MASONS
POWER GENERATION

A new generation of power

REF. MPW 14.00

MODEL | MPW 655-1850

- **> PERKINS Diesel engine.**
- **> Water cooling system.**
- **> AIR-TO-AIR Intercooler (engine Series TAG).**
- **> AIR-TO-WATER Intercooler (engine Series TWG).**
- **> Industrial mufflers with flexible compensators.**
- **> Manual oil draining pump with pipe.**
- **> Automatic control panel mounted on the genset.**
- **> Main circuit breaker mounted on the genset.**

TECHNICAL FEATURES

MODEL		MPW655	MPW740	MPW800	MPW975	MPW1020	MPW1250	MPW1560	MPW1880	MPW1700	MPW1850
CODE		SI651TPA	SI741TPA	SI801TPA	SI971TPA	SI102TPA	SI122TPA	SI132TPA	SI152TPA	SI172TPA	SI182TPA
PRIME POWER PRP	**kVA** (kW)	**642 (514)**	**731 (585)**	**800 (640)**	**980 (784)**	**1006 (805)**	**1235 (988)**	**1315 (1052)**	**1499 (1199)**	**1689 (1351)**	**1846 (1477)**
STANDBY POWER LTP	**kVA** (kW)	**710 (568)**	**807 (646)**	**860 (688)**	**1010 (808)**	**1110 (888)**	**1350 (1080)**	**1350 (1080)**	**1649 (1319)**	**1770 (1416)**	**2030 (1624)**
Voltage (three phases)	Volt	400/231	400/231	400/231	400/231	400/231	400/231	400/231	400/231	400/231	400/231
Frequency	Hz	50	50	50	50	50	50	50	50	50	50
Power factor	Cos φ	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Fuel capacity	Litres	120	120	120	120	120	120	120	120	120	120
Autonomy (100% load PRP)	h	0,82	0,69	0,63	0,50	0,48	0,41	0,40	0,35	0,30	0,28
Dimensions (LxWxH)	mm	3391x1536x2050	3960x1706x2131	3960X1706X2131	4830X1868X2494	4830X1868X2494	4852X1868X2686	4962X2265X3046	4962X2265X3046	5620X2150X2720	5620X2775X3516
Weight	kg	4.860	6.193	6.203	8.004	8.166	10.284	11.019	11.317	14.136	14.588
DIESEL ENGINE	**PERKINS**	**2806C-E18TAG2**	**4006C-23 TAG2A**	**4006-23 TAG3A**	**4008 TAG2A**	**4008 TAG2A**	**4012 TWG2**	**4012 TAG1A**	**4012 TAG2A**	**4016 TWG2**	**4016 TAG1A**
Cooling system	Type	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Speed	r.p.m.	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
Displacement	c.c.	18.100	22.921	22.921	30.561	30.561	45.842	45.842	45.842	61.123	61.123
Cyliders and disposition	n° disp.	6 L	6 L	6 L	8 L	8 L	12 V	12 V	12 V	16 V	16 V
Aspiration	Type	Turbocharged with CAC	Turbocharged with CAC	Turbocharged with CAC	Turbocharged with CAC	Turbocharged with CAC	Turbocharged with CWC	Turbocharged with CAC	Turbocharged with CAC	Turbocharged with CWC	Turbocharged with CAC
Net engine power PRP (with fan)	kWm	542	620	679	861	861	1.044	1.136	1.254	1.406	1.537
Net engine power LTP (with fan)	kWm	599	685	760	947	947	1.154	1.250	1.380	1.550	1.690
Fuel consumption (100% load)	l/h	128	151	166	211	219	255	263	300	348	375
Engine governor (standard)	Type	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
SYNCHRONOUS ALTERNATOR	**STAMFORD / MECC-ALTE**	**ECO 40 1.5L**	**Eco 40 2L**	**ECO 43 1S**	**ECO 43 2S**	**ECO 43 1L**	**ECO 43 2L**	**ECO 43 2L**	**PI 734 C**	**PI 734 D**	**ECO 46 2S**
Insulation	Class	H	H	H	H	H	H	H	H	H	H
Mechanical degree of protection	Type	IP 21	IP 21	IP 21	IP 21	IP 21	IP 21	IP 21	IP 21	IP 21	IP 21
Voltage regulation	Type	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
Sustained short circuit current	Icc / Time	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 20 sec.	3 x In / 10 sec.	3 x In / 10 sec.	3 x In / 20 sec.

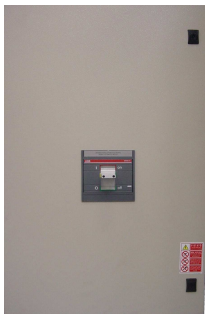
TECHNICAL CHARACTERISTICS NOT IMPEGNATIVE RESERVATION OF MODIFICATIONS FOR INNOVATION OF THE PRODUCT

AUTOMATIC/MANUAL CONTROL PANEL (ACP)

Automatic control panel mounted on the genset, complete with digital control unit **DST4600A** for monitoring, control and protection of the generating set.

AUTOMATIC/MANUAL CONTROL PANEL (ACP)	MPW655	MPW740	MPW800	MPW975	MPW1020	MPW1250	MPW1560	MPW1880	MPW1700	MPW1850
Digital instrumentation through DST4600A control unit.	• Genereting set voltage (3 phases). • Mains voltage. • Generating set frequency. • Generating set current (3 phases). • Battery voltage. • Active power (kW). • Reactive power (kVAr). • Apparent power (kVA). • Power factor (cos φ). • Start-counter. • Active energy counter (kWh) no fiscal. • Hours-counter. • Oil pressure *(optional)*. • Engine coolant temperature *(optional)*.									
Commands and others	• Key operated mode selector switch: Automatic starting - Manual starting - Program - OFF/RESET - Test. • Engine start push button. • Engine stop push button. • Emergency stop push button. • Acoustic alarm silencing push button. • UP/DOWN push button for display selection.									
Auxiliary services	• Automatic battery charger. • Engine coolant preheating system power supply (single phase). • Acoustic alarm. • Programmable periodic test. • Genset report.									
Protections without shutdown	Battery failure (maximum/minimum voltage), pre-alarm for low oil pressure, pre-alarm for high engine coolant temperature.									
Protections with shutdown	High engine coolant temperature, low oil pressure, overspeed (derived from generator frequency), engine over-crank, generator overload (derived from external contact of MCB), fuel reserve with delayed shutdown, no fuel, emergency stop.									
Alarms shown on display	Belts failure, overload and short circuit (electronic protection), running under conditions not reached, generator under voltage, generator over voltage, generator under frequency, generator over frequency, maximum power, free alarm (w/o shutdown), power reverse, closing of Mains contactor or genset contactor failed, stop failure.									

MAIN CIRCUIT BREAKER PANEL

MAIN CIRCUIT BREAKER PANEL	MPW655	MPW740	MPW800	MPW975	MPW1020	MPW1250	MPW1560	MPW1880	MPW1700	MPW1850
										
Nominal current (In)	**1000A**	**1250A**	**1250A**	**1600A**	**1600A**	**2000A**	**2500A**	**3200A**	**3200A**	**4000A**
Main features	• Number of poles: III poles. • Type of construction: fix moulded case. • Operating type: automatic. • Use category (EN60947-2): Curve B. • Current transformers and tripping coil. • Electronic protection by interchangeable relays for maximum current against overloads and short-circuits for alternate current. • Rated service voltage (Ue) 50/60Hz: 690V.									
	Supplied in a separate panel (made of steel sheets) for mounting on the baseframe. It protects the generator against overloads (thermal section) and short circuits (magnetic section).									

GENSET SUPPLEMENTS (ONLY AVAILABLE WHEN ORDERED)

GS

>	**EFO: EXTENDED CAPACITY ON BASE FUEL TANK.**
>	**DPP: DIFFERENTIAL PROTECTION.**
>	**AFP: AUTOMATIC REFUELING SYSTEM.**
>	**RES: RESIDENTIAL SILENCER.**
>	**PHS: COOLANT PREHEATING SYSTEM. It is absolutely necessary for starting under ambient conditions < +10ºC.**

CONTROL PANEL SUPPLEMENTS (ONLY AVAILABLE WHEN ORDERED)

CPS

>	**TIF: IV POLES CIRCUIT BREAKER INSTEAD OF III POLES.**

ACCESSORIES

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LOAD TRANSFER SWITCH PANEL	MPW655	MPW740	MPW800	MPW975	MPW1020	MPW1250	MPW1560	MPW1880	MPW1700	MPW1850
										
Motorized change over contactors	**IV poles - 1250A**			**IV poles - 1600A**		**IV poles - 2000A**	**IV poles - 2500A**	**IV poles - 3200A**		**IV poles - 4000A**
Commands	• Motorized contactors integrated into Sircover (SOCOMEC) device. • 3 positions selector switch, placed on the front of the panel, which allows selecting manually the following positions: ⇨ AUTO: operating mode based on the automatic logic control DST4600A. ⇨ MAINS: Mains power supply forcement. ⇨ GENSET: Genset power supply forcement. • Manual pulley, placed on the own change over contactors, for emergency load transfer.									
Connections	• Plinth row for connection from MCB (main circuit breaker) to LTS panel. • Terminals board for power cables connection (GENSET - MAINS - LOAD).									
Protections	• Mechanically and electrically interlocked. • 2 visual LED's to show the contactors position: MAINS - GENSET. • Mechanical degree of protection: IP40 (external) and IP20 (internal).									

Load transfer switch panel built in a metal cabinet and supplied loose from the genset.

Automatic control panel + LTS panel measures the Mains voltage and starts automatically the genset within few seconds to supply load in case of Mains failure. It transfers immediately the load back to the Mains when its voltage returns within the rated values.