

# SCHAEFER

## Series IV

Power Supplies

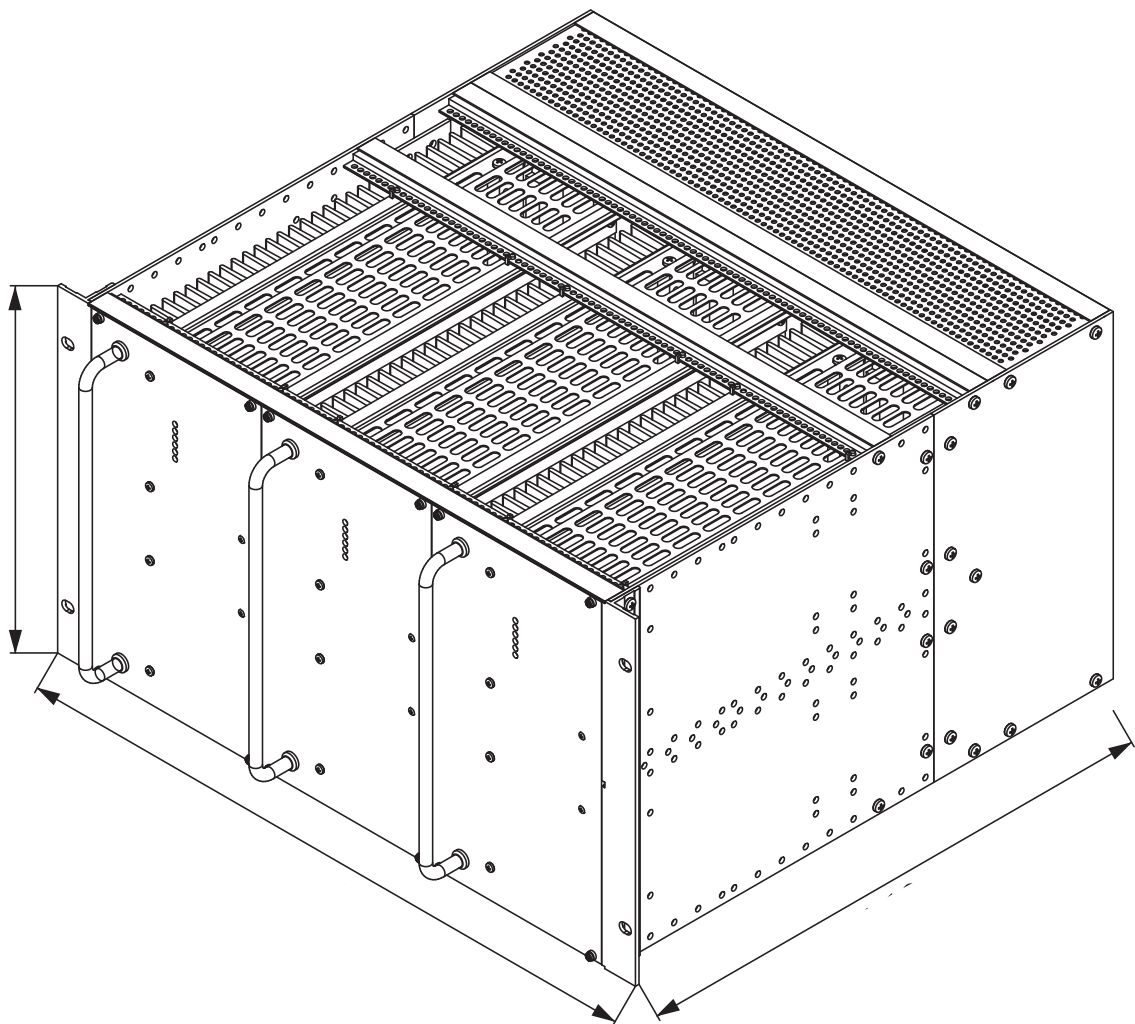
Converters

Inverters

Rectifiers

Chargers

Systems



Schaefer – the Power to make it happen.

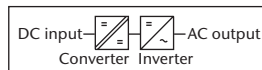
## DC/AC Inverters with single phase output

▶ from 200 VA to 10 kVA

Page 80

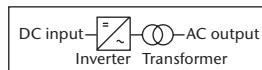
### Series CI

is a combination of a switch mode **C**onverter and **I**nverter (internal circuit see page 97). The converter provides the isolation between input and output and transforms the voltage to the level needed by the inverter for supplying the specified AC output voltage.



### Series IT

is a combination of a switch mode **I**nverter (internal circuit see page 97) and a **T**ransformer at the output. The transformer provides the isolation between input and output and transforms the voltage to the required level.



*For lower input voltages the CI version is more compact than the IT version.*

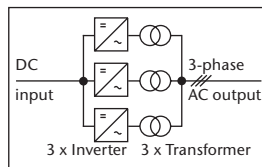
## DC/AC Inverters with 3-phase output

▶ from 600 VA to 30 kVA

Page 82

### Series IV

is a combination of 3 individual switch mode inverters with output transformers synchronized for a symmetrical 3-phase output. The transformers provide the isolation between input and output and transform the voltages to the required levels.



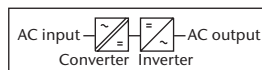
## Frequency Converters with single phase output

▶ from 500 VA to 12 kVA

Page 84

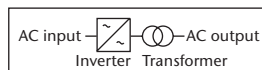
### Series CI

is a combination of a switch mode **C**onverter and **I**nverter (internal circuit see page 97). The converter provides the isolation between input and output and transforms the voltage to the level needed by the inverter for supplying the specified AC output voltage.



### Series IT

is a combination of a switch mode **I**nverter (internal circuit see page 97) with a rectifier at the input and a **T**ransformer at the output. The transformer provides the isolation between input and output and transforms the voltage to the required level.



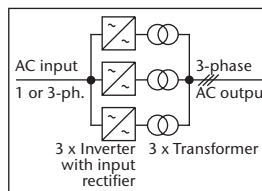
## Frequency Converters with 3-phase output

▶ from 1.5 to 36 kVA

Page 86

### Series IV

is a combination of 3 individual switch mode inverters, each with input rectifier and output transformer, synchronized for a symmetrical 3-phase output. The transformers provide the isolation between input and output and transform the voltages to the required levels.



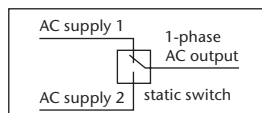
## Static Switches

▶ from 800 VA to 10 kVA

Page 88

### Series SS

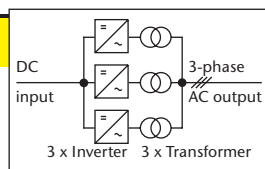
provides uninterrupted AC power to a critical load by connecting the load to AC supply 1 which can be the inverter output or to AC supply 2 which can be the mains.





## Features

- DC input: 20 – 800 V
- AC output: 200 / 400 / 480 V, 3-phase
- 40 – 400 Hz or fixed frequency (crystal stabilized)
- Sine wave
- Continuous short circuit protection
- Thermal shutdown with auto restart for inverter systems > 2 kVA
- Industrial grade components
- Suitable for complex load
- Surge power capability
- Unsymmetrical load permissible
- Modular system with interchangeable inverters



## Series IV Switch mode inverters with output transformers for isolation and voltage transformation

Input VDC																Cooling	Output VAC line-to-line
20–32 VDC	Output kVA	Size	40–64 VDC	50–80 VDC	Output kVA	Size	80–160 VDC	Output kVA	Size	160–320 VDC	340–400 <sup>1)</sup> VDC	340–640 VDC	450–800 VDC	Output kVA	Size		
IV 5526	0.6	A	IV 5536 IV 5636	IV 5546 IV 5646	1.2 1.5	A B	IV 5556 IV 5656	1.5 3	A C	IV 5576 IV 5676 IV 5776 IV 5876 IV 5876 F <sup>2)</sup>	IV 5586 Z IV 5686 Z IV 5786 Z IV 5886 Z IV 5886 ZF	IV 5676 G IV 5776 G IV 5876 G IV 5876 GF <sup>2)</sup>	IV 5776 K IV 5876 K IV 5876 K IV 5876 KF <sup>2)</sup>	1.8 3.6 5.4 7.5 10	A C D+T2 E+T3 F+T4		3 x 200
			IV 5836	IV 5846	3.6	E+T1	IV 5856	6	E+T2	IV 6276 IV 6476 IV 6676	IV 6286 Z IV 6486 Z IV 6686 Z	IV 6276 G IV 6476 G IV 6676 G	IV 6276 K IV 6476 K IV 6676 K	15 24 30	G+T5 G+T6 G+T7		
IV 5528	0.6	A	IV 5538 IV 5638	IV 5548 IV 5648	1.2 1.5	A B	IV 5558 IV 5658	1.5 3	A C	IV 5578 IV 5678 IV 5778 IV 5878 IV 5878 F <sup>2)</sup>	IV 5588 Z IV 5688 Z IV 5788 Z IV 5888 Z IV 5888 ZF	IV 5678 G IV 5778 G IV 5878 G IV 5878 GF <sup>2)</sup>	IV 5778 K IV 5878 K IV 5878 K IV 5878 KF <sup>2)</sup>	1.8 3.6 5.4 7.5 10	A C D+T2 E+T3 F+T4		3 x 400
			IV 5838	IV 5848	3.6	E+T1	IV 5858	6	E+T2	IV 6278 IV 6478 IV 6678	IV 6288 Z IV 6488 Z IV 6688 Z	IV 6278 G IV 6478 G IV 6678 G	IV 6278 K IV 6478 K IV 6678 K	15 24 30	G+T5 G+T6 G+T7		
IV 5529	0.6	A	IV 5539 IV 5639	IV 5549 IV 5649	1.2 1.5	A B	IV 5559 IV 5659	1.5 3	A C	IV 5579 IV 5679 IV 5779 IV 5879 IV 5879 F <sup>2)</sup>	IV 5589 Z IV 5689 Z IV 5789 Z IV 5889 Z IV 5889 ZF	IV 5679 G IV 5779 G IV 5879 G IV 5879 GF <sup>2)</sup>	IV 5779 K IV 5879 K IV 5879 K IV 5879 KF <sup>2)</sup>	1.8 3.6 5.4 7.5 10	A C D+T2 E+T3 F+T4		3 x 480
			IV 5839	IV 5849	3.6	E+T1	IV 5859	6	E+T2	IV 6279 IV 6479 IV 6679	IV 6289 Z IV 6489 Z IV 6689 Z	IV 6279 G IV 6479 G IV 6679 G	IV 6279 K IV 6479 K IV 6679 K	15 24 30	G+T5 G+T6 G+T7		

= natural convection    = temperature controlled fans

## Frequency Designation

.1	40 - 400 Hz adjustable / programmable
.2	45 - 65 Hz adjustable / programmable
.3	any fixed frequency between 40 - 400 Hz
.4	400 Hz
.5	50 Hz
.51	synchronized with 50 Hz mains
.6	60 Hz
.61	synchronized with 60 Hz mains
.7	50/60 Hz switchable

### Assistance in table use:

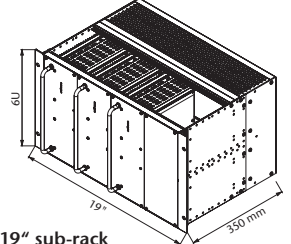
- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage and power.
- 3 The intersection of both results in the module required.
- 4 Add the required frequency designation to the part number.

### For example:

- 1 input voltage = 220 VDC
- 2 output voltage = 3 x 400 VAC , 50 Hz @ 7.5 kVA
- 3 results in a IV 5878
- 4 for 50 Hz add .5, i.e. IV 5878.5

- <sup>1)</sup> input supply from PFC also suitable  
<sup>2)</sup> input voltage range to be narrowed

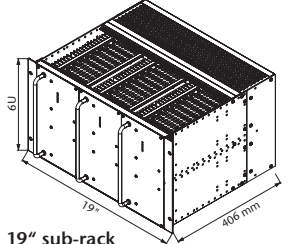




**Size A**

19" sub-rack including pluggable inverters and transformers, approx. 22 - 27 kg

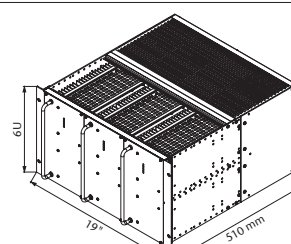
with wall plate (optional) approx. 26 - 31 kg



**Size B**

19" sub-rack including pluggable inverters and transformers, approx. 33 kg

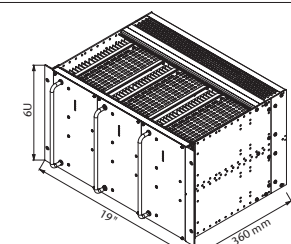
with wall plate (optional) approx. 38 kg



**Size C**

19" sub-rack including pluggable inverters and transformers, approx. 40 kg

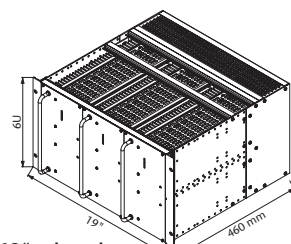
with wall plate (optional) approx. 45 kg



**Size D**

19" sub-rack including pluggable inverters, approx. 24 kg (transformers external)

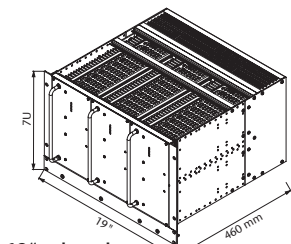
with wall plate (optional) and transformers, approx. 65 kg



**Size E**

19" sub-rack including pluggable inverters, approx. 27 kg (transformers external)

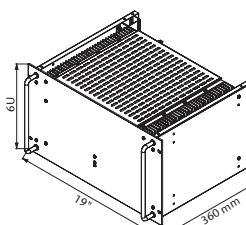
with wall plate (optional) and transformers (T1/T2/T3), approx. 58/70/80 kg



**Size F**

19" sub-rack including pluggable inverters, approx. 28 kg (transformers external)

with wall plate (optional) and transformers, approx. 104 kg

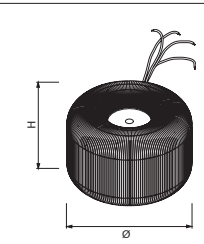


**Size G**

19" Plug-in module / approx. 32 kg

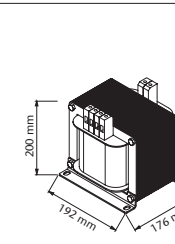
with wall plate (optional) approx. 36 kg

**Attention:**  
For 3-phase system 3 modules are required.



Size T1 - T3				
Transformer	Ø	H	Weight	Power
	in mm		in kg	in kVA
T1	190	75	8.6	1.4
T2	205	85	12	2
T3	243	85	15	3

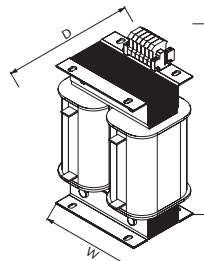
Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.



**Size T4**

approx. 23 kg / 3.4 kVA

Transformer refers to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.

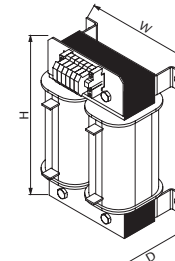


**Size T5 - T7**

Transformer	H	W	D	Weight	Power
	in mm			in kg	in kVA
T5	390	240	233	33	5
T6	450	280	253	50	8
T7	450	280	283	66	12

Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.

standing version



**Size T5 - T7**

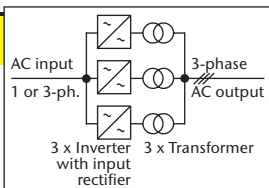
Transformer	H	W	D	Weight	Power
	in mm			in kg	in kVA
T5	335	230	210	33	5
T6	390	260	240	50	8
T7	390	260	270	66	12

Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.

Wall mount version

## Features

- AC input: 1 or 3-phase, 47 – 400 Hz
- AC output: 200 / 400 / 480 V, 3-phase
- 40 – 400 Hz or fixed frequency (crystal stabilized)
- Sine wave
- Continuous short circuit protection
- Thermal shutdown with auto restart for inverter systems > 2 kVA
- Industrial grade components
- Suitable for complex load
- Surge power capability
- Unsymmetrical load permissible
- Modular system with interchangeable inverters



## Series IV Switch mode inverters with output transformers for isolation and voltage transformation

Input VAC 1-Phase	Output kVA	Size	Input VAC 1-Phase	Input VAC 3-Phase			Output kVA	Size	Cooling	Output VAC line-to-line
115 ±20%			230 <sup>+15%</sup> <sub>-20%</sub>	3x200 <sup>+15%</sup> <sub>-20%</sub>	3x400 <sup>+15%</sup> <sub>-20%</sub>	3x480 <sup>+10%</sup> <sub>-15%</sub>				
IV 5566	1.5	A	IV 5586	IV 5566 V			1.8	A		3 x 200
IV 5666	3	C	IV 5686	IV 5666 V	IV 5686 V		3.6	C		
IV 5766	3.6	D+T1	IV 5786	IV 5766 V	IV 5786 V	IV 5796 V	5.4	D+T2		
IV 5866	6	E+T2	IV 5886	IV 5866 V	IV 5886 V	IV 5896 V	7.5	E+T3		
					IV 5886 VF	IV 5896 VF	10	F+T4		
IV 6266	9	G+T3	IV 6286	IV 6266 V	IV 6286 V	IV 6296 V	15	G+T5		
IV 6466	15	G+T5	IV 6486	IV 6466 V	IV 6486 V	IV 6496 V	24	G+T6		
					IV 6686 V	IV 6696 V	36	G+T7		
IV 5568	1.5	A	IV 5588	IV 5568 V			1.8	A		3 x 400
IV 5668	3	C	IV 5688	IV 5668 V	IV 5688 V		3.6	C		
IV 5768	3.6	D+T1	IV 5788	IV 5768 V	IV 5788 V	IV 5798 V	5.4	D+T2		
IV 5868	6	E+T2	IV 5888	IV 5868 V	IV 5888 V	IV 5898 V	7.5	E+T3		
					IV 5888 VF	IV 5898 VF	10	F+T4		
IV 6268	9	G+T3	IV 6288	IV 6268 V	IV 6288 V	IV 6298 V	15	G+T5		
IV 6468	15	G+T5	IV 6488	IV 6468 V	IV 6488 V	IV 6498 V	24	G+T6		
					IV 6688 V	IV 6698 V	36	G+T7		
IV 5569	1.5	A	IV 5589	IV 5569 V			1.8	A		3 x 480
IV 5669	3	C	IV 5689	IV 5669 V	IV 5689 V		3.6	C		
IV 5769	3.6	D+T1	IV 5789	IV 5769 V	IV 5789 V	IV 5799 V	5.4	D+T2		
IV 5869	6	E+T2	IV 5889	IV 5869 V	IV 5889 V	IV 5899 V	7.5	E+T3		
					IV 5889 VF	IV 5899 VF	10	F+T4		
IV 6269	9	G+T3	IV 6289	IV 6269 V	IV 6289 V	IV 6299 V	15	G+T5		
IV 6469	15	G+T5	IV 6489	IV 6469 V	IV 6489 V	IV 6499 V	24	G+T6		
					IV 6689 V	IV 6699 V	36	G+T7		

= natural convection    = temperature controlled fans

## Frequency Designation (output)

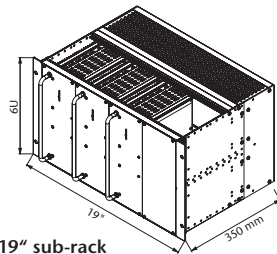
.1	40 - 400 Hz adjustable / programmable
.2	45 - 65 Hz adjustable / programmable
.3	any fixed frequency between 40 - 400 Hz
.4	400 Hz
.5	50 Hz
.51	synchronized with 50 Hz mains
.6	60 Hz
.61	synchronized with 60 Hz mains
.7	50/60 Hz switchable

### Assistance in table use:

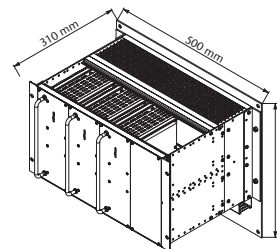
- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage and power.
- 3 The intersection of both results in the module required.
- 4 Add the required frequency designation to the part number.

### For example:

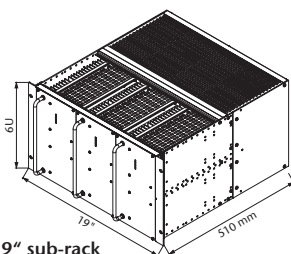
- 1 input voltage = 3 x 200 VAC, 60 Hz
- 2 output voltage = 3 x 400 VAC, 400 Hz @ 6 kVA
- 3 results in a IV 5868 V
- 4 for 400 Hz add .4, i.e. IV 5868 V.4

**Size A**

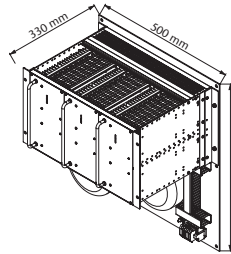
19" sub-rack  
including pluggable inverters and transformers,  
approx. 27 kg



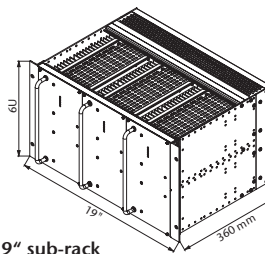
with wall plate (optional)  
approx. 31 kg



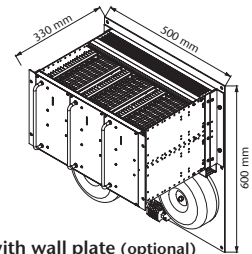
19" sub-rack  
including pluggable inverters and transformers,  
approx. 40 kg

**Size C**

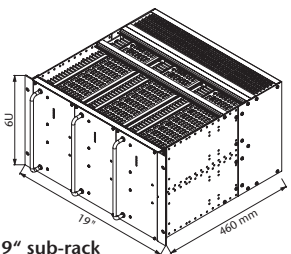
with wall plate (optional)  
approx. 45 kg



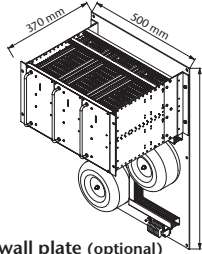
19" sub-rack  
including pluggable inverters, approx. 24 kg  
(transformers external)

**Size D**

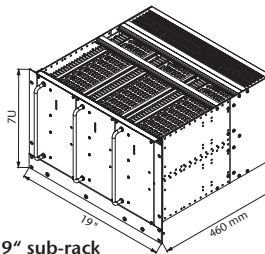
with wall plate (optional)  
and transformers (T1/T2),  
approx. 55/65 kg



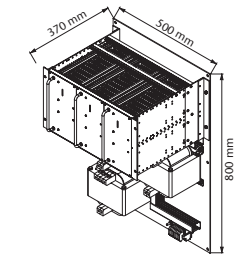
19" sub-rack  
including pluggable inverters, approx. 27 kg  
(transformers external)

**Size E**

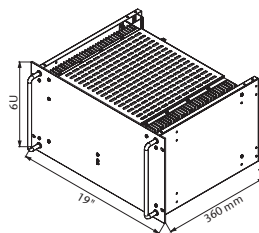
with wall plate (optional)  
and transformers (T2/T3),  
approx. 70/80 kg



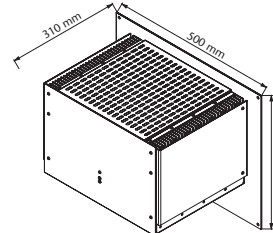
19" sub-rack  
including pluggable inverters, approx. 28 kg  
(transformers external)

**Size F**

with wall plate (optional)  
and transformers, approx. 104 kg

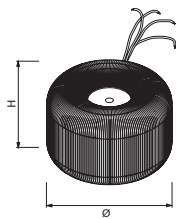


19" Plug-in module / approx. 32 kg

**Size G**

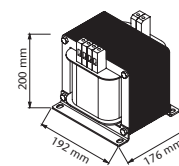
with wall plate (optional)  
approx. 36 kg

**Attention:**  
For 3-phase system  
3 modules are required.

**Size T1 - T3**

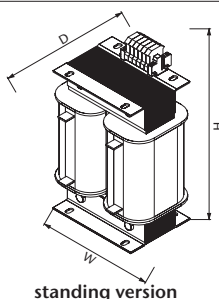
Trans- former	Ø in mm	H in mm	Weight in kg	Power in kVA
T1	190	75	8.6	1.4
T2	205	85	12	2
T3	243	85	15	3

Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.

**Size T4**

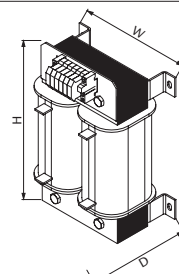
approx. 23 kg / 3.4 kVA

Transformer refers to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.

**Size T5 - T7**

Trans- former	H in mm	W in mm	D in mm	Weight in kg	Power in kVA
T5	390	240	233	33	5
T6	450	280	253	50	8
T7	450	280	283	66	12

Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.



Wall mount version

**Size T5 - T7**

Trans- former	H in mm	W in mm	D in mm	Weight in kg	Power in kVA
T5	335	230	210	33	5
T6	390	260	240	50	8
T7	390	260	270	66	12

Transformers refer to 50/60 Hz at the output. Other frequencies or tropical insulation may change size and weight.  
Attention: For 3-phase system 3 transformers are required.