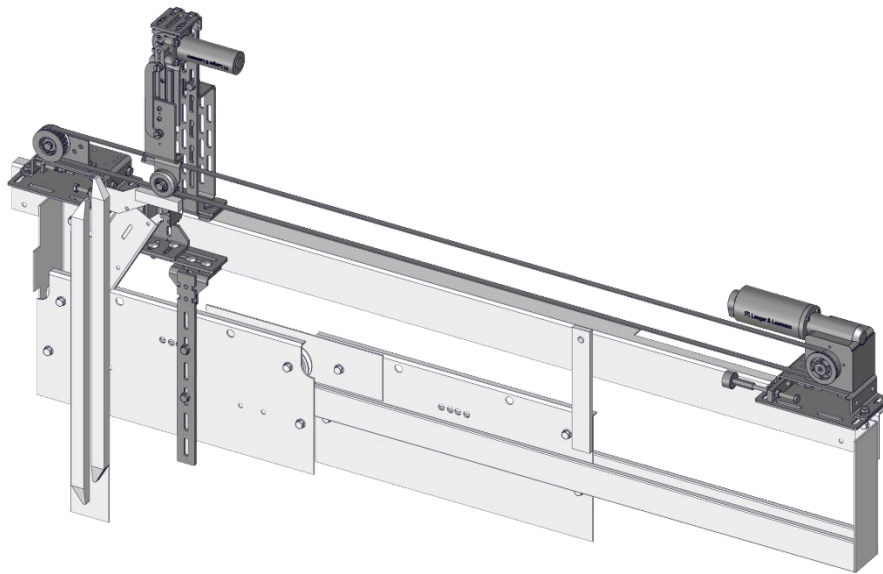


Montageanleitung **Assembly Instruction**

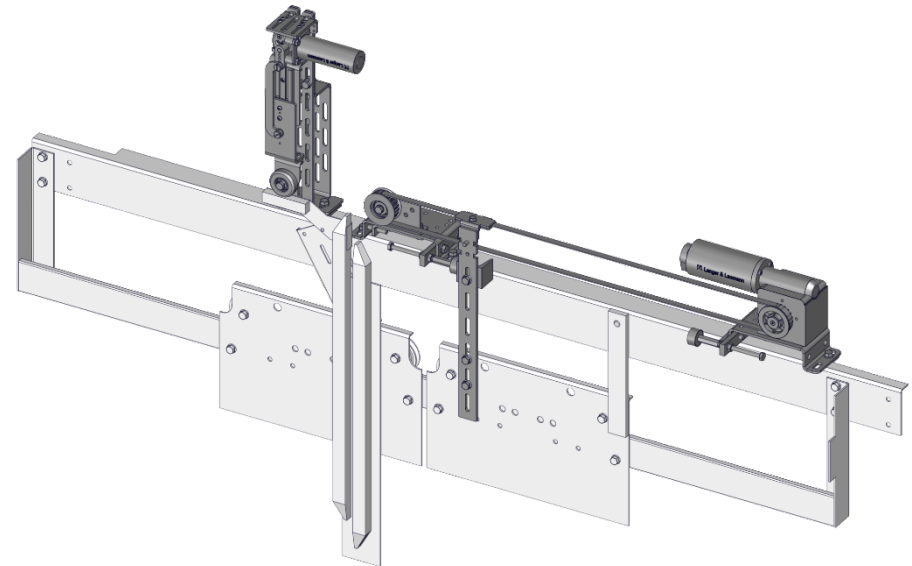
TSG in Thyssen M2T/Z D4 - **TSG in Thyssen M2T/Z D4**

TR + TL S. 8 bis 35 / Z S.36 bis 57 –
TR + TL p. 8 to 35 / C p. 36 to 57

TSG in Thyssen M2T D4 - **TSG in Thyssen M2T D4**



TR + TL S. 8 bis 35 –
TR + TL p. 8 to 35



Z S. 36 bis 57 –
C p. 36 to 57

Lieferumfang – scope of supply



picture	Number	description DE	description EN	quantity
	8.20.xxxxx.04	TSG-Elektronik	TSG-electronic	1
	8.20.400xx.xx	TSG-Motor	TSG-motor	1
	1.20.60060	TSG Kombiwinkel, Ausführung 'Hut'	TSG universal bracket, version 'hat'	2
	1.20.60013	TSG Halter für Umlenkrad	TSG bracket for counter roller	1
	1.20.60003	TSG Umlenkrad	TSG counter roller	1
	1.20.60004	TSG Türflügelmitnehmer	TSG door panel coupler	1
	1.20.92030	Verbindungsplatte für rechtwinkligen Türflügelmitnehmer	Connecting plate for right-angled door panel coupler	1
	1.20.60020	TSG Anschlag für Türflügelmitnehmer	TSG stopper for door coupler	1

picture	Number	description DE	description EN	quantity
	1.20.60075	rechtwinkliges Verbindungsblech TSG Mitnehmer	right-angled connecting plate TSG driver	1
	1.20.92020	TSG Türflügelmitnehmer, rechtwinklig	TSG door panel coupler, rectangular	1
	1.20.60005	TSG Zahnriemenschloß, Stahl	TSG toothed belt lock, steel	1
	1.20.60037	Halterung Puffer, Standardversion	bracket buffer, standard version	2
	1.20.60086	Unterlegplatte für Hutwinkel	shim for hat bracket	2
	1.20.60110	Spannlasche für Spannstation, normale Ausführung	clamping tab for clamping station, normal execution	1
	x.20.xxxxx.40	TSG Zahnriemen [4,0m]	TSG toothed belt [4,0m]	1
	8.20.831xx	TSG Sinusantrieb	TSG Sinus Drive	1
	1.20.94050	Haltewinkel für TSG Sinusantrieb	mounting bracket for TSG Sinus Drive	1

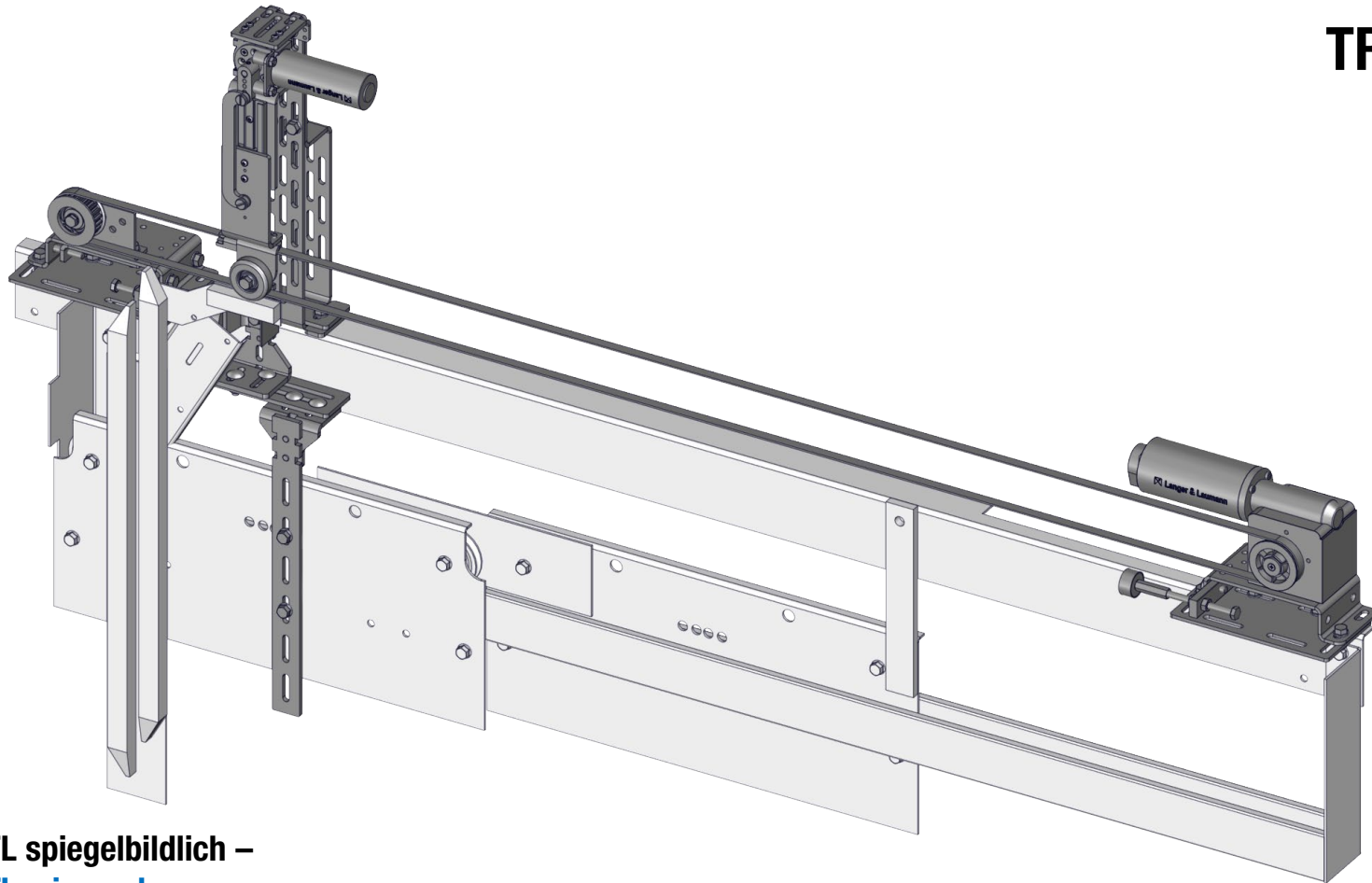
picture	Number	description DE	description EN	quantity
	1.20.94080	Rollenhalter für TSG Sinusantrieb	wheel holder for TSG Sinus Drive	1
	1.20.41010	Rad mit Kugellager	wheel with ball bearing	1
	1.20.41020	Gleitlager für Rad mit Kugellager	slide bearing for wheel with ball bearing	1
	1.20.94100	Winkel zur Befestigung an Türmaschine für TSG Sinusantrieb	bracket for mounting at door machine for TSG Sinus Drive	1
	1.20.94101	Gegenwinkel zur Befestigung an Türmaschine für TSG Sinusantrieb	counter bracket for fixing at door machine for TSG Sinus Drive	1
	1.36.00720	Sperrzahnschraube WN0274 A2C 8.8 - M8x20	hexagon head serrated screw WN0274 A2C 8.8 - M8x20	18
	1.36.00501	Sperrzahnmutter, ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	22
	1.36.00710	Sperrzahnschraube WN0274 A2C 8.8 - M8x16	hexagon head serrated screw WN0274 A2C 8.8 - M8x16	4
	1.36.00725	Sperrzahnschraube WN0274 A2C 8.8 - M8x25	hexagon head serrated screw WN0274 A2C 8.8 - M8x25	8

picture	Number	description DE	description EN	quantity
	1.36.00135	Sperrzahnschraube WN0274 A2C 8.8 - M6x12	hexagon head serrated screw WN0274 A2C 8.8 - M6x12	7
	1.36.00177	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x100	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x100	2
	1.36.00430	Sechskantmutter DIN934-8 vz 8.8 - M8	hexagon nut DIN934-8 vz 8.8 - M8	4
	1.36.00121	Sechskantdistanzmuffe vz 8.8 - M8x40	hexagonal spacer sleeve vz 8.8 - M8x40	2
	1.36.00115	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x40	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x40	2
	1.36.00450/ 1.36.01035	Scheibe großer Durchmesser DIN9021 vz - 8,4	washer with large outside diameter DIN9021 vz - 8,4	1
	1.36.00169	Federring DIN127 vz - M8	lock washer DIN127 vz - M8	1
	1.36.00003	Linsenschraube DIN7985 vz 4.8 - M4x10	pan head screw DIN7985 vz 4.8 - M4x10	4
	1.36.00730	Sperrzahnschraube WN0274 A2C 8.8 - M8x30	hexagon head serrated screw WN0274 A2C 8.8 - M8x30	1

picture	Number	description DE	description EN	quantity
	1.36.00470	Scheibe DIN125A vz - 10,5	washer DIN125A vz - 10,5	4
	1.20.91120	Gummipuffer D30x15, Gewindebolzen M8x20, 75 Shore	rubber-metal bump stop D30x15, threaded stud M8x20, 75 Shore	2

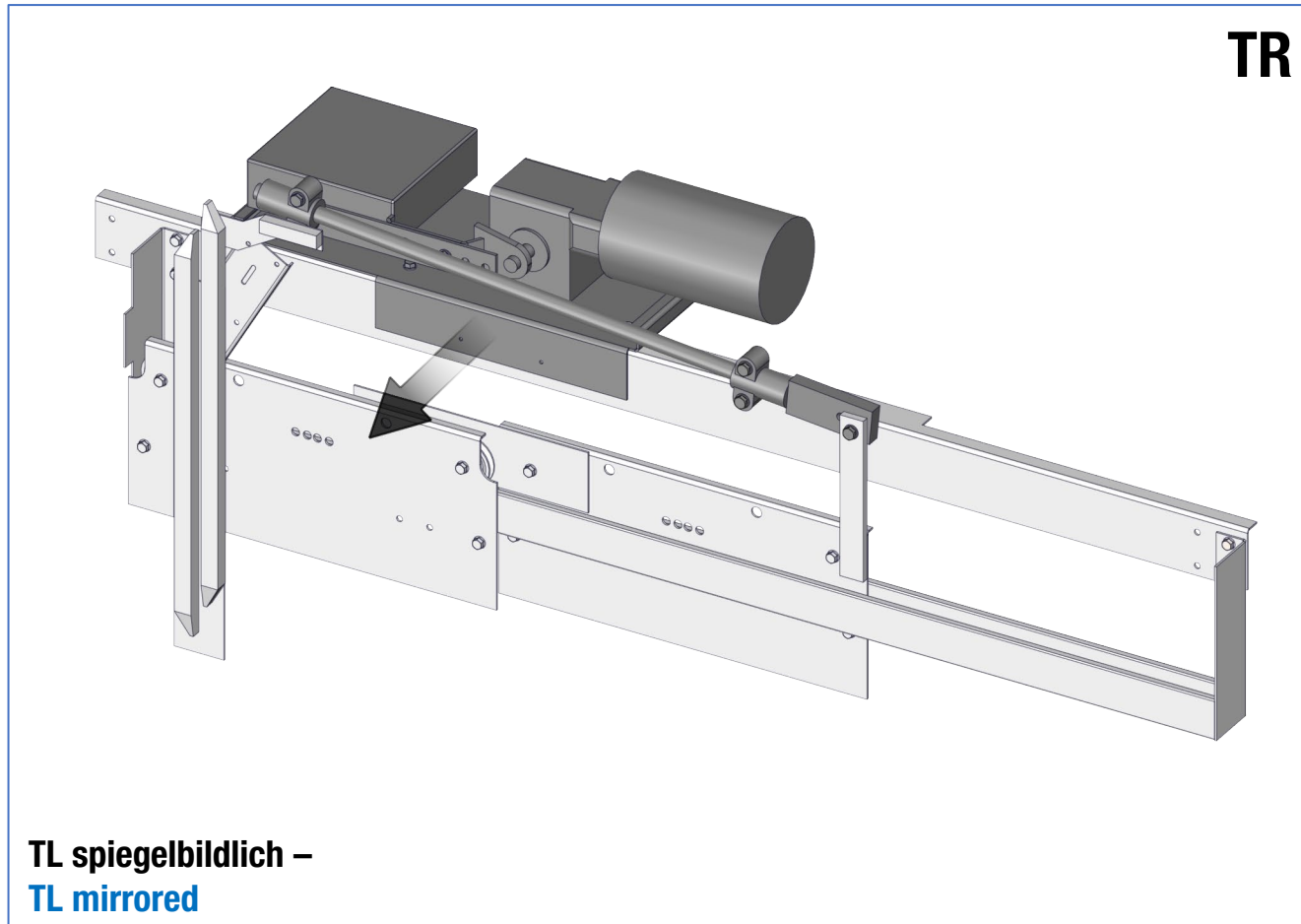
TSG in Thyssen M2T D4 TR + TL – TSG in Thyssen M2T D4 TR + TL

TR

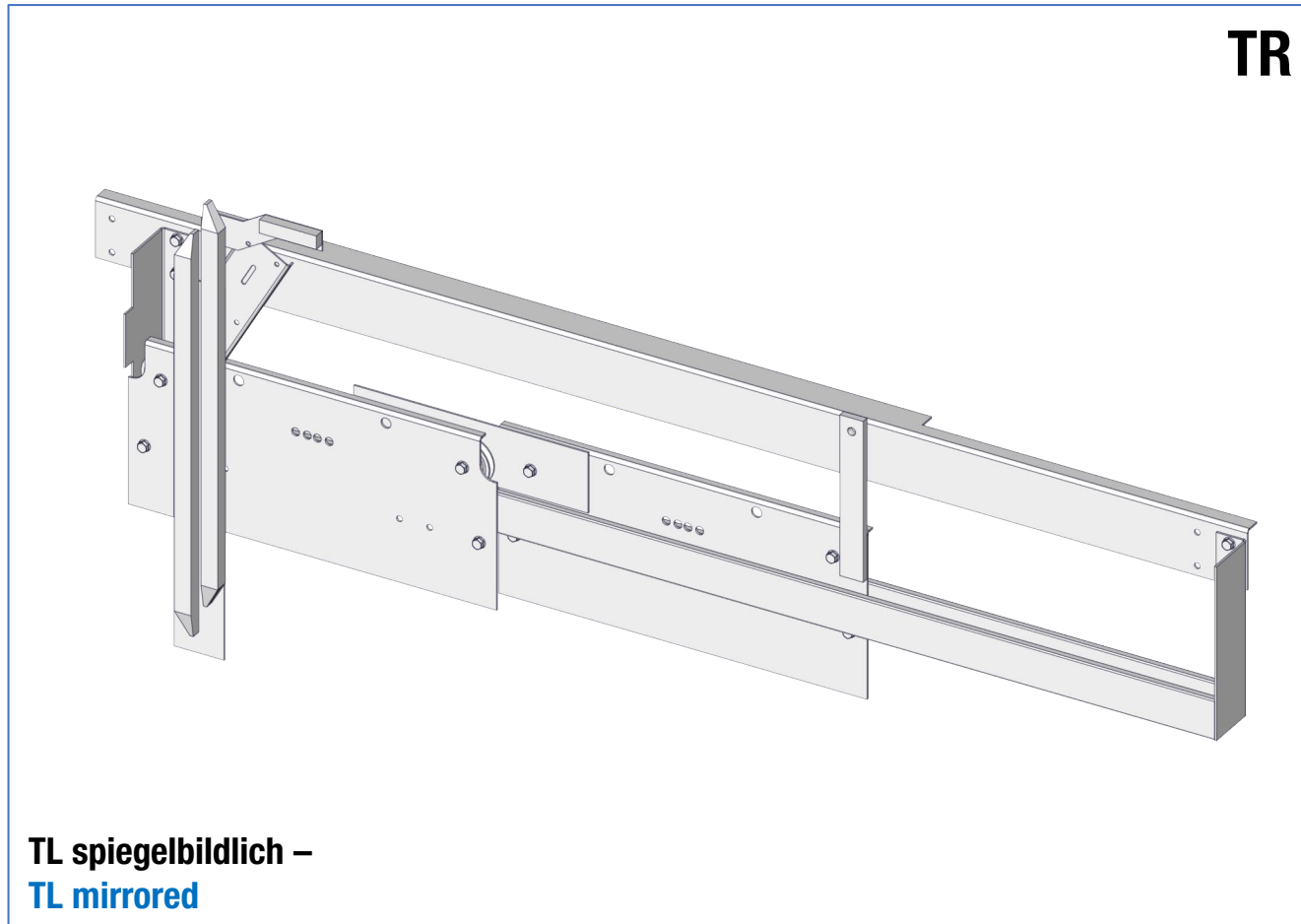


TL spiegelbildlich –
TL mirrored

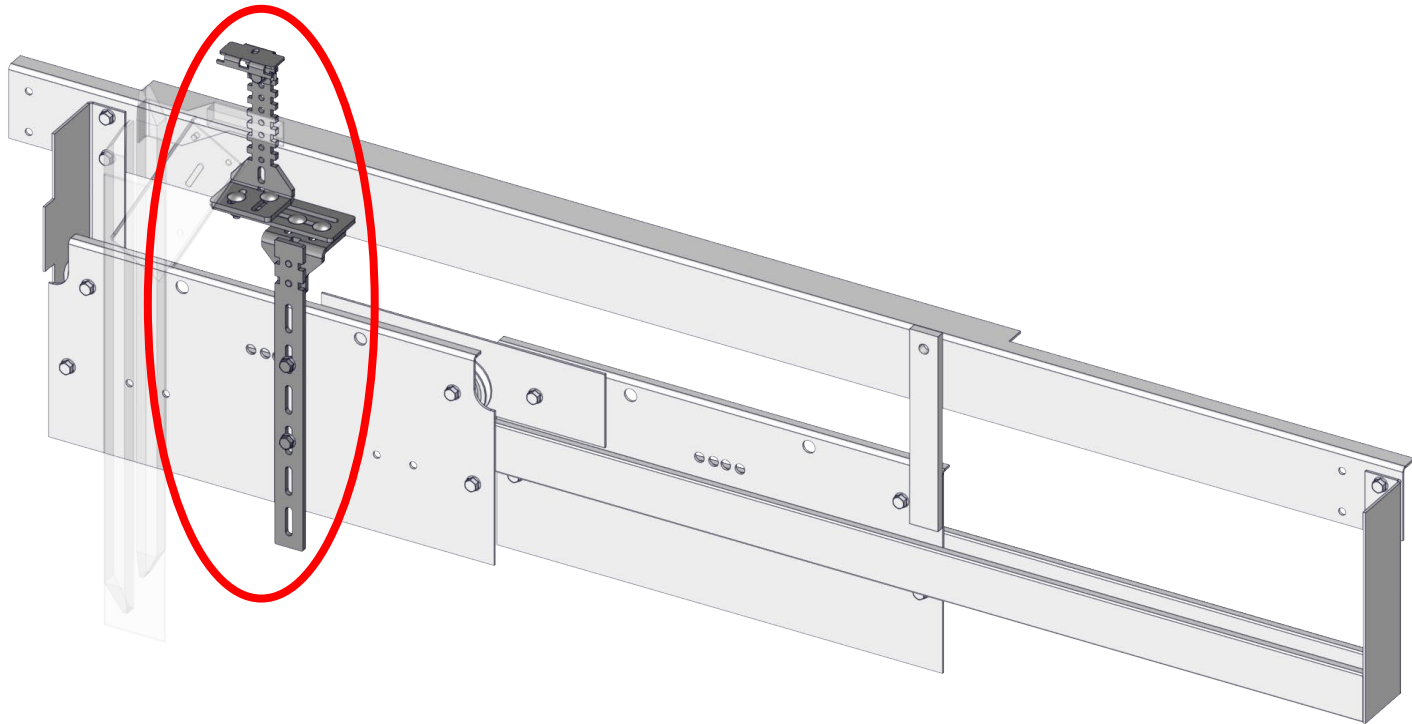
Vor Umbau entfernen – remove before conversion

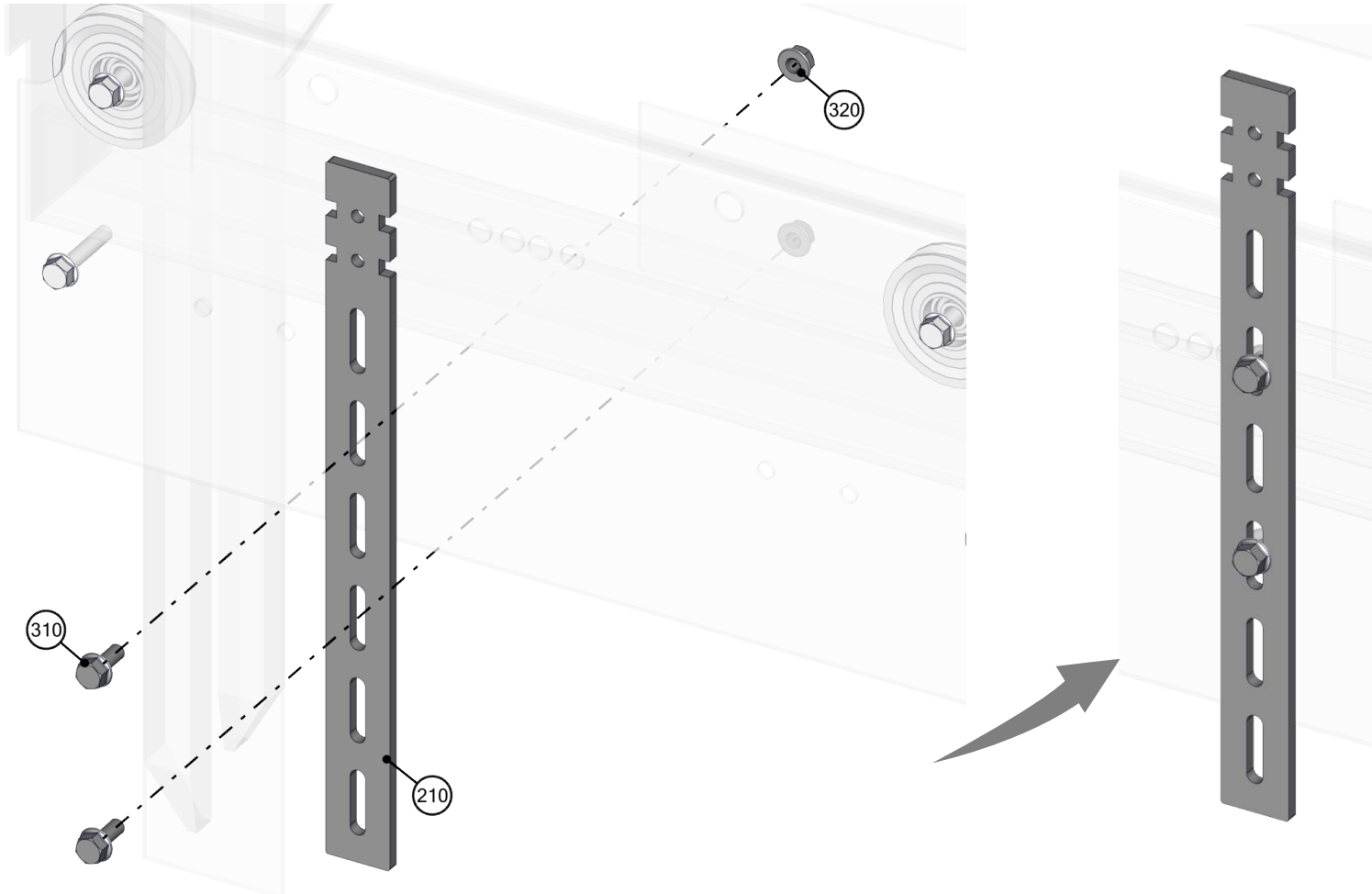


Nach Demontage – after disassembly

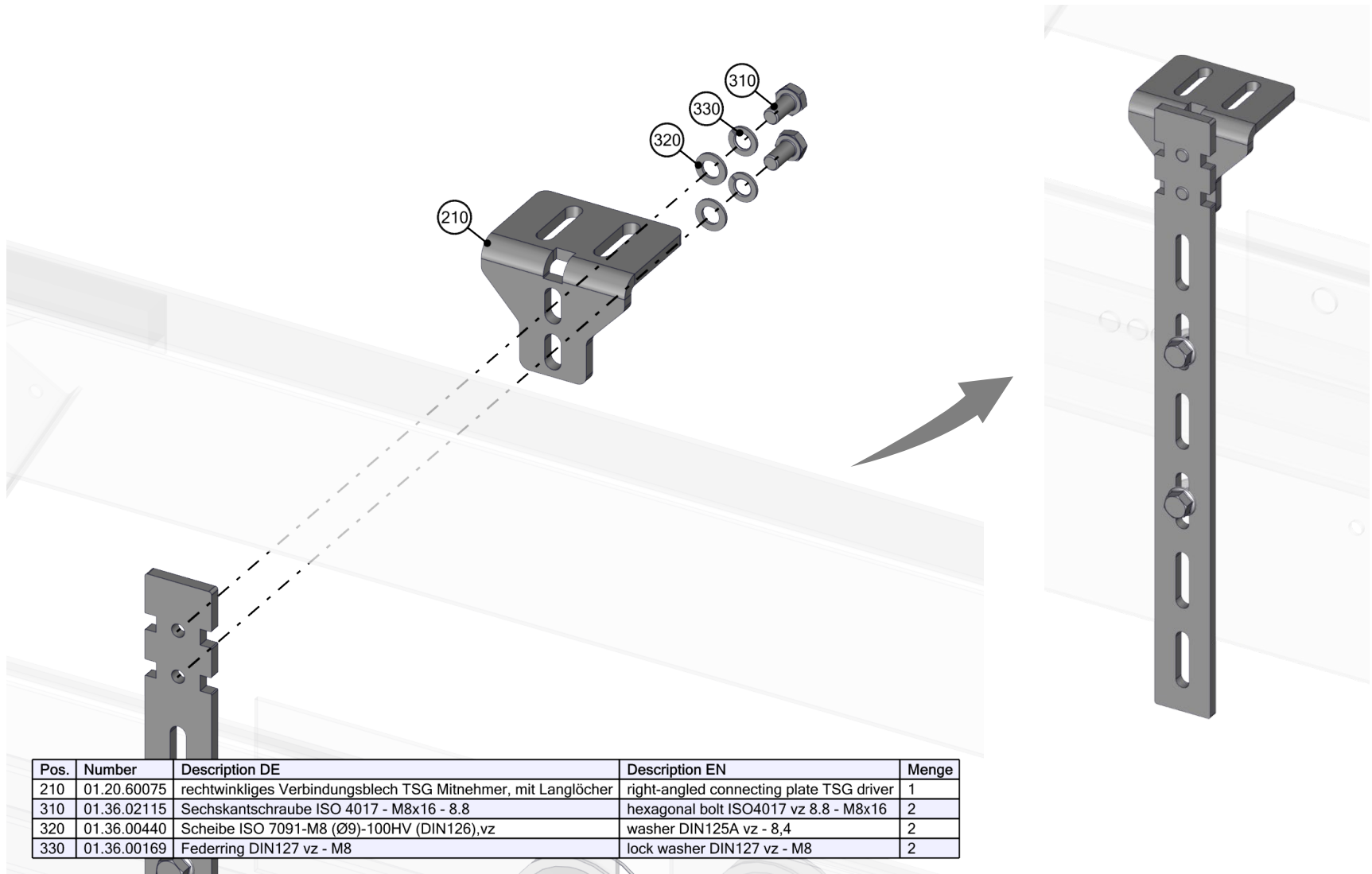


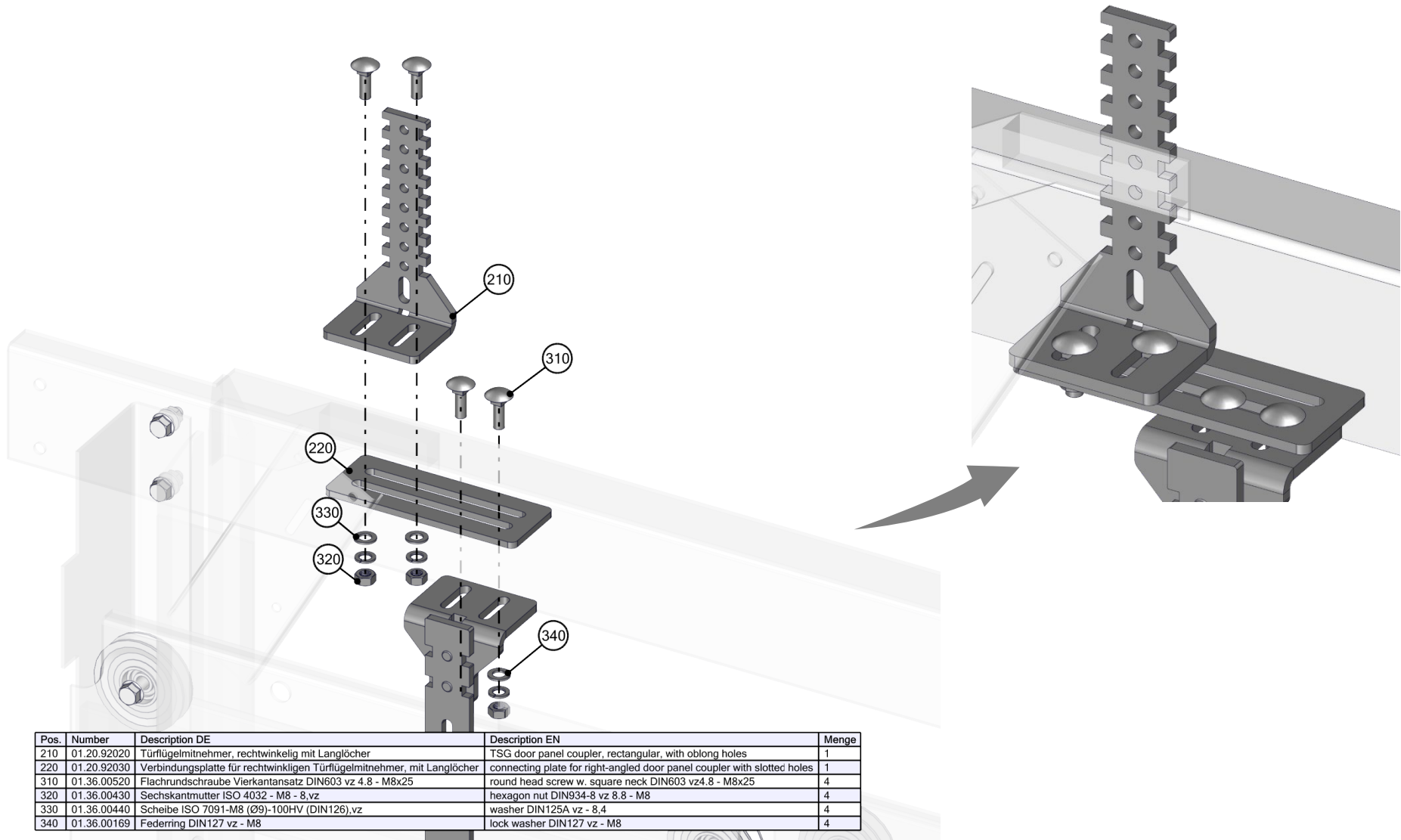
Montage Türflügelmitnehmer – assembly of the door panel coupler

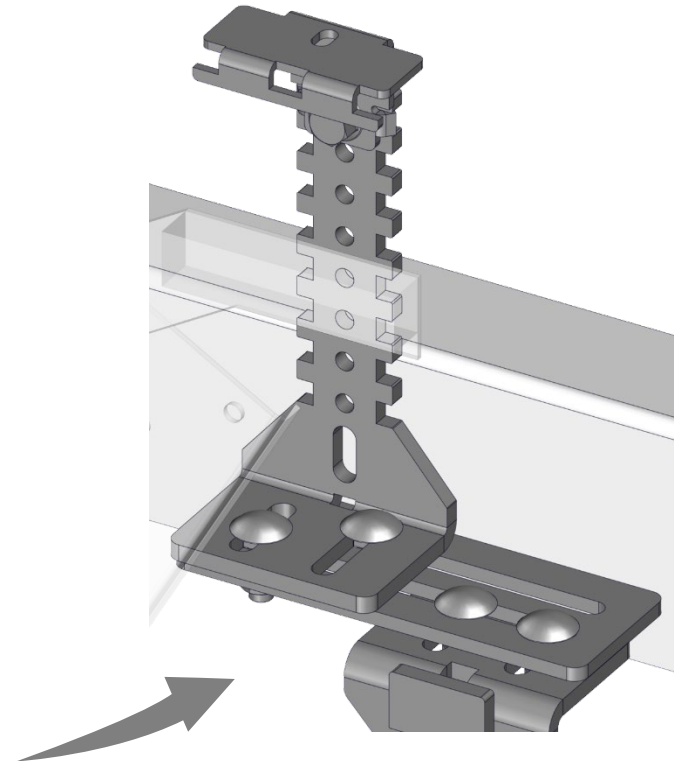
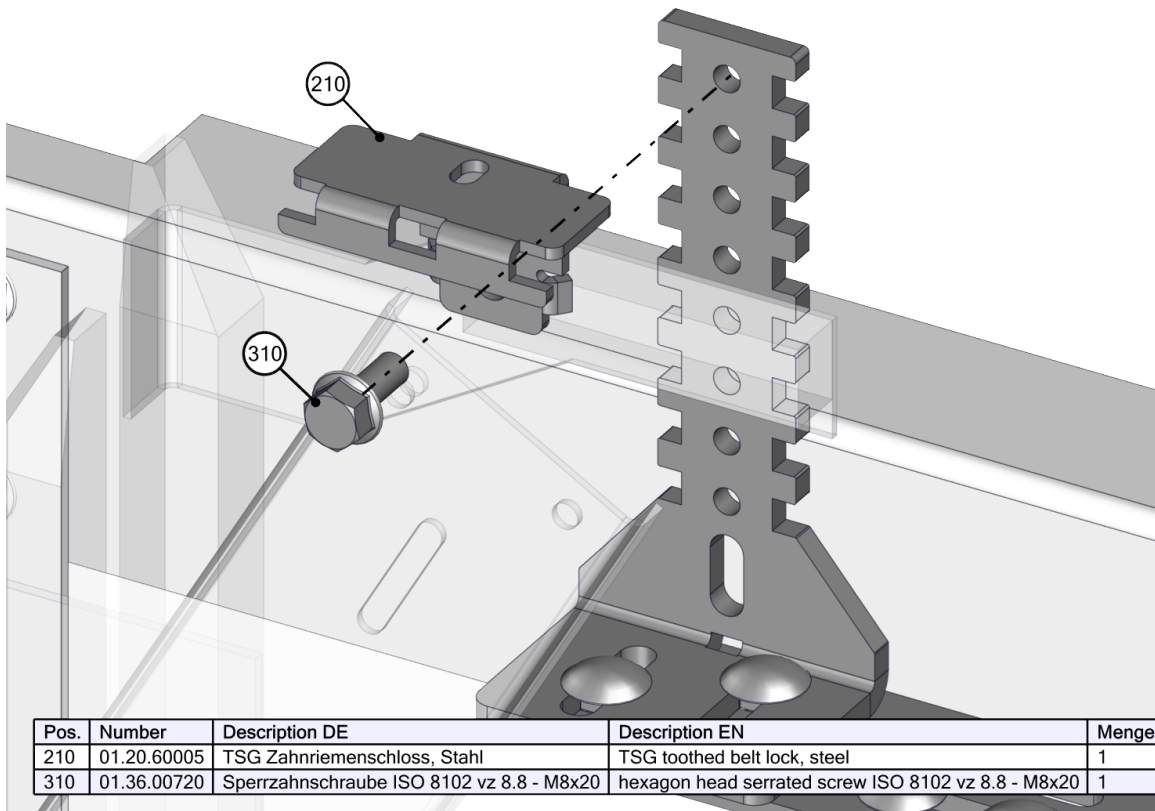




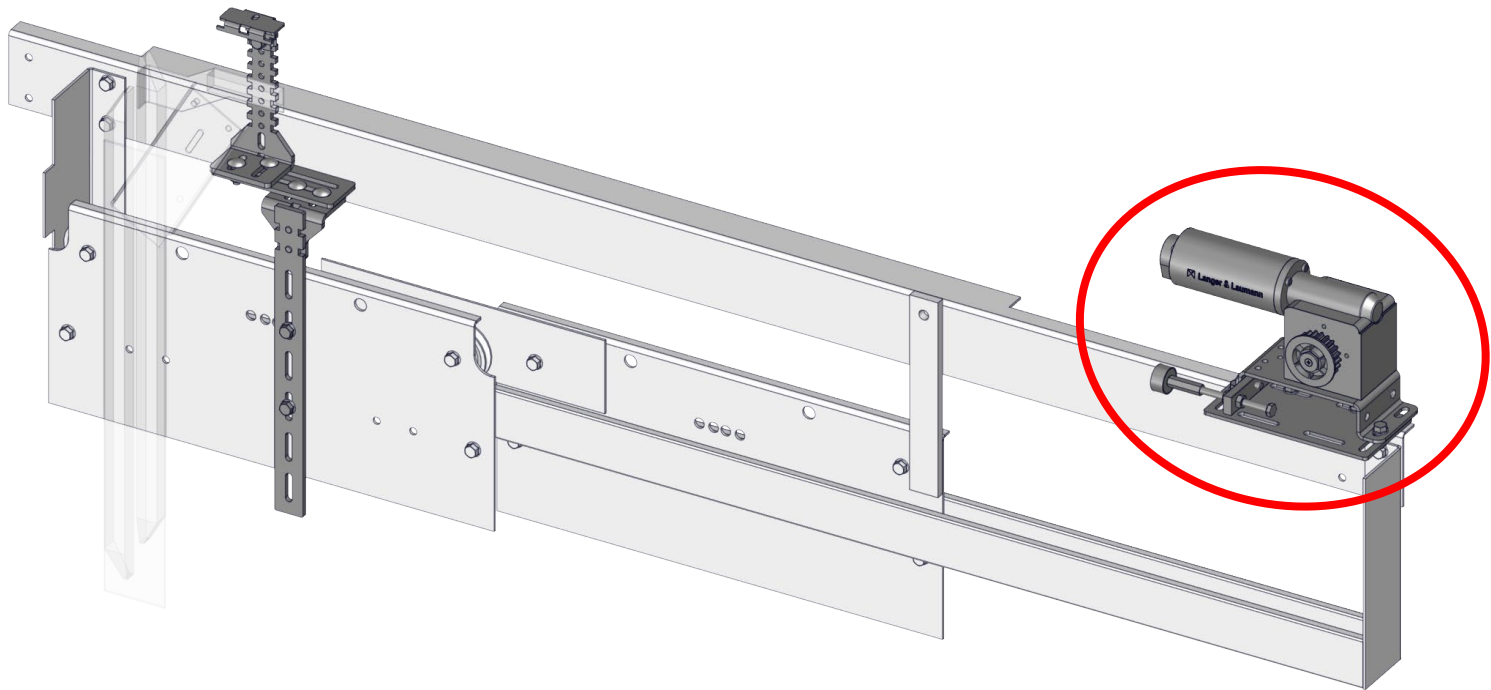
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60004	Türflügelmitnehmer 375x35x6	TSG door panel coupler 375x35x6	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

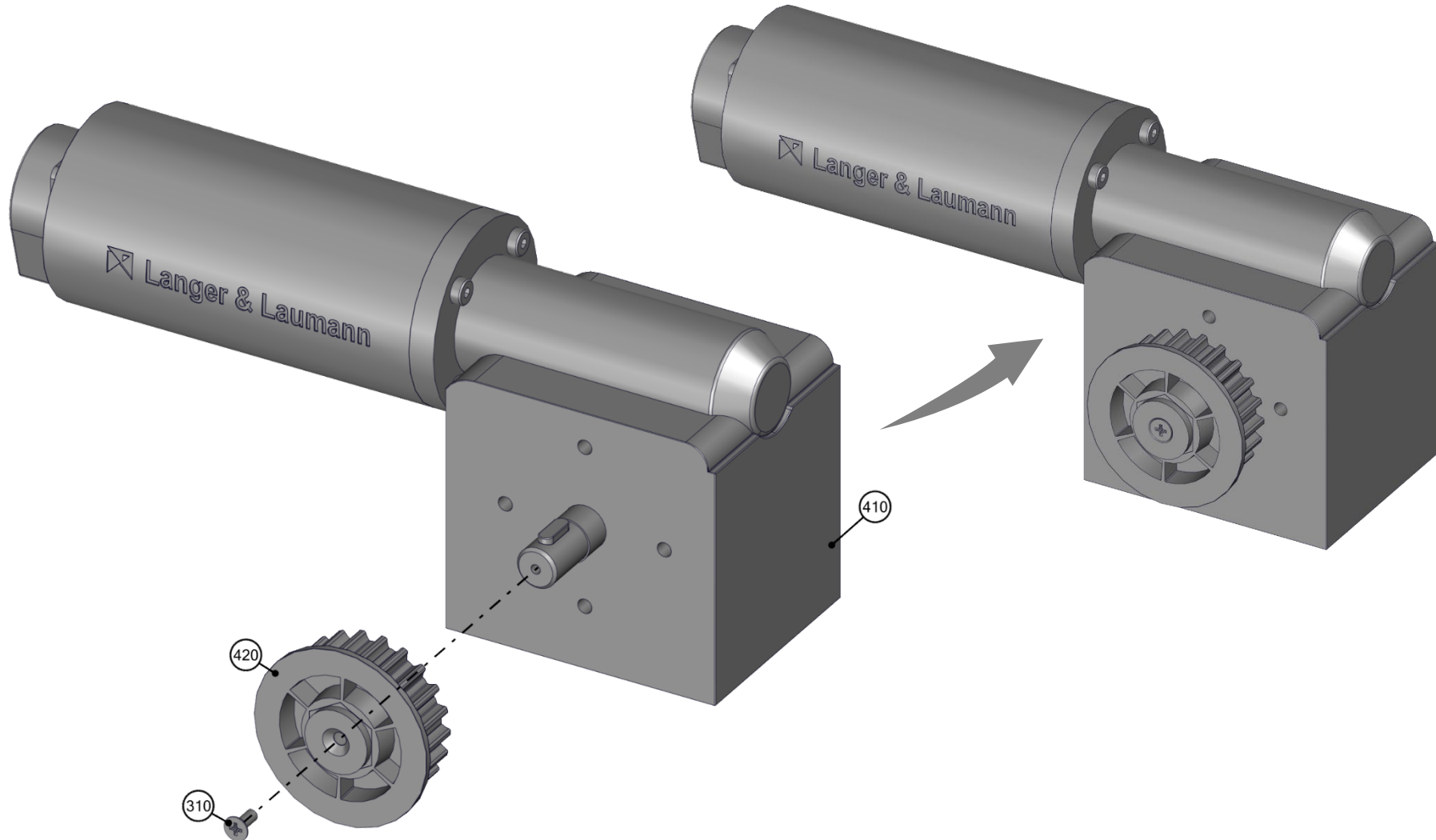




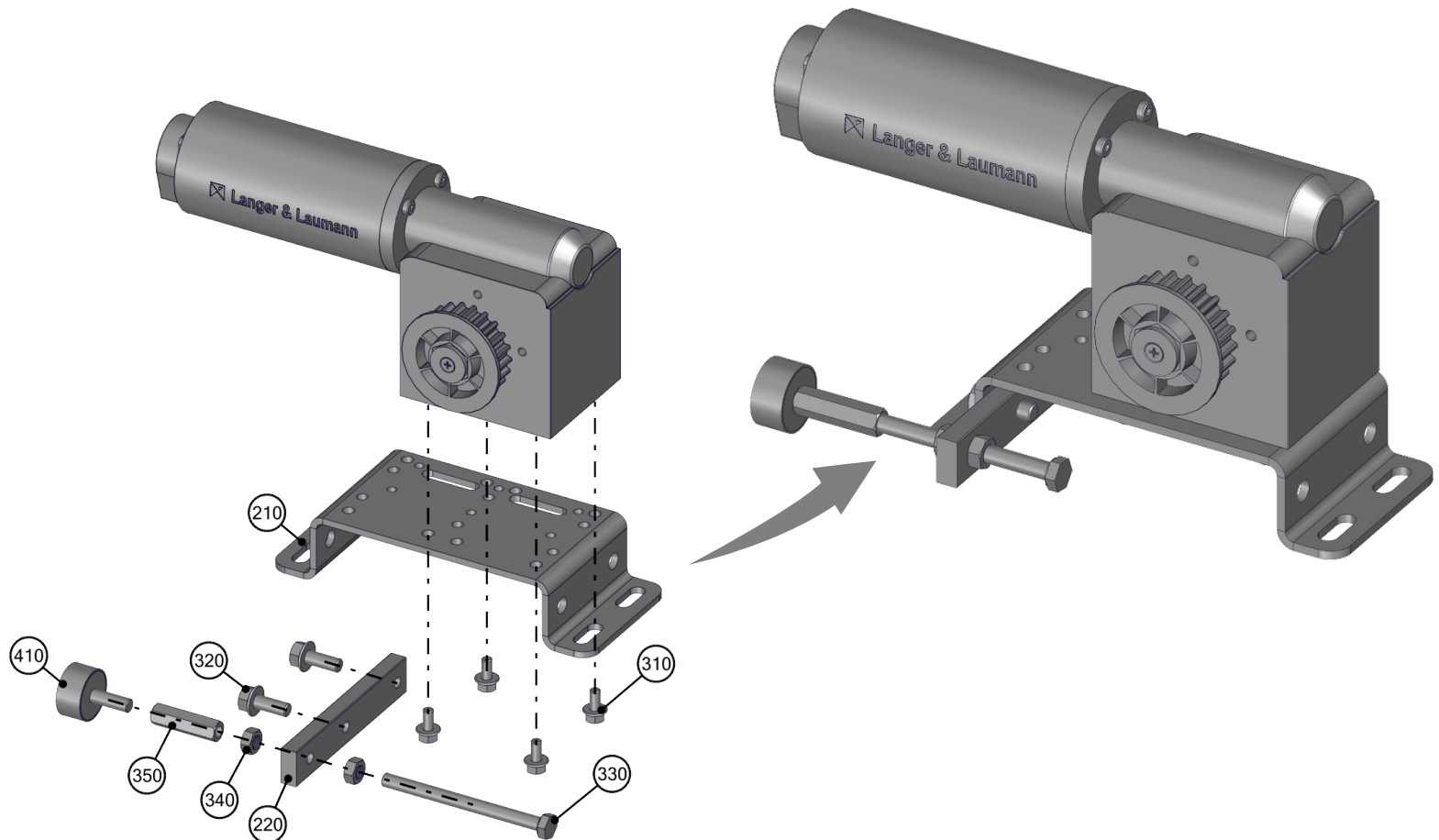


Montage Motor – assembly of the motor

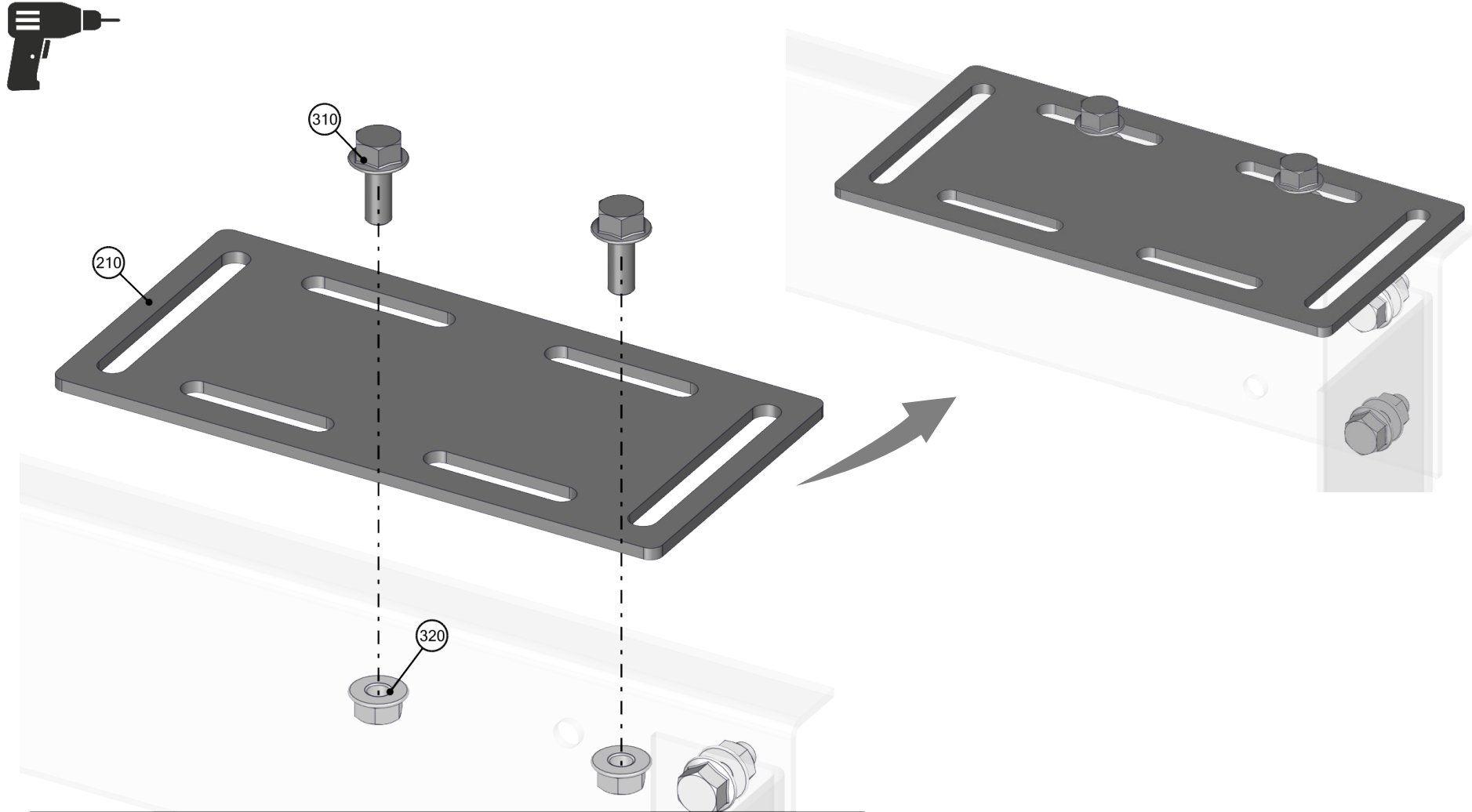




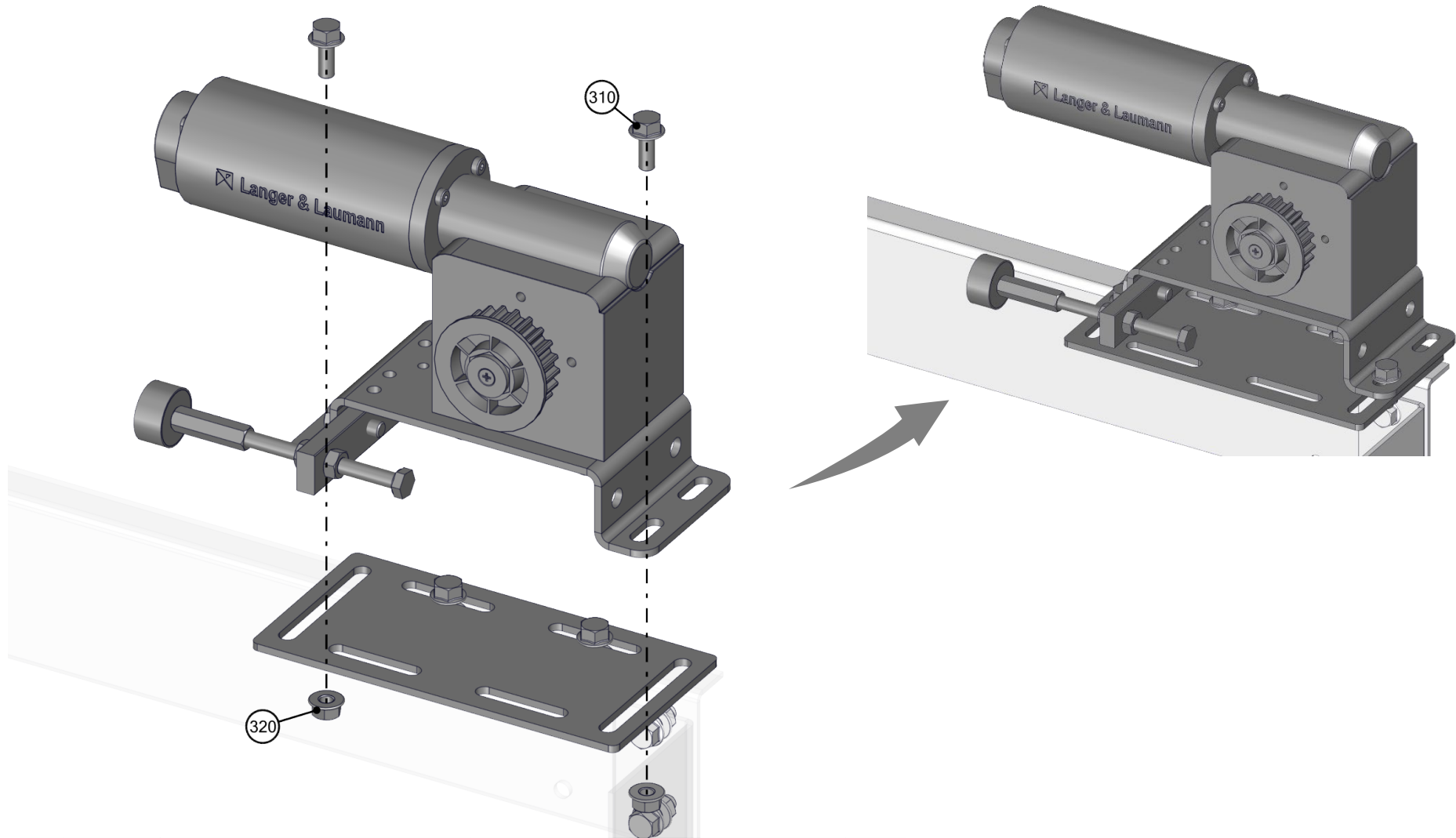
Pos.	Number	Description DE	Description EN	Menge
310	01.36.00332	Senkkopfschraube mit Kreuzschlitz DIN965 vz 4.8 - M4x10	countersunk screw w. cross recess DIN965 vz 4.8 - M4x10	1
410	08.20.40000.X1	Motor Gross Links & Getriebe, 24V/4,9A/1:15	Motor Large Left & Gearbox, 24V/4,9A/1:15	1
420	01.20.60160	Zahnriemenrad, STD8M, d=14H7, D=56[mm], B=15[mm], mit Nut, mit 1 Bordscheibe	timing belt pulley, STD8M, d=14H7, D=56[mm], B=15[mm]	1



Pos.	Number	Description DE	Description EN	Menge
210	01.20.60060	TSG Kombiwinkel, Ausführung "Hut", für TSG Motor oder Umlenkrad	TSG universal bracket, version "hat"	1
220	01.20.60037	Halterung Puffer Standardversion	bracket buffer, standard version	1
310	01.36.00135	Sperrzahnschraube ISO 8102 vz 8.8 - M6x12	hexagon head serrated screw ISO 8102 vz 8.8 - M6x12	4
320	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
330	01.36.00177	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x100	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x100	1
340	01.36.00430	Sechskantmutter ISO 4032 - M8 - 8,vz	hexagon nut DIN934-8 vz 8.8 - M8	2
350	01.36.00121	Sechskantdistanzmuffe DIN 6334 vz 8.8 - M8x40	hexagonal spacer sleeve DIN 6334 vz 8.8 - M8x40	1
410	01.20.91120	Gummi Metall Puffer 30x15, M8x20 Gewindebolzen	rubber-metal bump stop D30x15, threaded stud M8x20, 75 Shore	1

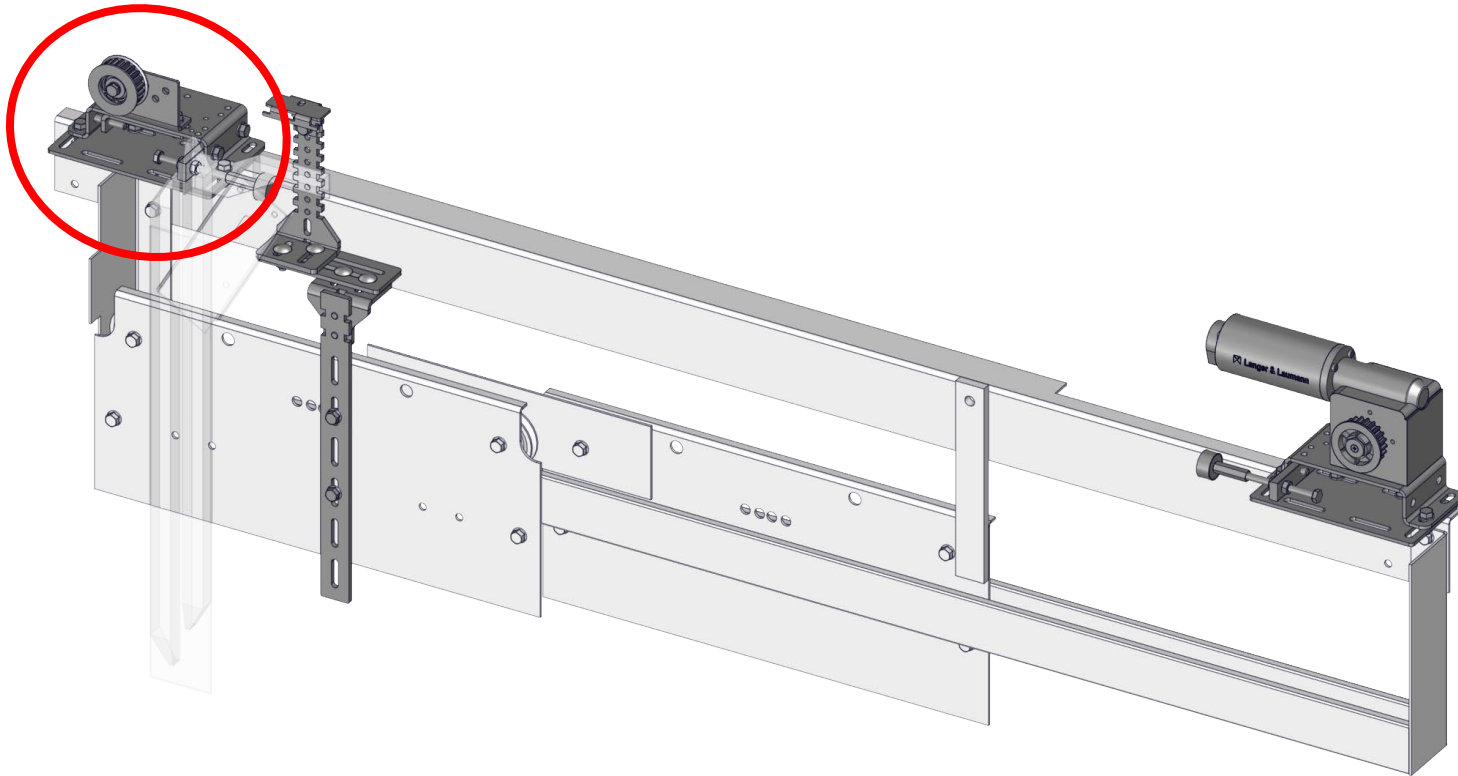


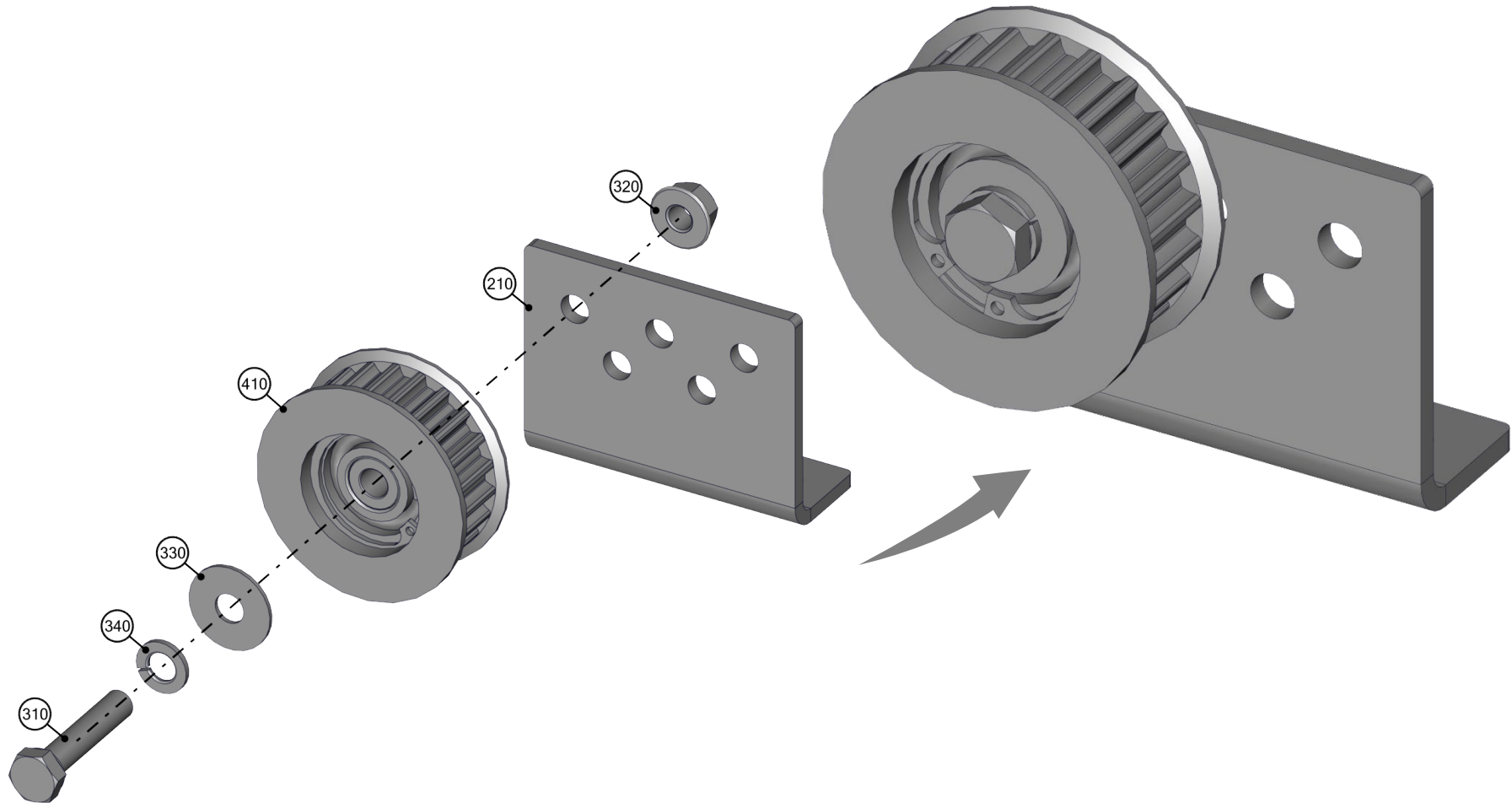
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60086	Unterlegplatte für Hutwinkel	shim for hat bracket	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2



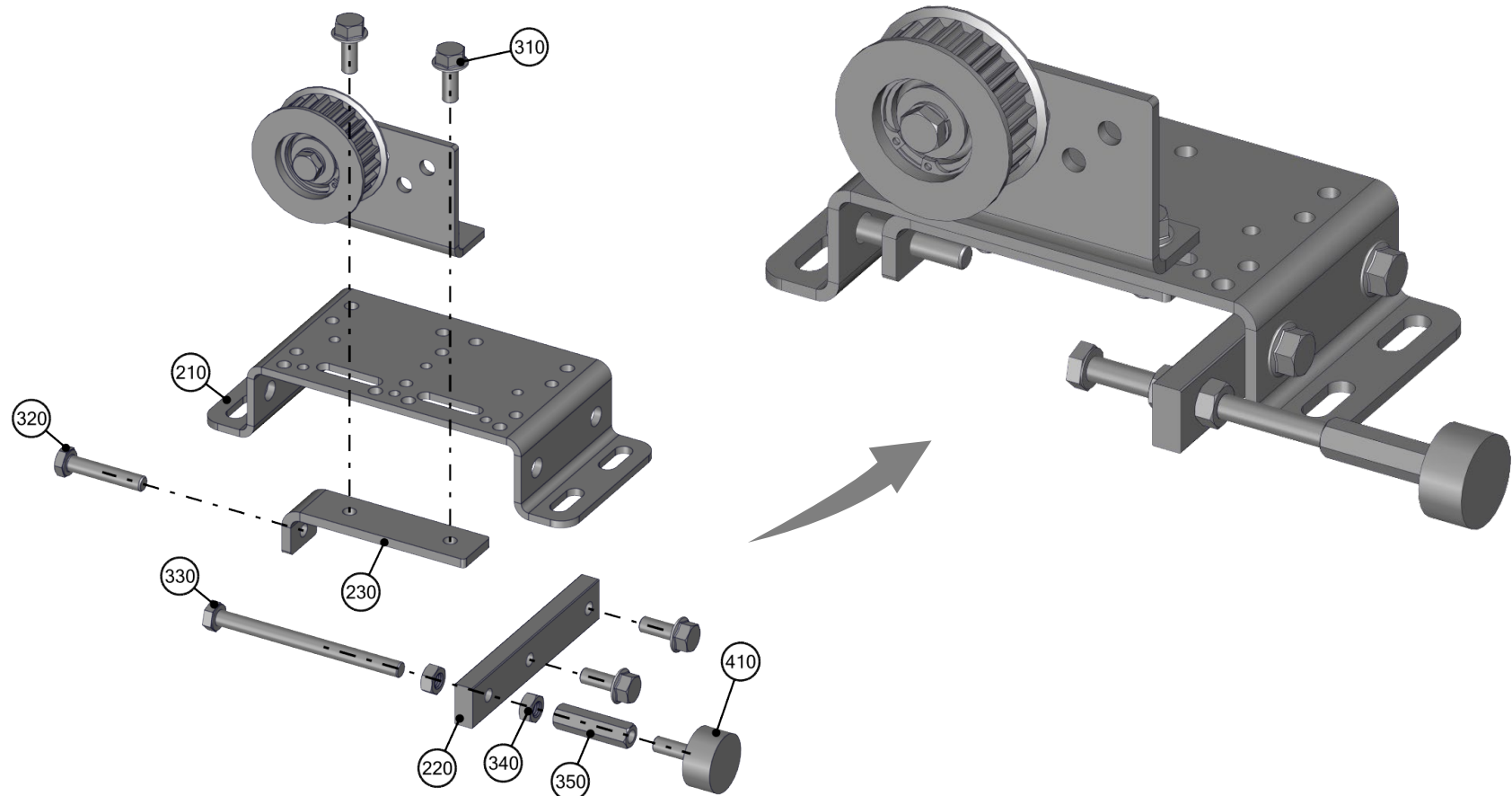
Pos.	Number	Description DE	Description EN	Menge
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

Montage Umlenkrolle – assembly of the counter roller

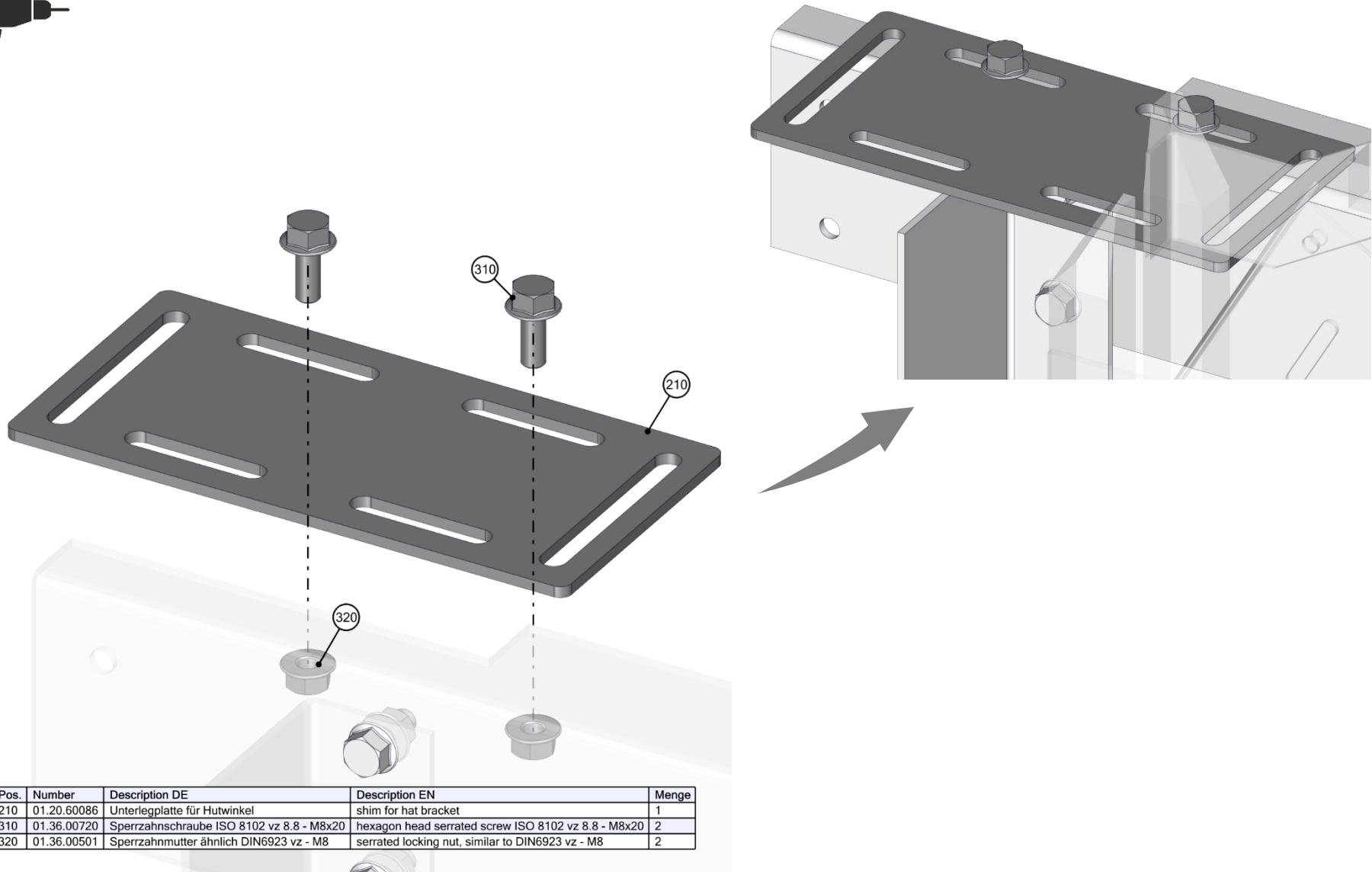




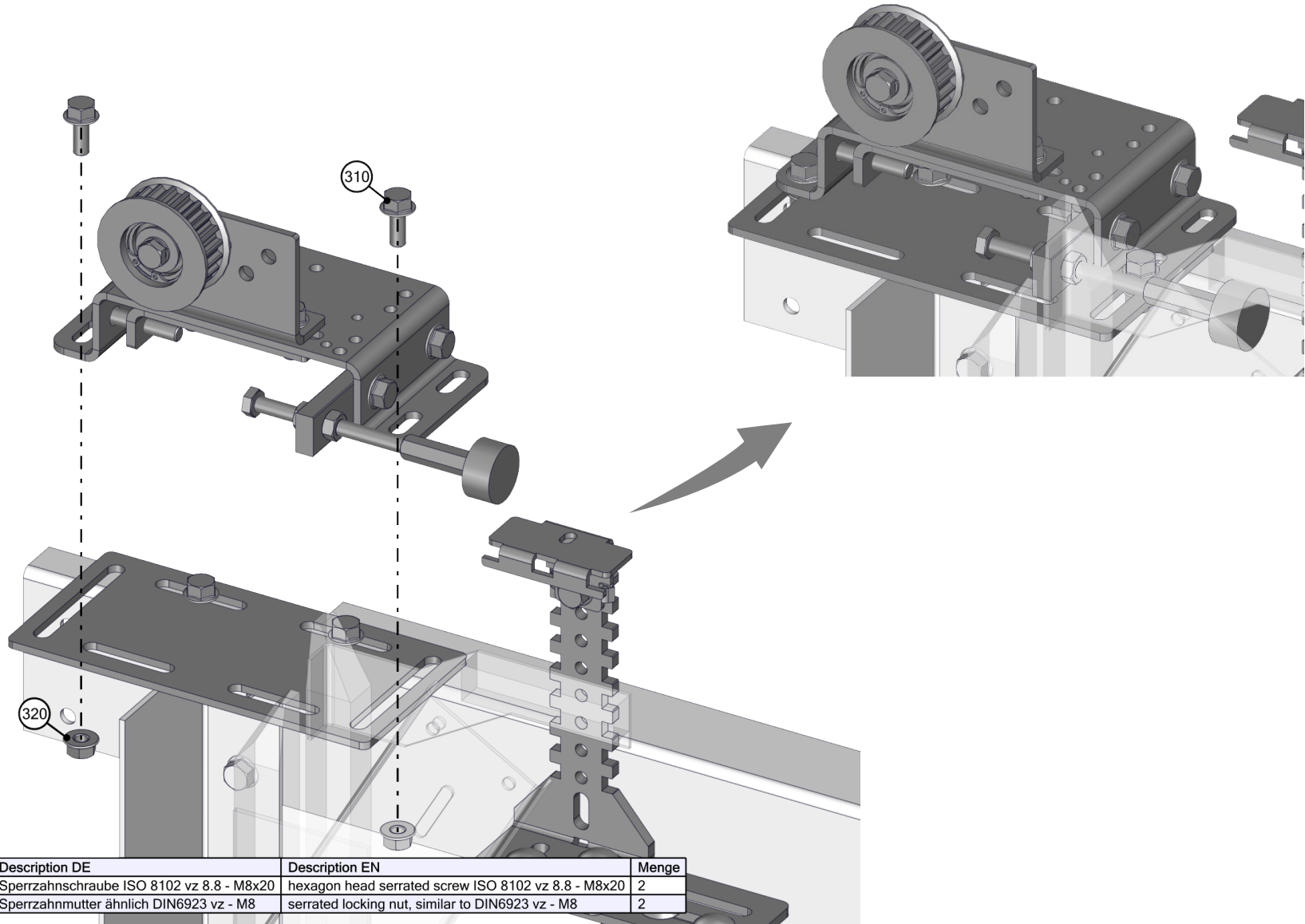
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60013	Halterung Umlenkrolle für Spannstation_T1	TSG bracket for counter roller	1
310	01.36.00115	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x40	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x40	1
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	1
330	01.36.01035	Scheibe DIN 9021-8.4-140 HV.vz	washer with large outside diameter DIN9021 vz - 8,4	1
340	01.36.00169	Federring DIN127 vz - M8	lock washer DIN127 vz - M8	1
410	01.20.60003	Tüte Umlenkrad	bag counter roller	1



Pos.	Number	Description DE	Description EN	Menge
210	01.20.60060	TSG Kombiwinkel, Ausführung "Hut", für TSG Motor oder Umlenkrad	TSG universal bracket, version "hat"	1
220	01.20.60037	Halterung Puffer Standardversion	bracket buffer, standard version	1
230	01.20.60110	Spannlasche für Spannstation	Clamping tab for clamping station, normal execution	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	4
320	01.36.00115	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x40	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x40	1
330	01.36.00177	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x100	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x100	1
340	01.36.00430	Sechskantmutter ISO 4032 - M8 - 8,vz	hexagon nut DIN934-8 vz 8.8 - M8	2
350	01.36.00121	Sechskantdistanzmuffe DIN 6334 vz 8.8 - M8x40	hexagonal spacer sleeve DIN 6334 vz 8.8 - M8x40	1
410	01.20.91120	Gummi Metall Puffer 30x15, M8x20 Gewindebolzen	rubber-metal bump stop D30x15, threaded stud M8x20, 75 Shore	1

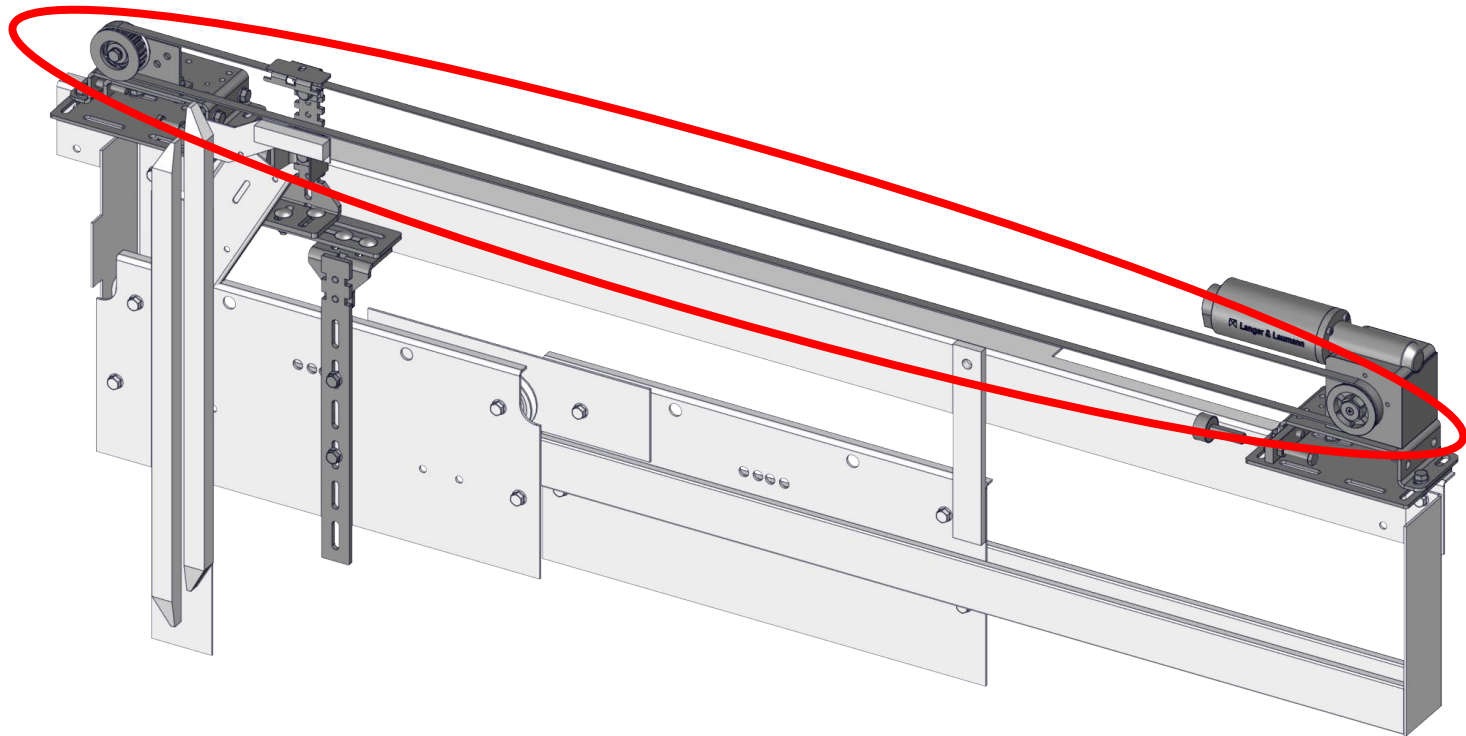


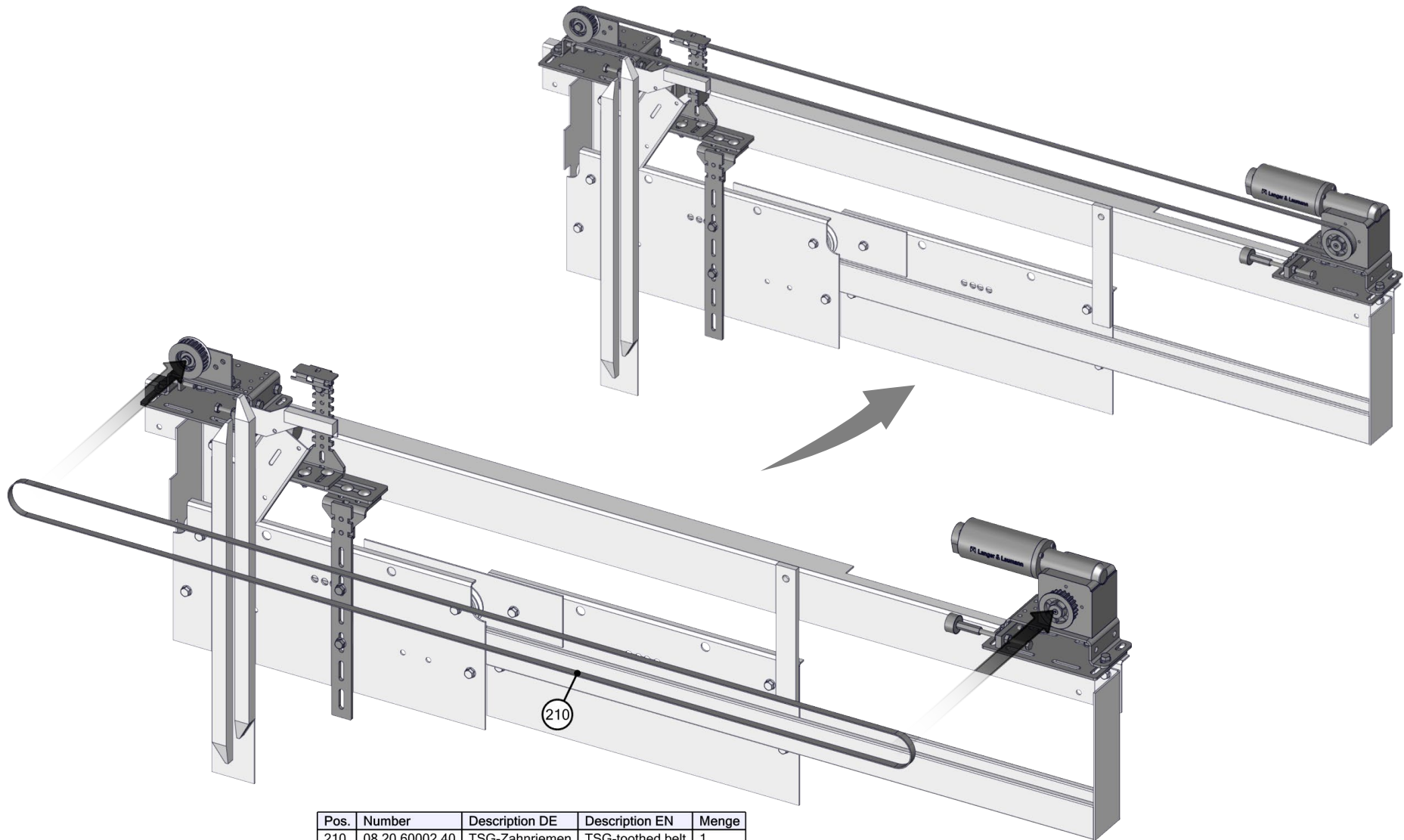
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60086	Unterlegplatte für Hutwinkel	shim for hat bracket	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

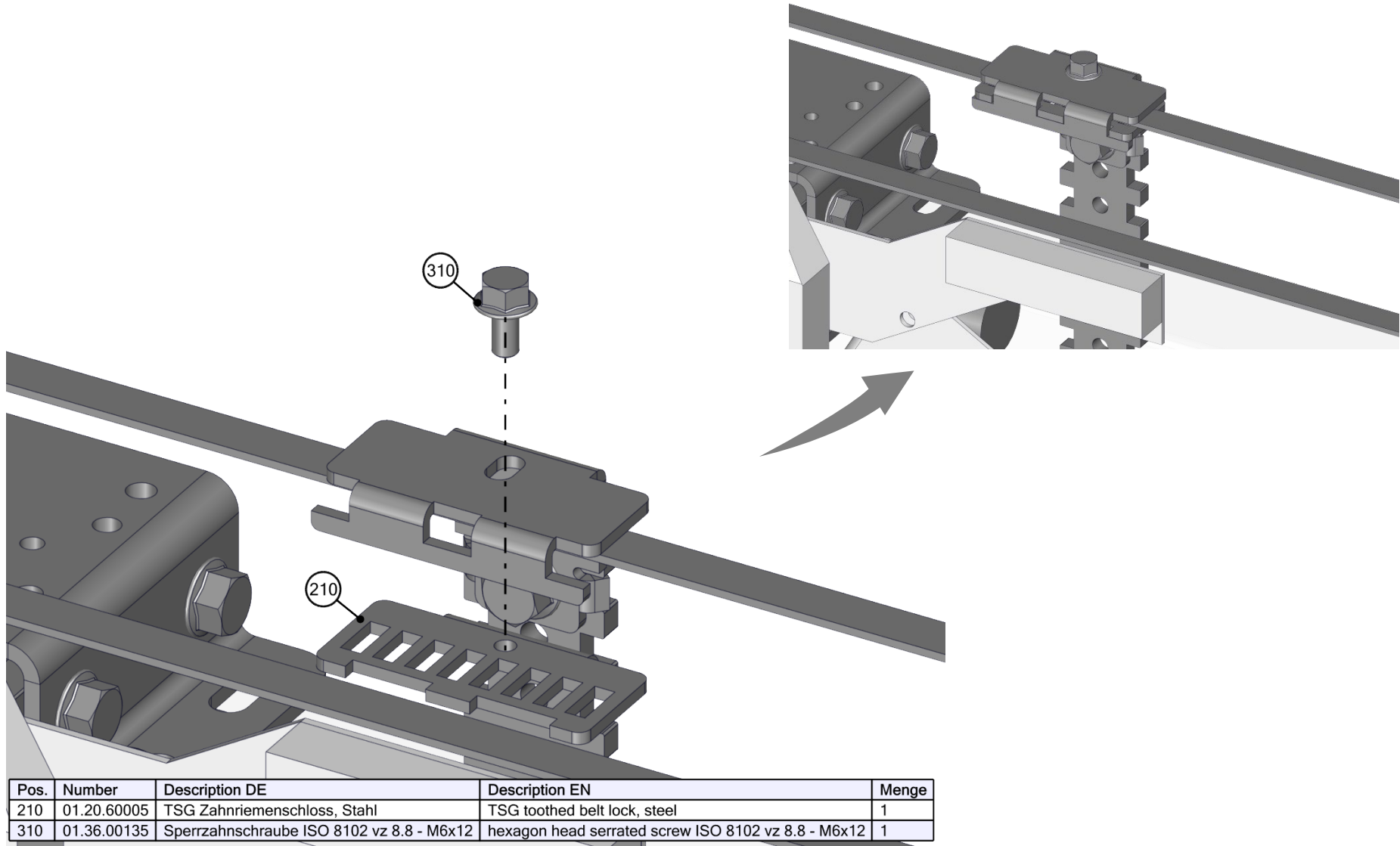


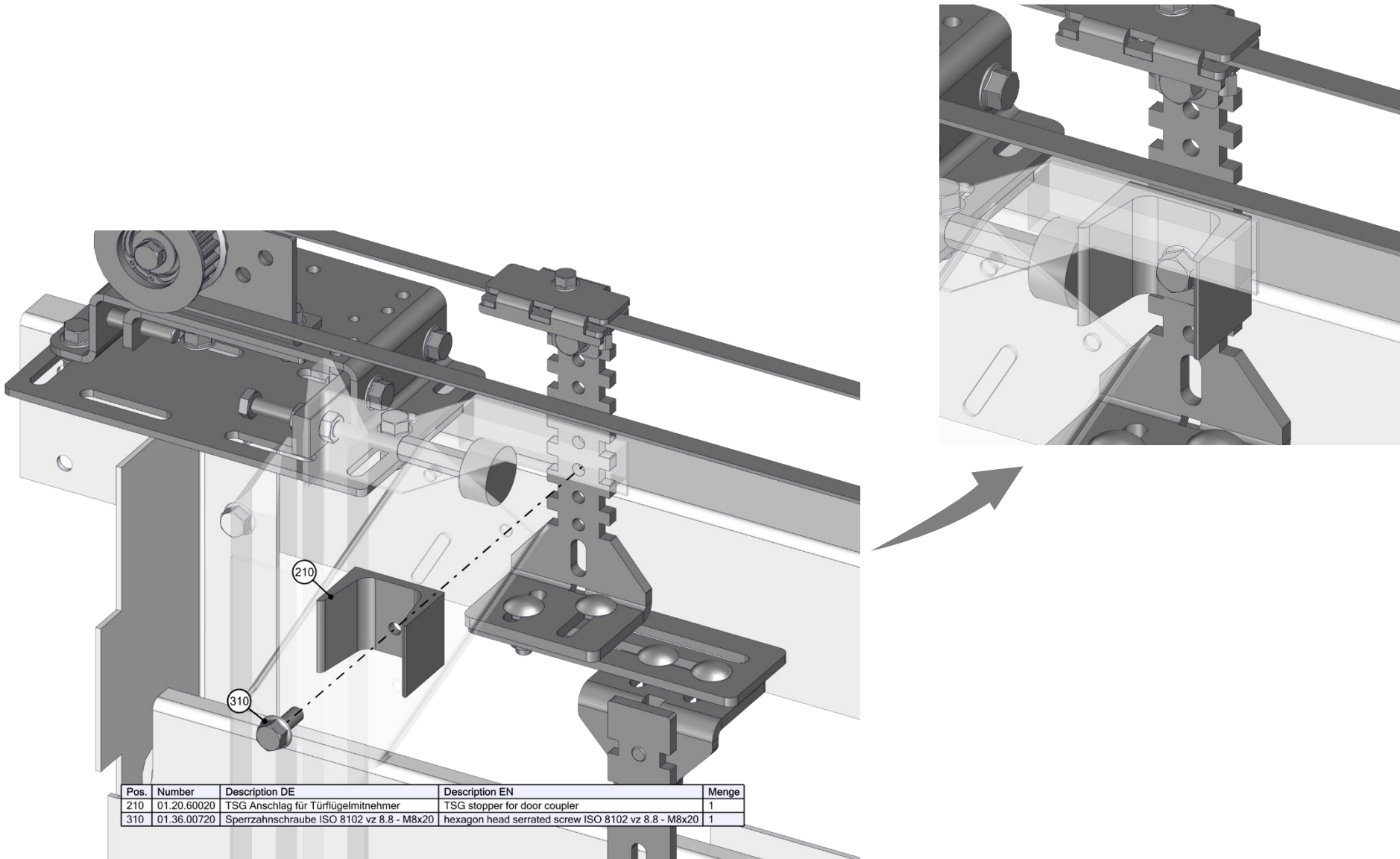
Pos.	Number	Description DE	Description EN	Menge
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

Montage Zahnriemen und Anschlag – assembly of the toothed belt and bump stop

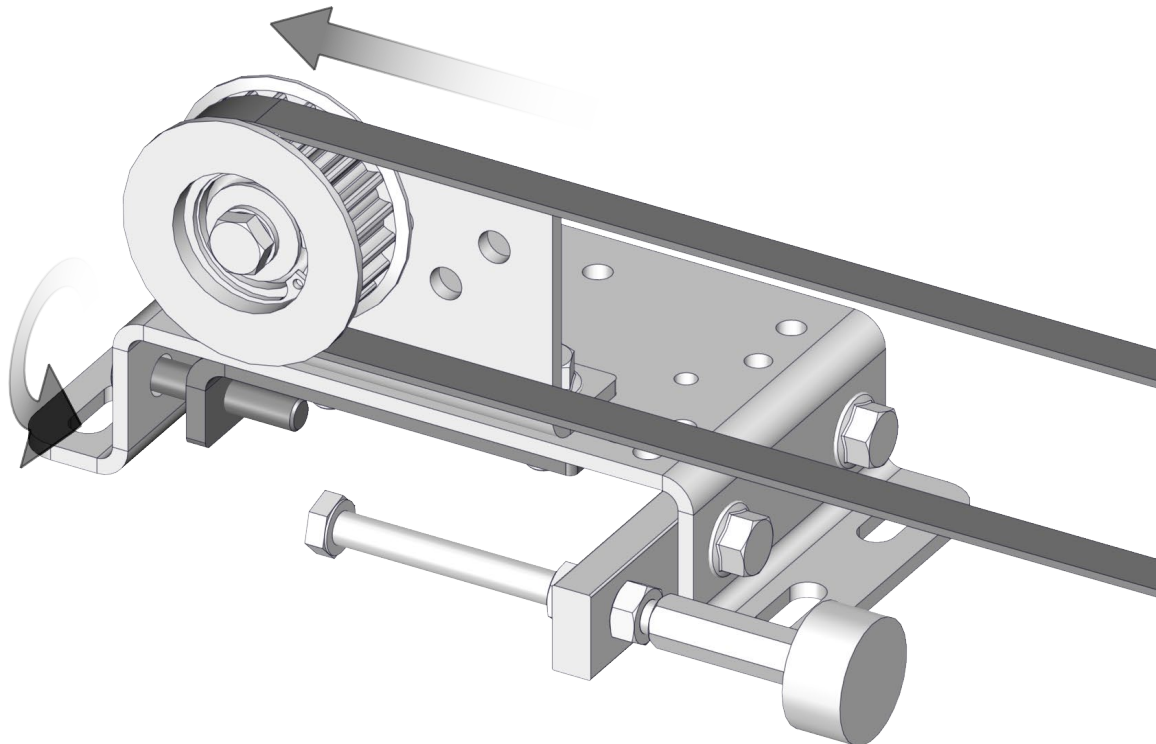




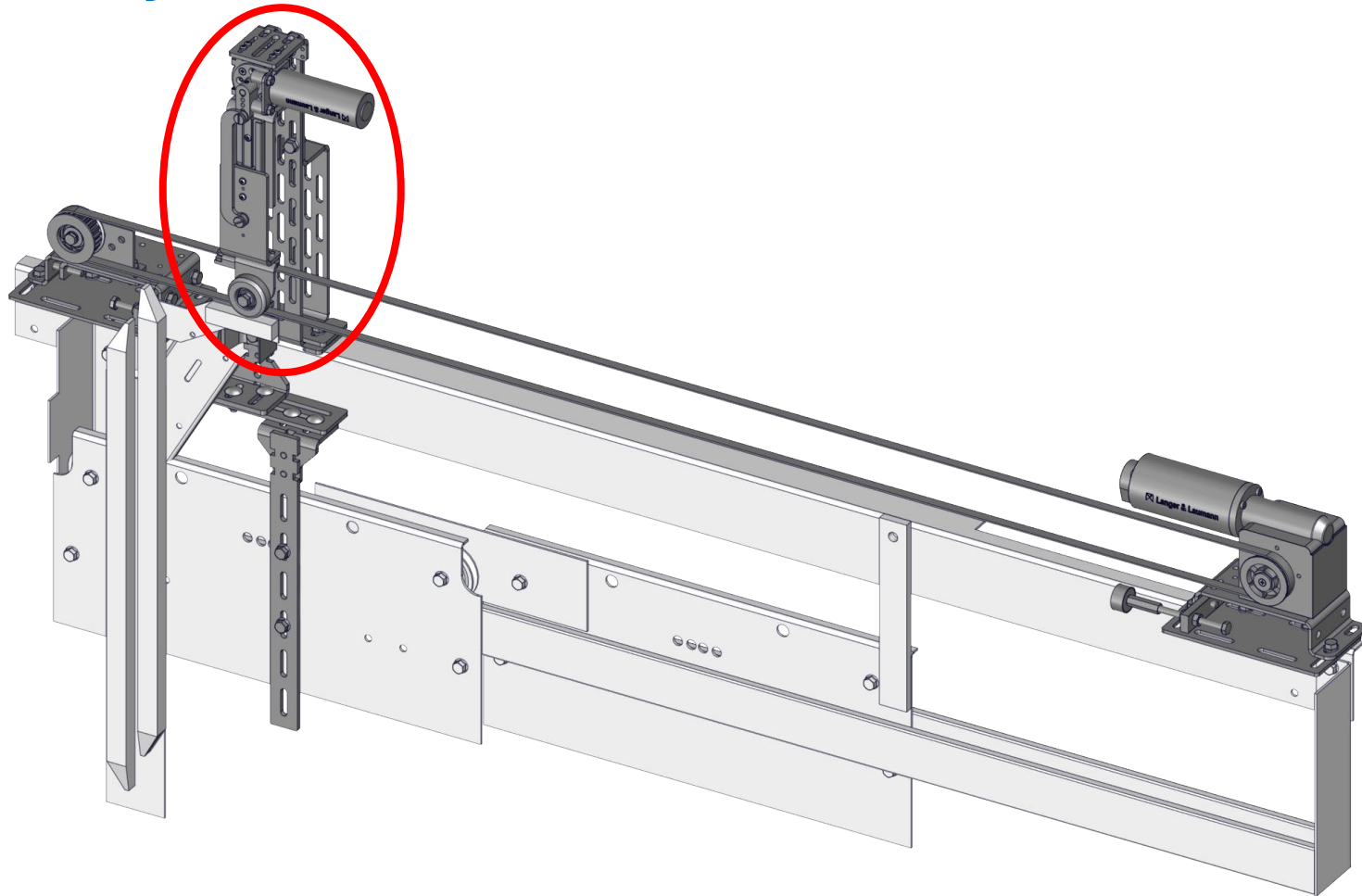


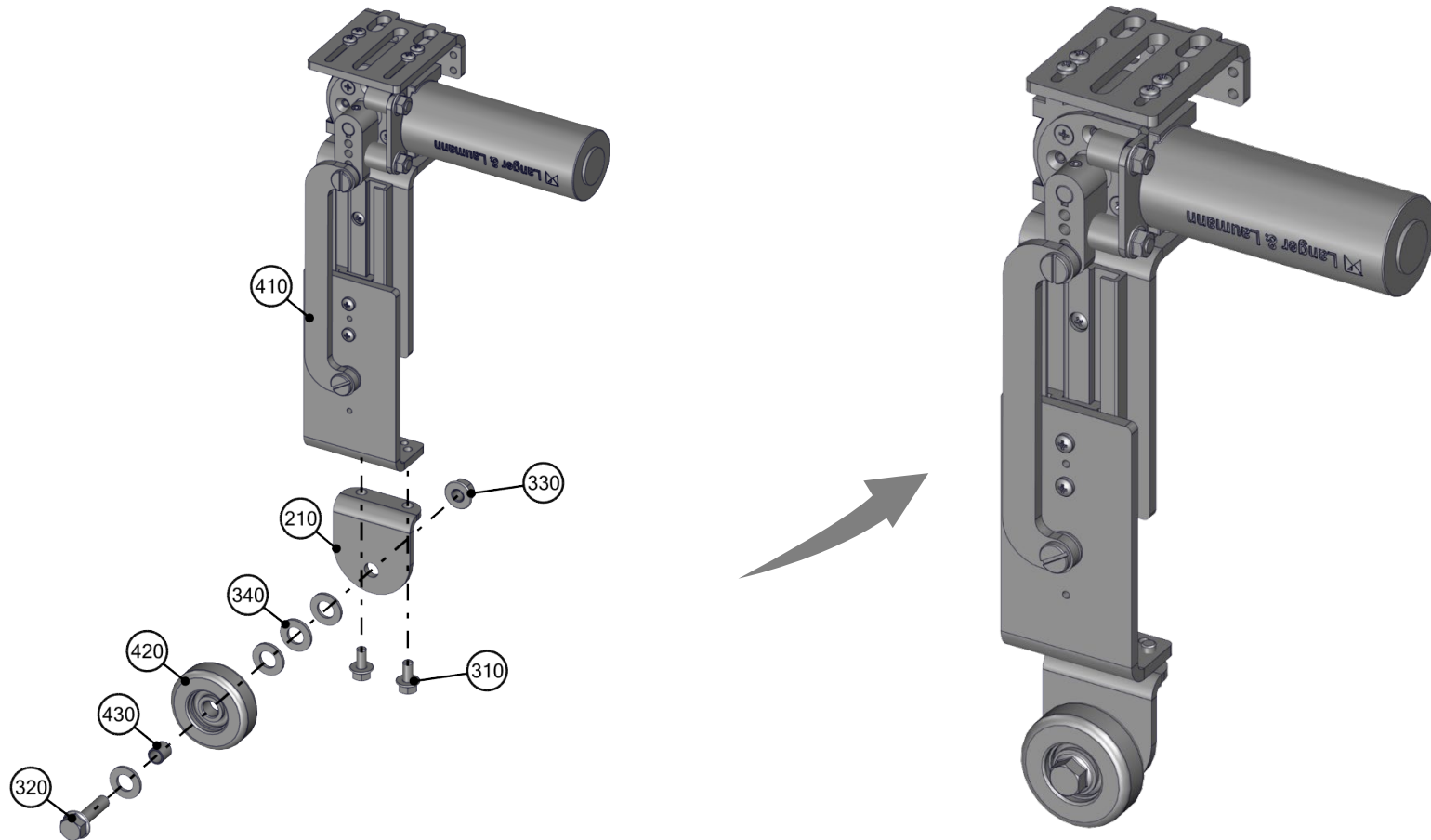


Zahnriemen spannen – tensioning of the toothed belt

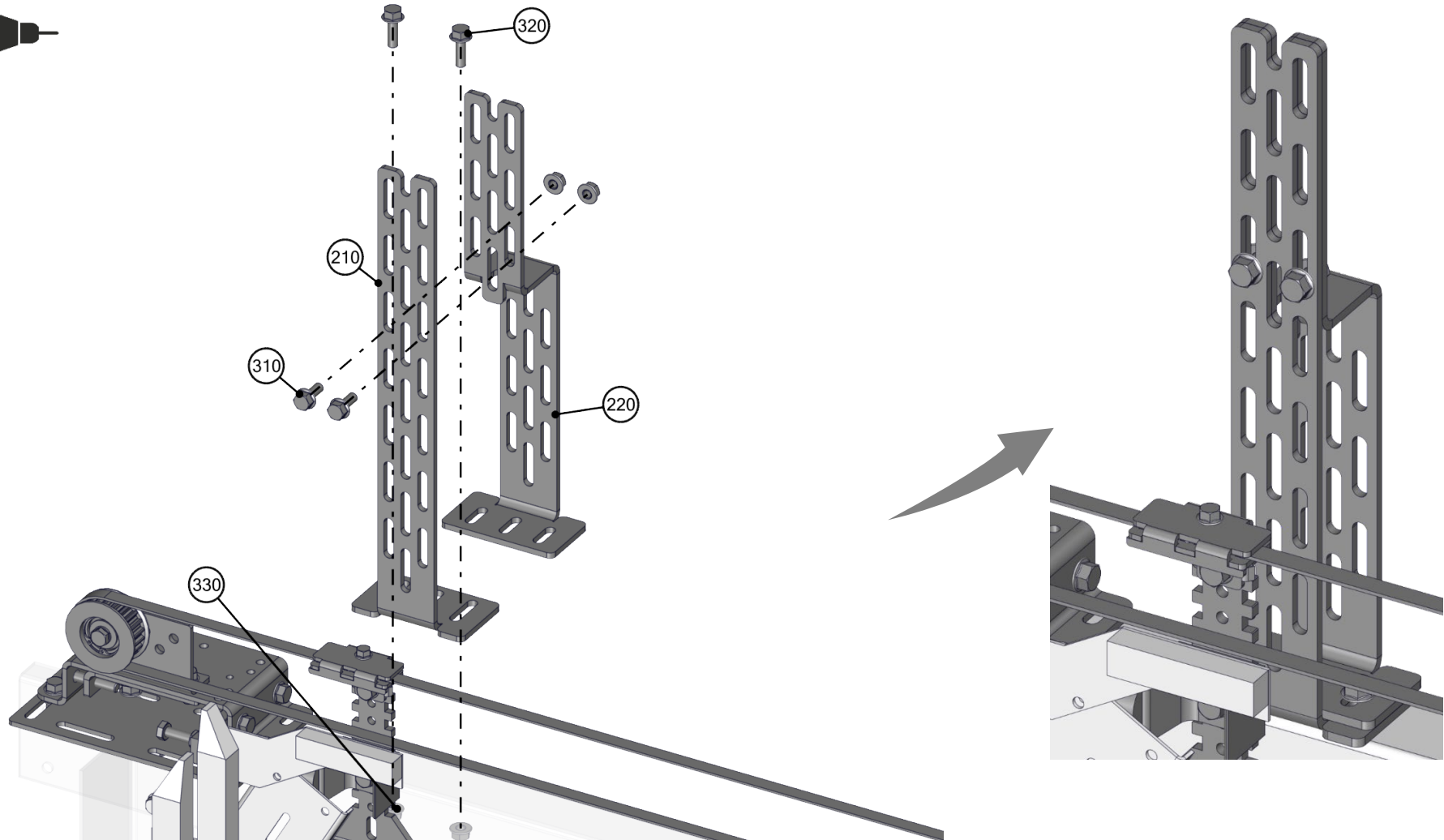


Montage Sinusantrieb – assembly of the Sinus Drive

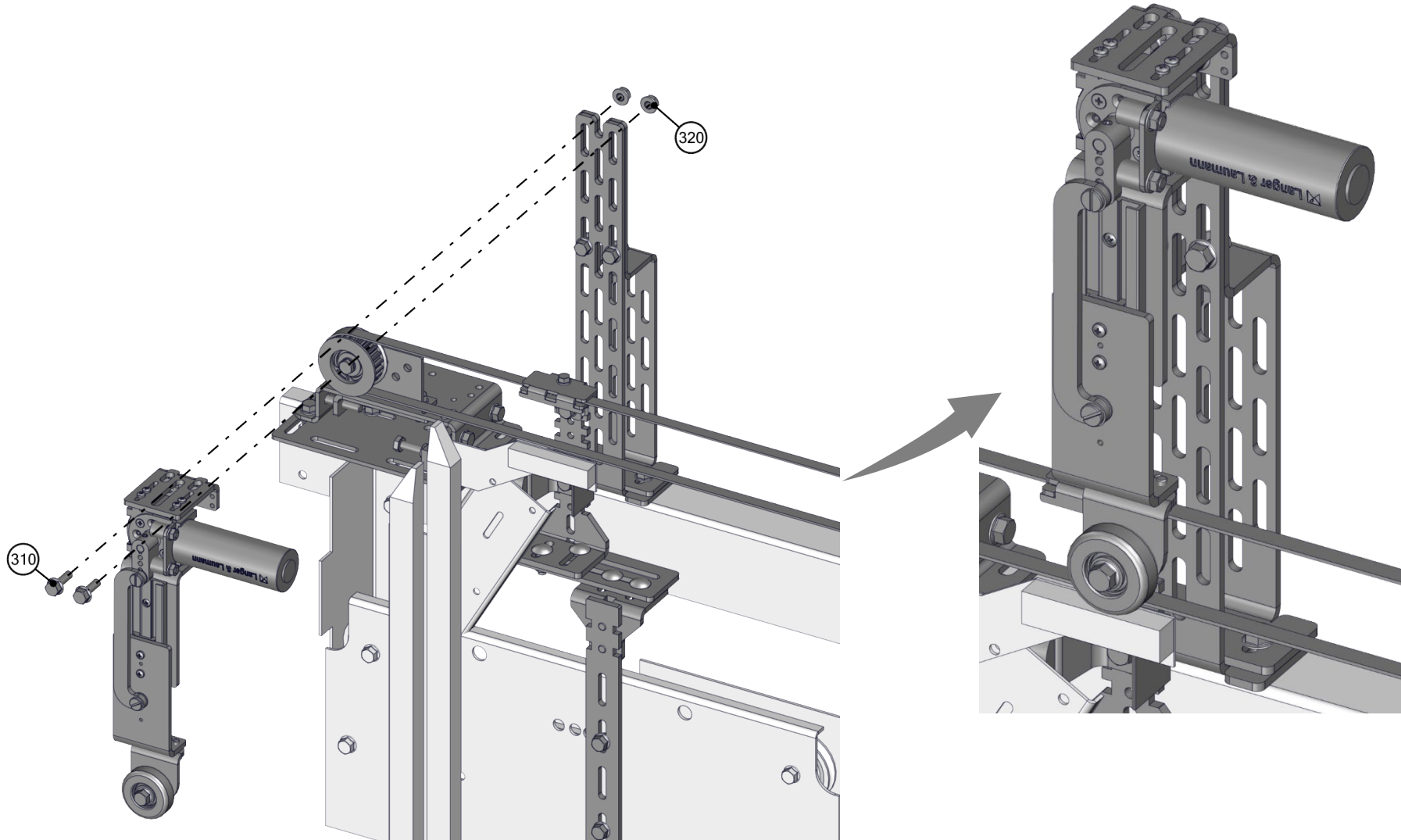




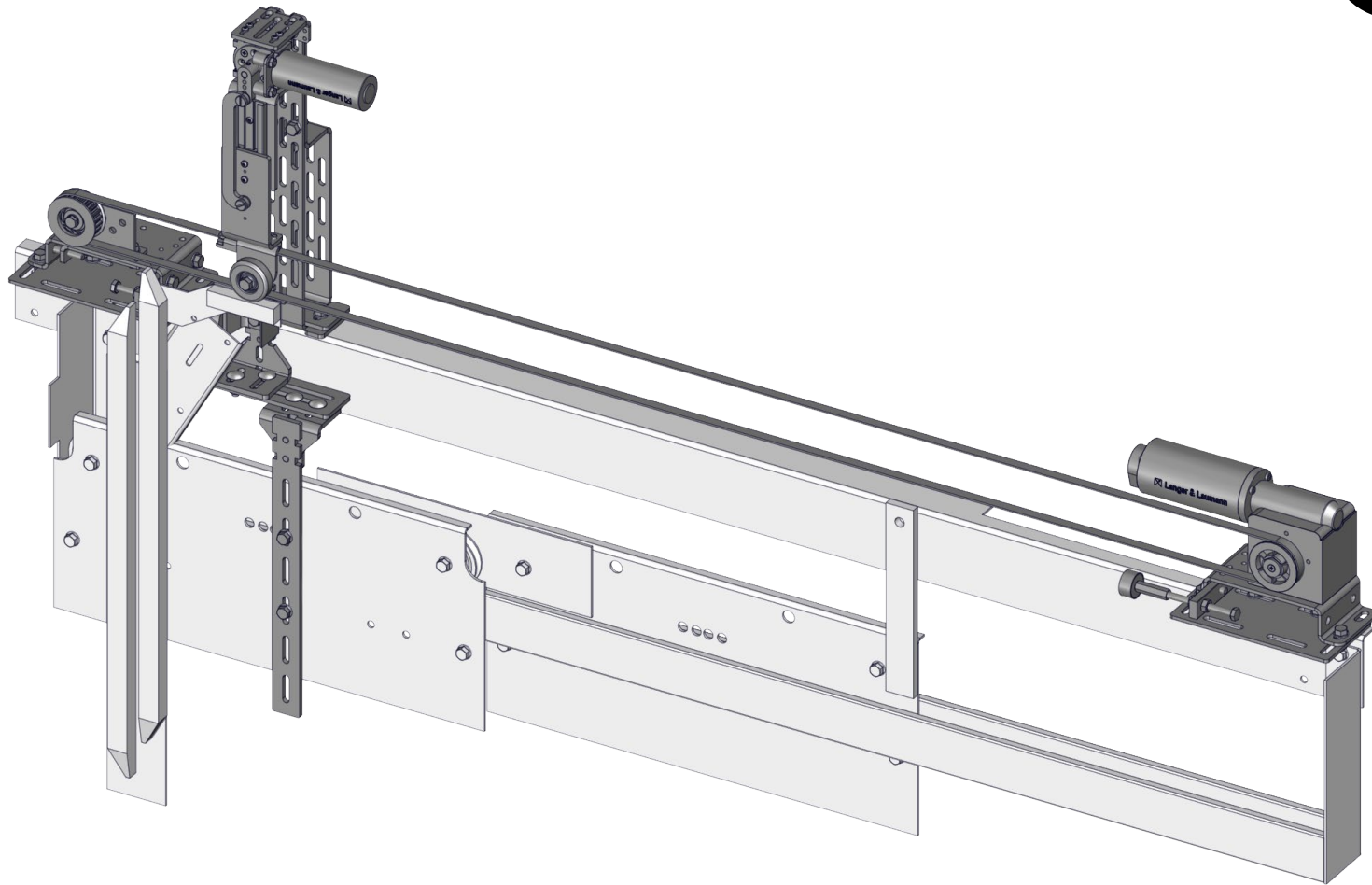
Pos.	Number	Description DE	Description EN	Menge
210	01.20.94080	Rollenhalter für TSG Sinusantrieb	wheel holder for TSG Sinus Drive	1
310	01.36.00135	Sperrzahnschraube ISO 8102 vz 8.8 - M6x12	hexagon head serrated screw ISO 8102 vz 8.8 - M6x12	2
320	01.36.00730	Sperrzahnschraube ISO 8102 vz 8.8 - M8x30	hexagon head serrated screw ISO 8102 vz 8.8 - M8x30	1
330	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	1
340	01.36.00470	Scheibe ISO 7090-10-140HV (DIN125), vz	washer DIN125A vz - 10,5	4
410	08.20.83112	TSG Sinusantrieb rechts für Riegelbetätigung (ohne TSG Elektronik)	TSG Sinus Drive right for interlock operation	1
420	01.20.41010	Schraubentüte mit Rolle	wheel with ball bearing, injected polyurethane, D=50[mm], M10	1
430	01.20.41020	Gleitlager für Rad mit Kugellager, d1=8mm d2=10mm Breite=10mm	slide bearing with wheel	1



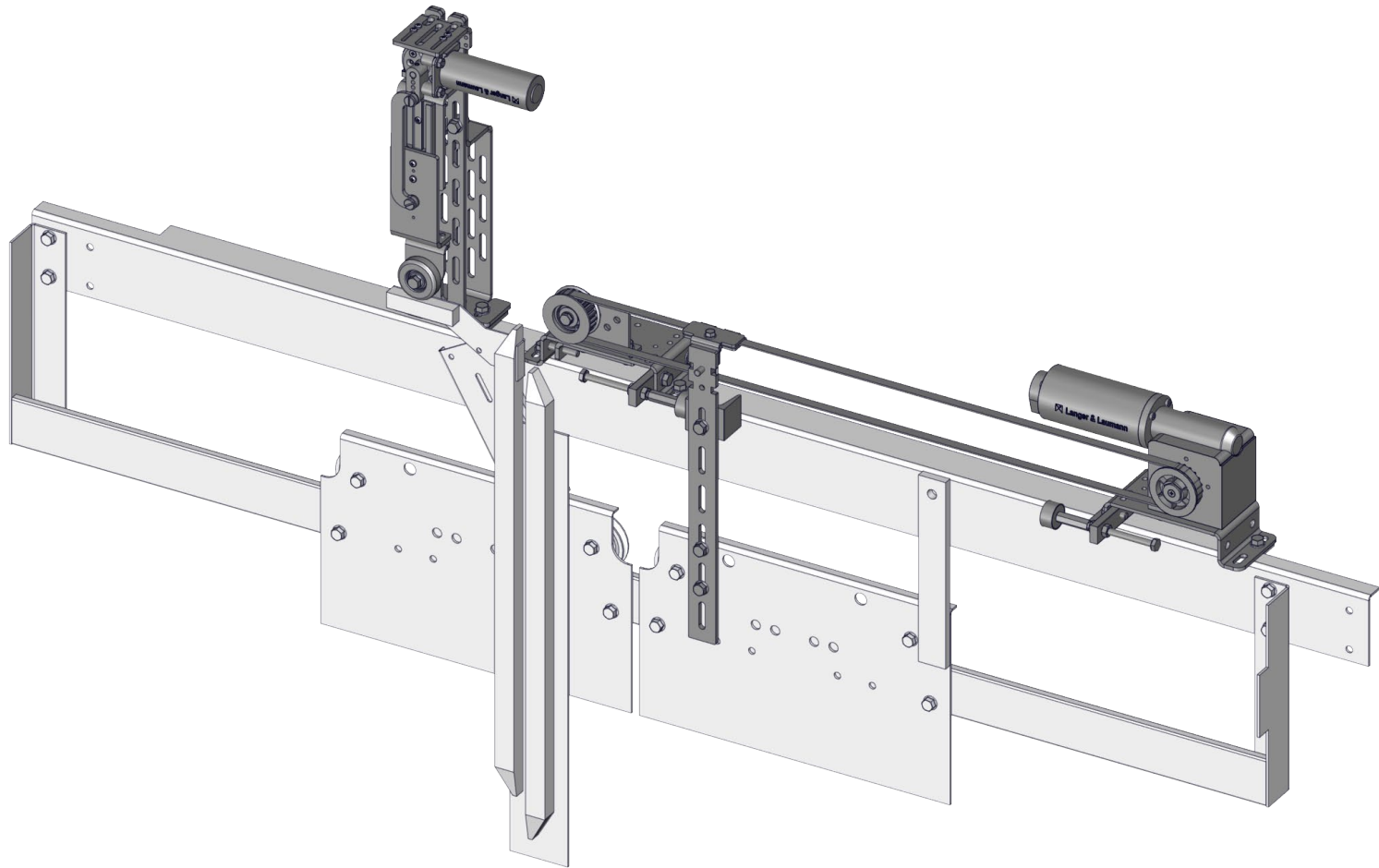
Pos.	Number	Description DE	Description EN	Menge
210	01.20.94100	Winkel zur Befestigung an Türmaschine für TSG Sinus Hubantrieb	bracket for mounting at door mashine for TSG Sinus Drive	1
220	01.20.94101	Gegenwinkel zur Befestigung an Türmaschine für TSG Sinusantrieb	counter bracket for fixing at door machine for TSG Sinus Drive	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00725	Sperrzahnschraube ISO 8102 vz 8.8 - M8x25	hexagon head serrated screw ISO 8102 vz 8.8 - M8x25	2
330	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	4



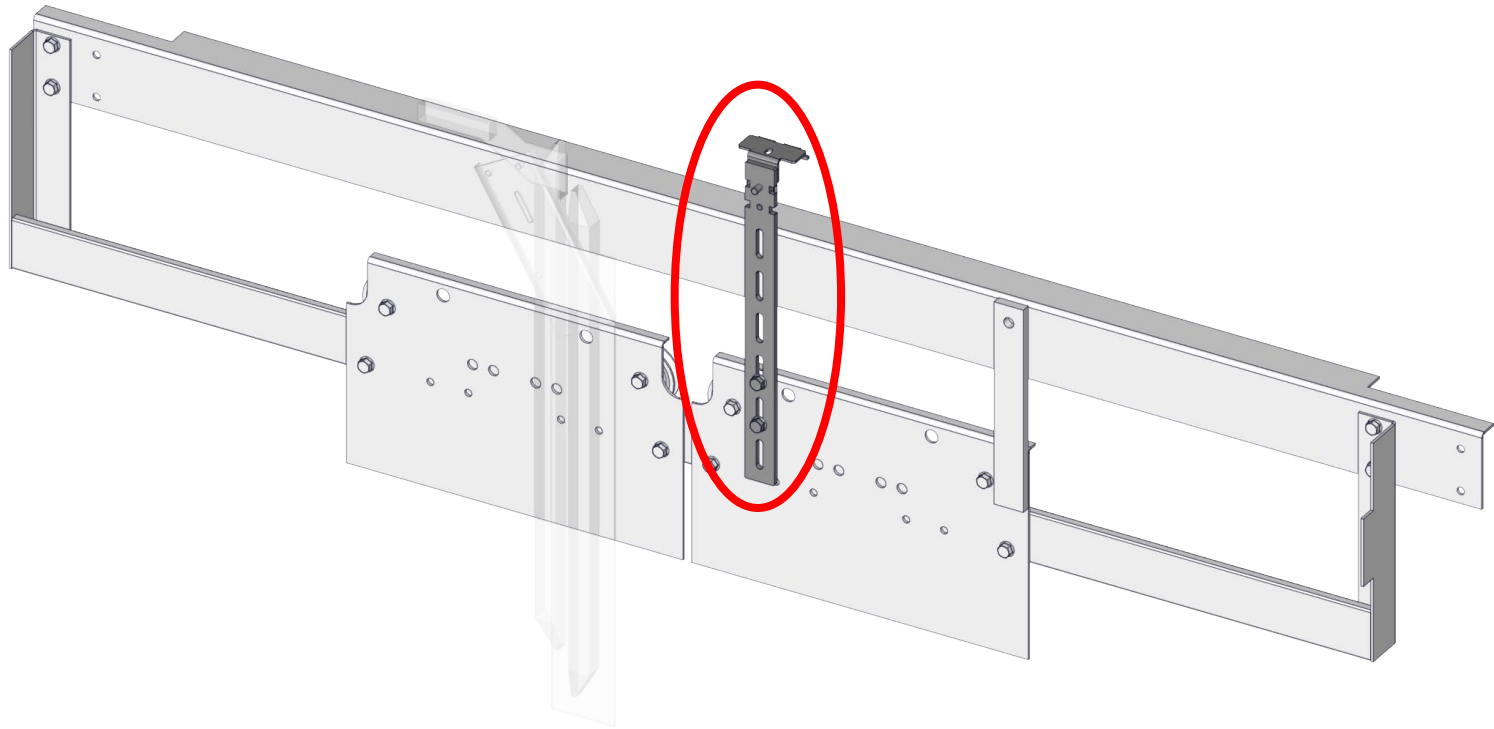
Pos.	Number	Description DE	Description EN	Menge
310	01.36.00725	Sperrzahnschraube ISO 8102 vz 8.8 - M8x25	hexagon head serrated screw ISO 8102 vz 8.8 - M8x25	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

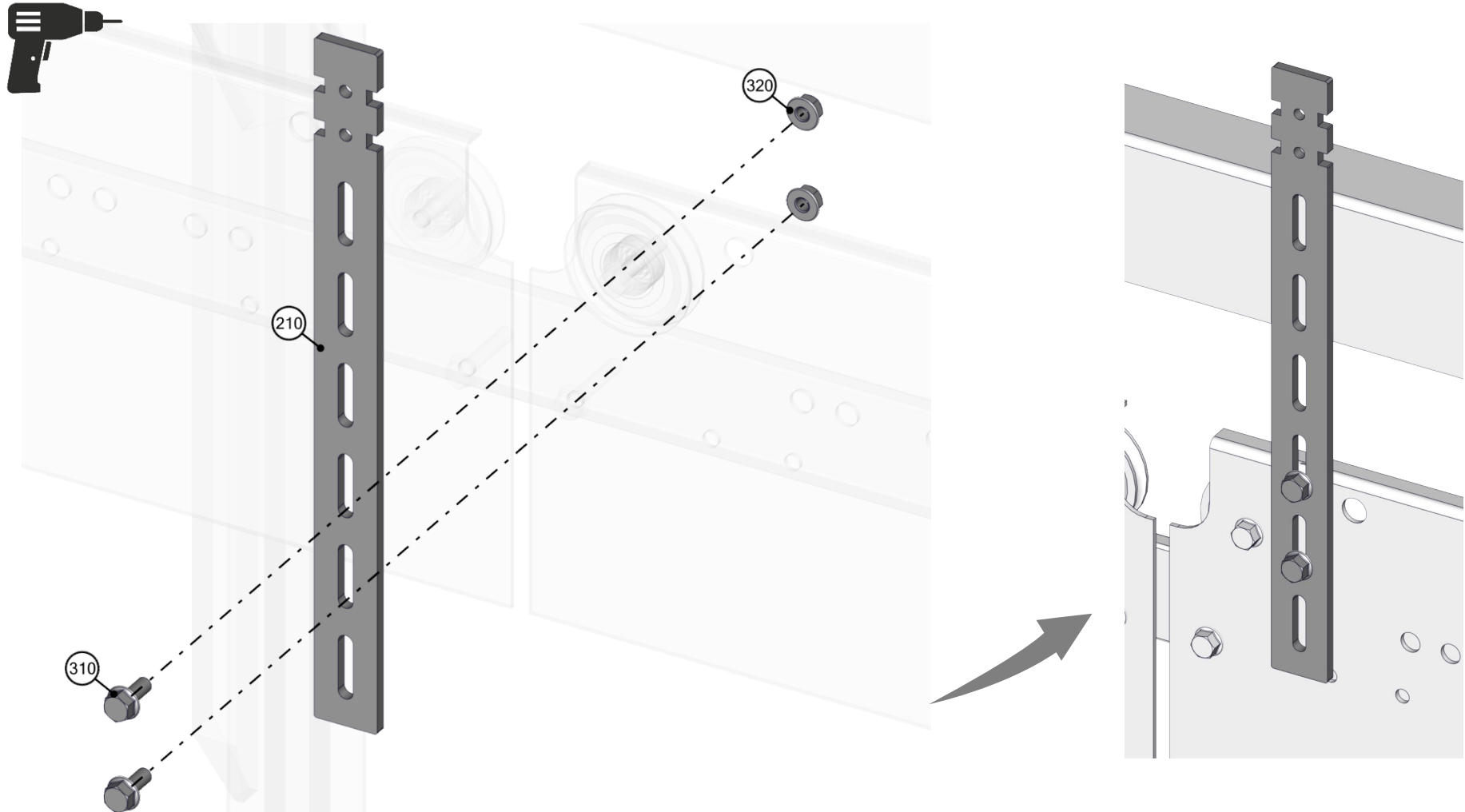


TSG in Thyssen M2Z D4 – TSG in Thyssen M2Z D4

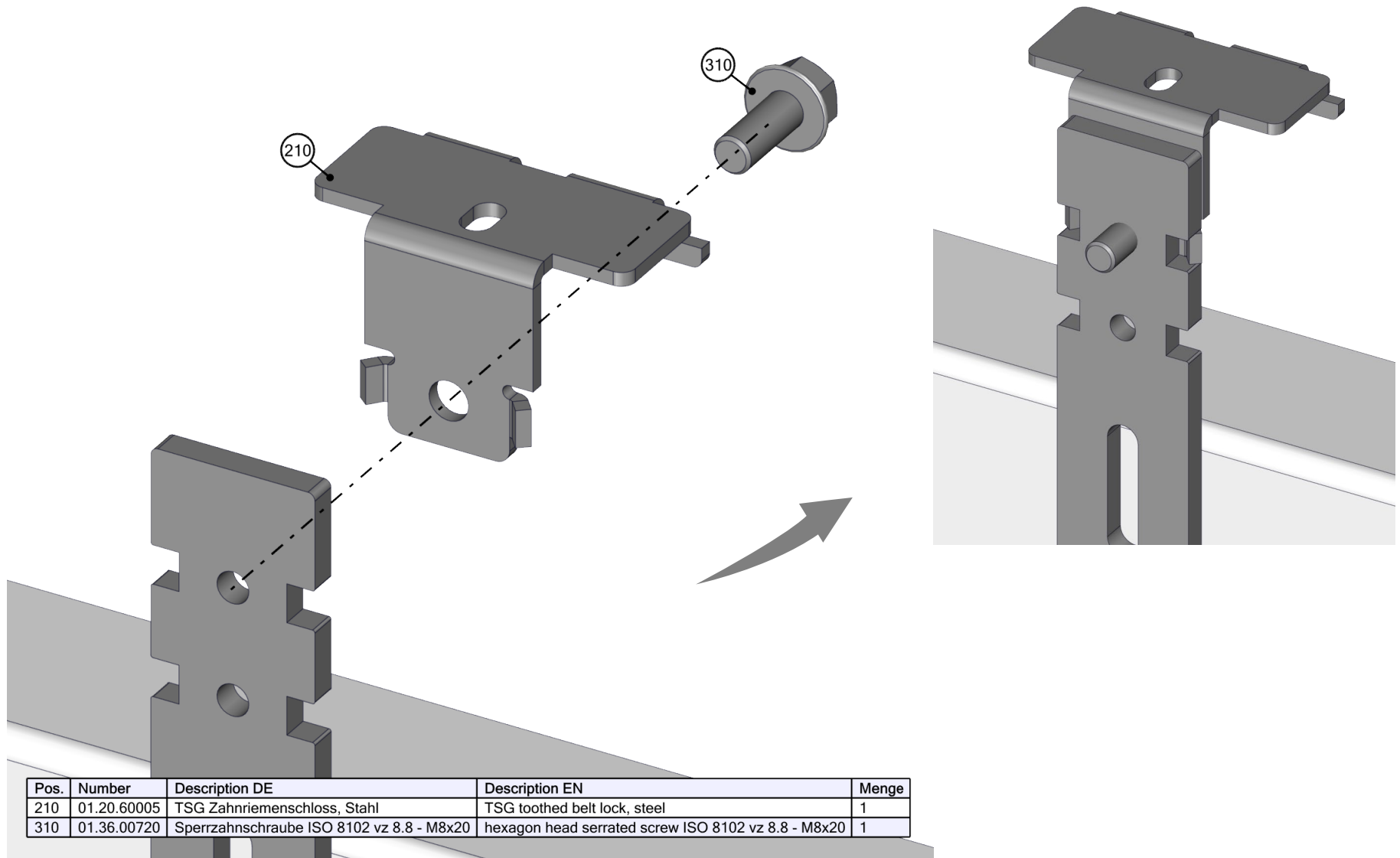


Montage Türflügelmitnehmer – assembly of the door panel coupler

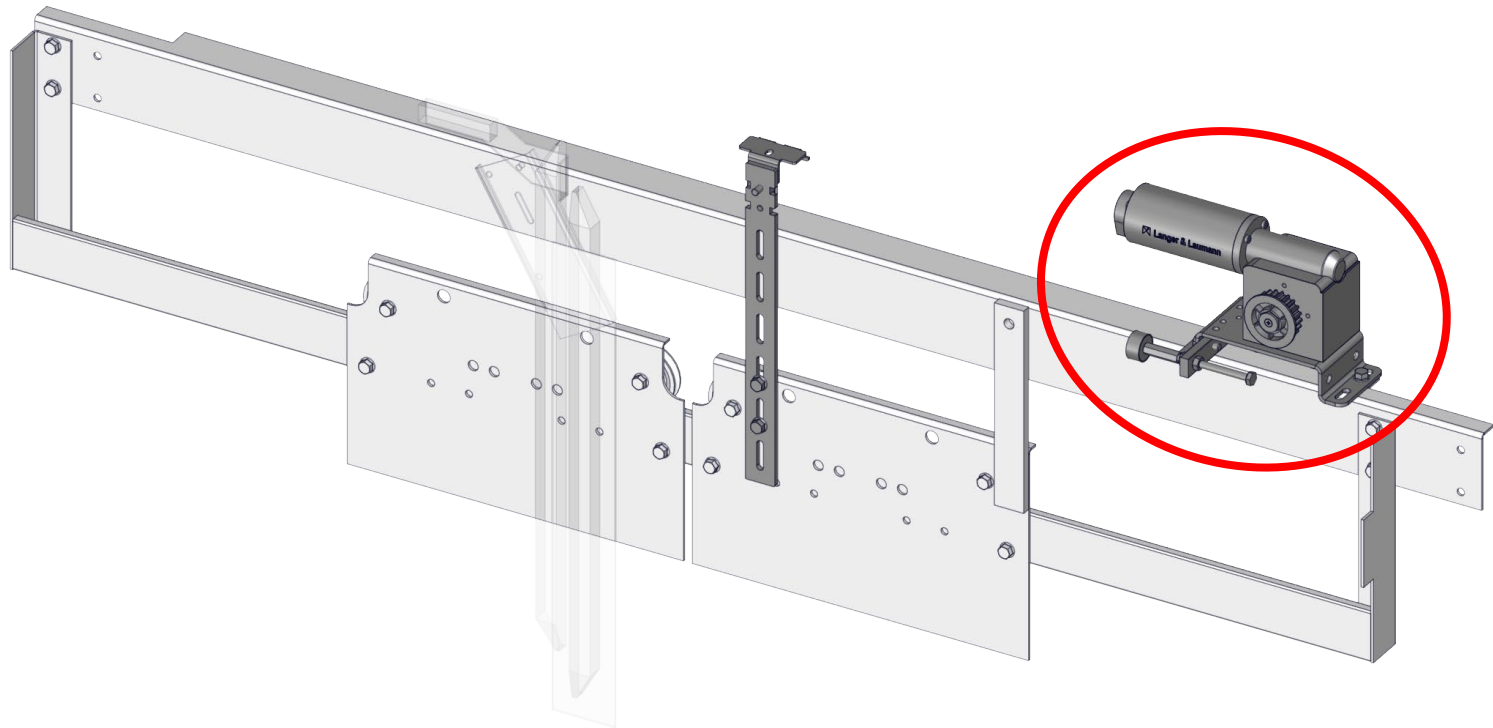


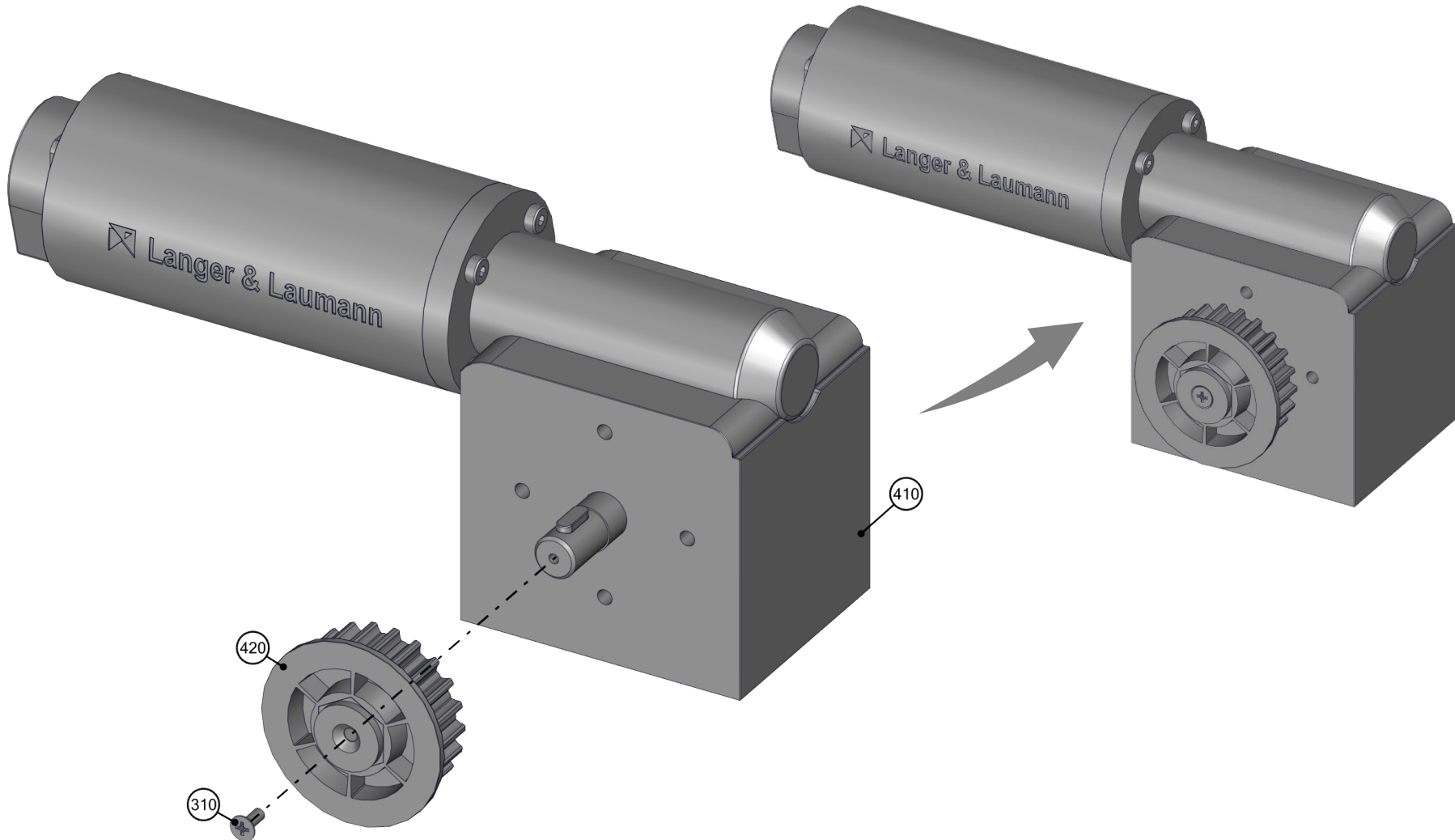


Pos.	Number	Description DE	Description EN	Menge
210	01.20.60004	Türflügelmitnehmer 375x35x6	TSG door panel coupler 375x35x6	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

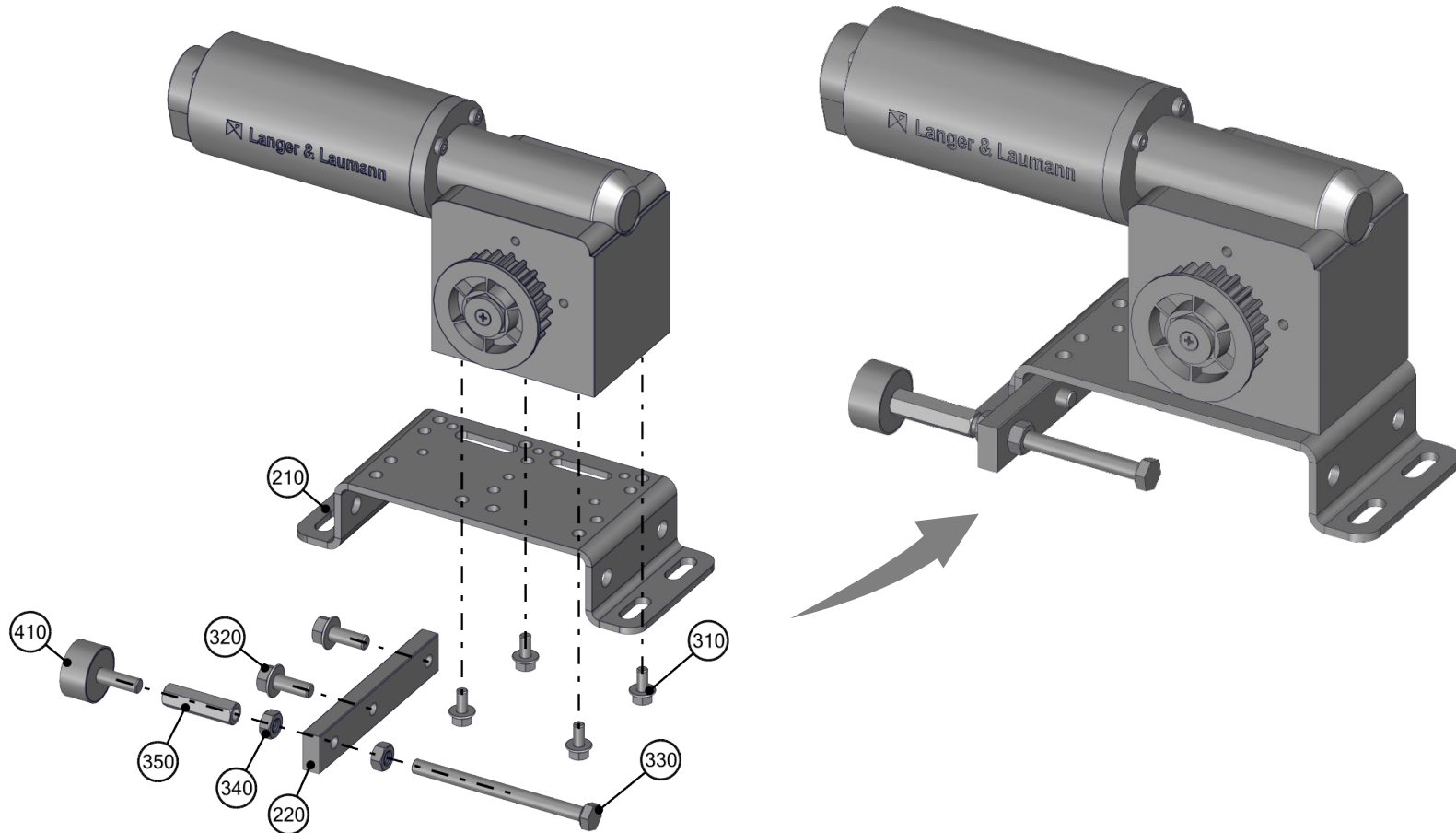


Montage Motor – assembly of the motor

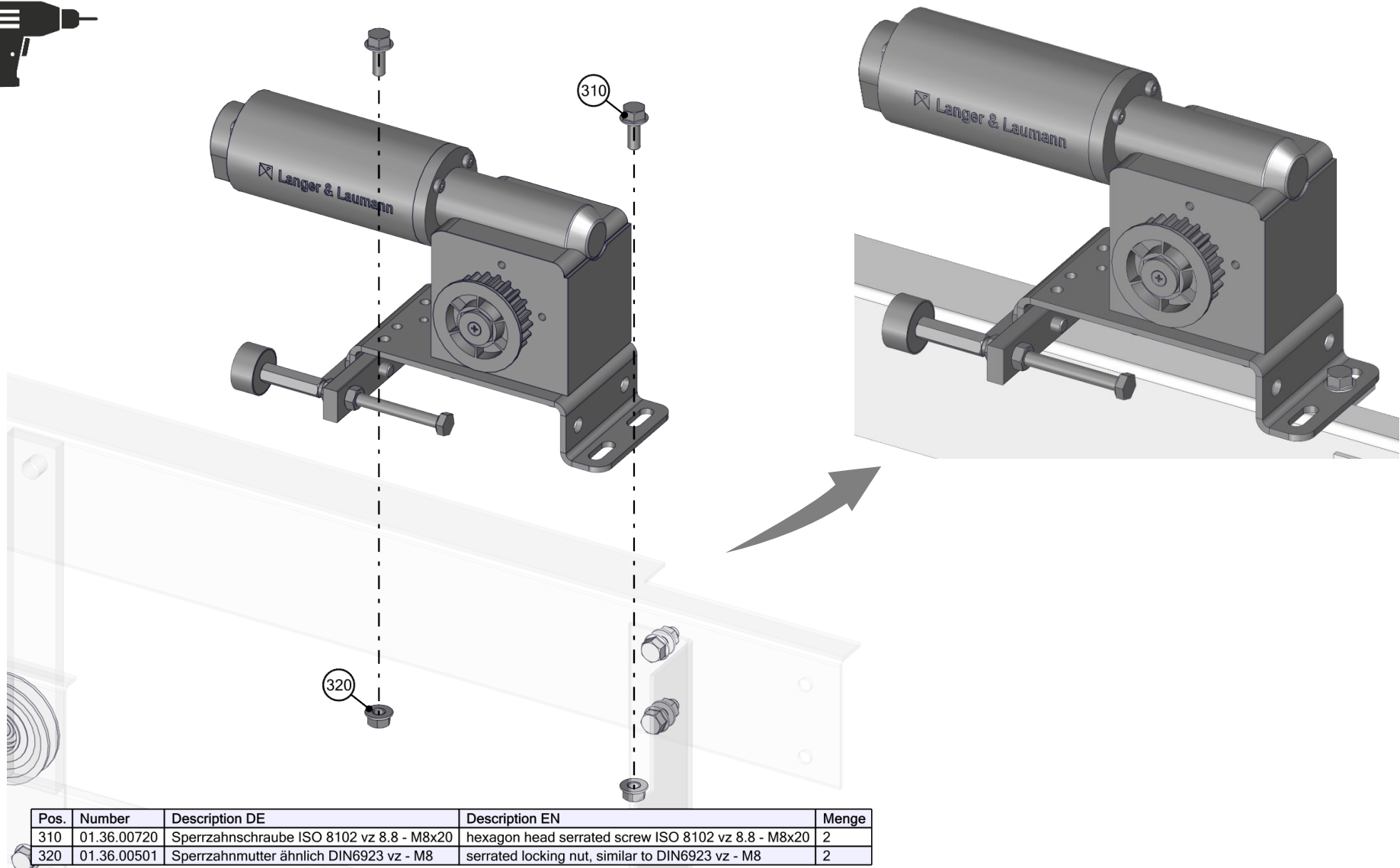




Pos.	Number	Description DE	Description EN	Menge
310	01.36.00332	Senkkopfschraube mit Kreuzschlitz DIN965 vz 4.8 - M4x10	countersunk screw w. cross recess DIN965 vz 4.8 - M4x10	1
410	08.20.40000.X1	Motor Gross Links & Getriebe, 24V/4,9A/1:15	Motor Large Left & Gearbox, 24V/4,9A/1:15	1
420	01.20.60160	Zahnriemenrad, STD8M, d=14H7, D=56[mm], B=15[mm], mit Nut, mit 1 Bordscheibe	timing belt pulley, STD8M, d=14H7, D=56[mm], B=15[mm]	1

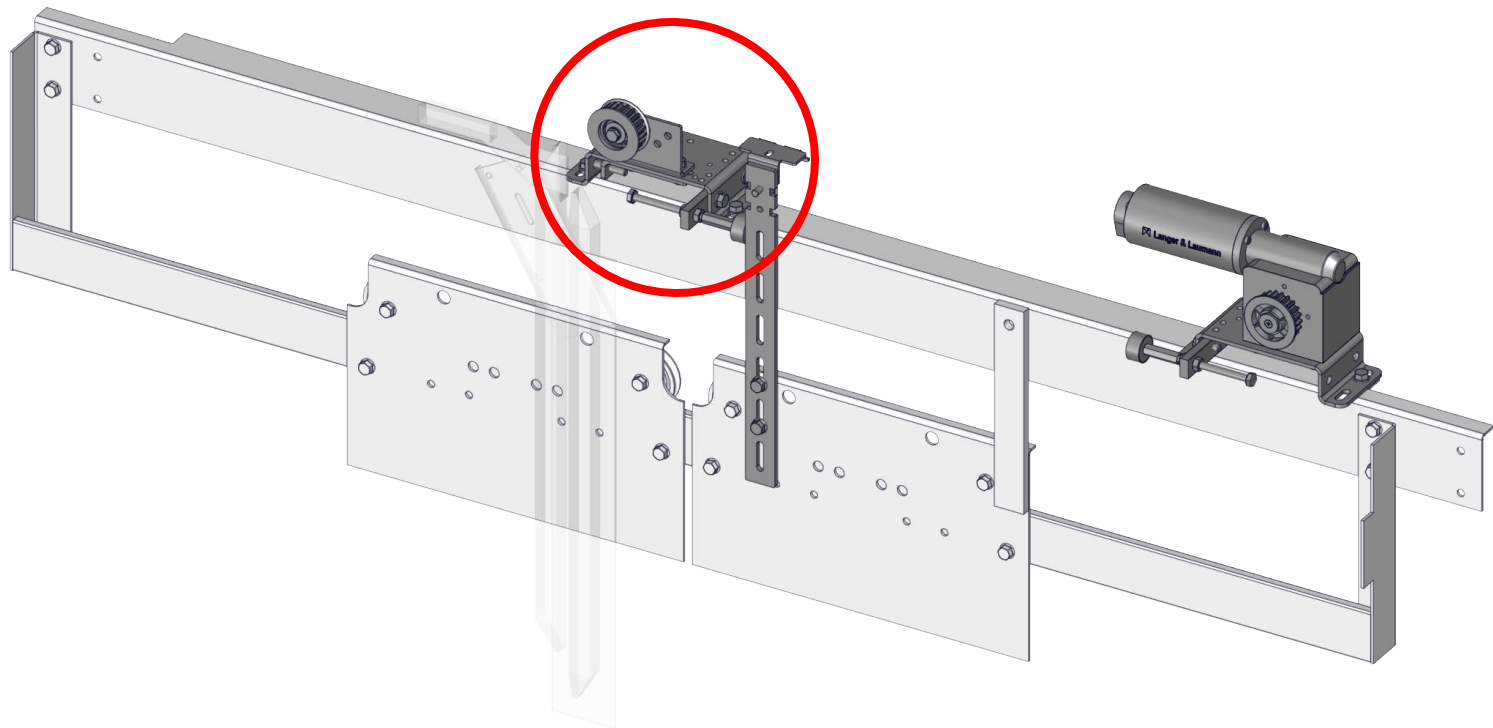


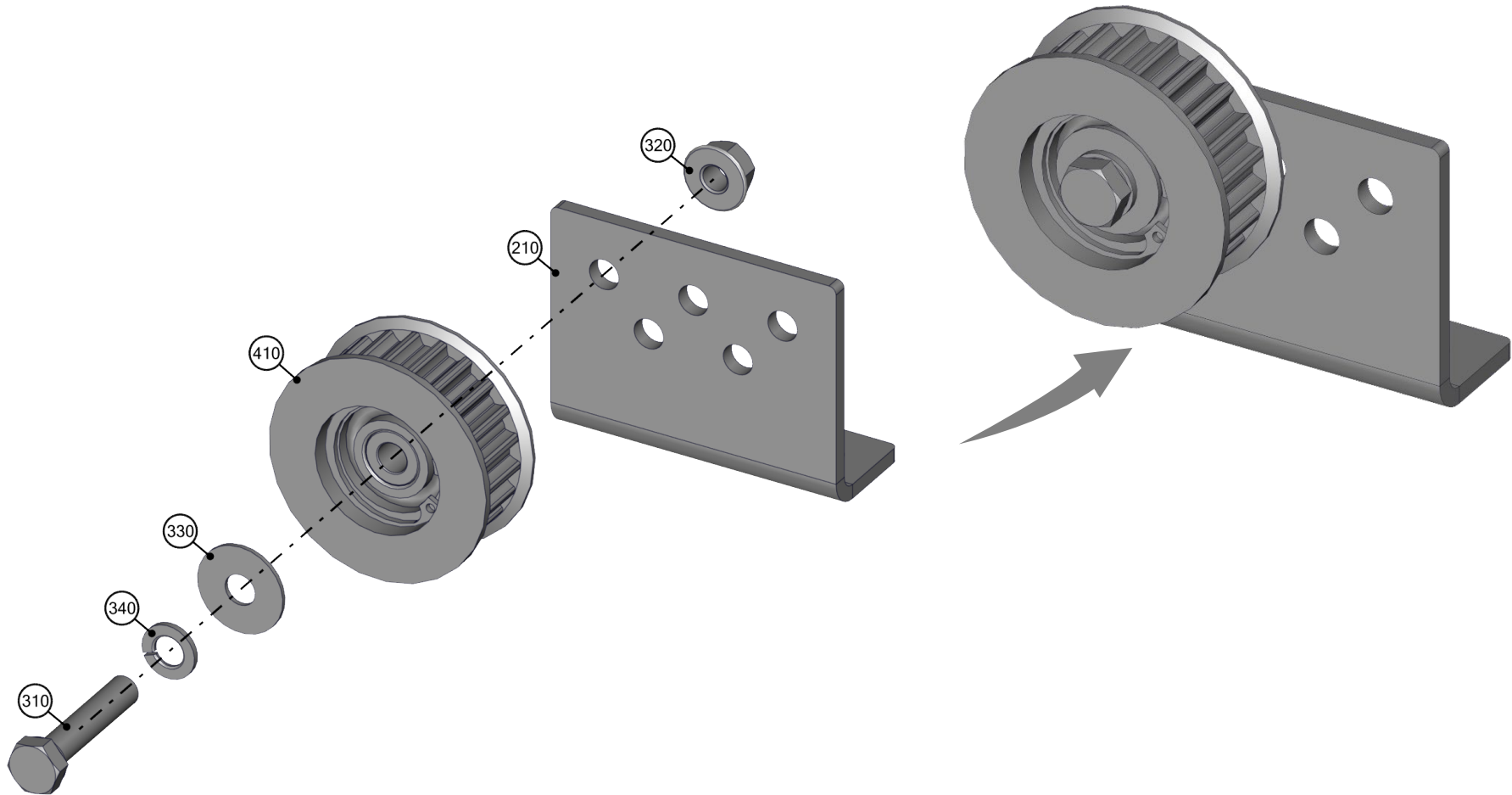
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60060	TSG Kombiwinkel, Ausführung "Hut", für TSG Motor oder Umlenkrad	TSG universal bracket, version "hat"	1
220	01.20.60037	Halterung Puffer Standardversion	bracket buffer, standard version	1
310	01.36.00135	Sperrzahnschraube ISO 8102 vz 8.8 - M6x12	hexagon head serrated screw ISO 8102 vz 8.8 - M6x12	4
320	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
330	01.36.00177	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x100	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x100	1
340	01.36.00430	Sechskantmutter ISO 4032 - M8 - 8,vz	hexagon nut DIN934-8 vz 8.8 - M8	2
350	01.36.00121	Sechskantdistanzmuffe DIN 6334 vz 8.8 - M8x40	hexagonal spacer sleeve DIN 6334 vz 8.8 - M8x40	1
410	01.20.91120	Gummi Metall Puffer 30x15, M8x20 Gewindebolzen	rubber-metal bump stop D30x15, threaded stud M8x20, 75 Shore	1



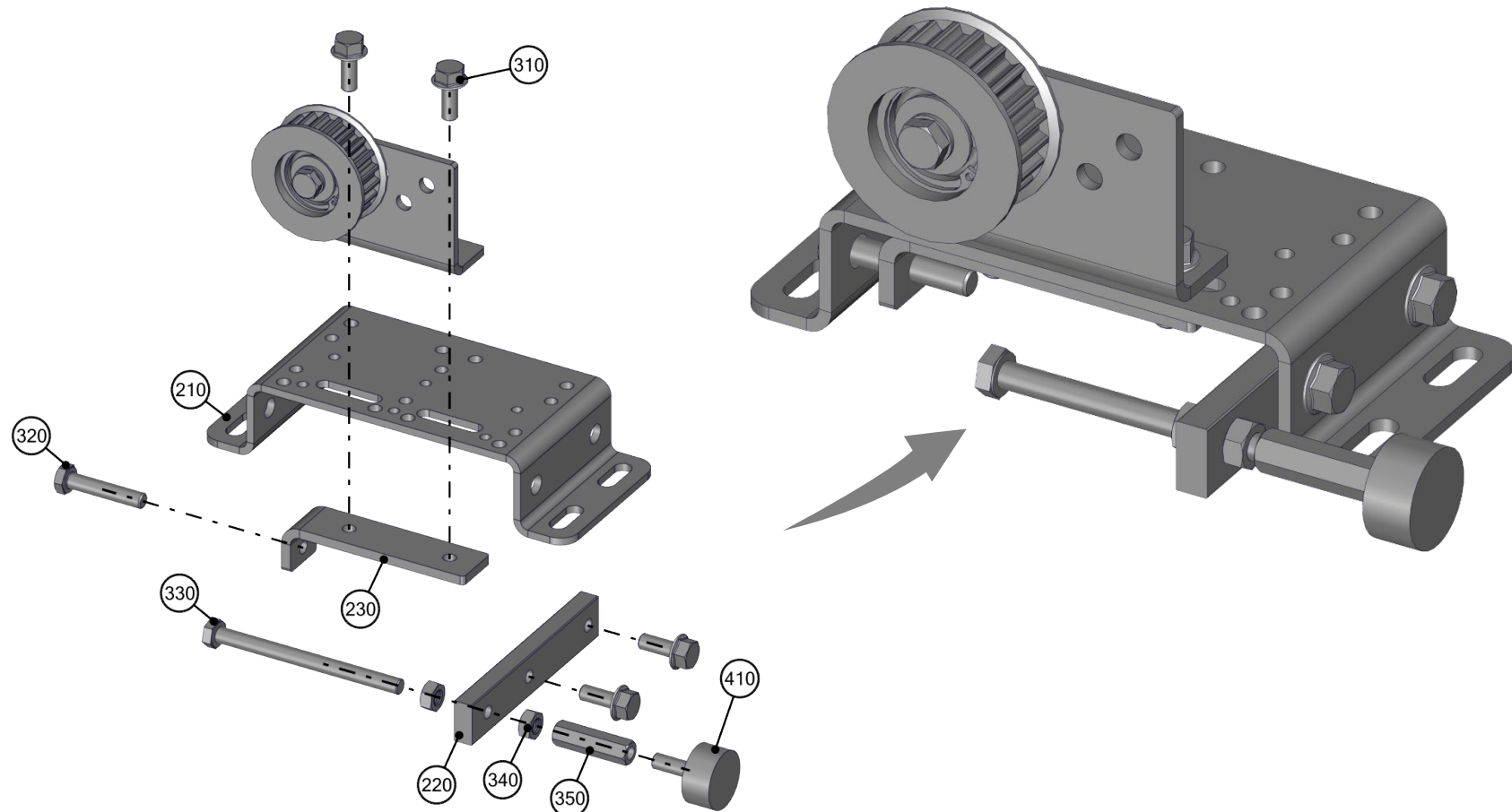
Pos.	Number	Description DE	Description EN	Menge
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	2

Montage Umlenkrolle – assembly of the counter roller

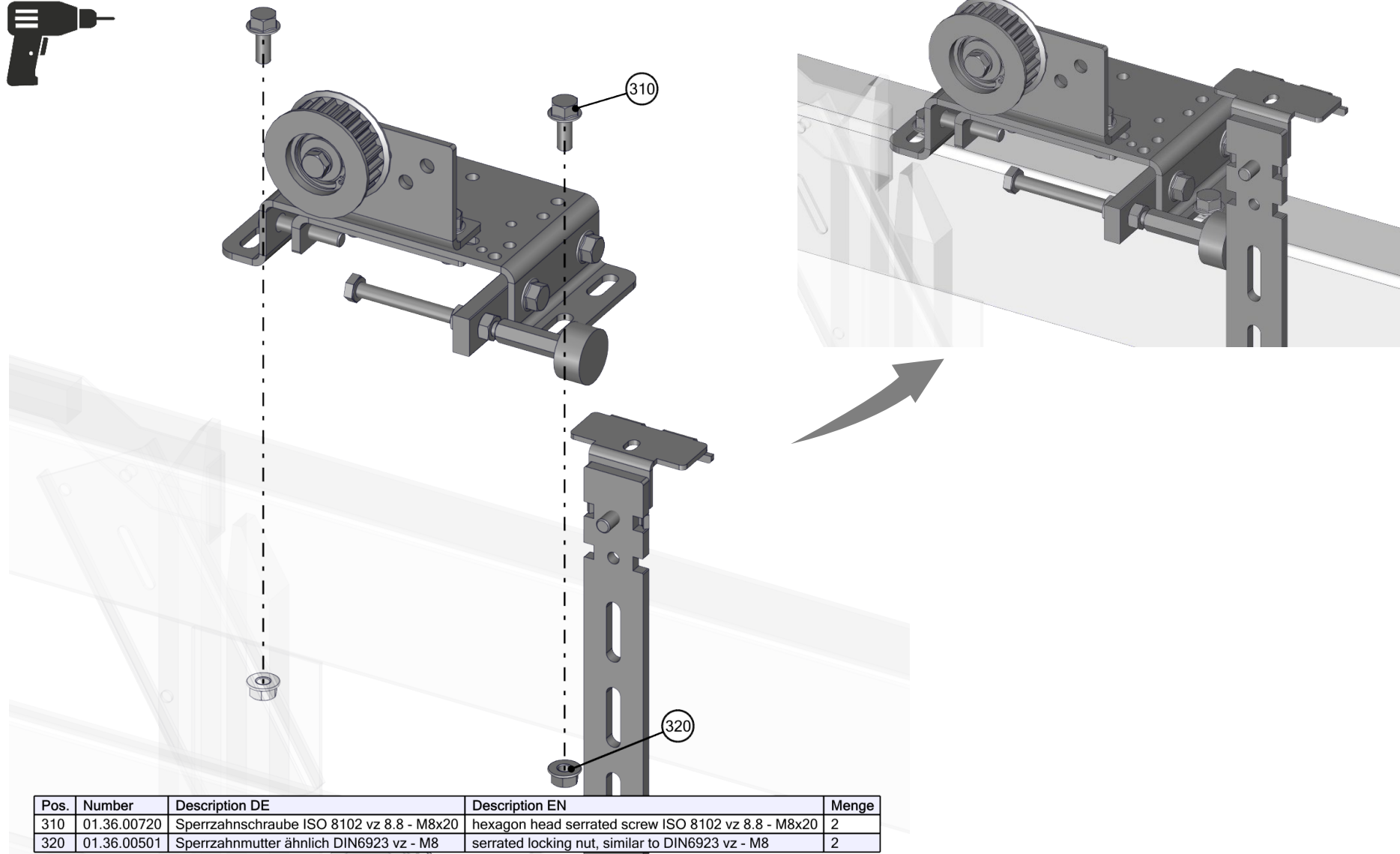




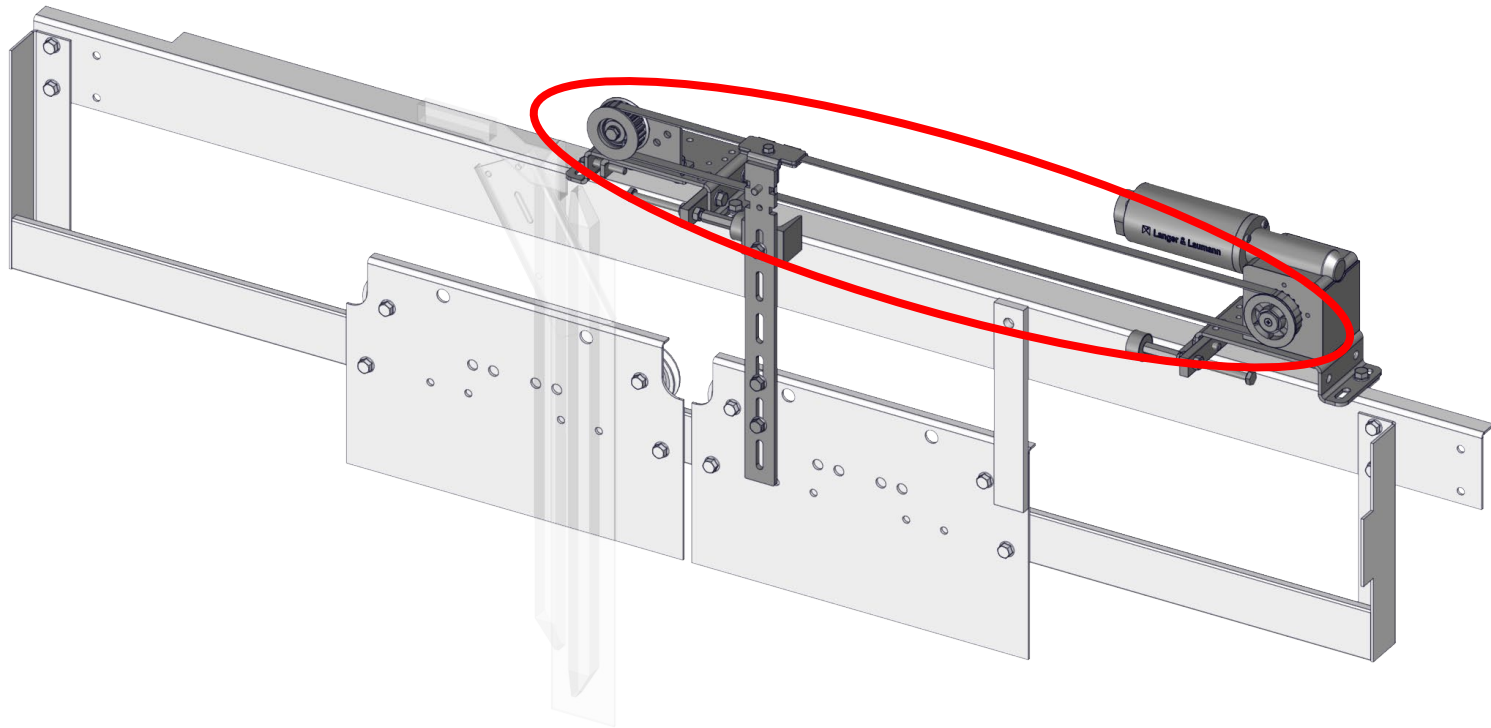
Pos.	Number	Description DE	Description EN	Menge
210	01.20.60013	Halterung Umlenkrolle für Spannstation_T1	TSG bracket for counter roller	1
310	01.36.00115	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x40	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x40	1
320	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	1
330	01.36.01035	Scheibe DIN 9021-8.4-140 HV,vz	washer with large outside diameter DIN9021 vz - 8,4	1
340	01.36.00169	Federring DIN127 vz - M8	lock washer DIN127 vz - M8	1
410	01.20.60003	Tüte Umlenkrad	bag counter roller	1

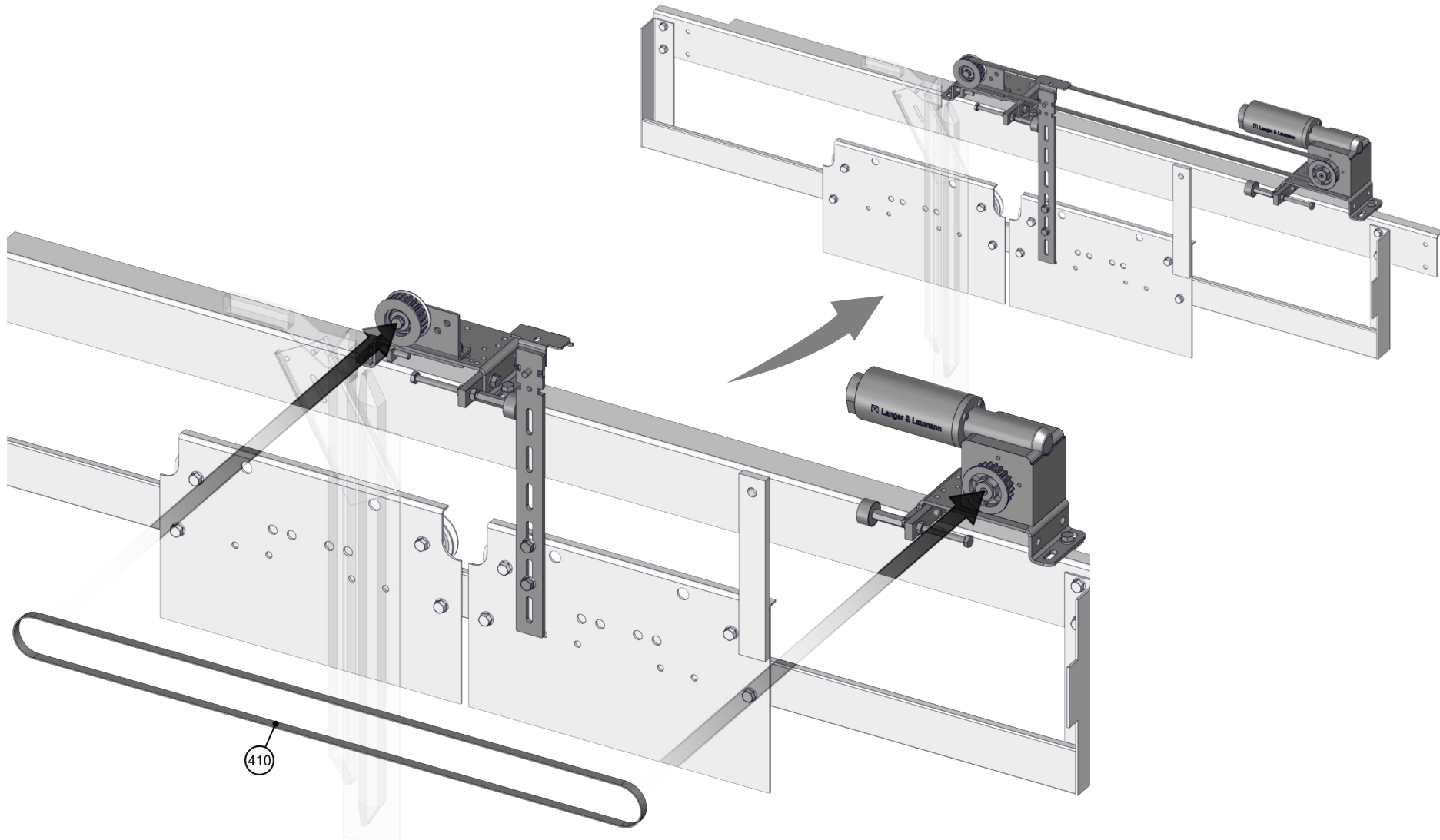


Pos.	Number	Description DE	Description EN	Menge
210	01.20.60060	TSG Kombiwinkel, Ausführung "Hut", für TSG Motor oder Umlenkrad	TSG universal bracket, version "hat"	1
220	01.20.60037	Halterung Puffer Standardversion	bracket buffer, standard version	1
230	01.20.60110	Spannlasche für Spannstation	Clamping tab for clamping station, normal execution	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	4
320	01.36.00115	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x40	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x40	1
330	01.36.00177	Sechskantschraube Vollgewinde DIN933 vz 8.8 - M8x100	hexagonal bolt, thread up to head DIN933 vz 8.8 - M8x100	1
340	01.36.00430	Sechskantmutter ISO 4032 - M8 - 8,vz	hexagon nut DIN934-8 vz 8.8 - M8	2
350	01.36.00121	Sechskantdistanzmuffe DIN 6334 vz 8.8 - M8x40	hexagonal spacer sleeve DIN 6334 vz 8.8 - M8x40	1
410	01.20.91120	Gummi Metall Puffer 30x15, M8x20 Gewindebolzen	rubber-metal bump stop D30x15, threaded stud M8x20, 75 Shore	1

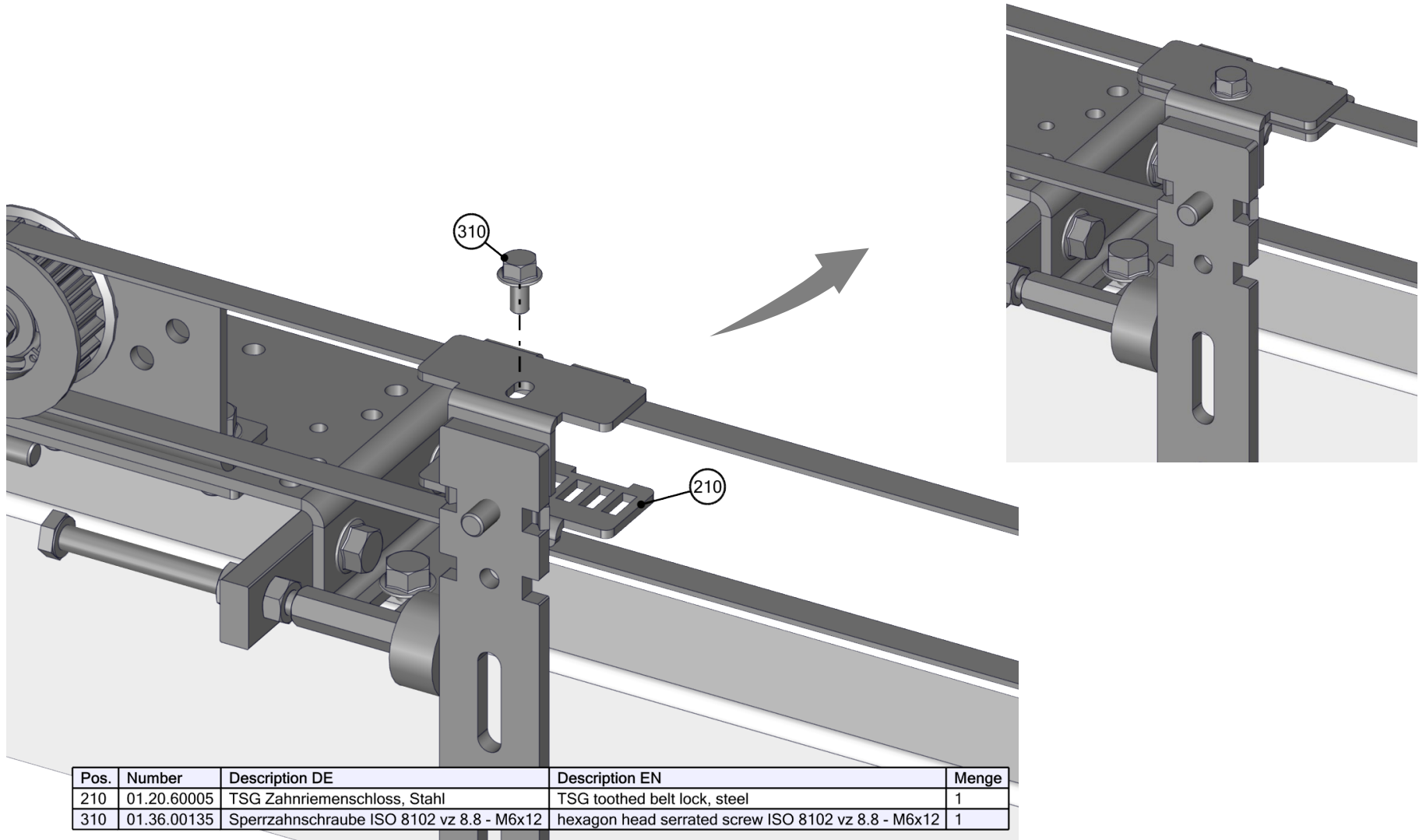


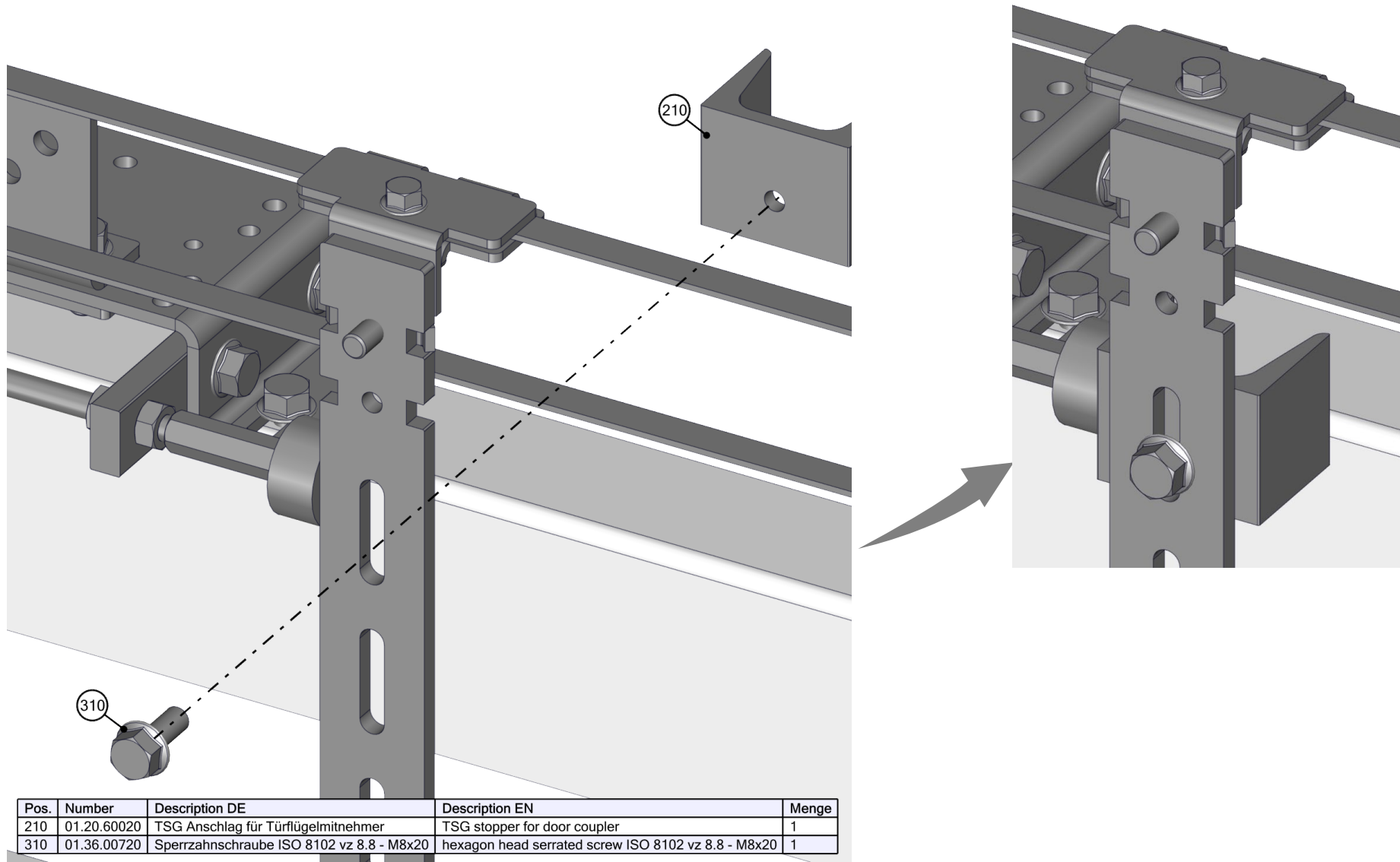
Montage Zahnriemen und Anschlag – assembly of the toothed belt and bump stop



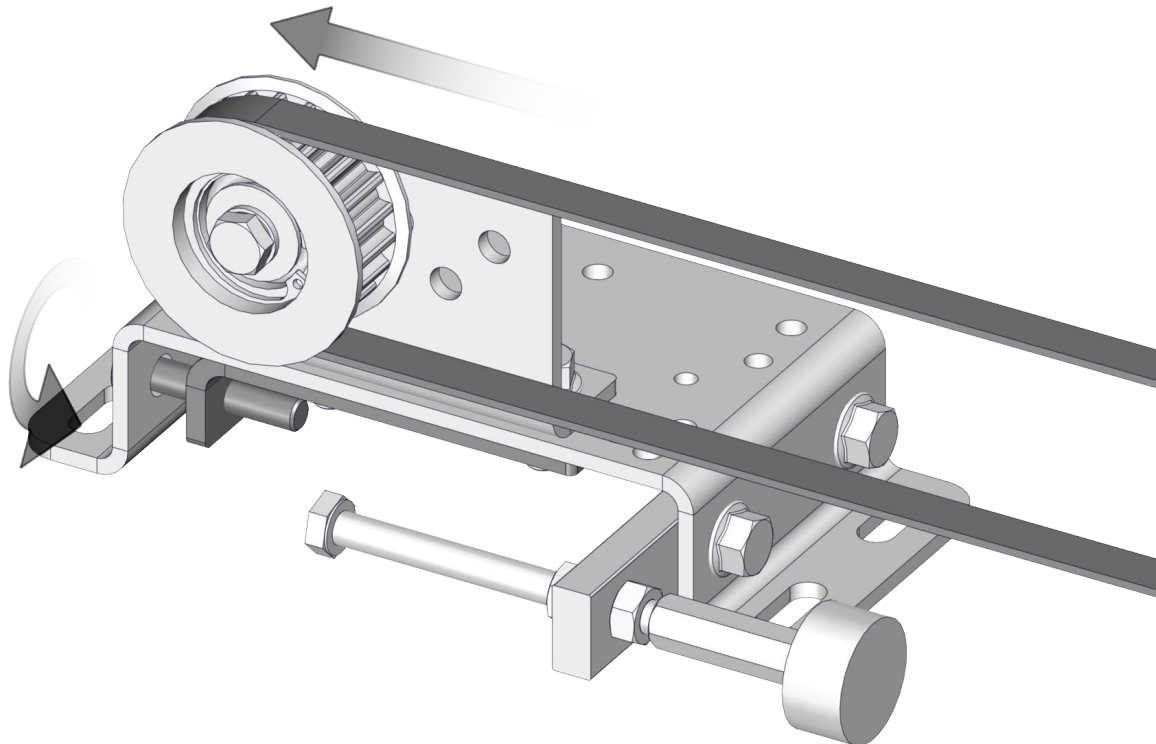


Pos.	Number	Description DE	Description EN	Menge
410	08.20.60002.40	TSG-Zahnriemen	TSG-toothed belt	1

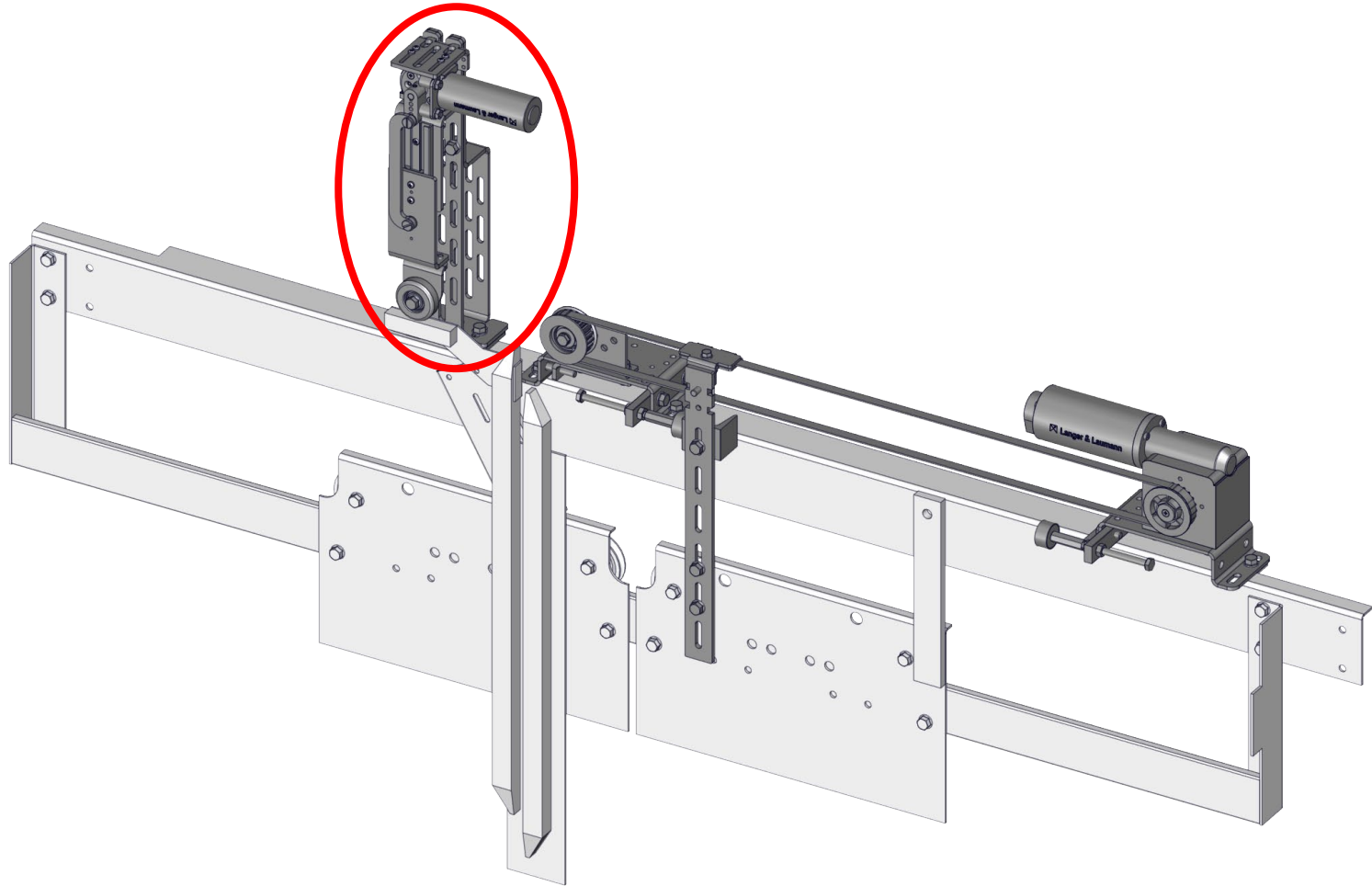


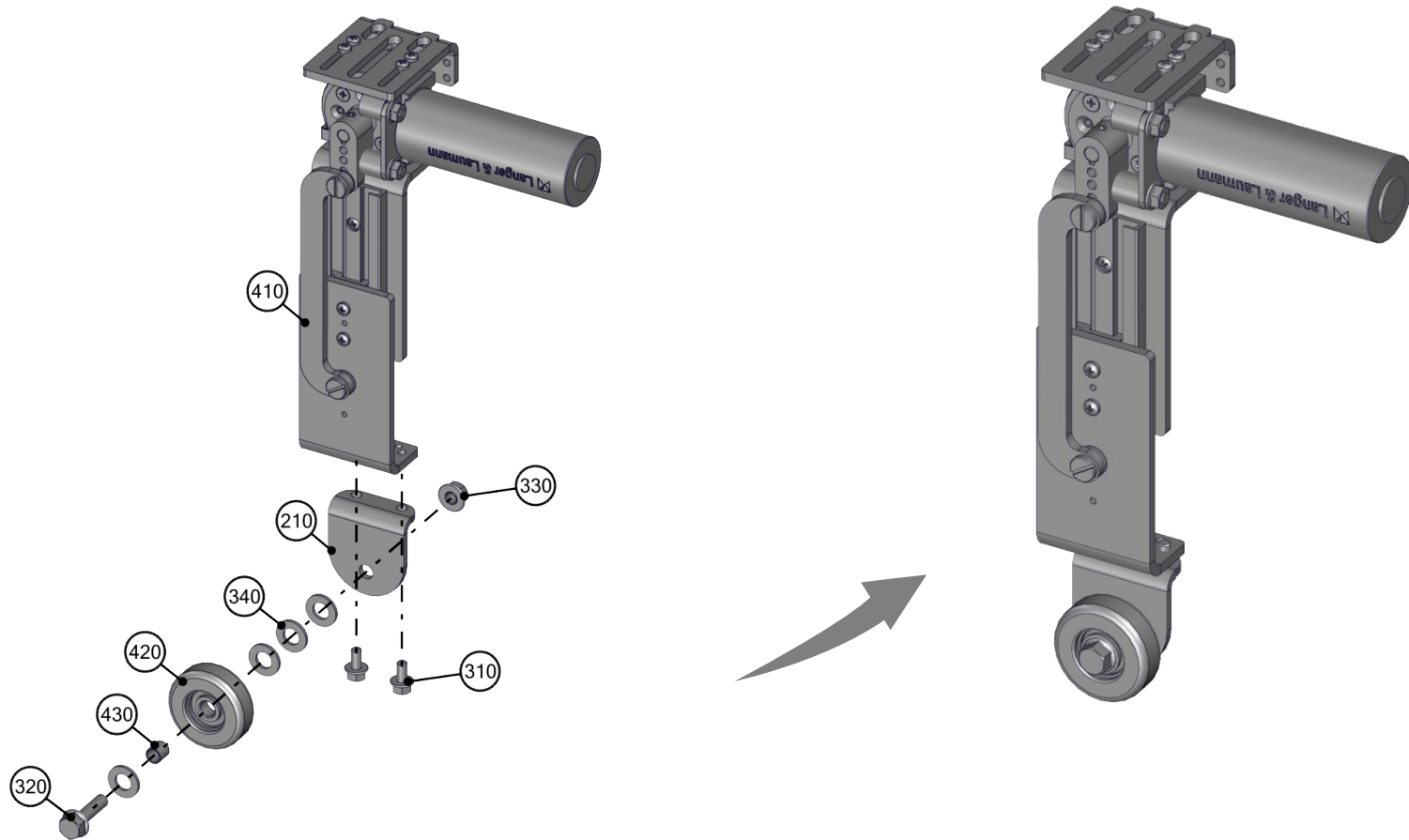


Zahnriemen spannen – tensioning of the toothed belt

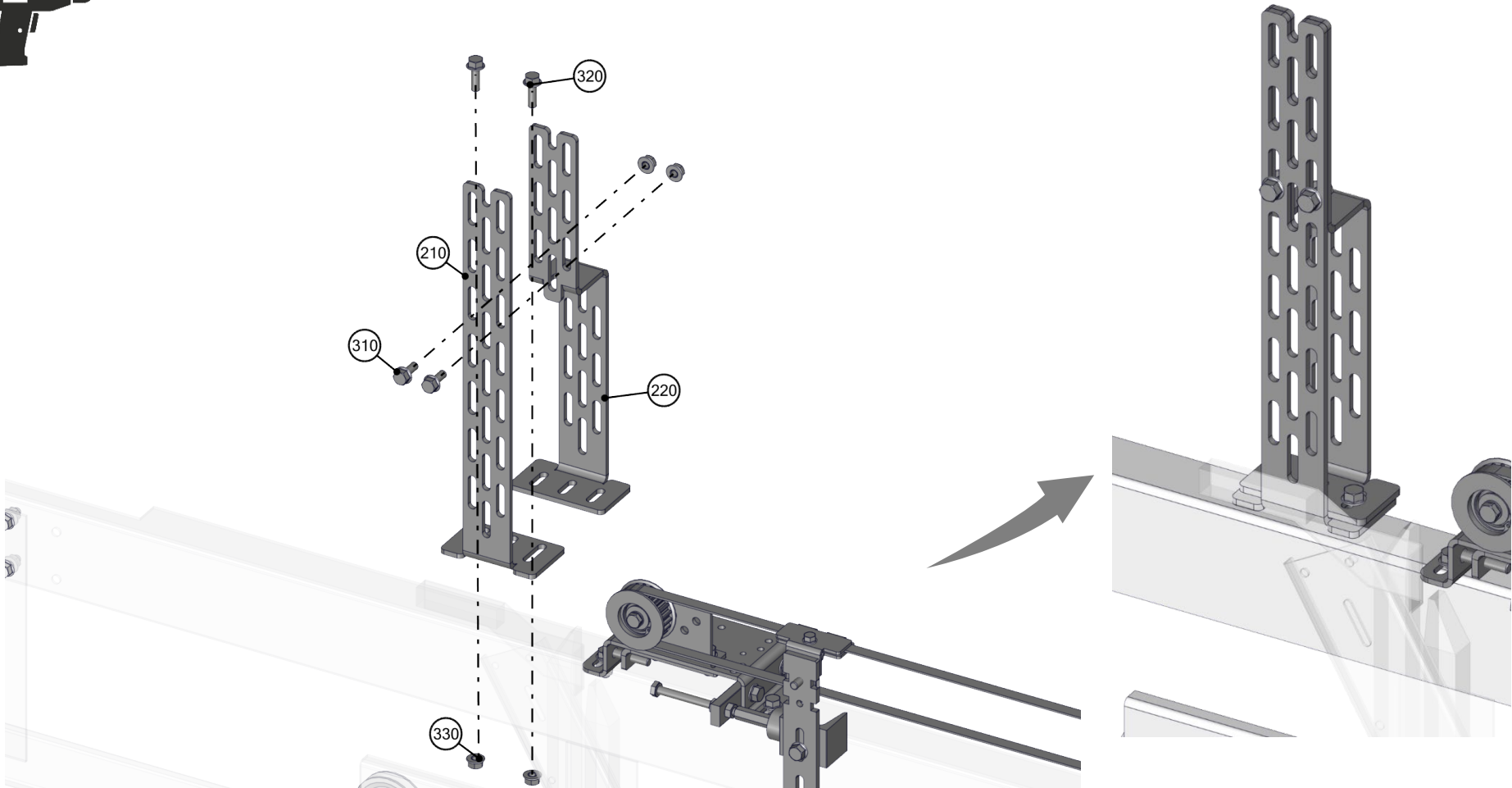


Montage Sinusantrieb – assembly of the Sinus Drive

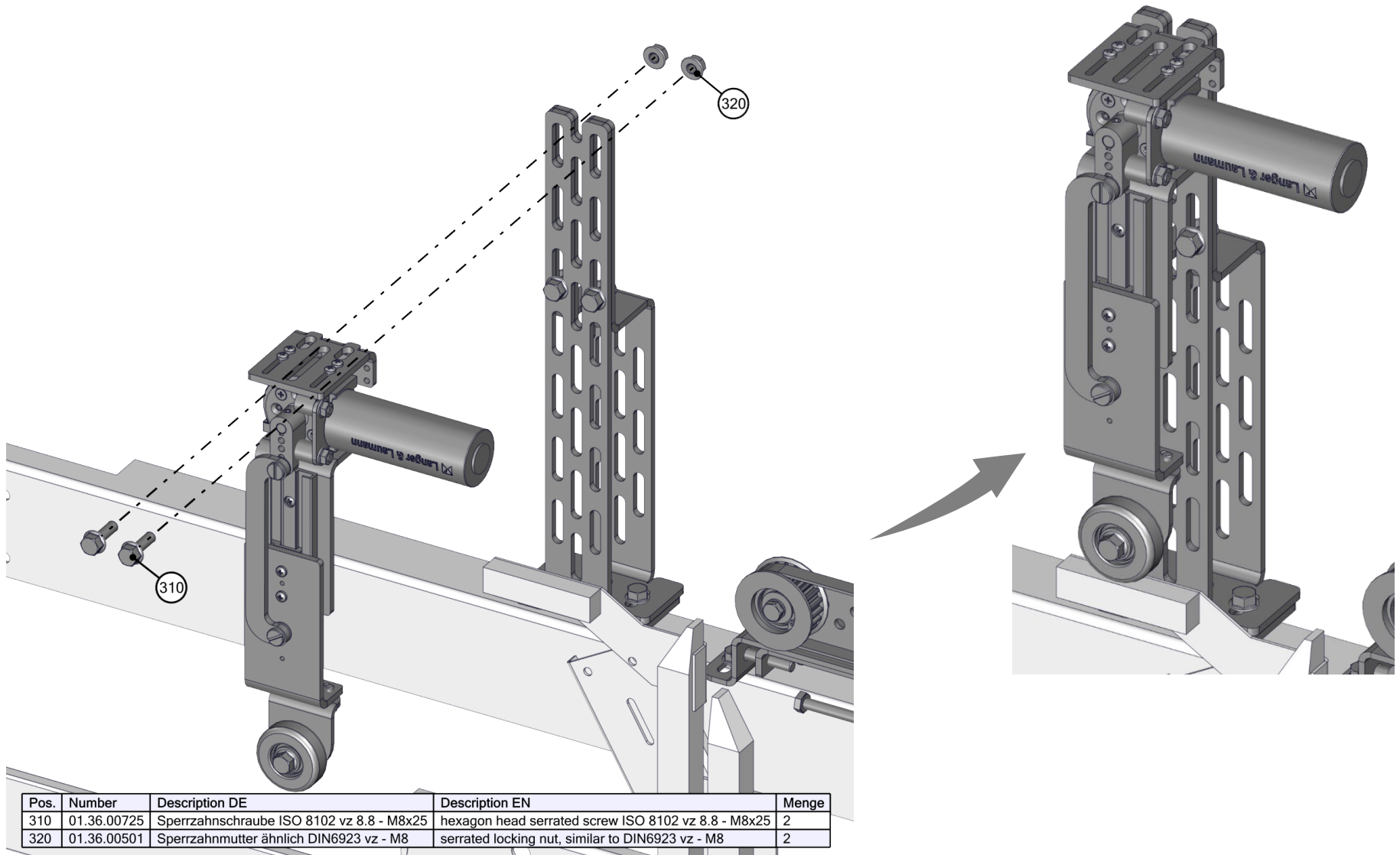


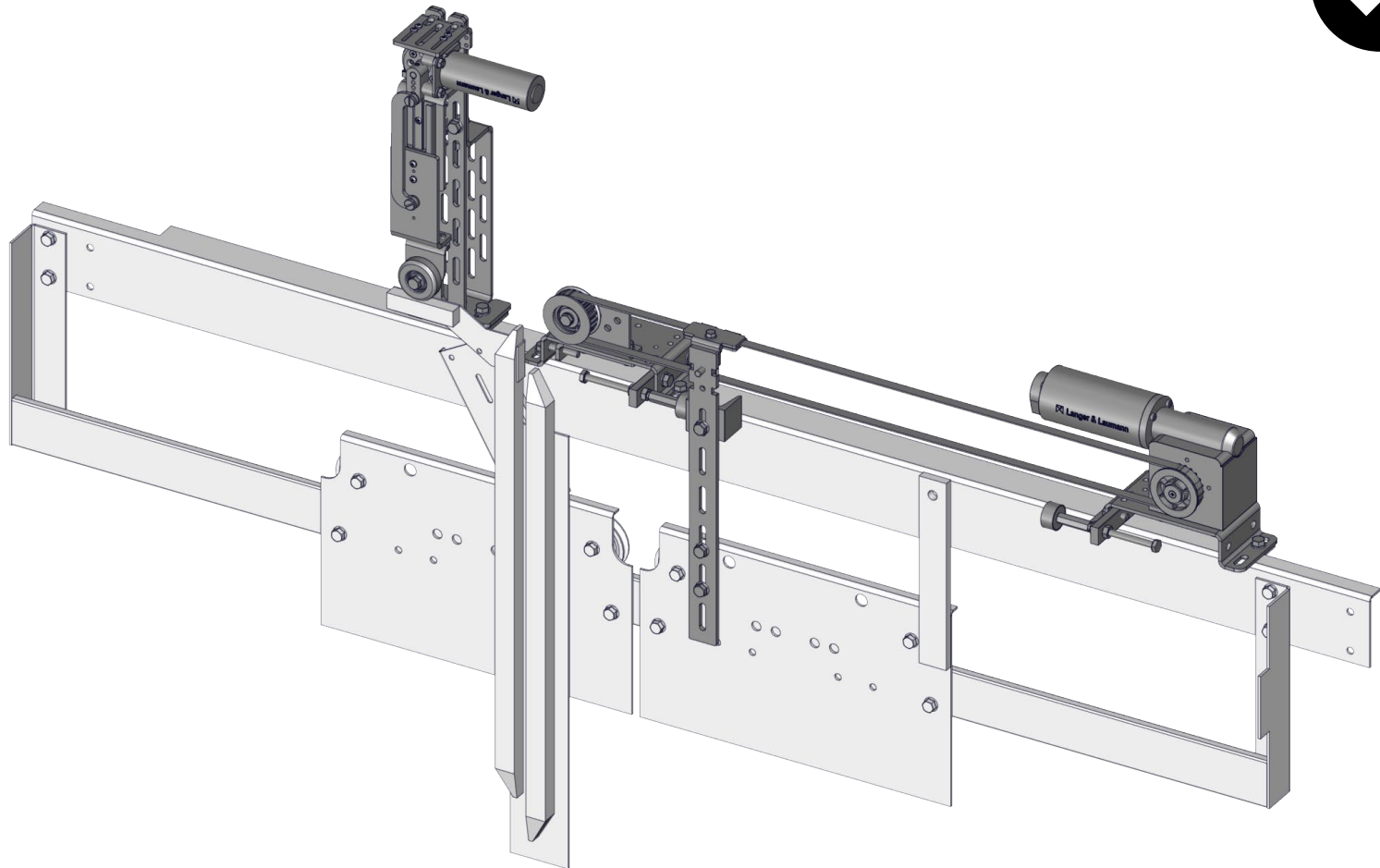


Pos.	Number	Description DE	Description EN	Menge
210	01.20.94080	Rollenhalter für TSG Sinusantrieb	wheel holder for TSG Sinus Drive	1
310	01.36.00135	Sperrzahnschraube ISO 8102 vz 8.8 - M6x12	hexagon head serrated screw ISO 8102 vz 8.8 - M6x12	2
320	01.36.00730	Sperrzahnschraube ISO 8102 vz 8.8 - M8x30	hexagon head serrated screw ISO 8102 vz 8.8 - M8x30	1
330	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	1
340	01.36.00470	Scheibe ISO 7090-10-140HV (DIN125),vz	washer DIN125A vz - 10,5	4
410	08.20.83112	TSG Sinusantrieb rechts für Riegelbetätigung (ohne TSG Elektronik)	TSG Sinus Drive right for interlock operation	1
420	01.20.41010	Schraubentüte mit Rolle	wheel with ball bearing, injected polyurethane, D=50[mm],M10	1
430	01.20.41020	Gleitlager für Rad mit Kugellager, d1=8mm d2=10mm Breite=10mm	slide bearing with wheel	1



Pos.	Number	Description DE	Description EN	Menge
210	01.20.94100	Winkel zur Befestigung an Türmaschine für TSG Sinus Hubantrieb	bracket for mounting at door mashine for TSG Sinus Drive	1
220	01.20.94101	Gegenwinkel zur Befestigung an Türmaschine für TSG Sinusantrieb	counter bracket for fixing at door machine for TSG Sinus Drive	1
310	01.36.00720	Sperrzahnschraube ISO 8102 vz 8.8 - M8x20	hexagon head serrated screw ISO 8102 vz 8.8 - M8x20	2
320	01.36.00725	Sperrzahnschraube ISO 8102 vz 8.8 - M8x25	hexagon head serrated screw ISO 8102 vz 8.8 - M8x25	2
330	01.36.00501	Sperrzahnmutter ähnlich DIN6923 vz - M8	serrated locking nut, similar to DIN6923 vz - M8	4







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