**MAN Energy Solutions**
Future in the making

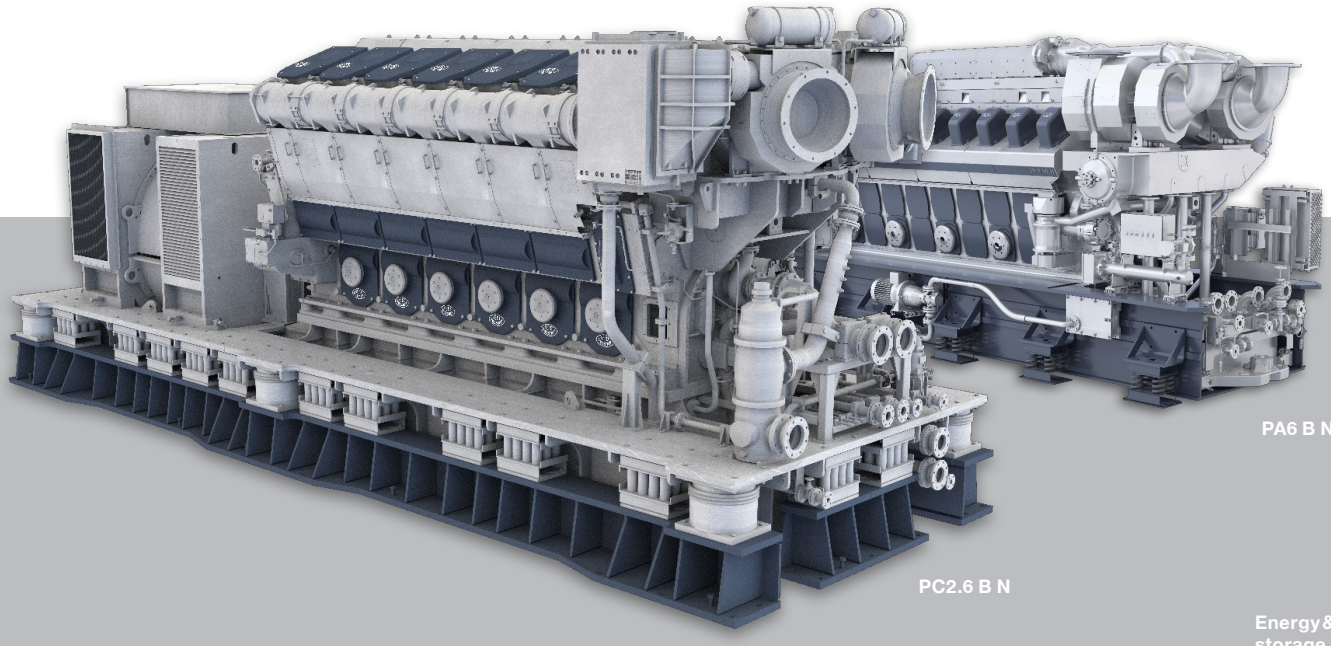
# MAN Emergency Diesel Generators

Our expertise over 40 years enables us to provide safe and highly reliable emergency power solutions. We also provide technical support throughout the project, from the earliest specification stages through to commissioning and servicing.
All MAN emergency power solutions meet the strict international safety standards of the nuclear industry.
The engines offer high availability and reliability rates, which are confirmed by the relevant qualification tests as well as proven in operational use.
The long track record of the engines confirms their total suitability for the needs of the nuclear industry.

They can be precisely adapted to individual customer requirements and benefit from continuous technical improvements based on operational experience.
PA6 B N and PC2.6 B N combine the widest power range on the market – from 4MW up to 12MW.
These two engine types have the versatility and power range to meet the needs of a diverse range of emergency power systems.

## Benefits at a glance

- Extensive experience with nuclear standards
- Over 400 emergency generators in more than 80 nuclear power plants in 18 countries supplied
- Fast starting under any conditions
- Rapid response to changing load demand
- Compact plug and play concept



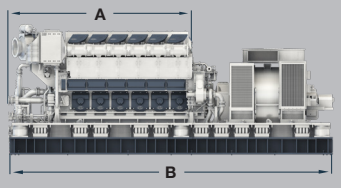
PA6 B N

PC2.6 B N

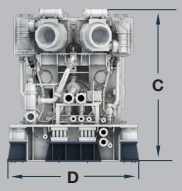
Energy & storage systems

# S.E.M.T Pielstick PC2.6 B N

## PC2.6 B N medium-speed engines 8,6 MW to 12 MW
## Highest power range in its class




| Bore 400 mm, Stroke 500 mm | | 12V | 14V | 16V |
|---|---|---|---|---|
| MRC | $kW_m$ | 8,640 | 10,500 | 12,000 |
| (maximum continuous rating) | $kW_e$ | 8,380 | 10,155 | 11,640 |
| Engine speed 50/60Hz | rpm | 600 | 600 | 600 |

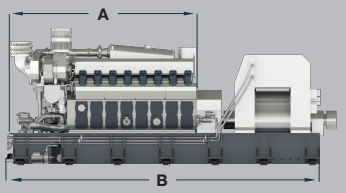



| Dimensions | | 12V | 14V | 16V |
|---|---|---|---|---|
| A | mm | 7,850 | 8,590 | 9,550 |
| B | mm | 11,890 | 12,630 | 13,590 |
| C | mm | 4,900 | 4,900 | 5,000 |
| D | mm | 4,100 | 4,100 | 4,100 |
| Genset dry mass | t | 210 | 245 | 280 |

Nominal generator efficiences: 97%.
All dimensions and masses are approximate and subject to change without prior notice.

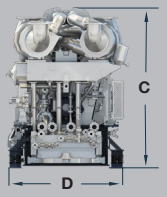
# S.E.M.T Pielstick PA6 B N

## PA6 B N high-speed engines 4,2 MW to 7 MW
## Compact plug-and-play concept




| Bore 280 mm, Stroke 330 mm | | 12V | 18V | 20V |
|---|---|---|---|---|
| 60 Hz at 900 rpm | $kW_m$ / $kW_e$ | 4,200/4,074 | 6,300/6,111 | 7,000/6,790 |
| 50 Hz at 1000 rpm[1] | $kW_m$ / $kW_e$ | 4,440/4,307 | 6,630/6,460 | 7,400/7,178 |

[1] 110% overload available




| Dimensions | | 12V | 18V | 20V |
|---|---|---|---|---|
| A | mm | 4,936 | 6,316 | 6,786 |
| B | mm | 8,920 | 10,300 | 10,760 |
| C | mm | 3,695 | 3,695 | 3,695 |
| D | mm | 2,825 | 2,825 | 2,825 |
| Genset dry mass | t | 70 | 106 | 109 |

Nominal generator efficiences: 97%.
All dimensions and masses are approximate and subject to change without prior notice.

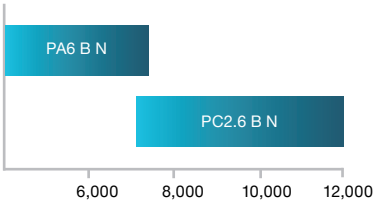
Values according to ISO 3046-1:2002; ISO 15550:2002. Last updated May 2022

## Engine features

### Applications
- Emergency diesel generators for nuclear power plants or mission critical application
- Hybrid and baseload power plants

### Black start capability
- Engine driven pumps for all fluid systems
- Compressed air starting system
- Hydraulic speed governor

### Engine Output (kW)




### Starting time & loading
- < 15 s from start order to nominal speed
- 100% load in < 60 s

### Reliability
- MTBF > 2000 h
- Startup and loading failure rate <1%

### Ambient conditions
- Reliable even in severe seismic conditions
- Extreme temperature ranges between -45° C to +45° C and wider

### Expert support in all aspects of
- Licensing
- Engineering
- Procurement
- Services

### International standards
- IEEE 387
- KTA 3702
- RCC-E
- IEC

### Project management standards
- ISO 9001
- GS-R-3
- 10CFR 500 Appendix B

**MAN Energy Solutions**
44600 Saint-Nazaire, France
Phone: +33 2 40 90 65 00
sales.nuclear@man-es.com
www.man-es.com