

MIST Facility Equipment List



Small Solar Inverters

Manufacturer	Model	Phase	Rating (kW)	Solar Panels
ABB	UNO-DM-2.0-TL-PLUS-B	1 ϕ	2	Kyocera
Fronius	Primo 3.0	1 ϕ	3	ET Solar
SMA	SB 3000TL-21	1 ϕ	3	Jinko
SolarEdge	SE5000	1 ϕ	3	Jinko
Solax	SK-SU 5000E	1 ϕ	5	Kyocera
Selectronic	SPMC481	1 ϕ	5	Kyocera
Selectronic	SPMC482	1 ϕ	7.5	-

Large Solar Inverters

Manufacturer	Model	Phase	Rating (kW)	Solar Panels
SMA	SB20000TL-30	3 ϕ	20	Kyocera
SMA	STP50-40	3 ϕ	50	Kyocera

Battery Systems

Manufacturer	Model	Phase	Rating (kW)	Energy Storage (kWh)	Solar Panels
Pixii	Pole-Top	3 ϕ	30	100	-
Redback	SH5000	1 ϕ	5	11.9	Kyocera
SigEnergy	SigenStor EC 10.0SP	1 ϕ	10	24	Aiko
Sungrow	SH10RS-ADA, SBH250	1 ϕ	10	25	Aiko
Tesla	Powerwall 2 + Gateway	1 ϕ	5	13.5	-
Toshiba	ABB PCS100 Converter Toshiba SCiB Lithium Titanate	3 ϕ	83	200	-

Loose Batteries

LG Chem	RESU 10
Polarium	SLB48-250-146-2
Powerplus	
Pylontech	Powercube HM3A180

Load Banks

Manufacturer	Description	Phase	Rating (kW)
Custom	Resistive in 1kW increments	1 ϕ	10
Sephco	25kW Increments	3 ϕ Delta	400
Sephco	25kW Increments	3 ϕ Delta	1000

High Power Connection (Option for Grid Connected or Standalone)

Voltage	230/400V
Grid Supply Rating (Import or Export)	1200A
Number of Device Connection Points	9
Rating of Device Connection Points	400A to 1600A
Continuous Bus Rating	3000A
Device Connection Point Fault Rating	50kA, 1s
Switchboard Fault Withstand	63kA, 1s

Small Power Connection (Option for Grid Connected or Standalone)

Voltage	230/400V
Grid Supply Rating (Import or Export)	400A
Number of Device Connection Points	> 10
Rating of Device Connection Points	16A to 250A
Continuous Bus Rating	630A
Switchboard Fault Withstand	25kA, 1s

Rotating Machines

Type	Description	Rating
Diesel Genset Node 1	Engine: Hino J08 Alternator: Meccalte ECO38 Control: ComAp IG1000 AVR: Basler DECS-150	100kW
Diesel Genset Node 2	Engine: Scania DC13 Alternator: Meccalte ECO38 Control: ComAp IG1000 AVR: Basler DECS-150	250kW

Other Equipment

Type	Manufacturer	Description
Power Quality Analyser	Elspec CHK Power Quality	G4400 Blackbox Miro PQ45
High-speed recording	National Instruments	Compact RIO 50kHz sampling Analog, digital signals
GPS Clock	Tekron	TTM 01-G

Digital Twins and Hardware in the Loop

Type	Manufacturer	Description	Specification
Real-time digital simulator	RTDS Technologies	1 x NovaCor 1.0	5 cores
		2 x GTNet card	Modbus, DNP, IEC 61850
		24 Ch High precision analogue output	+/- 10V, 0-20mA
		48 Ch High precision analogue inputs	+/- 10V, 0-20mA
		64 Ch Digital Inputs	24VDC
		64 Ch Digital Outputs	24VDC
		24 Ch Digital Inputs	240V
24 Ch Digital Outputs	240V		
Linear power amplifier (four-quadrant)	Spitzenberger- Spies	3 x APS10000	30kVA Single or Three-phase
Solar Simulator (Bi-directional DC Converter)	ITECH	4 x IT6012C-800-50	36kVA
Small Amplifiers	Custom	4 x Voltage Amplifiers 4 x Current Amplifier	-30V -1A

Access to Ergon Energy Network SEP2 Utility Server

Description				
opModExpLimW	opModGenLimW	opModEnergize	opModFixedW	opModTargetW
opModImpLimW	opModLoadLimW	opModConnect	opModMaxLimW	opModTargetVar
				opModGrid ConnectPermit

For more information visit:
ergon.com.au/network



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