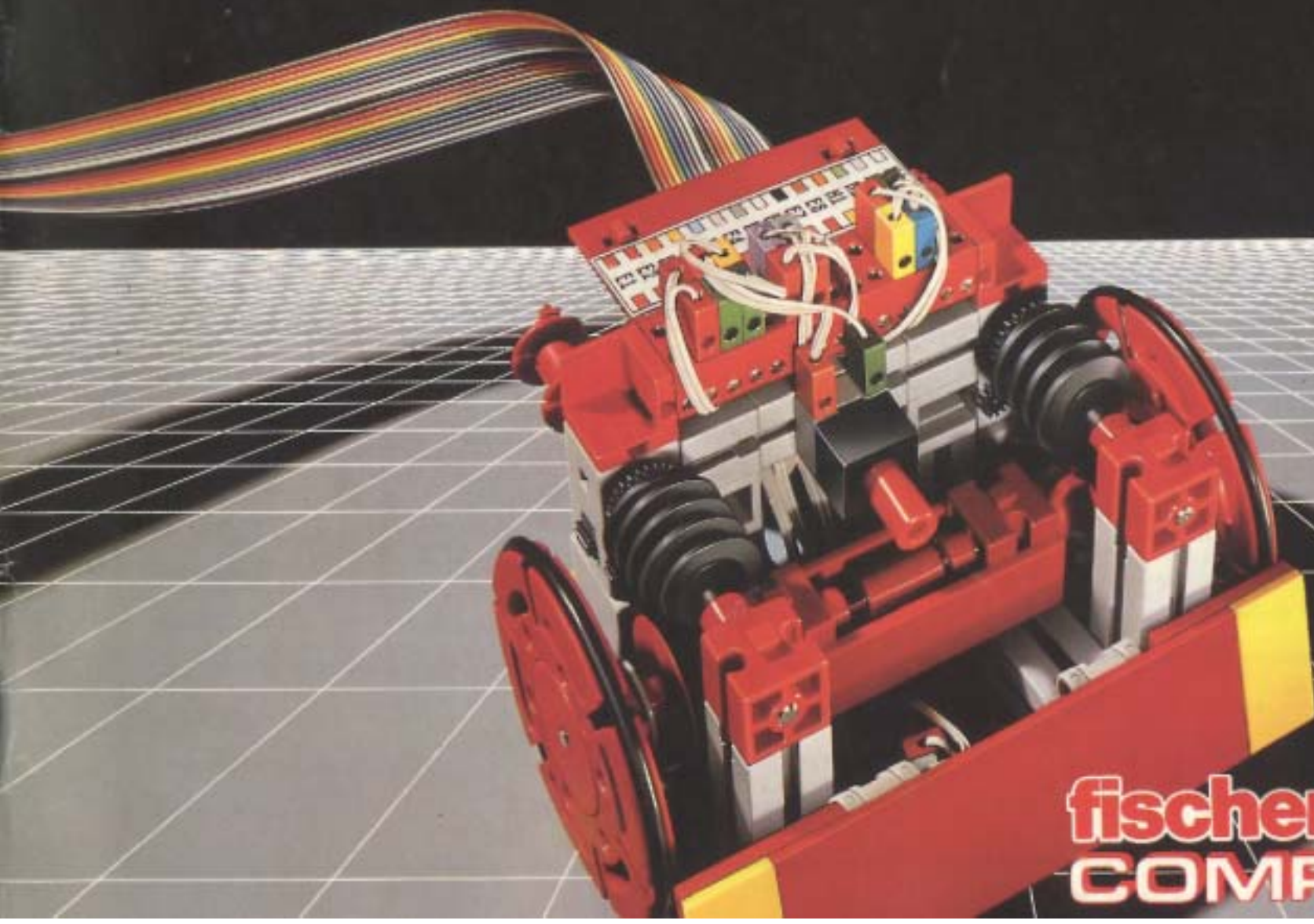


COMPUTING EXPERIMENTAL

Bauanleitung • Assembly Manual • Mode d'emploi



fischertechnik
COMPUTING



Inhaltsverzeichnis

Contents

Contenu

Stückliste	2	Parts list	2	Liste des pièces	2
Seilwinde 1	6	Winch 1	6	Palan 1	6
Seilwinde 2	8	Winch 2	8	Palan 2	8
Seilwinde 3	9	Winch 3	9	Palan 3	9
Gabellichtschranke	10	Fork Light Barrier	10	Barrage photoélectrique de transmission	10
Reflexionslichtschranke	12	Reflecting Light Barrier	12	Barrage photoélectrique de réflexion	12
Belichtungsmesser	14	Exposure Meter	14	Photomètre	14
Computerauge	15	Computer Eye	15	Oeil d'ordinateur	15
Radar	17	Radar	17	Radar	17
Thermometer	20	Thermometer	20	Thermomètre	20
Kalibrierung des Heißeiters	21	Calibration of the Thermistor	21	Calibration du thermistance	21
Ofen	22	Furnace	22	Chauffage	22
Gebläse	24	Fan	24	Ventilateur	24
Drosselventil	26	Throttle Valve	26	Soupape de réglage	26
Schweißroboter	28	Welding Robot	28	Robot de soudage	28
Schweißroboter mit Temperatursensor	33	Welding Robot with Thermistor	33	Robot de soudage avec thermistance	33
Schildkröte	36	Turtle	36	Tortue	36
Schildkröte mit Lesekopf	43	Turtle with Recording Head	43	Tortue avec Tête de lecture	43
Anschlußbeispiel	45	Examples of connection	45	Plan de câblage (exemple)	45

Stückliste **Parts list** **Liste des pièces**

	31003	Baustein 30 Building block 30 Pierre de 30
	31004	Baustein 30 mit Bohrung Building block 30 with bore Pierre de 30 percée
	31005	Baustein 15 Building block 15 Pierre de 15
	31006	Baustein 15 mit 2 Zapfen Double ended block Pierre de 15 à 2 tenons
	37237	Baustein 5 Building block 5 Pierre de 5
	32064	Baustein 15 mit Bohrung, rot Building block 15 with bore, red Pierre de 15 percée, rouge
	32322	Baustein 15 mit Ansenkung, grau Building block 15 with counter- bore, grey Pierre fraisée de 15, gris
	32330	Bauplatte 15 x 30 x 3,75 Mounting plate 15 x 30 x 3,75 Plaque de 15 x 30 x 3,75

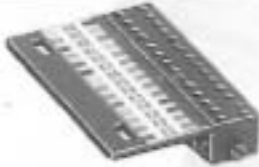
	37636	Rollenlager, rot Roller bearing, red Support de poulie, rouge
	36300	Winkelträger 15 Angle girder 15 Cornière de 15
	32085	Rollenbock, rot Roller block, red Palier, rouge
	31423	Gelenkwürfel 15 Hinged block 15 Pierre d'articulation de 15
	38240	Baustein V15 Eck Building Block V15 Pierre angulaire de 15
	31981	Winkelstein 15° Angular block 15° Pierre à 15°
	31011	Winkelstein 30° Isosceles 30° Pierre angulaire isocèle 30°
	31983	Hülse 15 Sleeve 15 Douille de 15

	36334	Riegelscheibe Locking washer Disque d'arrêt
	31597	Abstandsring Spacer ring Bague
	31647	Scheibe 4 Disk 4 Disque de 4
	37679	Klemmbuchse 5 Clip 5 Bague de serrage 5
	31915	Zangenmutter Chuck nut Ecran
	35112	Ritzel Z10 Cog wheel Z10 Pignon Z10
	37858	Klemmbare Schnecke Clamping worm Vis sans fin serrable
	37926	Schneckenteil Worm Élément des vis sans fin
	37925	Schneckenmutter Worm nut Ecran de vis sans fin
	31021	Zahnrad Z20 Gear wheel Z20 Roue dentée Z20

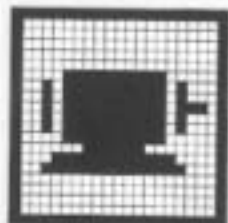
	35678	O-Ring 54 x 3 O-Ring 54 x 3 Jante torique 54 x 3
	31019	Drehscheibe 60 ø Large pulley 60 ø Couronne de poulie 60 ø
	31058	Nabenmutter Hub nut Ecran de moyeu
	35031	Flachnabenzange Flat hub chuck Couronne
	31016	Seiltrommel Cable drum Treuil
	35787	Flugzeugrad Airplane tire Roue d'avion
	31065	U-Achse 135 U-axle 135 U-Axe 135
	32370	Schneckenantrieb Worm drive Vis sans fin
	31032 31031	Achse - Axle - Axe 60 110

	36305	Flachträger 120 Flat girder 120 Etrier de 120
	36310	I-Strebe 45 I-strut 45 Entretoise de 45
	38251	Bauplatte 30 x 90 Mounting plate 30 x 90 Panneau de revêtement 30 x 90
	38432	Bauplatte 30 x 60 Mounting plate 30 x 60 Panneau de revêtement 30 x 60
	38474	Bauplatte 15 x 60 Mounting plate 15 x 60 Panneau de revêtement 15 x 60
	38268	Bauplatte 15 x 30, gelb Mounting plate 15 x 30, yellow Panneau de revêtement 15 x 30, jaune
	38263	Bauplatte 15 x 15, weiß Mounting plate 15 x 15, white Panneau de revêtement 15 x 15, blanc
	32366	Bauplatte 15 x 15, grau Mounting plate 15 x 15, grey Panneau de revêtement 15 x 15, gris
	38246	Bauplatte 15 x 15, rot Mounting plate 15 x 15, red Panneau de revêtement 15 x 15, rouge
	33582	Tesa-Klebeband Stick-pad Film adhésif

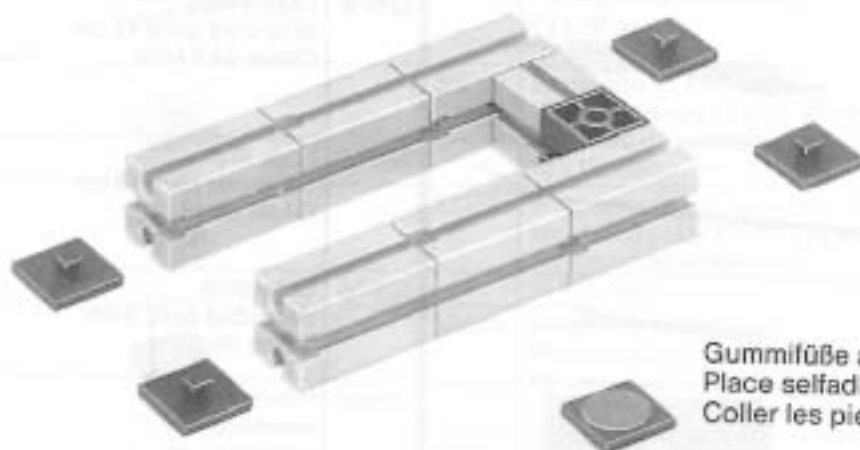
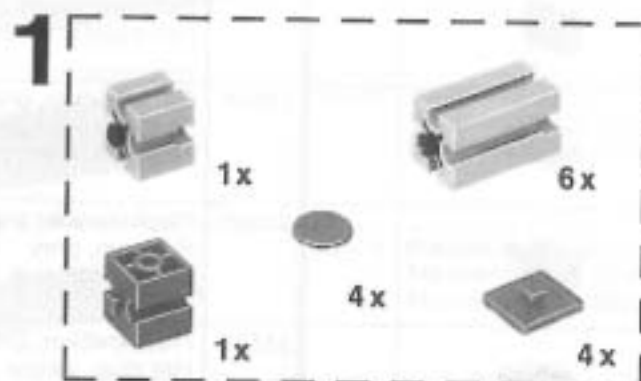
	32247	Luftschraube Propeller Hélice
	31124	Aufnahmeachse Holding axle Axe
	31060	Verbindungsstück 15 Link 15 Languette d'assemblage de 15
	36323	S-Riegel 4 mm Single rivet 4 mm Rivet de 4 mm
	31982	Federnocken Spring cam Came
	35404	V-Achse 4 x 17 V-axle 4 x 17 Axe de 4 x 17
	37604	Störlichtkappe Stray light cap Coiffe d'occult.
	31320	Leuchtkappe, weiß Light cap, white Cabochoon, blanc
	36437	Heißleiter NTC resistor Thermistance
	32680	Netzgerät Power supply Alimentation

	38612	Fotowiderstand Photoresistor Photo-résistance
	37875	Linsenstecklampe Plug light with lens Lampe à lentille
	38217	Leuchtstein mit Steckfassung Plug in light holder Socle de lampe
	37780	Mini-Taster Mini switch Mini-interrupteur
	31068	U-Getriebe Mini Mini motor gear box Réducteur en U
	31062	Mini-Motor Mini motor Mini-moteur
	32674	Steckerbuchse 28polig Plug socket Fiche femelle
	36443	Schraubendreher Screw-driver Tournevis
	32673	Flachbandkabel Rainbow cable Natte

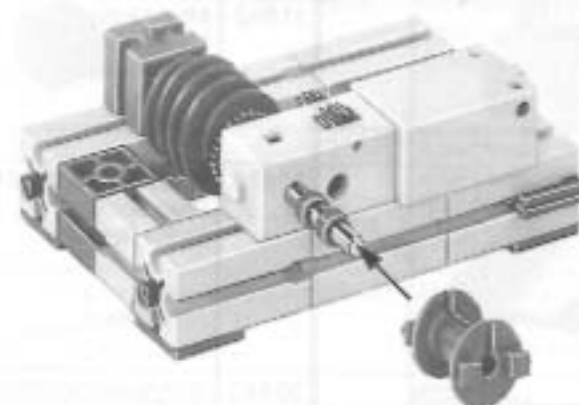
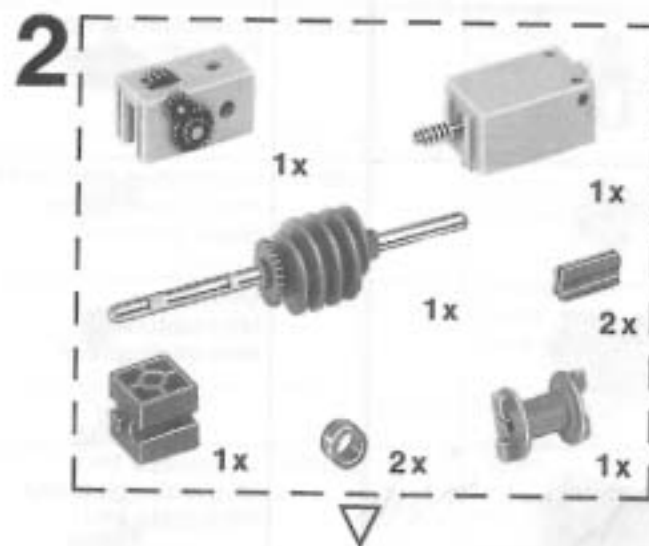
	31548	Flachstecker, blau Flat plug, blue Fiche plate, bleu
	31337	Flachstecker, rot Flat plug, red Fiche plate, rouge
	31549	Flachstecker, violett Flat plug, violet Fiche plate, violet
	31336	Flachstecker, grün Flat plug, green Fiche plate, vert
	31546	Flachstecker, orange Flat plug, orange Fiche plate, orange
	31550	Flachstecker, grau Flat plug, grey Fiche plate, gris
	31547	Flachstecker, gelb Flat plug, yellow Fiche plate, jaune
	32678	Litze 44 cm Stranded cord 44 cm Câble de 44 cm
	32677	Litze 18 cm Stranded cord 18 cm Câble de 18 cm
	32676	Litze 6 cm Stranded cord 6 cm Câble de 6 cm
	30566	Interface Interface Interface



Seilwinde 1
Winch 1
Palan 1

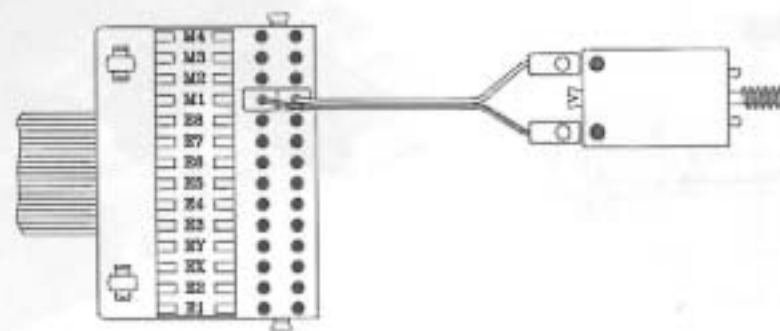
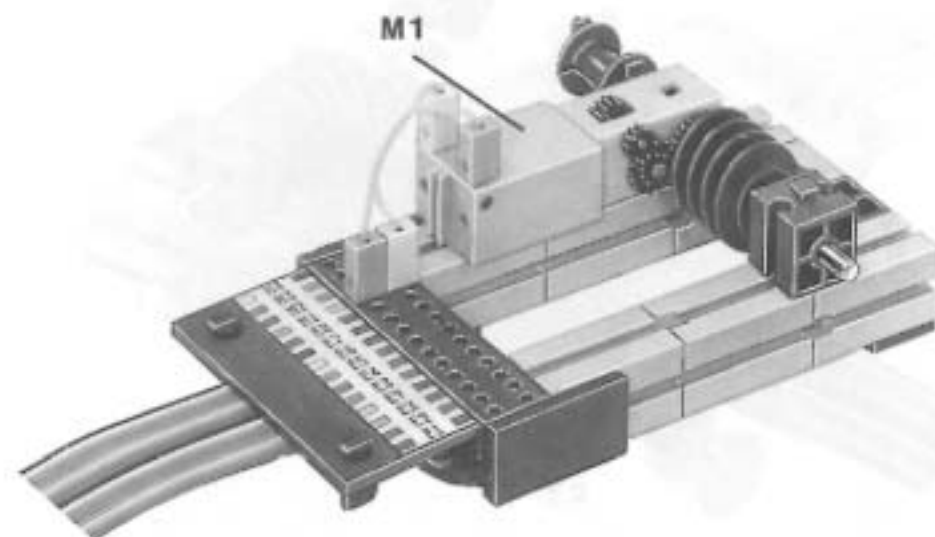
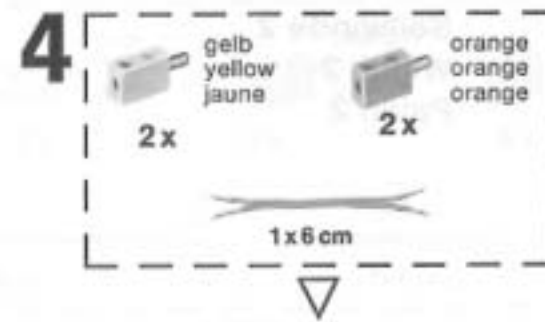
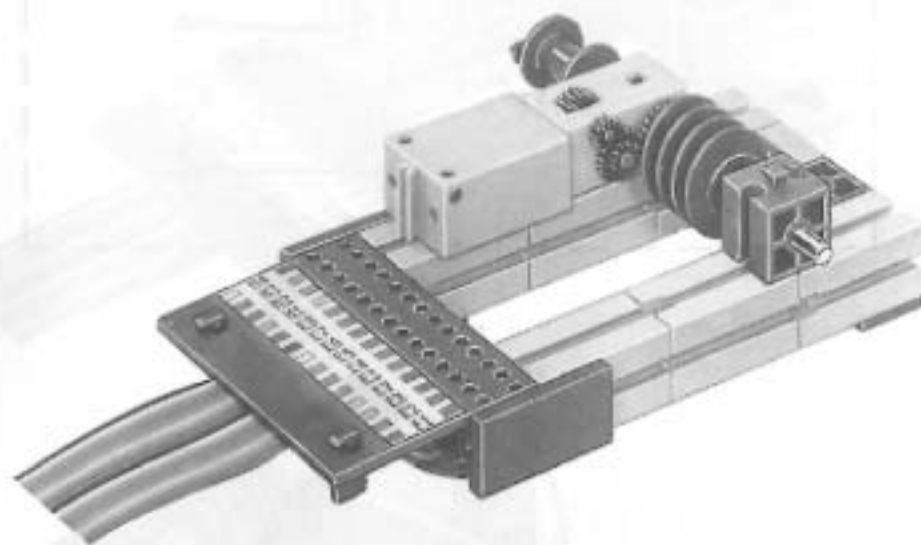
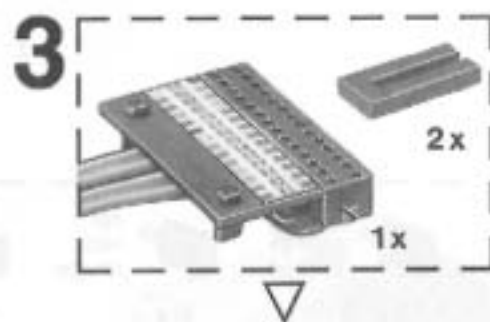


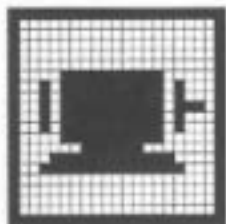
GummiüÙe aufkleben
Place selfadhesive pads
Coller les pieds en caoutchouc



Bis Anschlag aufstecken
Insert to full stop
Fixer jusqu'au blocage

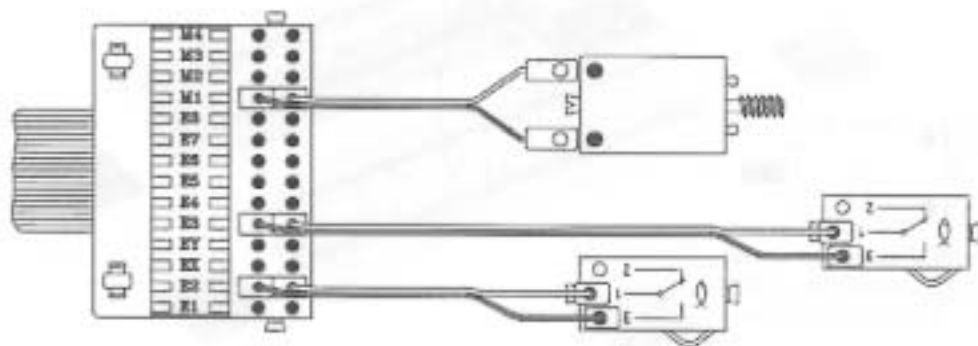
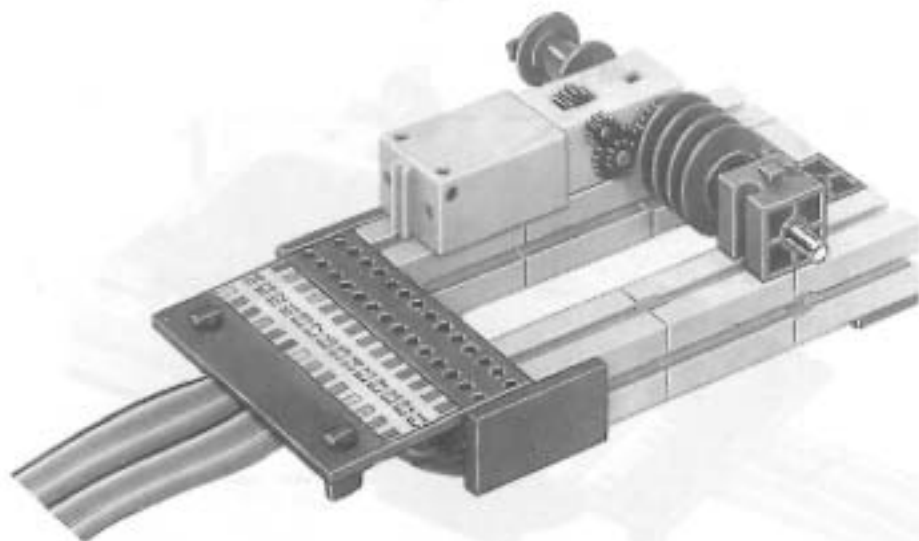
Schritt 3
WinCC 3
Pilot 3



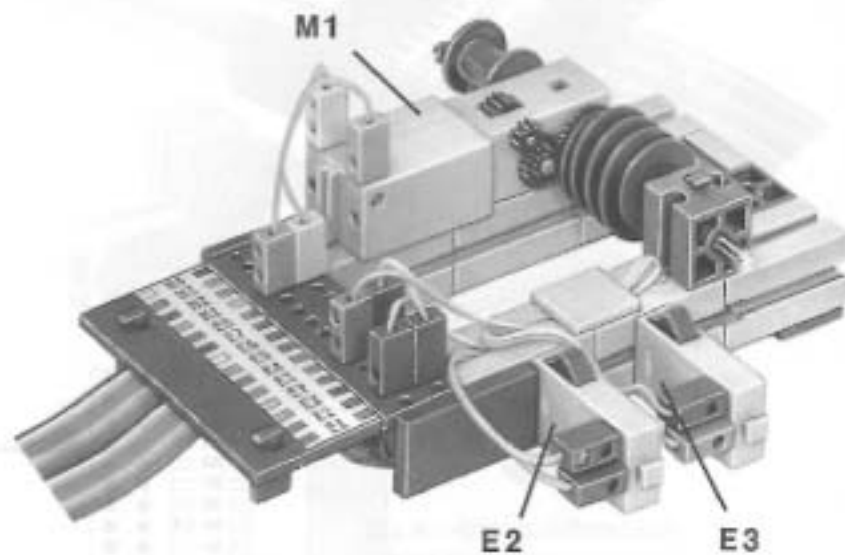
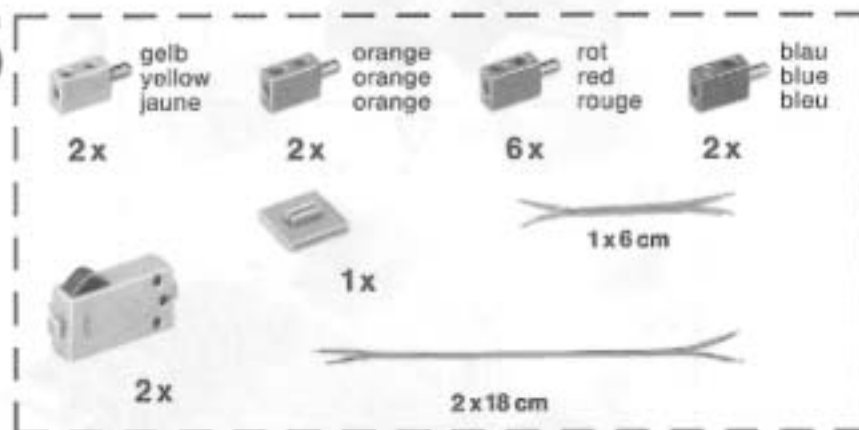


Seilwinde 2
Winch 2
Palan 2

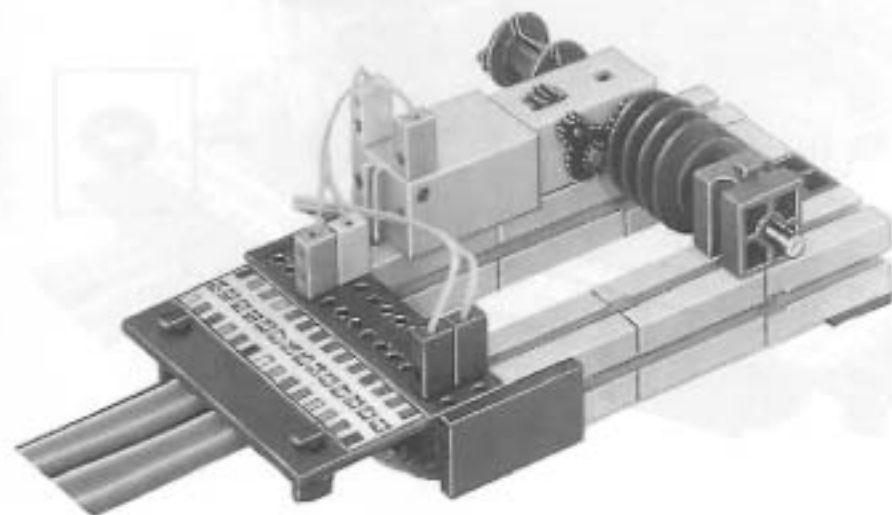
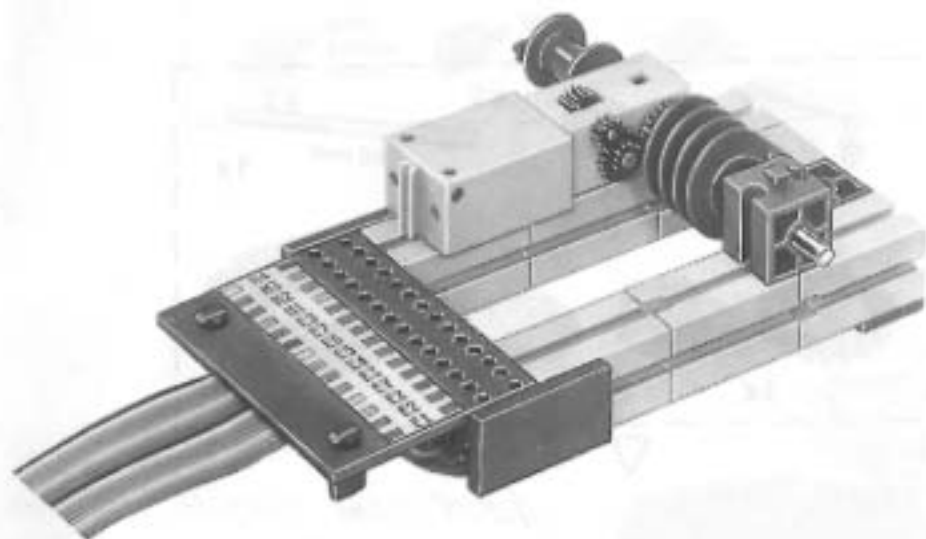
Palan 2



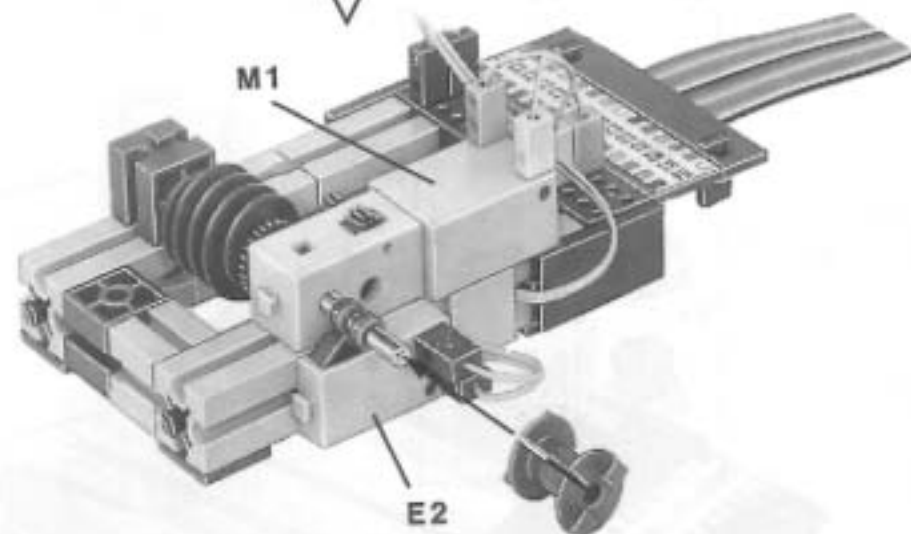
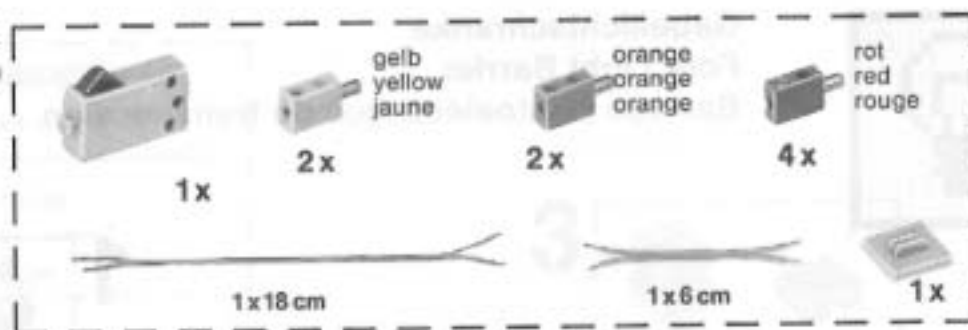
5



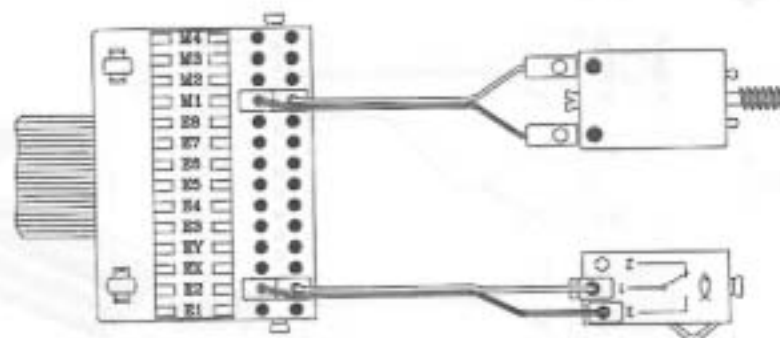
Seilwinde 3
Winch 3
Palan 3



6



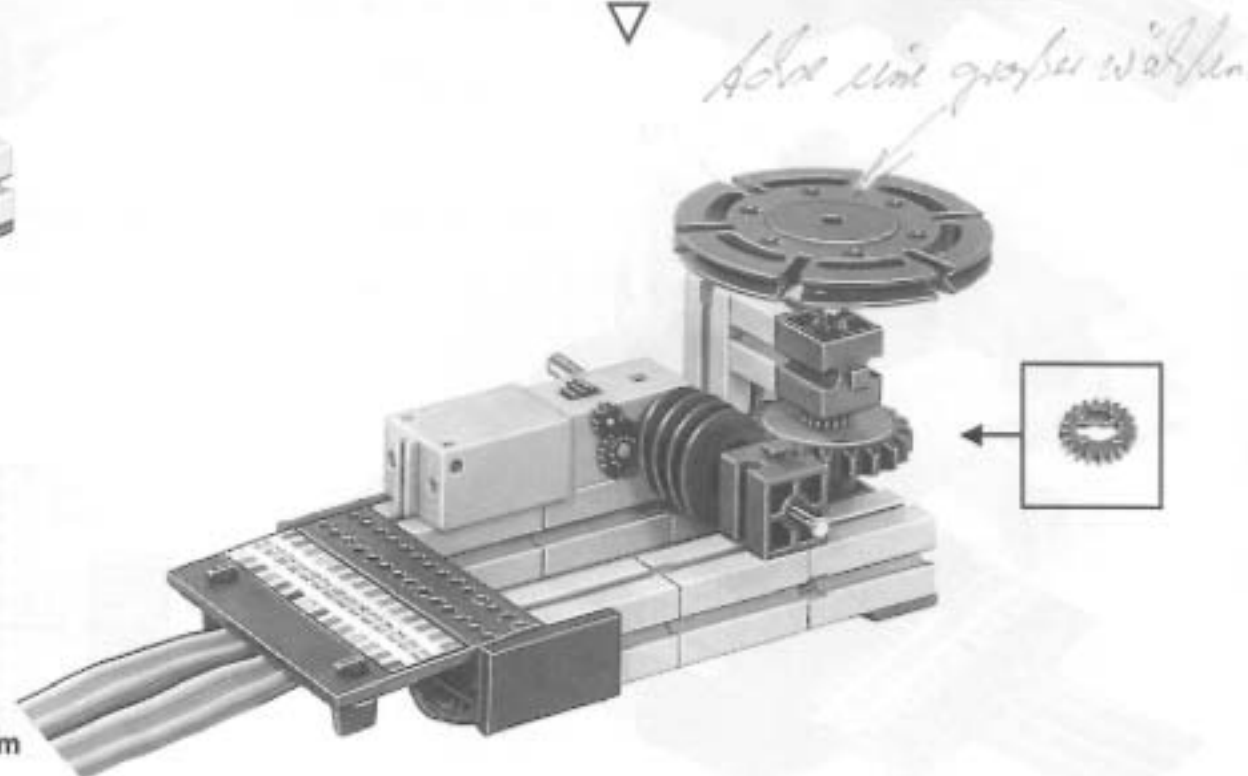
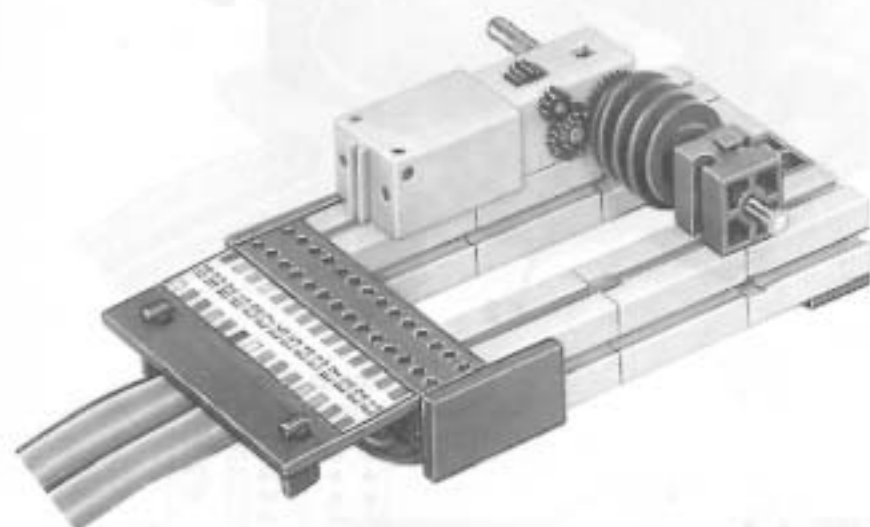
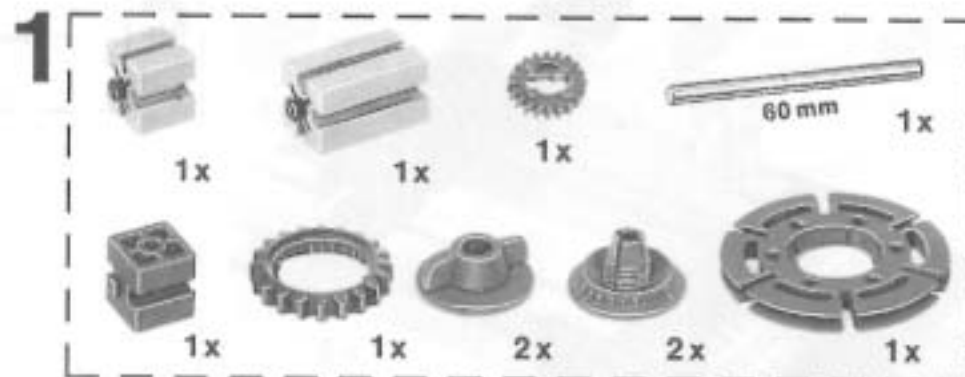
Bis Anschlag aufstecken
Insert to full stop
Fixer jusqu'au blocage





Gabellichtschranke
Fork Light Barrier
Barrage photoélectrique de transmission

Bausteil
Werk
Seite 3



2

4x rot
red
rouge

2x orange
orange
orange

2x violett
violet
violet

1x 44 cm

2x

2x

2x

1x 18 cm

2x gelb
yellow
jaune

2x grau
grey
gris



3x

1x 6 cm

2x

2x



1x 6 cm

2x

2x

3x

1x 6 cm

3



3x



4x



4x



1x



1x



1x



1x



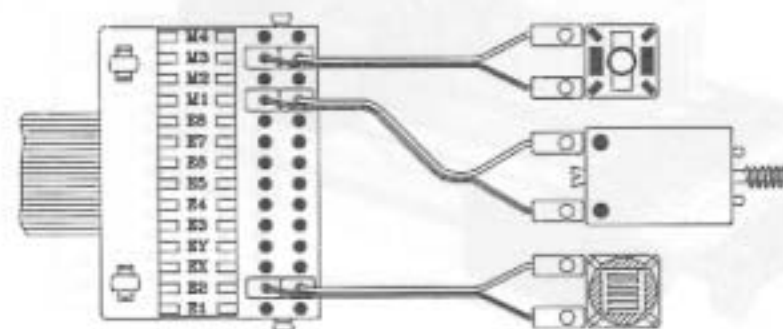
1x

Säule für Abstand anbauen

M3

M1

E2





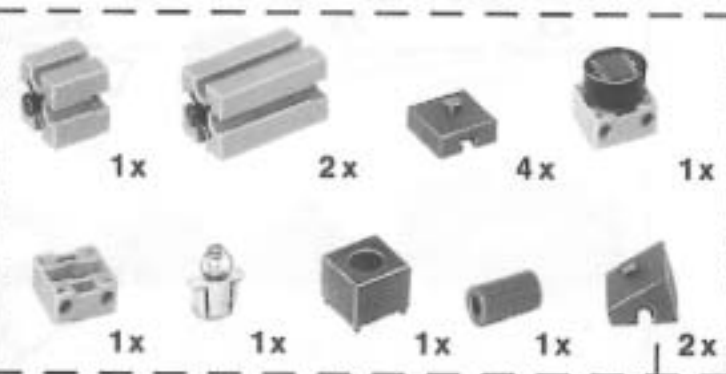
Reflexionslichtschranke
Reflecting Light Barrier
Barrage photoélectrique de réflexion

4

6x



5



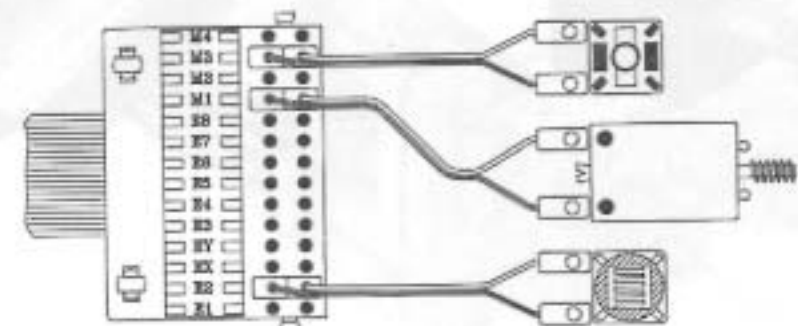
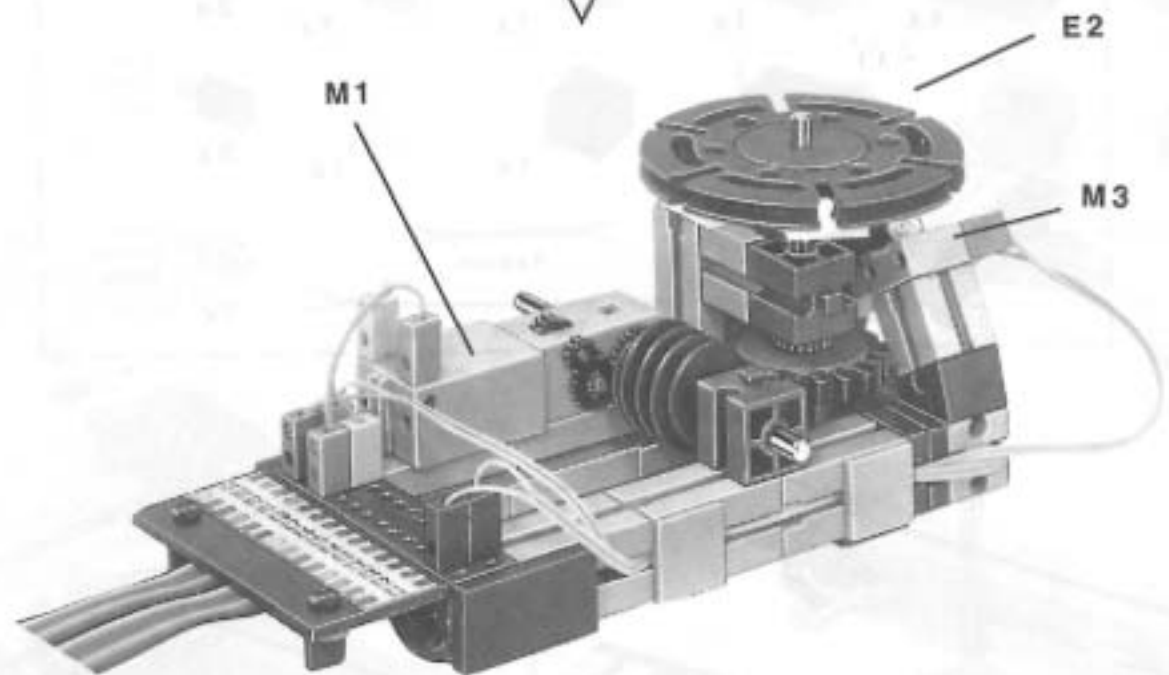
30°

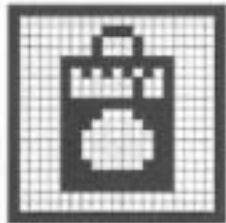


Complémentaire
Composants
Outil d'assemblage

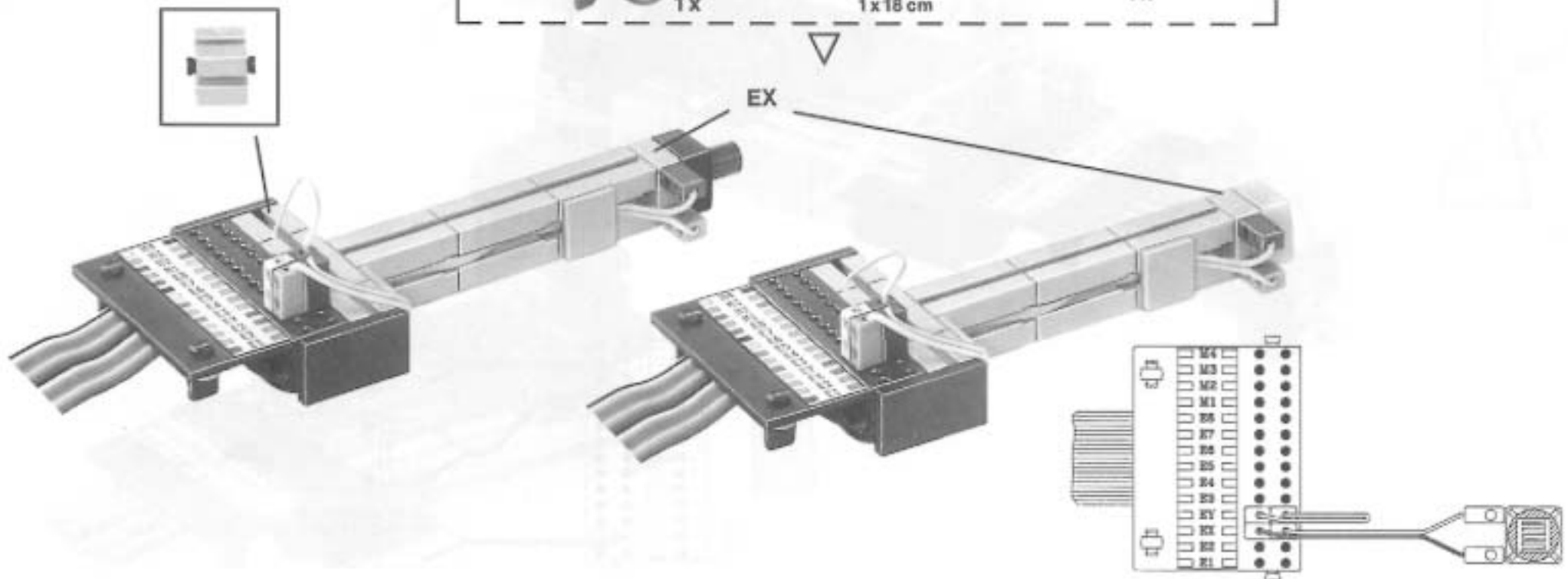
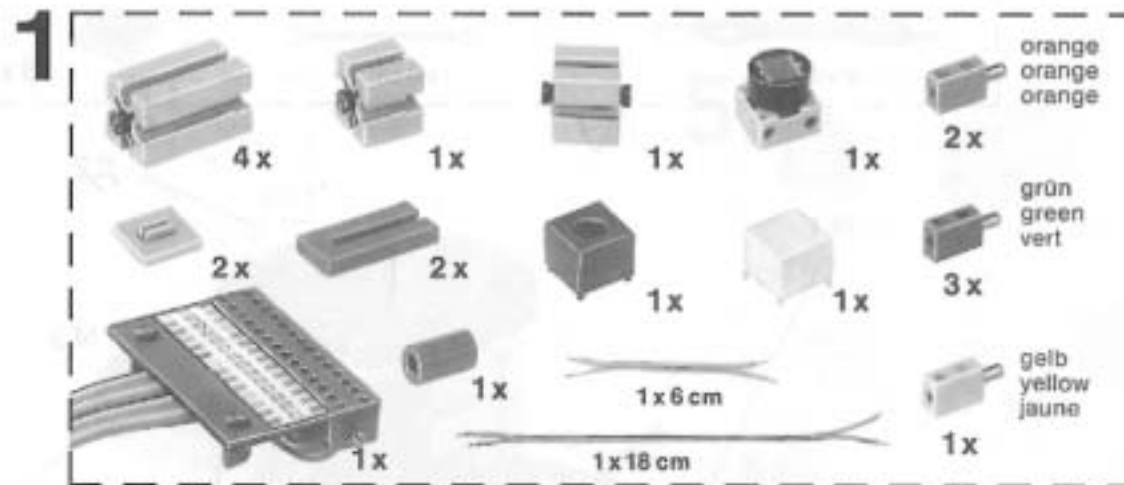
6

	gelb yellow jaune		orange orange orange		grau grey gris		violett violet violet		rot red rouge
2x		2x		2x		2x		4x	
2 x 44 cm		1 x 6 cm				3 x			



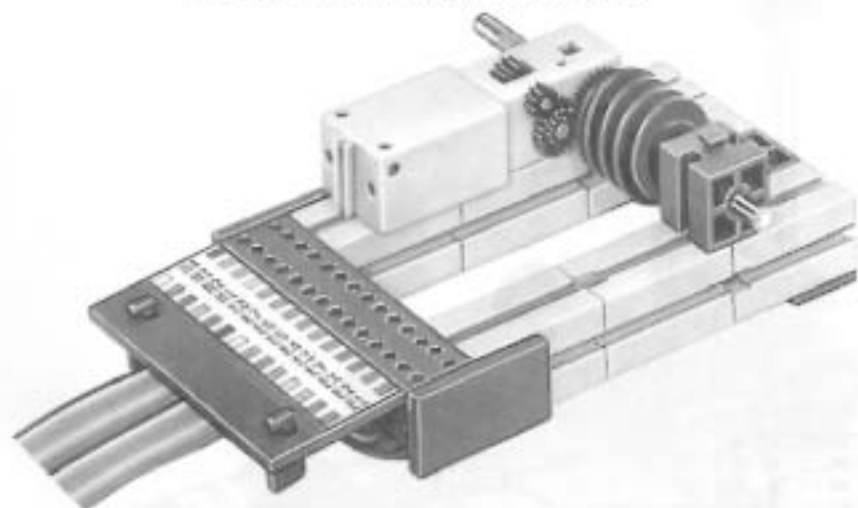


Belichtungsmesser
Exposure Meter
Photomètre

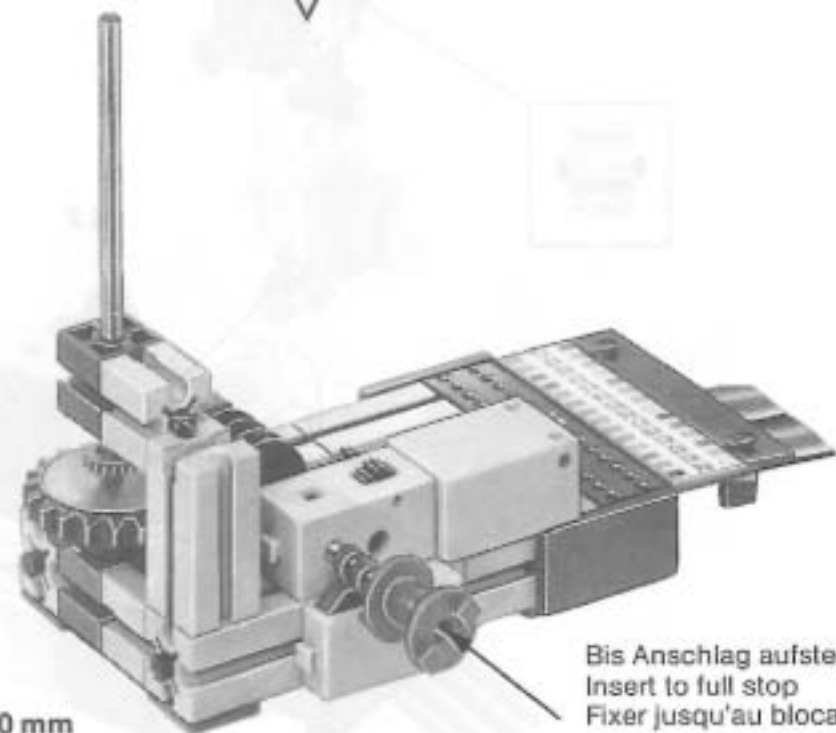
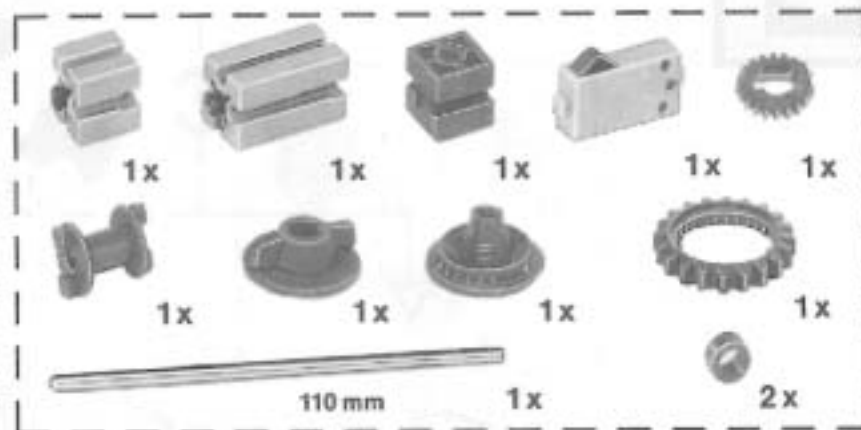


Computerauge
Computer Eye
Oeil d'ordinateur

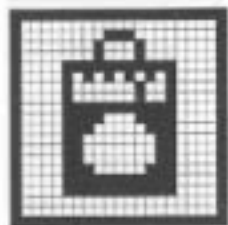
Baustufen ab Seite 6
Construction steps from page 6 on
Etapas de construction voir page 6



1



Bis Anschlag aufstecken
Insert to full stop
Fixer jusqu'au blocage



2



1x



1x



3x

gelb
yellow
jaune



4x

orange
orange
orange



3x



4x

rot
red
rouge



3x

grün
green
vert



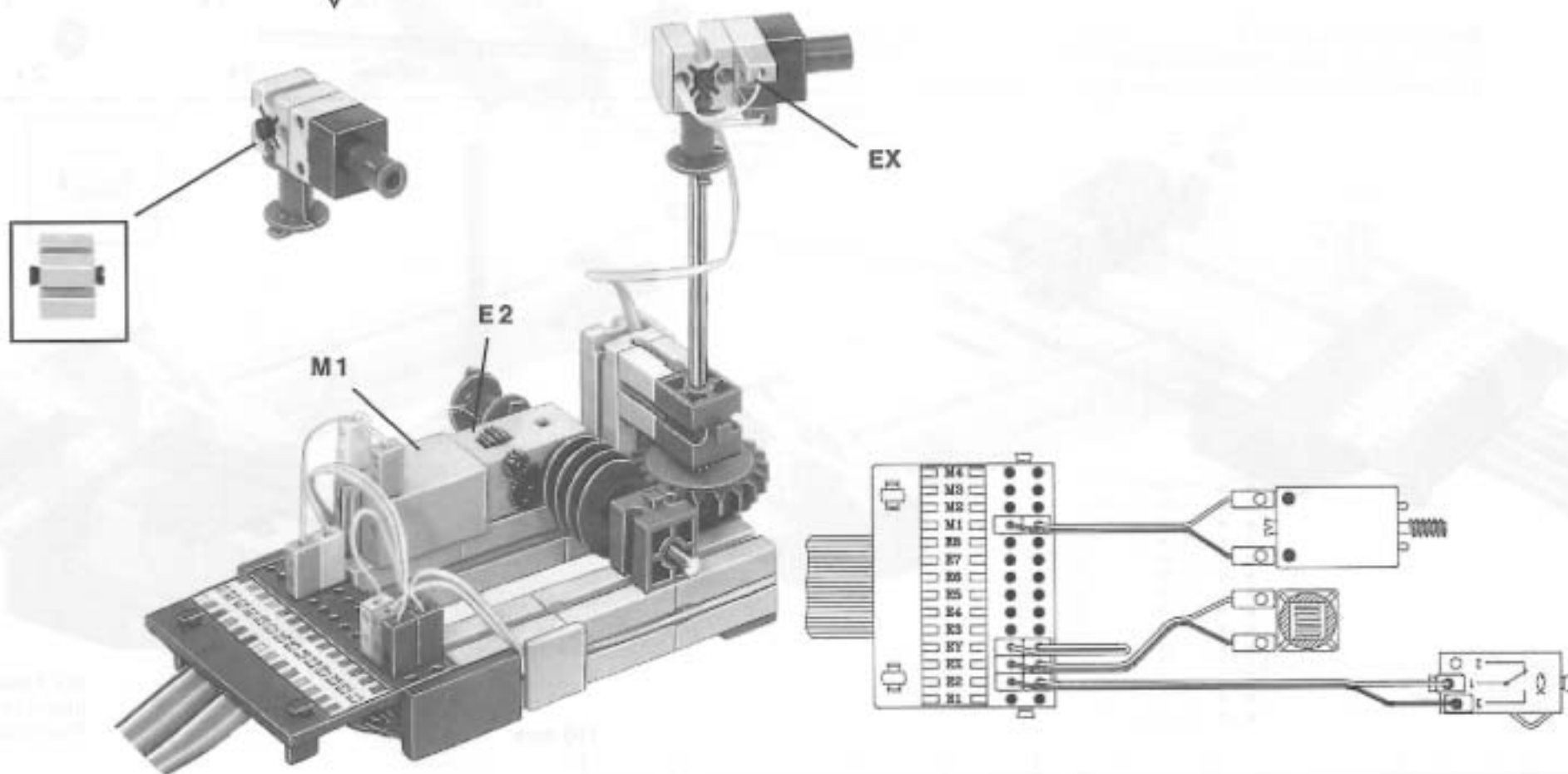
1x44 cm



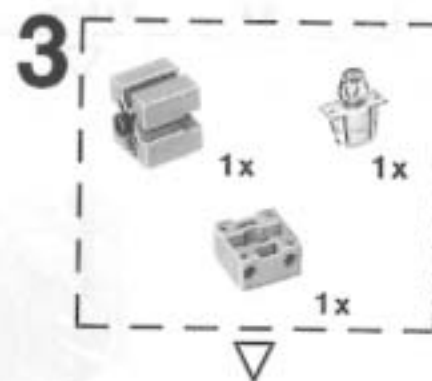
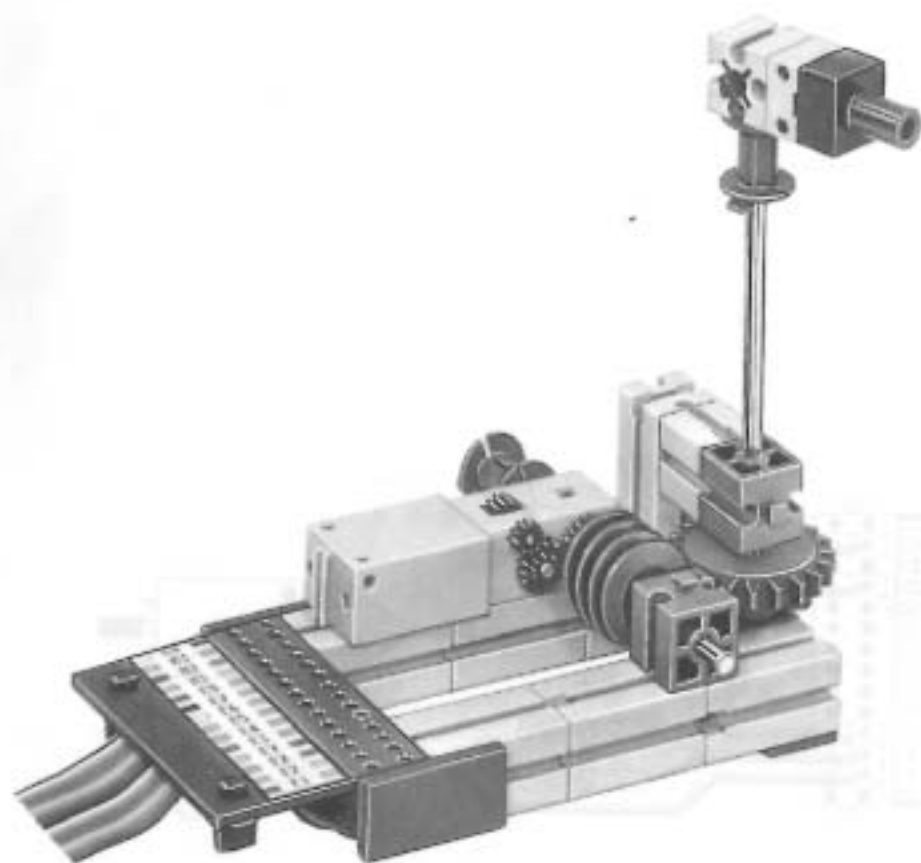
1x18 cm

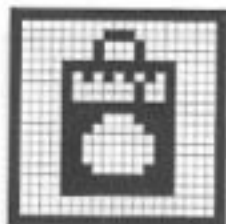


2x6 cm

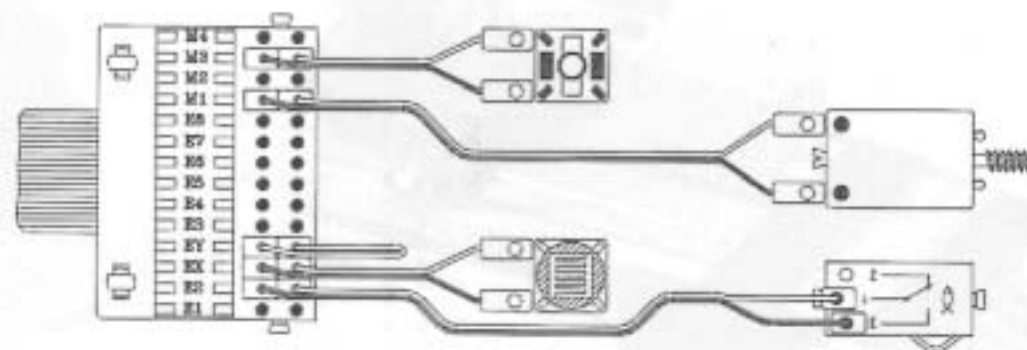
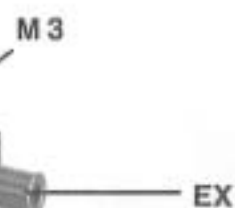
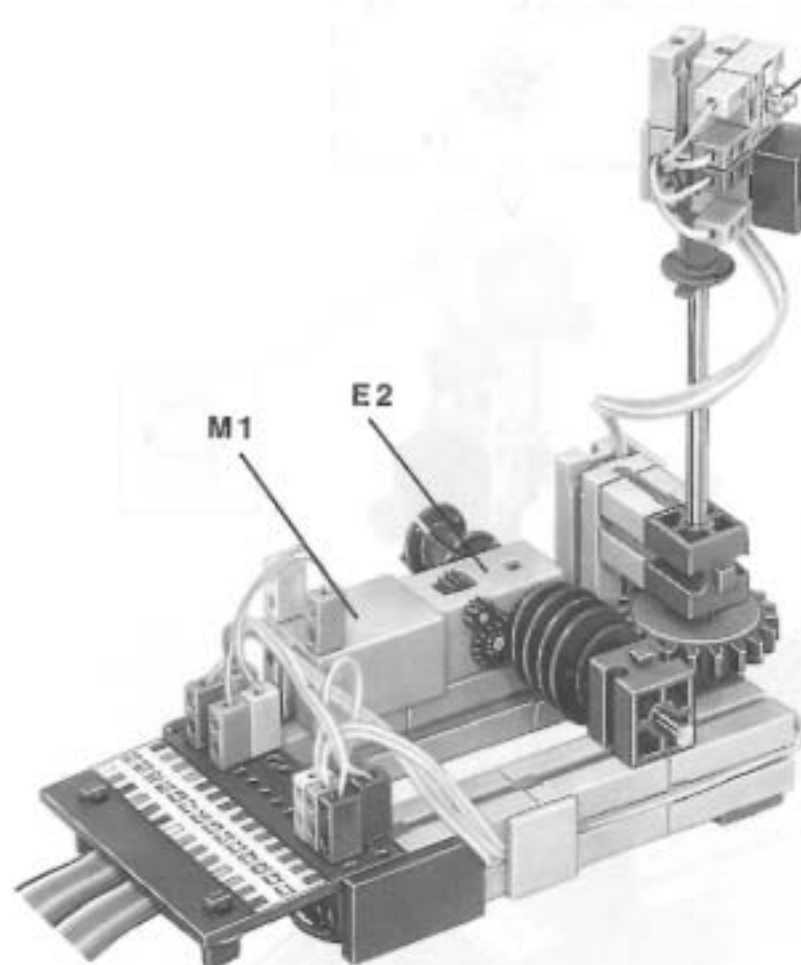
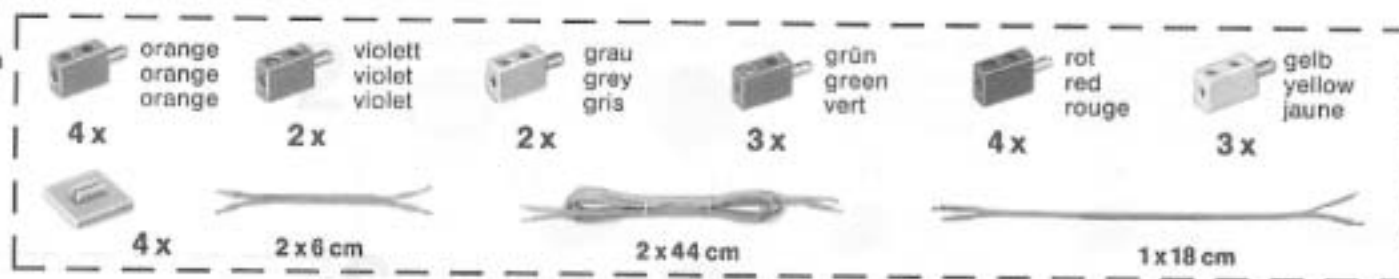


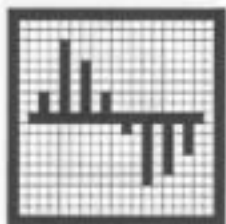
Radar
Radar
Radar



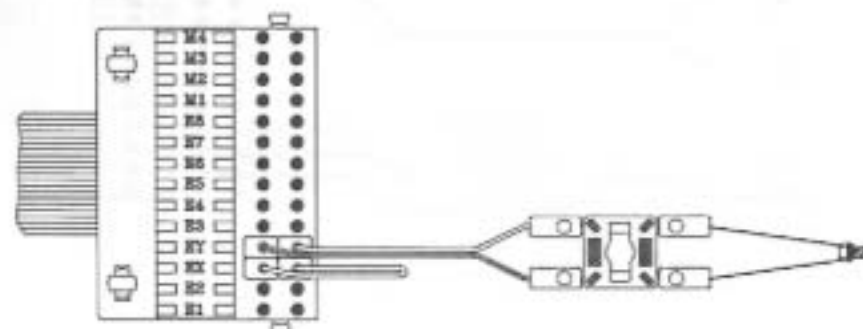
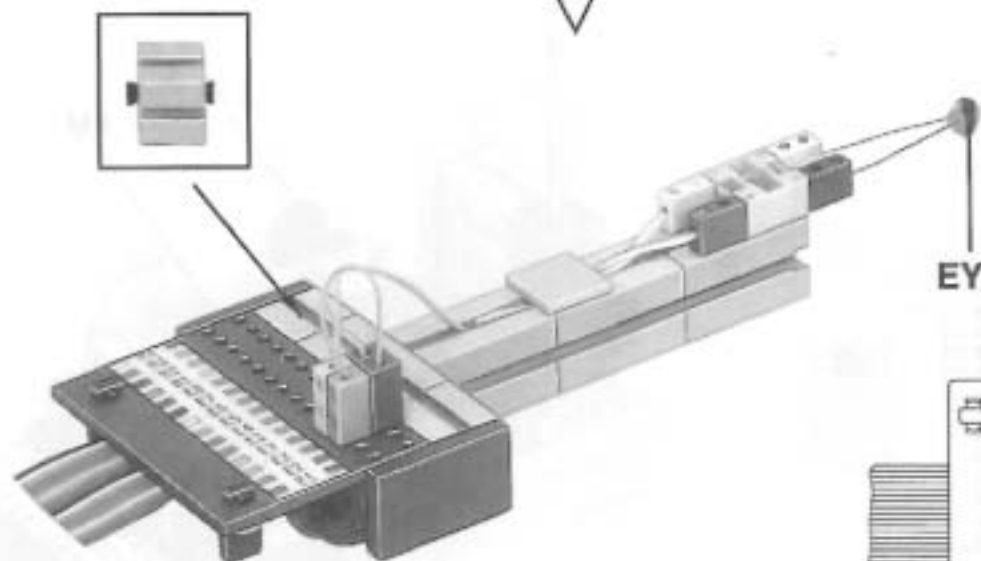
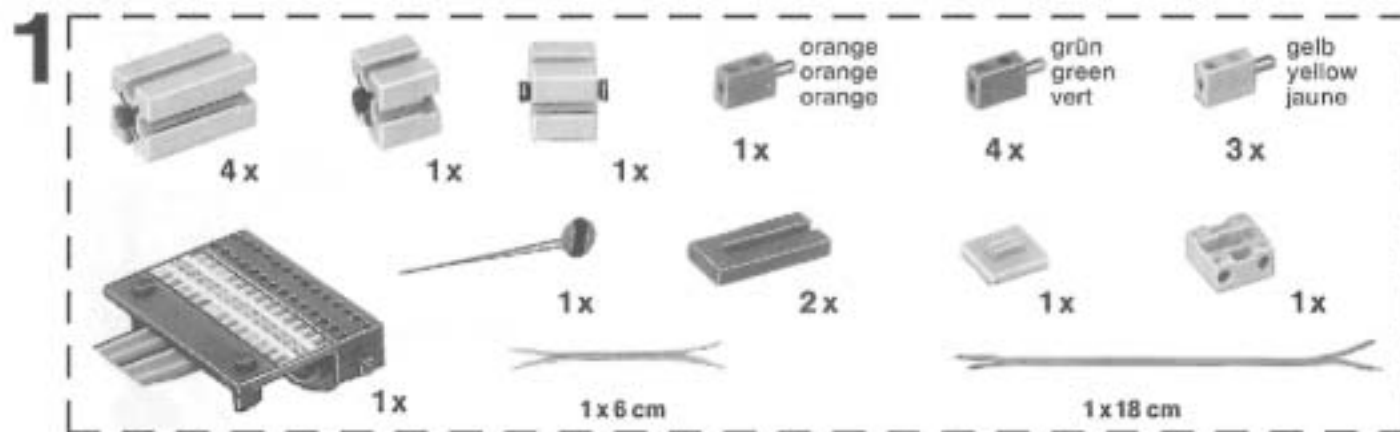


4





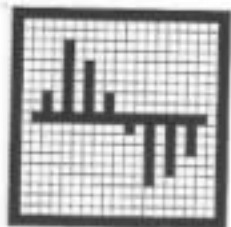
Thermometer Thermometer Thermomètre



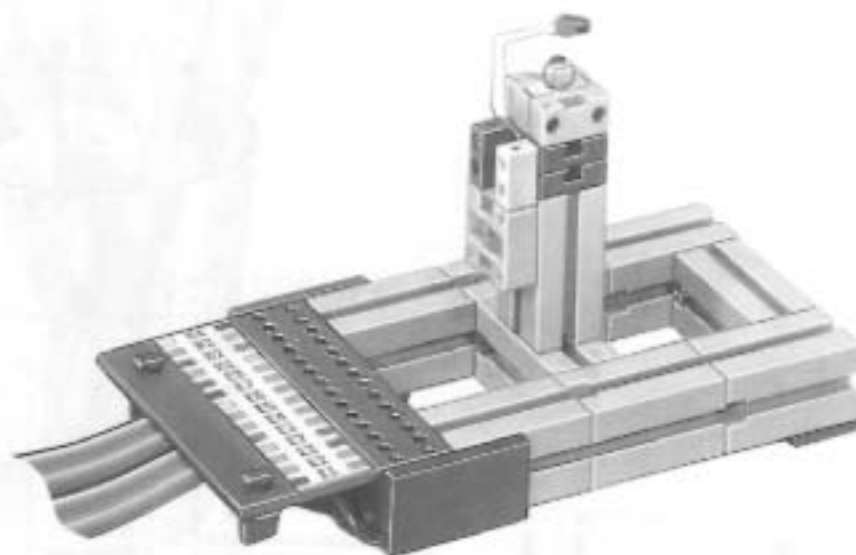
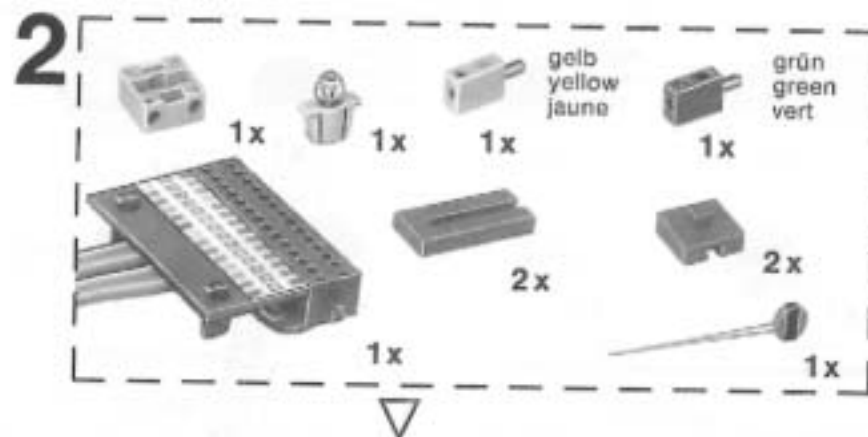
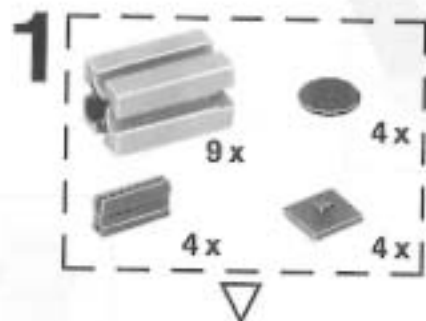
Kalibrierung des Heißleiters
Calibration of the thermistor
Calibration du thermistance

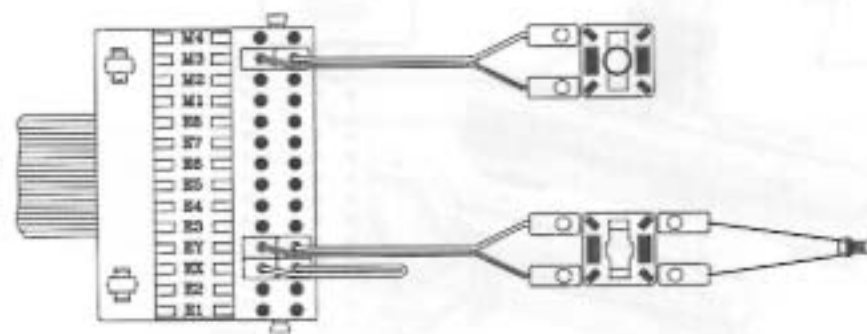
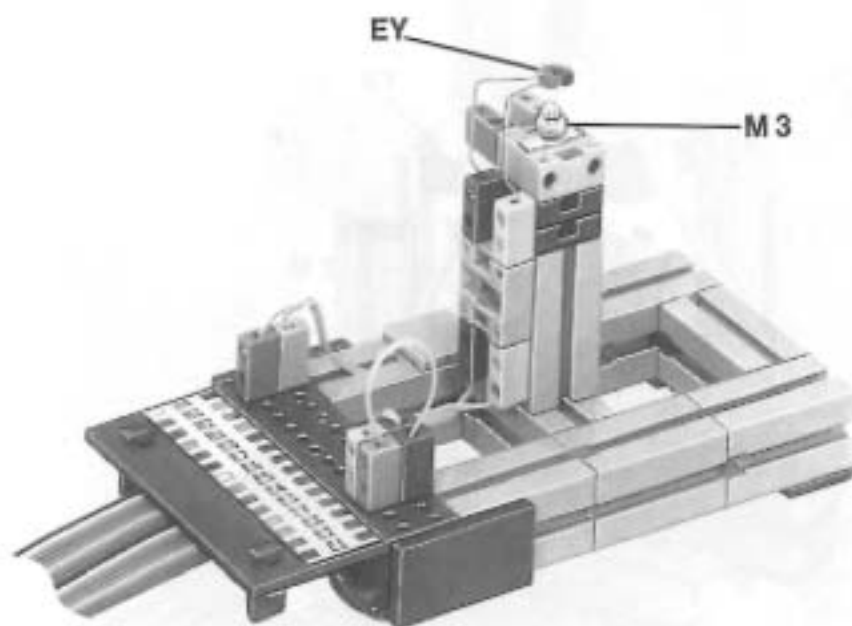
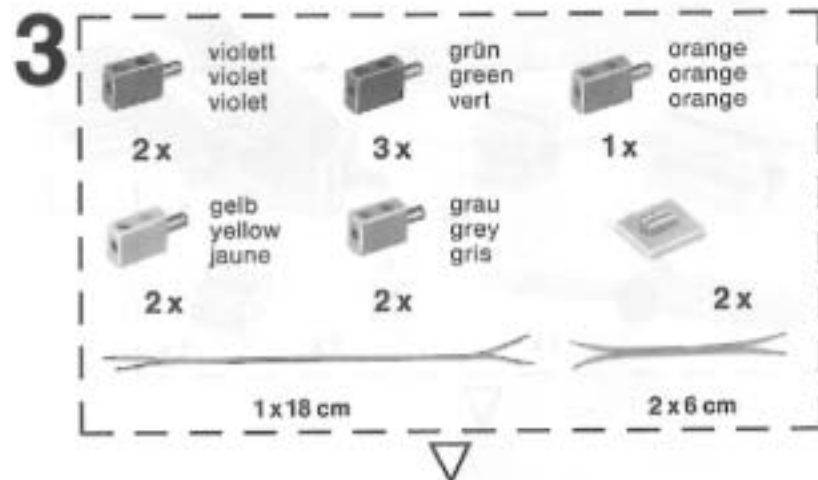
Open
Frame
Chassis

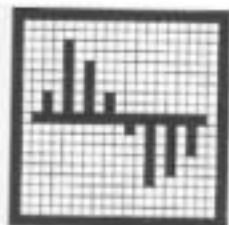




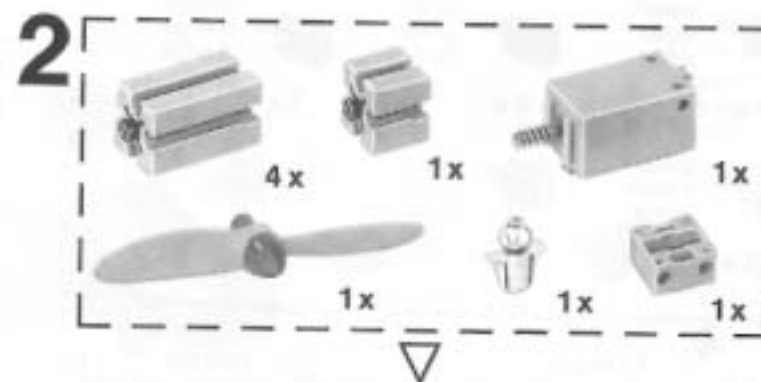
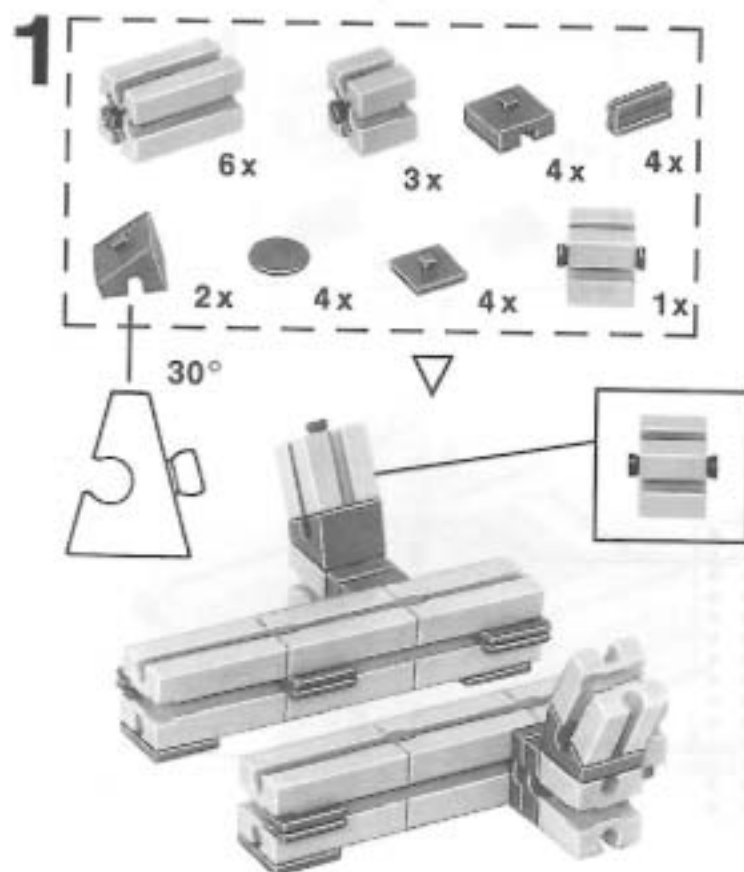
Ofen
Furnace
Chauffage



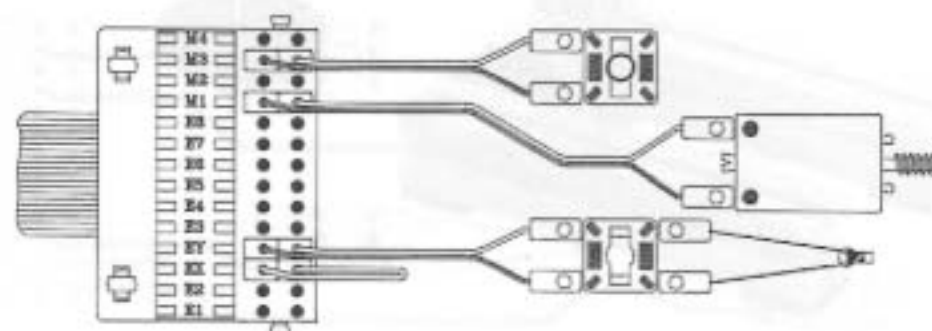
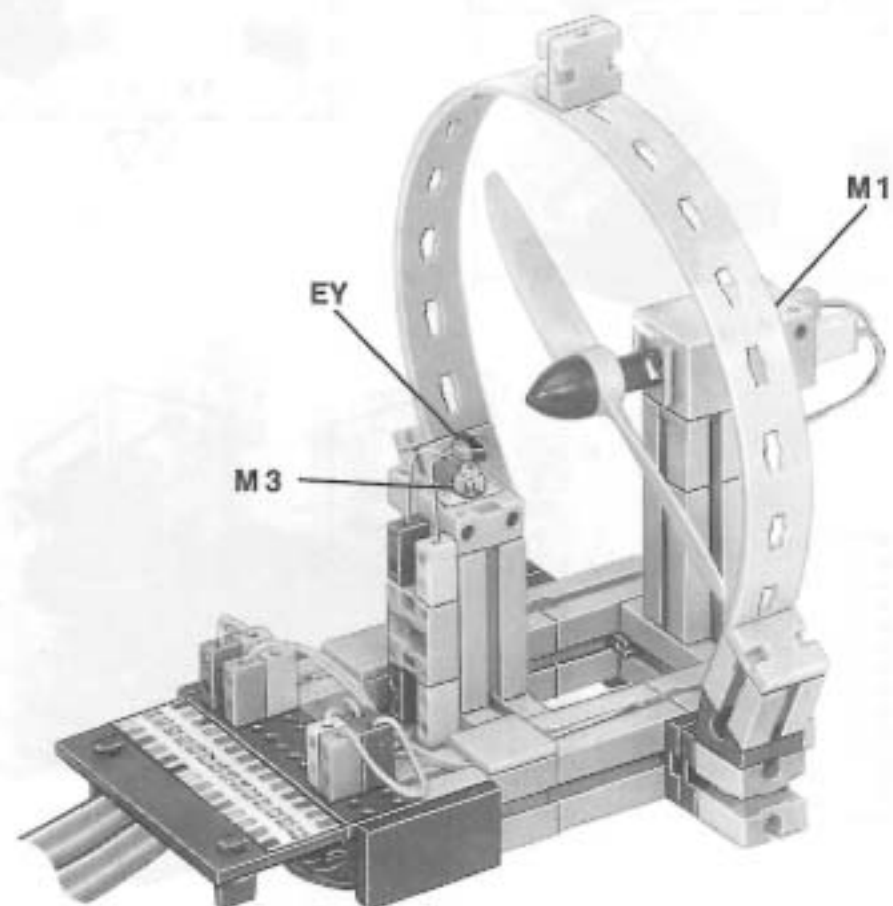
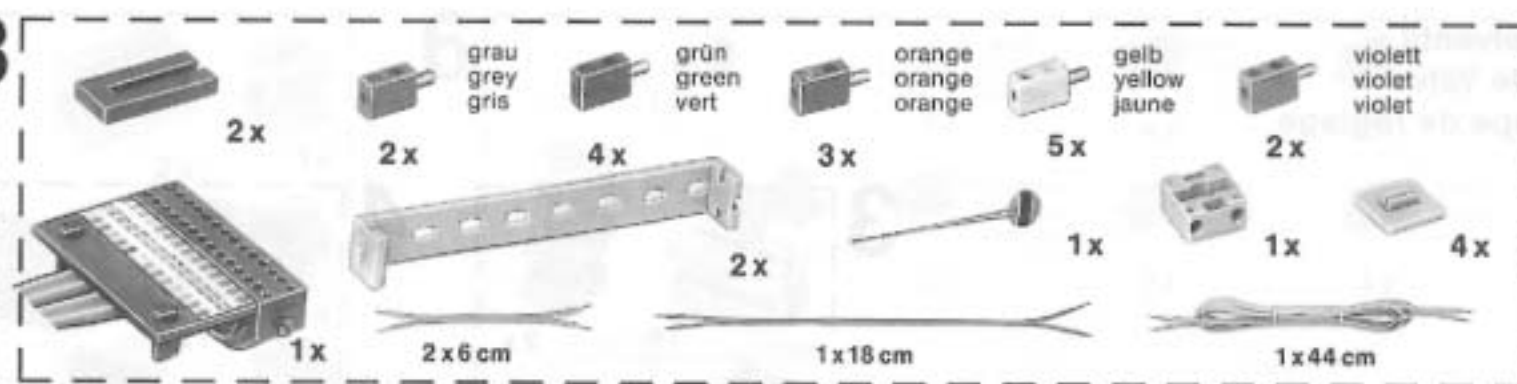


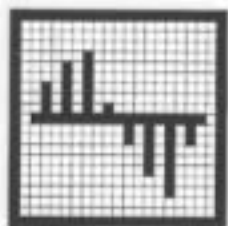


Gebüse
Fan
Ventilateur

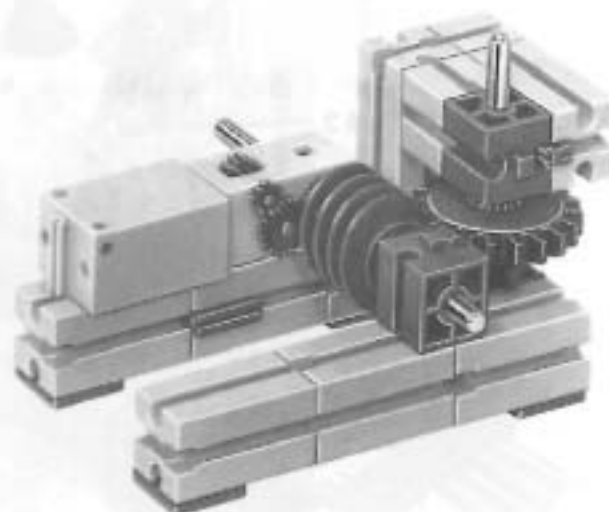
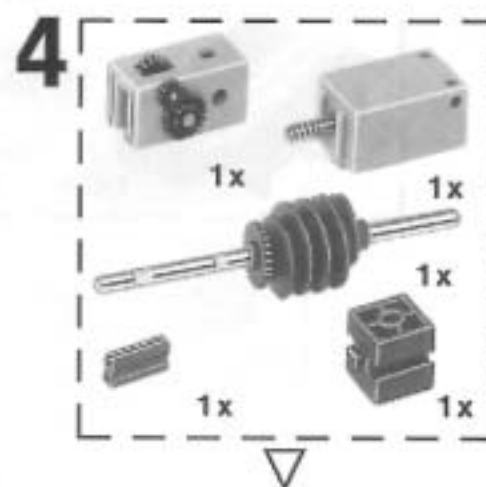
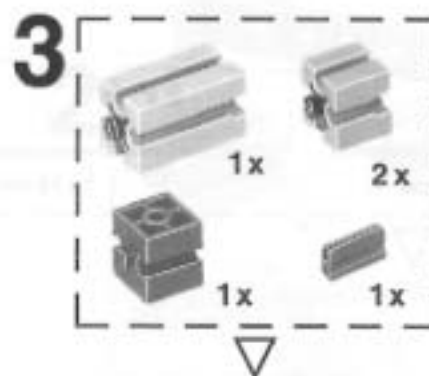
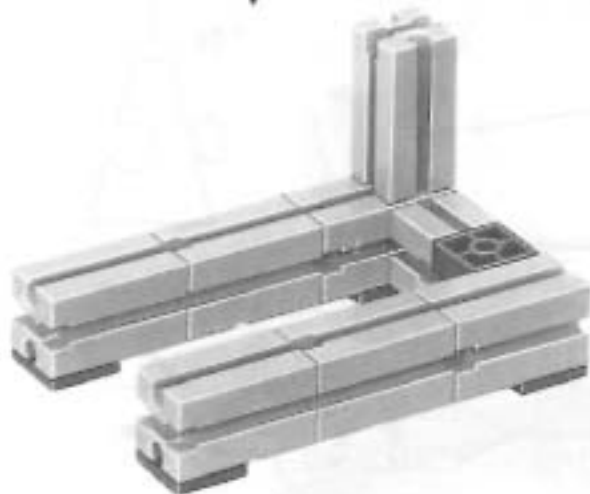
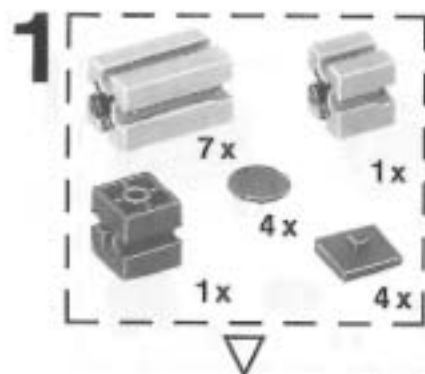


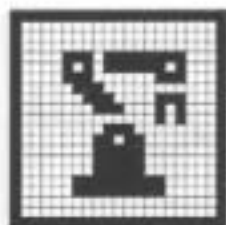
3



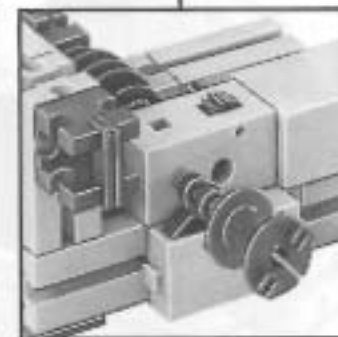
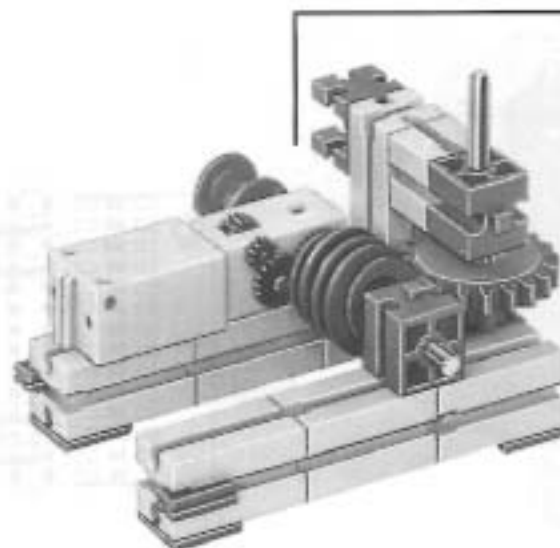
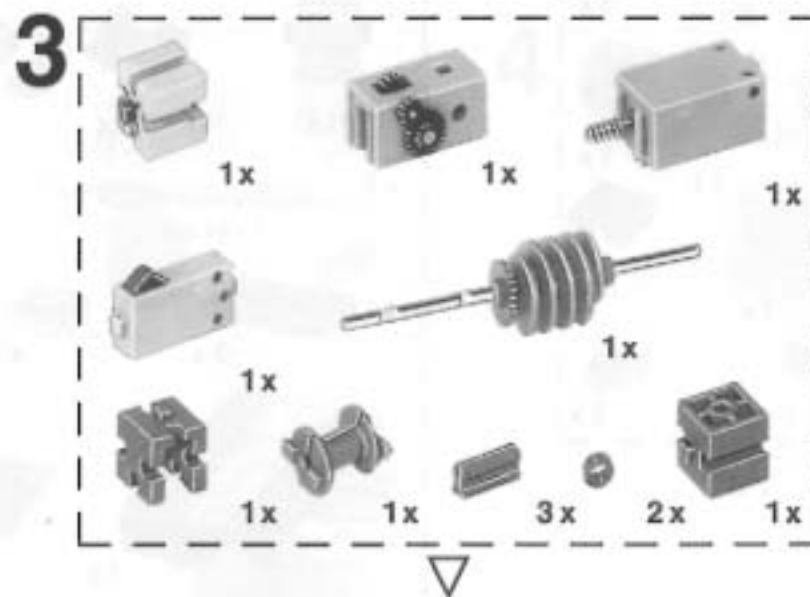
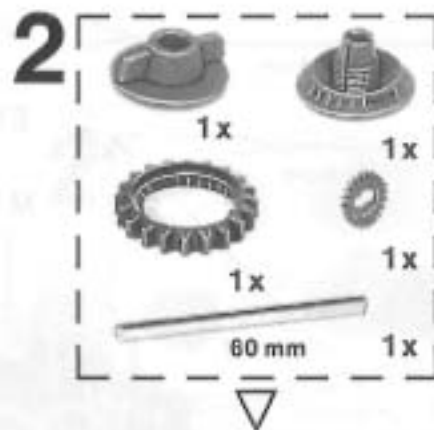
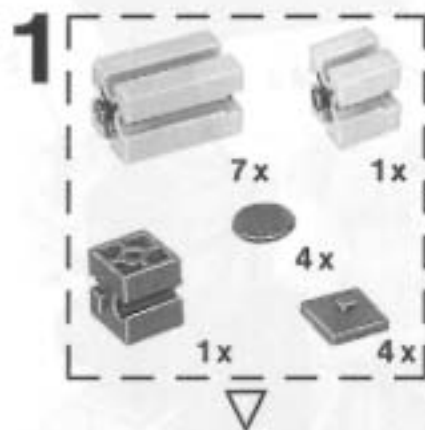


Drosselventil
Throttle Valve
Soupape de réglage

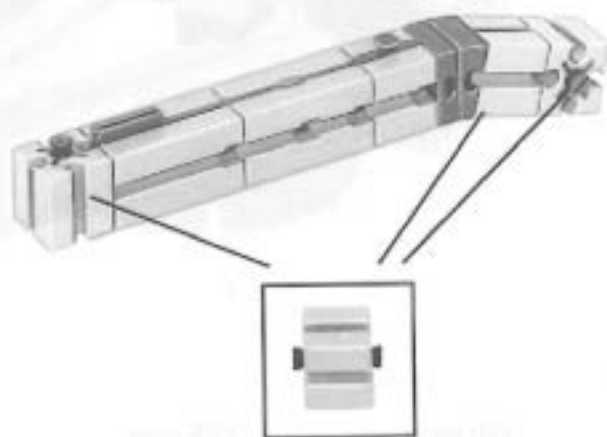
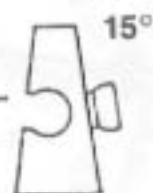
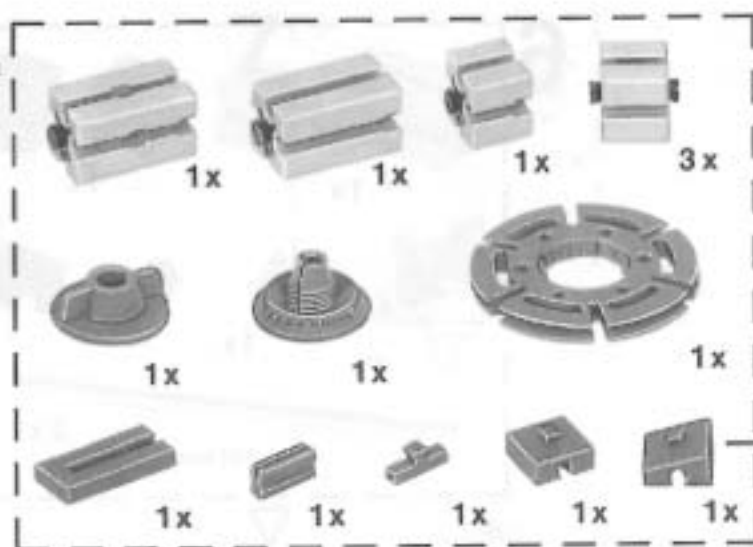


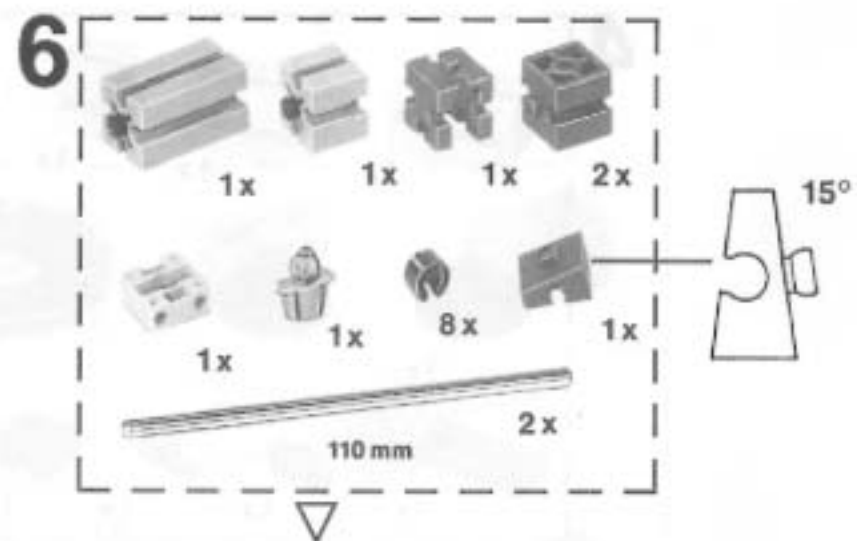
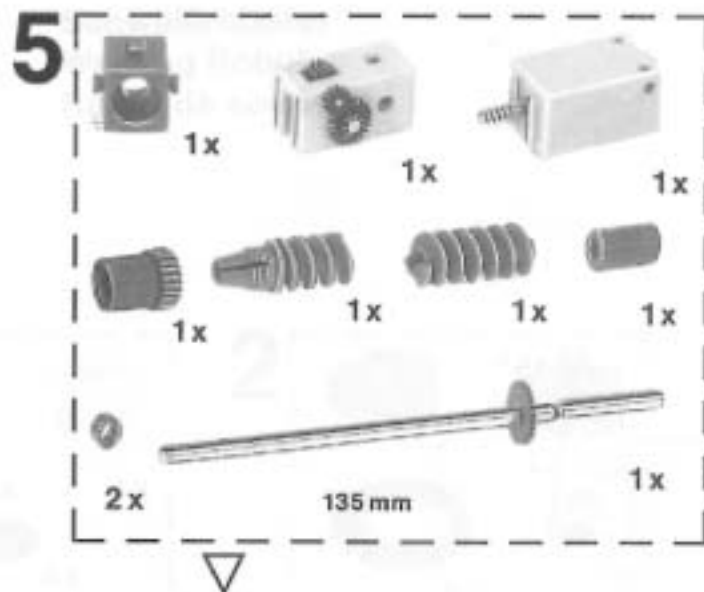
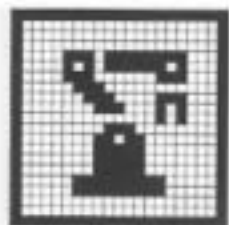


Schweißroboter
Welding Robot
Robot de soudage

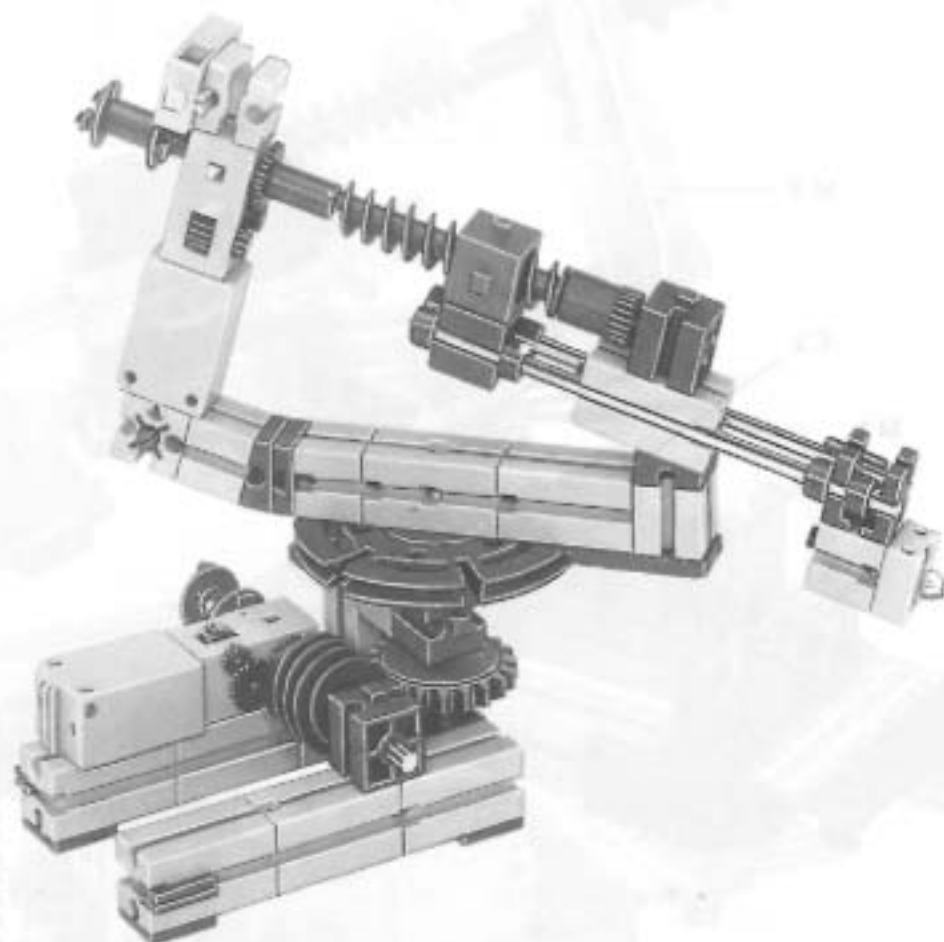
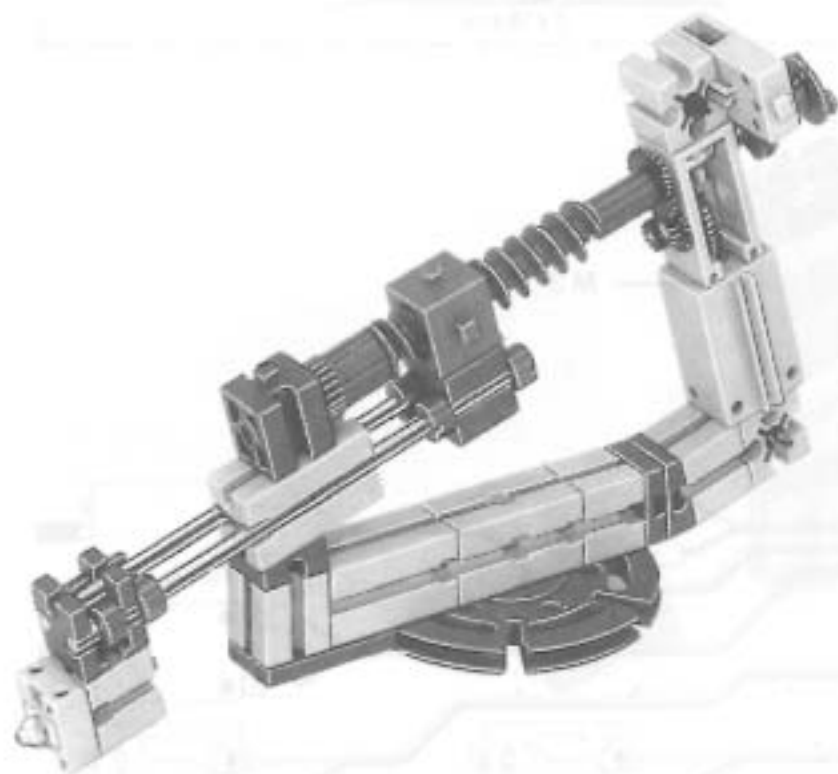


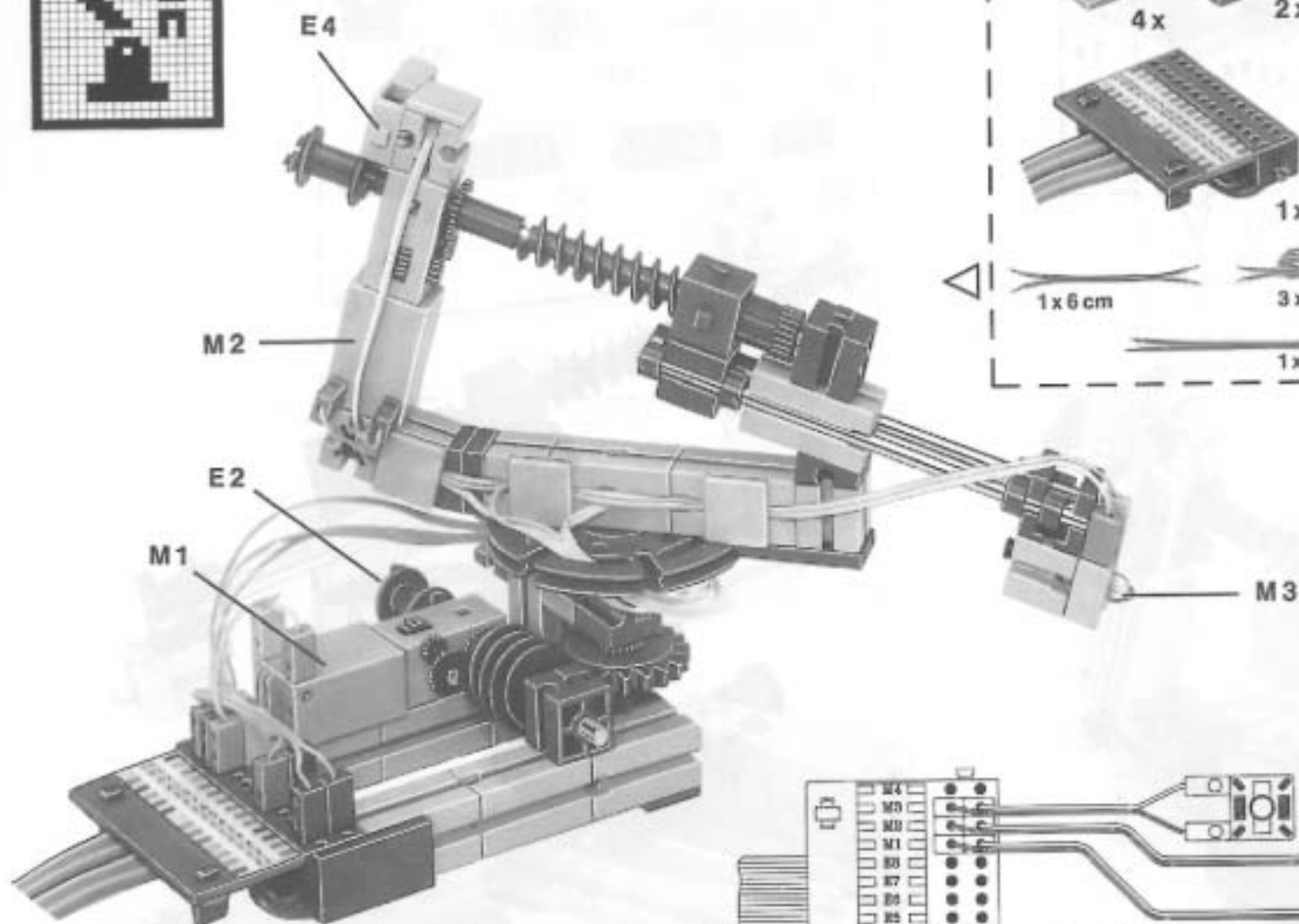
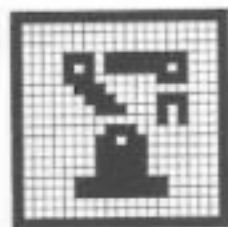
4



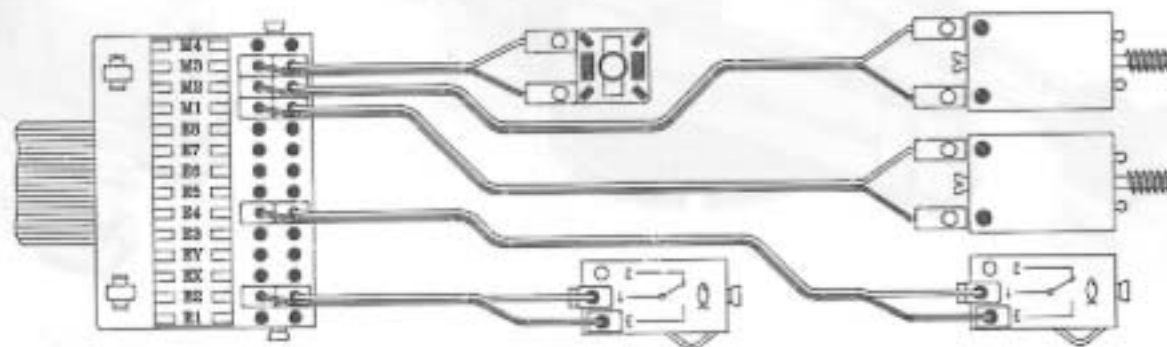
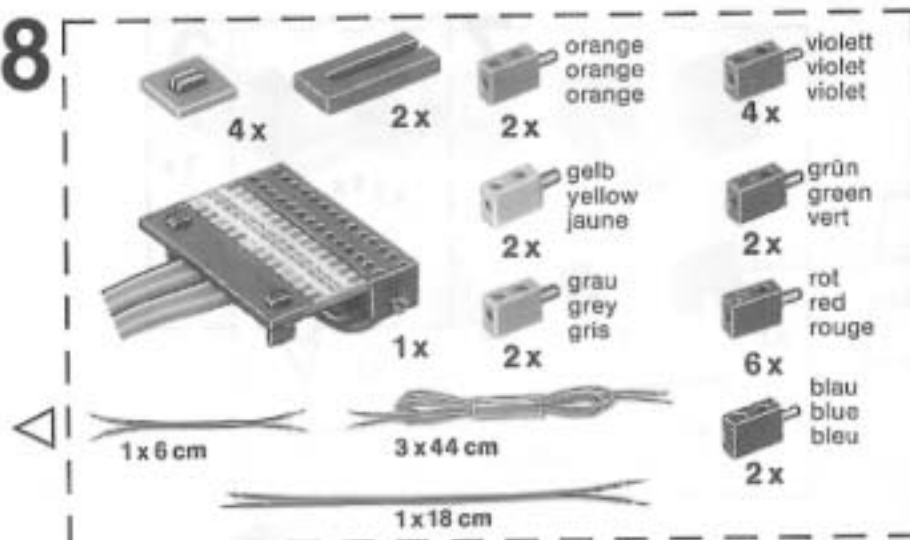


7

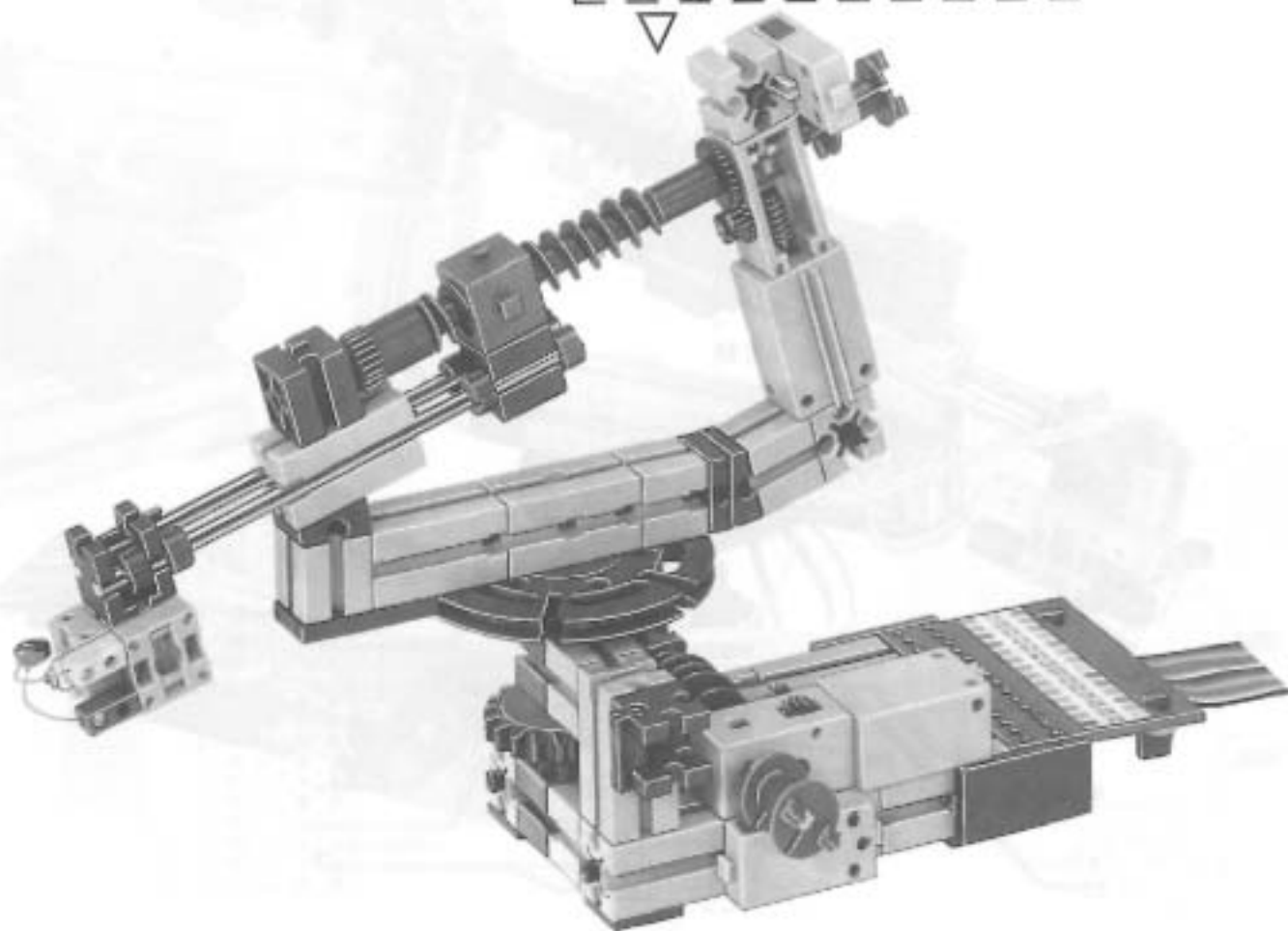


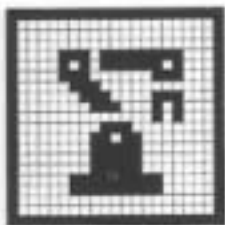


8

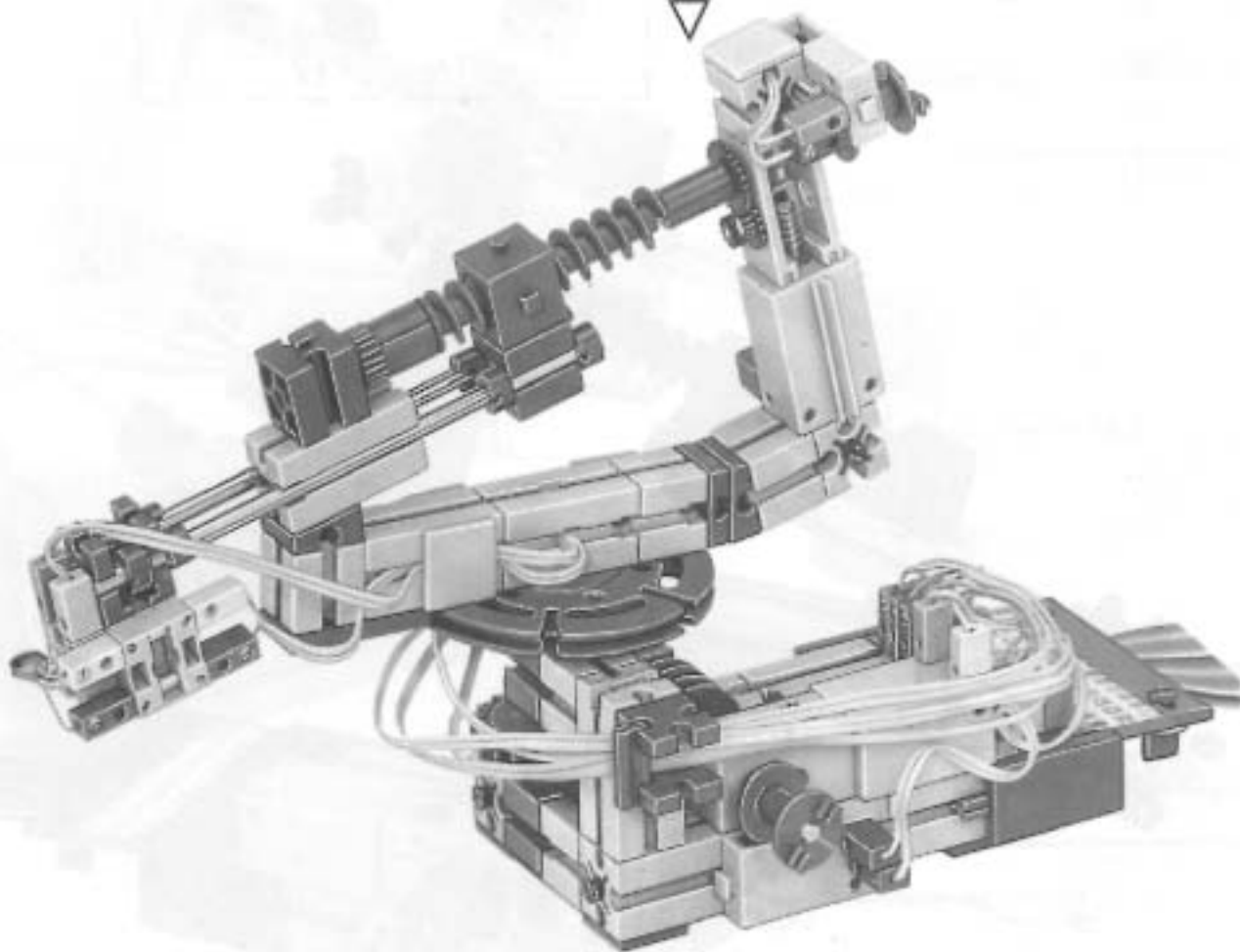
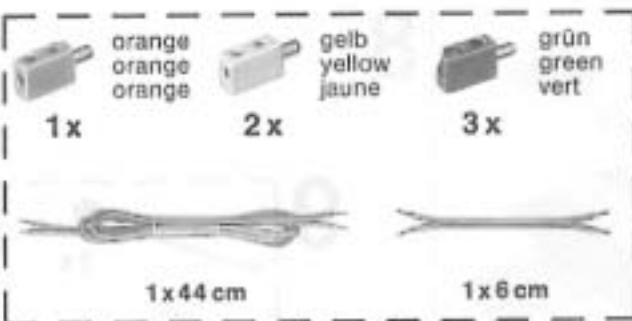


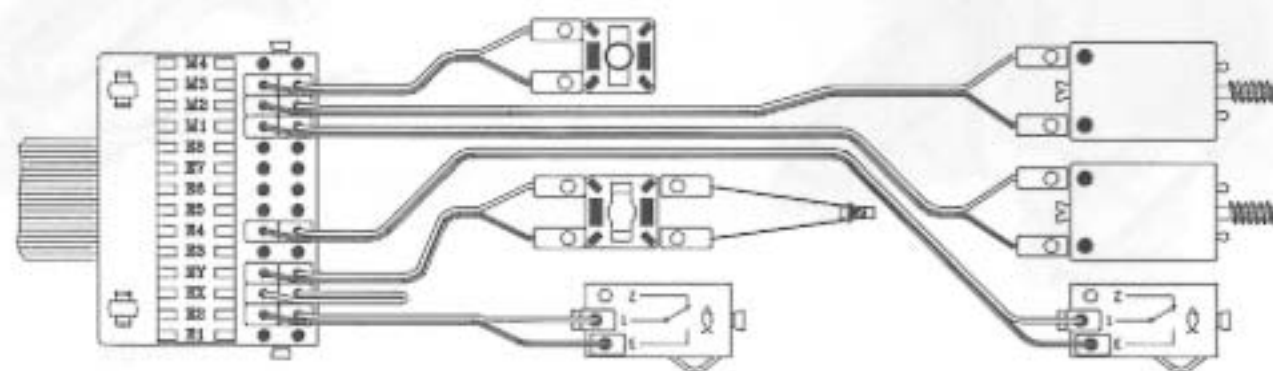
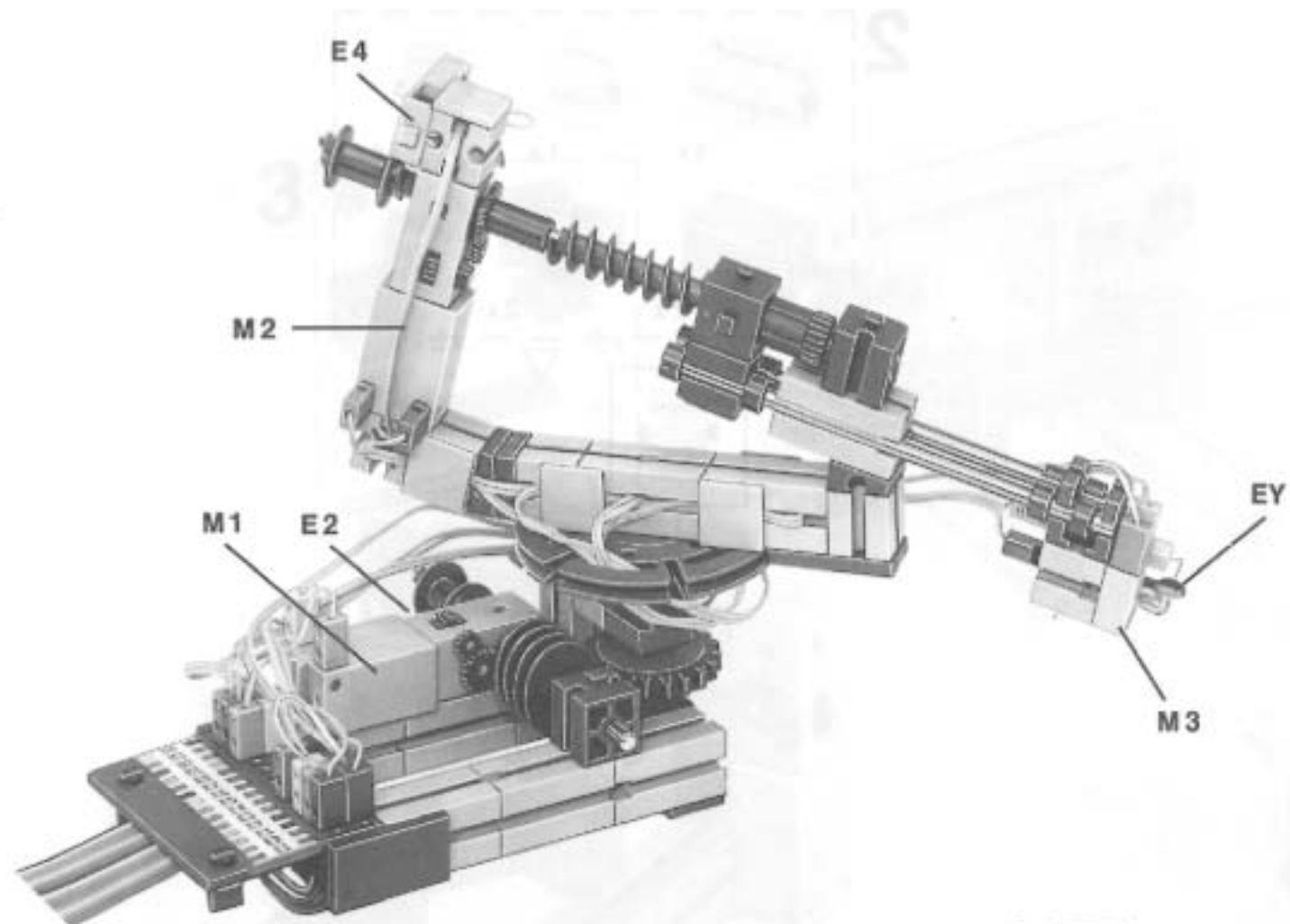
Schweißroboter mit Temperatursensor
Welding Robot with Thermistor
Robot de soudage avec thermistance

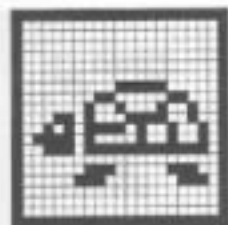




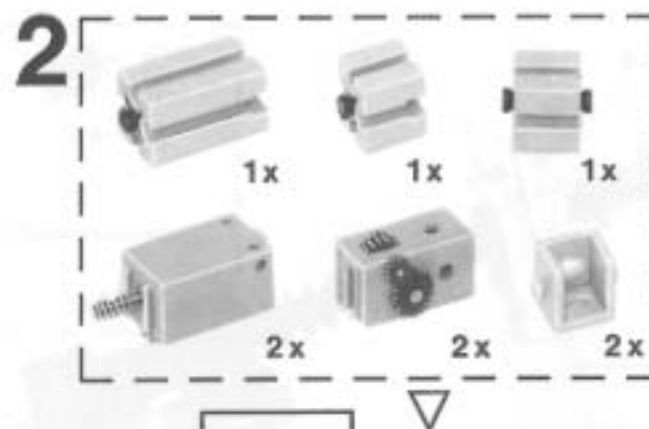
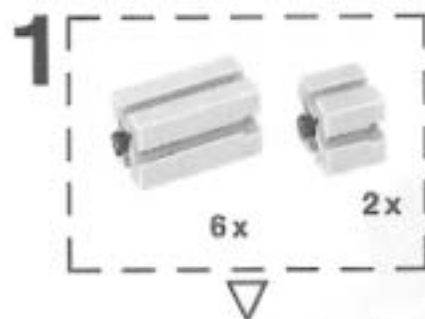
10

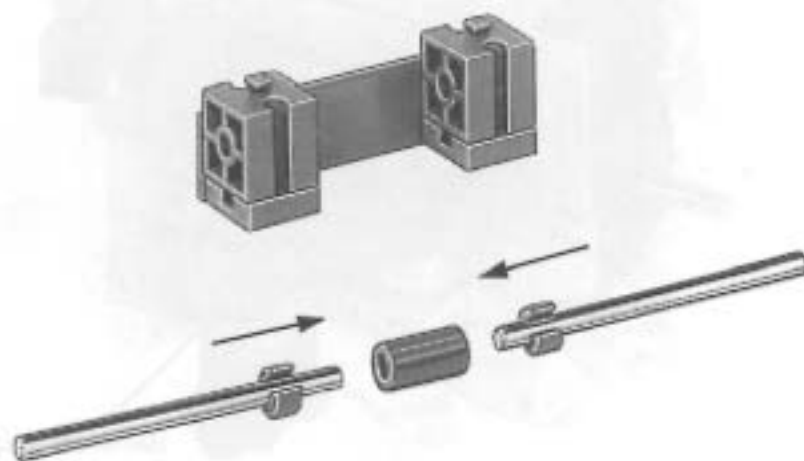
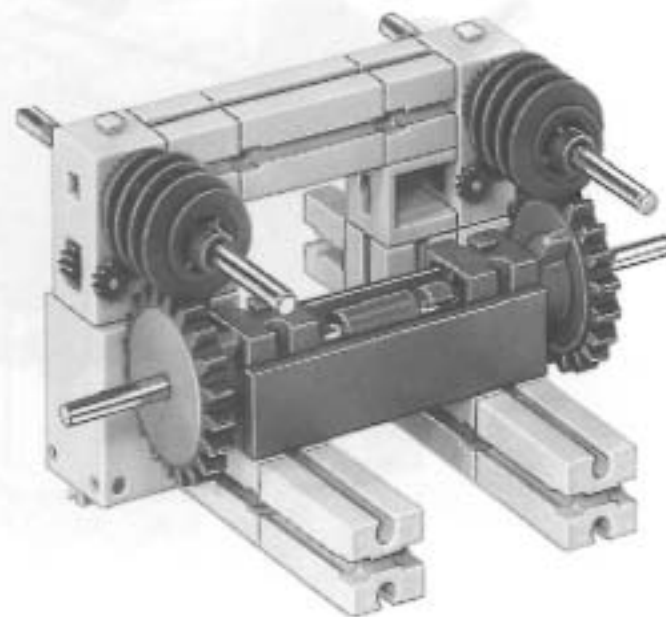
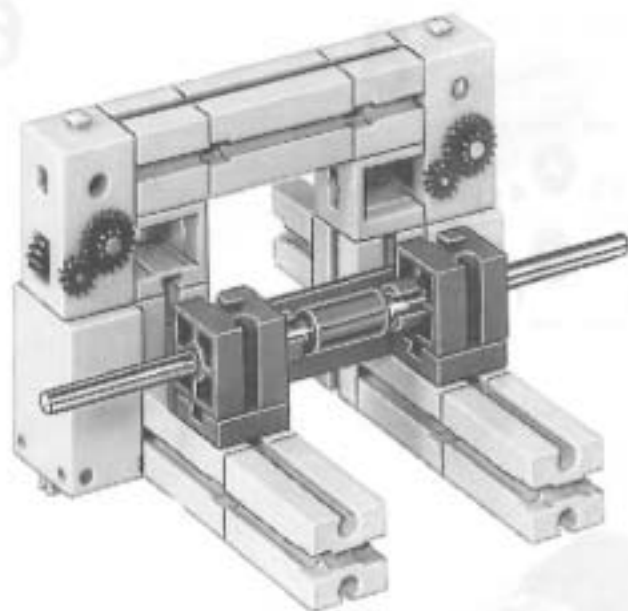


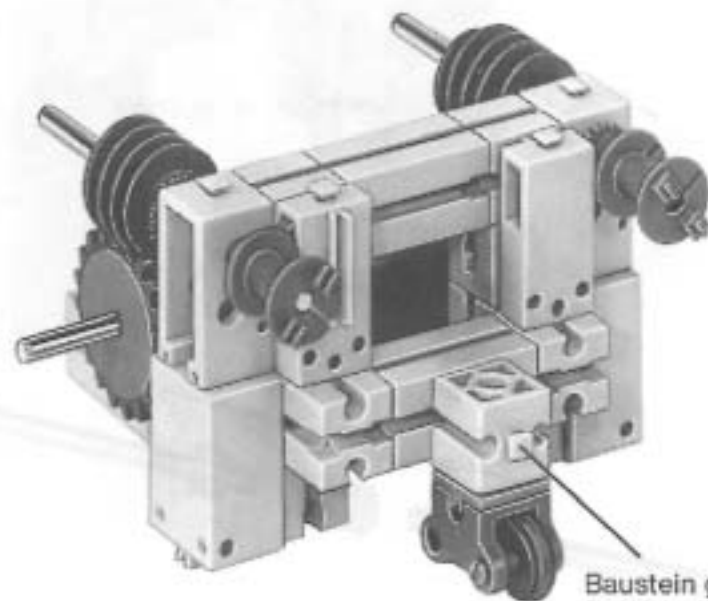
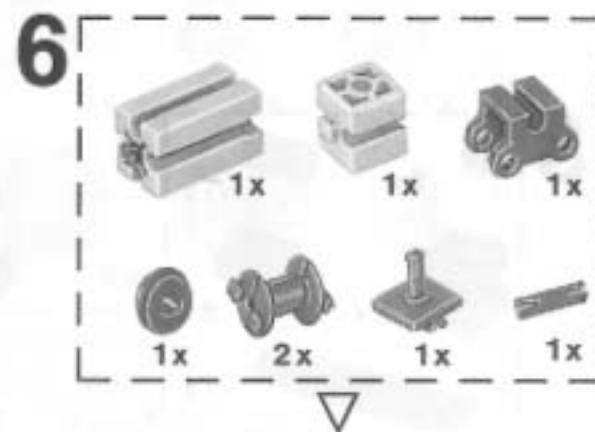
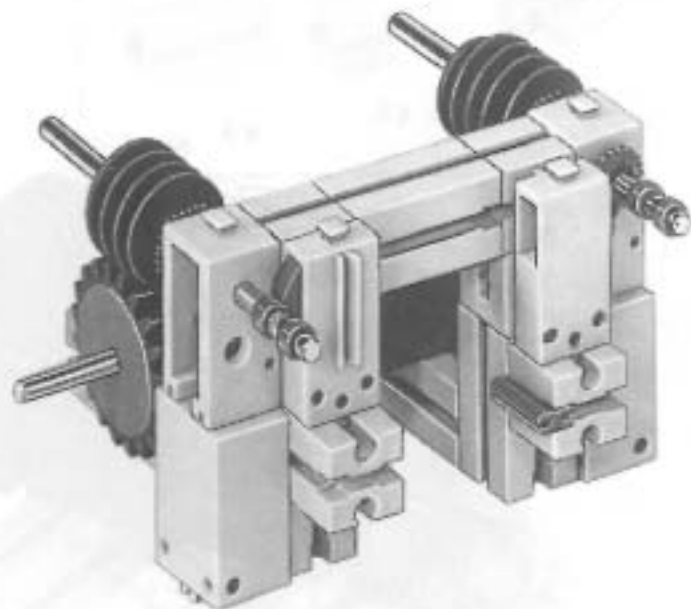
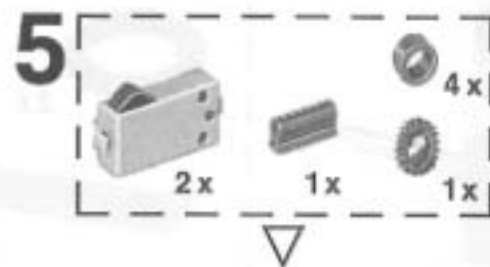




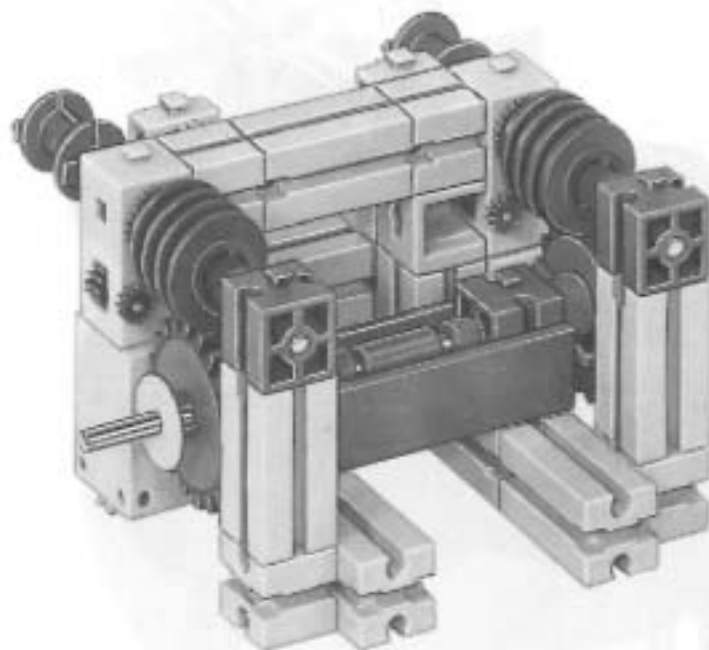
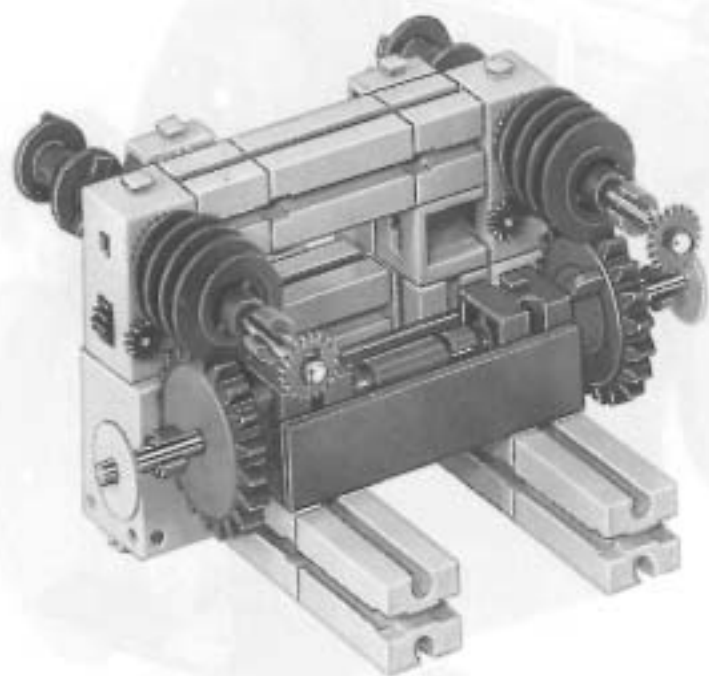
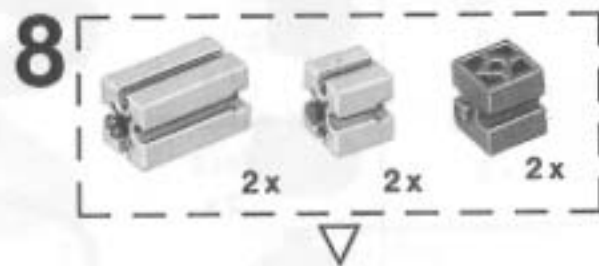
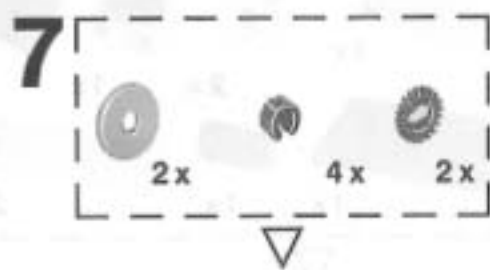
Schildkröte
Turtle
Tortue

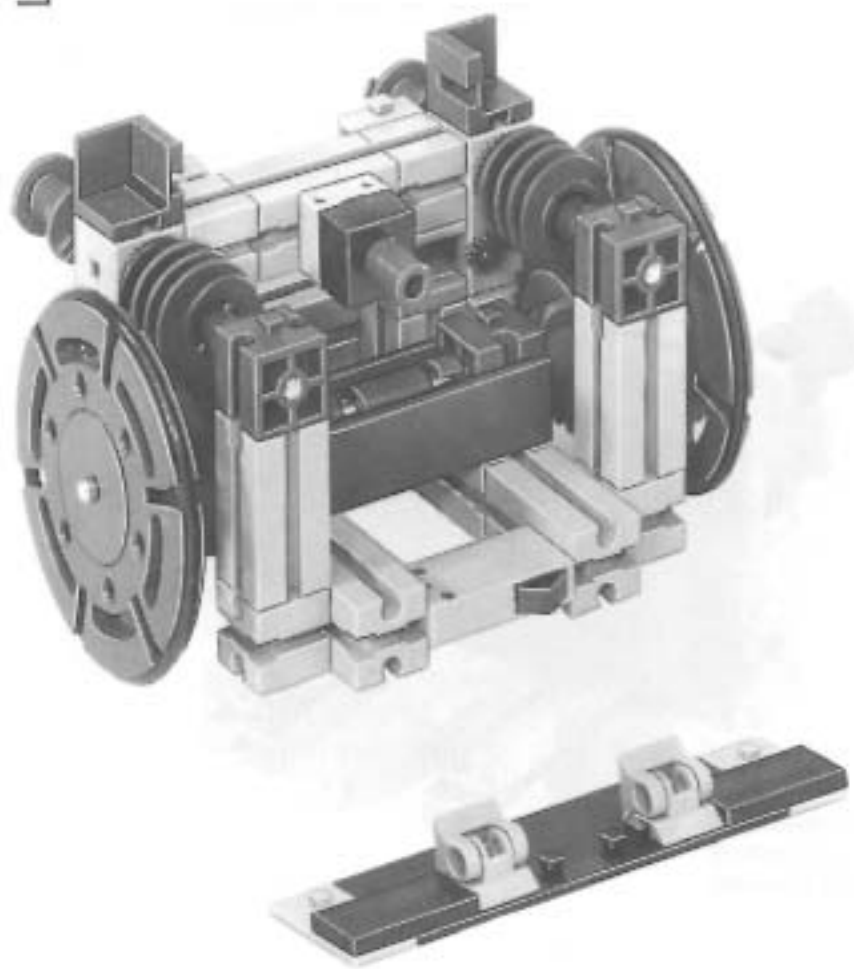
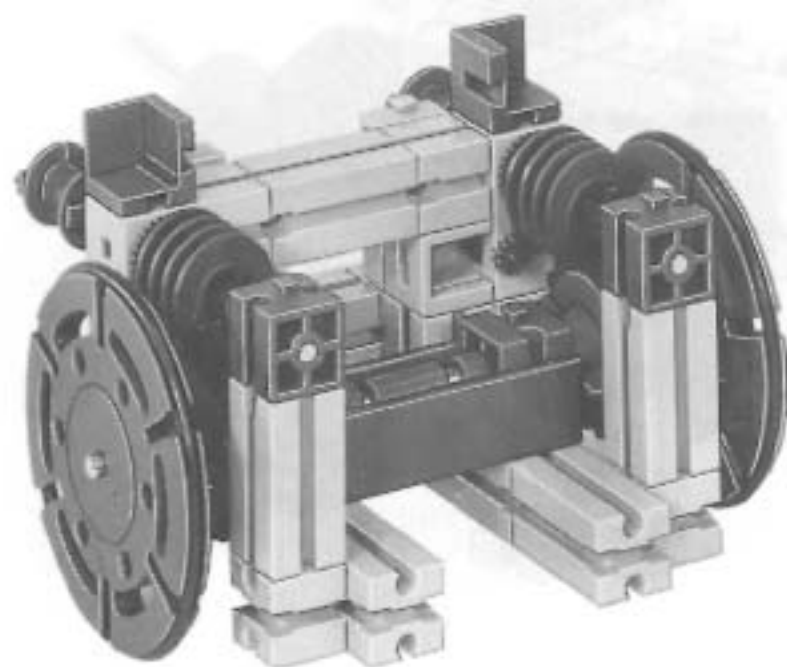
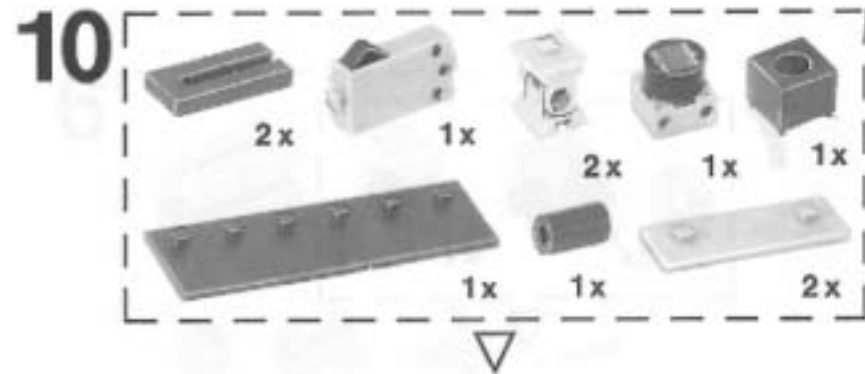
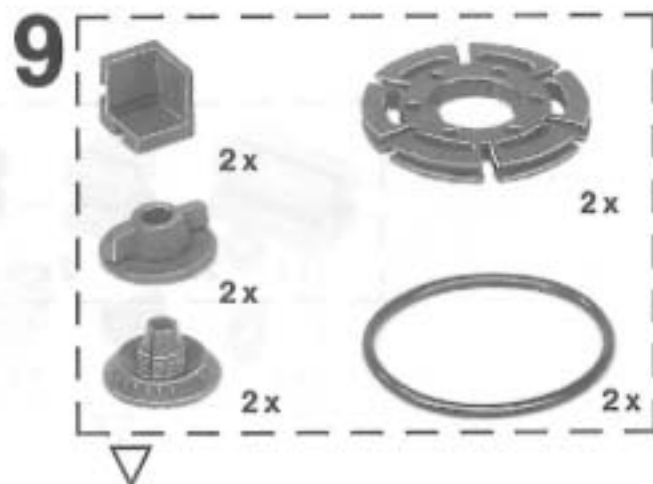
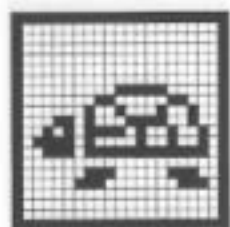






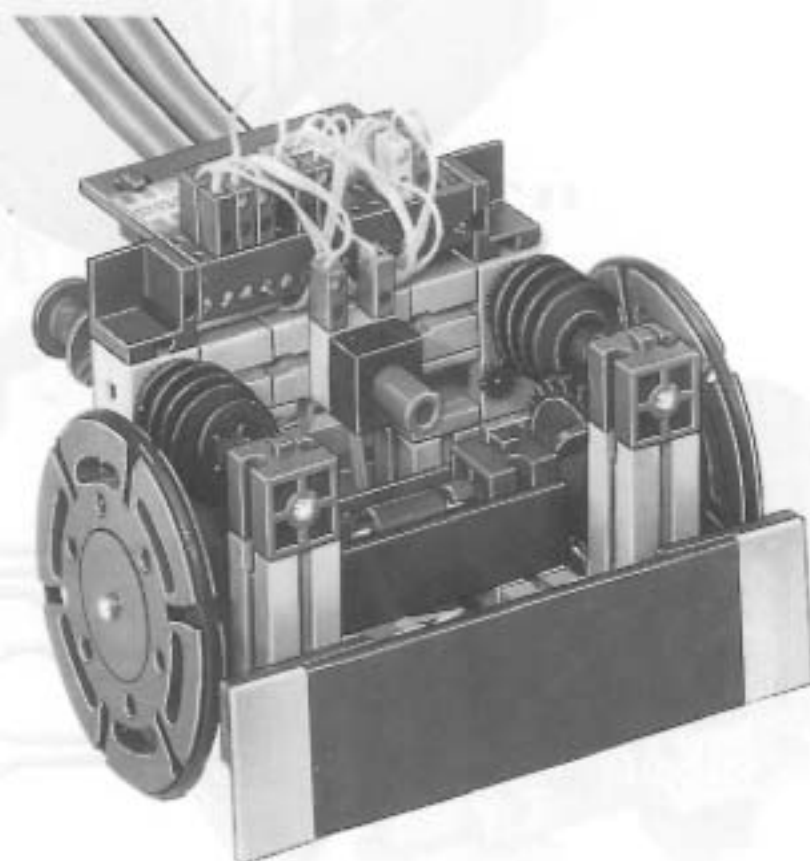
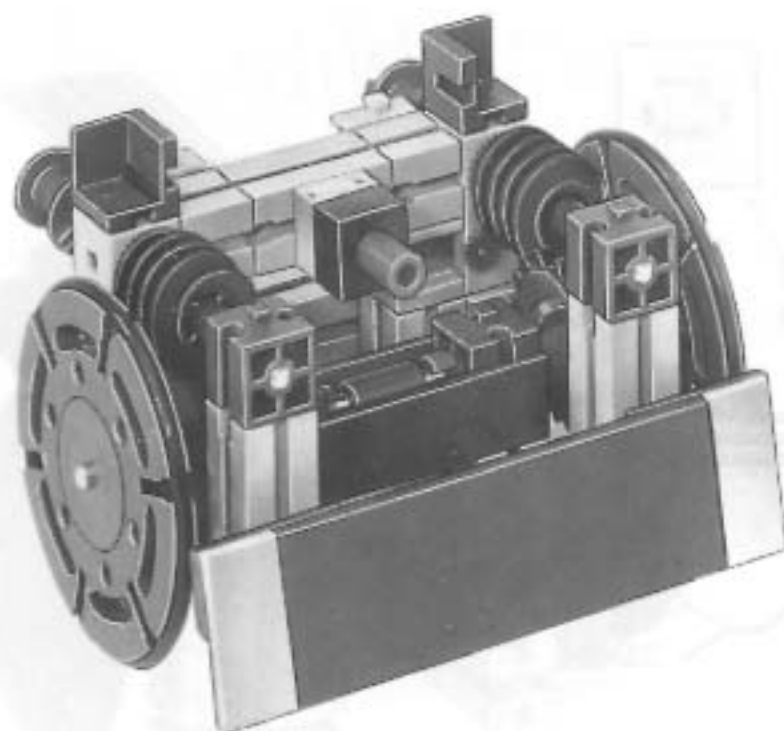
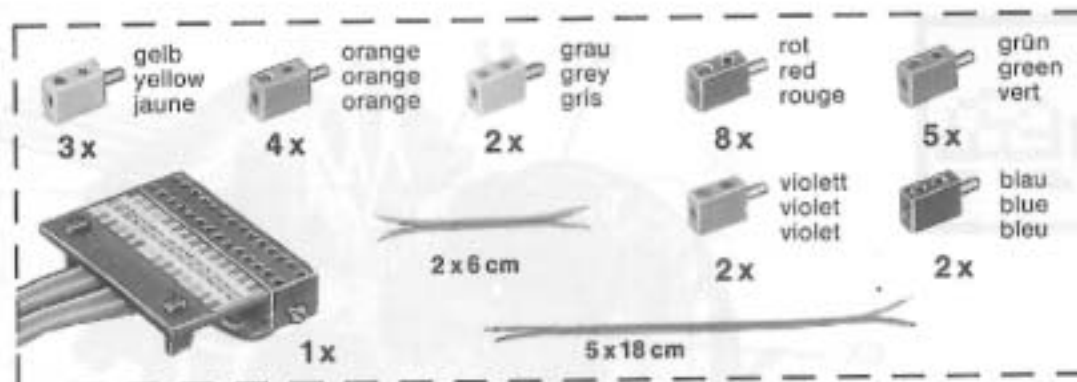
Baustein grau
Building block grey
Élément gris

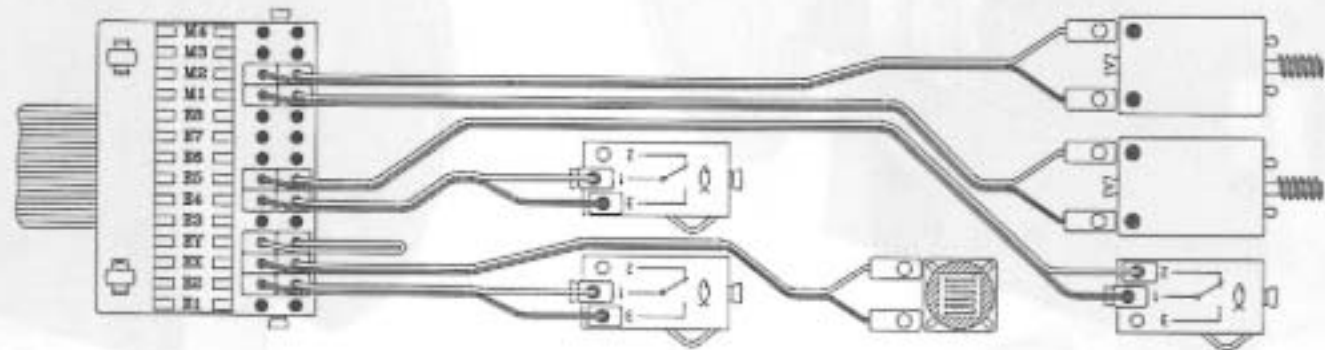
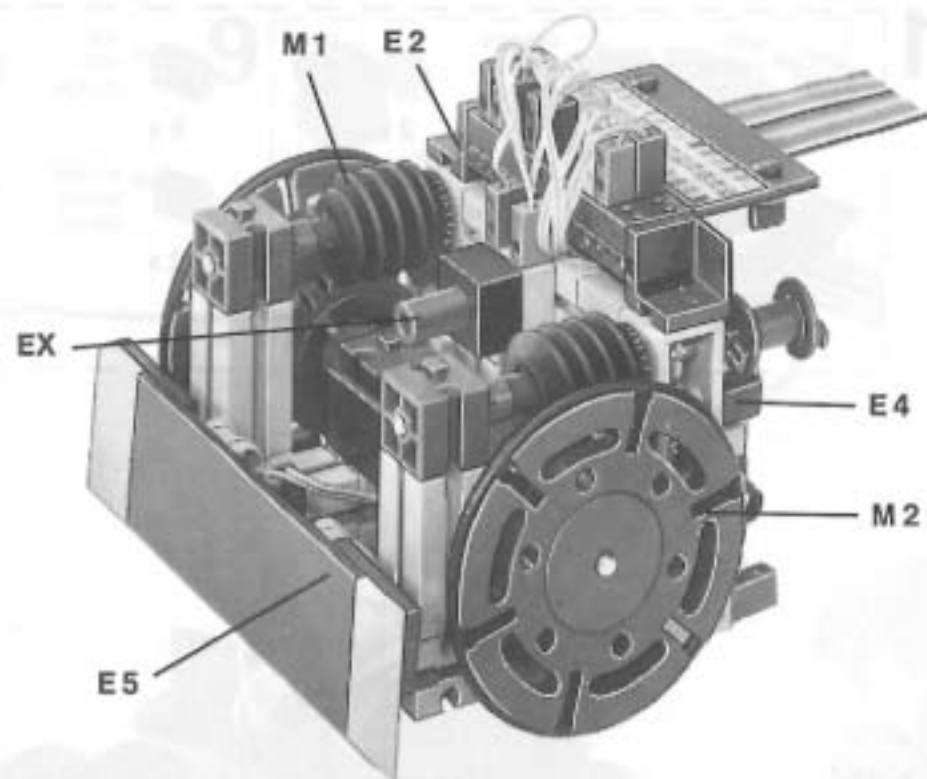
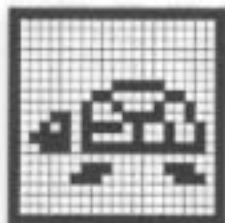




Zusätzlich mit Levelkopf
 Tube with Resonating Head
 (siehe auch Seite 40/41)

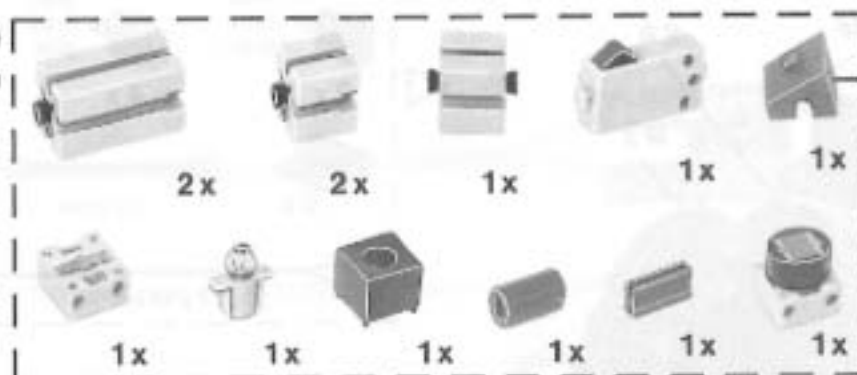
11



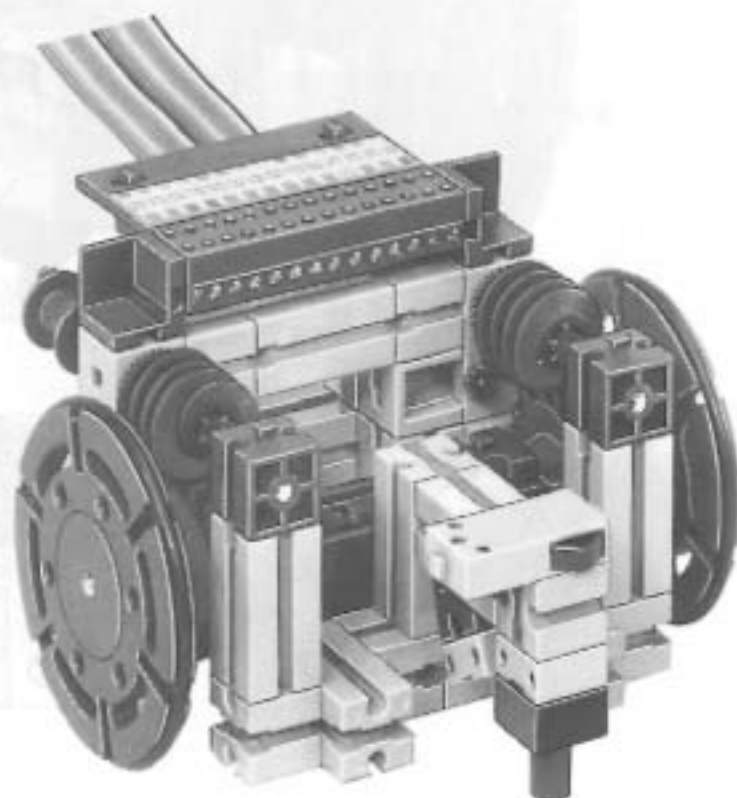


Schildkröte mit Lesekopf
Turtle with Recording Head
Tortue avec Tête de lecture

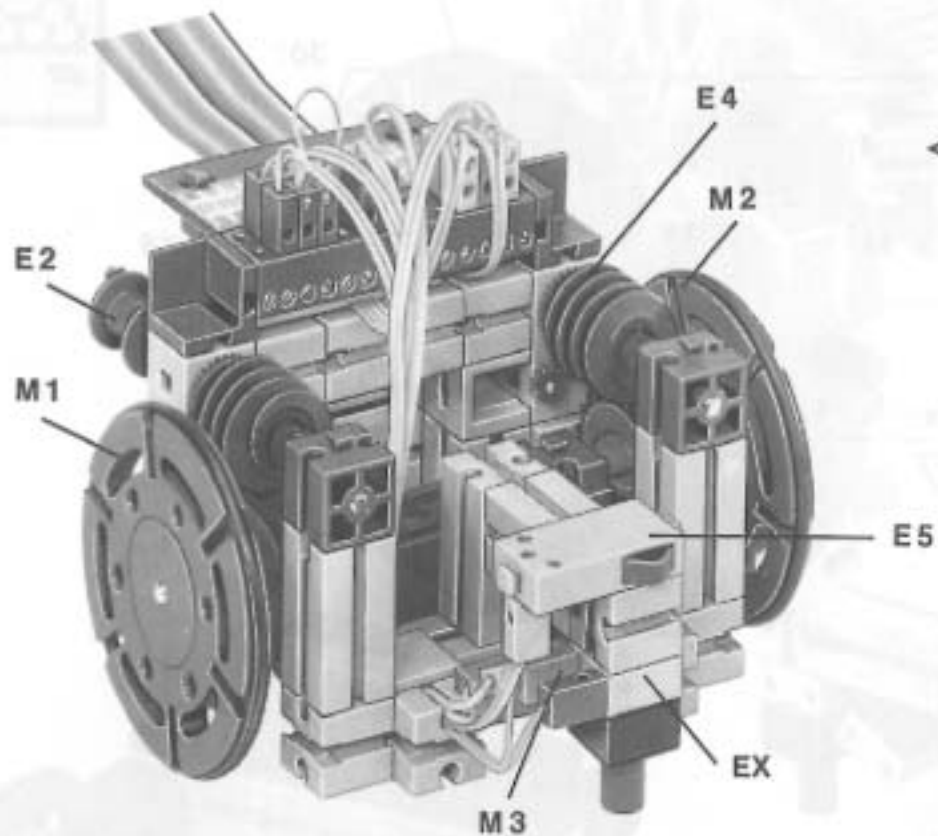
12



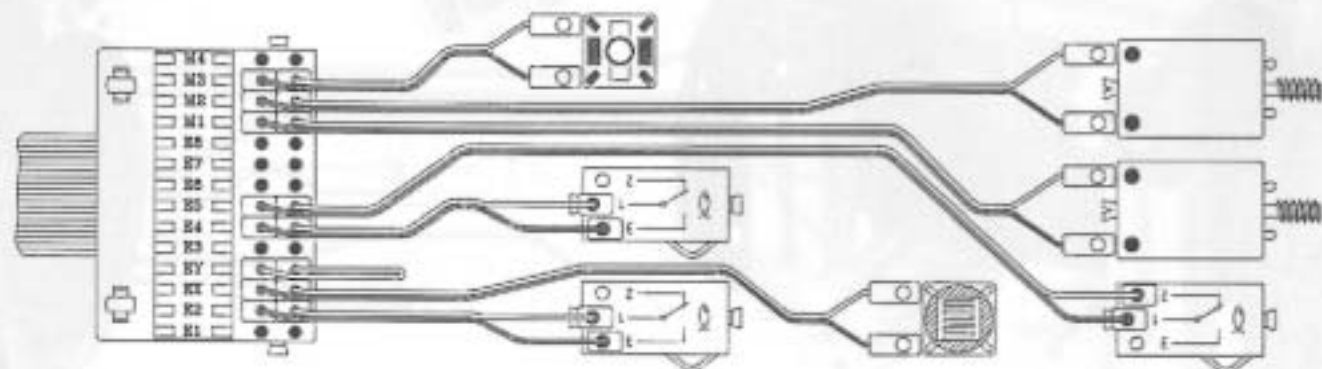
30°



13



8 x	rot red rouge	4 x	orange orange orange	5 x	grün green vert
2 x	blau blue bleu	4 x	grau grey gris	4 x	violett violet violet
2 x		1 x 6 cm		3 x	gelb yellow jaune
7 x 18 cm					



Anschlußbeispiel
Examples of connection
Plan de câblage (exemple)

