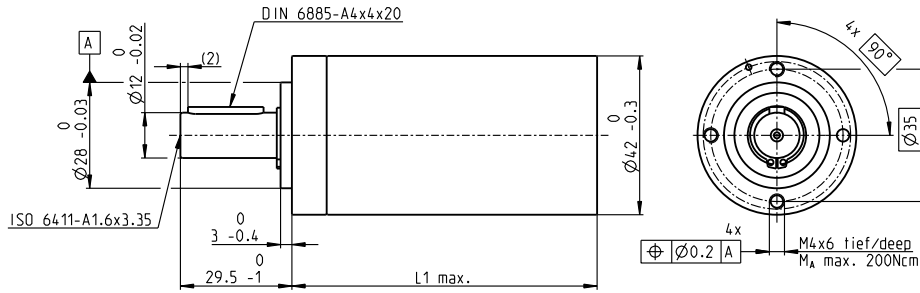


Planetary Gearhead GP 42 C $\varnothing 42$ mm, 3.0–15.0 Nm

Ceramic Version

gear



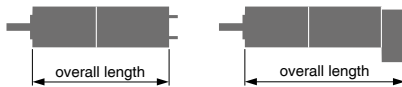
M 1:2

Technical Data

Planetary Gearhead	straight teeth
Output shaft	stainless steel
Bearing at output	preloaded ball bearings
Radial play, 12 mm from flange	max. 0.06 mm
Axial play at axial load	< 5 N 0 mm > 5 N max. 0.3 mm
Max. axial load (dynamic)	150 N
Max. force for press fits	300 N
Direction of rotation, drive to output	=
Max. continuous input speed	8000 rpm
Recommended temperature range	-40...+100°C
Number of stages	1 2 3 4
Max. radial load, 12 mm from flange	120 N 240 N 360 N 360 N

	Part Numbers									
	203113	203115	203119	203120	203124	203129	203128	203133	203137	203141
Gearhead Data										
1 Reduction	3.5:1	12:1	26:1	43:1	81:1	156:1	150:1	285:1	441:1	756:1
2 Absolute reduction	$\frac{7}{2}$	$\frac{49}{4}$	26	$\frac{343}{8}$	$\frac{2197}{27}$	156	$\frac{2401}{16}$	$\frac{15379}{64}$	441	756
10 Mass inertia	14	15	9.1	15	9.4	9.1	15	15	14	14
3 Max. motor shaft diameter	10	10	8	10	8	8	10	10	10	10
Part Numbers	203114	203116	260552*	203121	203125	260553*	203130	203134	203138	203142
1 Reduction	4.3:1	15:1	36:1	53:1	91:1	216:1	186:1	319:1	488:1	936:1
2 Absolute reduction	$\frac{13}{3}$	$\frac{91}{6}$	$\frac{361}{1}$	$\frac{637}{12}$	91	$\frac{2161}{1}$	$\frac{4459}{24}$	$\frac{637}{2}$	$\frac{4394}{9}$	936
10 Mass inertia	9.3	15	5.0	15	15	5.0	15	15	9.4	9.1
3 Max. motor shaft diameter	8	10	4	10	10	4	10	10	8	8
Part Numbers	260551*	203117		203122	203126		203131	203135	203139	260554*
1 Reduction	6:1	19:1		66:1	113:1		230:1	353:1	546:1	1296:1
2 Absolute reduction	$\frac{61}{1}$	$\frac{169}{9}$		$\frac{1183}{18}$	$\frac{338}{3}$		$\frac{8281}{36}$	$\frac{28561}{81}$	546	$\frac{12961}{1}$
10 Mass inertia	4.9	9.4		15	9.4		15	9.4	14	5.0
3 Max. motor shaft diameter	4	8		10	8		10	8	10	4
Part Numbers		203118		203123	203127		203132	203136	203140	
1 Reduction		21:1		74:1	126:1		257:1	394:1	676:1	
2 Absolute reduction		21		$\frac{147}{2}$	126		$\frac{1029}{4}$	$\frac{1183}{3}$	676	
10 Mass inertia		14		15	14		15	15	9.1	
3 Max. motor shaft diameter		10		10	10		10	10	8	
4 Number of stages	1	2	2	3	3	3	4	4	4	4
5 Max. continuous torque	Nm 3.0	7.5	7.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0
6 Max. intermittent torque at gear output	Nm 4.5	11.3	11.3	22.5	22.5	22.5	22.5	22.5	22.5	22.5
7 Max. efficiency	% 90	81	81	72	72	72	64	64	64	64
8 Weight	g 260	360	360	460	460	460	560	560	560	560
9 Average backlash no load	° 0.6	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0
11 Gearhead length L1**	mm 41.0	55.5	55.5	70.0	70.0	70.0	84.5	84.5	84.5	84.5

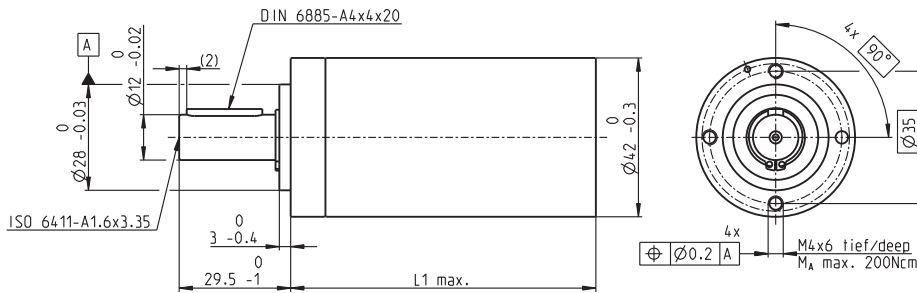
*no combination with EC 45 (150/250 W) and EC-I 40
**for EC 45 flat L1 is -3.6 mm



maxon Modular System													
+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts							
RE 35, 90 W	139					112.1	126.6	126.6	141.1	141.1	155.6	155.6	155.6
RE 35, 90 W	139	MR	464			123.5	138.0	138.0	152.5	152.5	167.0	167.0	167.0
RE 35, 90 W	139	HED_5540	471/473			132.8	147.3	147.3	161.8	161.8	176.3	176.3	176.3
RE 35, 90 W	139	DCT 22	480			130.2	144.7	144.7	159.2	159.2	173.7	173.7	173.7
RE 35, 90 W	139			AB 28	519	148.2	162.7	162.7	177.2	177.2	191.7	191.7	191.7
RE 35, 90 W	139	HED_5540	471/473	AB 28	519	165.4	179.9	179.9	194.4	194.4	208.9	208.9	208.9
RE 40, 150 W	141					112.1	126.6	126.6	141.1	141.1	155.6	155.6	155.6
RE 40, 150 W	141	MR	464			123.5	138.0	138.0	152.5	152.5	167.0	167.0	167.0
RE 40, 150 W	141	HED_5540	471/474			132.8	147.3	147.3	161.8	161.8	176.3	176.3	176.3
RE 40, 150 W	141	HEDL 9140	478			166.2	180.7	180.7	195.2	195.2	209.7	209.7	209.7
RE 40, 150 W	141			AB 28	519	148.2	162.7	162.7	177.2	177.2	191.7	191.7	191.7
RE 40, 150 W	141			AB 28	520	156.2	170.7	170.7	185.2	185.2	199.7	199.7	199.7
RE 40, 150 W	141	HED_5540	471/474	AB 28	519	165.4	179.9	179.9	194.4	194.4	208.9	208.9	208.9
RE 40, 150 W	141	HEDL 9140	478	AB 28	520	176.7	191.2	191.2	205.7	205.7	220.2	220.2	220.2
EC 40, 170 W	229					121.1	135.6	135.6	150.1	150.1	164.6	164.6	164.6
EC 40, 170 W	229	HED_5540	472/474			144.5	159.0	159.0	173.5	173.5	188.0	188.0	188.0
EC 40, 170 W	229	Res 26	481			148.3	162.8	162.8	177.3	177.3	191.8	191.8	191.8
EC 40, 170 W	229			AB 32	521	163.8	178.3	178.3	192.8	192.8	207.3	207.3	207.3
EC 40, 170 W	229	HED_5540	472/474	AB 32	521	182.2	196.7	196.7	211.2	211.2	225.7	225.7	225.7
EC 45, 150 W	230					152.3	166.8	166.8	181.3	181.3	195.8	195.8	195.8
EC 45, 150 W	230	HEDL 9140	478			167.9	182.4	182.4	196.9	196.9	211.4	211.4	211.4
EC 45, 150 W	230	Res 26	481			152.3	166.8	166.8	181.3	181.3	195.8	195.8	195.8
EC 45, 150 W	230			AB 28	520	159.7	174.2	174.2	188.7	188.7	203.2	203.2	203.2
EC 45, 150 W	230	HEDL 9140	478	AB 28	520	176.7	191.2	191.2	205.7	205.7	220.2	220.2	220.2
EC 45, 250 W	231					185.1	199.6	199.6	214.1	214.1	228.6	228.6	228.6
EC 45, 250 W	231	HEDL 9140	478			200.7	215.2	215.2	229.7	229.7	244.2	244.2	244.2
EC 45, 250 W	231	Res 26	481			185.1	199.6	199.6	214.1	214.1	228.6	228.6	228.6
EC 45, 250 W	231			AB 28	520	192.5	207.0	207.0	221.5	221.5	236.0	236.0	236.0
EC 45, 250 W	231	HEDL 9140	478	AB 28	520	209.5	224.0	224.0	238.5	238.5	253.0	253.0	253.0

Planetary Gearhead GP 42 C $\varnothing 42$ mm, 3.0–15.0 Nm

Ceramic Version



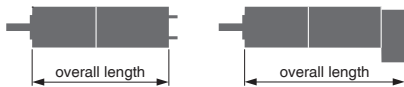
M 1:2

Technical Data	
Planetary Gearhead	straight teeth
Output shaft	stainless steel
Bearing at output	preloaded ball bearings
Radial play, 12 mm from flange	max. 0.06 mm
Axial play at axial load	< 5 N 0 mm > 5 N max. 0.3 mm
Max. axial load (dynamic)	150 N
Max. force for press fits	300 N
Direction of rotation, drive to output	=
Max. continuous input speed	8000 rpm
Recommended temperature range	-40...+100°C
Number of stages	1 2 3 4
Max. radial load, 12 mm from flange	120 N 240 N 360 N 360 N

gear

	Stock program	Standard program	Special program (on request)	Part Numbers																	
				203113	203115	203119	203120	203124	203129	203128	203133	203137	203141								
Gearhead Data																					
1 Reduction				3.5:1	12:1	26:1	43:1	81:1	156:1	150:1	285:1	441:1	756:1								
2 Absolute reduction				7/2	49/4	26	343/8	2197/27	156	2401/16	15379/54	441	756								
10 Mass inertia	gcm ²			14	15	9.1	15	9.4	9.1	15	15	14	14								
3 Max. motor shaft diameter	mm			10	10	8	10	8	8	10	10	10	10								
Part Numbers				203114	203116	260552*	203121	203125	260553*	203130	203134	203138	203142								
1 Reduction				4.3:1	15:1	36:1	53:1	91:1	216:1	186:1	319:1	488:1	936:1								
2 Absolute reduction				13/3	91/6	36/1	637/12	91	216/1	4459/24	637/2	4394/9	936								
10 Mass inertia	gcm ²			9.1	15	5.0	15	15	5.0	15	15	9.4	9.1								
3 Max. motor shaft diameter	mm			8	10	4	10	10	4	10	10	8	8								
Part Numbers				260551*	203117		203122	203126		203131	203135	203139	260554*								
1 Reduction				6:1	19:1		66:1	113:1		230:1	353:1	546:1	1296:1								
2 Absolute reduction				6/1	169/9		1183/18	338/3		8281/36	28561/81	546	1296/1								
10 Mass inertia	gcm ²			4.9	9.4		15	9.4		15	9.4	14	5.0								
3 Max. motor shaft diameter	mm			4	8		10	8		10	8	10	4								
Part Numbers					203118		203123	203127		203132	203136	203140									
1 Reduction					21:1		74:1	126:1		257:1	394:1	676:1									
2 Absolute reduction					21		147/2	126		1029/4	1183/3	676									
10 Mass inertia	gcm ²				14		15	14		15	15	9.1									
3 Max. motor shaft diameter	mm				10		10	10		10	10	8									
4 Number of stages				1	2	2	3	3	3	4	4	4	4								
5 Max. continuous torque	Nm			3.0	7.5	7.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0								
6 Max. intermittent torque at gear output	Nm			4.5	11.3	11.3	22.5	22.5	22.5	22.5	22.5	22.5	22.5								
7 Max. efficiency	%			90	81	81	72	72	72	72	64	64	64								
8 Weight	g			260	360	360	460	460	460	560	560	560	560								
9 Average backlash no load	°			0.6	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0								
11 Gearhead length L1**	mm			41.0	55.5	55.5	70.0	70.0	70.0	84.5	84.5	84.5	84.5								

*no combination with EC 45 (150/250 W) and EC-I 40
**for EC 45 flat L1 is -3.6 mm

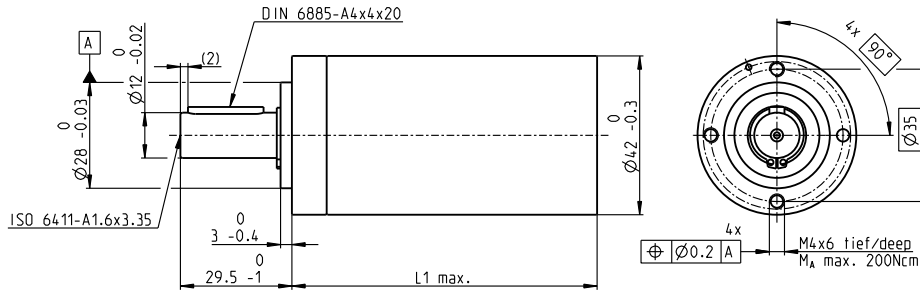


maxon Modular System														
+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts								
EC-max 30, 60 W	241					105.1	119.6	119.6	134.1	134.1	134.1	148.6	148.6	148.6
EC-max 30, 60 W	241	MR		463		117.3	131.8	131.8	146.3	146.3	146.3	160.8	160.8	160.8
EC-max 30, 60 W	241	HEDL 5540		475		125.7	140.2	140.2	154.7	154.7	154.7	169.2	169.2	169.2
EC-max 30, 60 W	241				AB 20	516	140.7	155.2	155.2	169.7	169.7	169.7	184.2	184.2
EC-max 30, 60 W	241	HEDL 5540		475	AB 20	516	161.3	175.8	175.8	190.3	190.3	204.8	204.8	204.8
EC-max 40, 70 W	242					99.1	113.6	113.6	128.1	128.1	128.1	142.6	142.6	142.6
EC-max 40, 70 W	242	MR		464		114.8	129.3	129.3	143.8	143.8	143.8	158.3	158.3	158.3
EC-max 40, 70 W	242	HEDL 5540		475		122.5	137.0	137.0	151.5	151.5	151.5	166.0	166.0	166.0
EC-max 40, 70 W	242				AB 28	518	133.5	148.0	148.0	162.5	162.5	177.0	177.0	177.0
EC-max 40, 70 W	242	HEDL 5540		475	AB 28	518	151.8	166.3	166.3	180.8	180.8	195.3	195.3	195.3
EC-4pole 30, 100 W	249					88.1	102.6	102.6	117.1	117.1	117.1	131.6	131.6	131.6
EC-4pole 30, 100 W	249	16 EASY/XT/Abs.		449-453		102.0	116.5	116.5	131.0	131.0	131.0	145.5	145.5	145.5
EC-4pole 30, 100 W	249	16 EASY Abs. XT		455		102.5	117.0	117.0	131.5	131.5	131.5	146.0	146.0	146.0
EC-4pole 30, 100 W	249	16 RIO		466		100.5	115.0	115.0	129.5	129.5	129.5	144.0	144.0	144.0
EC-4pole 30, 100 W	249	AEDL/HEDL		469/475		108.7	123.2	123.2	137.7	137.7	137.7	152.2	152.2	152.2
EC-4pole 30, 100 W	249				AB 20	516	124.3	138.8	138.8	153.3	153.3	167.8	167.8	167.8
EC-4pole 30, 100 W	249	16 EASY/XT/Abs.		449-453	AB 20	516	138.4	152.9	152.9	167.4	167.4	181.9	181.9	181.9
EC-4pole 30, 100 W	249	16 EASY Abs. XT		455	AB 20	516	138.9	153.4	153.4	167.9	167.9	182.4	182.4	182.4
EC-4pole 30, 100 W	249	16 RIO		466	AB 20	516	136.9	151.4	151.4	165.9	165.9	180.4	180.4	180.4
EC-4pole 30, 100 W	249	AEDL/HEDL		469/475	AB 20	516	145.1	159.6	159.6	174.1	174.1	188.6	188.6	188.6
EC-4pole 30, 200 W	251					105.1	119.6	119.6	134.1	134.1	134.1	148.6	148.6	148.6
EC-4pole 30, 200 W	251	16 EASY/XT/Abs.		449-453		119.0	133.5	133.5	148.0	148.0	148.0	162.5	162.5	162.5
EC-4pole 30, 200 W	251	16 EASY Abs. XT		455		119.5	134.0	134.0	148.5	148.5	148.5	163.0	163.0	163.0
EC-4pole 30, 200 W	251	16 RIO		466		117.5	132.0	132.0	146.5	146.5	146.5	161.0	161.0	161.0
EC-4pole 30, 200 W	251	AEDL/HEDL		469/475		125.7	140.2	140.2	154.7	154.7	154.7	169.2	169.2	169.2
EC-4pole 30, 200 W	251				AB 20	516	141.3	155.8	155.8	170.3	170.3	184.8	184.8	184.8
EC-4pole 30, 200 W	251	16 EASY/XT/Abs.		449-453	AB 20	516	155.4	169.9	169.9	184.4	184.4	198.9	198.9	198.9
EC-4pole 30, 200 W	251	16 EASY Abs. XT		455	AB 20	516	155.9	170.4	170.4	184.9	184.9	199.4	199.4	199.4

Planetary Gearhead GP 42 C $\varnothing 42$ mm, 3.0–15.0 Nm

Ceramic Version

gear

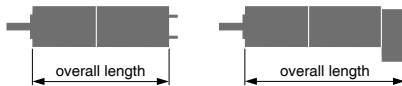


M 1:2

Technical Data

Planetary Gearhead	straight teeth
Output shaft	stainless steel
Bearing at output	preloaded ball bearings
Radial play, 12 mm from flange	max. 0.06 mm
Axial play at axial load	< 5 N 0 mm > 5 N max. 0.3 mm
Max. axial load (dynamic)	150 N
Max. force for press fits	300 N
Direction of rotation, drive to output	=
Max. continuous input speed	8000 rpm
Recommended temperature range	-40...+100°C
Number of stages	1 2 3 4
Max. radial load, 12 mm from flange	120 N 240 N 360 N 360 N

- Stock program
- Standard program
- Special program (on request)



Part Numbers

203113	203115	203119	203120	203124	203129	203128	203133	203137	203141
203114	203116	260552*	203121	203125	260553*	203130	203134	203138	203142
260551*	203117		203122	203126		203131	203135	203139	260554*
	203118		203123	203127		203132	203136	203140	

*no combination with EC 45 (150/250 W) and EC-i 40
**for EC 45 flat L1 is -3.6 mm

maxon Modular System

+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts									
EC-4pole 30, 200 W	251	16 RIO	466	AB 20	516	153.9	168.4	168.4	182.9	182.9	182.9	197.4	197.4	197.4	197.4
EC-4pole 30, 200 W	251	AEDL/HEDL	469/475	AB 20	516	162.1	176.6	176.6	191.1	191.1	191.1	205.6	205.6	205.6	205.6
EC-i 40, 50 W	262/263					67.1	81.6	81.6	96.1	96.1	96.1	110.6	110.6	110.6	110.6
EC-i 40, 50 W	262/263	16 EASY/Abs.	449/453			78.8	93.3	93.3	107.8	107.8	107.8	122.3	122.3	122.3	122.3
EC-i 40, 50 W	262/263	16 RIO	466			81.6	96.1	96.1	110.6	110.6	110.6	125.1	125.1	125.1	125.1
EC-i 40, 50 W	262/263	AEDL/HEDL	469/475			90.1	104.6	104.6	119.1	119.1	119.1	133.6	133.6	133.6	133.6
EC-i 40, 70 W	264/265					77.1	91.6	91.6	106.1	106.1	106.1	120.6	120.6	120.6	120.6
EC-i 40, 70 W	264/265	16 EASY/Abs.	449/453			88.8	103.3	103.3	117.8	117.8	117.8	132.3	132.3	132.3	132.3
EC-i 40, 70 W	264/265	16 RIO	466			91.6	106.1	106.1	120.6	120.6	120.6	135.1	135.1	135.1	135.1
EC-i 40, 70 W	264/265	AEDL/HEDL	469/475			100.1	114.6	114.6	129.1	129.1	129.1	143.6	143.6	143.6	143.6
EC-i 40, 100 W	266					97.1	111.6	111.6	126.1	126.1	126.1	140.6	140.6	140.6	140.6
EC-i 40, 100 W	266	16 EASY/XT/Abs.	449/453			108.8	123.3	123.3	137.8	137.8	137.8	152.3	152.3	152.3	152.3
EC-i 40, 100 W	266	16 EASY Abs. XT	456			109.3	123.8	123.8	138.3	138.3	138.3	152.8	152.8	152.8	152.8
EC-i 40, 100 W	266	16 RIO	466			111.6	126.1	126.1	140.6	140.6	140.6	155.1	155.1	155.1	155.1
EC-i 40, 100 W	266	AEDL/HEDL	469/475			120.1	134.6	134.6	149.1	149.1	149.1	163.6	163.6	163.6	163.6
EC-i 40, 130 W	267					131.9	146.4	146.4	160.9	160.9	160.9	175.4	175.4	175.4	175.4
EC-i 40, 130 W	267	16 EASY/XT/Abs.	449/453			143.6	158.1	158.1	172.6	172.6	172.6	187.1	187.1	187.1	187.1
EC-i 40, 130 W	267	16 EASY Abs. XT	456			144.1	158.6	158.6	173.1	173.1	173.1	187.6	187.6	187.6	187.6
EC-i 40, 130 W	267	16 RIO	466			146.4	160.9	160.9	175.4	175.4	175.4	189.9	189.9	189.9	189.9
EC-i 40, 130 W	267	AEDL/HEDL	469/475			154.9	169.4	169.4	183.9	183.9	183.9	198.4	198.4	198.4	198.4
EC 45 flat, 30 W	285					53.9	68.4	68.4	82.9	82.9	82.9	97.4	97.4	97.4	97.4
EC 45 flat, 30 W	285	MILE	446			56.1	70.6	70.6	85.3	85.3	85.3	99.6	99.6	99.6	99.6
EC 45 flat, 50 W	286					59.5	74.0	74.0	88.5	88.5	88.5	103.0	103.0	103.0	103.0
EC 45 flat, 50 W	286	MILE	446			60.3	74.8	74.8	89.3	89.3	89.3	103.8	103.8	103.8	103.8
EC 45 flat, 60 W	287					59.5	74.0	74.0	88.5	88.5	88.5	103.0	103.0	103.0	103.0
EC 45 flat, 60 W	287	MILE	446			60.3	74.8	74.8	89.3	89.3	89.3	103.8	103.8	103.8	103.8
EC 45 flat, 90 W	288					65.5	80.0	80.0	94.5	94.5	94.5	109.0	109.0	109.0	109.0
EC 45 flat, 90 W	288	MILE	446			66.3	80.8	80.8	95.3	95.3	95.3	109.8	109.8	109.8	109.8
EC 45 flat, 70 W	289					64.5	79.0	79.0	93.5	93.5	93.5	108.0	108.0	108.0	108.0
EC 45 flat, 70 W	289	MILE	446			65.3	79.8	79.8	94.3	94.3	94.3	108.8	108.8	108.8	108.8
EC 45 flat, 80 W	290					64.5	79.0	79.0	93.5	93.5	93.5	108.0	108.0	108.0	108.0
EC 45 flat, 80 W	290	MILE	446			65.3	79.8	79.8	94.3	94.3	94.3	108.8	108.8	108.8	108.8
EC 45 flat, 120 W	291					70.5	85.0	85.0	99.5	99.5	99.5	114.0	114.0	114.0	114.0
EC 45 flat, 120 W	291	MILE	446			71.3	85.8	85.8	100.3	100.3	100.3	114.8	114.8	114.8	114.8
EC 45 flat, IE, IP 00	292					72.7	87.2	87.2	101.7	101.7	101.7	116.2	116.2	116.2	116.2
EC 45 flat, IE, IP 40	292					74.9	89.4	89.4	103.9	103.9	103.9	118.4	118.4	118.4	118.4
EC 45 flat, IE, IP 00	293					77.7	92.2	92.2	106.7	106.7	106.7	121.2	121.2	121.2	121.2
EC 45 flat, IE, IP 40	293					79.9	94.4	94.4	108.9	108.9	108.9	123.4	123.4	123.4	123.4