

HIGH POWER Built-In Nutrunner**E 1.3****■ Built-In Nutrunner – Angle Drive**

Torque up to 642 Nm

Speed up to 1200 rpm



Built-In Nutrunner – Angle Drive

HIGH POWER Built-In Nutrunner

Designation Code Subassemblies

E 1.3

1 Motor and gear units

Design

ECR105

ECR = Built-in tool, brushless driving motor, Resolver
1 = Size 1, 2, 3
05 = Capacity x 10 in Nm



2 Torque sensors

Reaction torque sensor

DR50

D = Torque sensor
R = Reaction torque sensor
50 = Nominal torque of the torque sensor



Reaction torque sensor
with angle encoder

DWR50

D = Torque sensor
W = Angle encoder
R = Reaction torque sensor
50 = Nominal torque of the torque sensor



3 Drive units

Angle design
without torque sensor

AW125

A = Drive
W = Angle drive
1 = Size 1, 2, 3
25 = Spring travel 25mm; 50mm



Angle design
with action torque sensor

AWD150-50

A = Drive
W = Angle drive
D = Action torque sensor
1 = Size 1, 2, 3
50 = Spring travel 25mm; 50mm
50 = Nominal torque of the torque sensor



Angle encoder subassembly
for angle drive AWD

W1

W = Angle encoder subassembly
1 = Size 1, 2, 3



4 Socket adapter designation

SK1-1/2-50

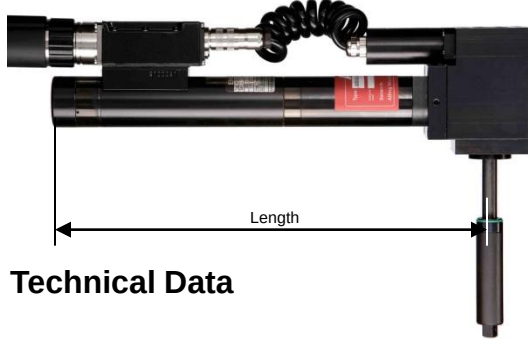
SK = Socket adapter
1 = Size 1, 2, 3
½ = Size of the square drive in inches
50 = Spring travel 25mm; 50mm



Built-In Nutrunner Size 1 – Angle Drive

E 1.3.1

Illustration: ECR105 AWD150-50



Size 1

2 Nm up to 48 Nm

■ Technical Data

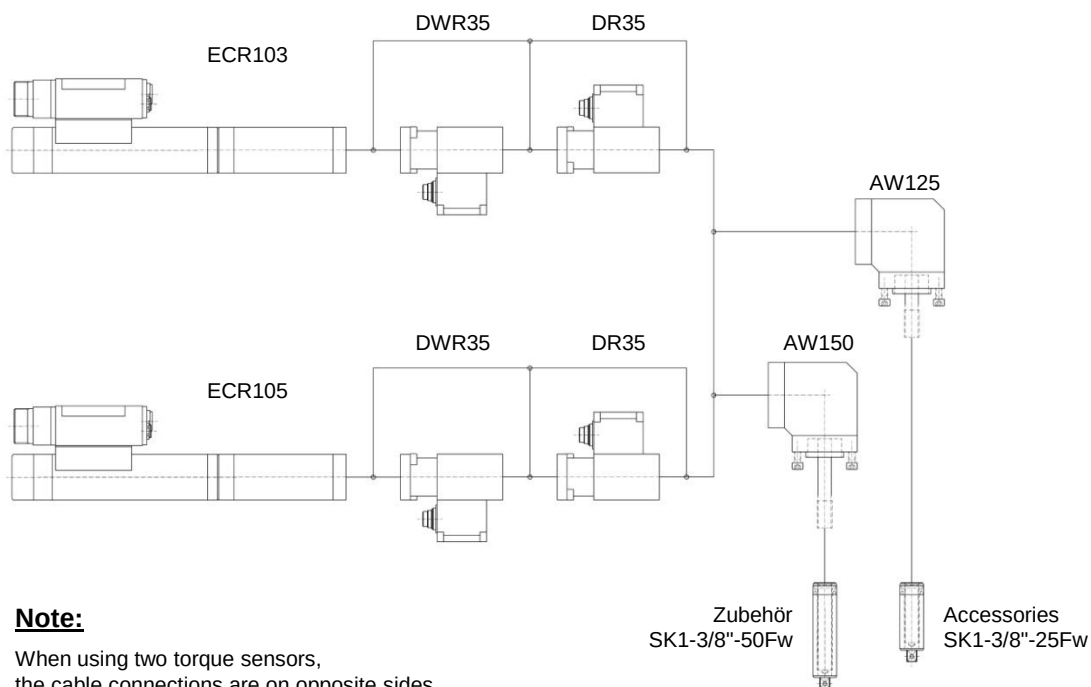
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
	Built-in nutrunner without torque sensor							
A	32	12 - 28	ECR103 AW125	990	359	4,1	67	792 0264
	32	12 - 28	ECR103 AW150	990	359	4,2	67	792 0265
	48	17 - 43	ECR105 AW125	661	359	4,1	67	792 0266
	48	17 - 43	ECR105 AW150	661	359	4,2	67	792 0267
	Built-in nutrunner with reaction torque sensor for calibration							
B	32	12 - 28	ECR103 DWR35 AW125	990	453	5,1	67	792 0268
	32	12 - 28	ECR103 DWR35 AW150	990	453	5,2	67	792 0269
	48	17 - 43	ECR105 DWR50 AW125	661	453	5,1	67	792 0270
	48	17 - 43	ECR105 DWR50 AW150	661	453	5,2	67	792 0271
	Built-in nutrunner with reaction torque sensor							
C	32	7 - 28	ECR103 DR35 AW125	990	453	5,0	67	792 0497
	32	7 - 28	ECR103 DR35 AW150	990	453	5,1	67	792 0498
	47	10 - 42	ECR105 DR50 AW125	661	453	5,0	67	792 0499
	47	10 - 42	ECR105 DR50 AW150	661	453	5,1	67	792 0500
	Built-in nutrunner with two reaction torque sensors							
D	32	7 - 28	ECR103 DWR35 DR35 AW125	990	547	6,0	67	792 0513
	32	7 - 28	ECR103 DWR35 DR35 AW150	990	547	6,1	67	792 0514
	47	10 - 42	ECR105 DWR50 DR50 AW125	661	547	6,0	67	792 0515
	47	10 - 42	ECR105 DWR50 DR50 AW150	661	547	6,1	67	792 0516

Built-In Nutrunner – Angle Drive

E 1.3.1

■ Combinations

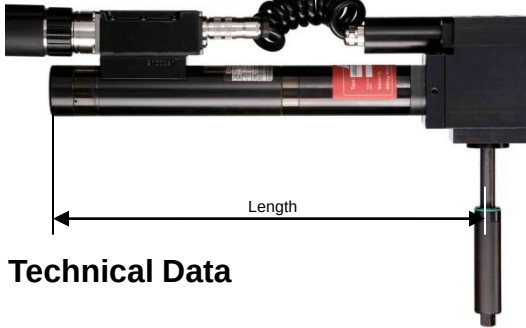
Design with reaction torque sensor



Built-In Nutrunner Size 1 – Angle Drive

E 1.3.1

Illustration similar (ECR105 AWD150-50)



Size 1

2 Nm up to 48 Nm

■ Technical Data

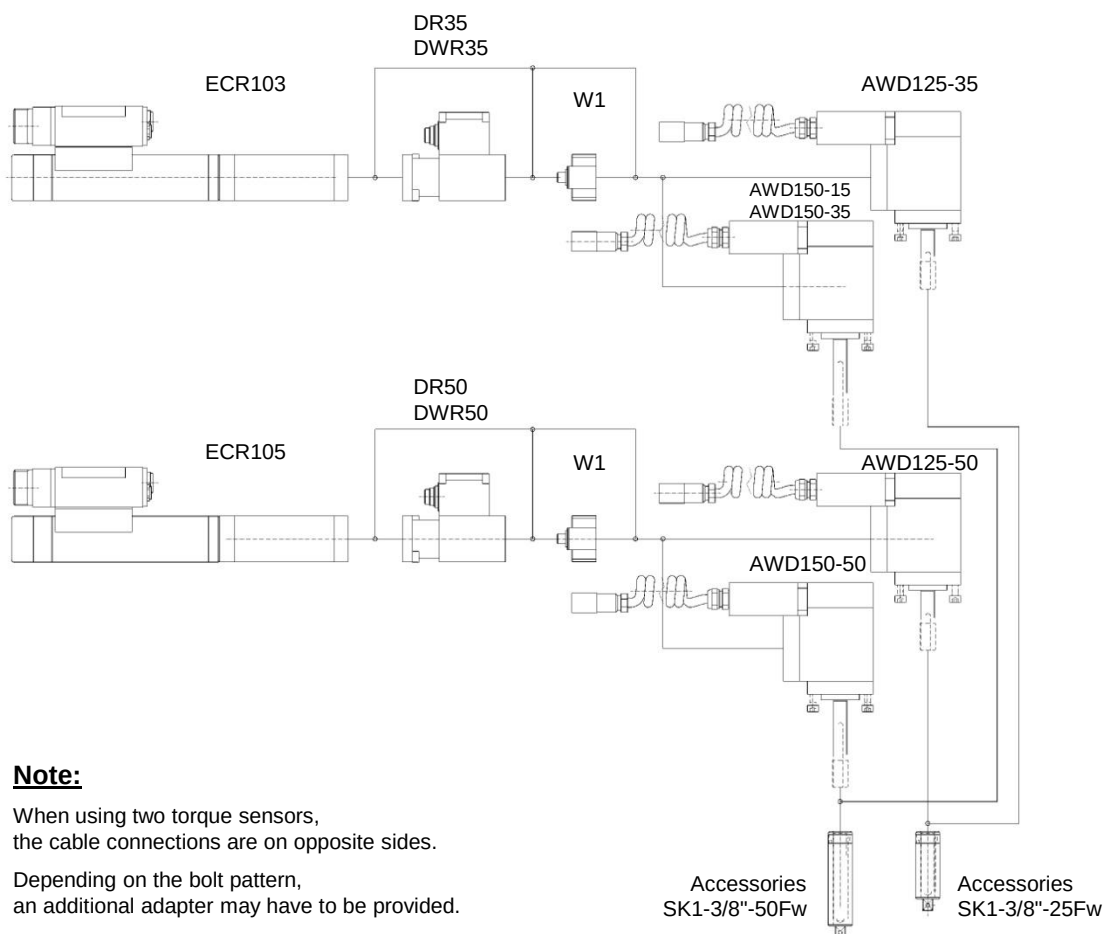
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
	Built-in nutrunner with action torque sensor							
E	32	4 - 28	ECR103 AWD125-35	990	359	4,5	67	792 0276
	32	2 - 13	ECR103 AWD150-15	990	359	4,6	67	792 0277
	32	4 - 28	ECR103 AWD150-35	990	359	4,6	67	792 0278
	48	5 - 43	ECR105 AWD125-50	661	359	4,5	67	792 0279
	48	5 - 43	ECR105 AWD150-50	661	359	4,6	67	792 0280
	Built-in nutrunner with action torque sensor and angle encoder							
F	32	4 - 28	ECR103 W1 AWD125-35	990	381	4,6	67	792 0281
	32	2 - 13	ECR103 W1 AWD150-15	990	381	4,7	67	792 0282
	32	4 - 28	ECR103 W1 AWD150-35	990	381	4,7	67	792 0283
	48	5 - 43	ECR105 W1 AWD125-50	661	381	4,6	67	792 0284
	48	5 - 43	ECR105 W1 AWD150-50	661	381	4,7	67	792 0285
	Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)							
G	32	4 - 28	ECR103 DWR35 AWD125-35	990	453	5,4	67	792 0286
	32	2 - 13	ECR103 DWR35 AWD150-15	990	453	5,6	67	792 0287
	32	4 - 28	ECR103 DWR35 AWD150-35	990	453	5,6	67	792 0288
	48	5 - 43	ECR105 DWR50 AWD125-50	661	453	5,4	67	792 0289
	48	5 - 43	ECR105 DWR50 AWD150-50	661	453	5,6	67	792 0290
	Built-in nutrunner with redundant design							
H	32	4 - 28	ECR103 DR35 W1 AWD125-35	990	475	5,5	67	792 0529
	32	2 - 13	ECR103 DR35 W1 AWD150-15	990	475	5,7	67	792 0530
	32	4 - 28	ECR103 DR35 W1 AWD150-35	990	475	5,7	67	792 0531
	48	5 - 43	ECR105 DR50 W1 AWD125-50	661	475	5,5	67	792 0532
	48	5 - 43	ECR105 DR50 W1 AWD150-50	661	475	5,7	67	792 0533
	Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)							
I	32	4 - 28	ECR103 DWR35 W1 AWD125-35	990	475	5,5	67	792 0291
	32	2 - 13	ECR103 DWR35 W1 AWD150-15	990	475	5,7	67	792 0292
	32	4 - 28	ECR103 DWR35 W1 AWD150-35	990	475	5,7	67	792 0293
	48	5 - 43	ECR105 DWR50 W1 AWD125-50	661	475	5,5	67	792 0294
	48	5 - 43	ECR105 DWR50 W1 AWD150-50	661	475	5,7	67	792 0295

Built-In Nutrunner – Angle Drive

E 1.3.1

■ Combinations

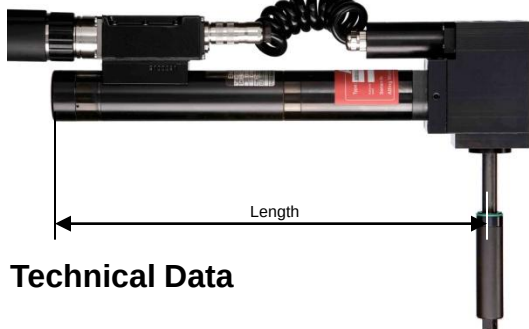
Design with action torque sensor



Built-In Nutrunner Size 2 – Angle Drive

E 1.3.2

Illustration similar (ECR105 AWD150-50)



Size 2

6 Nm up to 196 Nm

■ Technical Data

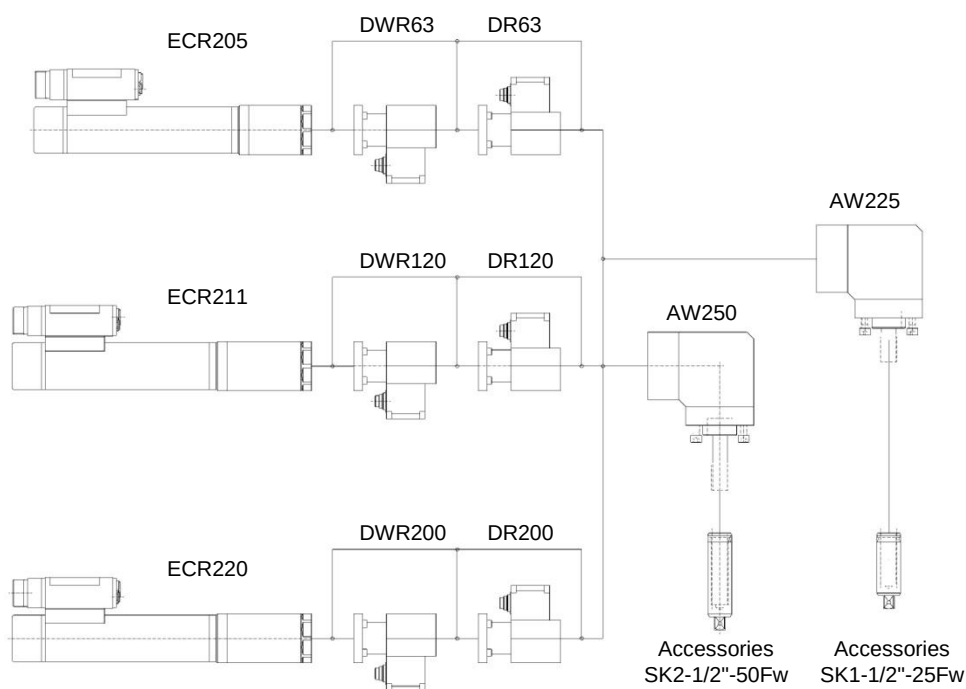
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
Built-in nutrunner without torque sensor								
A	52	19 - 46	ECR205 AW225	1200	412	8,1	67	792 0296
	52	19 - 46	ECR205 AW250	1200	412	8,2	67	792 0297
	108	38 - 97	ECR211 AW225	577	438	8,6	67	792 0298
	108	38 - 97	ECR211 AW250	577	438	8,7	67	792 0299
	196	69 - 176	ECR220 AW225	319	438	8,6	67	792 0300
	196	69 - 176	ECR220 AW250	319	438	8,7	67	792 0301
Built-in nutrunner with reaction torque sensor for calibration								
B	52	19 - 46	ECR205 DWR63 AW225	1200	509	9,6	67	792 0302
	52	19 - 46	ECR205 DWR63 AW250	1200	509	9,7	67	792 0303
	108	38 - 97	ECR211 DWR120 AW225	577	535	10,1	67	792 0304
	108	38 - 97	ECR211 DWR120 AW250	577	535	10,2	67	792 0305
	196	69 - 176	ECR220 DWR200 AW225	319	535	10,1	67	792 0306
	196	69 - 176	ECR220 DWR200 AW250	319	535	10,2	67	792 0307
Built-in nutrunner with reaction torque sensor								
C	52	11 - 46	ECR205 DR63 AW225	1200	509	9,5	67	792 0501
	52	11 - 46	ECR205 DR63 AW250	1200	509	9,6	67	792 0502
	108	22 - 97	ECR211 DR120 AW225	577	535	10,0	67	792 0503
	108	22 - 97	ECR211 DR120 AW250	577	535	10,1	67	792 0504
	190	38 - 171	ECR220 DR200 AW225	319	535	10,0	67	792 0505
	190	38 - 171	ECR220 DR200 AW250	319	535	10,1	67	792 0506
Built-in nutrunner with two reaction torque sensors								
D	52	11 - 46	ECR205 DWR63 DR63 AW225	1200	606	10,9	67	792 0517
	52	11 - 46	ECR205 DWR63 DR63 AW250	1200	606	10,6	67	792 0518
	108	22 - 97	ECR211 DWR120 DR120 AW225	577	632	11,4	67	792 0519
	108	22 - 97	ECR211 DWR120 DR120 AW250	577	632	11,5	67	792 0520
	190	38 - 171	ECR220 DWR200 DR200 AW225	319	632	11,4	67	792 0521
	190	38 - 171	ECR220 DWR200 DR200 AW250	319	632	11,5	67	792 0522

Built-In Nutrunner – Angle Drive

E 1.3.2

■ Combinations

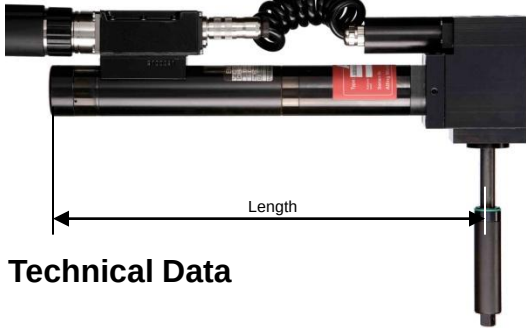
Design with reaction torque sensor



Built-In Nutrunner Size 2 – Angle Drive

E 1.3.2

Illustration similar (ECR105 AWD150-50)



Size 2

6 Nm up to 196 Nm

■ Technical Data

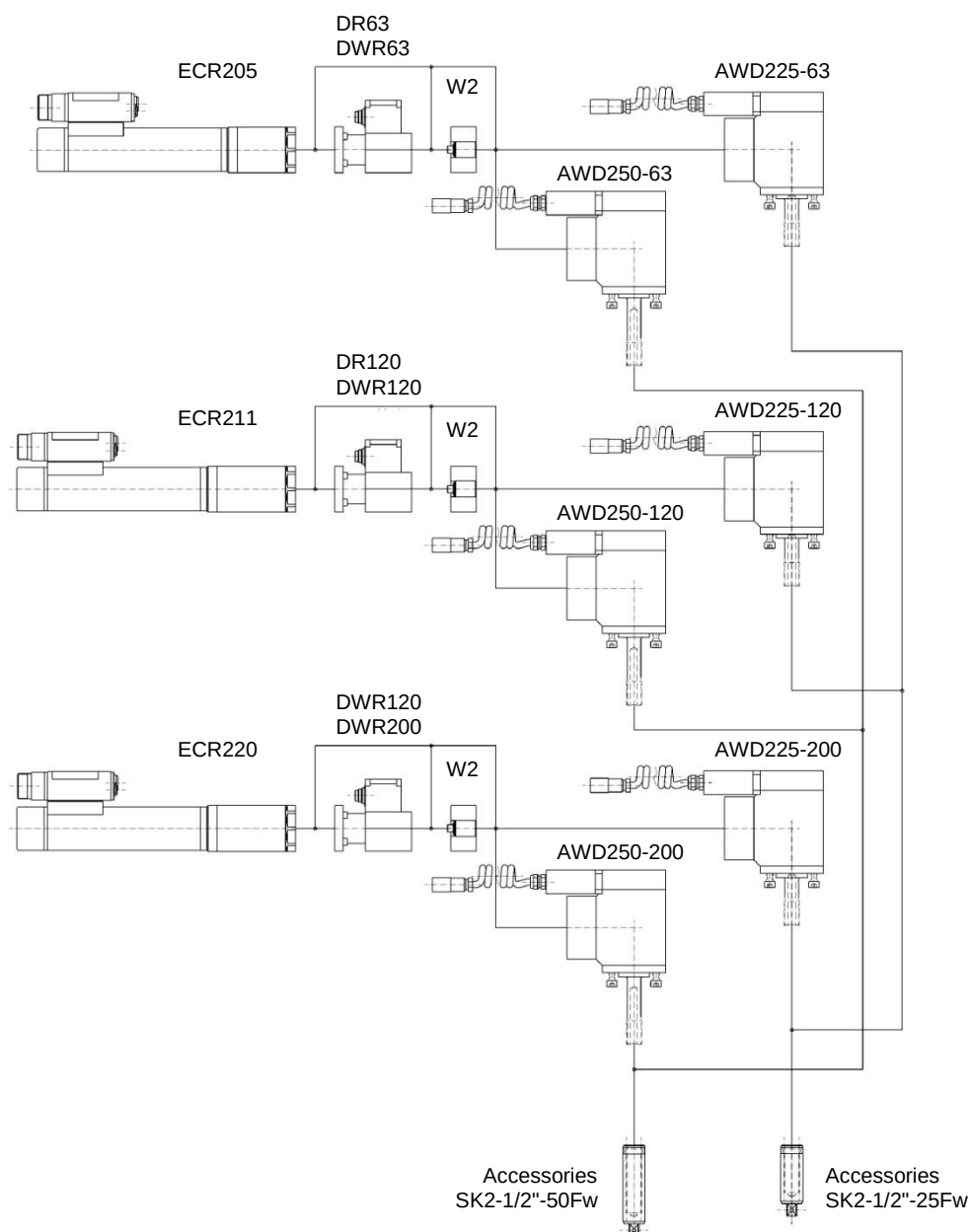
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
Built-in nutrunner with action torque sensor								
E	52	6 - 46	ECR205 AWD225-63	1200	412	8,6	67	792 0314
	52	6 - 46	ECR205 AWD250-63	1200	412	8,7	67	792 0315
	108	11 - 97	ECR211 AWD225-120	577	438	9,1	67	792 0316
	108	11 - 97	ECR211 AWD250-120	577	438	9,2	67	792 0317
	196	20 - 176	ECR220 AWD225-200	319	438	9,1	67	792 0318
	196	20 - 176	ECR220 AWD250-200	319	438	9,2	67	792 0319
Built-in nutrunner with action torque sensor and angle encoder								
F	52	6 - 46	ECR205 W2 AWD225-63	1200	444	8,9	67	792 0320
	52	6 - 46	ECR205 W2 AWD250-63	1200	444	9,0	67	792 0321
	108	11 - 97	ECR211 W2 AWD225-120	577	470	9,4	67	792 0322
	108	11 - 97	ECR211 W2 AWD250-120	577	470	9,5	67	792 0323
	196	20 - 176	ECR220 W2 AWD225-200	319	470	9,4	67	792 0324
	196	20 - 176	ECR220 W2 AWD250-200	319	470	9,5	67	792 0325
Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)								
G	52	6 - 46	ECR205 DWR63 AWD225-63	1200	509	10,0	67	792 0326
	52	6 - 46	ECR205 DWR63 AWD250-63	1200	509	10,1	67	792 0327
	108	11 - 97	ECR211 DWR120 AWD225-120	577	535	10,5	67	792 0328
	108	11 - 97	ECR211 DWR120 AWD250-120	577	535	10,6	67	792 0329
	196	20 - 176	ECR220 DWR200 AWD225-200	319	535	10,5	67	792 0330
	196	20 - 176	ECR220 DWR200 AWD250-200	319	535	10,6	67	792 0331
Built-in nutrunner with redundant design								
H	52	6 - 46	ECR205 DR63 W2 AWD225-63	1200	541	10,3	67	792 0534
	52	6 - 46	ECR205 DR63 W2 AWD250-63	1200	541	10,4	67	792 0535
	108	11 - 97	ECR211 DR120 W2 AWD225-120	577	567	10,8	67	792 0536
	108	11 - 97	ECR211 DR120 W2 AWD250-120	577	567	10,9	67	792 0537
	196	20 - 176	ECR220 DR200 W2 AWD225-200	319	567	10,8	67	792 0538
	196	20 - 176	ECR220 DR200 W2 AWD250-200	319	567	10,9	67	792 0539
Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)								
I	52	6 - 46	ECR205 DWR63 W2 AWD225-63	1200	541	10,3	67	792 0332
	52	6 - 46	ECR205 DWR63 W2 AWD250-63	1200	541	10,4	67	792 0333
	108	11 - 97	ECR211 DWR120 W2 AWD225-120	577	567	10,8	67	792 0334
	108	11 - 97	ECR211 DWR120 W2 AWD250-120	577	567	10,9	67	792 0335
	196	20 - 176	ECR220 DWR200 W2 AWD225-200	319	567	10,8	67	792 0336
	196	20 - 176	ECR220 DWR200 W2 AWD250-200	319	567	10,9	67	792 0337

Built-In Nutrunner – Angle Drive

E 1.3.2

■ Combinations

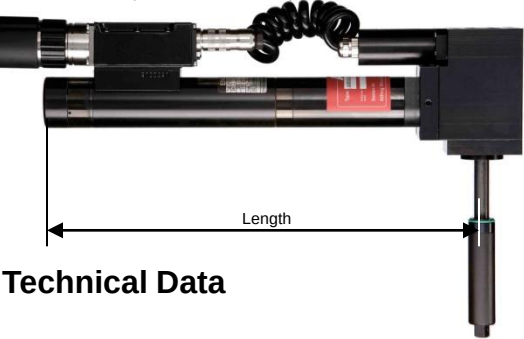
Design with action torque sensor



Built-In Nutrunner Size 3 – Angle Drive

E 1.3.3

Illustration similar (ECR105 AWD150-50)



Size 3

25 Nm up to 642 Nm

■ Technical Data

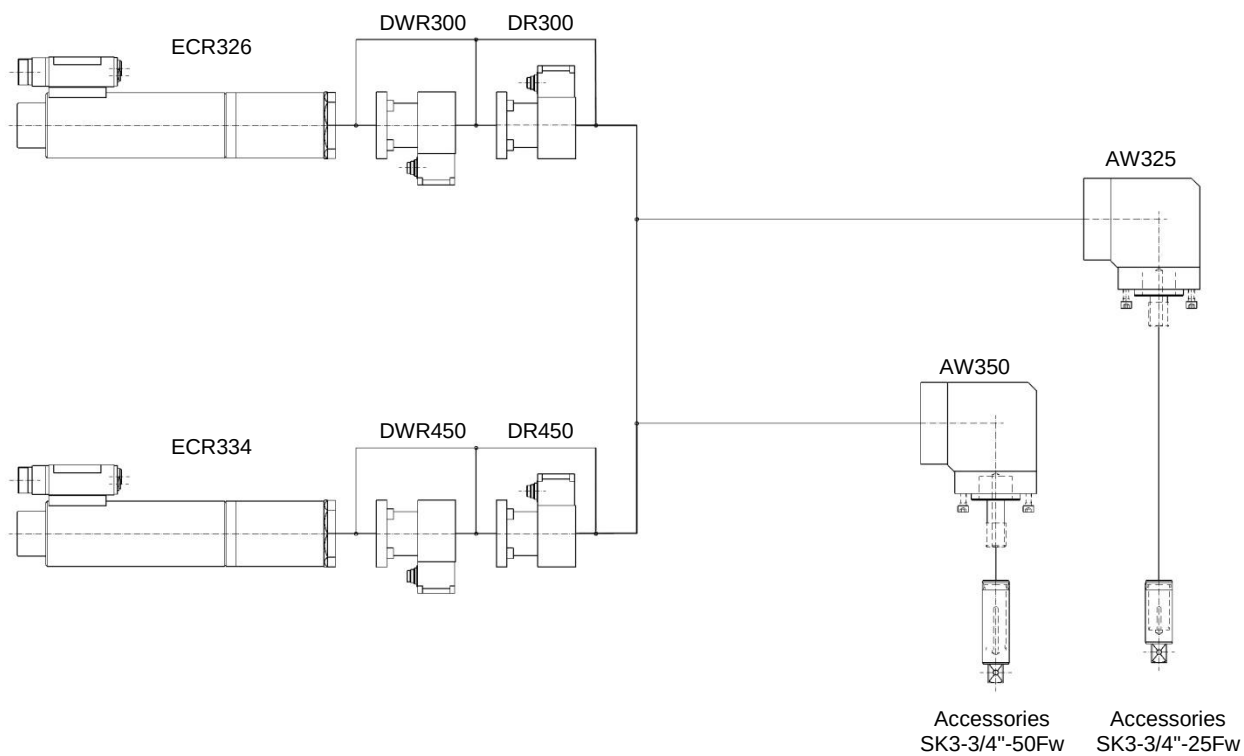
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
Built-in nutrunner without torque sensor								
A	247	87 - 222	ECR326 AW325	470	482	13,0	65	792 0338
	247	87 - 222	ECR326 AW350	470	482	13,4	65	792 0339
	321	105 - 270	ECR334 AW325	362	482	16,2	65	792 0340
	321	105 - 270	ECR334 AW350	362	482	16,6	65	792 0341
	495	174 - 445	ECR326 AW3325	235	498	15,0	65	792 0545
	495	174 - 445	ECR326 AW3350	235	498	15,0	65	792 0546
	642	210 - 540	ECR334 AW3325	181	498	18,2	65	792 0547
	642	210 - 540	ECR334 AW3350	181	498	18,2	65	792 0548
Built-in nutrunner with reaction torque sensor for calibration								
B	247	87 - 222	ECR326 DWR300 AW325	470	579	15,8	65	792 0344
	247	87 - 222	ECR326 DWR300 AW350	470	579	16,2	65	792 0345
	321	105 - 270	ECR334 DWR450 AW325	362	579	19,0	65	792 0346
	321	105 - 270	ECR334 DWR450 AW350	362	579	19,4	65	792 0347
	495	174 - 445	ECR326 DWR300 AW3325	235	595	17,7	65	792 0685
	495	174 - 445	ECR326 DWR300 AW3350	235	595	17,7	65	792 0686
	642	210 - 540	ECR334 DWR450 AW3325	181	595	20,9	65	792 0687
	642	210 - 540	ECR334 DWR450 AW3350	181	595	20,9	65	792 0688

Built-In Nutrunner – Angle Drive

E 1.3.3

■ Combinations

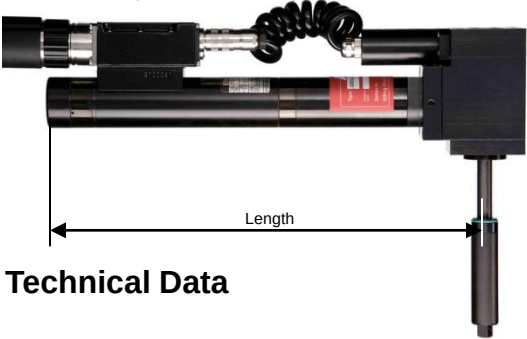
Design with reaction torque sensor



Built-In Nutrunner Size 3 – Angle Drive

E 1.3.3

Illustration similar (ECR105 AWD150-50)



Size 3
25 Nm up to 642 Nm

■ Technical Data

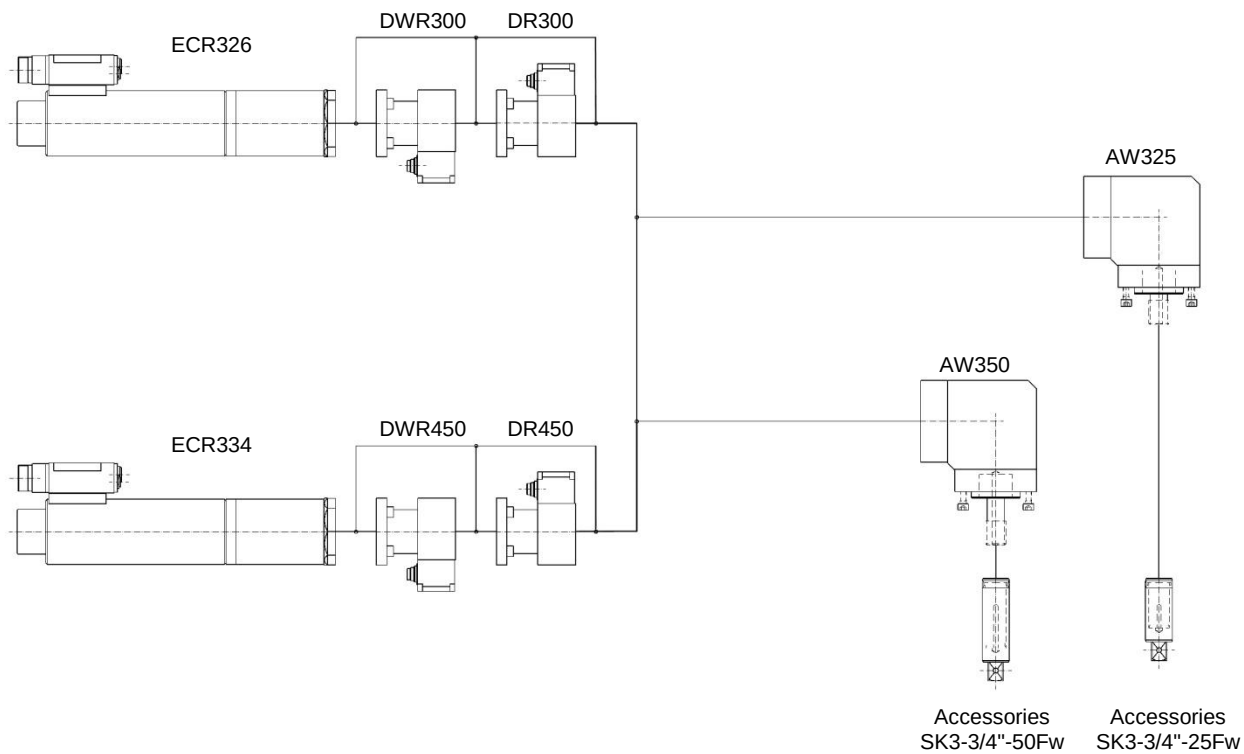
	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
	Built-in nutrunner with reaction torque sensor							
C	247	50 - 222	ECR326 DR300 AW325	470	579	15,7	65	792 0507
	247	50 - 222	ECR326 DR300 AW350	470	579	16,1	65	792 0508
	321	60 - 270	ECR334 DR450 AW325	362	579	18,9	65	792 0509
	321	60 - 270	ECR334 DR450 AW350	362	579	19,3	65	792 0510
	495	99 - 445	ECR326 DR300 AW3325	235	595	17,6	65	792 0551
	495	99 - 445	ECR326 DR300 AW3350	235	595	17,6	65	792 0552
	642	120 - 540	ECR334 DR450 AW3325	181	595	20,8	65	792 0553
	642	120 - 540	ECR334 DR450 AW3350	181	595	20,8	65	792 0554
	Built-in nutrunner with two reaction torque sensors							
D	247	50 - 222	ECR326 DWR300 DR300 AW325	470	676	18,4	65	792 0523
	247	50 - 222	ECR326 DWR300 DR300 AW350	470	676	18,8	65	792 0524
	321	60 - 270	ECR334 DWR450 DR450 AW325	362	676	21,6	65	792 0525
	321	60 - 270	ECR334 DWR450 DR450 AW350	362	676	22,0	65	792 0526
	495	99 - 445	ECR326 DWR300 DR300 AW3325	235	692	20,2	65	792 0557
	495	99 - 445	ECR326 DWR300 DR300 AW3350	235	692	20,2	65	792 0558
	642	120 - 540	ECR334 DWR450 DR450 AW3325	181	692	23,4	65	792 0559
	642	120 - 540	ECR334 DWR450 DR450 AW3350	181	692	23,4	65	792 0560

Built-In Nutrunner – Angle Drive

E 1.3.3

■ Combinations

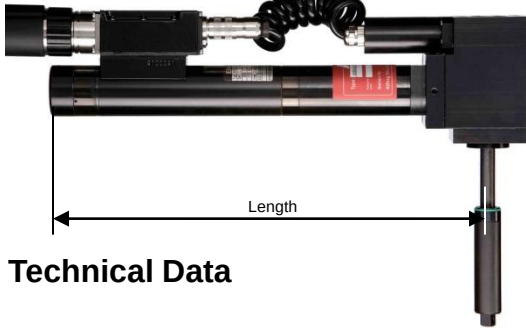
Design with reaction torque sensor



Built-In Nutrunner Size 3 – Angle Drive

E 1.3.3

Illustration similar (ECR105 AWD150-50)



Size 3

25 Nm up to 642 Nm

■ Technical Data

	Max. torque capacity in Nm	Torque range Nm	Type	Max. idle speed rpm	Length mm	Weight kg	Sound Level db (A)	Ident-No.
	Built-in nutrunner with action torque sensor							
E	247	25 - 222	ECR326 AWD325-300	470	482	14,3	65	792 0356
	247	25 - 222	ECR326 AWD350-300	470	482	14,5	65	792 0357
	642	60 - 540	ECR334 AWD325-700	181	499	18,6	65	792 0358
	642	60 - 540	ECR334 AWD360-700	181	499	18,9	65	792 0359
	Built-in nutrunner with action torque sensor and angle encoder							
F	247	25 - 222	ECR326 W3 AWD325-300	470	521	14,9	65	792 0360
	247	25 - 222	ECR326 W3 AWD350-300	470	521	15,1	65	792 0361
	642	60 - 540	ECR334 W3 AWD325-700	181	538	19,2	65	792 0362
	642	60 - 540	ECR334 W3 AWD360-700	181	538	19,5	65	792 0363
	Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)							
G	247	25 - 222	ECR326 DWR300 AWD325-300	470	579	16,9	65	792 0364
	247	25 - 222	ECR326 DWR300 AWD350-300	470	579	17,1	65	792 0365
	642	60 - 540	ECR334 DWR450 AWD325-700	181	596	21,5	65	792 0366
	642	60 - 540	ECR334 DWR450 AWD360-700	181	596	21,8	65	792 0367
	Built-in nutrunner with redundant design							
H	247	25 - 222	ECR326 DR300 W3 AWD325-300	470	618	17,5	65	792 0540
	247	25 - 222	ECR326 DR300 W3 AWD350-300	470	618	17,7	65	792 0541
	642	60 - 540	ECR334 DR450 W3 AWD325-700	181	635	22,1	65	792 0542
	642	60 - 540	ECR334 DR450 W3 AWD360-700	181	635	22,4	65	792 0543
	Built-in nutrunner with torque sensor for calibration (action torque sensor and reaction torque sensor)							
I	247	25 - 222	ECR326 DWR300 W3 AWD325-300	470	618	17,5	65	792 0368
	247	25 - 222	ECR326 DWR300 W3 AWD350-300	470	618	17,7	65	792 0369
	642	60 - 540	ECR334 DWR450 W3 AWD325-700	181	635	22,1	65	792 0370
	642	60 - 540	ECR334 DWR450 W3 AWD360-700	181	635	22,4	65	792 0371

Built-In Nutrunner – Angle Drive

E 1.3.3

■ Combinations

Design with action torque sensor

