



## Louis Poulsen and the energy issue

It was always a desire for Louis Poulsen to follow the latest advances in technology, to minimise energy consumption and to achieve the optimum atmosphere created by the light. That is why all Louis Poulsen products have to meet a wide range of requirements. In our lighting philosophy, energy saving is an aspect of "function", so most of our products are available with multiple light source choices, aimed at minimising energy consumption and maximising comfort and atmosphere.

We face a constant challenge in updating our products to use optimal energy-saving light sources while also being loyal to our lighting philosophy. Originally, we developed a large part of the Residential product programme, including the PH lamps, for incandescent light sources. This was logical as the products are often used in settings where the colour quality is a key factor - and the best alternative to daylight is still the incandescent light source.

Although energy-saving alternatives are not point-emitting - which was a key parameter, especially in the design of the PH lamps - the development of energy-saving alternatives is moving very rapidly on all other parameters. Light sources are getting smaller, sockets are getting narrower, colour rendering is improving and availability in the shops is increasing in step with the increasing awareness of environmental impact. We at Louis Poulsen believe it is important to offer alternatives to the incandescent lamps for all our products.

### Energy saving alternatives to incandescent bulbs:

Louis Poulsen believes that you should consider the following aspects before you choose your light source:

#### Colour rendering

The colour rendering of energy-efficient light sources is still not as good as that of incandescent light sources - although it is improving day by day. We express this feature as the RA index number. When the RA index number is less than 100 - the figure for incandescent light sources - the colour of the surroundings is not reproduced as if in natural light. You should take this into consideration when choosing between incandescent light sources and energy-saving alternatives.



## Colour

The colour of energy-saving alternatives is often cooler. For some applications this is agreeable - for other applications a warm tone is preferable. Remember this when you choose your light source.

## Operating

Some energy-saving alternatives do not switch on instantly - and some may need 1-3 minutes to warm up to maximum. Would this be something you have to consider in the application where you will use an energy-saving light source? Please be aware that not all energy-saving light sources are dimmable. If the product is equipped with a dimmer solution, dimmable light sources must be used. Louis Poulsen products with dimmers regulate from 100 to 0%, make sure that the energy-saving light source is prepared for that.

## Design - shape and sizes

Energy-saving alternatives come in many different shapes and sizes. You must check if there is room for the light source in the product, and you need to be careful that the lamp is not seen. For some products - e.g. glass products - you should also make sure that shadows etc. appear as close as possible to what was originally intended for the product.

## Recommended energy-saving alternatives:












At Louis Poulsen, we have tested energy saving alternatives in all our products originally developed for incandescent lamps. The alternatives listed below were evaluated with following questions in mind:












Is there enough space for the light source?
















If the light source is visible - is the shape acceptable and similar to the original intentions?














Is the lighting experience close to the original - in terms of shadows, light level, etc.?










Use the list below to find the for the present best alternative light source for the products in the Louis Poulsen programme today.

Original light source				Energy-saving light source				
Product	Original light source	Luminous Flux Lumen	Wattage	Socket	Product name	Luminous Flux Brand	Lumen	
 AJ Discus 220	40W QT ax-14 Frosted G9	490	-					
AJ Discus 350	60W A55 Frosted E27	710	13W outdoor alt. 15W	E27 E27	Classic Liliput Plus	Megaman Megaman	663 950	
AJ Discus 450	100W A55 Frosted E27	1340	20W alt. 15W outdoor alt. 15W	E27 E27 E27	Softone Miniball Liliput Plus	Philips Osram Megaman	1160 850 950	
 AJ Floor	60W A55 Frosted E27	710	13W alt. 42W	E27 E27	Classic Halogen Energy Saver Classic A	Megaman Osram	663 630	
 AJ Table	60W A55 Frosted E27	710	13W alt. 42W	E27 E27	Classic Halogen Energy Saver Classic A	Megaman Osram	663 630	
 AJ Wall	40W D45 Frosted E14	400	7W alt. 28W	E14 E14	Softlight Halogen Energy Saver Classic P	Megaman Osram	286 345	
 AJ Pendant Ø 370	100W A55 Frosted E27	1340	15W	E27	Liliput Plus	Megaman	950	
AJ Pendant Ø 500	1x100W A-CS60+3x100W A55 E27	1x1360 3x1340	4x15W	E27	Liliput Plus	Megaman	4x950	
 Campbell 210	40W Reflector R50 E14	410 candela	9W	E14	Ultra Compact Classic	Megaman	405	
 Campbell 275	75W Reflector R80 E27	345 candela	15W	E27	Liliput Plus	Megaman	950	
 Collage Floor	100W A55 Frosted E27	1340	23W	E27	Ambiance Pro 827	Philips	1380	
 Collage Pendant Ø 450	75W A55 Frosted E27	935	18W	E27	Classic	Megaman	900	
 Collage Pendant Ø 600	100W A55 Frosted E27	1340	23W	E27	Ambiance Pro 827	Philips	1380	
 Enigma 425	50W GR GU10	800 candela	-					

Original light source				Energy-saving light source				
Product	Original light source	Luminous Flux Lumen	Wattage	Socket	Product name	Brand	Luminous Flux Lumen	
	Enigma 545	75W GR GU10	1900 candela	-				
	Flindt 220 Floor	60W A55 Frosted E27	710	-				
	Flindt 220 Pendant	60W A55 Frosted E27	710	11W	E27	Classic	Megaman 570	
	Flindt 475 Pendant	100W A55 Frosted E27	1340	20W alt. 23W	E27 E27	Liliput Plus Ambiance Pro 827	Megaman 1300 Philips 1380	
	Homann Wall	40W D45 Frosted E14	400	11W alt. 28W	E14 E14	Liliput Plus Halogen Energy Saver Classic P	Megaman 700 Osram 345	
	Magazin Mini	40W D45 Clear E14	400	28W	E14	Halogen Energy Saver	Osram 345	
	Magazin Normal	100W A55 Clear E27	1340	70W	E27	Halogen Energy Saver	Osram 1240	
	Moser Ø 185	40W A55 Frosted E27	415	8W alt. 9W	E27 E27	Master PL-Electronic Ultra Compact Classic	Philips 400 Megaman 405	
	Moser Ø 205	40W A55 Frosted E27	415	20W alt. 20W	E27 E27	Master PL-Electronic Liliput Plus	Philips 1200 Megaman 1300	
	Moser Ø 250	60W A55 Frosted E27	710	23W alt. 23W	E27 E27	Master PL-Electronic Liliput Plus	Philips 1500 Megaman 1500	
	Munkegaard 265	60W A55 Clear E27	710	15W alt. 15W	E27 E27	Miniball Liliput Plus	Osram 850 Megaman 950	
	Nyhavn Pendant	100W A55 Frosted E27	1340	18W alt. 70W	E27 E27	Softlight Halogen Energy Saver Classic A	Megaman 900 Osram 1240	
	Nyhavn Wall	100W A55 Frosted E27	1340	18W alt. 70W	E27 E27	Softlight Halogen Energy Saver Classic A	Megaman 900 Osram 1240	

Original light source				Energy-saving light source				
Product	Original light source	Luminous Flux Lumen	Wattage	Socket	Product name	Luminous Flux Brand	Lumen	
	Orbiter Ceiling	100W A55 Frosted E27	1340	18W alt. 70W	E27 E27	Softlight Halogen Energy Saver Classic A	Megaman Osram	900 1240
	Orbiter Pendant	100W A55 Frosted E27	1340	18W alt. 70W	E27 E27	Softlight Halogen Energy Saver Classic A	Megaman Osram	900 1240
	Orbiter Wall	100W A55 Frosted E27	1340	18W alt. 70W	E27 E27	Softlight Halogen Energy Saver Classic A	Megaman Osram	900 1240
	Panthella Floor	150W A65 Frosted E27	2160	23W	E27	Liliput Plus	Megaman	1500
	Panthella Table	75W A55 Frosted E27	935	20W	E27	Liliput Plus	Megaman	1300
	PH 2/1 Pendant	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 2/1 Stem Fitting	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 2/1 Table	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 2/1 Wall	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 3/2 Academy	3x40W D45 Frosted E14	3x400	3x7W	E14	PingPong	Megaman	3x286
	PH 3/2 Pendant	75W A55 Frosted E27	935	13W	E27	Classic	Megaman	663
	PH 3/2 Table	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 3/2 Wall	40W D45 Frosted E14	400	7W	E14	PingPong	Megaman	286
	PH 3-2½ Bollard	60W A55 Frosted E27	710	13W alt. 42W	E27 E27	Classic Halogen Energy Saver Classic A	Megaman Osram	663 630
	PH 3-2½ Wall	60W A55 Frosted E27	710	13W alt. 42W	E27 E27	Classic Halogen Energy Saver Classic A	Megaman Osram	663 630

Original light source				Energy-saving light source				
Product	Original light source	Luminous Flux Lumen	Wattage	Socket	Product name	Luminous Flux Brand	Lumen	
	PH 3 1/2-2 1/2 Floor	100W A55 Frosted E27	1340	18W	E27	Softlight	Megaman	900
	PH 4/3 Pendant	100W A55 Frosted E27	1340	20W	E27	Liliput Plus	Megaman	1300
	PH 4/3 Table	100W A55 Frosted E27	1340	20W	E27	Liliput Plus	Megaman	1300
	PH 4 1/2-3 1/2 Glass Floor	150W A65 Frosted E27	2160	23W	E27	Liliput Plus	Megaman	1500
	PH 4 1/2-3 1/2 Glass Table	150W A65 Frosted E27	2160	23W	E27	Liliput Plus	Megaman	1500
	PH 4 1/2-4 Glass Pendant	150W A65 Frosted E27	2160	23W	E27	Liliput Plus	Megaman	1500
	PH5 Pendant	200W A80 Frosted E27	3040	23W	E27	Liliput Plus	Megaman	1500
	PH5 Pendel - old edition	Max. 100W A55 E27	1340	20W	E27	Liliput Plus	Megaman	1300
	PH 5 PLUS & PH 50	200W A80 Frosted E27/ 23W TC-TSE	3040	25W alt. 23W	E27 E27	Duralux Twist Master PL-Electronic	Duralamp Philips	1600 1500
	PH 5-4 1/2	200W A80 Clear E17	3045	30W	E27	Liliput Plus	Megaman	2000
	PH 80 Floor	100W A55 Frosted E27	1340	18W alt. 18W	E27 E27	Softlight Classic	Megaman Megaman	900 900
	PH Artichoke Ø 480	200W A80 Clear E27	3045	30W	E27	Liliput Plus	Megaman	2000
	PH Artichoke Ø 600-840	500W A110 Clear E40	8400	80W alt. 500W	E40 E40	Clusterlite HalogenA IDE	Megaman Philips	5400 10250
	PH Artichoke Ø 720-840			100W	E40	Clusterlite	Megaman	6700
	PH Hat Ø 225	40W D45 Frosted E14	400	7W alt. 7W	E14 E14	PingPong Softlight	Megaman Megaman	286 286
	PH Louvre	500W A110 Clear E40	8400	100W	E40	Clusterlite	Megaman	6700

Original light source				Energy-saving light source				
Product	Original light source	Luminous Flux Lumen	Wattage	Socket	Product name	Brand	Luminous Flux Lumen	
	PH Snowball	300W A80 Clear E27	5000	30W	E27	Liliput Plus	Megaman	2000
	PH Wall Copper	100W A55 Frosted E27	1340	20W	E27	Liliput Plus	Megaman	1300
	Satellite Ø 250	200W A80 Frosted E27	3040	23W	E27	Liliput Plus	Megaman	1500
	Satellite Ø 300	200W A80 Frosted E27	3040	23W alt. 27W	E27 E27	Ambiance Pro 827 Master PL-Electronic	Philips Philips	1380 1800
	Satellite Ø 350	200W A80 Frosted E27	3040	23W alt. 33W	E27 E27	Ambiance Pro 827 Master PL-Electronic	Philips Philips	1380 2250
	Satellite Ø 400	200W A80 Frosted E27	3040	23W alt. 33W	E27 E27	Ambiance Pro 827 Master PL-Electronic	Philips Philips	1380 2250
	Saturn Wall	2x100W A55 Clear E27	2X1340	70W alt. 18W	E27 E27	Halogen Energy Saver Classic A Classic	Osram Megaman	2x1240 2x900
	Snow	1x40W Reflector R50 E14	410 candela	28W alt. 11W	E14 E14	Halogen Energy Sav. R50 Compact Reflector R50	Osram Megaman	430 candela 483 candela
+1x60W Globe G95 E27		600	+23W alt. 11W	E27 E14	DorS dimmable Globe Globe	Megaman Megaman	1371 570	
	Toldbod 120 Metal Pendant	40W QT ax-14 Frosted G9	490	33W	G9	Halopin Energy Saver	Osram	460
	Toldbod 155 Bollard	40W D45 Frosted E14	400	11W	E14	Liliput Plus	Megaman	700
				alt. 28W	E14	Halogen Energy Saver Classic P	Osram	345
	Toldbod 155 Wall	40W D45 Frosted E14	400	11W alt. 28W	E14 E14	Liliput Plus Halogen Energy Saver Classic P	Megaman Osram	700 345
	Toldbod 155 Glass Pendant	40W QT ax-14 Frosted G9	490	-	-			
	Toldbod 220 Glass Pendant	60W QT ax-14 Frosted G9	820	-	-			
	Warehouse Pendant	75W A55 Clear E27	935	52W	E27	Halogen Energy Saver Classic A	Osram	840