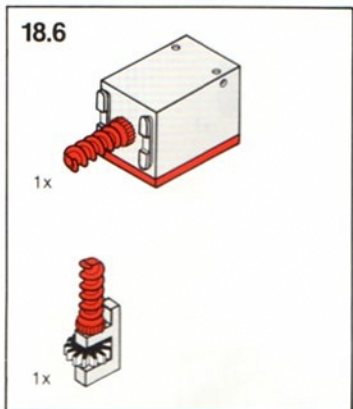


18.4

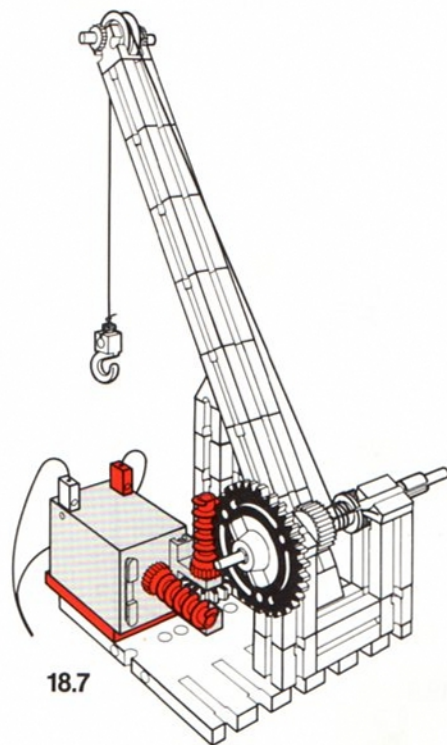


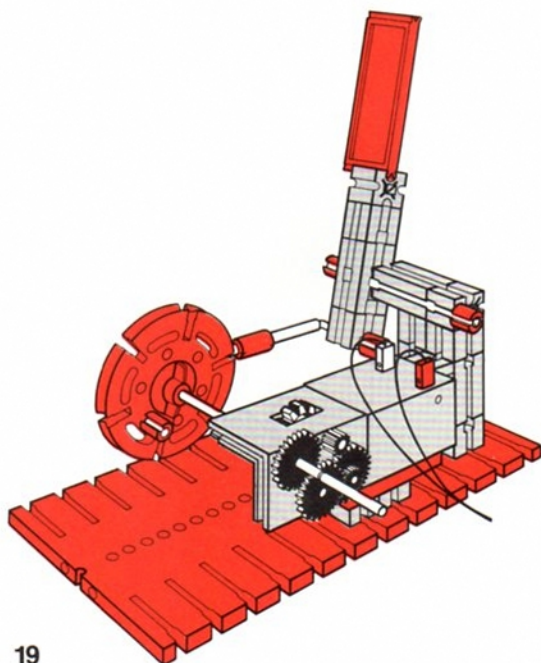
18.5



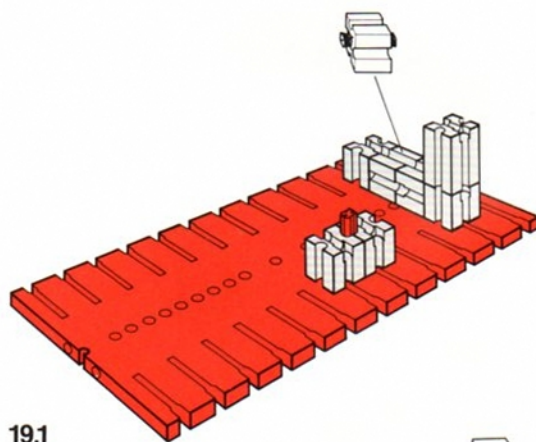
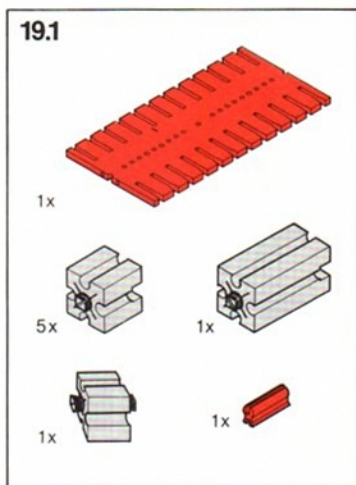


18.6

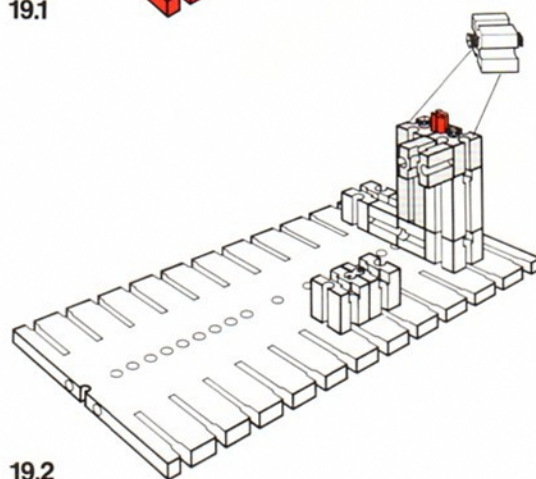
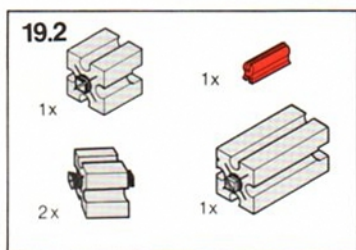




19

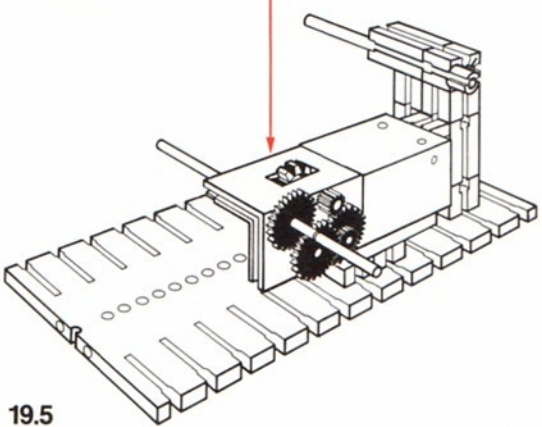
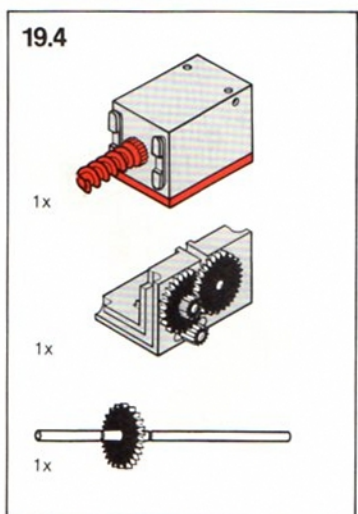
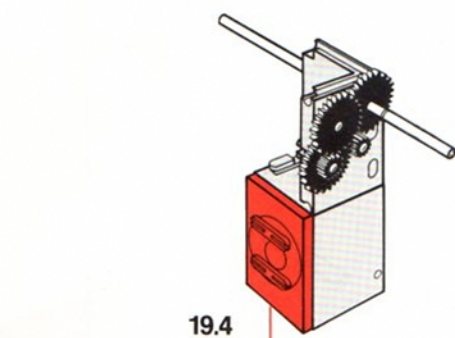
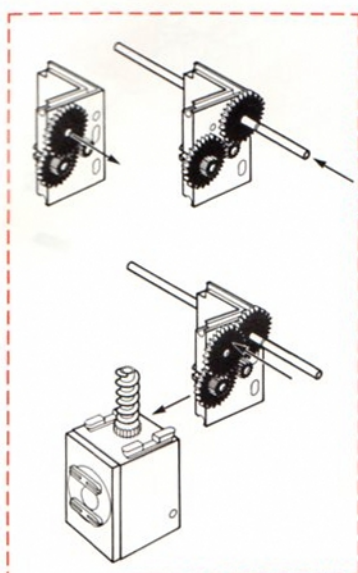
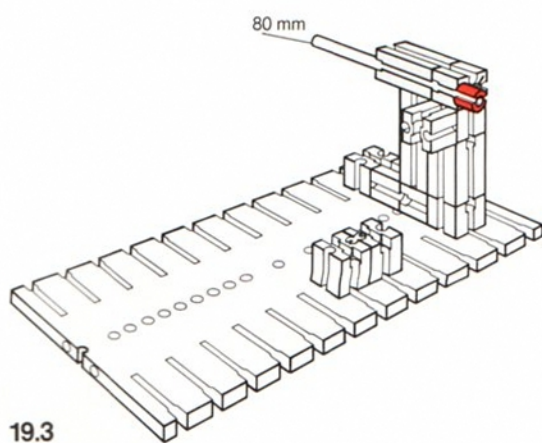
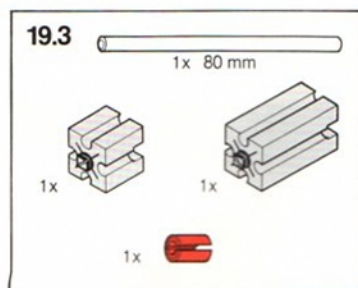


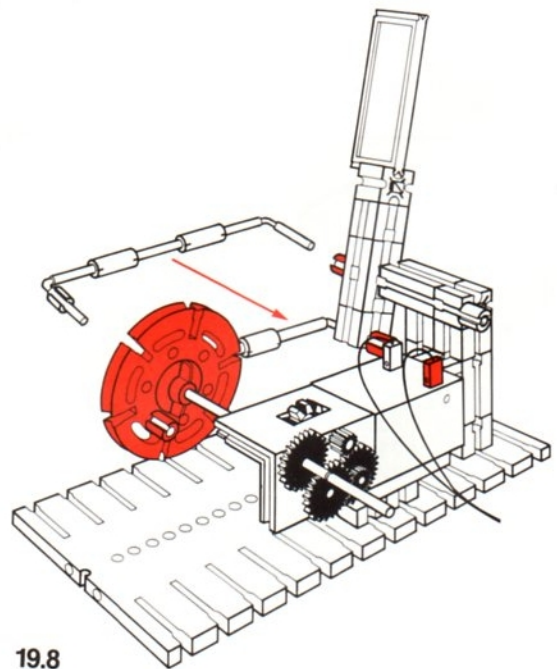
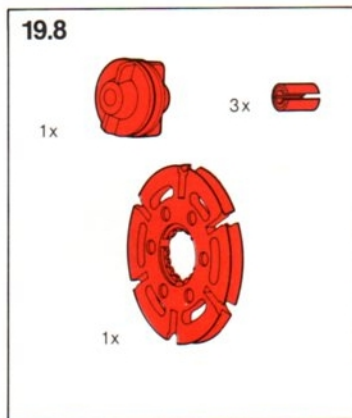
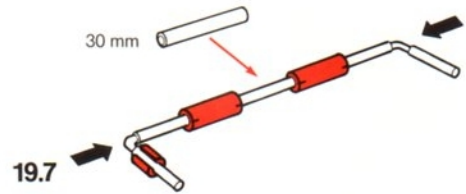
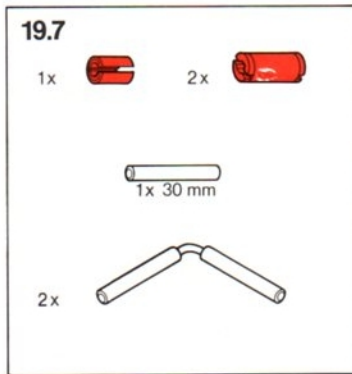
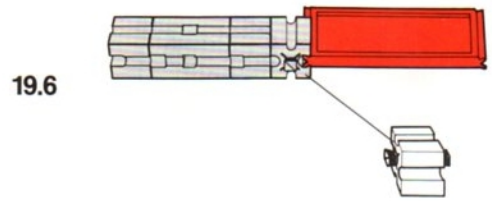
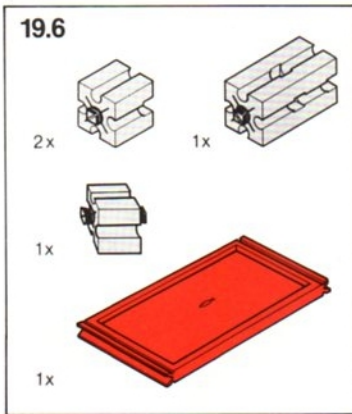
19.1

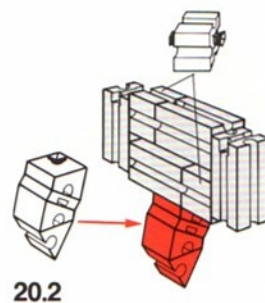
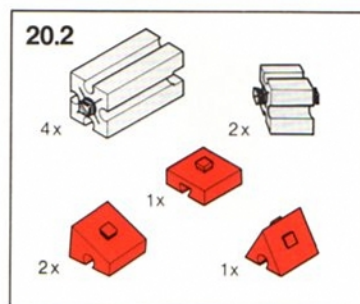
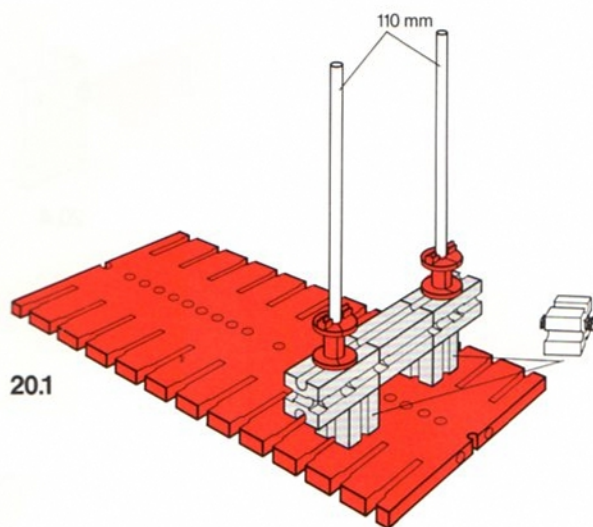
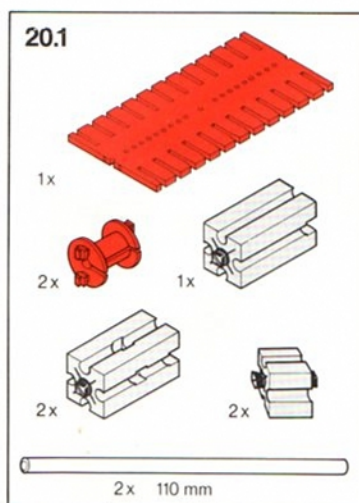
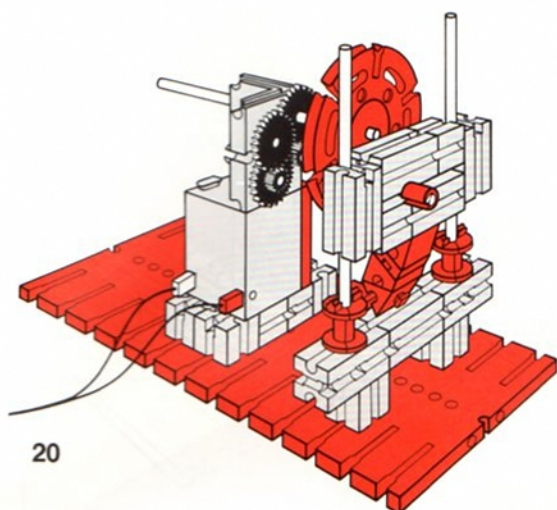


19.2





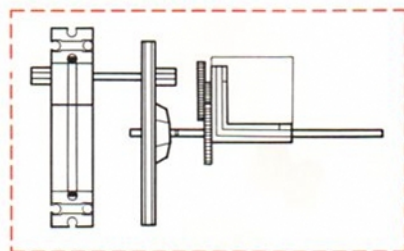
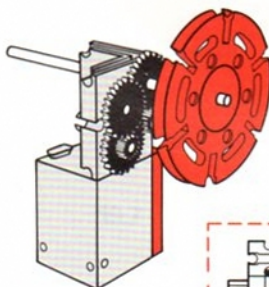
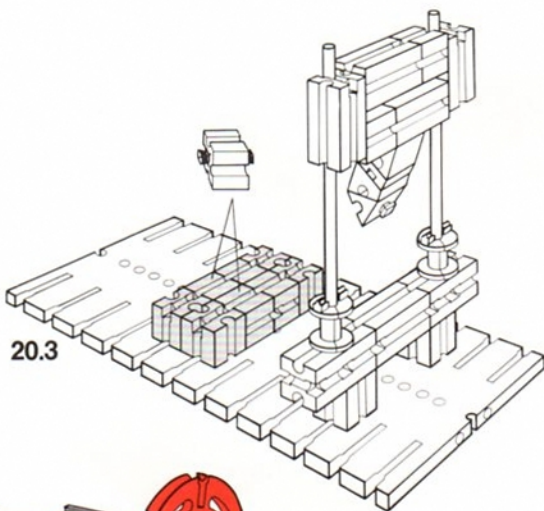
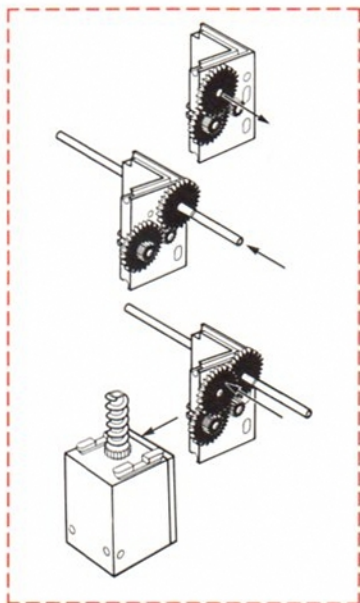




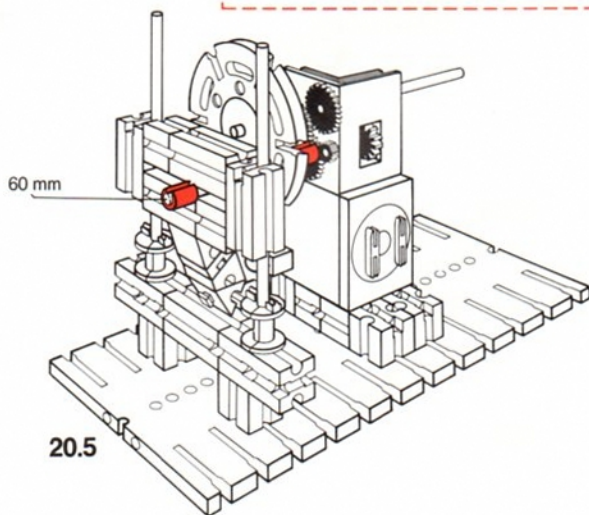
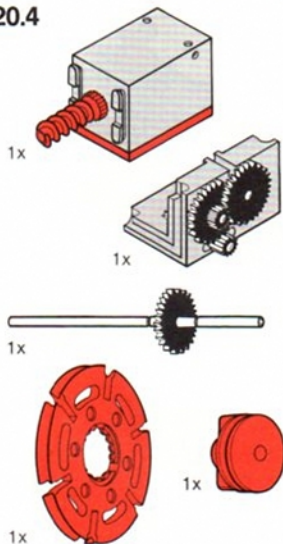
110 mm



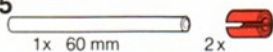
20.3



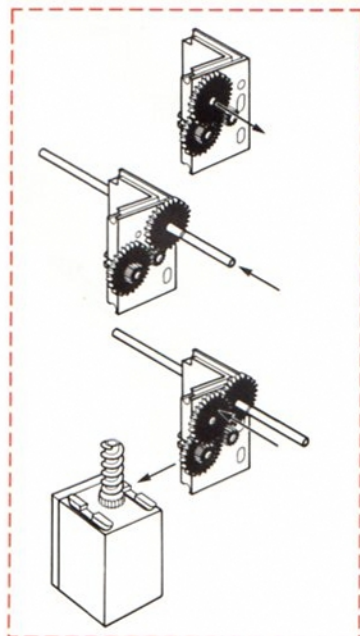
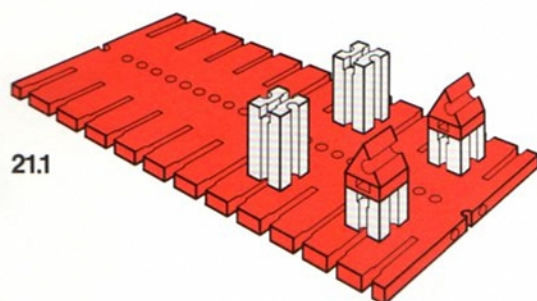
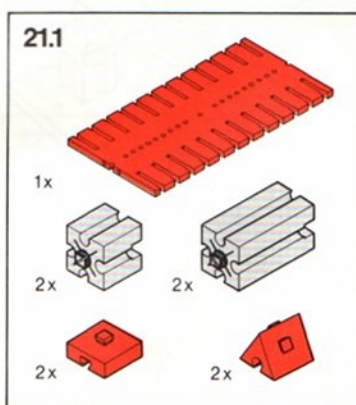
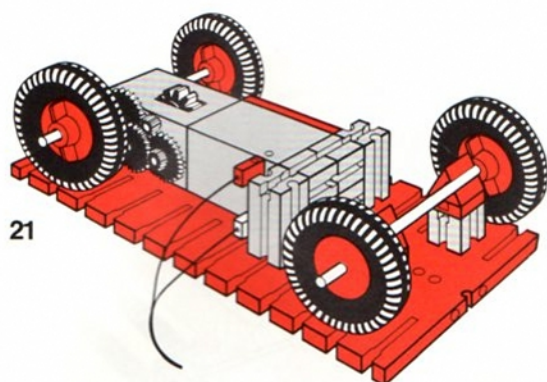
20.4

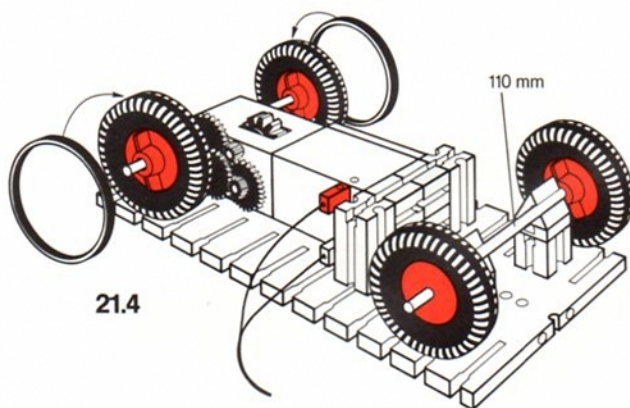
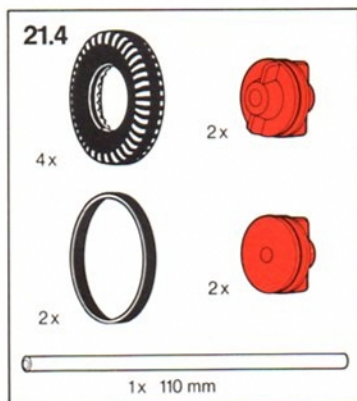
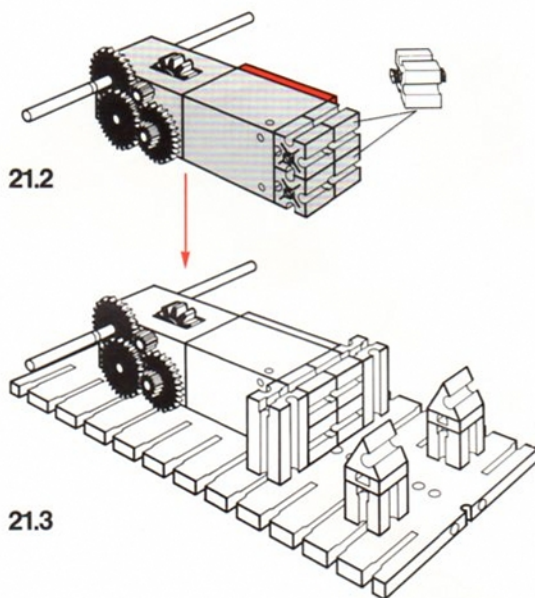
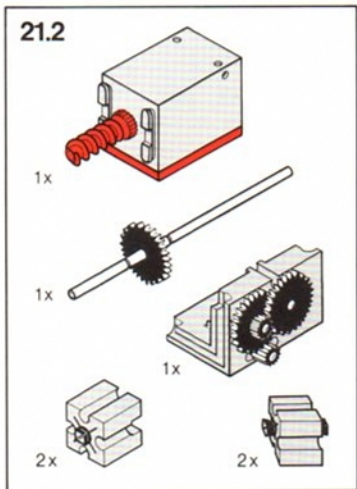


20.5



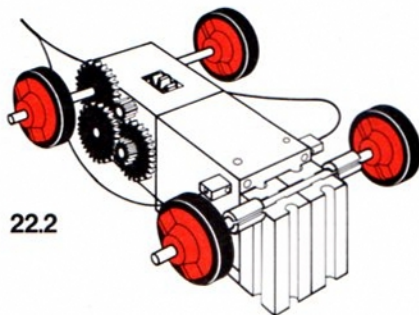
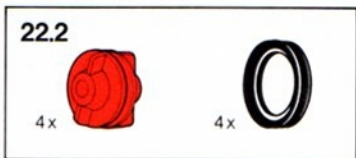
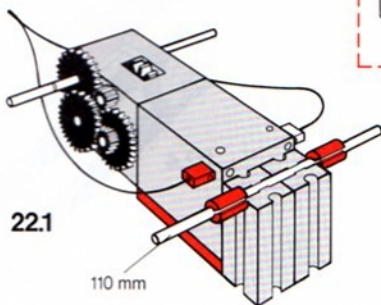
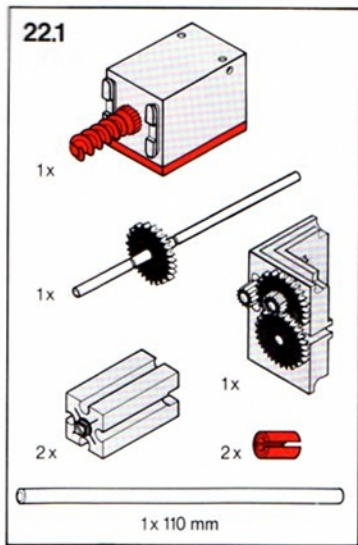
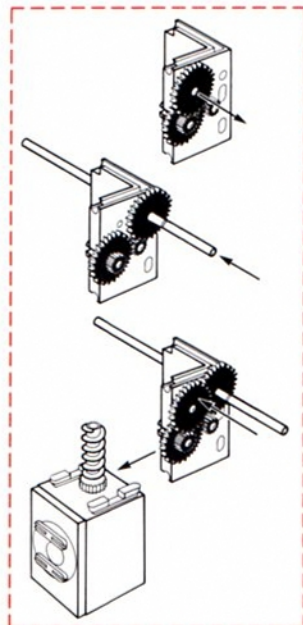
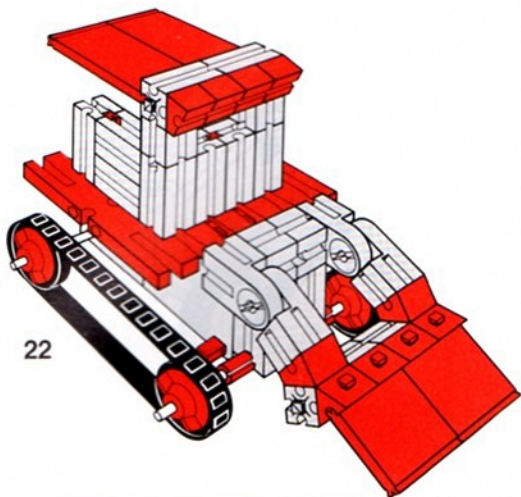
60 mm





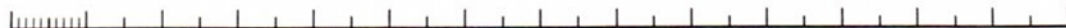
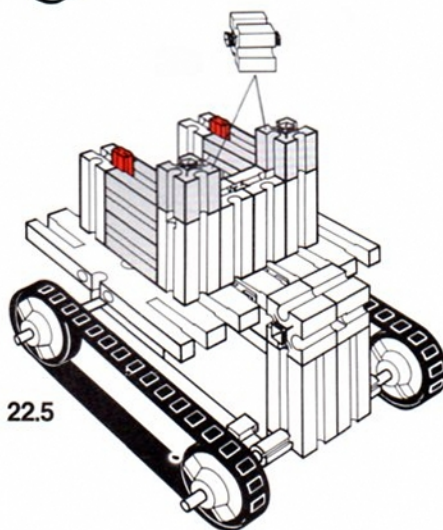
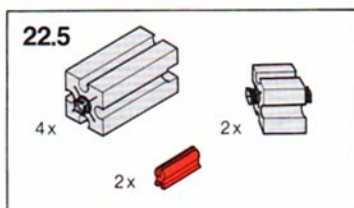
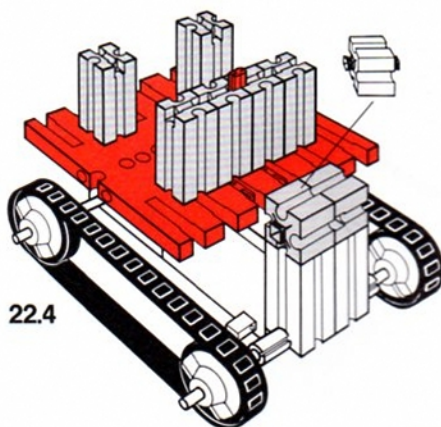
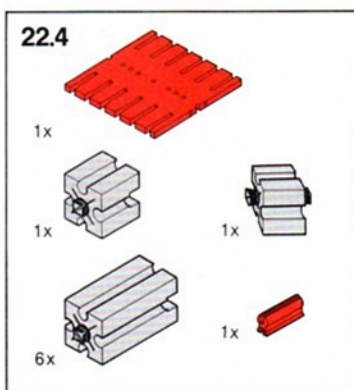
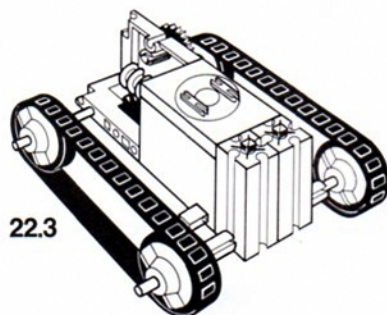
110 mm

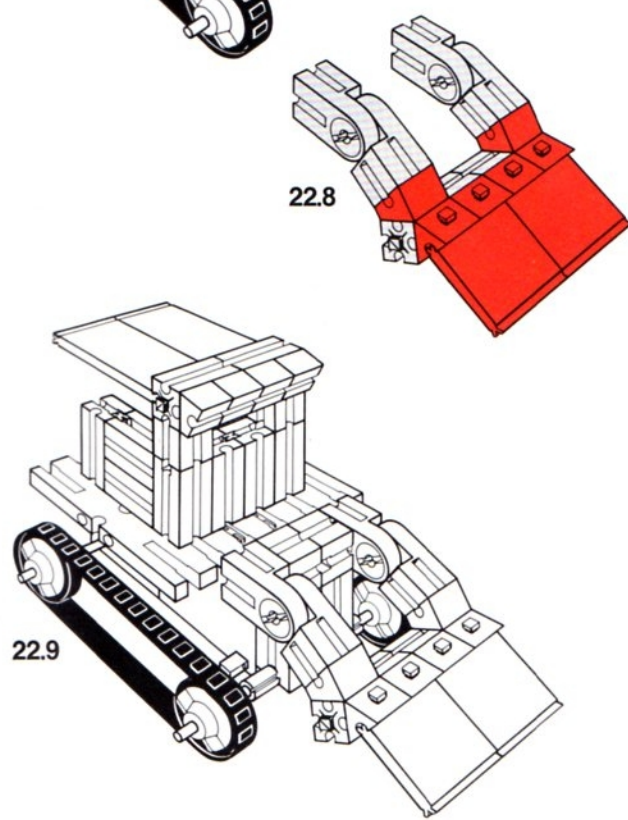
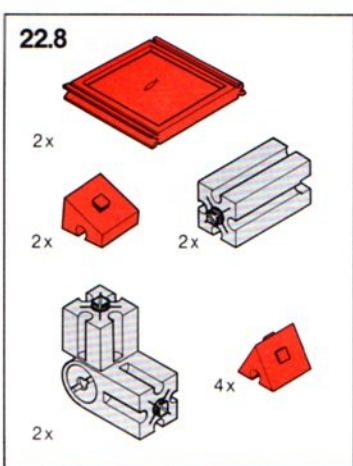
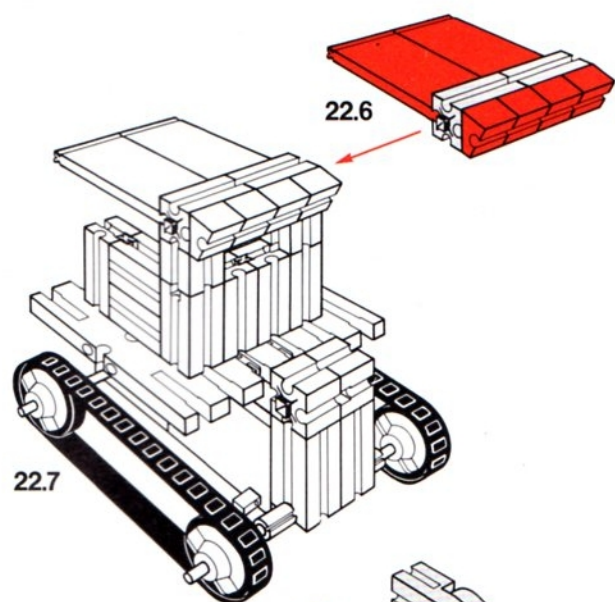
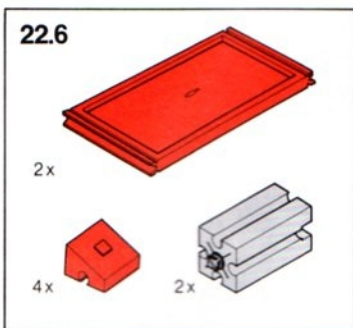


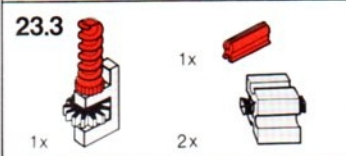
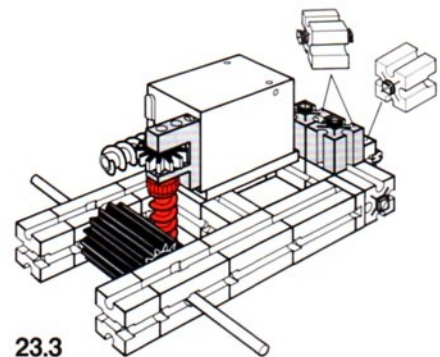
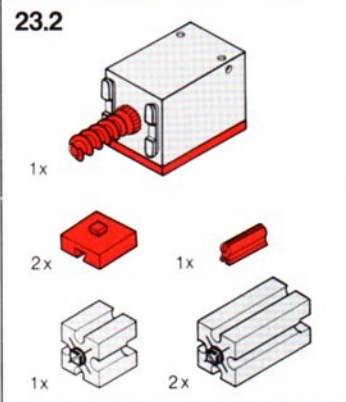
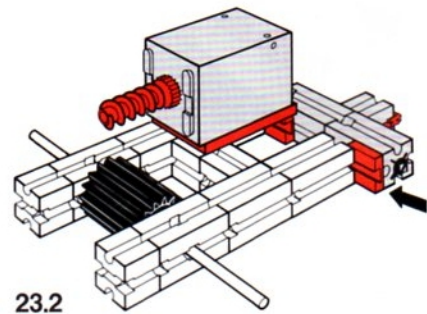
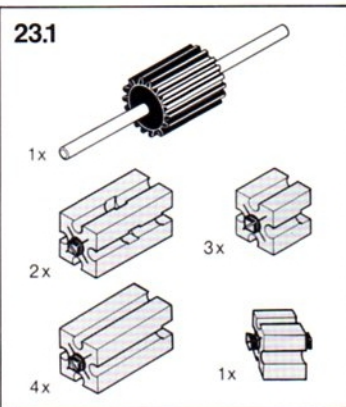
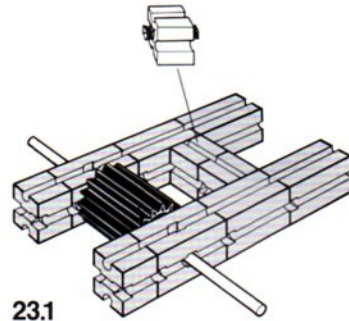
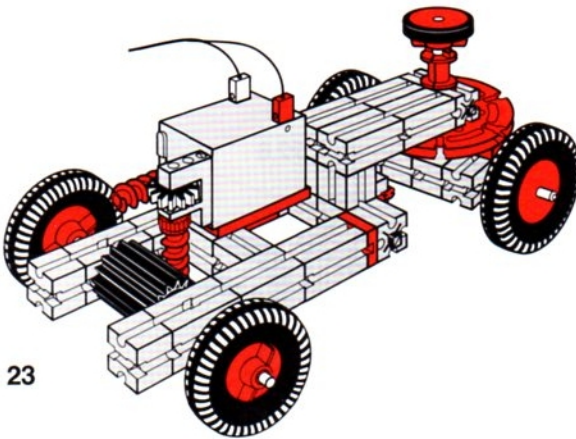


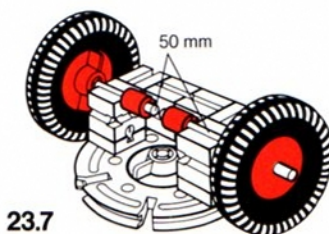
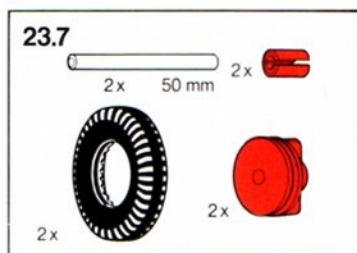
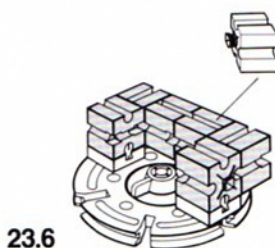
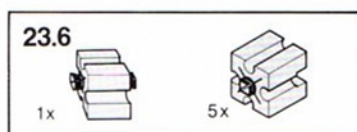
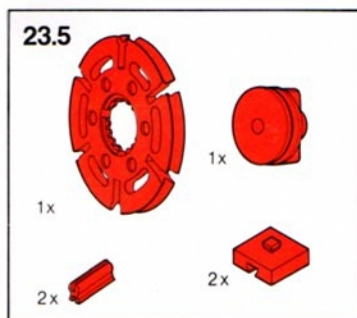
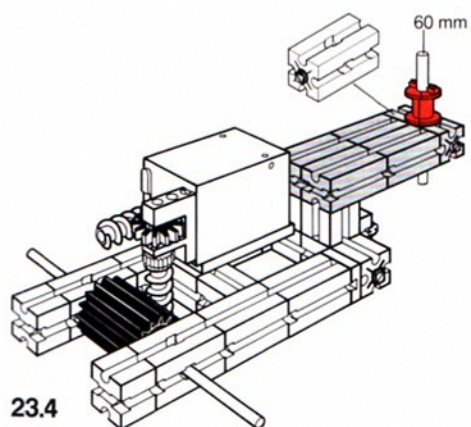
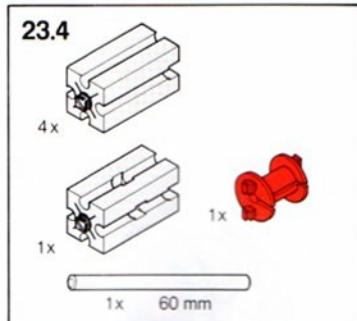
110 mm

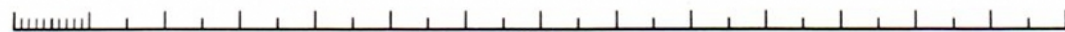
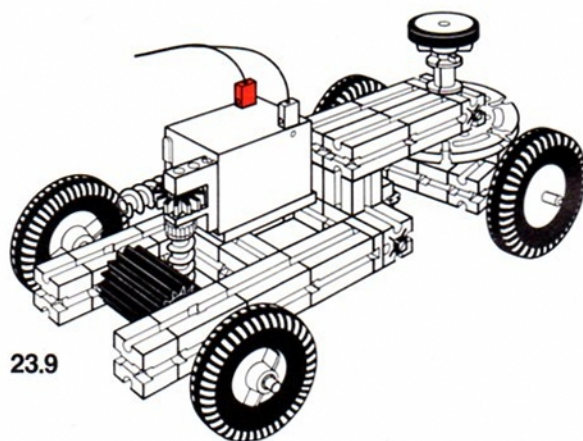
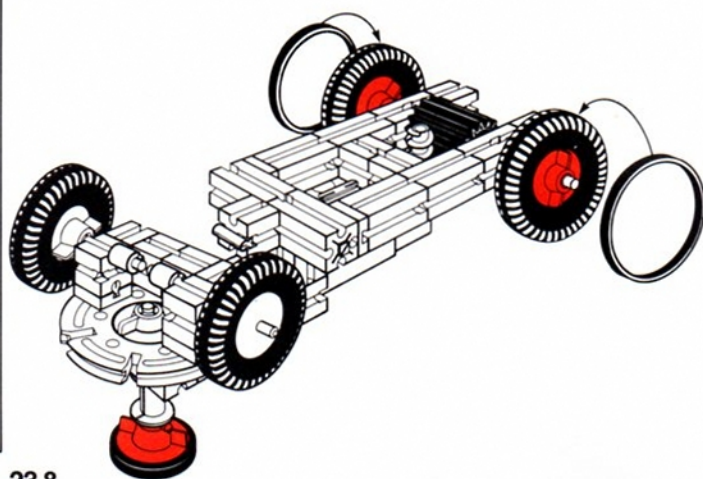
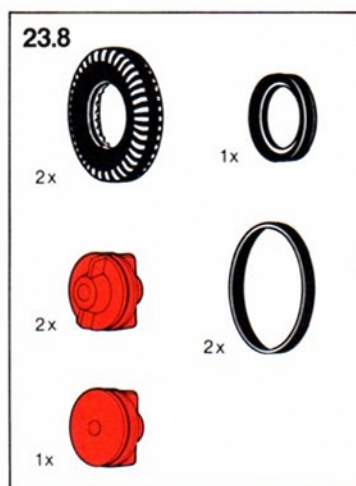


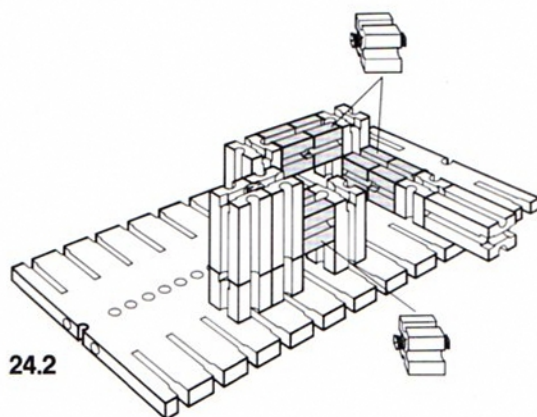
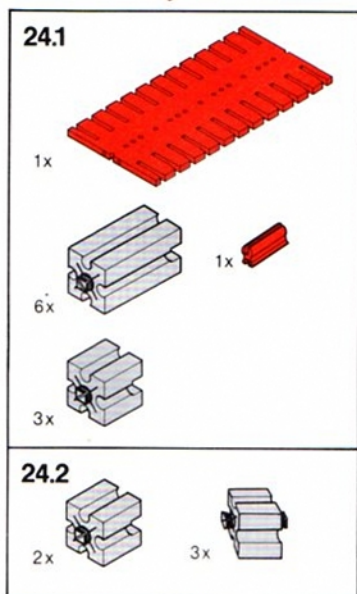
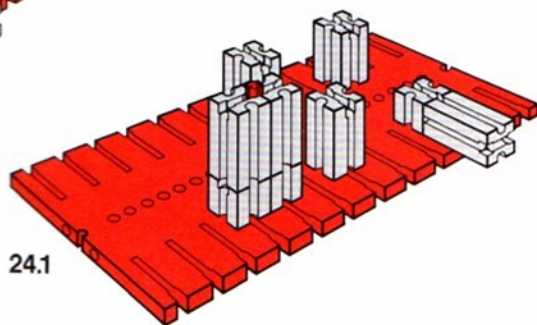
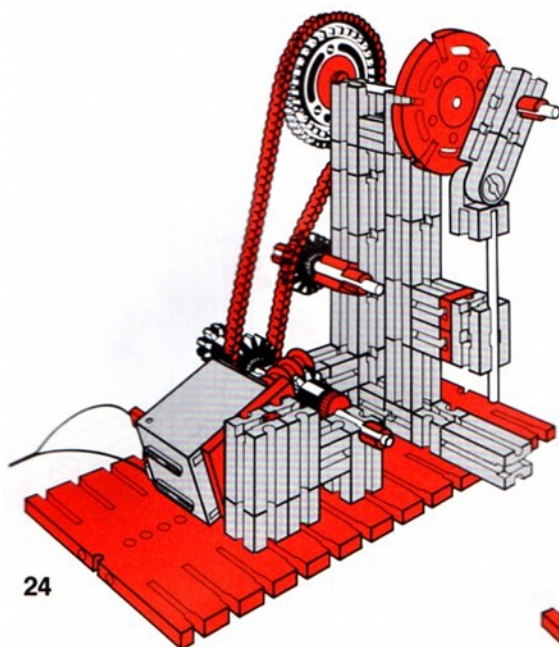


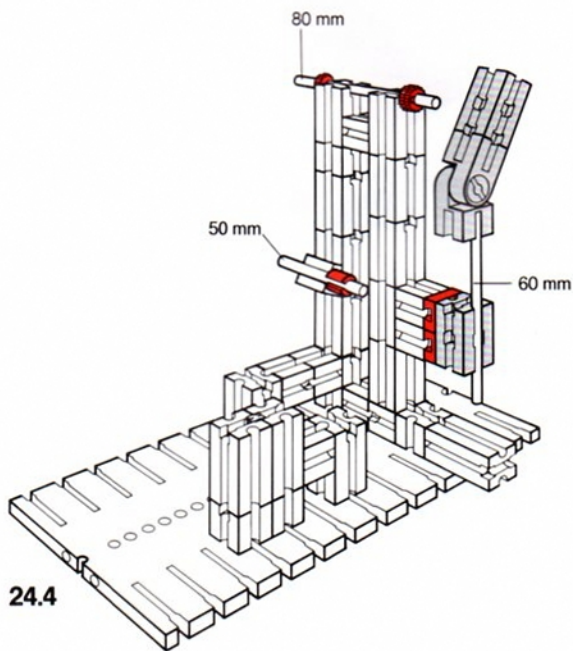
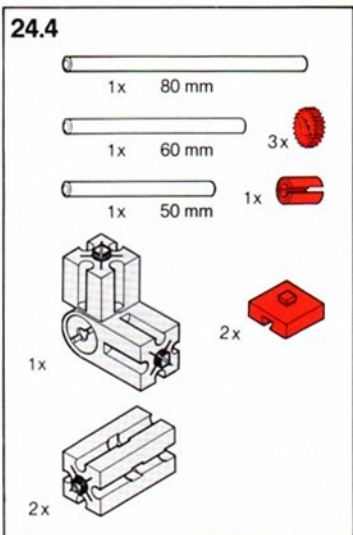
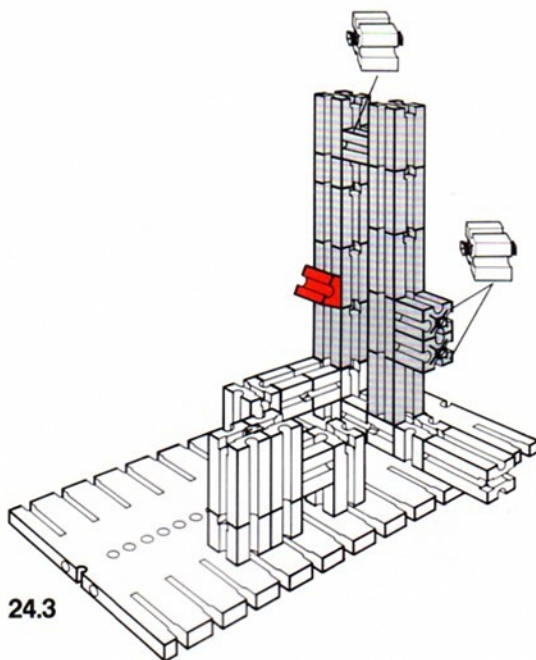
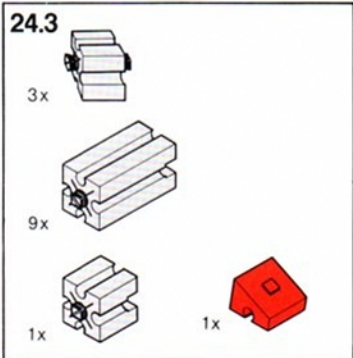








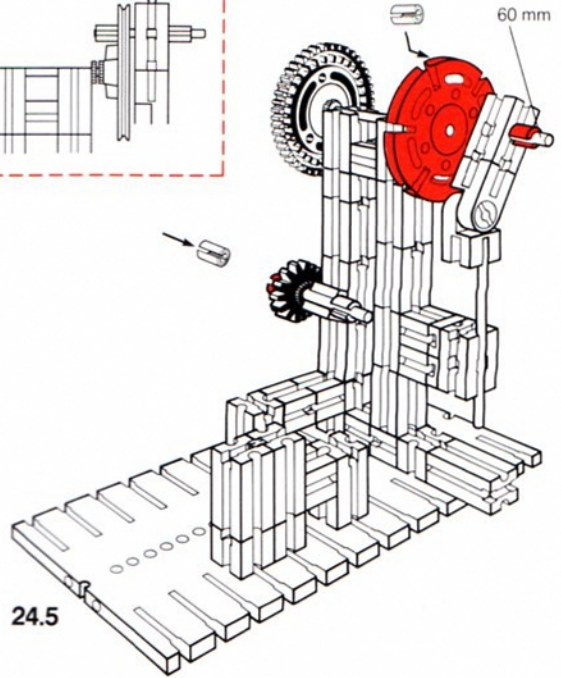
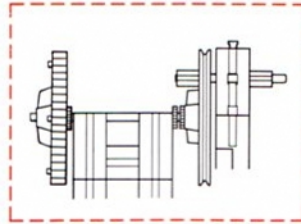
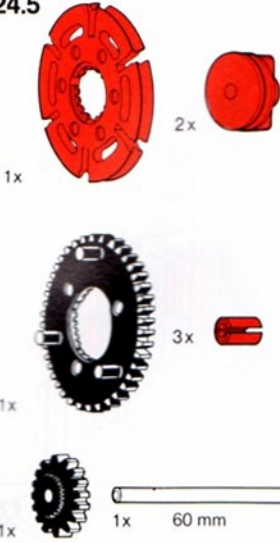




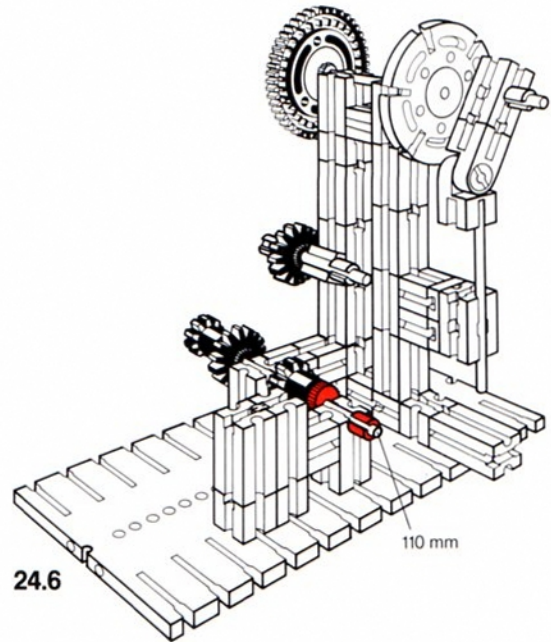
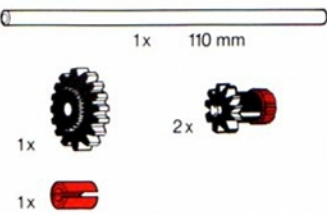
50 mm 60 mm 80 mm



24.5



24.6

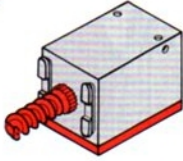


60 mm

110 mm



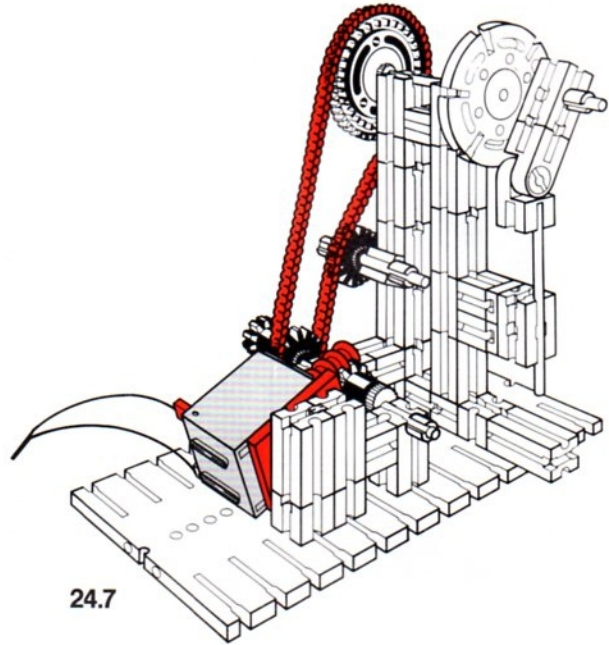
24.7



1x

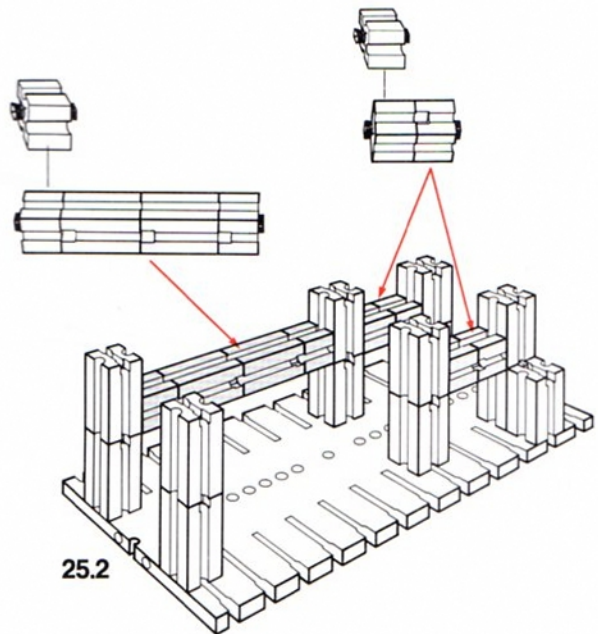
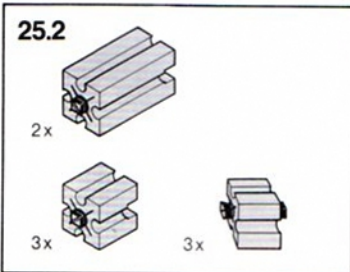
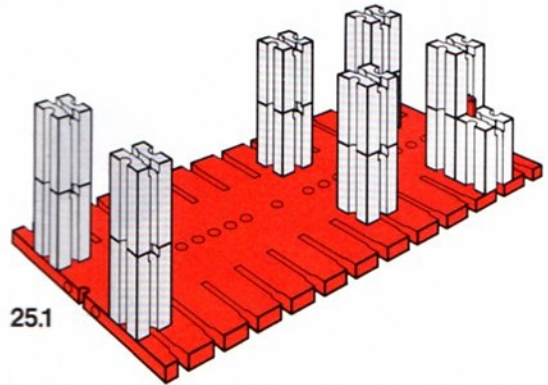
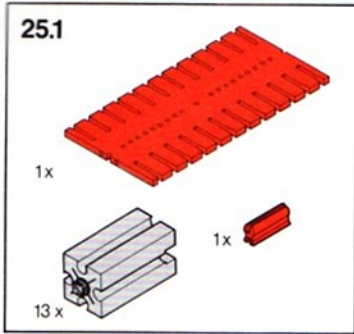
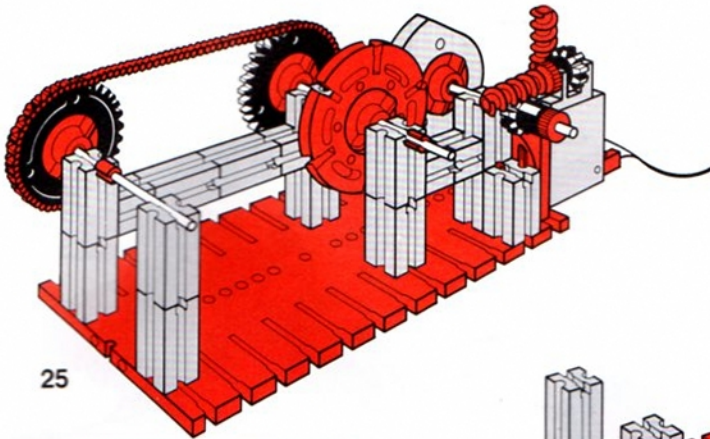


87x

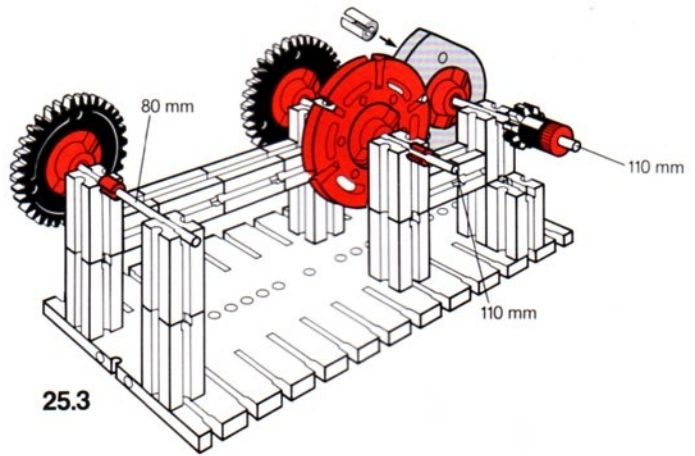
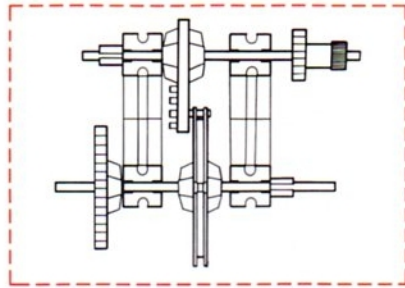
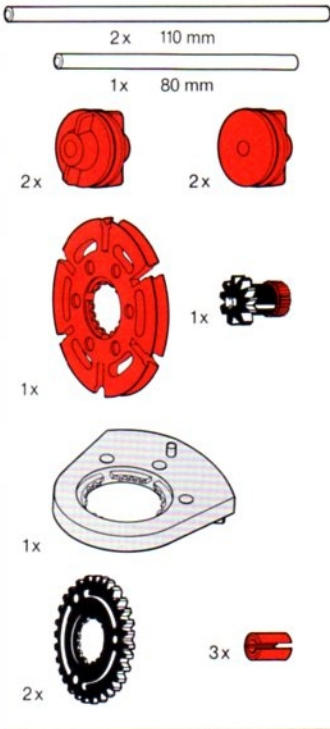


24.7

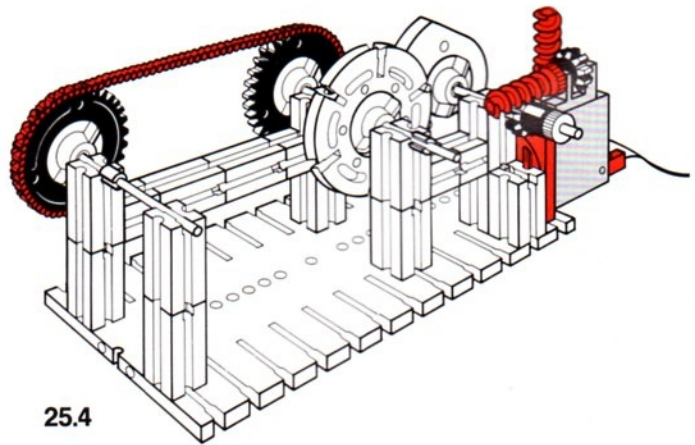
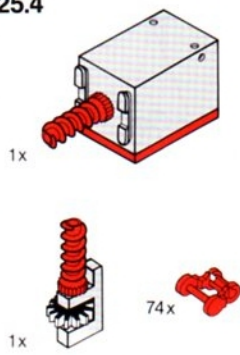




25.3



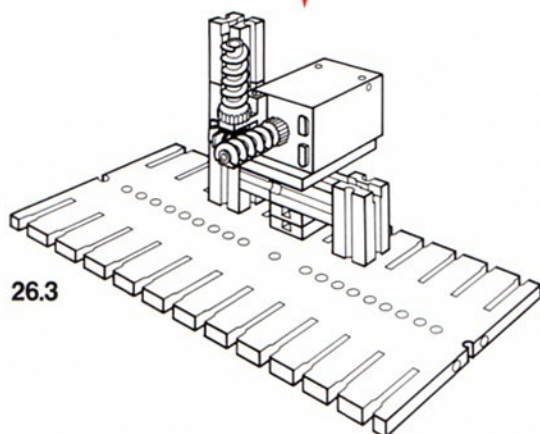
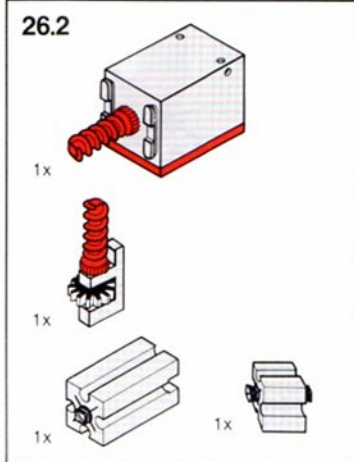
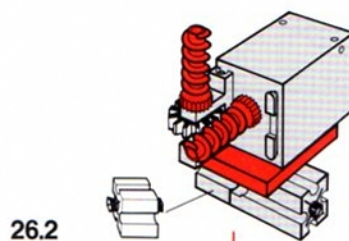
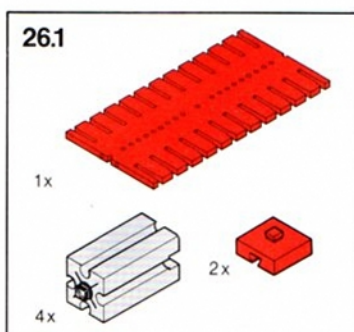
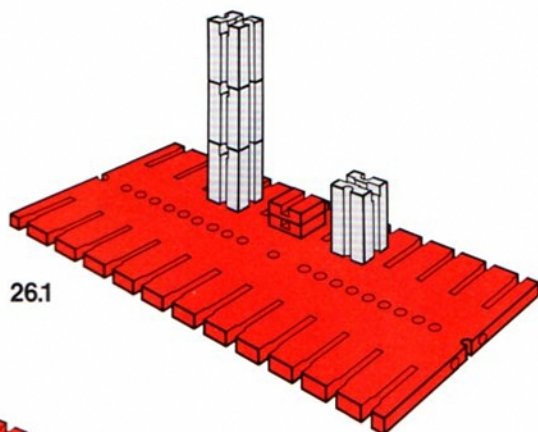
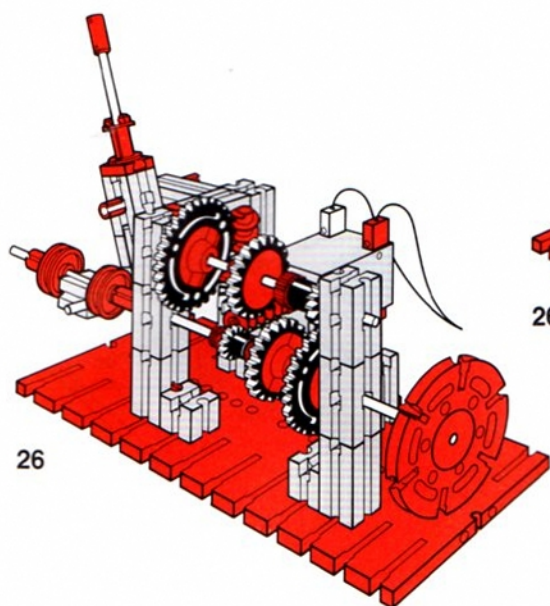
25.4

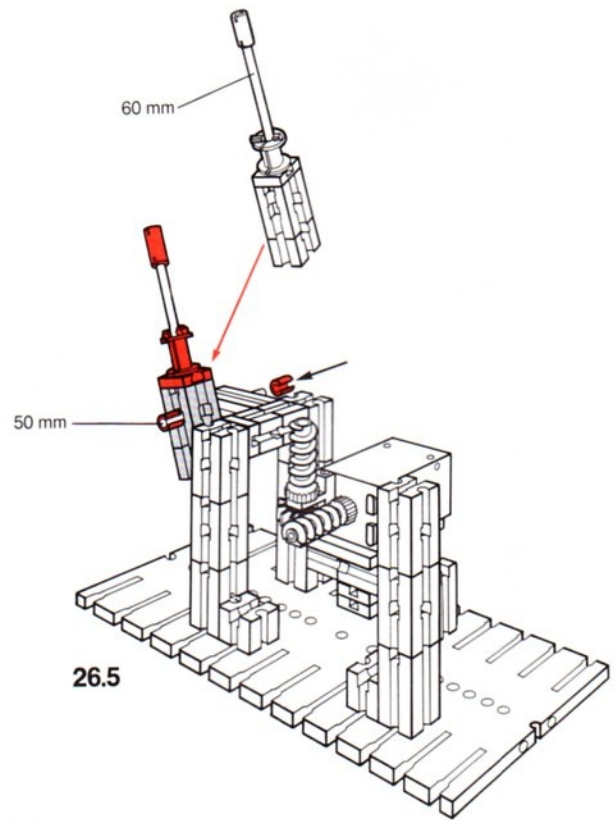
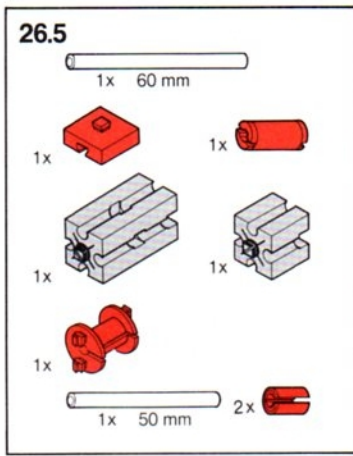
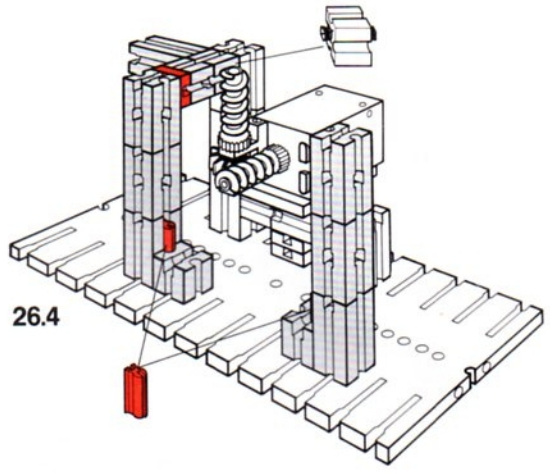
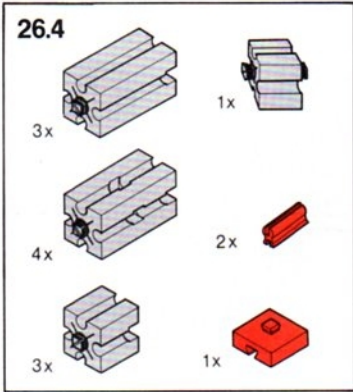


80 mm

110 mm

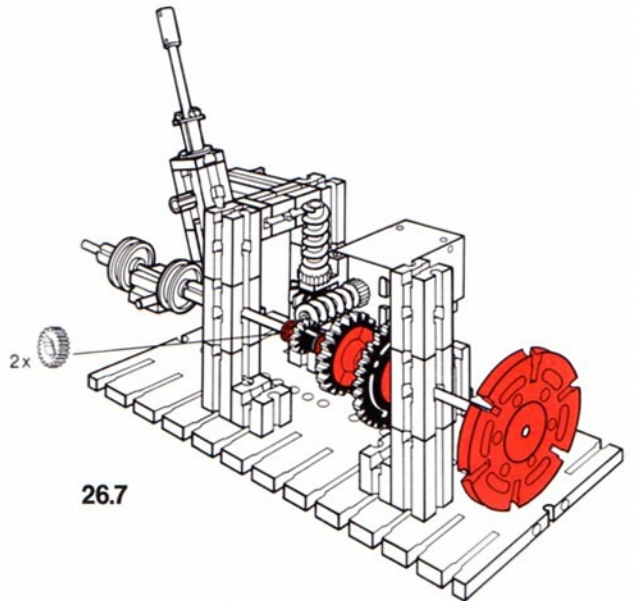
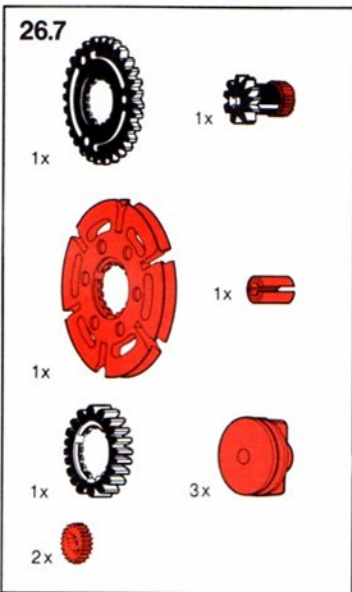
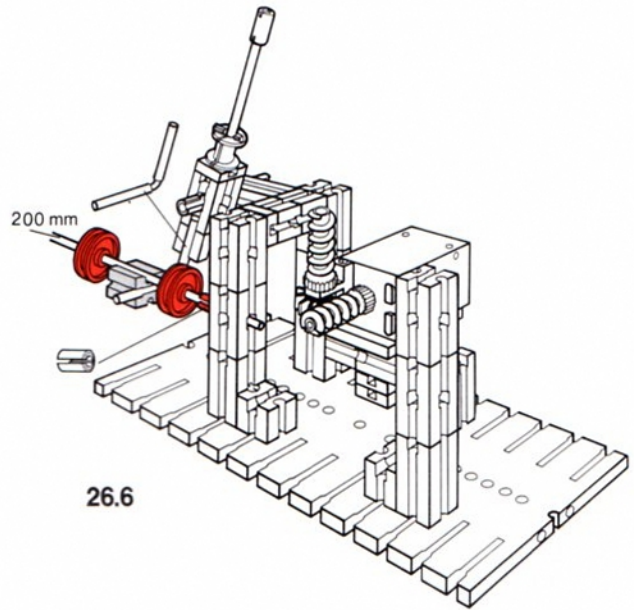
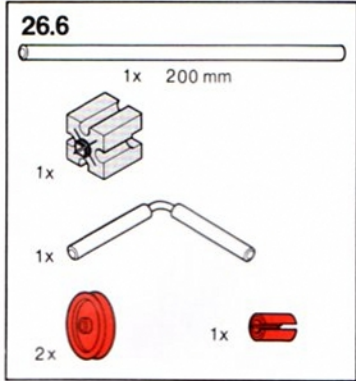


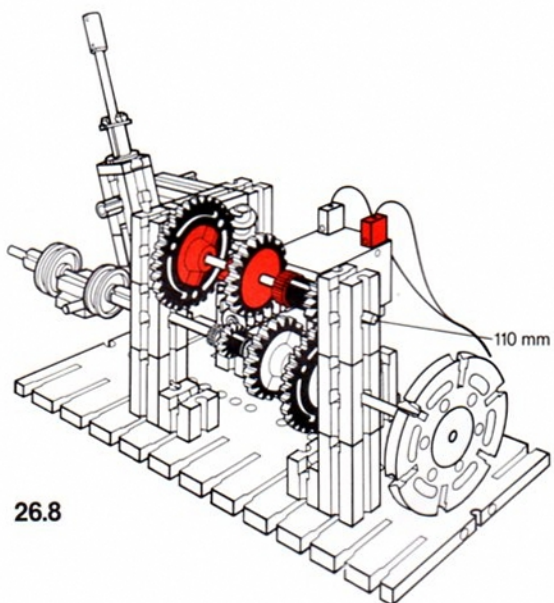
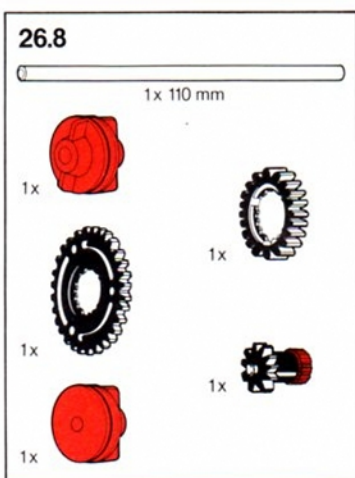
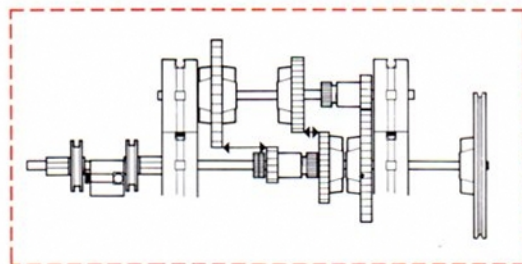


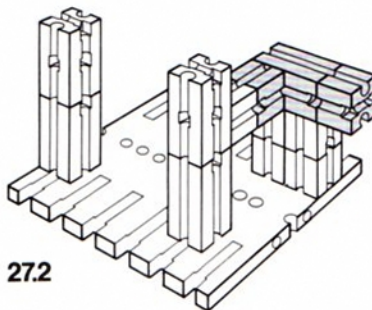
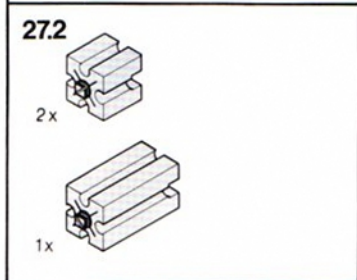
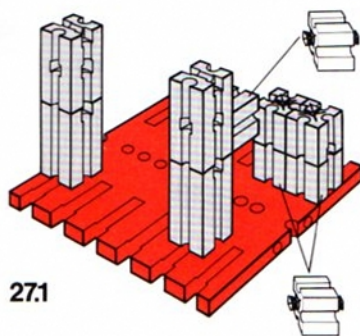
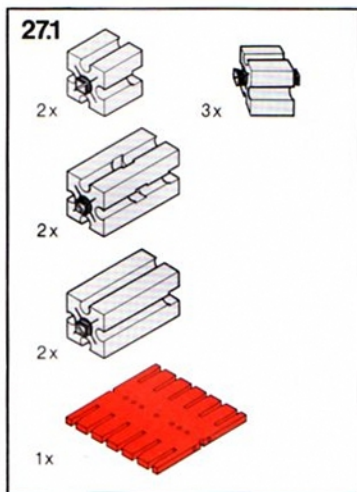
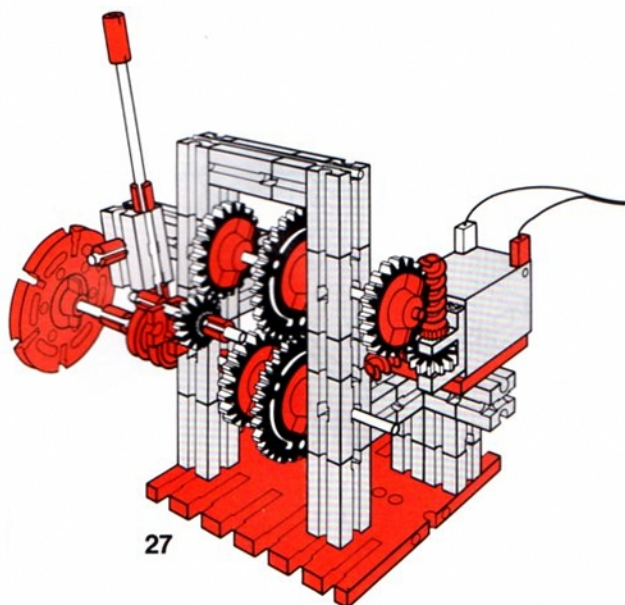


50 mm 60 mm

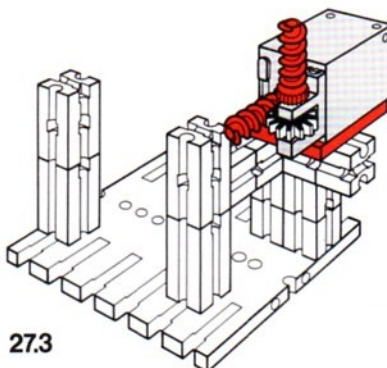
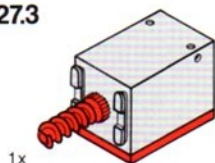




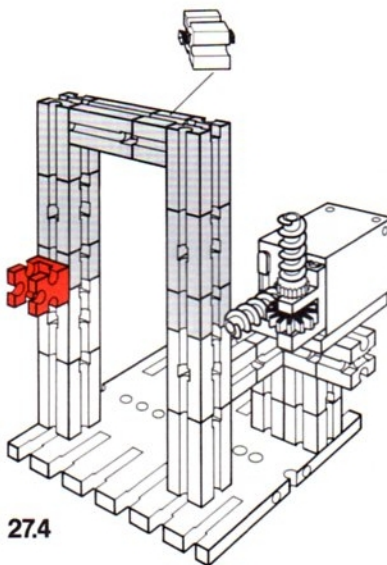
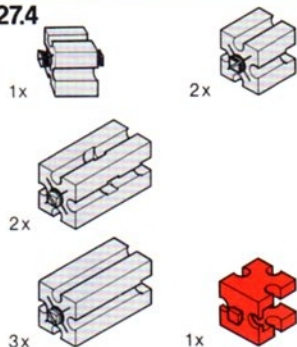




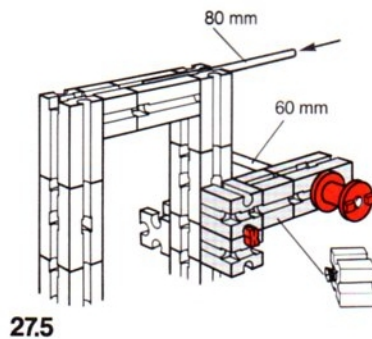
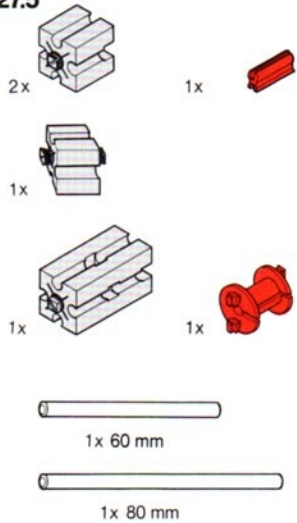
27.3



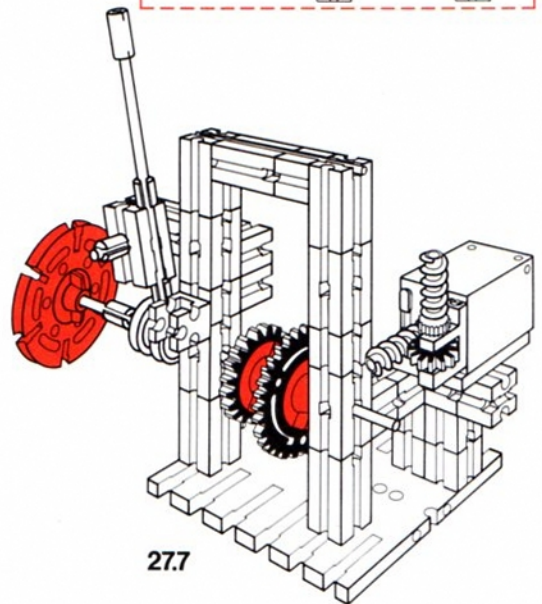
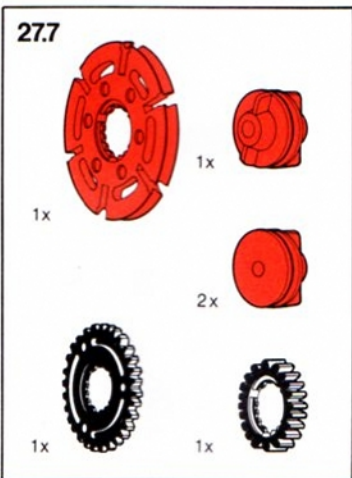
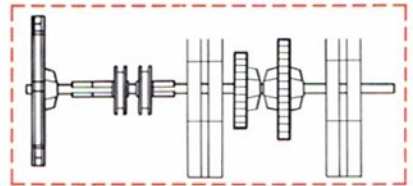
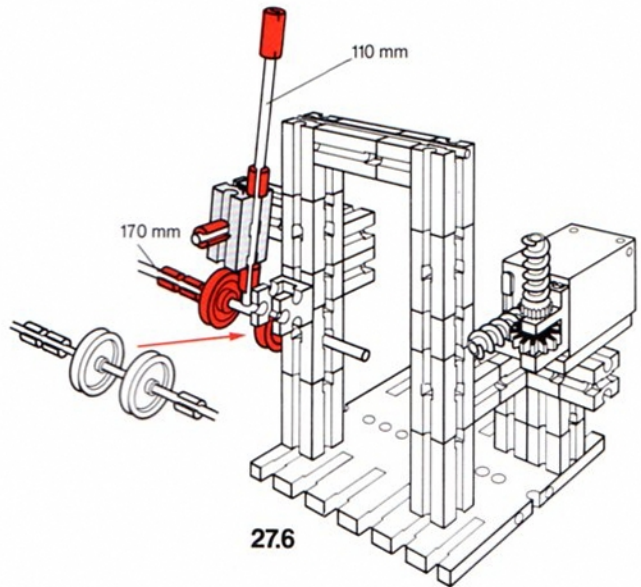
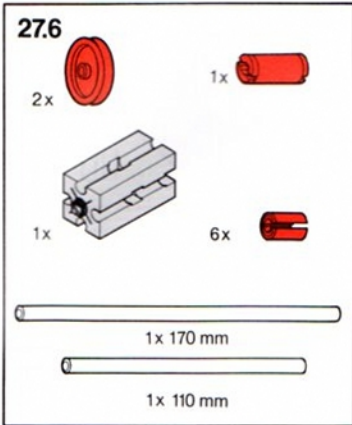
27.4



27.5

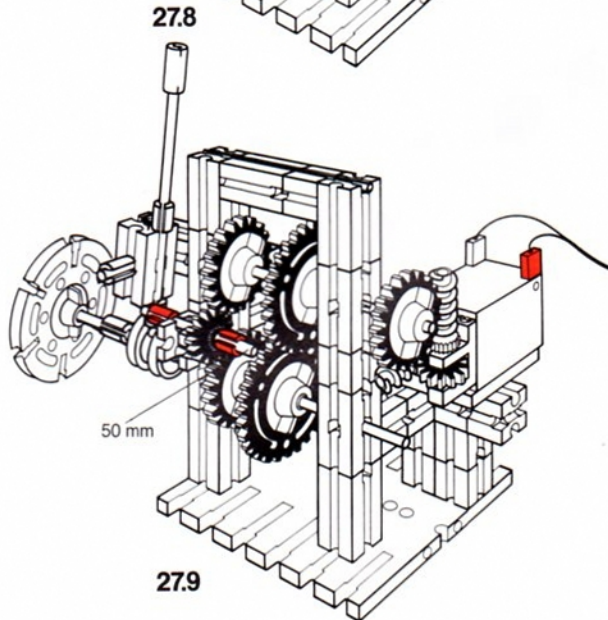
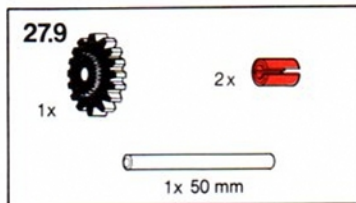
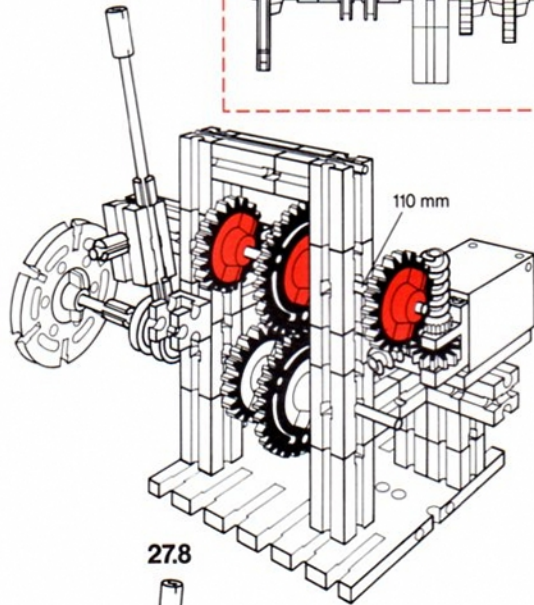
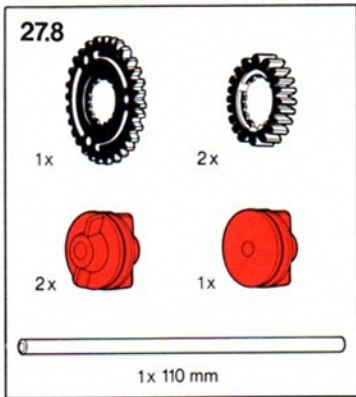
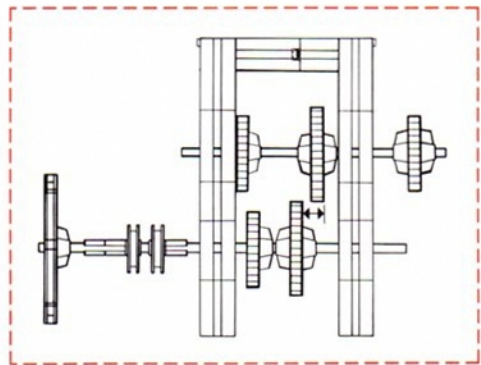


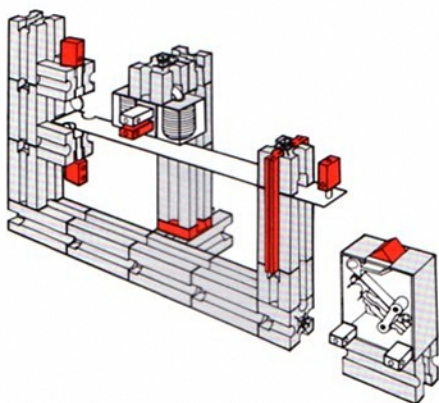
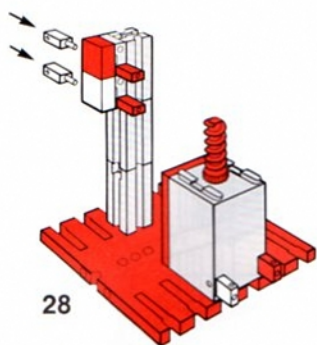
60 mm 80 mm



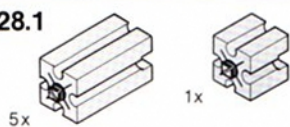
110 mm



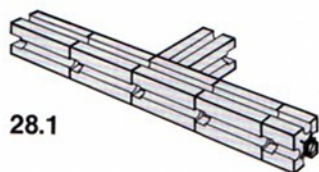




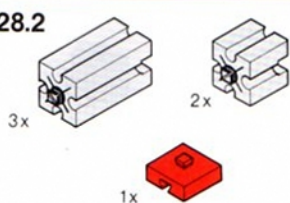
28.1



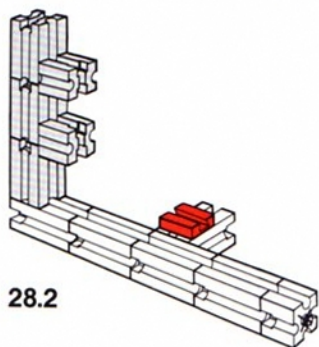
28.1



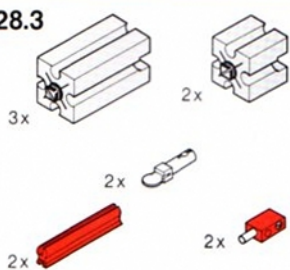
28.2



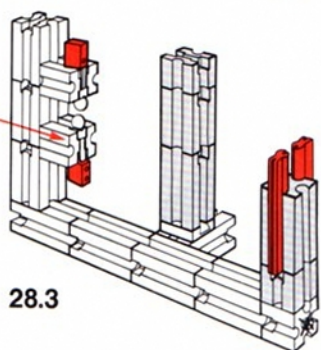
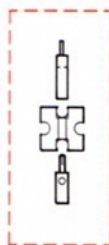
28.2

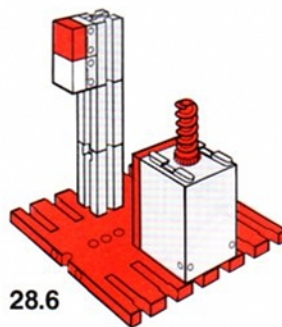
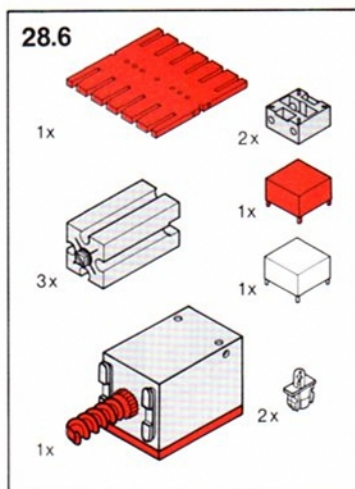
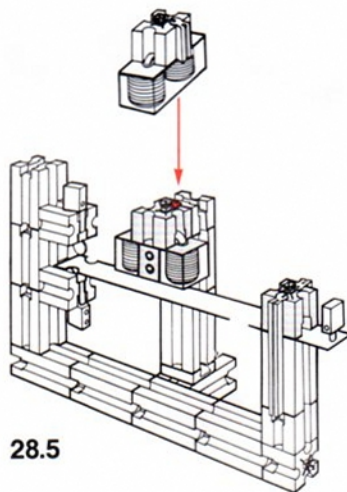
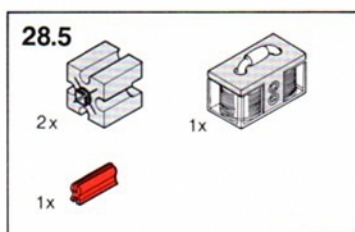
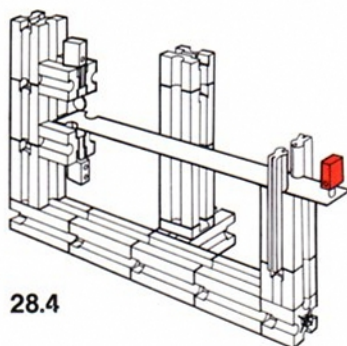
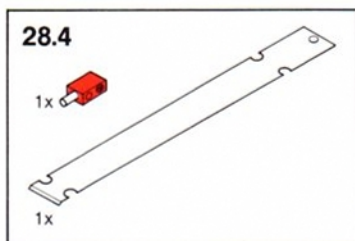


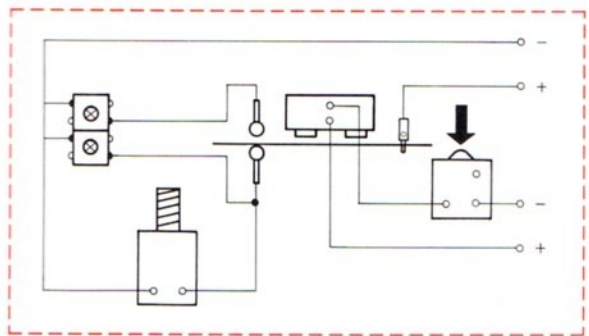
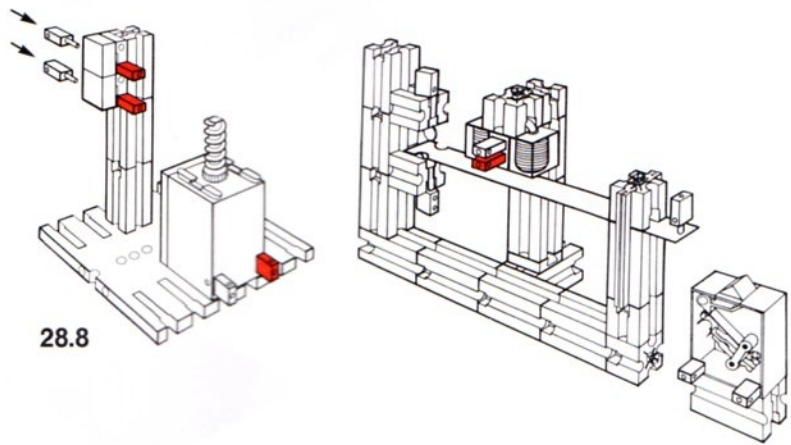
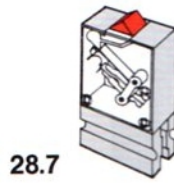
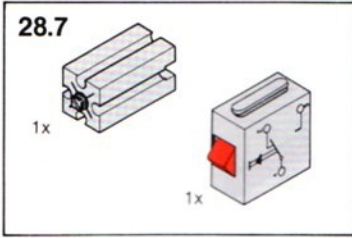
28.3

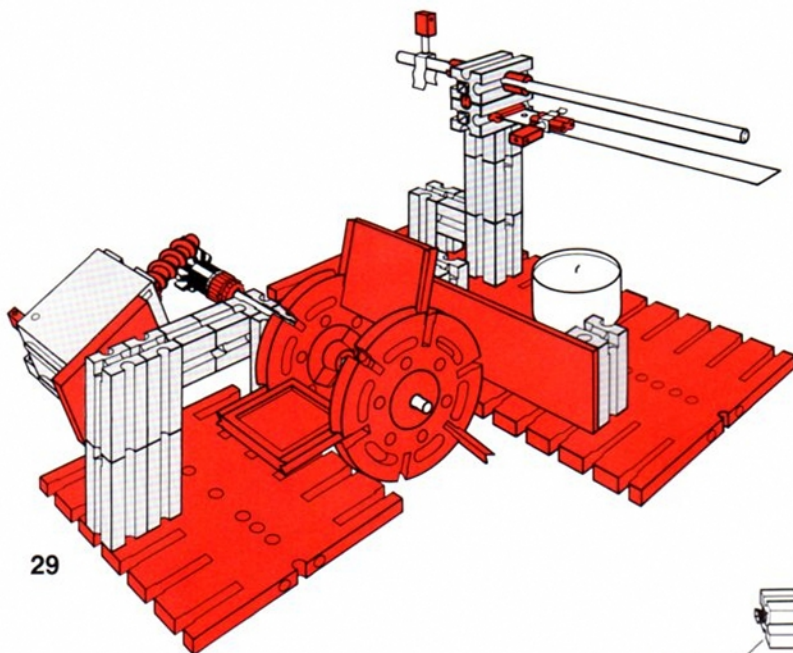


28.3

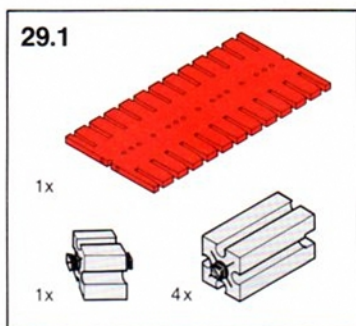








29

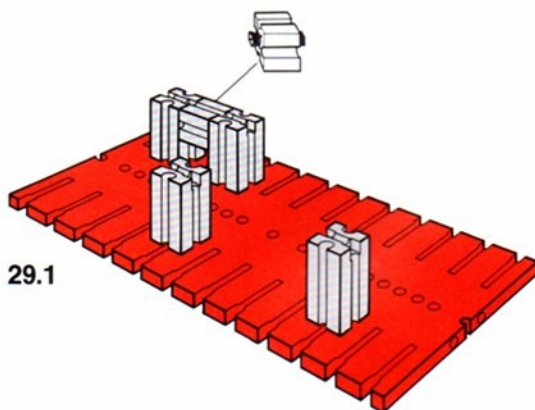


29.1

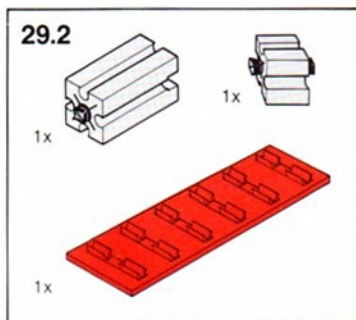
1x

1x

4x



29.1

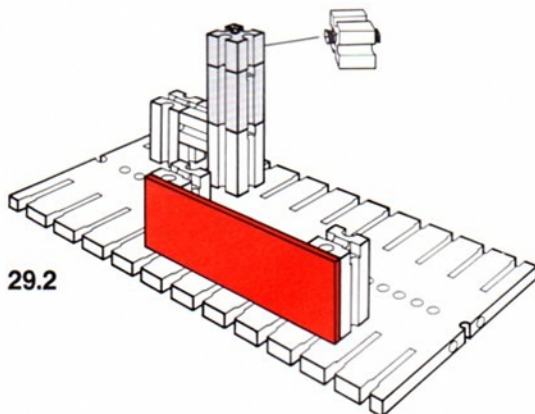


29.2

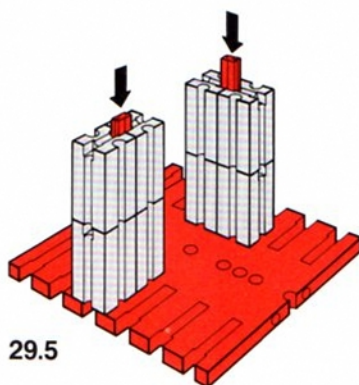
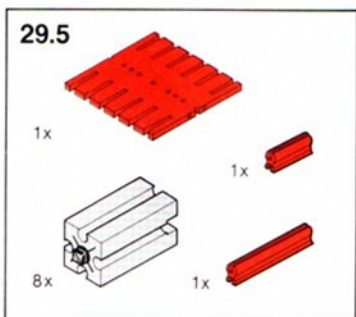
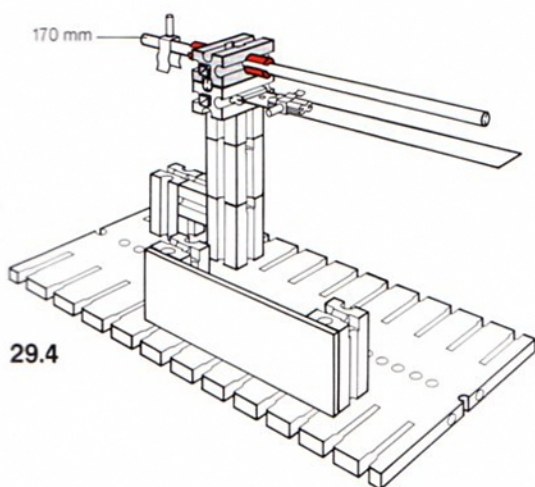
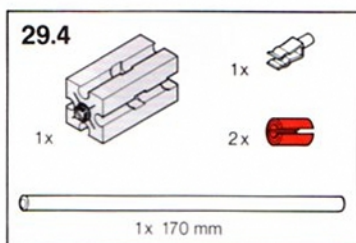
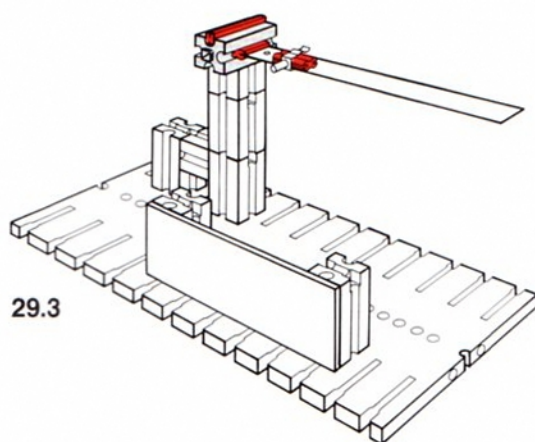
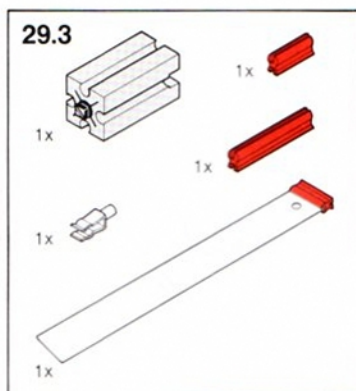
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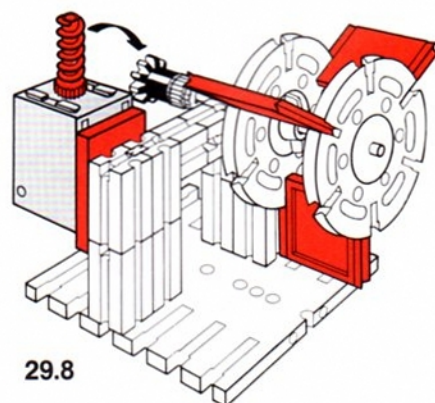
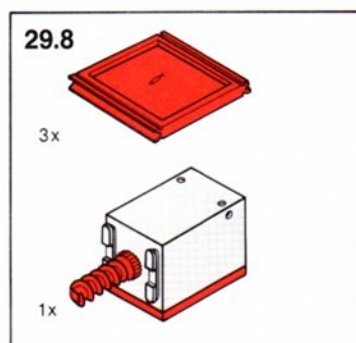
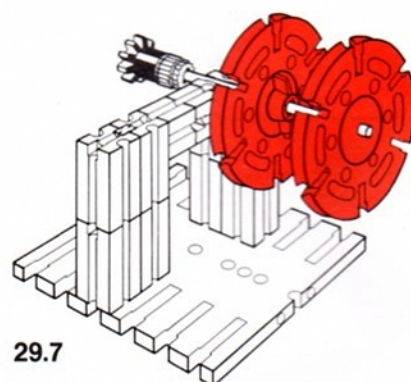
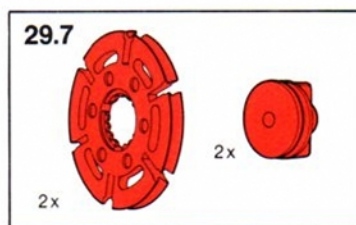
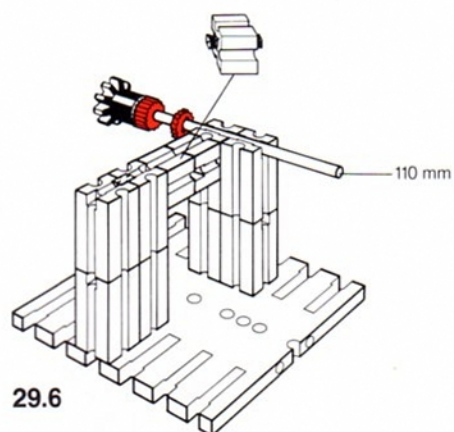
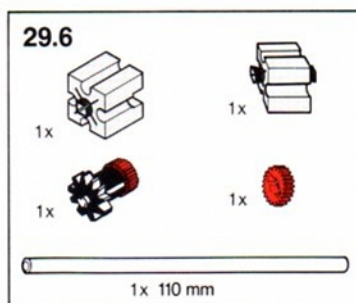
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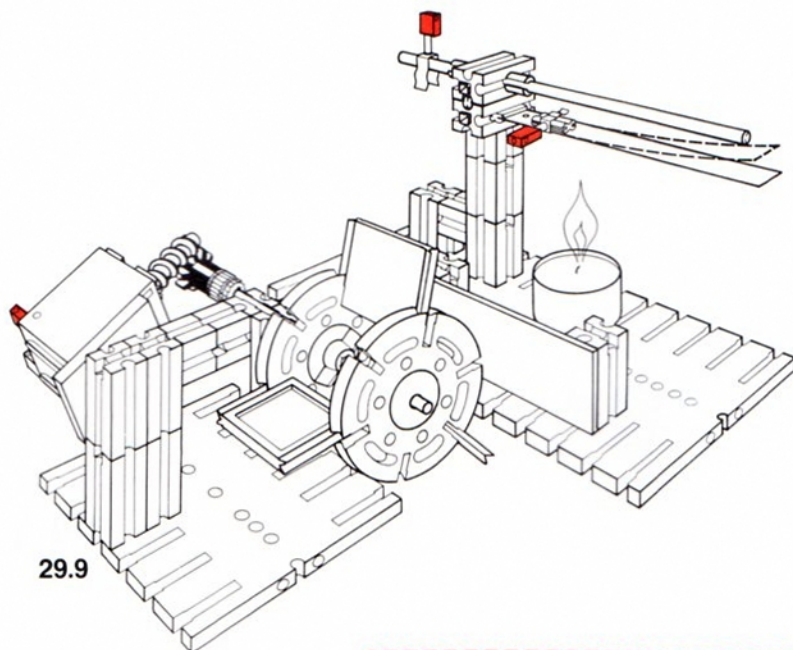
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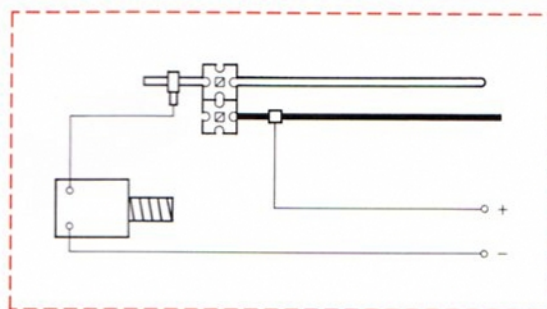
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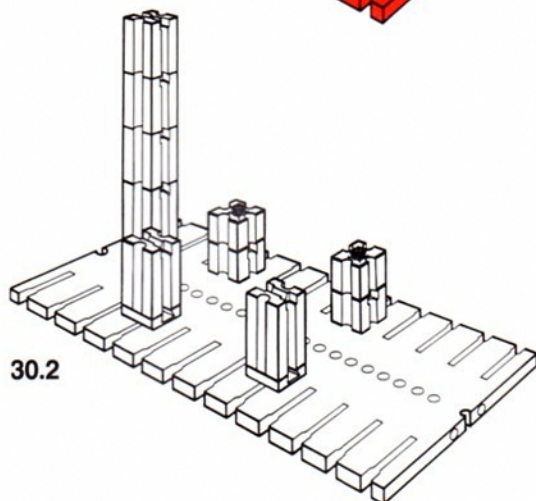
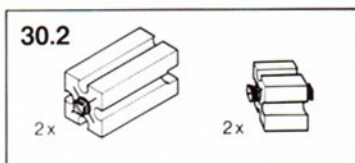
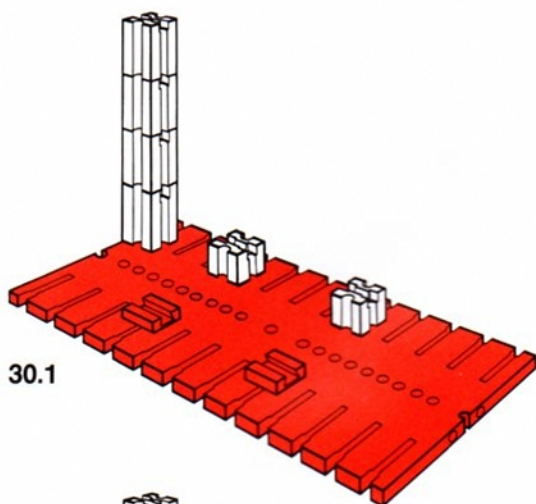
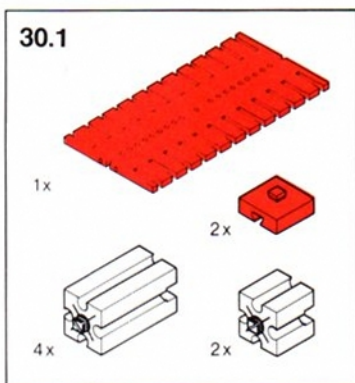
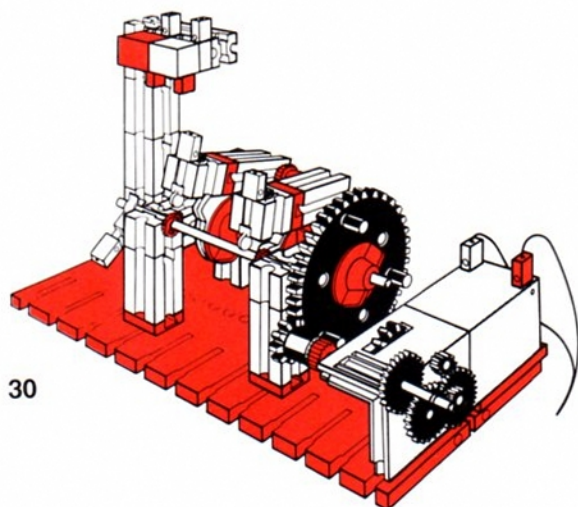


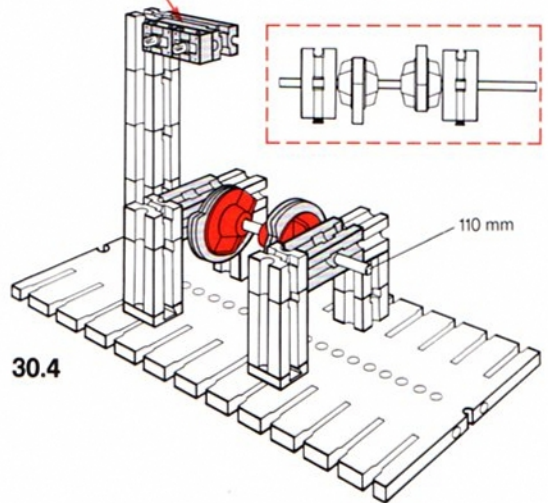
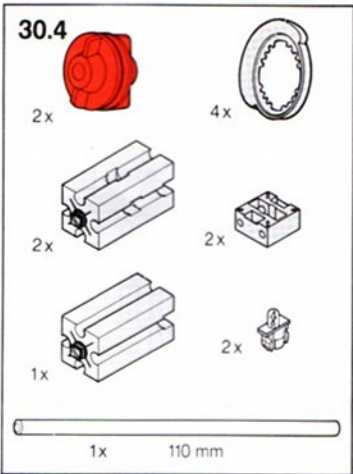
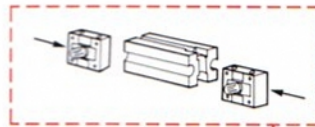
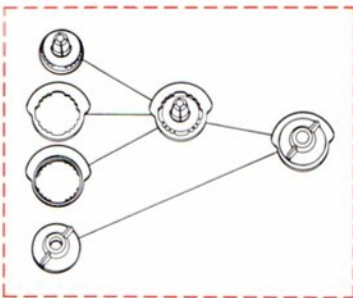
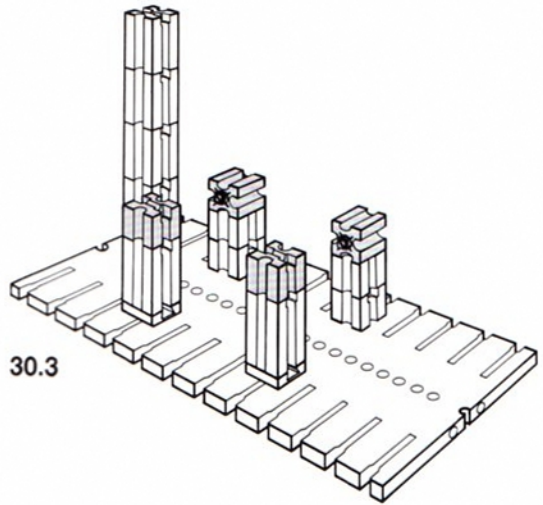
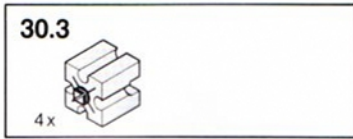




29.9

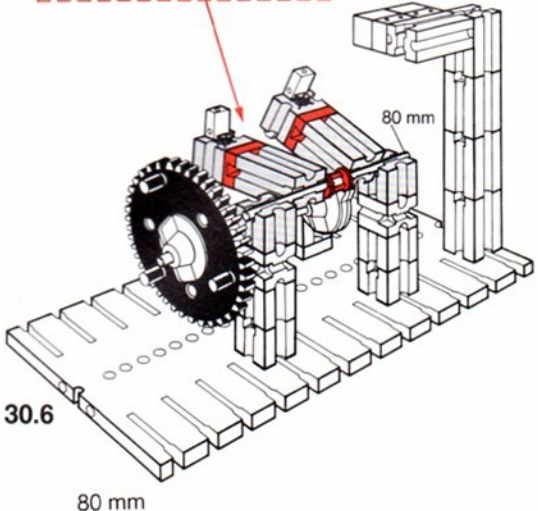
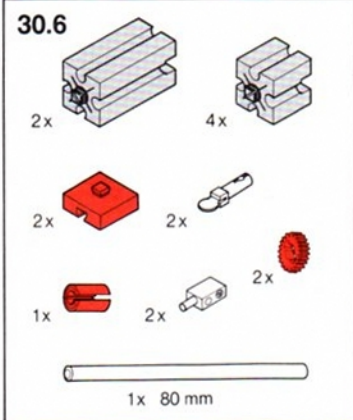
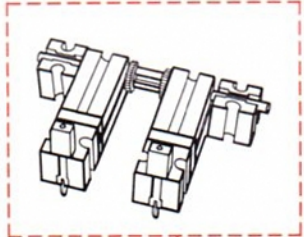
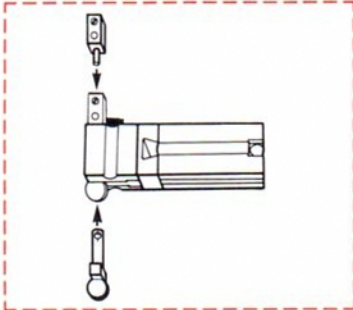
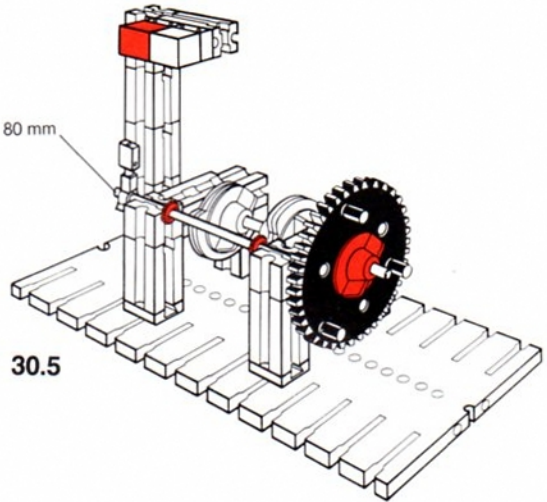
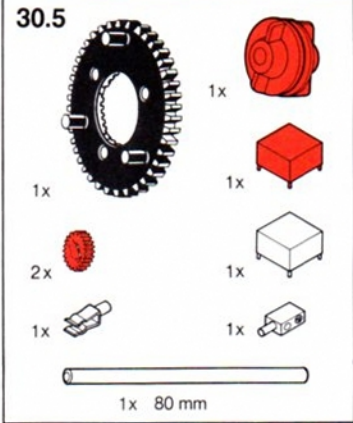


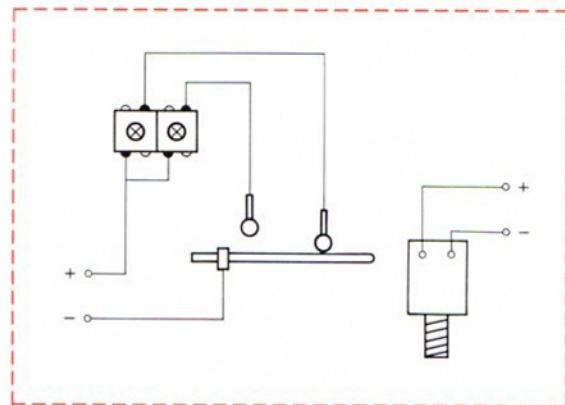
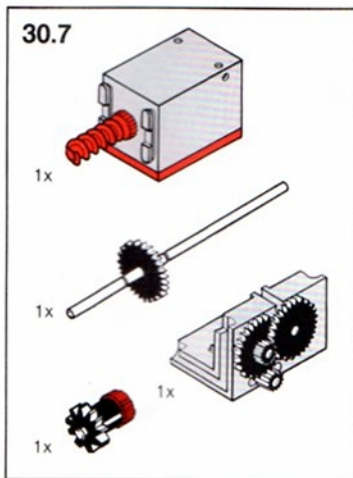
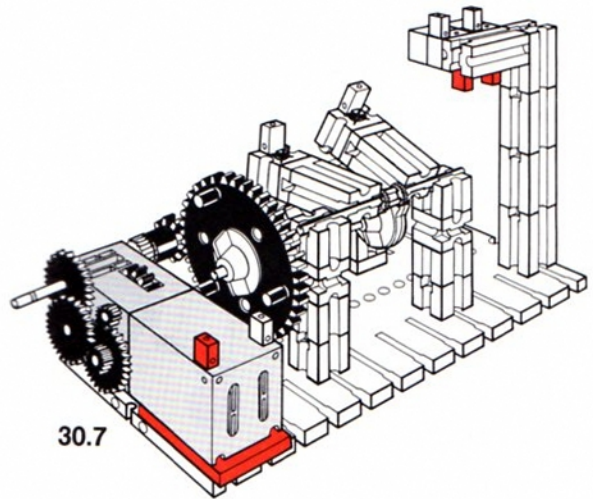
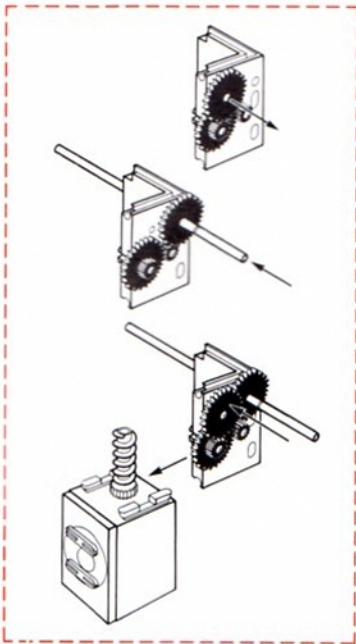


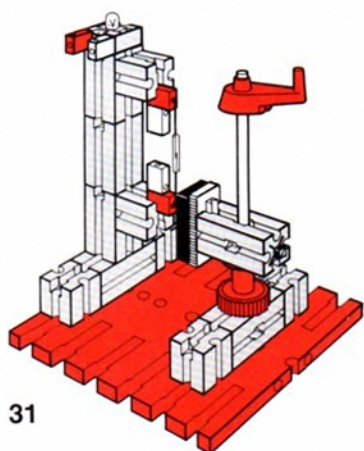


110 mm

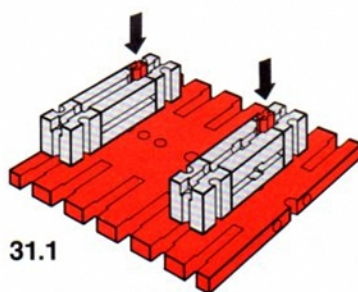
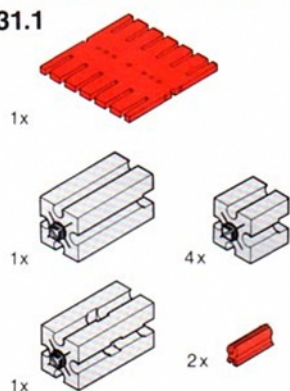




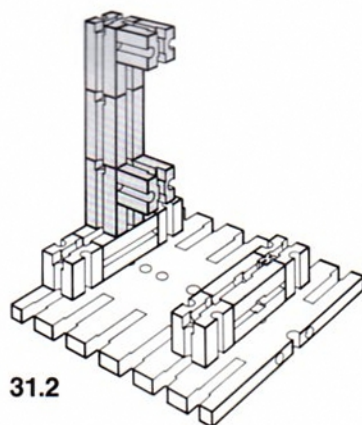
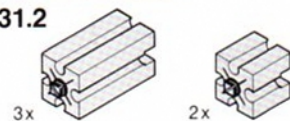


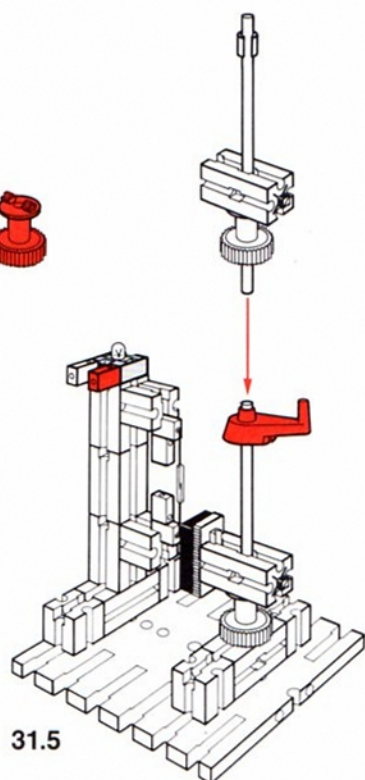
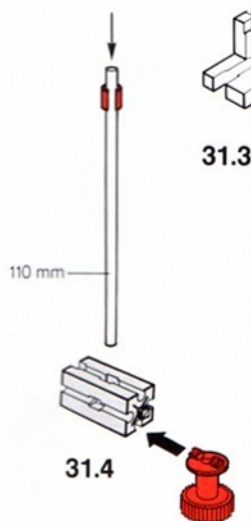
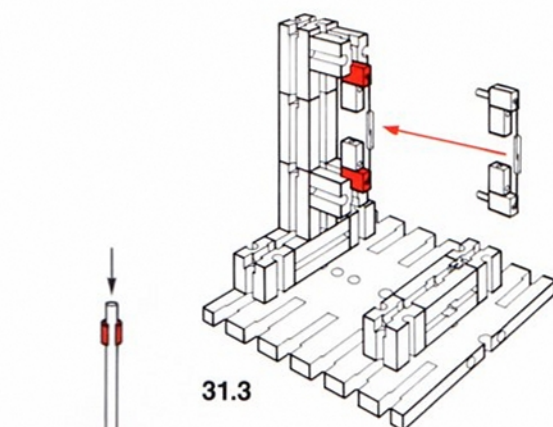
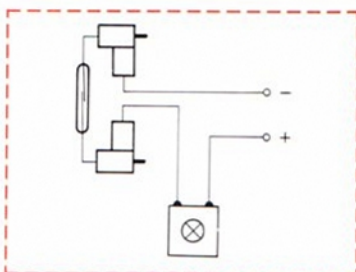
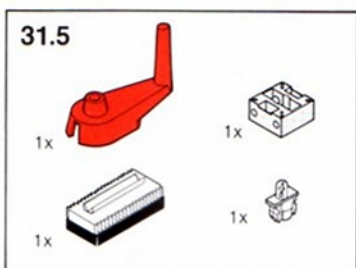
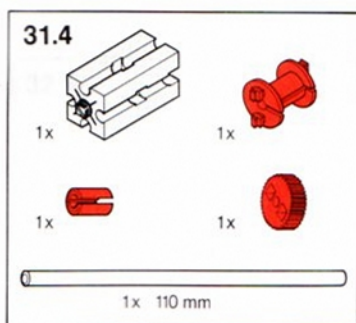
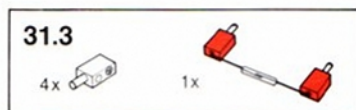


31.1



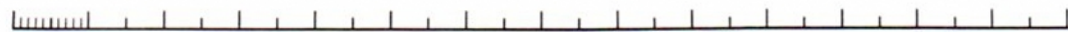
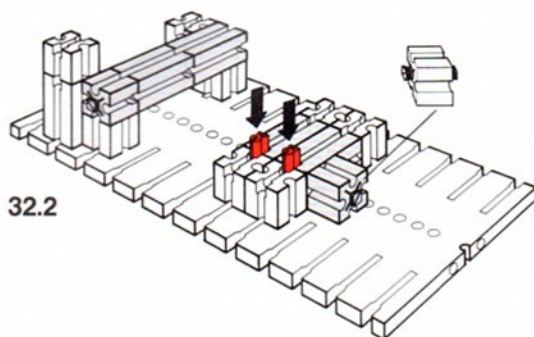
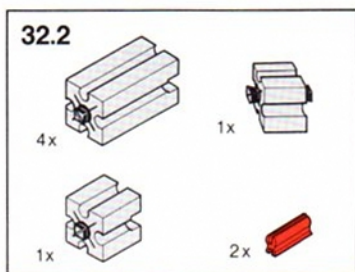
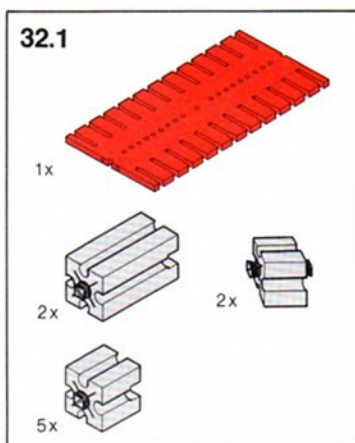
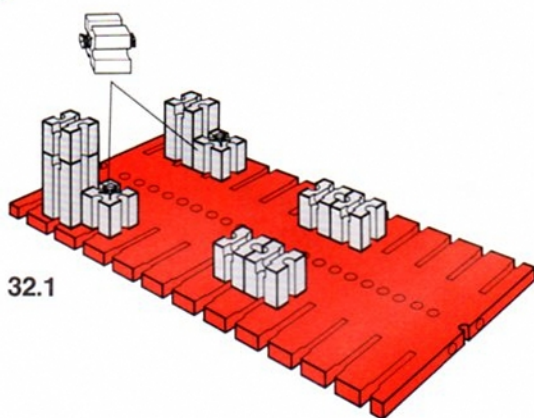
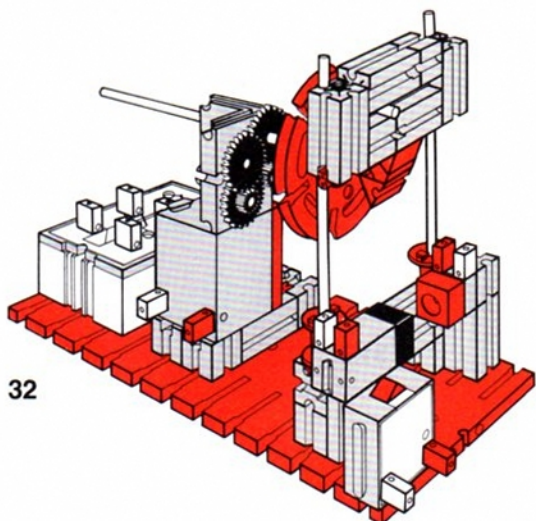
31.2

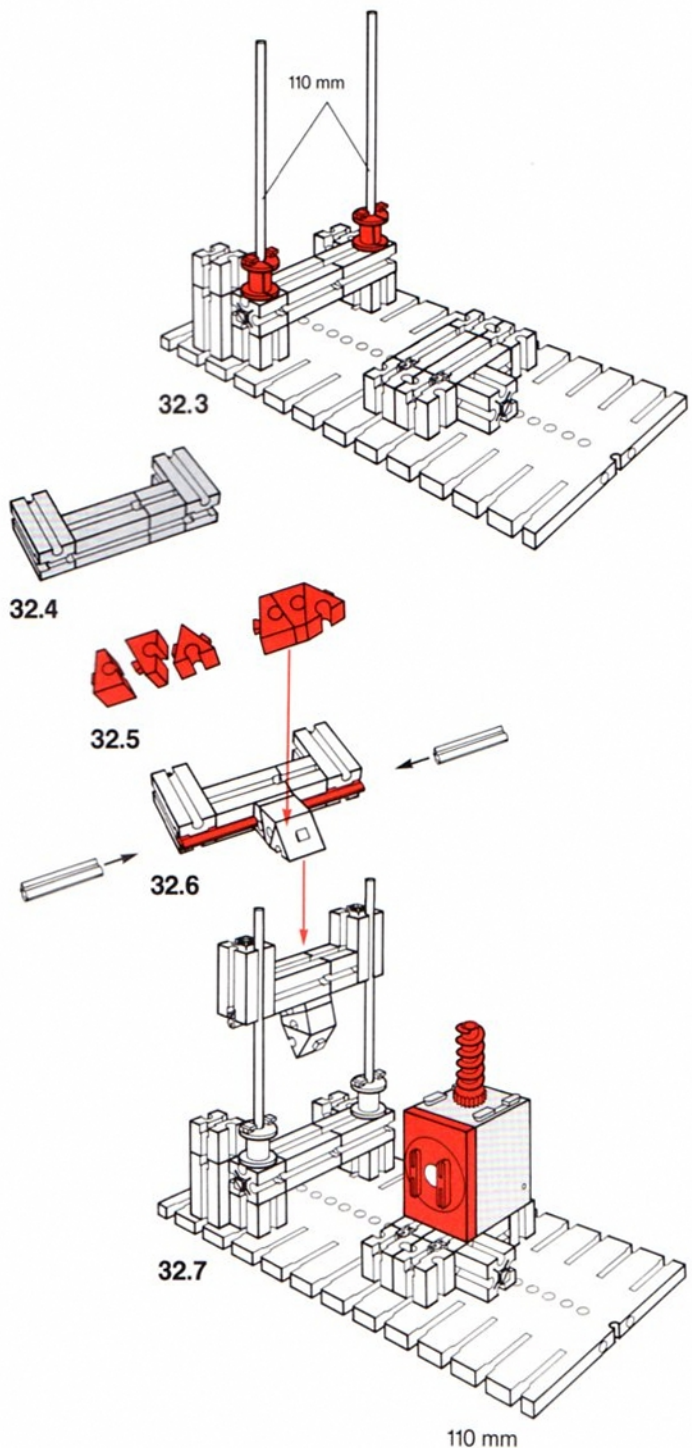
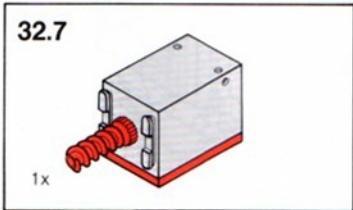
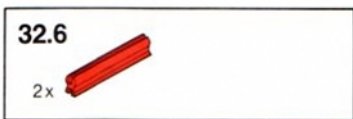
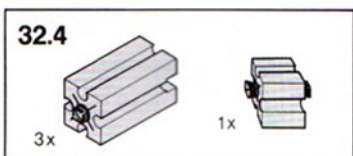
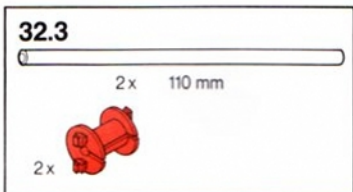


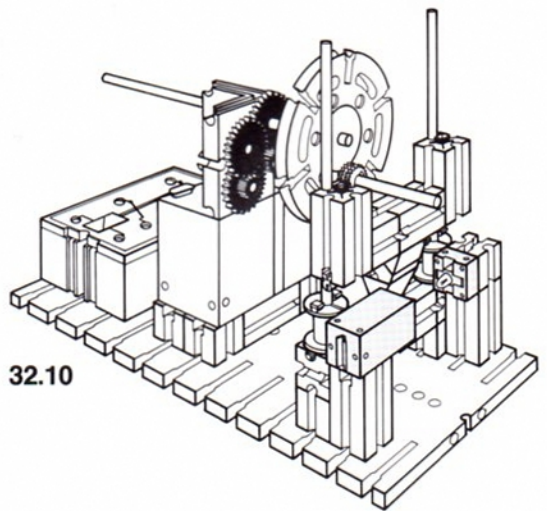
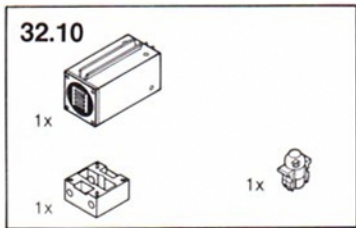
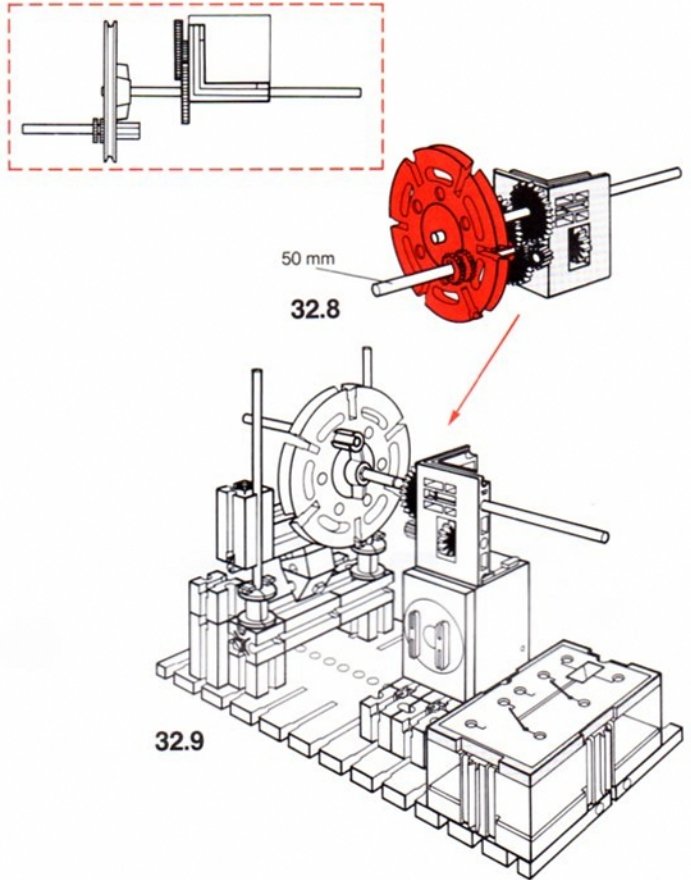
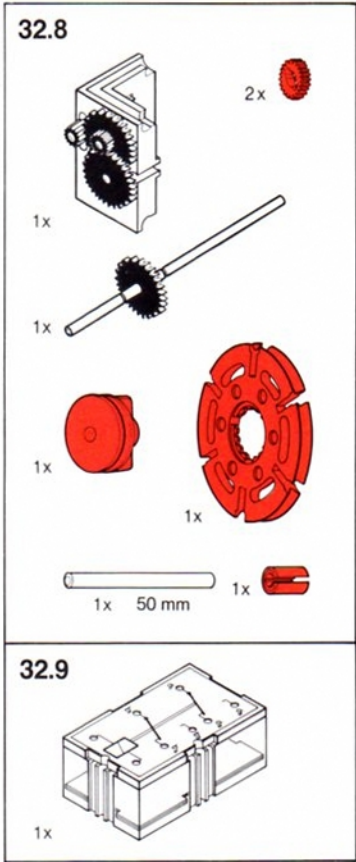


110 mm



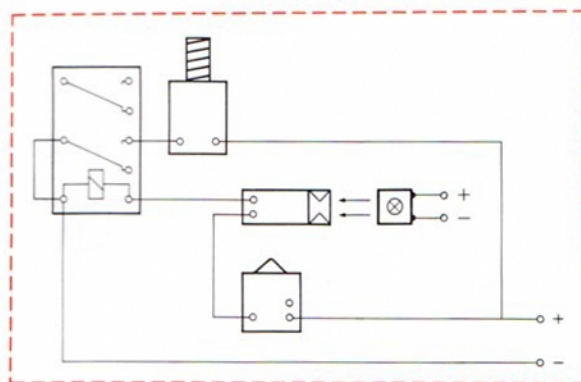
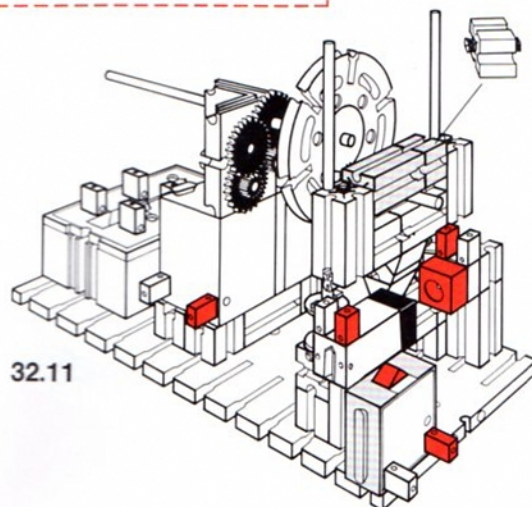
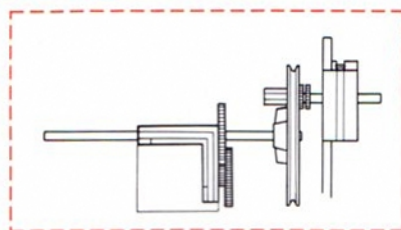
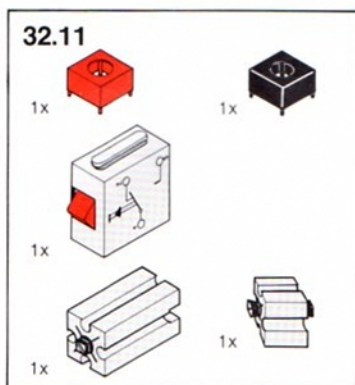


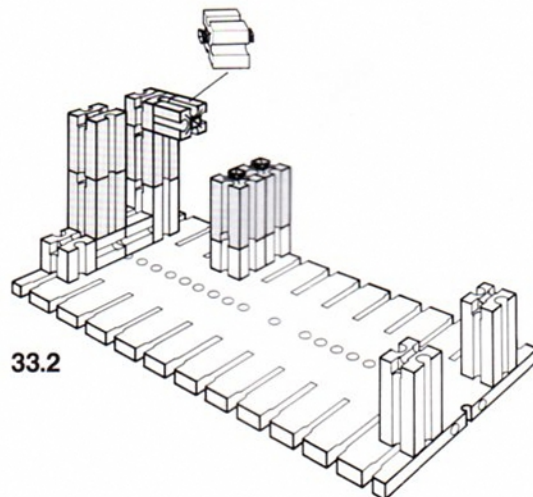
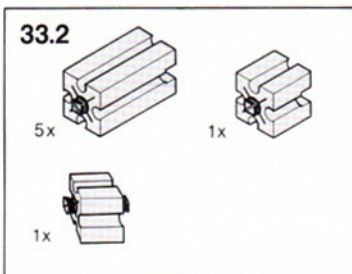
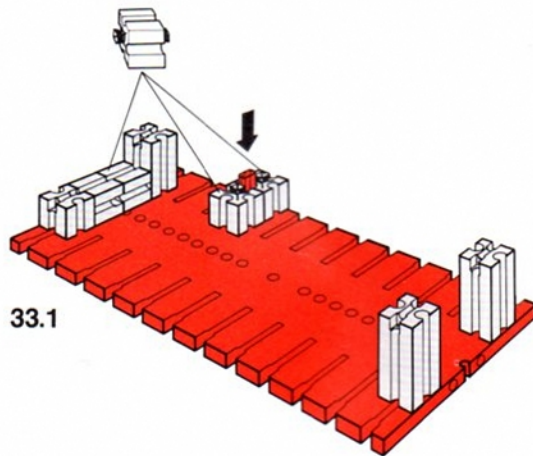
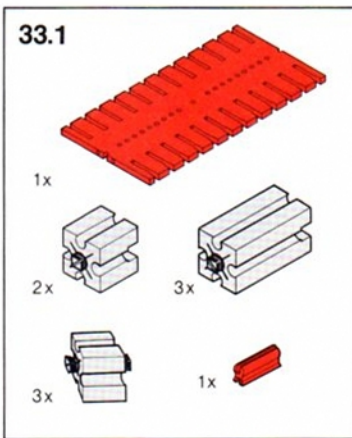
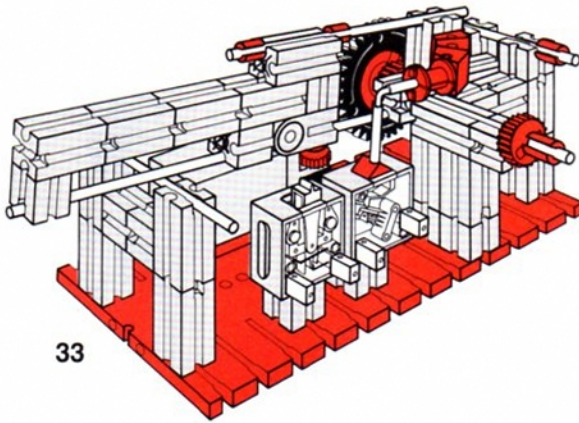


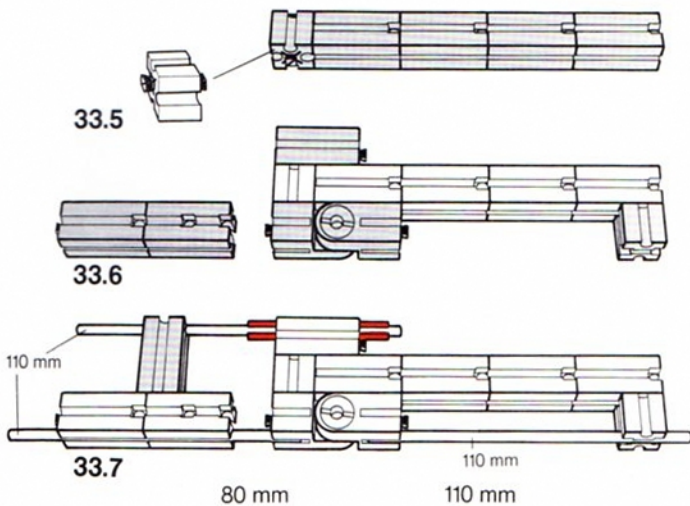
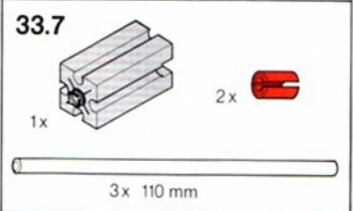
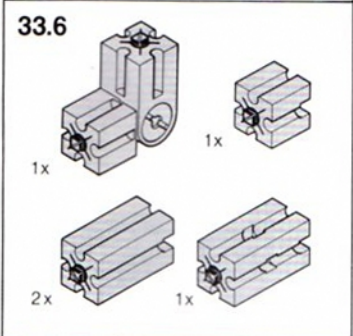
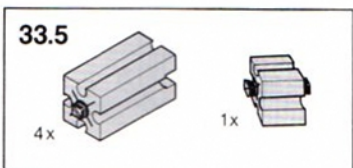
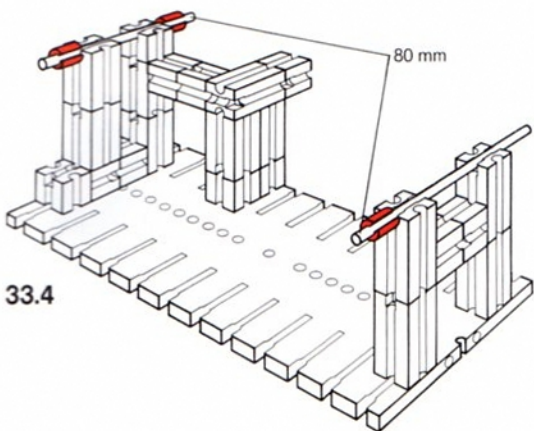
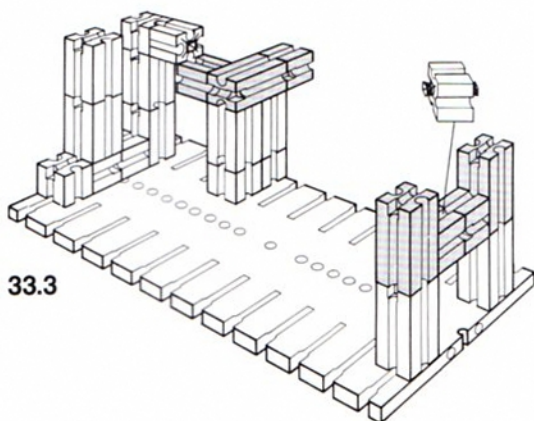
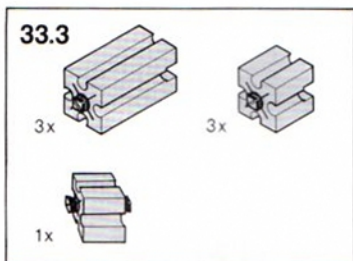


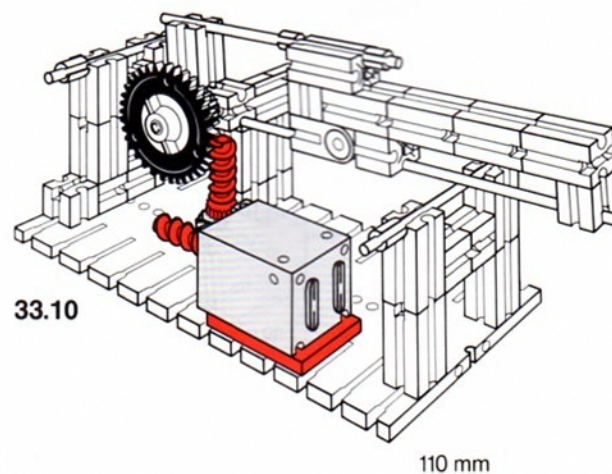
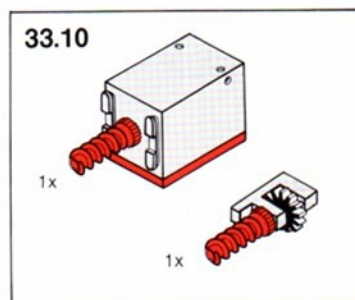
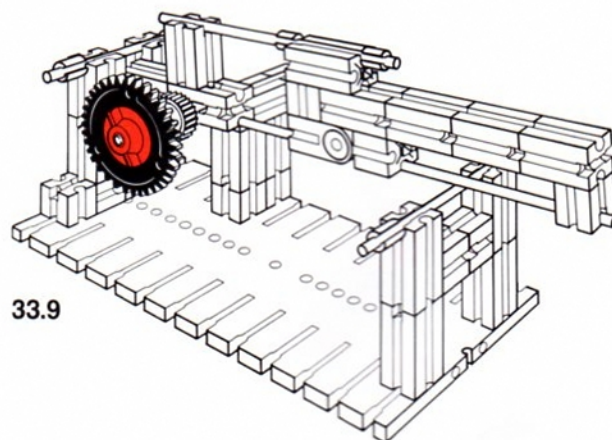
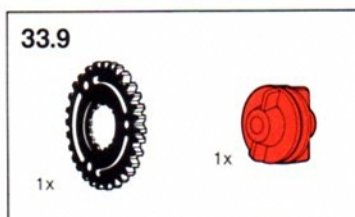
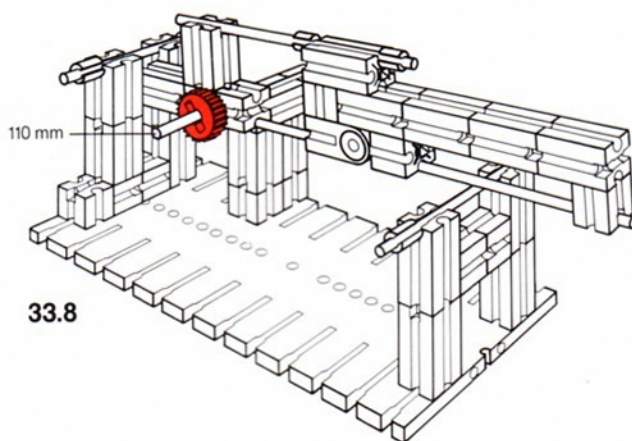
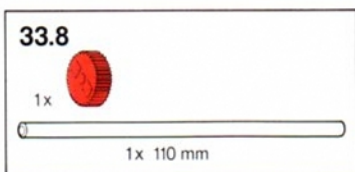
50 mm

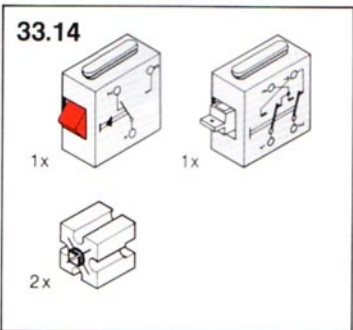
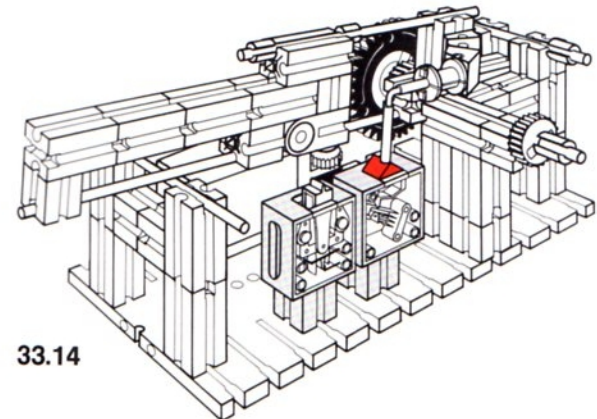
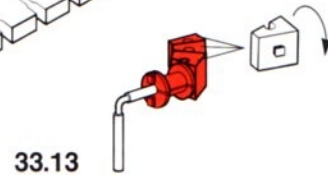
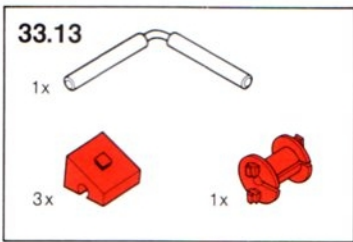
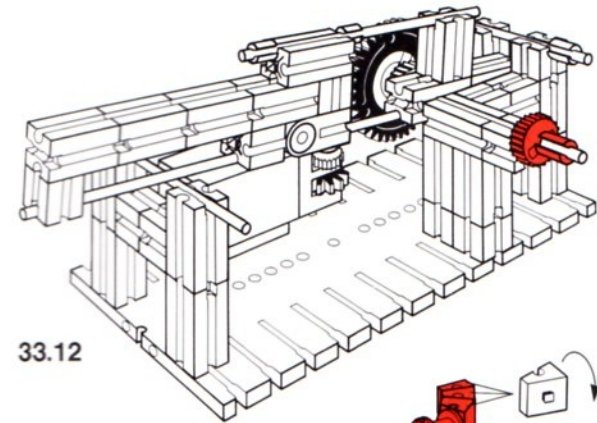
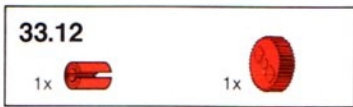
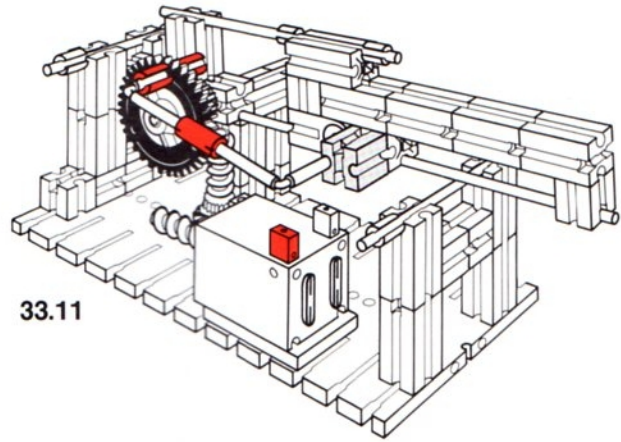
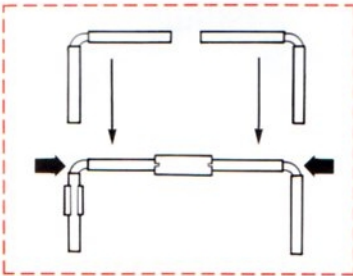
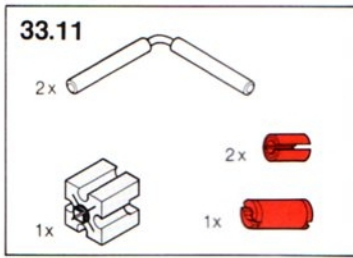


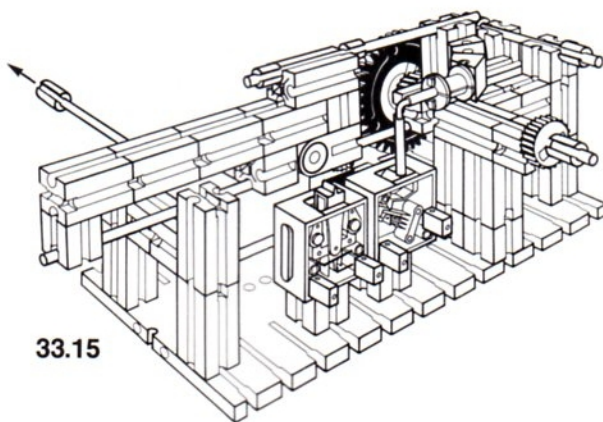




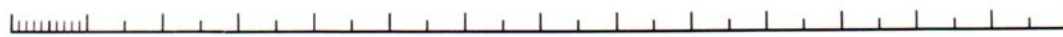
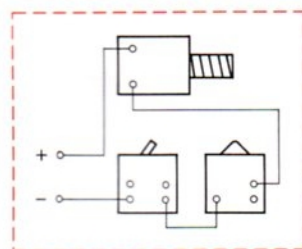


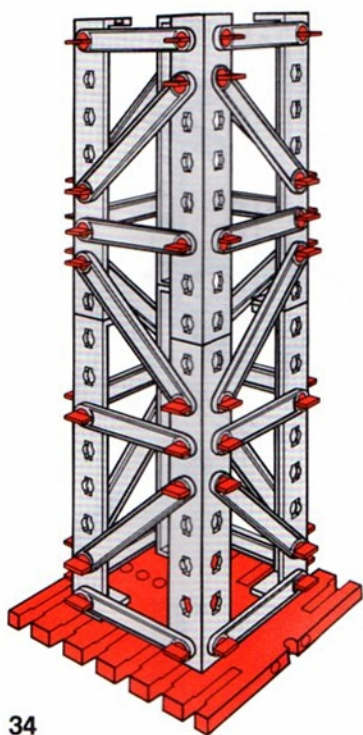




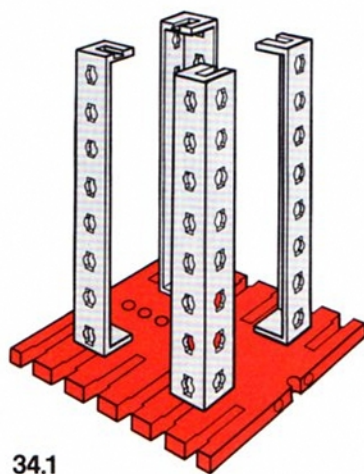
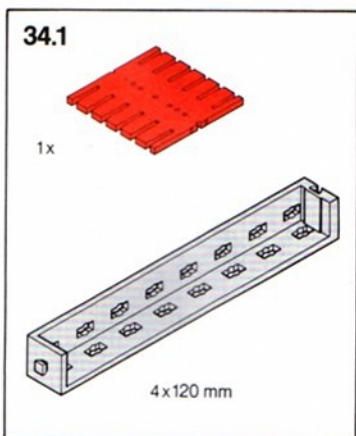


33.15





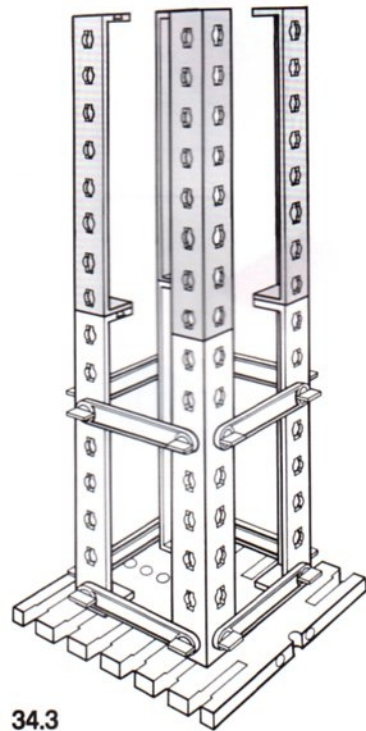
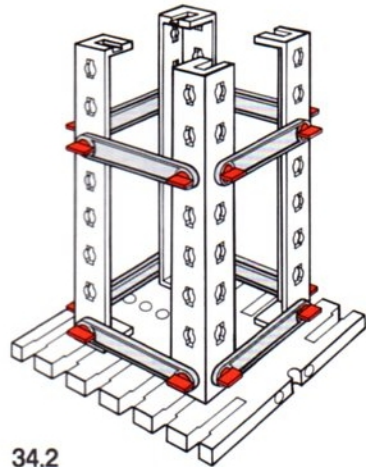
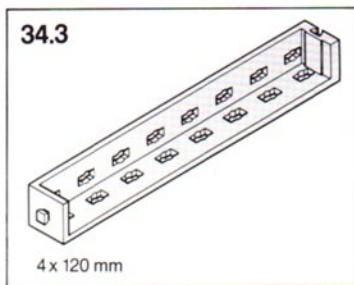
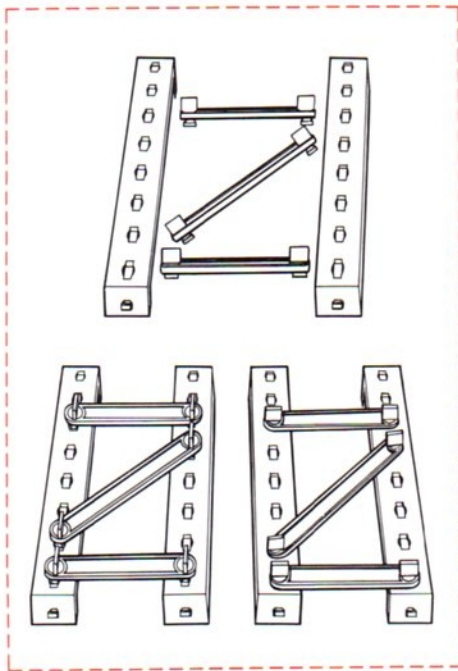
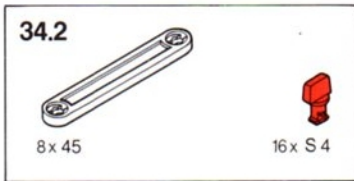
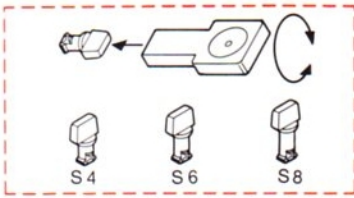
34

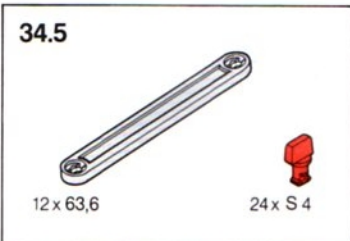
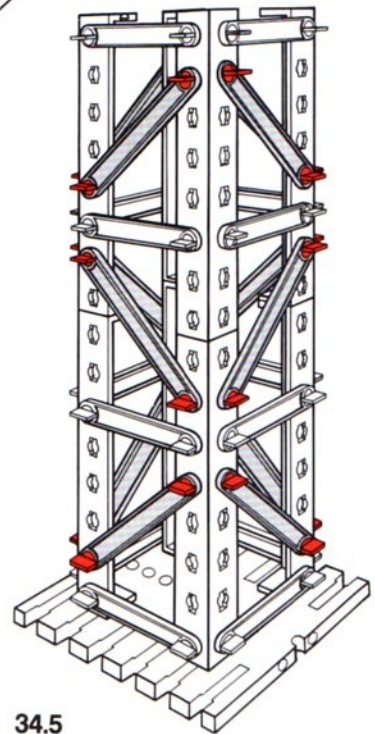
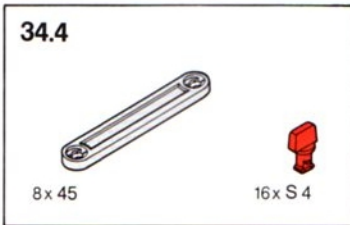
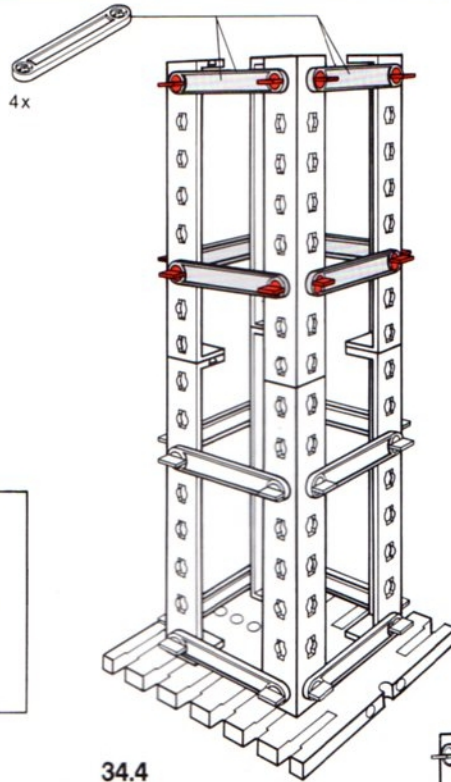


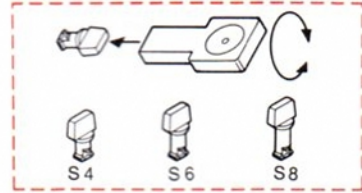
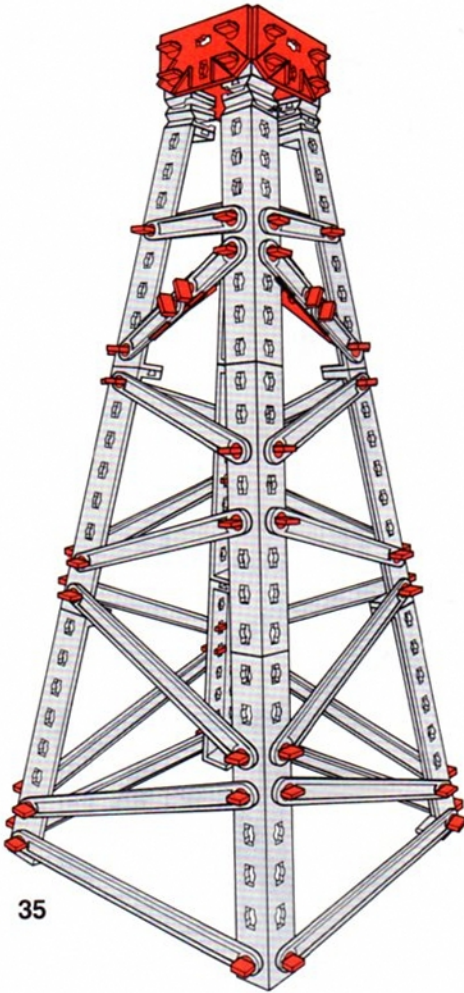
34.1

120 mm

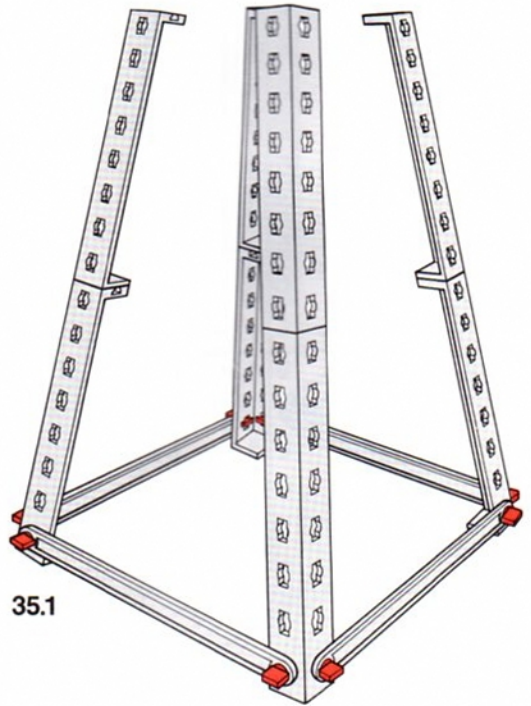
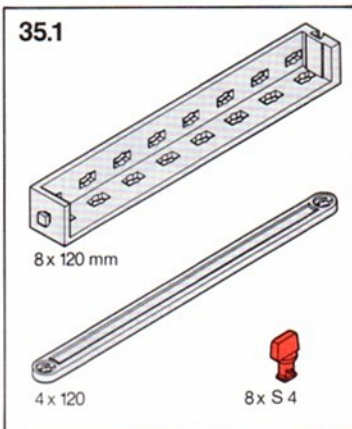








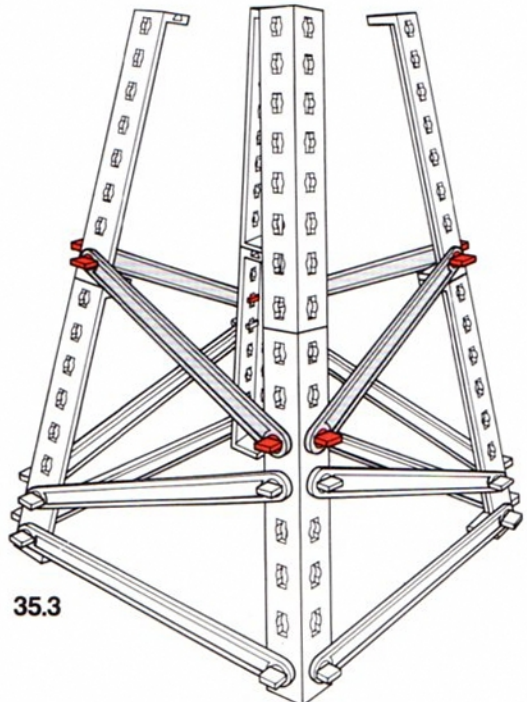
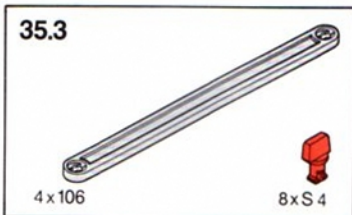
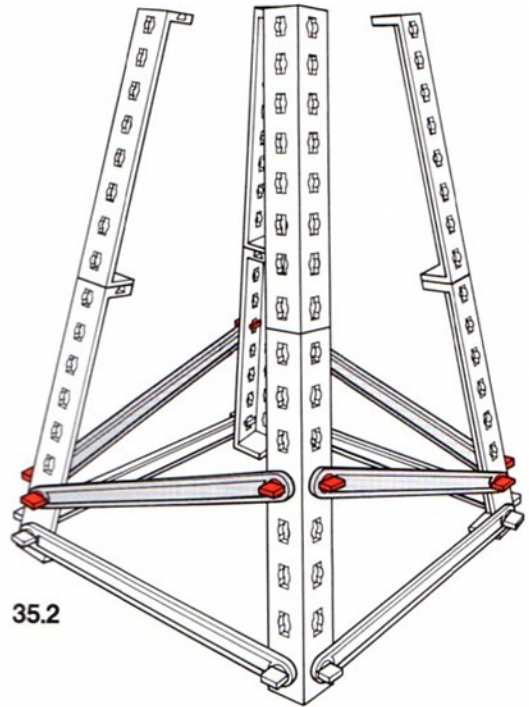
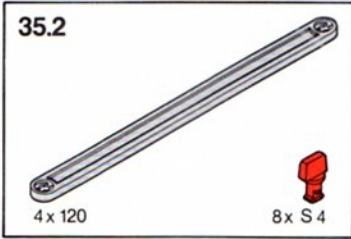
35

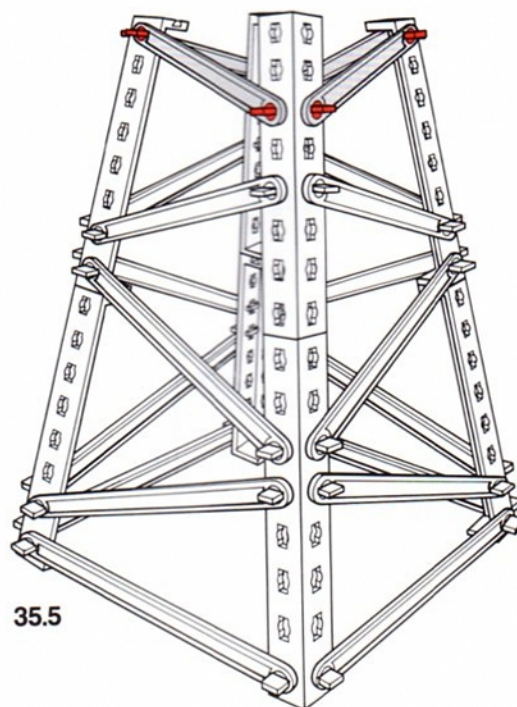
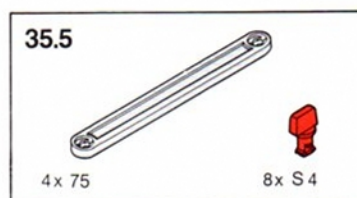
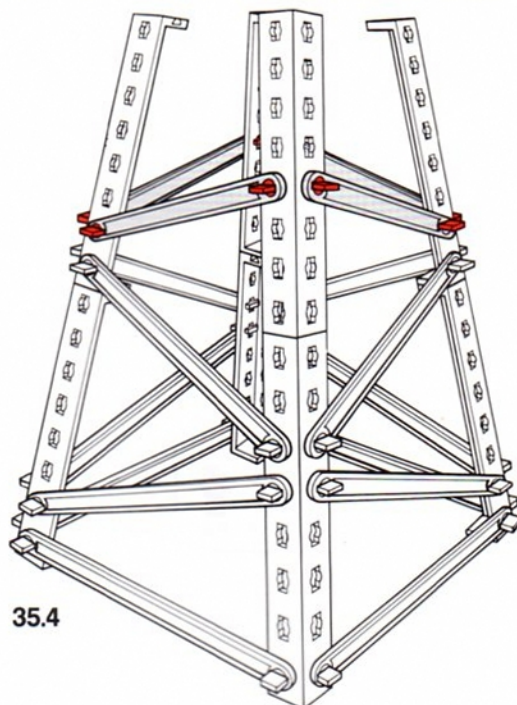
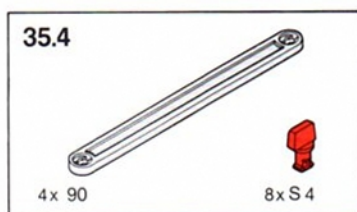


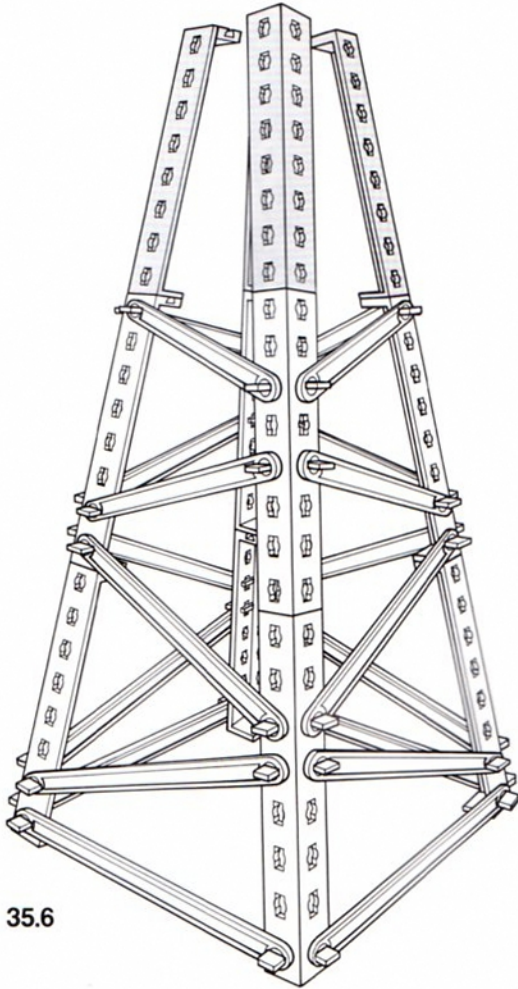
35.1

120 mm

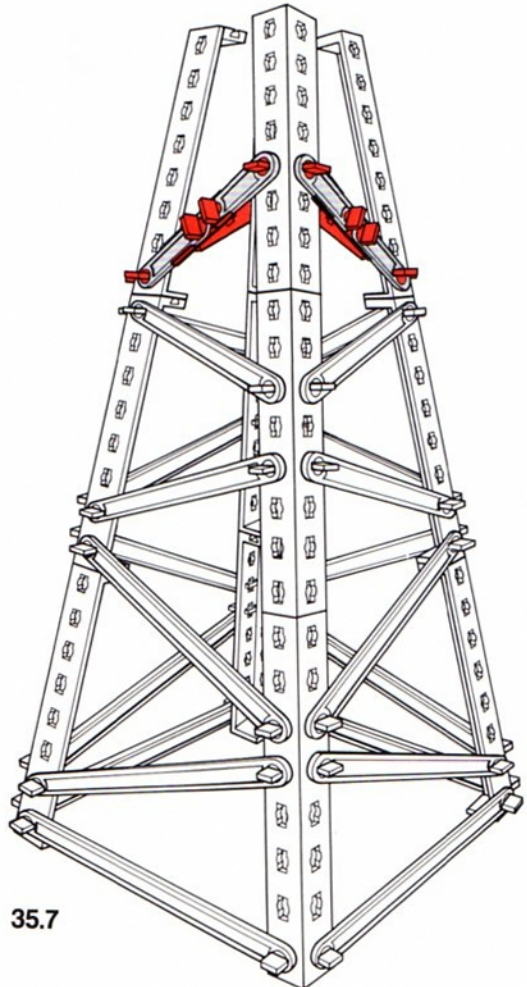
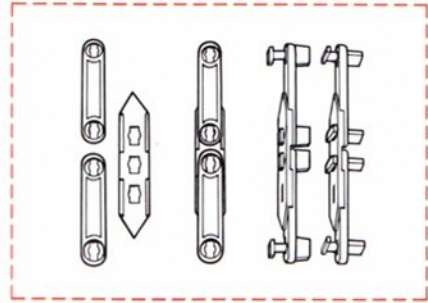




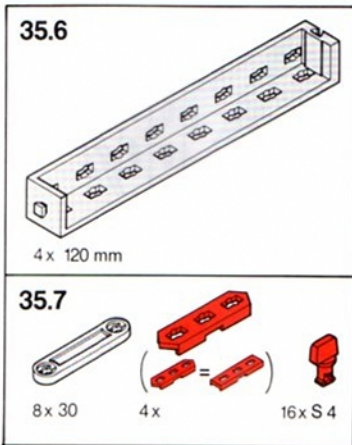




35.6

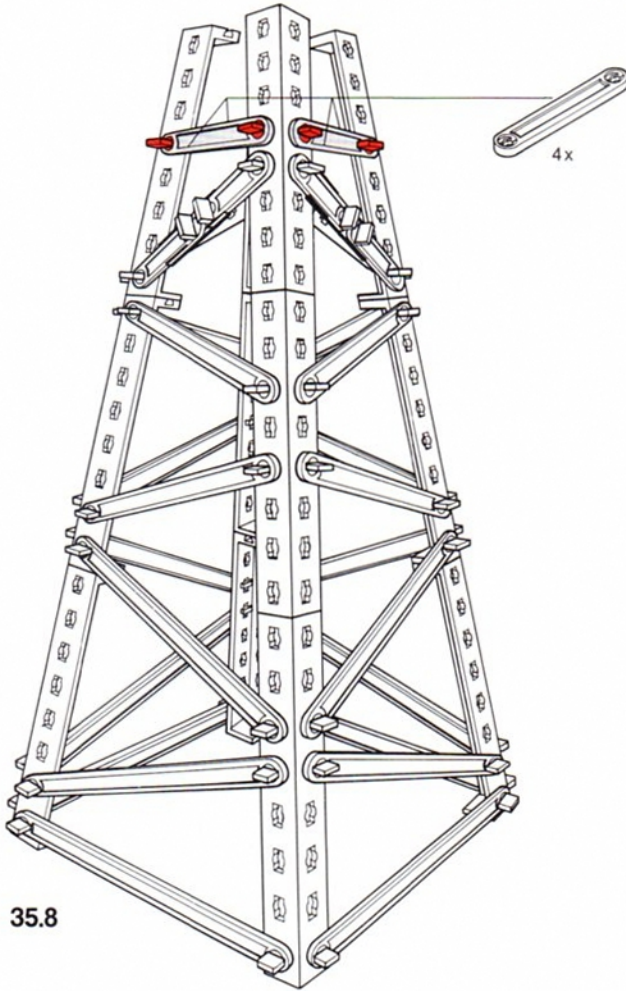


35.7

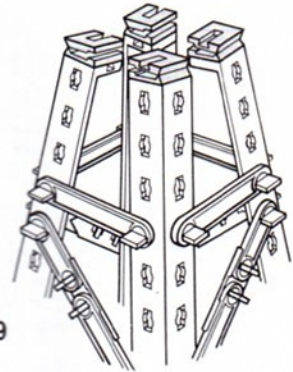


120 mm

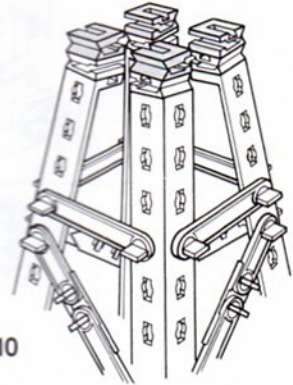








35.8



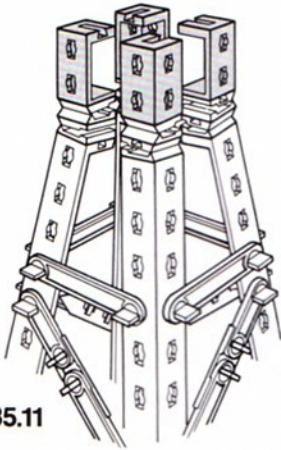
35.9



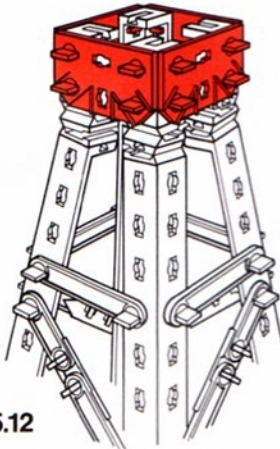
35.10

35.8  4 x 45  8 x S 4
35.9  4 x
35.10  4 x

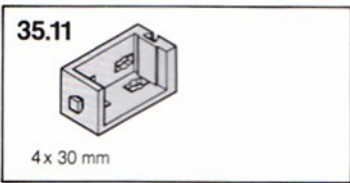




35.11

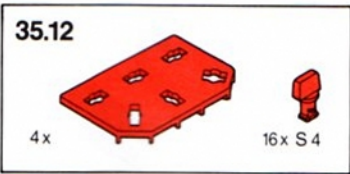


35.12



35.11

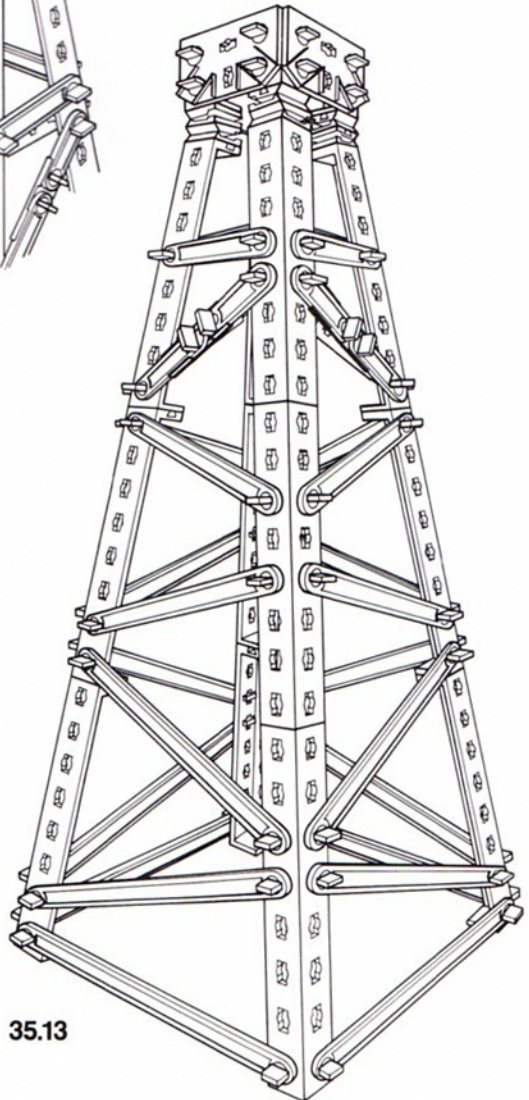
4 x 30 mm



35.12

4 x

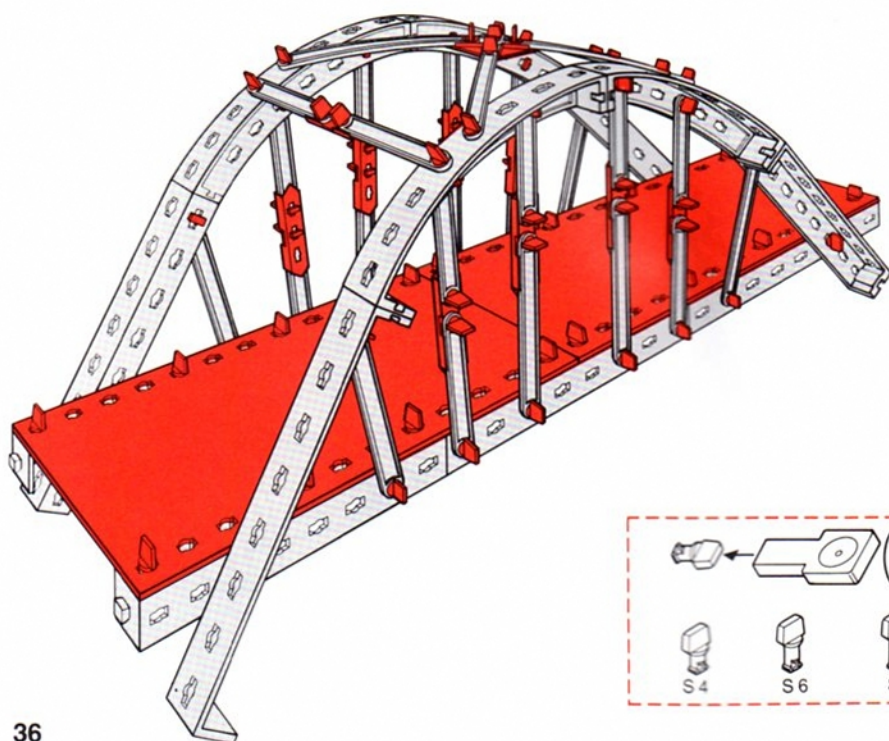
16 x S 4



35.13

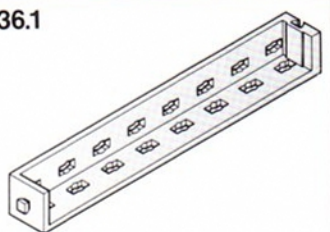
30 mm



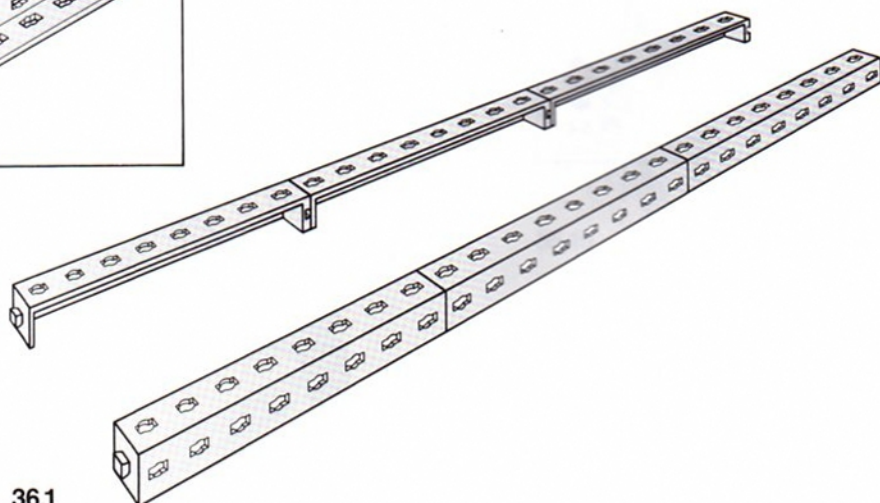


36

36.1

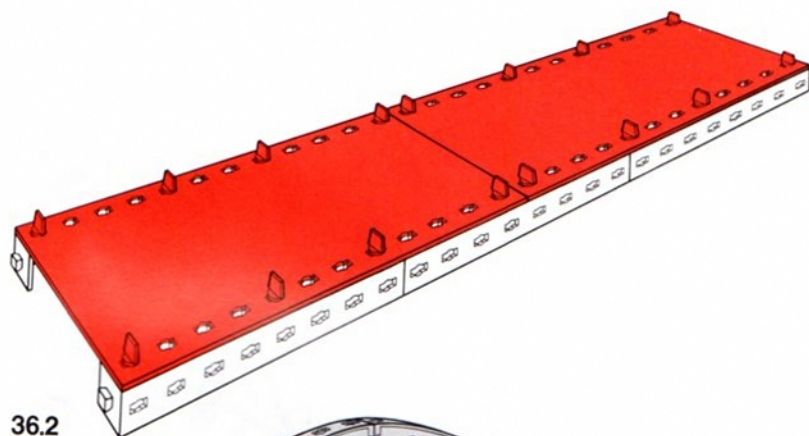


6 x 120 mm

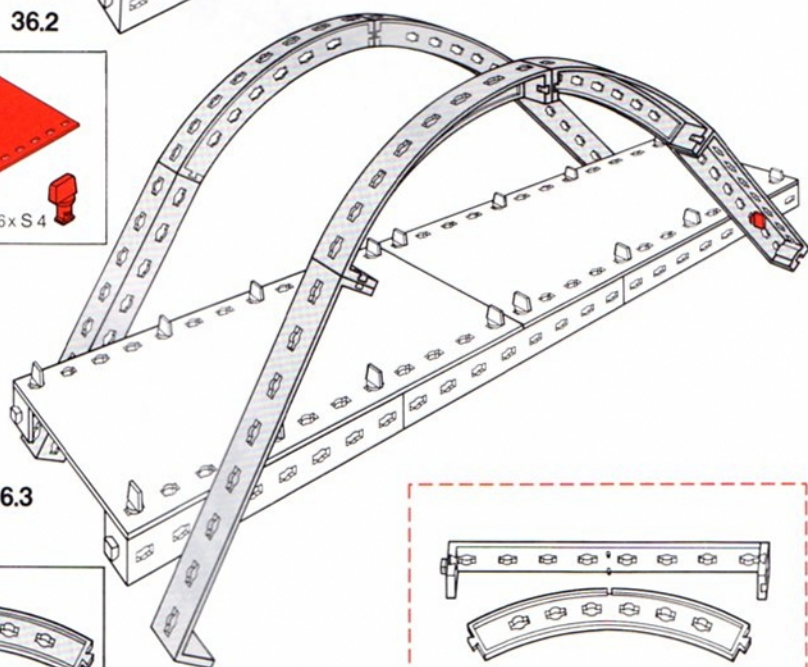
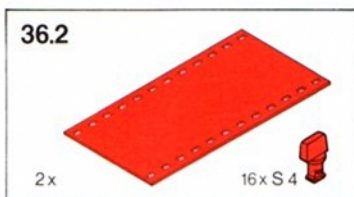


36.1

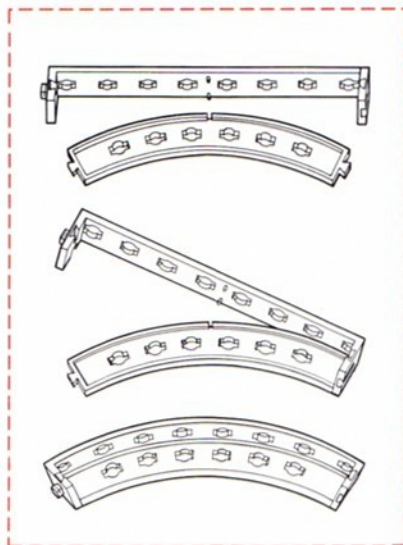
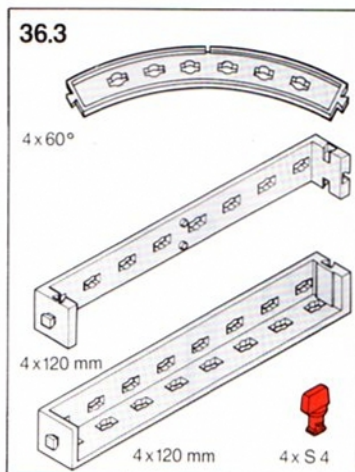
120 mm .



36.2

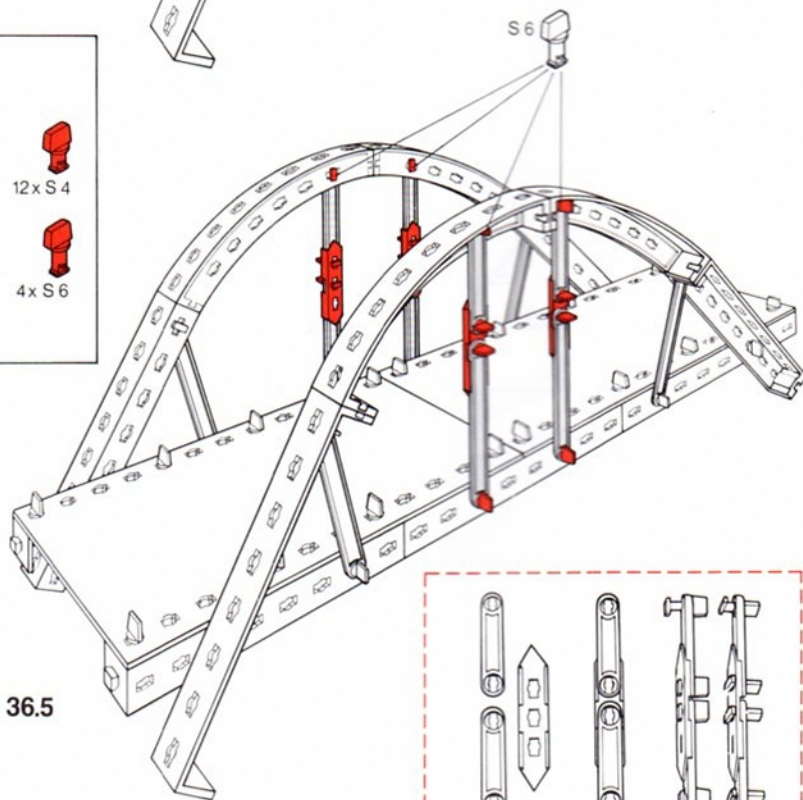
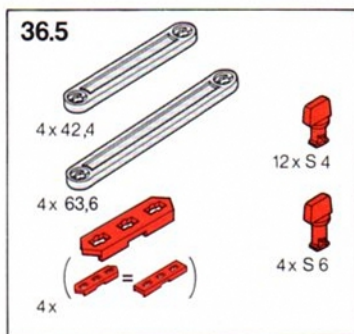
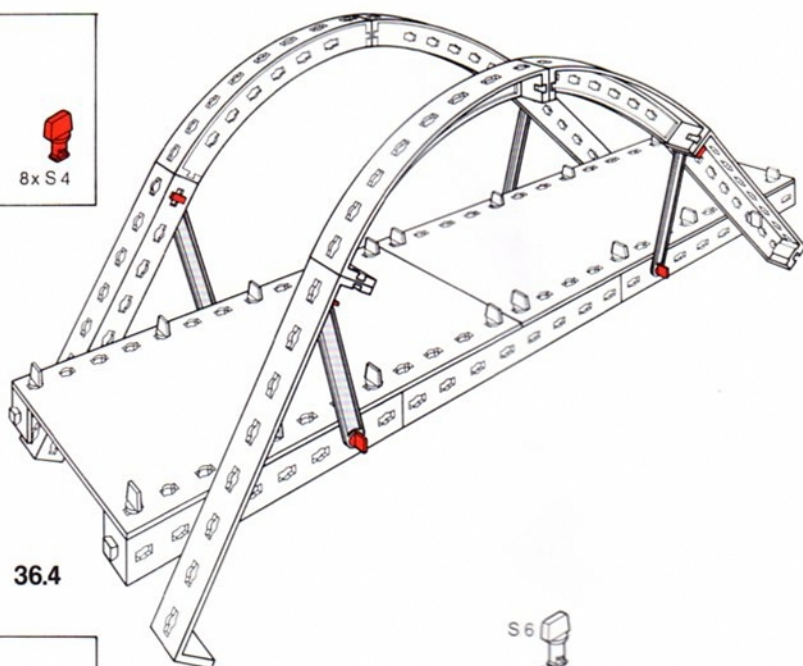
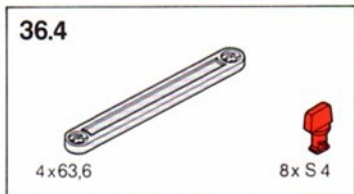


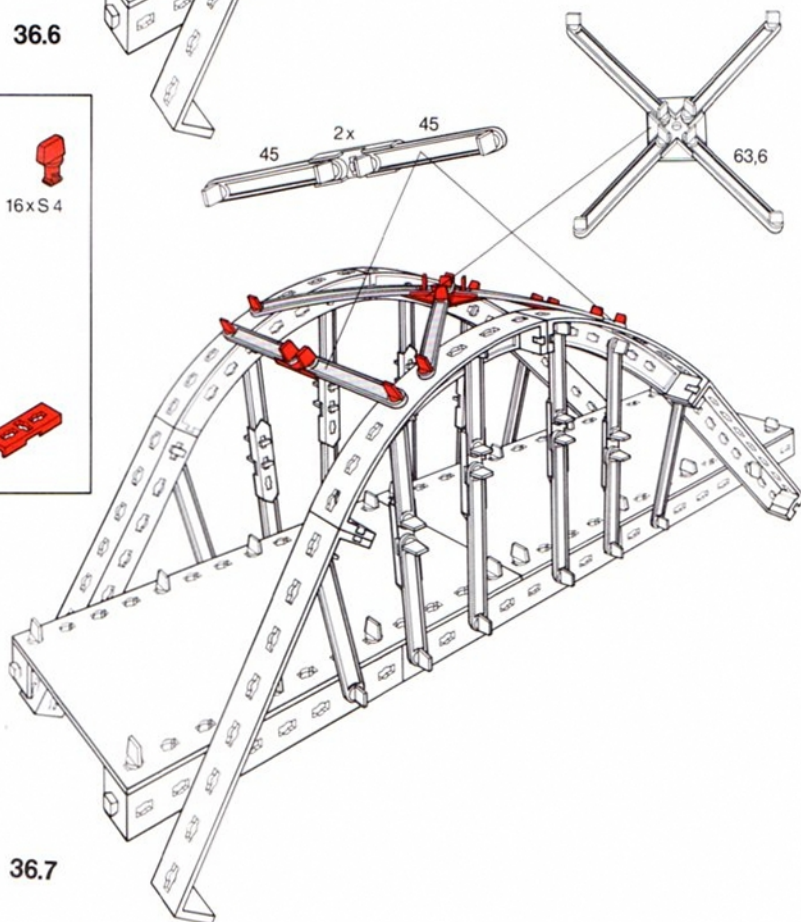
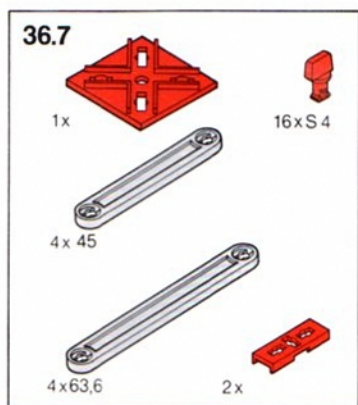
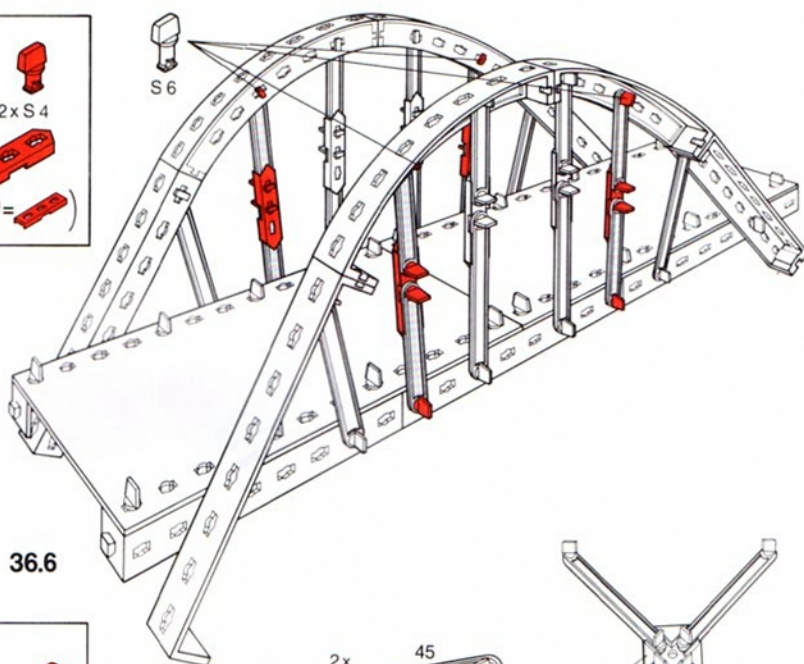
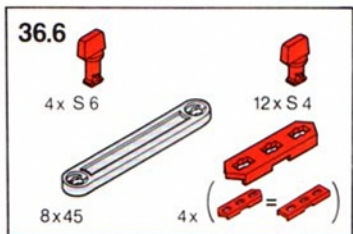
36.3



120 mm

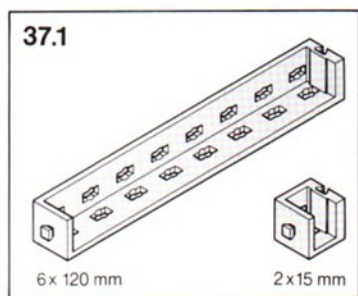
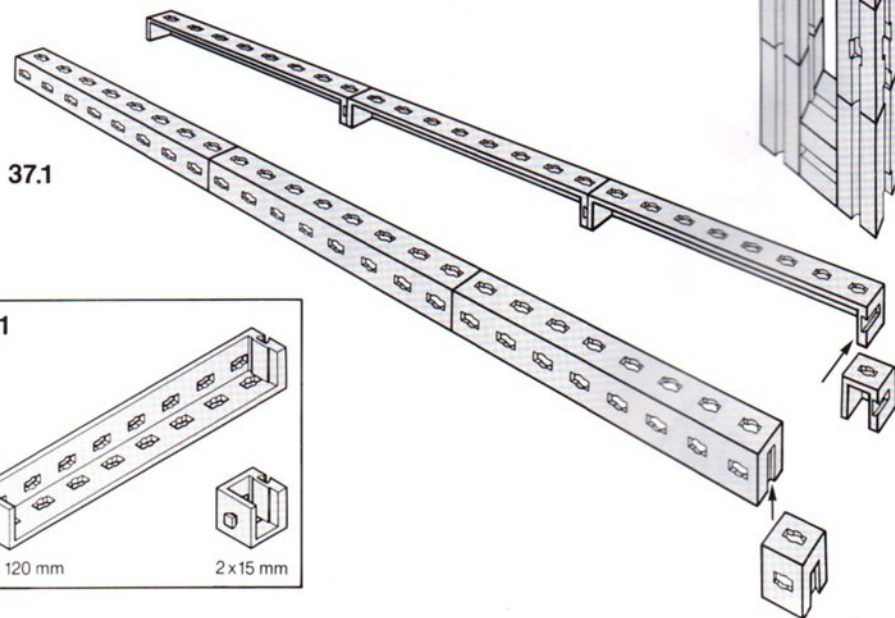
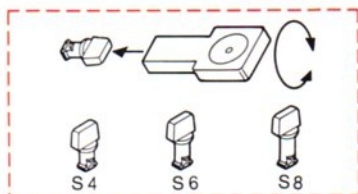
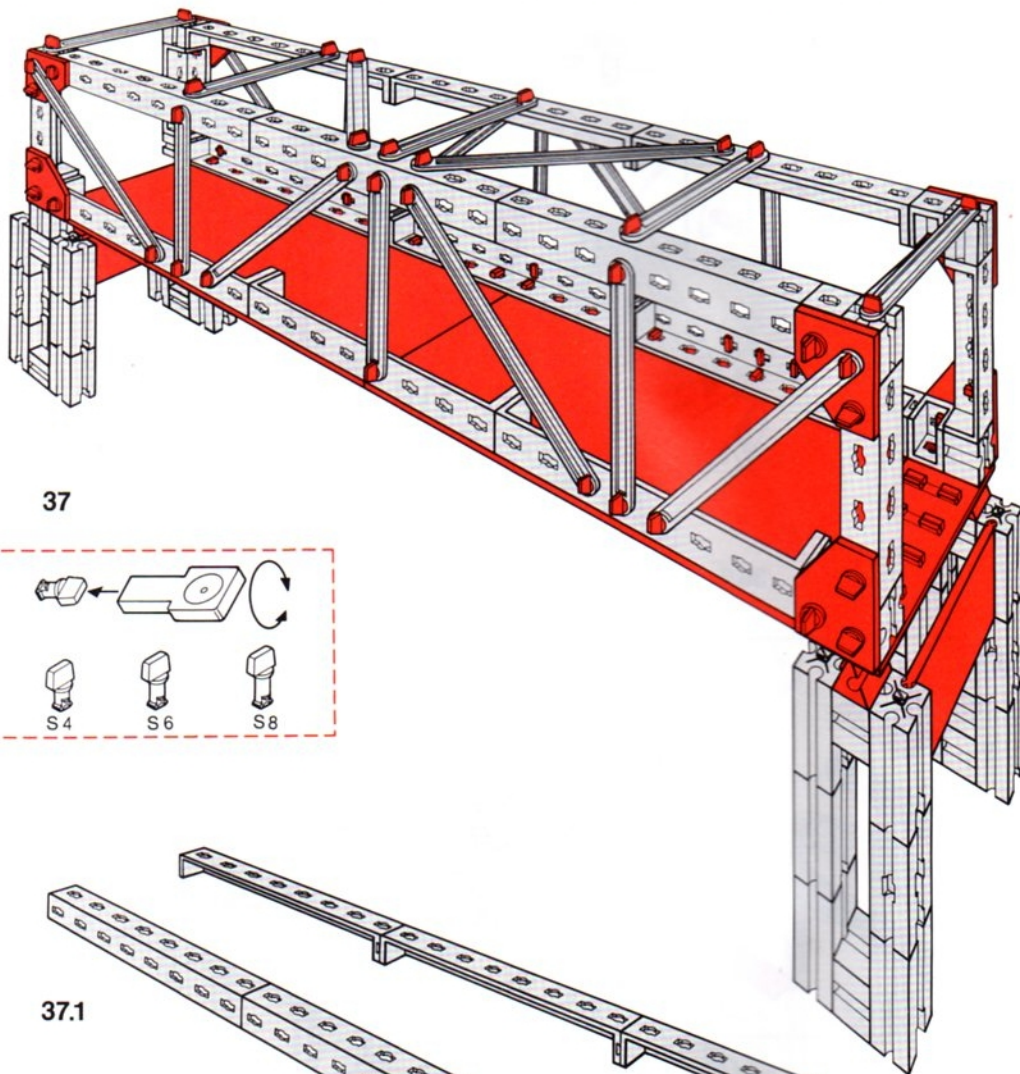


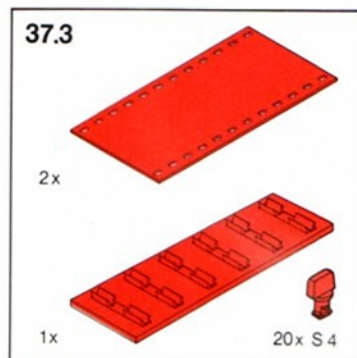
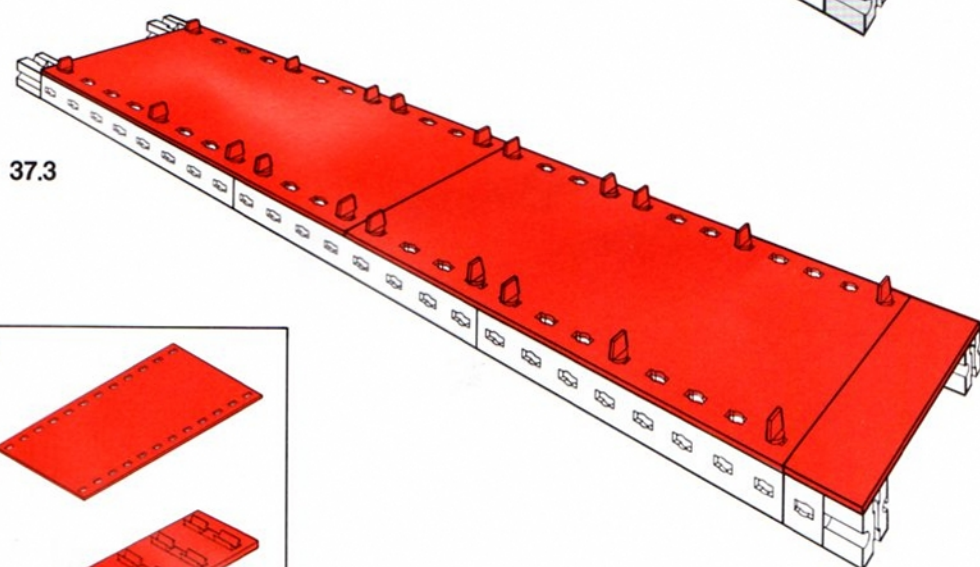
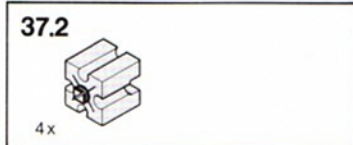
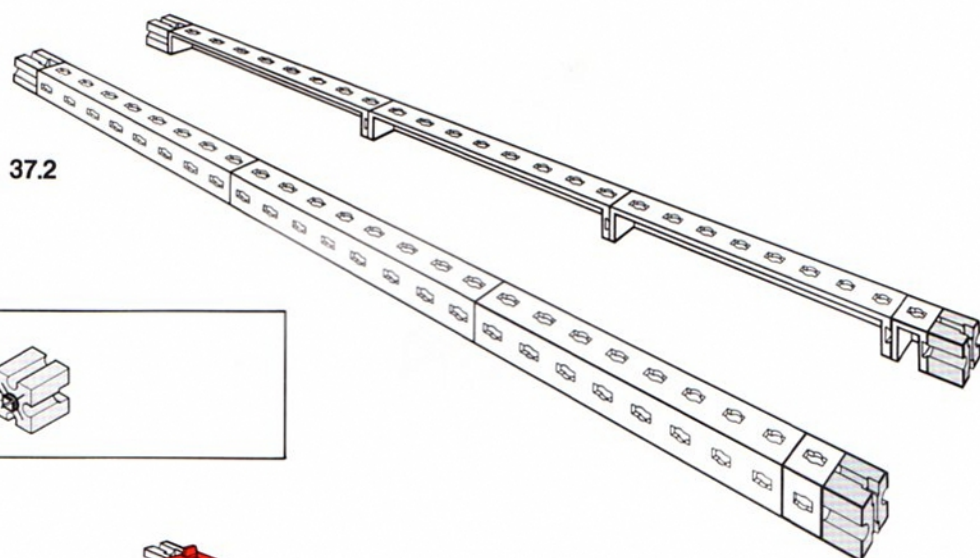


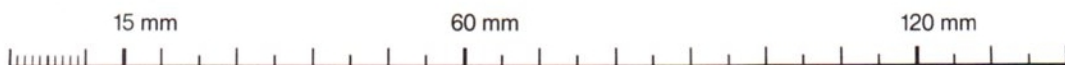
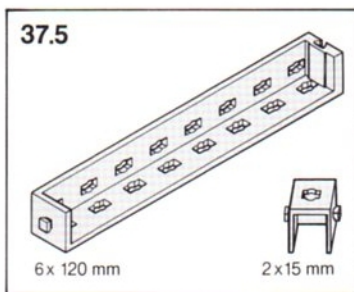
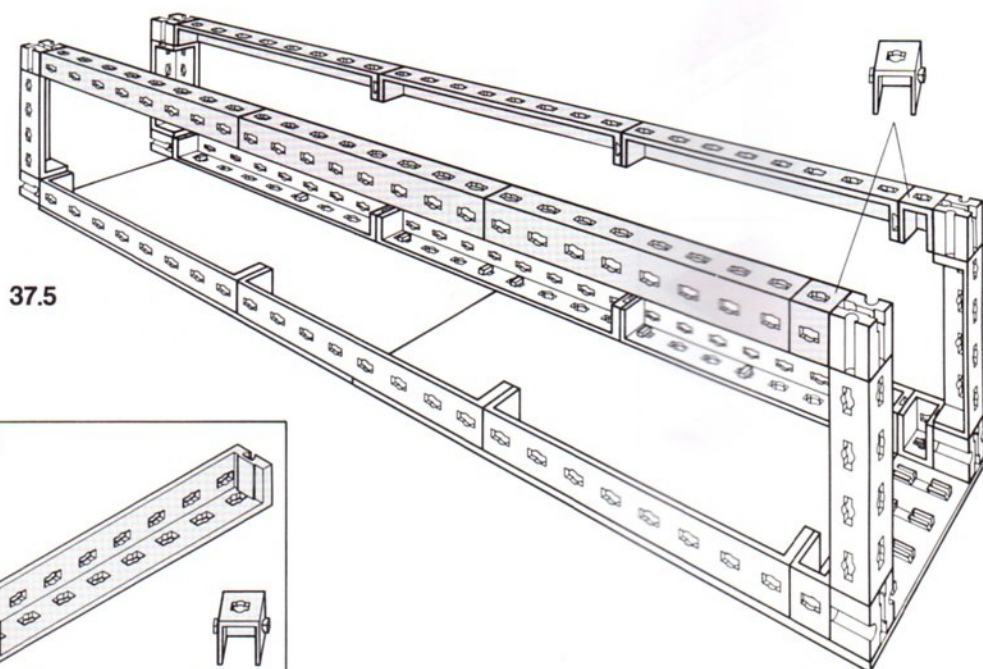
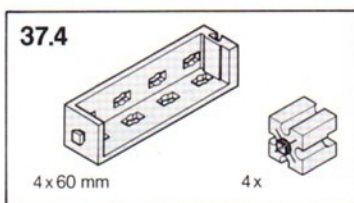
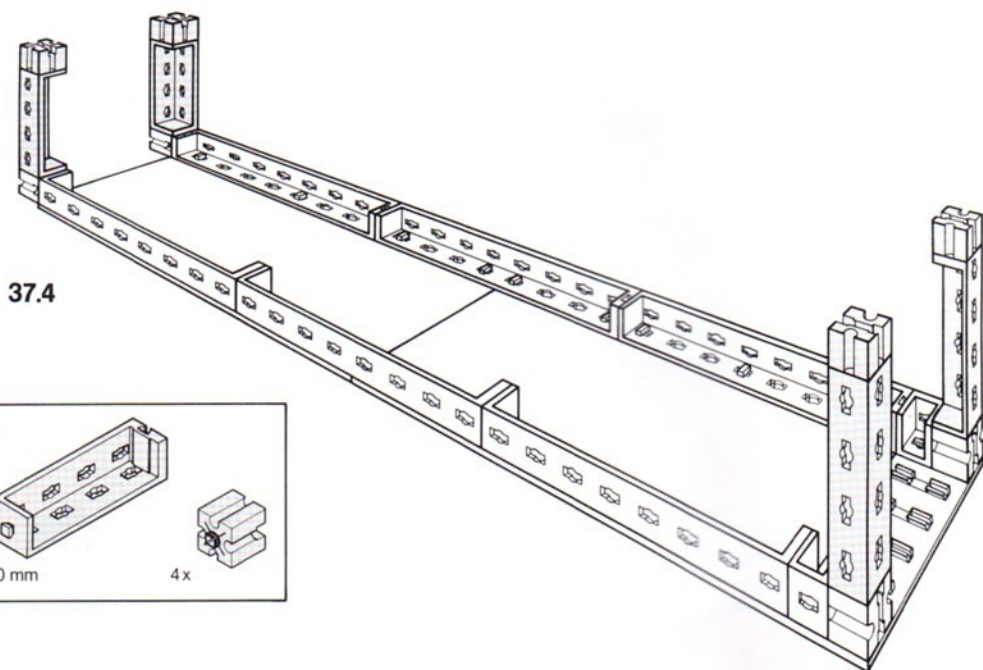


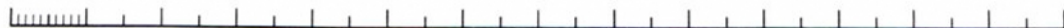
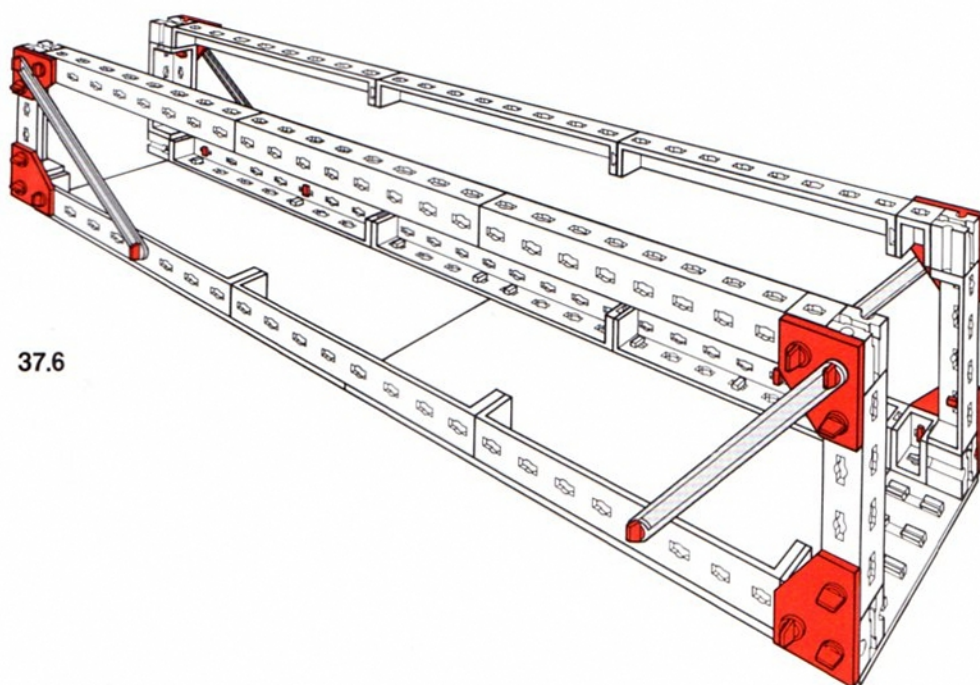
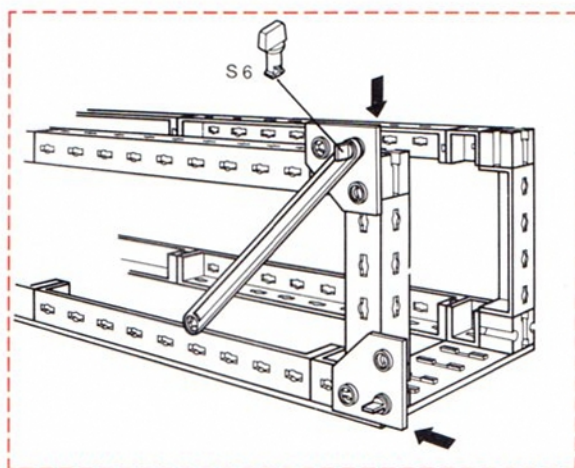
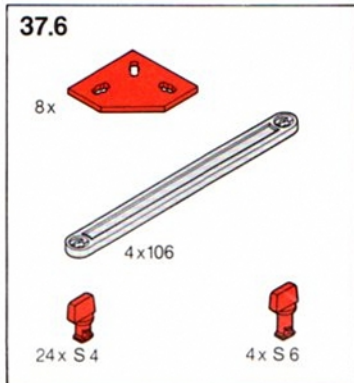
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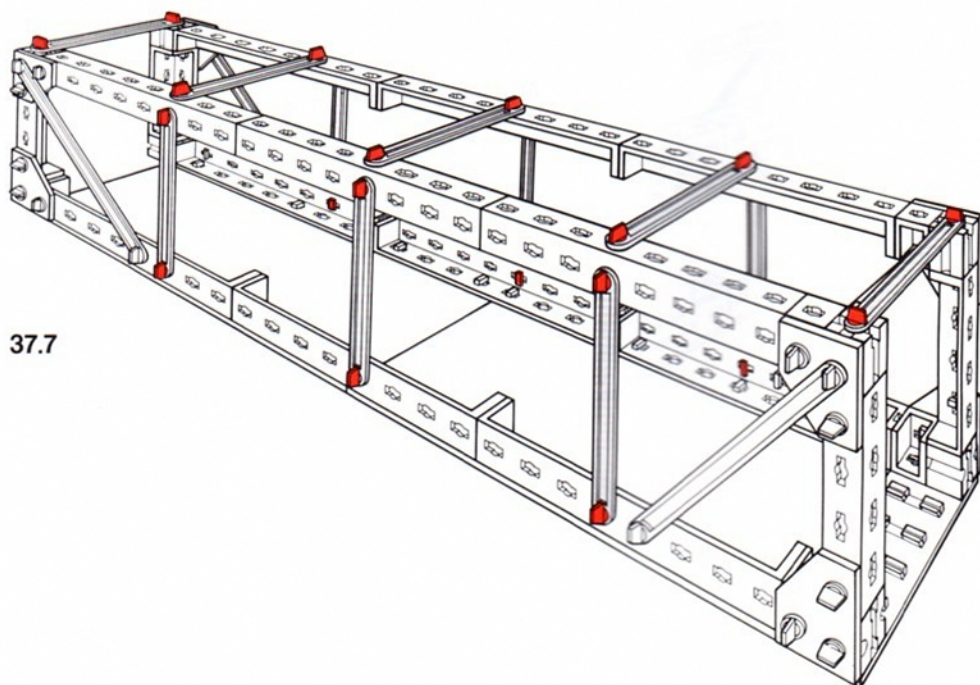
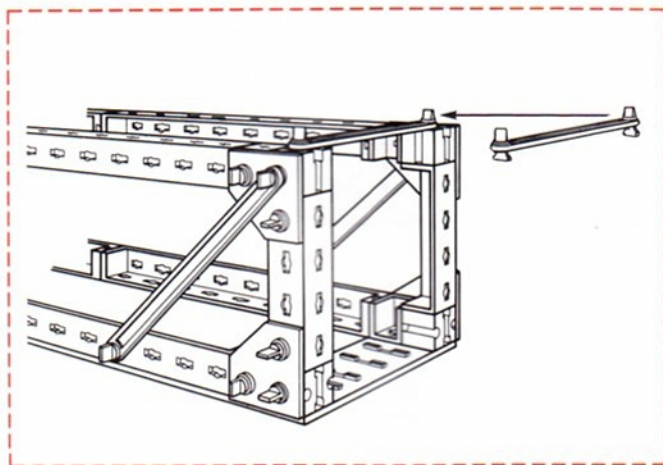
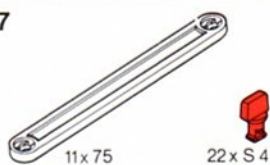


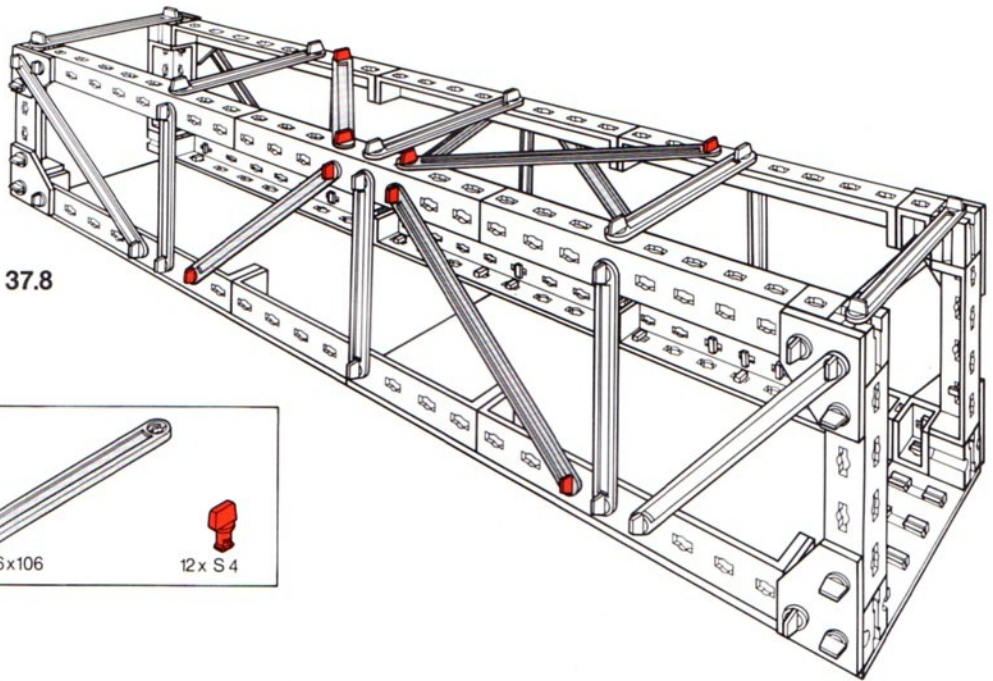




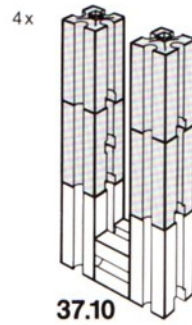
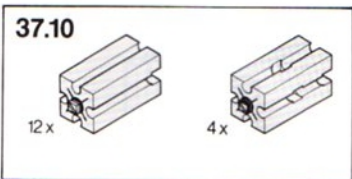
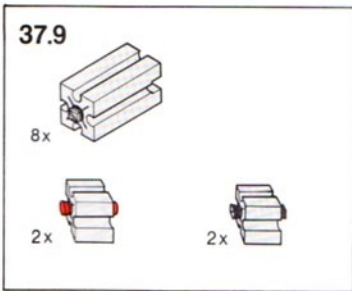
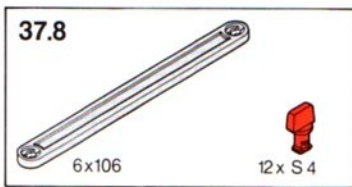


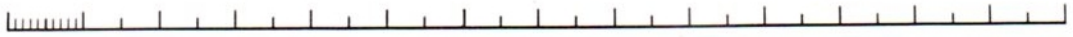
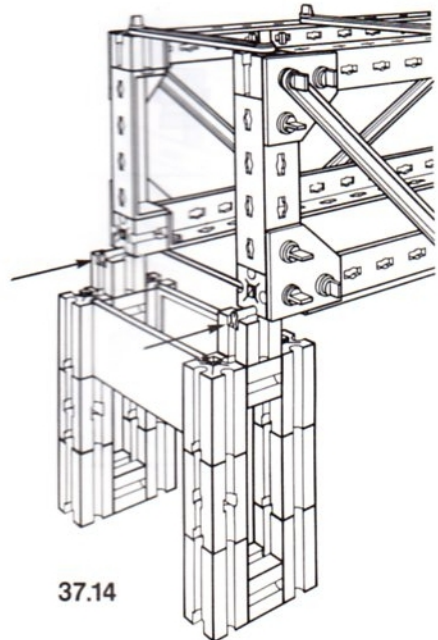
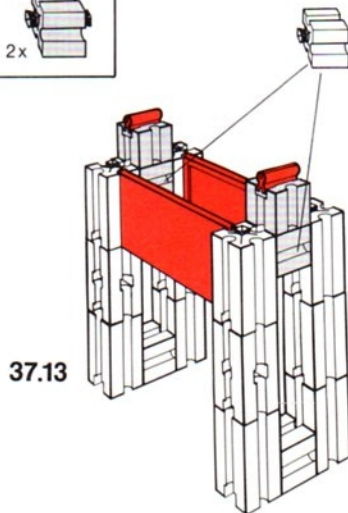
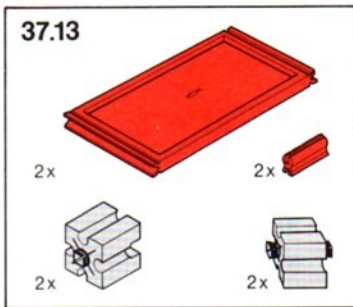
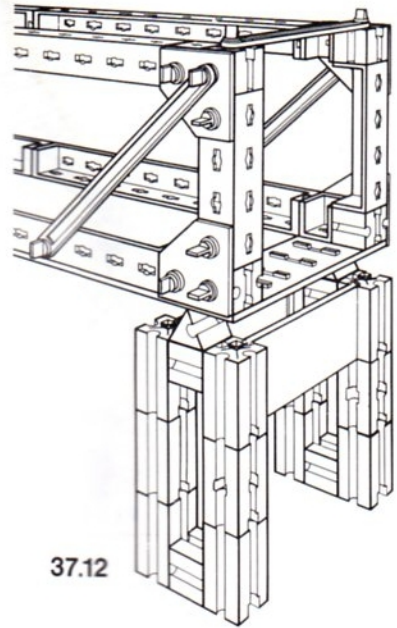
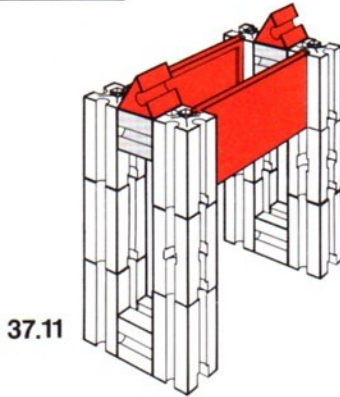
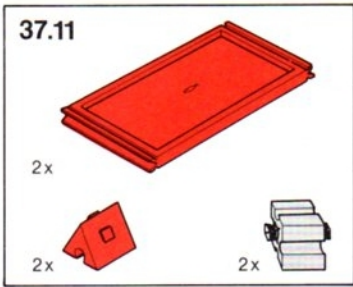
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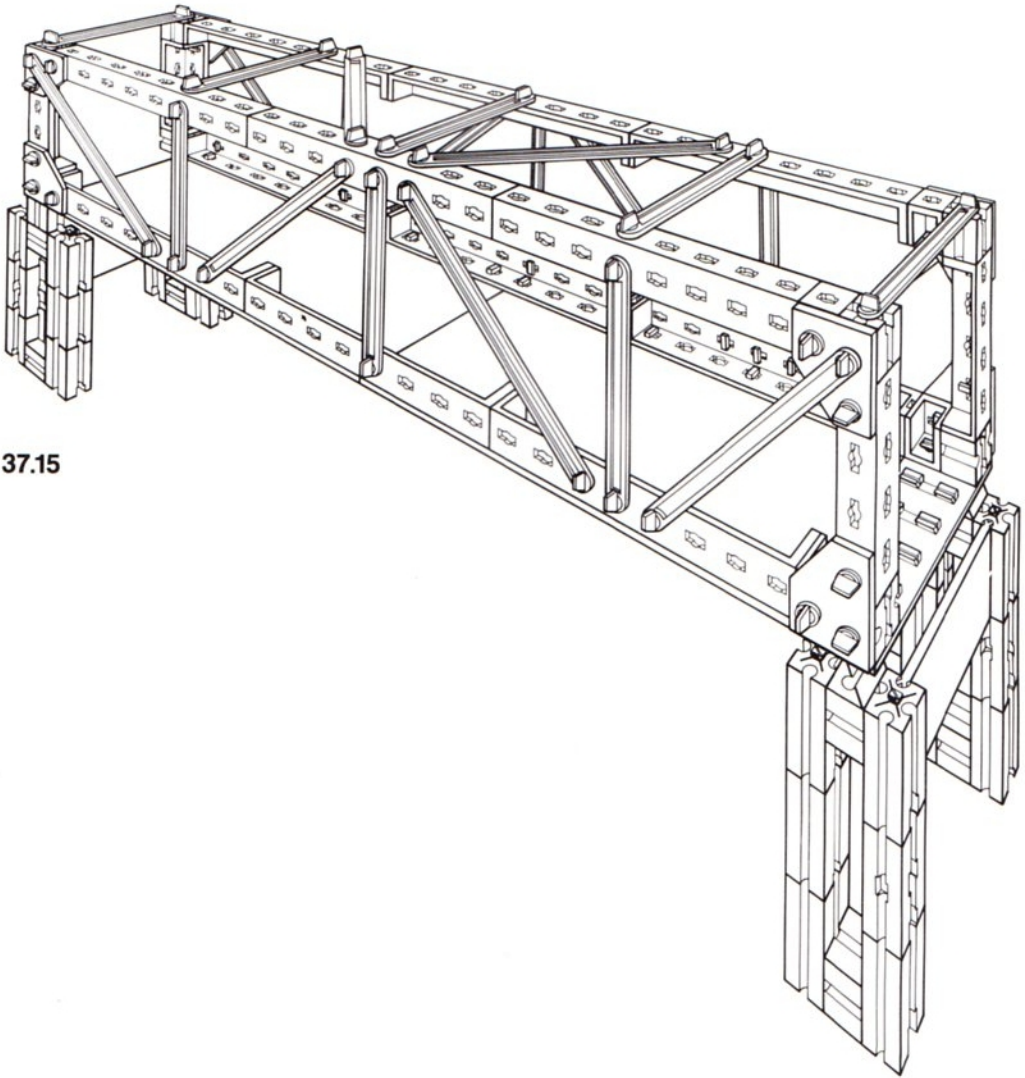




37.8







37.15



Cornelsen
EXPERIMENTA

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