

TECHNICAL FACT SHEET



ELECTRICAL

Mains replacement and mains parallel operation:

- nominal voltage (L/N/PE)	V	3x 230
- nominal frequency	Hz	50
- nominal power ¹	kW	7,2
- fuel cell power / constant power	kW	1,5
- apparent output power in mains backup mode ¹	kVA	9,0
- apparent output power – and feed-in power in parallel mains operation ¹	kVA	7,5

DC connection at photovoltaic²:

- number of independent MPPT inputs / strings		2 (optional 3)
- maximum power of generator per MPPT	kW	5,8
- maximum input voltage (open terminal voltage) per MPPT	V	250

AC connection to external PV inverter²:

- voltage / frequency / max. charging power of the picea battery	V / Hz / kW	3x 230 / 50 / 5,7
electrical energy battery (short-term, usable) ³	kWh	25
electrical energy hydrogen storage (seasonal) ⁴	kWh	300 (expandable up to 1500)

THERMAL

available waste heat ⁵	kWh	ca. 3.000
temperature levels of process heat extraction	°C	max. 55

Ventilation:

- maximum air volume (at 100 Pa)	m ³ /h	350
- heat recovery rate	%	up to 87
- sound power level of housing radiation in nominal operation ⁶	dB (A)	58
- sound power level of duct connections with silencer in nominal operation ⁶	dB (A)	37
- nominal pipe size	DN	180
- measurements of the 4 air filter boxes with reducers (dimensions WxHxD)	mm	resp. 470 x 427 x 330
- combinable with heating unit independent of ambient air		yes (optional)
- fresh air filter box with G4 and F7, exhaustion with F7 and circulation with G4 filters		

Hydraulic connections:

- flow and return connection to hot water storage tank	G ¾" AG / G ½" AG
- fresh water hose / waste water hose	DN ¼" / 10x15 mm flexibel

Heating element:

- thermal power	kW	three-tiered up to 4,5
- fitting length	mm	450
- thread		G 1½" AG

Communication with heat pumps SG Ready (for heat pumps), combinable with all common heat generators

MAIN COMPONENTS

Energy unit (interior system) ⁷ :	Weight	Dimensions (W x H x D)
- consisting of system and battery cabinet	ca. 2,2 t	1,5 x 1,85 x 1,0 m
- electrical subdistribution for connection of picea	ca. 45 kg	0,55 x 1,1 x 0,22 m
- installation within the thermal insulation envelope of the house, T >15°C		
- height (piping included) 2.10 m; optimal room height 2.30 m		

Hydrogen storage (outside system) ⁸ :	Weight	Dimensions (W x H x D)
- compact compressor unit	ca. 0,6 t	0,75 x 2,0 x 1,0 m
- gas cylinder bundle XL (300 kWh electrically usable)	ca. 1,8 t	1,0 x 2,0 x 1,0 m
- sound levels without silencer in nominal operation ⁹	dB (A)	58
- sound levels with silencer in nominal operation ⁹	dB (A)	55
- sound levels without silencer in nominal operation at a visual distance of 3m ⁹	dB (A)	49
- operating pressure gas cylinder bundle	bar	max. 300

Hydrogen storage extensions (combinable in multiple ways):	Weight	Dimensions (W x H x D)
- gas cylinder bundle L (outside system, 225 kWh electrically usable) ⁴	ca. 1,3 t	0,75 x 2,0 x 1,0 m
- gas cylinder bundle XL (outside system, 300 kWh electrically usable) ⁴	ca. 1,8 t	1,0 x 2,0 x 1,0 m

OPTION: HOT WATER STORAGE TANK

Volume	litre	550
Dimension with / without insulation in m	D x H in m	0,7 x 1,63 (tilt measurement 1,69) / 0,96 x 1,73
Weight (insulation included) in kg	kg	ca. 131

FURTHER INFORMATION

Energy source / emission	Solar energy / H ₂ O and O ₂
picea-App ¹⁰	Android, IOS

¹dependent on temperature and battery state of charge. effective outputs (kW) valid for mains backup mode and mains parallel operation. apparent output power depending on operation mode and limited to 3 kVA per phase. ²maximum PV system output on location 30 kWp, maximum combined apparent power of externally installed generation systems 22 kVA. requirements of VDE-AR-N 4105:2018-11 are to be considered. ³battery lifetime depends on installation and operating conditions. ⁴as-delivered condition, dependent on load profile and operating conditions. ⁵depending on design and consumption behavior, typically between 2000 and 4000 kWh. ⁶measurements in accordance with E DIN EN 13141-7. ⁷the energy unit complies with protection class IP20D. ⁸the hydrogen storage complies with protection class IP44C. ⁹manual measurement based on DIN EN ISO 3744:2011-02. all requirements of TA-Lärm for residential areas are met. noise emissions only sporadically between 10 pm and 6 am. ¹⁰an internet connection is required for the picea app as well as for remote maintenance and yield monitoring. further details on request.