

# TECHNICAL DATA SHEET

## UNIBLOCK UBTD+ 560/560 with POWERBRIDGE 16,5MJ

### Highlights UNIBLOCK UBTD+

- Single machines sized 500 kW up to 2700 kW and paralleling up to 40MW
- Higher reliability than other technologies
- Highest efficiency, up to 97% on line (with energy store connected)
- Total Design Flexibility
- Medium Voltage available
- Water cooling available using building chilled water
- Battery- or flywheel backed versions
- More than 3 times longer bridging time from Piller kinetic energy storage than with any other commercially available flywheel system
- Redundant on-board power supplies
- Leading and lagging output power factor without derating
- 100% load step capability
- Inherent fault clearing ability for short circuit faults without bypass
- Virtual unity input power factor
- 99% input/output harmonic isolation



**Nothing protects quite like Piller**

# TECHNICAL DATA SHEET

## UNIBLOCK

### UBTD+ 560/560 with POWERBRIDGE 16,5MJ



#### Output

Rated power	kVA	625	
Rated active power	kW	560	
Rated voltage	V	400 / 231	(±5% adjustable)
Rated frequency	Hz	50	
Rated current	A	902	
Power factor		0,9	
Voltage stability			
■ static with symmetrical load	%	±1	
■ dynamic with 50% load change (PF 1,0)	%	±1	
■ dynamic with 50% load change (PF 0,9)	%	±3	
■ dynamic with 50% load change (PF 0,8)	%	±5	
Settling time (±2%)	ms	200	
Frequency stability			
■ static self controlled	%	0,1	
■ on mains <sup>1</sup>	%	1	
■ dynamic with 100% load change	%	1	
Voltage distortion (EN 62040-1)			
■ symmetrical linear load (Ph-Ph/Ph-N)	%	1,5 / 2,5	
Overload capability (normal operation)			
■ 1 hour	%	10	
■ 2 minutes	%	50	
Maximum crest factor		limitless for harmonic loads	
Phase angle (symmetrical load)	°	120 ±1	
Maximum permissible unbalance <sup>2</sup>	%	100	
Short-circuit current	kA	10,4	(ca. 11x rated current) for 10ms

<sup>1</sup> According to the adjusted tolerance for the mains frequency

<sup>2</sup> Load unbalance capacity = different loading of the individual phases in a three-phase AC system.

# TECHNICAL DATA SHEET

## UNIBLOCK UBTD+ 560/560 with POWERBRIDGE 16,5MJ



### Input

Rated voltage	V	400 / 231
Rated frequency	Hz	50
Rated current	A	872
Power factor		0,97
Permissible voltage deviation		
■ continuous	%	±10
■ short-time	%	-20
■ dynamic	%	-50
Frequency tolerance	%	±1 (adjustable ±5%)
Harmonic attenuation (input to output and output to input)	%	> 99
Current distortion	%	< 3
Synchronisation time after mains return	s	< 3
Maximum current <sup>1</sup>	A	1095
Max. reverse current on mains short-circuit	A	1723

### POWERBRIDGE

Backup time	s	24
re-charge time	s	145 (adjustable <sup>2</sup> )

<sup>1</sup> Individual input protection is required.

<sup>2</sup> Value affects the maximum input current

# TECHNICAL DATA SHEET

## UNIBLOCK UBTD+ 560/560 with POWERBRIDGE 16,5MJ



### Emergency bus bar

#### Output (EB)

Rated power	kVA	625	
Rated active power	kW	560	
Rated voltage	V	400	
Rated current	A	902	
Power factor		0,9	
Static voltage deviation <sup>1</sup>	%	±2,5	
Overload capability			
■ 1 minute	%	10	
■ 2 seconds	%	50	
Short-circuit current	kA	4,7	(ca. 5x Rated current) for 10ms

#### Input (EB)

Rated voltage	V	400	
Permissible voltage deviation	%	±10	
Rated frequency	Hz	50	
Frequency tolerance	%	±5%	
Rated current	A	902	

<sup>1</sup> At equal load with pf 1.0 on essential and critical bus.

# TECHNICAL DATA SHEET

## UNIBLOCK

### UBTD+ 560/560 with POWERBRIDGE 16,5MJ



#### General data

Efficiency (at 100% load, cos $\phi$ 1,0)	%	95,5
Losses (at 100% load, cos $\phi$ 1,0)	kW	26
Max. heat dissipation	kW	41
Interfaces (Standard)		
■ outputs (dry contacts)		6
Wall-distance backside		not required
Colour		RAL 5012
Ambient temperature	°C / °F	0-40 / 32-104
■ Daily mean average	°C / °F	≤ 35 / ≤ 95
Ambient humidity (without condensation)	%	0-95
Installation altitude (above mean sea level)		
■ up to 1000m		without any derating
■ 1000m - 2000m		5% derating
Protection type (DIN/VDE 0470 part 11/92 IEC 529)		IP 20
Radio interference level (IEC 62040-2)		class C2 (class A acc. to EN 50091-2)
Cable connection		from top and bottom possible
Accessibility		front
Parallel configuration		up to 16 modules
Dimensions / Weight		
■ Width	mm (in.)	4250 (167,323)
■ Depth	mm (in.)	1320 (51,968)
■ Height	mm (in.)	2300 (90,551)
■ Weight	kg (lb.)	9040 (19929,584)

#### Options

- 4pole for neutral switching
- customer specific colours
- Castell-Key / Kirk-Key
- water cooling
- APOCONNECT (remote diagnostics)
- UNMS (Visualisation)
- DATAWATCH (shut-down)
- Profibus-DP
- Protocol-Gateway (3 maximum)
- I/O-card (3 maximum)
- SNMP-adaptor with Ethernet Interface
- OPC-Server

[www.piller.com](http://www.piller.com)



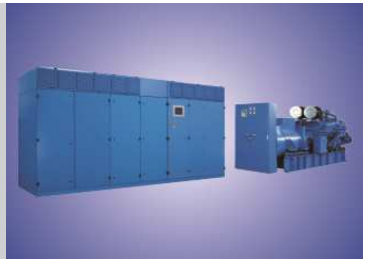
Issue:  
15.Jan.15

Modifications reserved

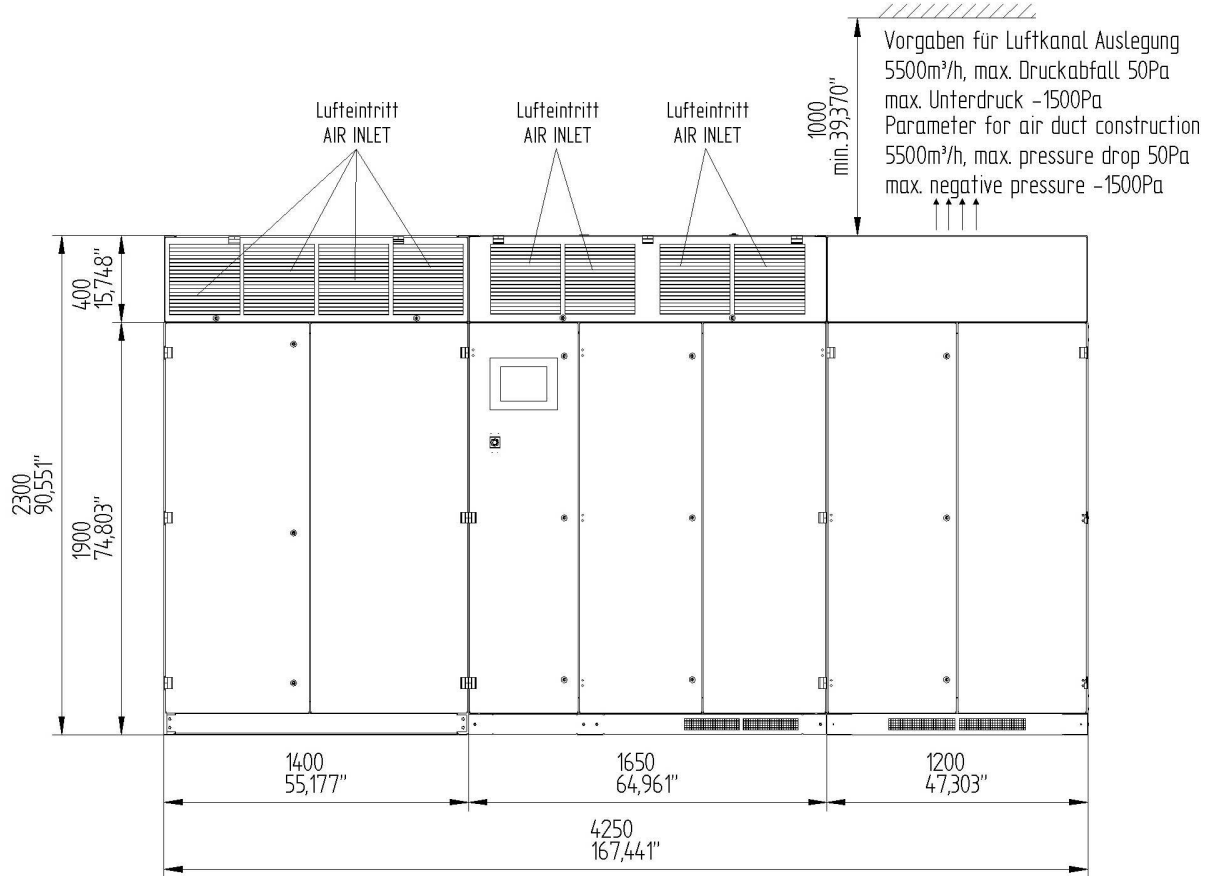
# TECHNICAL DATA SHEET

## UNIBLOCK

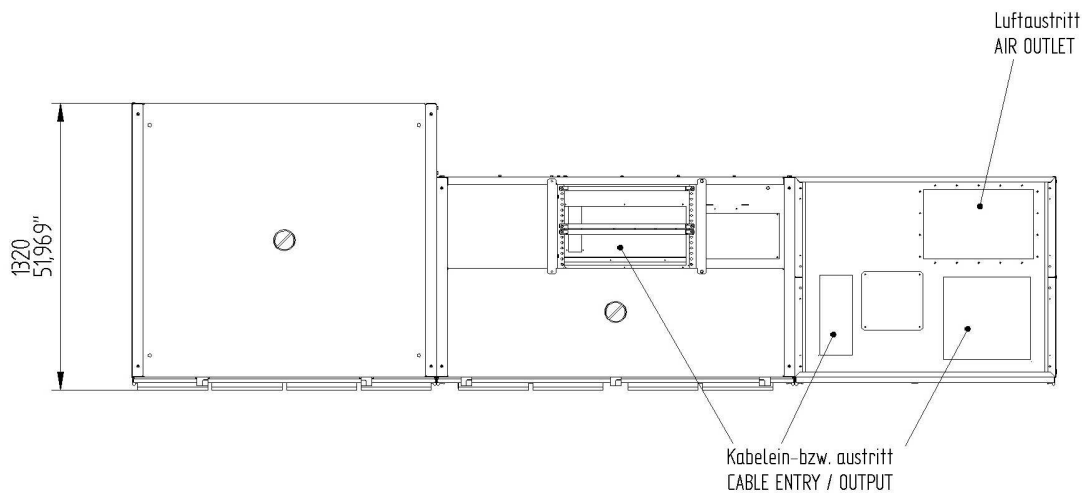
### UBTD+ 560/560 with POWERBRIDGE 16,5MJ



#### Dimensions / Weight



Gesamtgewicht TOTAL WEIGHT	PB-Schrank / PB CUBICLE	GR / WR- N / L Schrank INVERTER-MAINS / LOAD CUBICLE	NEA - Schrank NEA CUBICLE
9040 kg / 19929 lbs	6100 kg / 13448 lbs	1810 kg / 3990 lbs	1130 kg / 2491 lbs



[www.piller.com](http://www.piller.com)

Issue:  
15.Jan.15

Modifications reserved

  
**PILLER**  
Power Systems

# TECHNICAL DATA SHEET

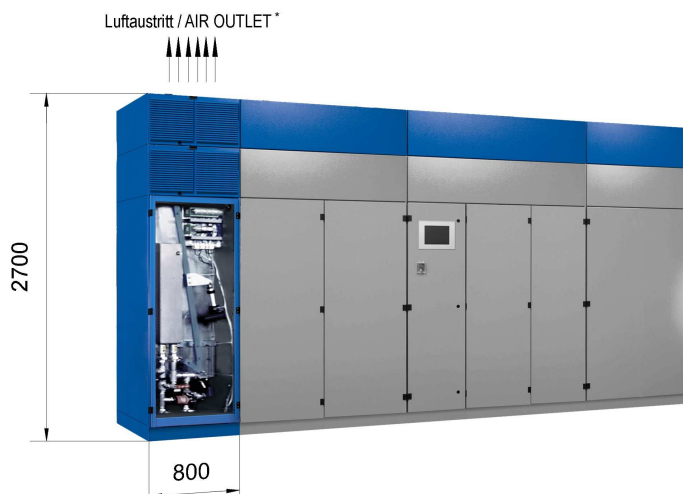
## UNIBLOCK UBTD+ 560/560 with POWERBRIDGE 16,5MJ



### Option Water Cooling

Max. heat dissipation	kW	41
Volume flow (per cooler)		
■ air *	m <sup>3</sup> /h	4500
■ water	m <sup>3</sup> /h	6
Pressure loss (per cooler)		
■ air *	Pa	50
■ water	kPa	25
Cooling water inlet temperature	°C / °F	5-20 / 41-68
Nominal size of connection	in.	1 ½" DN40
Condenser drain (inner diameter)	mm	13
Weight (additional)	kg (lb.)	900 (1984,14)

### Dimensions (optional fan / fan cabinet is required)



\* during emergency operation due to loss of water

[www.piller.com](http://www.piller.com)

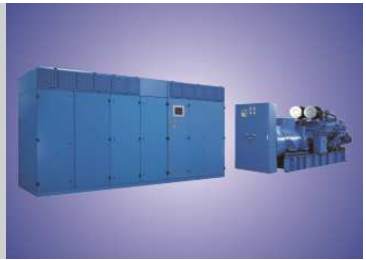
Issue:  
15.Jan.15

Modifications reserved

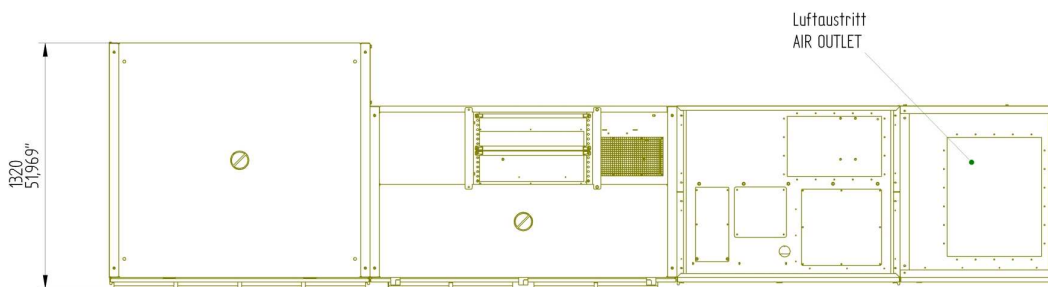
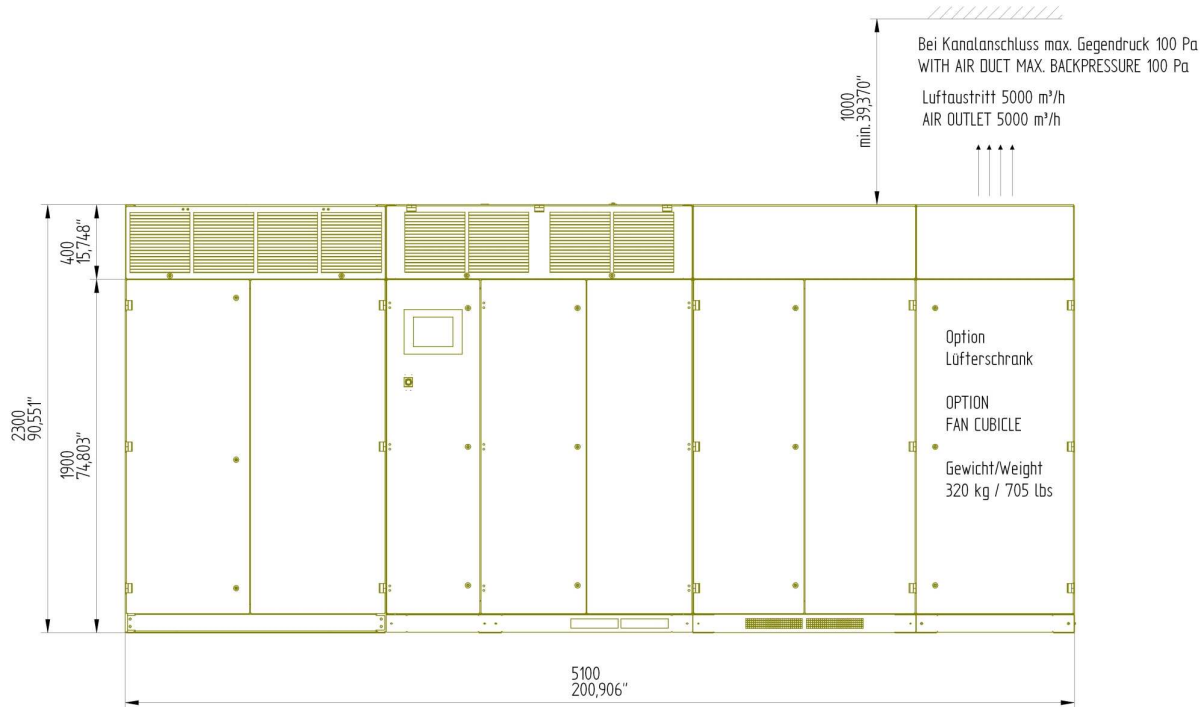
  
**PILLER**  
Power Systems

# TECHNICAL DATA SHEET

## UNIBLOCK UBTD+ 560/560 with POWERBRIDGE 16,5MJ



### Option fan cabinet



Gesamtgewicht TOTAL WEIGHT	PB-Schrank / PB CUBICLE	GR / WR- N / L Schrank INVERTER-MAINS / LOAD CUBICLE	NEA - Schrank NEA CUBICLE
9040 kg / 19929 lbs	6100 kg / 13448 lbs	1810 kg / 3990 lbs	1130 kg / 2491 lbs

[www.piller.com](http://www.piller.com)

Issue:  
15.Jan.15

Modifications reserved

**PILLER**  
Power Systems