

INGAL **EPS**
A valmont COMPANY



Lowering Systems



>> Australia's leading manufacturer of quality pole products with representation in every state and territory.

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A **valmont**  COMPANY



INGAL EPS is a division of Industrial Galvanizers Corporation Pty Ltd which is ultimately owned by Valmont Industries Inc. Actively involved in the Australian pole market since 1969, INGAL EPS has strived to continuously lead the industry in research, design, innovation, quality of product and quality of service. Establishing industry benchmarks such as the Seesaw pole, 60km/h and 110km/h Impact Absorbing poles and the largest steel poles ever installed in both Australia and New Zealand.

The company employs around 150 staff and has offices located in every state and territory of Australia and on the North Island of New Zealand. With manufacturing facilities in Brisbane and Perth and full access to three modern facilities in China owned by Valmont Industries Inc, INGAL EPS is well positioned to meet the broad requirements of the pole market. Due to our extensive experience, national coverage, resources and manufacturing capacity we have the ability to provide the most comprehensive product range available.

The INGAL EPS product range includes:

- Street Lighting poles
- Floodlighting poles
- Power poles
- Lowering Systems, for ease of maintenance
- Special Application poles including banner poles, camera poles, traffic signal and communication poles
- Services & Accessories providing individual design, drafting, installation and accessories including foundation materials, adaptors, headframes and cross arms.

With our dedicated design service, material control, quality assured manufacturing processes and after sales service, INGAL EPS has established itself as Australasia's largest pole supplier. INGAL EPS has over four decades of experience leading the industry in Australia and our ever improving product range and expanded manufacturing resources will continue to ensure we're at the cutting edge of providing new and innovative solutions to a growing and ever more demanding market.



Handrail Seesaw

The Handrail Seesaw is an ideal lighting solution to improve safety and reduce maintenance costs for handrail mounted lighting applications. The handrail seesaw eliminates the need for dangerous height work as maintenance of luminaires can be carried out from ground or walkway level, minimising the risk of a fall or accident. The Handrail Seesaw can be used in a multitude of applications including industrial walkways, stairways, bridges, schools, commercial premises, mines, fire escapes, gangways, power stations, sewage treatment works and marinas.

Benefits

- Can be installed virtually anywhere because the system lowers by safely swinging down for maintenance
- The pole can be rotated 360° to point the luminaire in any direction
- Requires no tools for lowering and raising
- Quick and easy one person operation
- Eliminates the need for working at heights
- Ability to hold luminaires and other equipment up to 10kg in weight
- Accommodates most luminaire mounting options and spigots are made to suit your application
- Suitable for Wind Region/Terrain Categories A2, A3 and B3.

Options and Accessories

- The Handrail Seesaw can be attached by welding or with the use of U-bolts
- All components are made from either hot dip galvanized mild steel or stainless steel
- Standard outreach length is 300mm
- The standard pole is depicted on this product sheet, however they can be designed for differing height and outreach lengths, including a post top configuration
- Preassembly
- Installation
- For information on handrails, please visit Webforge at www.webforge.com.au.

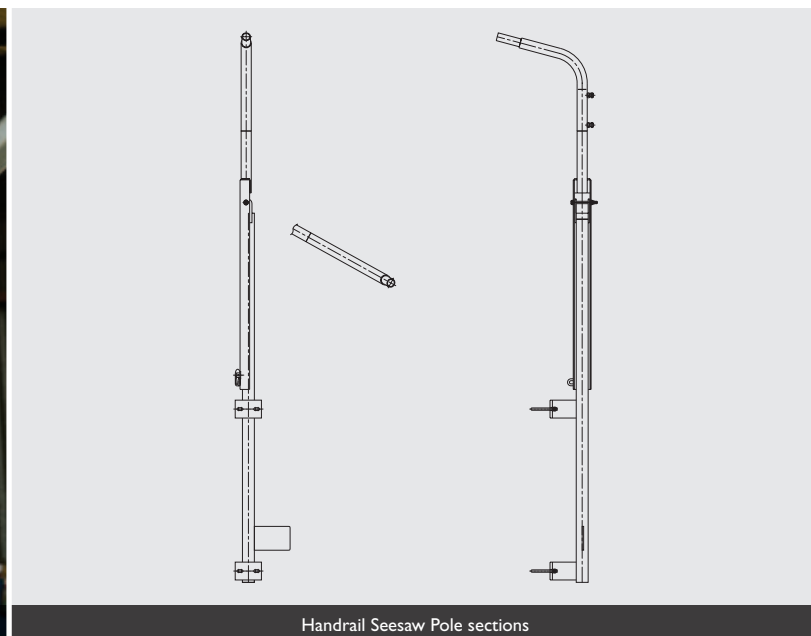
Product Codes

Handrail Seesaw
2.3m
HP23

HP=Handrail Pole



Handrail Seesaw Pole in the lowered position



Handrail Seesaw Pole sections

Stepped Pipe Seesaw

The Stepped Pipe Seesaw range is an ideal lighting solution for carpark, railway stations, shopping centres and anywhere that space is limited and cherry pickers are not practical. The pole design offers a simple, safe and effective method of luminaire maintenance, that can be carried out by one person.

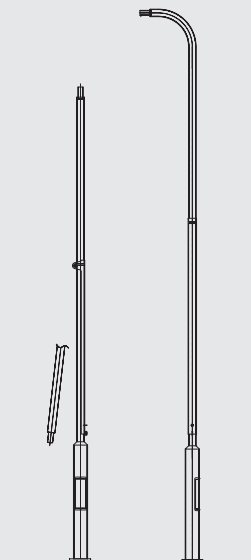
Options and Accessories

- Stepped Pipe Seesaw poles are base plate mounted as standard but can be designed for in-ground mounting
- The poles are hot dip galvanized and can be powder coated or painted in the colour of your choice
- The range is available in circular hollow section (CHS) only
- Standard mounting heights are 5.5m and 6.5m
- Standard outreach length is 0.5m
- Tamper resistant bolts
- Vandal resistant lock
- Operator training
- Preassembly
- Pre cabling
- Installation.

Product Codes For more information, please refer to the Technical Data Sheet.

Stepped Pipe Seesaw	
5.5m	6.5m
HRPP55F	HRPP65FS05
	HRPP65FD05

H=Hinged RPP=Reducing Pipe Pole F=Flange Mounted (Base Plate) S=Single Outreach D=Double Outreach



Standard Stepped Pipe Seesaw Pole





Avenue Seesaw

The Avenue Seesaw Pole design is based on that of the Avenue Street Lighting range. Ideal for parks and roadways with limited access, the range offers a simple, safe and effective method of luminaire maintenance that can be carried out by one or two people.

Options and Accessories

- Avenue Seesaw poles are base plate mounted as standard but can be designed for in-ground mounting
- The poles are hot dip galvanized and can be powder coated or painted in the colour of your choice
- The range is available in tapered octagonal only
- Standard mounting heights are 5.5m to 12m
- Standard outreach lengths are 1.5m to 3m
- Tamper resistant bolts
- Vandal resistant lock
- Operator training
- Preassembly
- Pre cabling
- Installation.

Product Codes

For more information, please refer to the Technical Data Sheet.

Stepped Pipe Seesaw					
5.5m	6.5m	7.5m	9m	10.5m	12m
HAL55FSO15	HAL65FSO15	HAL75FSO15	HAL9FSO15	HAL105FSO15	HAL12FSO15
HAL55FSO20	HAL65FSO20	HAL75FSO20	HAL9FSO20	HAL105FSO20	HAL12FSO20
HAL55FSO30	HAL65FSO30	HAL75FSO30	HAL9FSO30	HAL105FSO30	HAL12FSO30
HAL55FDO15	HAL65FDO15	HAL75FDO15	HAL9FDO15	HAL105FDO15	HAL12FDO15
HAL55FDO20	HAL65FDO20	HAL75FDO20	HAL9FDO20	HAL105FDO20	HAL12FDO20
HAL55FDO30	HAL65FDO30	HAL75FDO30	HAL9FDO30	HAL105FDO30	HAL12FDO30

H=Hinged A=Avenue L=Light Duty F=Flange Mounted (Base Plate) S=Single Outreach D=Double Outreach O=Tapered Octagonal



Standard Avenue Seesaw Poles

Boulevard Seesaw

The Boulevard Seesaw pole design is based on that of the Boulevard Floodlighting Range. Perfect for mine sites, airports and sporting facilities, the range offers a simple, safe and effective method of luminaire maintenance that can be carried out by one or two people.

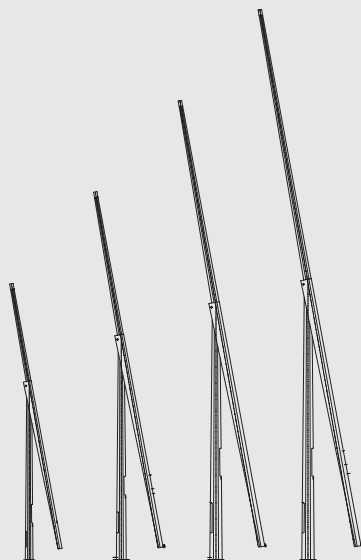
Options and Accessories

- Boulevard Seesaw poles are base plate mounted as standard but can be designed for in-ground mounting
- The poles are hot dip galvanized and can be powder coated or painted in the colour of your choice
- The range is available in tapered octagonal only
- Standard mounting heights are 6m to 12m
- Additional access doors
- Tamper resistant bolts
- Vandal resistant lock
- Operator training
- Preassembly
- Pre cabling
- Installation.

Product Codes For more information, please refer to the Technical Data Sheet.

Boulevard Seesaw			
6m	8m	10m	12m
HBM6F	HBM8F	HBM10F	HBM12F

H=Hinged B=Boulevard M=Medium Duty F=Flange Mounted (Base Plate)



Standard Boulevard Seesaw Poles





Park Seesaw

The Park Seesaw range is an ideal floodlighting solution where space is limited and cherry pickers are not feasible. The pole design is based on the higher capacity of the Park Floodlighting range and offers a simple, safe and effective method of luminaire maintenance up to 30m in height. Seesaw poles offer a simple mechanical lowering method that can be carried out by one or two people, and are suitable for mine sites, airport tarmacs and sporting facility floodlighting solutions.

Options and Accessories

- Park Seesaw poles are base plate mounted as standard but can be designed for in-ground mounting
- The poles are hot dip galvanized and can be powder coated or painted in the colour of your choice
- The range is available in tapered octagonal
- Standard mounting heights are 15m to 30m
- The standard poles are depicted on this product sheet,
- Additional access doors
- Tamper resistant bolts
- Vandal resistant lock
- Operator training
- Preassembly
- Pre cabling
- Installation.

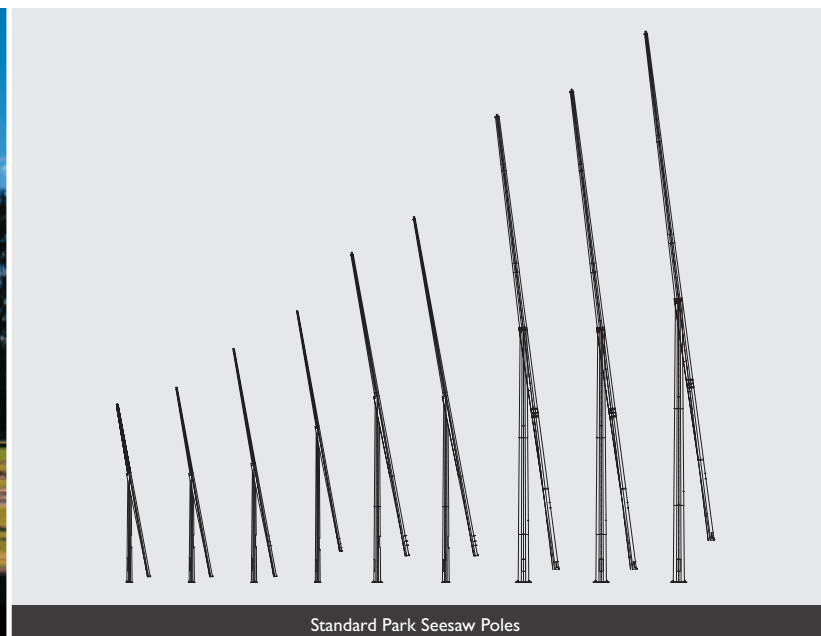
Product Codes

Park Seesaw								
9m	10m	12m	15m	18m	20m	25m	27m	30m
HPM9F	HPM10F	HPM12F	HPM15F	HPL18F	HPL20F	HPL25F	HPM27F	HPM30F
	HPH10F	HPH12F	HPH15F	HPH18F	HPM20F	HPM25F		

H=Hinged P=Park L=Light Duty M=Medium Duty H=Heavy Duty F=Flange Mounted (Base Plate)



Lowered Park Seesaw Pole



Standard Park Seesaw Poles

Individual Lowering Device

Luminaire System

The Luminaire ILD is an innovation that sought to provide the market with a lowering system for pole top mounted applications, without the need for an expensive high mast ring lighting system. The result is the ILD; a lowering system that can be more closely adapted to suit the needs of designers, authorities, councils and other organisations. One to three ILD's can be mounted on a single pole, meaning we can design a pole and lowering system to precisely meet your requirements. INGAL EPS is the sole Australian distributor of the [MG]² Lowering System, and coupled with over 40 years experience in the industry, we are ideally placed to provide you with the best engineering solution for your application.

The utilisation of an ILD provides distinct benefits in both the design and maintenance of lighting systems. The ILD allows a luminaire to be unlatched from its position atop a pole and lowered on a stainless steel aircraft cable to ground level. When the luminaire is lowered, the only cable travelling within the pole is the lowering cable. Electrical cables are secured and separated inside the pole, which means the cables are not subjected to stress or bending over pulleys during the operation. Locking and guide pins cause the luminaire to lock into the exact position every time. This provides for safe, simple and quick installation, maintenance, re-lamping or replacement of the luminaire.

Maintenance is performed on the ground by one electrician without the need for a cherry picker or associated road crews for lane closures. The lowering and maintenance of the luminaire can be performed by one person with the use of a Portable Lowering Tool that fits in the boot of a small car. This ease of maintenance equates to less system downtime, cost savings and a more efficient system.

The ILD is of course suitable for other applications. It can be utilised to lower cameras, antennas, beacons, wide band radar; in fact any item that you want to be able to service and maintain at ground level and not be restricted when locating the pole.

Benefits

- Design flexibility with virtually unlimited lighting pole placement options
- Enables lighting designers to place light poles away from roadways and at any height
- Reduce expenses by eliminating costly cherry pickers and scissor lifts
- Only a small, inexpensive maintenance vehicle required
- One person operation for quick and simple ground level maintenance of luminaires
- Reduce hazards with maintenance staff remaining on the ground
- Lane closures not required
- Patented weatherproof Hypalon contact connector
- Complete engineering design, installation, commissioning and training by INGAL EPS.

Ask a sales representative to send you the DVDs that further explain the system's operation.



Freeway Lighting Application



Close up of the ILD System





Individual Lowering Device Camera System

The Camera ILD is an innovation that sought to provide the market with a lowering system for pole top mounted applications, without the need for an expensive high mast ring lighting system. The result is the ILD; a lowering system that can be more closely adapted to suit the needs of designers, authorities, councils and other organisations. One to three ILD's can be mounted on a single pole, meaning we can design a pole and lowering system to precisely meet your requirements. INGAL EPS is the sole Australian distributor of the [MG]² Lowering System, and coupled with over 40 years experience in the industry, we are ideally placed to provide you with the best engineering solution for your application.

The utilisation of an ILD provides distinct benefits in both the design and maintenance of Intelligent Transport Systems (ITS) and security surveillance systems. The ILD allows the entire camera and housing to be unlatched from its position atop a pole and lowered on a stainless steel aircraft cable to ground level. When the camera is lowered, the only cable travelling within the pole is the lowering cable. The sensitive data and video cables are secured and separated inside the pole, which means the cables are not subjected to stress or bending over pulleys during the operation. Locking and guide pins cause the camera to lock into the exact position every time. This provides for safe, simple and quick camera installations, maintenance or replacement.

Maintenance is performed on the ground by one technician without the need for a cherry picker or associated road crews for lane closures. The lowering and maintenance of the camera can be performed by one person with the use of a Portable Lowering Tool that fits in the boot of a small car. This ease of maintenance equates to less system downtime, cost savings and a more efficient system.

Traffic management system design engineers are freed from constraints relating to mounting height and location. For example, a single camera mounted at 25m, depending on topography could do the work of 2-3 cameras mounted at 12m, potentially saving hundreds of thousands of dollars just at the design stage. With the ILD, camera pole locations are no longer determined by where the cherry picker can access or where a Seesaw Pole can be lowered. If the best location for the pole is on an embankment, down a slope, on top of a multistorey parking lot, a median strip, or bridge, placement can be successfully achieved without concern for vehicular access.

Ideally, camera pole placement should be well away from the shoulder of the road to prevent the exuberant cost to repair or replace the camera, which will occur should the pole be struck by a vehicle. In most cases, the further from the road shoulder, the less likely it is that vehicular access will be possible. Again, the

utilisation of the ILD will eliminate the 'how to access' question and allow the best placement of the pole for the particular project.

All ITS and security industry specifiers should consider and compare the initial and life cycle costs that result from the use of an ILD with that of conventional poles and lowering systems on their next project. The utilisation of Individual Lowering Devices will definitely provide a multitude of benefits in designing systems now and into the future.

The ILD is of course suitable for other applications. It can be utilised to lower luminaires, antennas, beacons, wide band radar; in fact any item that you want to be able to service and maintain at ground level and not be restricted when locating the pole.

Benefits

- Design flexibility with virtually unlimited camera pole placement options
- Allows greater mounting heights for cameras, providing a larger view of area and possibly reducing the number of poles and cameras required
- Reduce expenses by eliminating costly cherry pickers and scissor lifts
- Only a small, inexpensive maintenance vehicle required
- One person operation for quick and simple ground level maintenance of cameras and other ITS devices
- Reduce hazards with maintenance staff remaining on the ground
- Lane closures not required
- Patented weatherproof Hypalon contact connector
- Complete engineering design, installation, commissioning and training by INGAL EPS.

Ask a sales representative to send you the DVDs and CD that further explain the system's operation.



External mounted system



Anzac Bridge, NSW



Camera lowered for maintenance

Powerlift

The Powerlift range is suitable for applications that require quick and efficient maintenance while achieving optimum floodlighting requirements. An alternative to the seesaw range, the Powerlift allows for a larger number of lighting fixtures at heights up to 40m. Easy lowering and raising is achieved with the use of a portable hydraulic unit. The Powerlift is perfectly suited for use at airports, sporting ovals and mine sites. Powerlift columns have a locking hinge approximately 1m from the base, and are raised and lowered using a portable hydraulic unit. The hinged mechanism is manufactured in Australia exclusively for INGAL EPS.

Options and Accessories

- Powerlift Poles are base plate mounted
- The poles are hot dip galvanized and can be powder coated or painted in the colour of your choice
- The poles are available in tapered octagonal and tapered 16 sided
- Standard mounting heights are 8m to 40m
- The standard poles are depicted on this product sheet, however they can be designed for different heights
- Luminaire Adaptors, Cross Arms, Headframes and Lightning Protection Rods
- Portable Hydraulic Unit
- Operator training
- Preassembly
- Pre cabling
- Installation.

Product Codes

For more information, please refer to the Technical Data Sheet.

Powerlift										
8m	10m	12m	15m	17.5m	18m	20m	25m	30m	35m	40m
PPL18F ¹	PPL110F ¹	PPL112F ¹	PPL15F ²	PPM175F ³	PPL18F ²	PPM20F ³	PPH25F ⁴	PPH30F ⁴	PTH35F ⁵	PTH40F ⁵
	PPL10F ²	PPL12F ²	PPM15F ³			PPH20F ⁴	PTM25F ⁴	PTM30F ⁴		
						PTM20F ⁴		PTH30F ⁵		

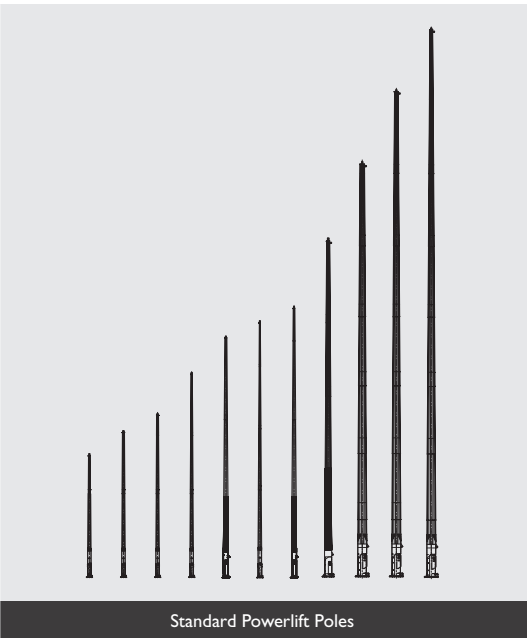
P=Powerlift P=Park T=Track LL=Extra Light Duty L=Light Duty M=Medium Duty H=Heavy Duty F=Flange Mounted (Base Plate)
Hydraulic Unit Required: 1=200 Series 2=250 Series 3=370 Series 4=520 Series 5=650 Series



Powerlift Base



Headframe



Standard Powerlift Poles





High Mast

High Mast systems have similar advantages to the Powerlift range in that they can light large areas with just a few poles. High Mast systems have the added advantage of lowering the headframe to the ground, rather than the pole, via an electrically operated winch system that is permanently integrated into the base of the pole. All systems are manufactured to INGAL EPS specifications and all standard poles are suitable for wind regions A and B. High Mast systems are suitable for airports, container terminals, roadway interchanges, roundabouts and all high traffic areas where luminaire maintenance needs to be carried out with minimal interruption, or where there simply isn't enough room to lower a pole.

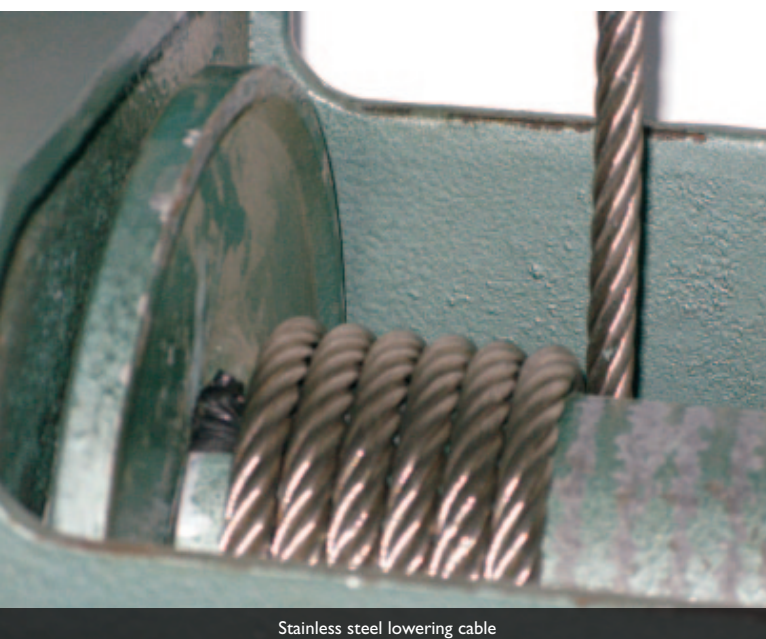
Benefits

- 415V motor
- Worm gear drive
- Stainless steel lowering cables
- No strain on lowering cables when system is in the home position
- Red indicator discs show when the system is unhooked or in the home position
- Lightning rod
- All steel components are hot dip galvanized and all coloured components are hot dip galvanized and powder coated
- All HMFJ60 systems have a 300kg capacity and can typically hold up to twelve 2000W luminaires
- All poles and systems are suitable for wind regions A and B
- On site instruction on operation and maintenance.

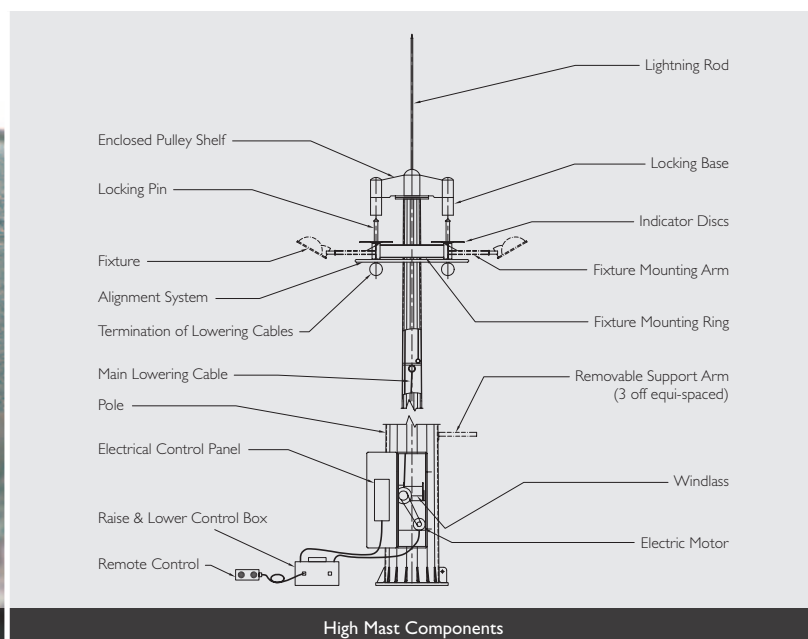
Product Codes

High Mast Systems		
30m	35m	40m
HMFJ6030030	HMFJ6030035	HMFJ6030040

HM=High Mast FJ60=Manufacturer's Code 300=300kg 30=30m



Stainless steel lowering cable



High Mast Components

Technical Information

NOMINAL HEIGHT (m)	CATALOGUE No.	POLE DIAMETER		DOOR SIZE L x W (mm)x(mm)	BOLTS	MAX. TOP WEIGHT (kg)	MAXIMUM ALLOWABLE SAIL AREA (M²)							ULT. BASE SHEAR (kN)	WORK. BASE MOMENT (kNm)	WORK. BASE SHEAR (kN)	SCREW PILE	POLE WEIGHT (kg)	
		TOP (mm)	BOT. (mm)				A-2	A-3	B-2	B-3	C-2	C-3	D-2						D-3
Stepped Pipe Seesaw																			
5.5	HRPP55F	89	168	350 x 120	4M20@233	5	0.30	0.30	0.30	0.30	0.20	0.30	0.05	0.15	6.1	2.0	1.4	2A	87
6.5	HRPP65FS05	89	168	350 x 120	4M20@233	6	0.25	0.30	0.15	0.30	0.05	0.15	-	-	6.1	2.0	1.4	2A	94
6.5	HRPP65FD05	89	168	350 x 120	4M20@233	12	0.20	0.30	0.15	0.20	0.10	0.15	-	0.05	8.6	2.2	1.5	2A	108

The maximum top weight is the total allowable weight inclusive of crossarms that may be applied to the top of the column. Due allowance must be made for the centre of gravity of the weight above or below the column top.
Above maximum sail areas include 100kg for every 1 m² or part thereof.
The above sail areas are applied to the end of the outreach. For double outreaches the applicable sail areas and weights may be applied to both sides of the outreach.

Avenue Seesaw (Single Outreach)																					
5.5	HAL55FSOI5	42	143	295 x 90	4M20@233	20	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	0.16	11.0	3.0	7.3	2.0	2A	70
5.5	HAL55FSO20	42	143	295 x 90	4M20@233	20	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	0.16	11.0	3.0	7.3	2.0	2A	72
5.5	HAL55FSO30	48	143	295 x 90	4M20@233	15	0.16	0.16	0.16	0.16	-	0.16	-	-	-	11.0	3.0	7.3	2.0	2A	77
6.5	HAL65FSOI5	42	159	295 x 90	4M20@233	30	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	0.16	14.0	3.3	9.3	2.2	2A*	88
6.5	HAL65FSO20	42	159	295 x 90	4M20@233	30	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	-	14.0	3.3	9.3	2.2	2A*	90
6.5	HAL65FSO30	48	159	295 x 90	4M20@233	25	0.16	0.16	0.16	0.16	-	0.16	-	-	-	14.0	3.3	9.3	2.2	2A*	96
7.5	HAL75FSOI5	42	156	295 x 110	4M24@350	30	0.16	0.16	0.16	0.16	-	0.16	-	-	-	13.0	3.0	8.7	2.0	3A	115
7.5	HAL75FSO20	42	156	295 x 110	4M24@350	30	0.16	0.16	0.16	0.16	-	0.16	-	-	-	13.0	3.0	8.7	2.0	3A	118
7.5	HAL75FSO30	48	156	295 x 110	4M24@350	25	0.16	0.16	0.16	0.16	-	-	-	-	-	13.0	3.0	8.7	2.0	3A	123
9	HAL9FSOI5	42	165	295 x 110	4M24@350	20	0.16	0.16	0.16	0.16	-	0.16	-	-	-	20.2	3.0	13.5	2.0	3A	138
9	HAL9FSO20	42	165	295 x 110	4M24@350	20	0.16	0.16	0.16	0.16	-	0.16	-	-	-	20.2	3.0	13.5	2.0	3A	141
9	HAL9FSO30	48	165	295 x 110	4M24@350	15	0.16	0.16	-	0.16	-	-	-	-	-	20.2	3.0	13.5	2.0	3A	146
10.5	HAL105FSOI5	42	183	410 x 110	4M24@350	30	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	-	20.2	3.5	13.5	2.3	3A	174
10.5	HAL105FSO20	42	183	410 x 110	4M24@350	30	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-	-	20.2	3.5	13.5	2.3	3A	177
10.5	HAL105FSO30	48	183	410 x 110	4M24@350	25	0.16	0.16	0.16	0.16	-	-	-	-	-	20.2	3.5	13.5	2.3	3A	182
12	HAL12FSOI5	42	201	410 x 130	4M24@350	25	0.16	0.16	0.16	0.16	-	0.16	-	-	-	26.5	4.0	17.7	2.7	3B	201
12	HAL12FSO20	42	201	410 x 130	4M24@350	25	0.16	0.16	0.16	0.16	-	0.16	-	-	-	26.5	4.0	17.7	2.7	3B	204
12	HAL12FSO30	48	201	410 x 130	4M24@350	20	0.16	0.16	0.16	0.16	-	-	-	-	-	26.5	4.0	17.7	2.7	3B	209

NOMINAL HEIGHT (m)	CATALOGUE No.	POLE DIAMETER		DOOR SIZE L x W (mm)x(mm)	BOLTS	MAX:TOP WEIGHT (kg)	MAXIMUM ALLOWABLE SAIL AREA (M²)							ULT. BASE MOMENT (kNm)	ULT. BASE SHEAR (kN)	WORK. BASE MOMENT (kNm)	WORK. BASE SHEAR (kN)	SCREW PILE	POLE WEIGHT (kg)
		TOP (mm)	BOT. (mm)				REGION - TERRAIN CATEGORY (AS1170.2)												
							A-2	A-3	B-2	B-3	C-2	C-3	D-2						
Avenue Seesaw (Double Outreach) - Continued																			
7.5	HAL75FDO30	48	156	295 x 110	4M24@350	10	-	0.16	-	0.16	-	-	-	13.0	3.0	8.7	2.0	3A	142
9	HAL9FDO15	42	165	295 x 110	4M24@350	10	0.16	0.16	-	-	-	-	-	20.2	3.0	13.5	2.0	3A	150
9	HAL9FDO20	42	165	295 x 110	4M24@350	10	0.16	0.16	-	0.16	-	-	-	20.2	3.0	13.5	2.0	3A	154
9	HAL9FDO30	48	165	295 x 110	4M24@350	10	0.16	0.16	-	0.16	-	-	-	20.2	3.0	13.5	2.0	3A	166
10.5	HAL105FDO15	42	183	410 x 110	4M24@350	25	0.16	0.16	-	0.16	-	-	-	20.2	3.5	13.5	2.3	3A	185
10.5	HAL105FDO20	42	183	410 x 110	4M24@350	20	0.16	0.16	-	0.16	-	-	-	20.2	3.5	13.5	2.3	3A	189
10.5	HAL105FDO30	48	183	410 x 110	4M24@350	15	0.16	0.16	-	0.16	-	-	-	20.2	3.5	13.5	2.3	3A	185
12	HAL12FDO15	42	201	410 x 130	4M24@350	15	-	0.16	-	0.16	-	-	-	26.5	4.0	17.7	2.7	3B	211
12	HAL12FDO20	42	201	410 x 130	4M24@350	10	-	0.16	-	0.16	-	-	-	26.5	4.0	17.7	2.7	3B	216
12	HAL12FDO30	48	201	410 x 130	4M24@350	5	-	0.16	-	-	-	-	-	26.5	4.0	17.7	2.7	3B	228

The maximum top weight has been allowed for in all cases to determine the maximum sail area. * Check with INGAL EPS (in some loading scenarios 2A Screw Piles may not be suitable).

Boulevard Seesaw																			
6	HBM6F	75	165	295 x 110	4M20@233	55	0.87	1.37	0.53	0.87	0.28	0.47	0.12	0.24	10.0	6.7	2.0	2A	80
8	HBM8F	75	212	410 x 130	4M24@350	65	1.57	2.06	1.11	1.63	0.69	1.01	0.37	0.61	25.0	16.7	3.5	3A	161
10	HBM10F	75	212	410 x 130	4M24@350	65	0.76	1.32	0.61	0.91	0.33	0.53	0.09	0.23	26.0	17.3	3.5	3B	196
12	HBM12F	75	241	410 x 130	4M24@350	70	0.62	1.14	0.48	0.73	0.19	0.39	-	0.11	32.0	21.3	3.7	3B	256

The maximum top weight is the total allowable weight inclusive of crossarms that may be applied to the top of the column. Due allowance must be made for the centre of gravity of the weight above or below the column top.

The maximum allowable sail areas include 100kg for every 1 m² or part thereof. A complete range of luminaire mounting hardware and accessories is available to suit these columns.

* Check with INGAL EPS (in some loading scenarios these Screw Piles may not be suitable).

Park Seesaw																			
9	HPM9F	94	266	610 x 190	4M24@350	115	2.11	2.79	1.55	2.28	0.98	1.42	0.49	0.81	37.8	25.2	4.9	3B*	242
10	HPM10F	75	266	610 x 190	4M24@350	85	1.42	2.26	1.22	1.66	0.77	1.09	0.35	0.61	37.8	25.2	4.7	3B*	248
10	HPH10F	110	268	610 x 190	4M30@350	115	2.29	3.65	2.02	2.71	1.31	1.83	0.69	1.06	55.0	36.7	5.7	n/a	315
12	HPM12F	75	266	610 x 190	4M24@350	70	0.91	1.56	0.65	1.09	0.38	0.65	0.07	0.26	37.8	25.2	4.5	3B*	275
12	HPH12F	75	268	610 x 190	4M30@350	70	1.52	2.28	1.09	1.74	0.84	0.99	0.37	0.66	55.0	36.7	5.5	n/a	329
15	HPM15F	75	266	610 x 190	4M30@350	75	0.46	0.94	0.29	0.58	0.02	0.23	-	-	45.0	30.0	4.1	4A*	345
15	HPH15F	75	268	610 x 190	4M30@350	75	0.91	1.37	0.55	1.01	0.32	0.45	-	0.18	58.0	38.7	5.0	n/a	396
18	HPL18F	129	368	610 x 190	4M36@500	120	0.92	1.63	0.49	1.08	0.19	0.45	-	0.01	102.0	68.0	8.0	n/a	667
18	HPM18F	129	370	610 x 190	8M30@500	120	1.75	2.54	1.25	1.89	0.65	0.95	0.35	0.65	161.0	107.3	11.4	n/a	774
20	HPL20F	100	368	610 x 190	4M36@500	90	0.55	1.12	0.21	0.68	-	0.16	-	-	97.0	64.7	6.7	n/a	685
20	HPM20F	100	370	610 x 190	8M30@500	90	1.13	1.69	0.76	1.22	0.29	0.52	0.11	0.29	161.0	107.3	11.3	n/a	792
25	HPL25F	154	488	610 x 190	12M30@640	90	2.28	3.37	1.40	2.19	-	0.50	-	-	295.0	196.7	16.0	n/a	1,670
25	HPM25F	205	585	610 x 190	16M30@800	195	3.42	5.59	1.96	3.71	0.66	0.99	-	-	373.0	248.7	18.5	n/a	2,340
27	HPM27F	181	585	610 x 190	16M30@800	160	2.94	4.91	1.61	3.19	0.39	0.69	-	-	374.0	249.3	18.3	n/a	2,360
30	HPM30F	155	612	610 x 190	16M30@800	130	2.67	3.51	1.52	2.65	-	0.49	-	-	446.0	297.3	17.7	n/a	2,535

The maximum top weight is the total allowable weight inclusive of crossarms that may be applied to the top of the column. Due allowance must be made for the centre of gravity of the weight above or below the column top.

The maximum allowable sail areas include 100kg for every 1 m² or part thereof. A complete range of luminaire mounting hardware and accessories is available to suit these columns.

* Check with INGAL EPS (in some loading scenarios these Screw Piles may not be suitable).

Technical Information

NOMINAL HEIGHT (m)	CATALOGUE No.	POLE DIAMETER		DOOR SIZE L x W (mm)x(mm)	BOLTS	MAX.TOP WEIGHT (kg)	MAXIMUM ALLOWABLE SAIL AREA (M²)								ULT. BASE MOMENT (kNm)	ULT. BASE SHEAR (kN)	WORK. BASE MOMENT (kNm)	WORK. BASE SHEAR (kN)	SCREW PILE	POLE WEIGHT (kg)
		TOP (mm)	BOT. (mm)				REGION - TERRAIN CATEGORY (AS1170.2)													
							A-2	A-3	B-2	B-3	C-2	C-3	D-2	D-3						
Powerlift																				
8	PPL18F ¹	128	201	550 x 125	4M24@350	220	2.40	3.80	1.80	2.80	1.15	1.65	0.65	0.95	36.7	6.8	24.5	4.6	n/a	238
10	PPL10F ¹	106	201	550 x 125	4M24@350	160	1.30	2.20	1.15	1.60	0.70	1.05	0.30	0.55	36.7	6.4	24.5	4.3	n/a	254
10	PPL10F ²	156	260	500 x 155	4M30@500	320	3.25	5.15	2.65	3.70	1.90	2.60	1.00	1.55	82.0	11.5	54.7	7.7	n/a	375
12	PPL12F ¹	75	201	550 x 125	4M24@350	100	0.70	1.15	0.50	0.80	0.35	0.45	0.05	0.20	36.7	6.2	24.5	4.2	n/a	269
12	PPL12F ²	146	260	500 x 155	4M30@500	265	2.25	3.40	1.70	2.60	1.45	1.65	0.70	1.15	82.0	11.0	54.7	7.4	n/a	395
15	PPL15F ²	106	260	500 x 155	4M30@500	160	1.05	1.60	0.75	1.15	0.50	0.60	0.20	0.45	82.0	10.6	54.7	7.1	n/a	417
15	PPM15F ³	187	368	500 x 200	8M30@PL370	260	2.20	3.35	1.85	2.45	1.10	1.60	0.50	0.85	139.0	17.0	92.7	11.4	n/a	651
17.5	PPM175F ³	152	368	500 x 200	8M30@PL370	185	1.35	2.15	0.85	1.50	0.50	0.80	0.05	0.25	137.0	17.0	91.4	11.4	n/a	681
18	PPL18F ²	75	260	500 x 155	4M30@500	90	0.40	0.65	0.25	0.45	0.10	0.15	-	-	70.0	8.0	46.7	5.4	n/a	437
20	PPM20F ³	126	368	500 x 200	8M30@PL370	135	0.80	1.40	0.40	0.90	0.15	0.35	-	-	118.0	13.0	78.7	8.7	n/a	710
20	PPH20F ⁴	304	516	570 x 170	8M42@GL520	605	8.95	13.40	6.45	9.60	4.65	4.95	2.50	3.45	525.0	42.0	350.0	28.0	n/a	2,360
20	PTM20F ⁴	295	516	570 x 170	8M42@GL520	605	9.45	13.80	7.05	10.00	3.85	5.35	3.00	3.85	566.0	42.0	378.0	28.0	n/a	2,230
25	PPH25F ⁴	236	516	570 x 170	8M42@GL520	425	5.10	7.45	3.40	5.35	1.05	2.15	0.65	1.05	518.0	40.0	346.0	27.0	n/a	2,534
25	PTM25F ⁴	230	516	570 x 170	8M42@GL520	425	5.30	7.15	3.90	5.45	1.60	2.65	1.00	1.30	532.0	35.0	355.0	24.0	n/a	2,355
30	PPH30F ⁴	163	516	570 x 170	8M42@GL520	295	2.20	2.90	1.55	2.20	-	0.65	-	-	498.0	34.0	332.0	23.0	n/a	2,630
30	PTM30F ⁴	156	516	570 x 170	8M42@GL520	295	1.90	2.50	1.40	1.90	0.35	0.80	-	0.10	510.0	33.0	340.0	22.0	n/a	2,442
30	PTH30F ⁵	336	668	800 x 250	12M48@1000S	640	8.70	13.30	5.40	8.90	1.10	2.85	0.25	0.95	908.0	58.0	606.0	39.0	n/a	5,869
35	PTH35F ⁵	267	668	800 x 250	12M48@1000S	340	5.75	8.30	3.10	5.90	-	1.00	-	-	908.0	53.0	606.0	36.0	n/a	6,056
40	PTH40F ⁵	206	668	800 x 250	12M48@1000S	200	2.55	3.80	1.70	2.55	-	0.05	-	-	908.0	42.0	606.0	28.0	n/a	6,149

The maximum allowable sail areas include 100kg for every 1 m² or part thereof. A complete range of luminaire mounting hardware and accessories is available to suit these columns.

Hydraulic Unit Required: ¹ = 200 Series ² = 250 Series ³ = 370 Series ⁴ = 520 Series ⁵ = 650 Series

High Mast Systems																			
30	HMF6030030	220	640	1200X350	12M30@760	300	1.9	1.9	1.9	1.9	-	-	-	525	28	350	19	n/a	1900
35	HMF6030035	220	700	1200X350	16M30@810	300	1.9	1.9	1.9	1.9	-	-	-	715	34	477	23	n/a	2700
40	HMF6030040	220	700	1200X350	16M36@830	300	1.9	1.9	1.9	1.9	-	-	-	945	39	630	26	n/a	3850

Arms on the circular headframe must be evenly distributed when attaching lights
Individual lights not to exceed 0.25m²/25kg
Lights not supplied and mounting arm to be ordered separately



Powerlift



Powerlift



High Mast



>> STREET LIGHTING POLES >> FLOODLIGHTING POLES >> POWER POLES
>> LOWERING SYSTEMS >> SPECIAL APPLICATION POLES >> SERVICES & ACCESSORIES

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