Sumitomo Drive Technologies

E CYCLO – ECY

Motion Control Drives

E CYCLO - ECY 20X

Precise. Compact. Durable.

We are constantly working to make our products as performing as possible in order to offer the best solution for your application. This is how the E Cyclo ECY 20X series was born, with which we have once again surpassed our leading position in the market.

The new ECY 20X series offers an overall improved performance of 30%. In many aspects the new series exceeds the performance of the previous model ECY 10X.

In addition, the ECY 20X series comes along with a variety of different out of the box motor adapters. This gives you the flexibility to mount a variety of motor types without any modifications.

In other words, the new E Cyclo 20X series offers more power and also more possibilities at the same price as the previous model.

Wide range of applications, from cobots to machine tools to medical equipment and packaging machines, as well as in all other application examples where zero backlash, compactness or high torque density are required.

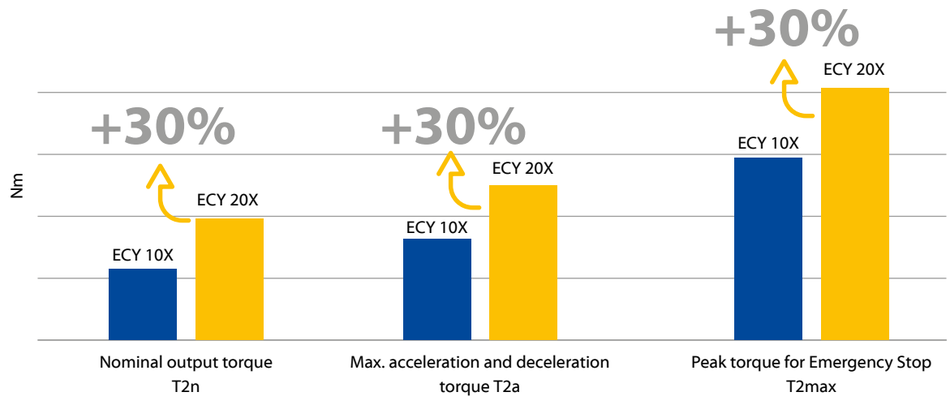
Visit the E Cyclo poduct page for more details:

visit us

SIZE	REDUCTION RATIO 50	80	100
203	●	●	●
205	●	●	●
107	●	●	●

E CYCLO - ECY 20X SERIES IMPROVEMENTS

Performance increases by 30%

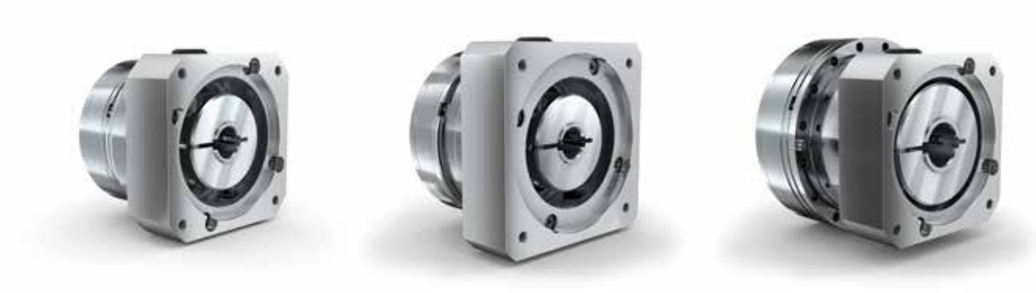


SIZE	RATIO	NOMINAL OUTPUT TORQUE T2n [Nm]	MAX. ACCELERATION AND DECELERATION TORQUE T2a [Nm]	PEAK TORQUE FOR EMERGENCY STOP T2max [Nm]
203	50	30	44	91
	80	42	56	113
	100	44	70	143
205	50	47	73	127
	80	63	96	165
	100	75	107	191
107	50	56	98	186
	80	90	137	255
	100	96	157	284

SIZE	MAX. PERMISSIBLE INPUT SPEED n1 max [rpm]	MAX. PERMISSIBLE INPUT SPEED n1 50% ED [rpm]	MAX. PERMISSIBLE INPUT SPEED n1 100% ED [rpm]
203	8,500	5,000	2,500
205	7,300	5,000	2,500
107	6,500	4,000	2,000

OUT OF THE BOX MOTOR ADAPTERS FOR EACH SIZE

Maximum flexibility for any motor



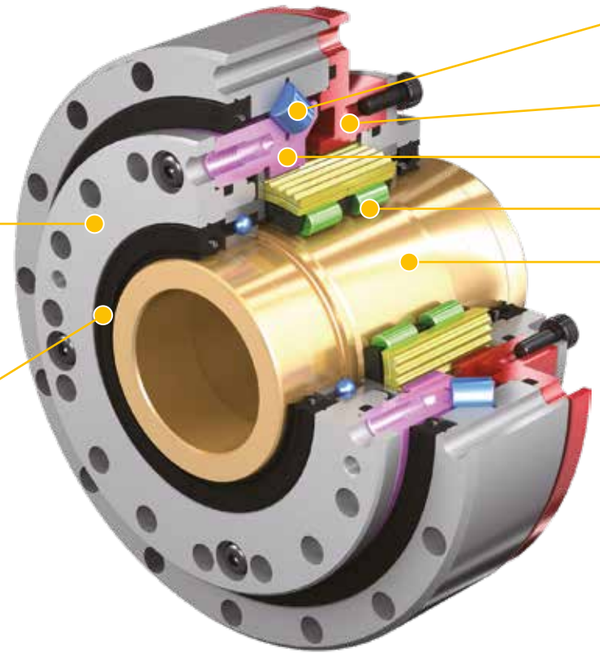
E CYLCO – UNIQUE REDUCER STRUCTURE FOR HIGHEST PERFORMANCES

An optimal starting point for various applications

Cyclo Drives were created and developed by Sumitomo Drive Technologies. This unique reducer structure by using teeth trochoid tooth profile* is being used in industrial robots and transfer devices all over the world.

The ECY series, which was developed as a compact reducer for non-backlash applications, fuses the strain wave gear with the engagement theory of the Cyclo Drives, thus realizing high rigidity and a compact structure that were unavailable until now.

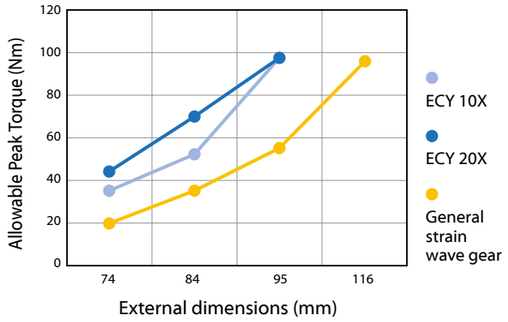
* Epitrochoid parallel curves



E CYCLO – THE BENCHMARK TO THE MARKET

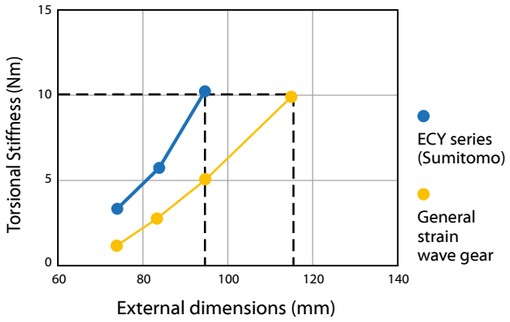
Precision and durability for various motion control challenges

Compact and high torque



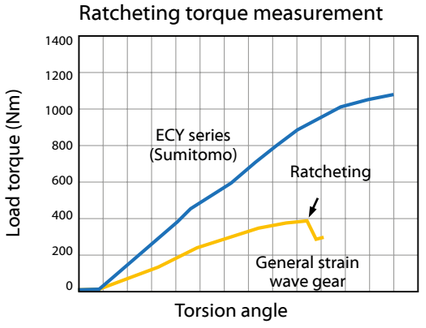
The allowable peak torque is approximately 2 times (representative value) that of a general strain wave gear (equivalent size and ratio 50:1), enabling the device to be miniaturized.

High rigidity



The torsional stiffness is approximately 1.5 times (representative value) that of a general strain wave gear (equivalent size), enabling the device to be miniaturized.

Ratcheting resistance (safety in the event of an overload)



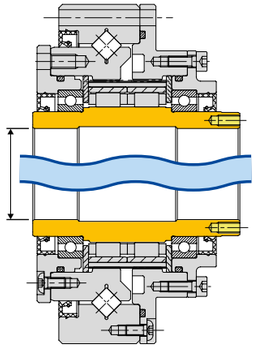
Ratcheting hardly occur, thus ensuring high safety in the event of an overload.

Reasons for above-average strength

	Examples of general strain wave gear	ECY-Series
External gear profile	Cup type / Hat type	Cylindrical type
Tooth contact in the tooth trace direction	30-50 %	≒ 100 %
Elliptical bearing structure	Ball bearing	Roller bearing

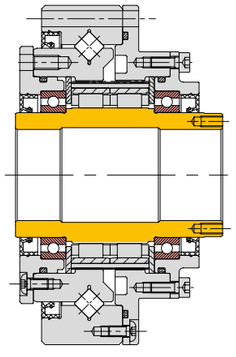
The structure differs from a general strain wave gear, realizing high strength.

Large diameter hollow of high speed shaft



The diameter of the hollow input shaft has been increased, enabling effective utilization of the space between the hollow shaft's wall among other components such as your cables and shafts.

Reduction of assembly work performed by a user



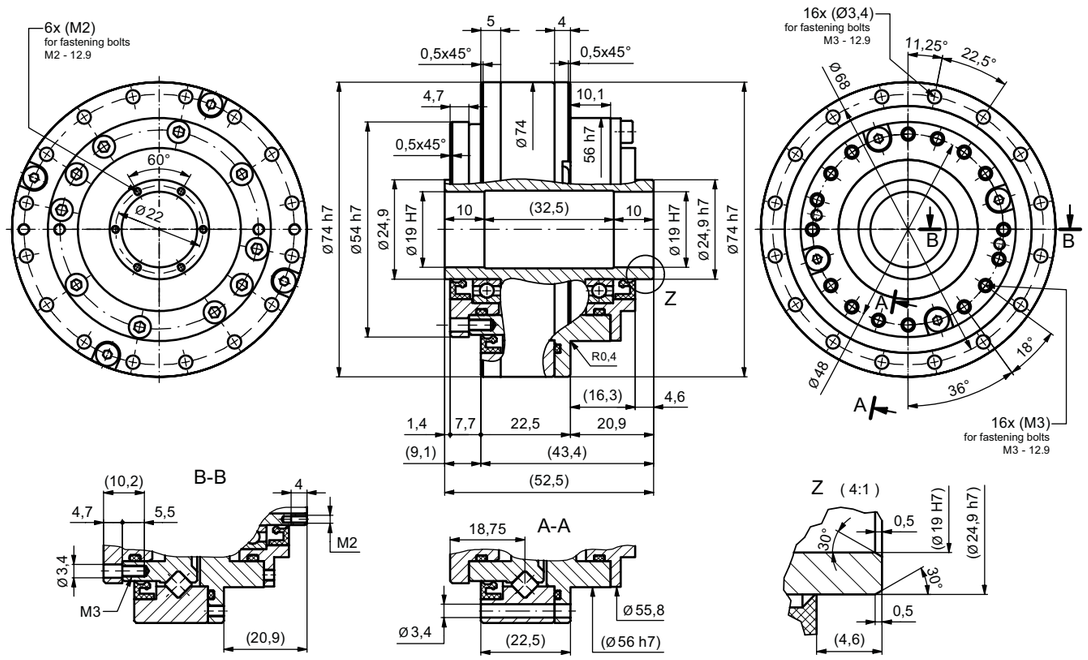
Since the input shaft is supported by the gearbox and the grease is packed into a sealed structure, the shaft is easy to install on the device or the motor.

E CYCLO - ECY 203

Standard E Cyclo, the essential foundation for high-performance gear solutions

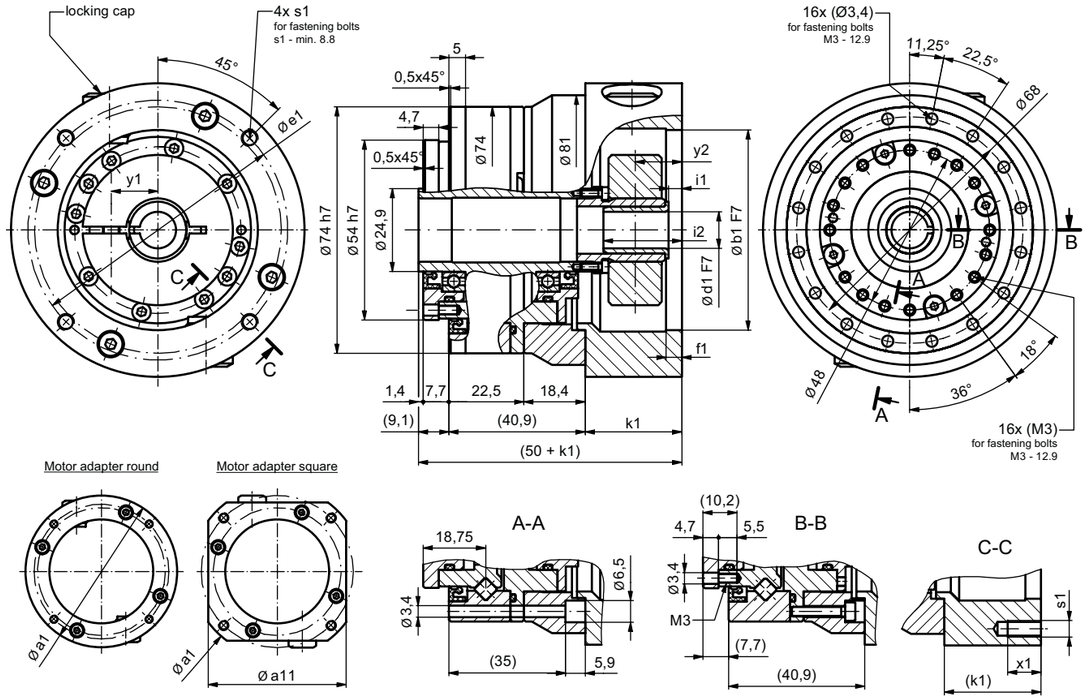
Reduction Ratio	50 - 100
Outer Diameter	74
Max hollow shaft diameter	19
Max. permissible input speed n1 max	8500
Max. permissible input speed n1 50% ED	5000
Max. permissible input speed n1 100% ED	2500
Max. acceleration torque [Nm]	up to 70
Max. torque for Emergency Stop [Nm]	up to 143
Mass [kg]	0.9

ECY 203



E CYCLO - ECY 203 MODULAR

E Cyclo including out of the box motor adapter variants



	Hole for shaft	Centering F7	Spigot seat depth	Pitch circle Ø	Thread in gearbox flange	Thread depth	Flange diameter	Flange square dimension	Flange width	Shaft leeway	Clamping length	Position dimensions clamping ring screw	
	Ø d1	Øb1	f1	Øe1	4x s1	x1	Øa1	a11	k1	i1	i2	y1	y2
Motor Code													
B14G	8	30	6	46	M4	6	90	-	31	6,0	25,5	14	16
B08G	8	40	6,5	63	M5	7	90	-	32	7,0	26,5	14	17
B25G	8	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
C08G	9	40	6,5	63	M4	7	90	-	32	7,0	26,5	14	17
C25G	9	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
C11G	9	60	4	75	M5	12	90	-	29	4,0	23,5	14	14
D25L	10	50	6	70	M5	12	90	-	36	10,0	29,5	14	21
D30L	10	80	5	100	M6	14	110	90	41,5	16,5	36,0	14	26,5
E08G	11	40	6,5	63	M5	7	90	-	32	7,0	26,5	14	17
E25G	11	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
E11G	11	60	4	75	M5	12	90	-	29	4,0	23,5	14	14
F25L	12	50	6	70	M5	12	90	-	36	10,0	29,5	14	21
H08G	14	40	6,5	63	M5	7	90	-	32	8,0	25,0	14	17
H25G	14	50	6	70	M5	12	90	-	31,5	7,5	24,5	14	16,5
H11G	14	60	4	75	M5	12	90	-	29	5,0	22,0	14	14
H18G	14	70	5	90	M6	14	100	80	33	9,0	26,0	14	18

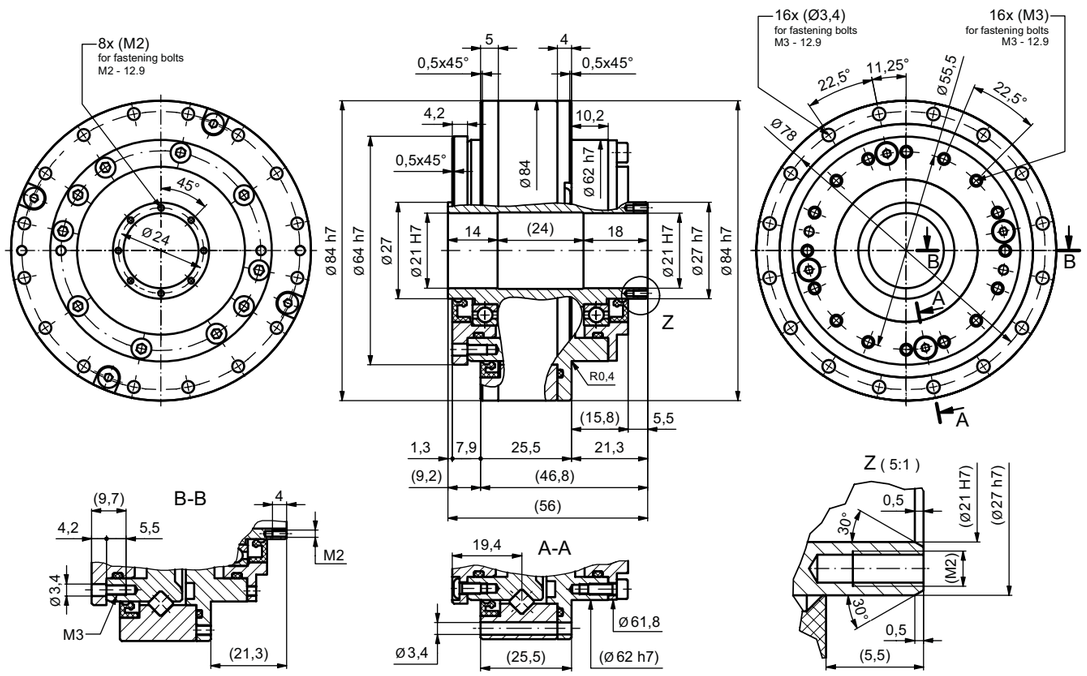
Other motor mounting dimensions available on request.

E CYCLO - ECY 205

Standard E Cyclo, the essential foundation for high-performance gear solutions

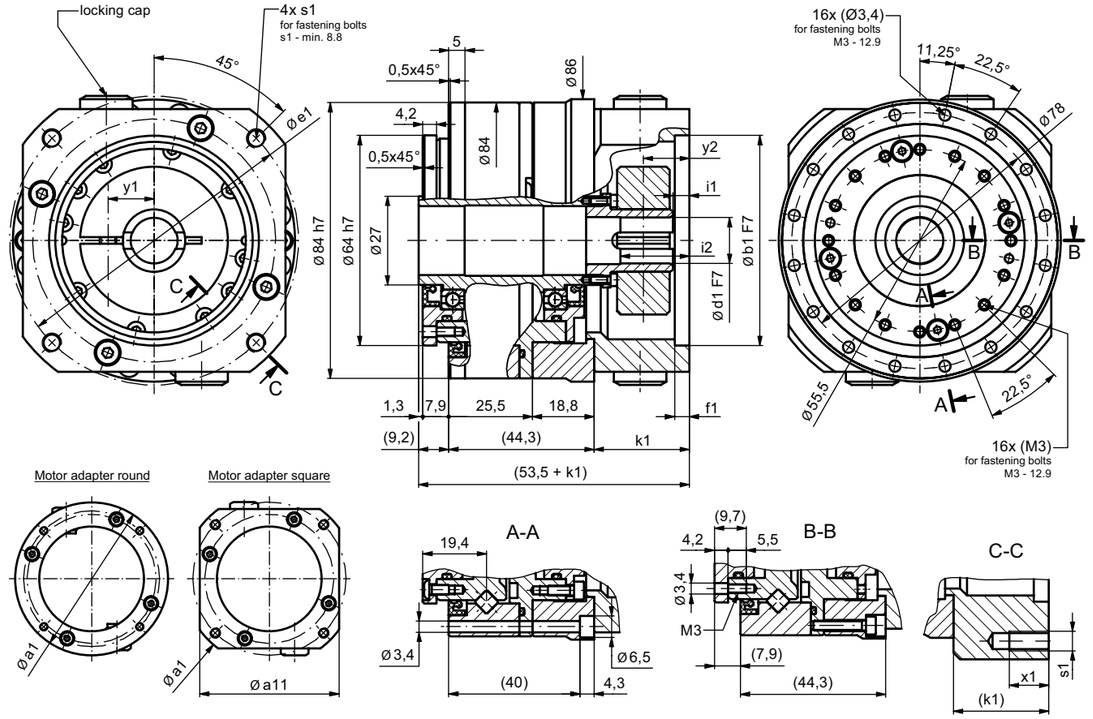
Reduction Ratio	50 - 100
Outer Diameter	84
Max hollow shaft diameter	21
Max. permissible input speed n1 max	7300
Max. permissible input speed n1 50% ED	5000
Max. permissible input speed n1 100% ED	2500
Max. acceleration torque [Nm]	up to 107
Max. torque for Emergency Stop [Nm]	up to 191
Mass [kg]	1.2

ECY 205



E CYCLO - ECY 205 MODULAR

E Cyclo including out of the box motor adapter variants



Motor Code	Hole for shaft Ø d1	Centering F7 Øb1	Spigot seat depth f1	Pitch circle Ø Øe1	Thread in gearbox flange 4x s1	Thread depth x1	Flange diameter Øa1	Flange square dimension a11	Flange width k1	Shaft leeway i1	Clamping length i2	Position dimensions clamping ring screw y1	y2
							mm						
B14G	8	30	6	46	M4	6	90	-	31	6,0	25,5	14	16
B08G	8	40	6,5	63	M5	7	90	-	32	7,0	26,5	14	17
B25G	8	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
C08G	9	40	6,5	63	M4	7	90	-	32	7,0	26,5	14	17
C25G	9	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
C11G	9	60	4	75	M5	12	90	-	29	4,0	23,5	14	14
D25L	10	50	6	70	M5	12	90	-	36	10,0	29,5	14	21
D30L	10	80	5	100	M6	14	110	90	41,5	16,5	36,0	14	26,5
E08G	11	40	6,5	63	M5	7	90	-	32	7,0	26,5	14	17
E25G	11	50	6	70	M5	12	90	-	31,5	6,5	26,0	14	16,5
E11G	11	60	4	75	M5	12	90	-	29	4,0	23,5	14	14
F25L	12	50	6	70	M5	12	90	-	36	10,0	29,5	14	21
H08G	14	40	6,5	63	M5	7	90	-	32	8,0	25,0	14	17
H25G	14	50	6	70	M5	12	90	-	31,5	7,5	24,5	14	16,5
H11G	14	60	4	75	M5	12	90	-	29	5,0	22,0	14	14
H18G	14	70	5	90	M6	14	100	80	33	9,0	26,0	14	18
H35G	14	95	5	115	M8	18	130	100	32,5	8,5	25,5	14	17,5

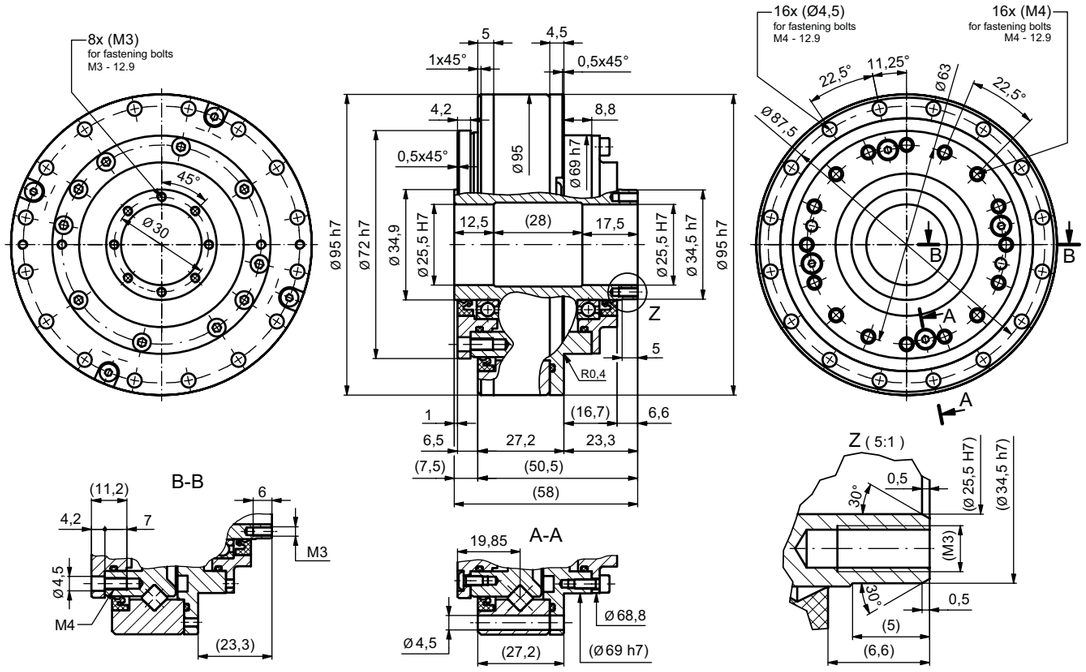
Other motor mounting dimensions available on request.

E CYCLO - ECY 107

Standard E Cyclo, the essential foundation for high-performance gear solutions

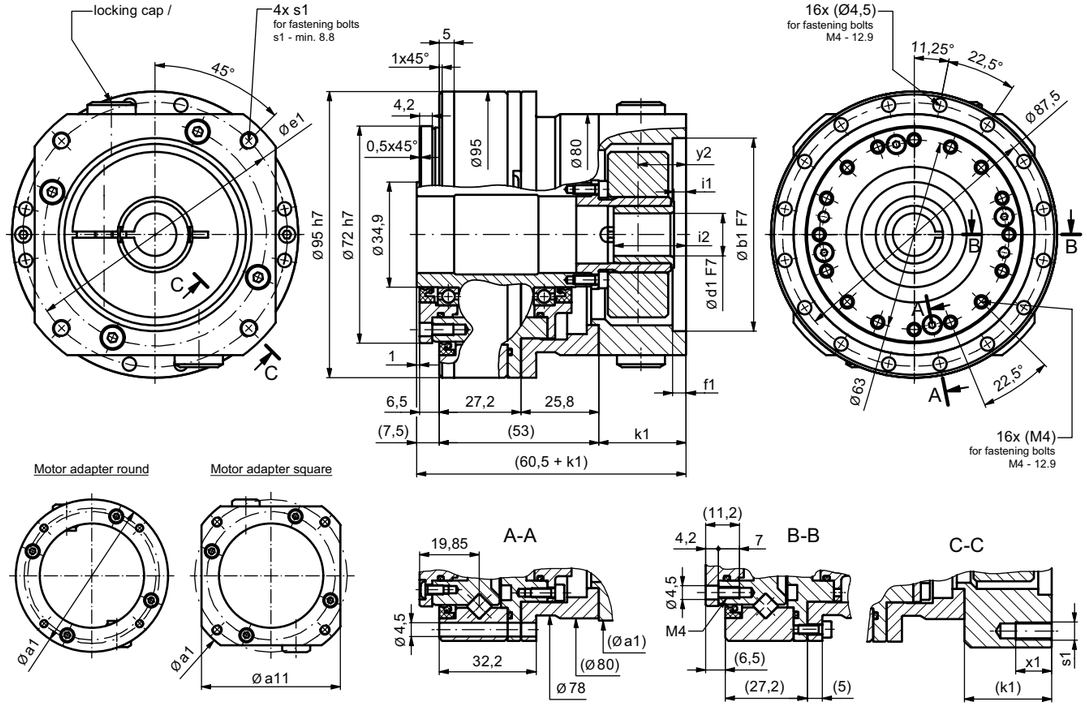
Reduction Ratio	50 - 100
Outer Diameter	95
Max hollow shaft diameter	25,5
Max. permissible input speed n1 max	6500
Max. permissible input speed n1 50% ED	4000
Max. permissible input speed n1 100% ED	2000
Max. acceleration torque [Nm]	up to 157
Max. torque for Emergency Stop [Nm]	up tp 284
Mass [kg]	1.6

ECY 107



E CYCLO - ECY 107 MODULAR

E Cyclo including out of the box motor adapter variants



Motor Code	Hole for shaft Ø d1	Centering F7 Øb1	Spigot seat depth f1	Pitch circle Ø Øe1	Thread in gearbox flange 4x s1	Thread depth x1	Flange diameter Øa1	Flange square dimension a11	Flange width k1	Shaft leeway i1	Clamping length i2	Position dimensions clamping ring screw y1	y2
							mm						
C08G	9	40	6,5	63	M4	7	90	-	32	7,0	27,0	17	17
C25G	9	50	6	70	M5	12	90	-	31,5	6,5	26,5	17	16,5
C11G	9	60	4	75	M5	12	90	-	29	4,0	24,0	17	14
D25L	10	50	6	70	M5	12	90	-	36	10,0	20,0 30,0	17	21
D30L	10	80	5	100	M6	14	110	90	41,5	16,5	36,5	17	26,5
E08G	11	40	6,5	63	M5	7	90	-	32	7,0	27,0	17	17
E25G	11	50	6	70	M5	12	90	-	31,5	6,5	26,5	17	16,5
E11G	11	60	4	75	M5	12	90	-	29	4,0	24,0	17	14
F25L	12	50	6	70	M5	12	90	-	36	10,0	30,0	17	21
H08G	14	40	6,5	63	M5	7	90	-	32	7,0	27,0	17	17
H25G	14	50	6	70	M5	12	90	-	31,5	6,5	26,5	17	16,5
H11G	14	60	4	75	M5	12	90	-	29	4,0	24,0	17	14
H18G	14	70	5	90	M6	14	100	80	33	8,0	28,0	17	18
H35G	14	95	5	115	M8	16	130	100	32,5	7,5	27,5	17	17,5
J30G	16	80	5	100	M6	14	110	90	32,5	7,5	27,5	17	19,5
K60L	17	110	8	145	M8	18	165	130	35,5	10,5	34,0	17	22,5
M11G	19	60	4	75	M5	12	90	-	29	5,0	26,0	17	14
M18G	19	70	5	90	M6	14	100	80	33	9,0	30,0	17	18
M30G	19	80	5	100	M6	14	110	90	32,5	8,5	29,5	17	19,5

Other motor mounting dimensions available on request.

Find your closest Sumitomo Drive Technologies facility here.

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