

● ● ● Price index



ESD classification:
Electrically conductive ESD/ATEX
version upon request

- ❶ Each chain link is made more rigid due to four opening crossbars, and consequently provides a great unsupported length
- ❷ Crossbars are removable along both radii
- ❸ Stop dog with "brake" for noise reduction
- ❹ Optimized glide pads with lateral wear allowance
- ❺ Wide, rounded plastic crossbars - cable friendly
- ❻ Dirt-repellent exterior
- ❼ E-Chains® also available with reverse bending radius "RBR"
- ❽ E-Chain® available with reverse bending radii
- ❾ Undercut for more stability



Opening E-Chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action. Repeat action for the other side



When to use the Series 840:

- If a particularly big and stable E-Chain® is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads



When not to use it:

- If a more stable E-Chain® with identical inner height is required
- ▶ Series 800, page 7.100



Order example complete E-Chain®

Please indicate chain-lengths or number of links **Example: 7 m or 28 links**

7 m **840.30.350.0**



E-Chain®

with 2 separators **8411** assembled every 2nd link



Interior separation

1 set **8000.1.12**



Mounting bracket

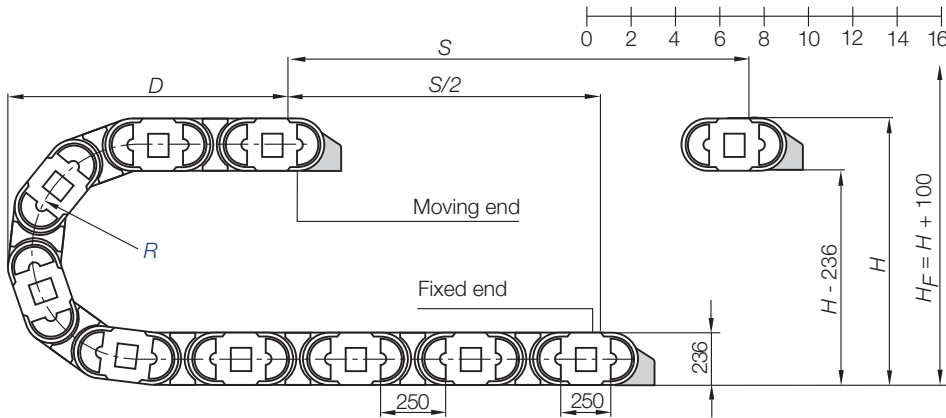
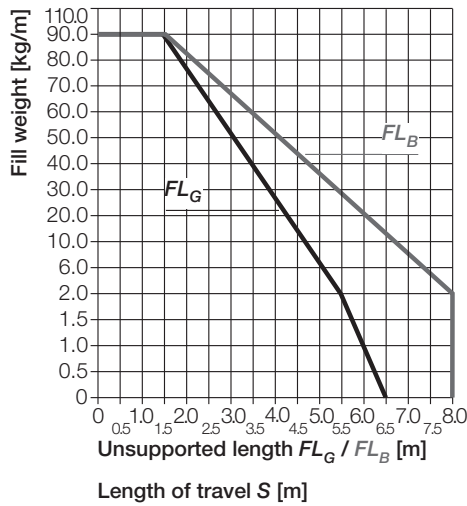
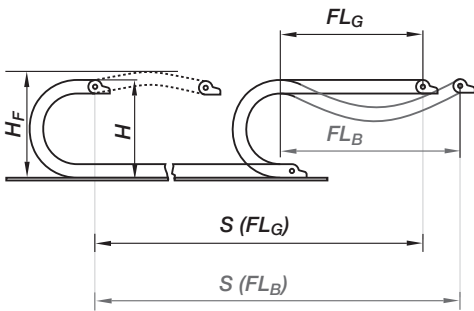


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



Pitch = 250 mm/link Links/m = 4 (1000 mm) Chain length = $S/2 + K$

R	325	350	400	450	500	600	750	1000
H	886	936	1036	1136	1236	1436	1736	2236
D	725	750	800	850	900	1000	1150	1400
K	1525	1600	1760	1915	2075	2385	2860	3645
H ₂	*	*	*	*	*	*	*	*
D ₂ ⁺²⁵	*	*	*	*	*	*	*	*
K ₂	*	*	*	*	*	*	*	*

*upon request

- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength E-Chain® radius in final position
 - K = $\pi \cdot R$ + "safety"
 - D₂ = Over length - long travels, gliding
 - K₂ = *Further add-on
 - H₂ = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 6 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

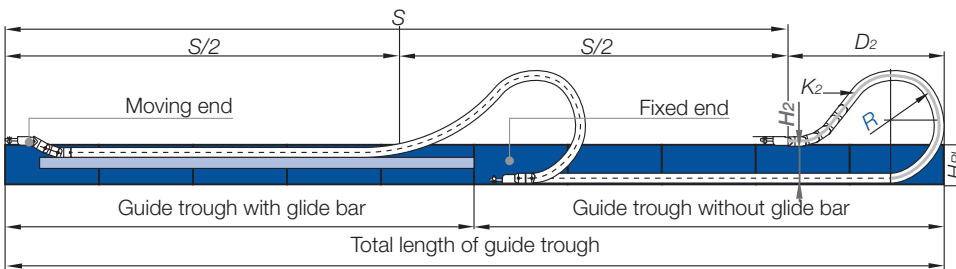


Short travels - unsupported

Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted.

The required clearance height:
H_F = H + 100 mm
 (with 5,0 kg/m fill weight)

Long travel lengths from 10 m to max. 450 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 450 m)

In this case the E-Chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Technical Data



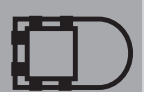
Details of material properties

► page 1.38

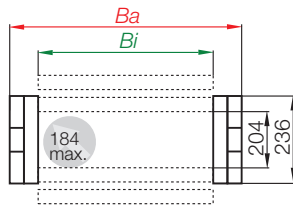
204

System E4/00
Inner height: 204 mm

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► page 7.15

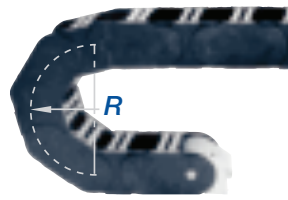


Part No. structure

840. 30. 350. 0

Color
black
Bending
radius
Width
Series

Series 840 - E-Chain® with crossbars every link



- E-Chains® of this size are basically used with crossbars every link
- Robust version
- Can be opened from two sides
- Removable crossbars

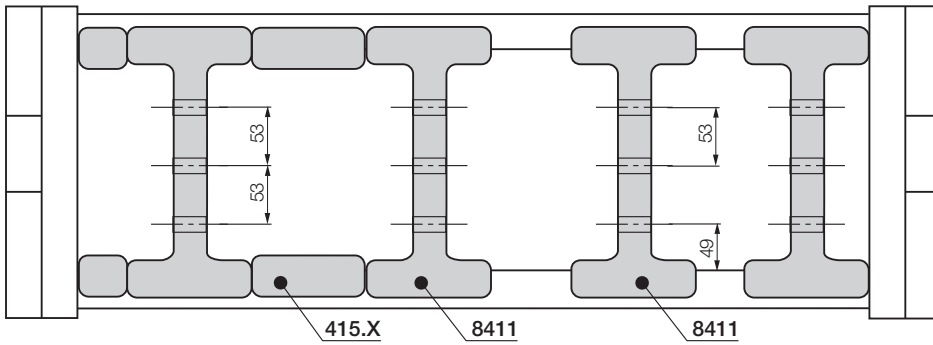


Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	Weight [kg/m]
840.13. <input type="checkbox"/> .0	100	160	≈ 13,84
840.15. <input type="checkbox"/> .0	113	173	≈ 13,87
840.16. <input type="checkbox"/> .0	125	185	≈ 13,95
840.17. <input type="checkbox"/> .0	138	198	≈ 14,04
840.18. <input type="checkbox"/> .0	150	210	≈ 14,13
840.20. <input type="checkbox"/> .0	163	223	≈ 14,17
840.21. <input type="checkbox"/> .0	175	235	≈ 14,22
840.22. <input type="checkbox"/> .0	188	248	≈ 14,27
840.23. <input type="checkbox"/> .0	200	260	≈ 14,35
840.25. <input type="checkbox"/> .0	213	273	≈ 14,43
840.26. <input type="checkbox"/> .0	225	285	≈ 14,49
840.27. <input type="checkbox"/> .0	238	298	≈ 14,57
840.28. <input type="checkbox"/> .0	250	310	≈ 14,61
840.30. <input type="checkbox"/> .0	263	323	≈ 14,72
840.31. <input type="checkbox"/> .0	275	335	≈ 14,75
840.32. <input type="checkbox"/> .0	288	348	≈ 14,82
840.33. <input type="checkbox"/> .0	300	360	≈ 14,91
840.35. <input type="checkbox"/> .0	313	373	≈ 15,06
840.36. <input type="checkbox"/> .0	325	385	≈ 15,09
840.37. <input type="checkbox"/> .0	338	398	≈ 15,11
840.38. <input type="checkbox"/> .0	350	410	≈ 15,15
840.40. <input type="checkbox"/> .0	363	423	≈ 15,34
840.41. <input type="checkbox"/> .0	375	435	≈ 15,39
840.42. <input type="checkbox"/> .0	388	448	≈ 15,50
840.43. <input type="checkbox"/> .0	400	460	≈ 15,57
840.45. <input type="checkbox"/> .0	413	473	≈ 15,63
840.46. <input type="checkbox"/> .0	425	485	≈ 15,69
840.47. <input type="checkbox"/> .0	438	498	≈ 15,72
840.48. <input type="checkbox"/> .0	450	510	≈ 15,80
840.50. <input type="checkbox"/> .0	463	523	≈ 15,87
840.51. <input type="checkbox"/> .0	475	535	≈ 15,91
840.52. <input type="checkbox"/> .0	488	548	≈ 15,93
840.53. <input type="checkbox"/> .0	500	560	≈ 16,00
840.55. <input type="checkbox"/> .0	513	573	≈ 16,31
840.60. <input type="checkbox"/> .0	563	623	≈ 16,47

Available bending radii

R [mm] 325 350 400 450 500 600 750 1000Supplement Part No. with required radius. Example: 840.30. 350 .0

0 = standard color, other colors ► page 1.39 · Pitch = 250 mm/link - Links/m = 4

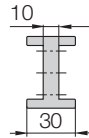


Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second E-Chain® link.

Vertical separators and spacers

● **Standard separator 8401 for E-Chains®** offers safe stability due to its wide base design, also when used with thick cables or hoses.

● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)



Vertical separator for E-Chains®	
unassembled	8401
assembled	8411



Spacer* for E-Chains®	
unassembled	405.XX
assembled	415.XX

*For side-mounted applications



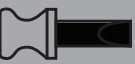
Vertical separator 8401



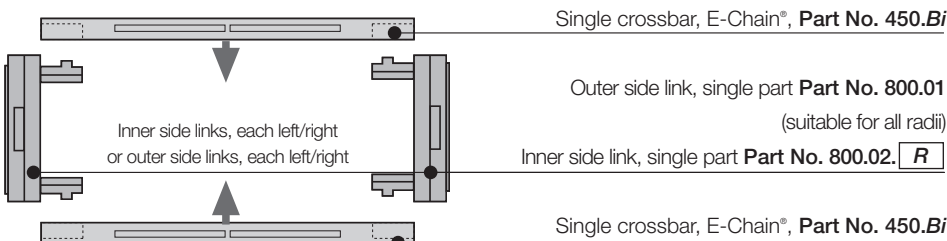
Spacer 405.XX

System E4/00
Inner height: 204 mm

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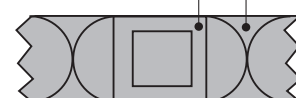


▶ page 7.15



Part No. E-Chain® links, single parts

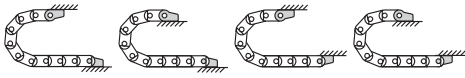
Inner side link
Outer side link





Option steel - pivoting

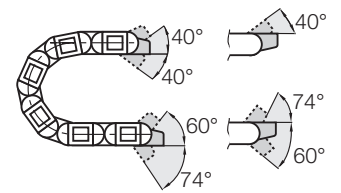
- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive



Possible installation conditions -

Further installation angles ► installation sketch

Moving end
8000.1



Fixed end
8000.2

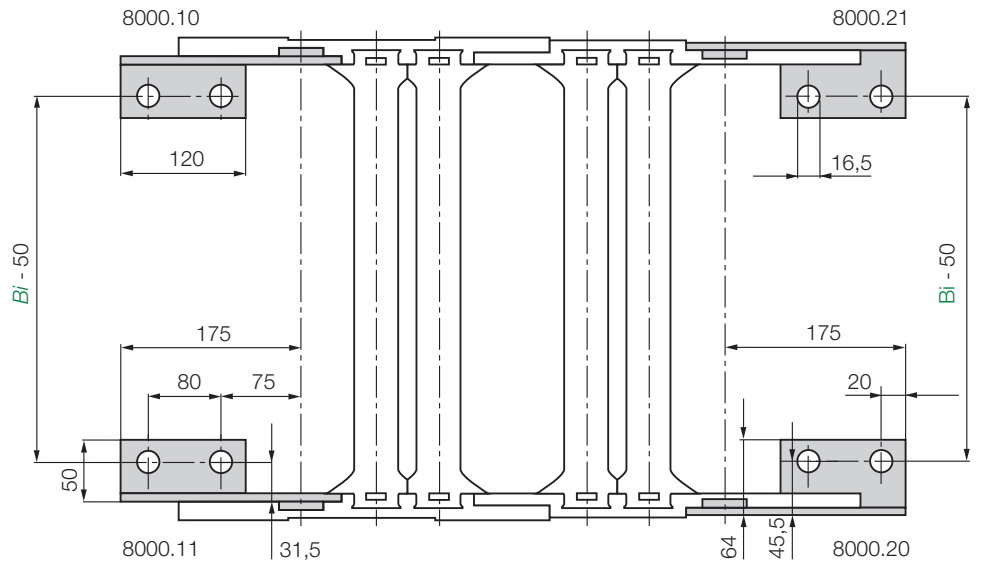
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Moving end
8000.1

Fixed end
8000.2



Note mounting brackets:

Depending on the E-Chain® length, the carrier will end with outer or inner side links. For the best appearance, make sure the chain ends with outer side link whenever possible. An odd number of links will always end with outer side links.

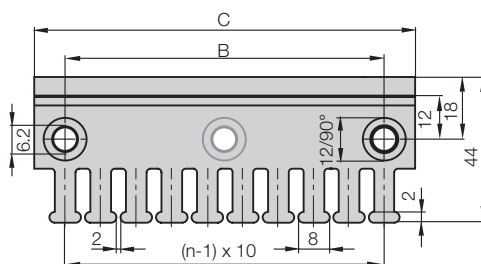
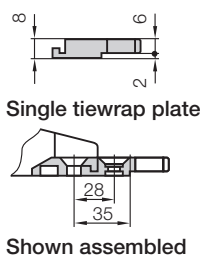
Part No.	Mounting bracket
8000.1.12	Full attachment set (both sides) for E-Chain®, ending with outer side link
8000.3.12	Full attachment set (both sides) for E-Chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
8000.1	Mounting bracket set moving end (one side) for outer side link
8000.2	Mounting bracket set fixed end (one side) for inner side link

E4.1 | Series 840 | Accessories | Strain Relief



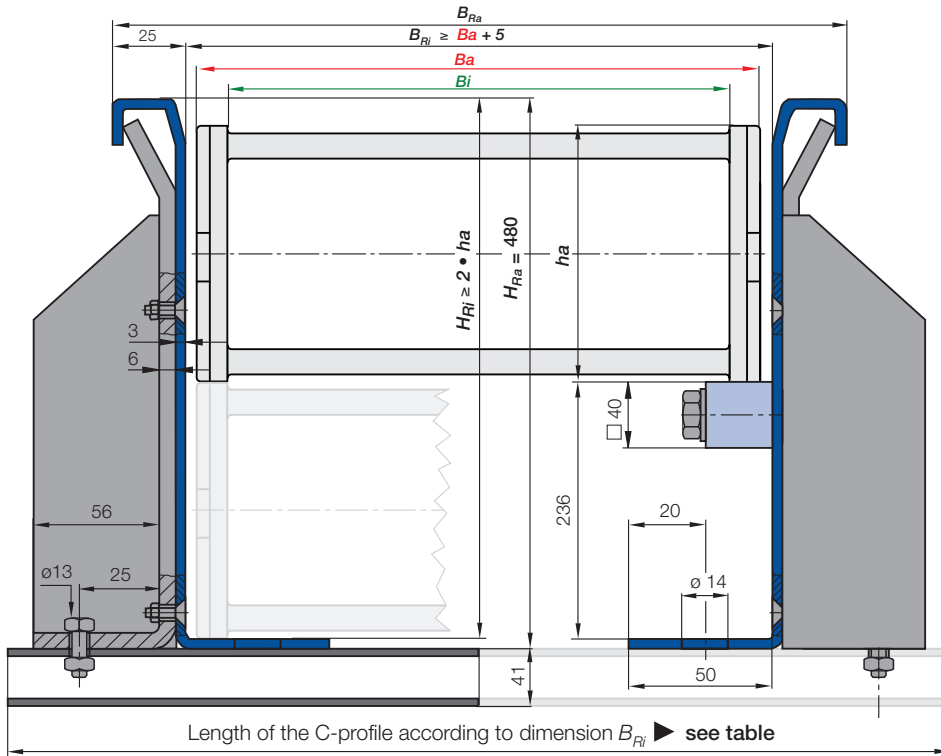
Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)



Guide troughs are used with applications where the upper run of the E-Chain® glides on the lower run. If using igus® steel guide troughs, the following components are required:

- Guide trough without glide bars
Part No. 90.30
- Guide trough with glide bars
Part No. 90.31
- Installation sets as end connectors
Part No. 90.50.XX

.XX indicates the length of the C-profile on which the guide trough is mounted. The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

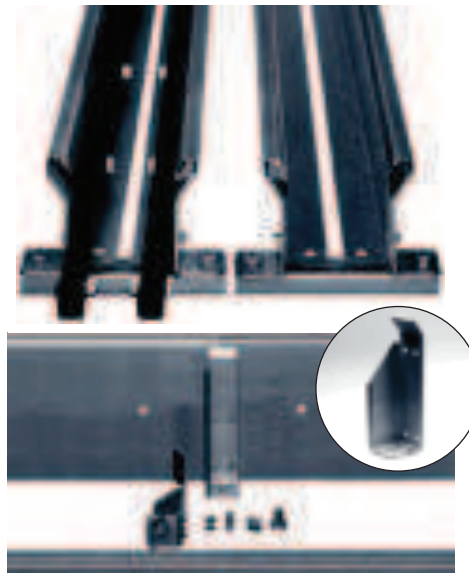


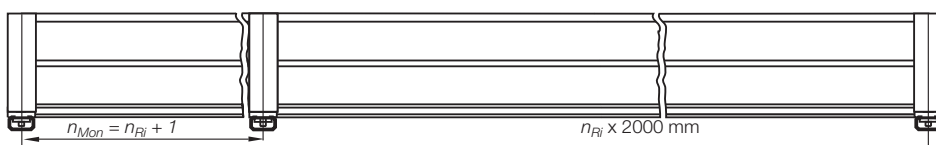
Illustration top: Guide trough with and without glide bar.

Illustration bottom: assembly kit with specially strengthened installation angle bracket for 90.30 and 90.31

Order example: Length of travel 30 m - Center mounted for Series 840.13.325.0 with $B_{Ri} = 165$

Guide trough set (set of 2 trough side parts, incl. glide strips) without glide bar	
Order text: 16 m Guide trough without glide bar (8 x 2 m sections)	Part No. 90.30
Guide trough set (set of 2 trough side parts, incl. glide strips) with glide bar	
Order text: 16 m Guide trough with glide bar (8 x 2 m sections)	Part No. 90.31
Installation set "Basic" complete (Guide trough-sets + 1)	
Order text: 17 Installation sets (with C-profile)	Part No. 90.50.350

Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



- B_a = Outer width E-Chains® / E-Tube
- B_i = Inner width E-Chains® / E-Tube
- h_a = Outer height E-Chains® / E-Tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- ! $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 5$
- = Guide trough set ● = Installation set
- = Glide bar ● = C-profile

Installation set with C-profile

840.13.325.0 ▶ Order example

	B_{Ri}	Part No.	Installation set
.13	165	90.50.350	
.15	178	90.50.350	
.16	190	90.50.375	
.17	203	90.50.375	
.18	215	90.50.400	
.20	228	90.50.400	
.21	240	90.50.425	
.22	253	90.50.425	
.23	265	90.50.450	
.25	278	90.50.450	
.26	290	90.50.475	
.27	303	90.50.475	
.28	315	90.50.500	
.30	328	90.50.500	
.31	340	90.50.525	
.32	353	90.50.525	
.33	365	90.50.550	
.35	378	90.50.550	
.36	390	90.50.575	
.37	403	90.50.575	
.38	415	90.50.600	
.40	428	90.50.600	
.41	440	90.50.625	
.42	453	90.50.625	
.43	465	90.50.650	
.45	478	90.50.650	
.46	490	90.50.675	
.47	503	90.50.675	
.48	515	90.50.700	
.50	528	90.50.700	
.51	540	90.50.725	
.52	553	90.50.725	
.53	565	90.50.750	
.55	578	90.50.750	
.60	628	90.50.800	

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▶ chapter 10



▶ chapter 9



▶ page 7.15