

SYSTEM | DW-POWER

Double wall pressure-tight exhaust system for engines and emergency standby power systems

YOUR PARTNER JEREMIAS

The Jeremias Group, headquartered in Wassertrüdingen (Bavaria), is one of the world's leading manufacturers of flue systems and chimney systems in all areas of heat and power generation for industrial and residential applications.

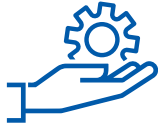
Strong, open and international - that's how we have been presenting ourselves for almost 50 years. Worldwide production sites and sales offices represent entrepreneurial success, ambitious visions and healthy growth.

With innovative products, outstanding service and highly qualified employees, we want to inspire our customers every day and achieve the goal of sustainable joint success.

Currently, our product range includes more than 100 different CE-certified systems for private and commercial applications as well as free-standing steel chimneys with a diameter of up to four meters.

This brochure provides you with a comprehensive overview of characteristics, application and installation of our exhaust system DW-POWER for marine engines and generators in the maritime sector.





SERVICE

- Flexible production
- Special solutions tailored to customer needs
- Planning support and designing advice
- Chimney calculation
- Chimney sizing
- Country specific approvals
- Professional customer service
- Free software solutions



QUALITY

- More than 100 CE-certified systems
- CNC laser cutting and stamping technology
- Special stainless steel alloys
- Condensate/gas tight, polished welding seams
- 25-year guarantee
- ISO 9001 certified



INNOVATION

- The largest range of products in the market
- System development with boiler, CHP and stove manufacturers
- In-house development of manufacturing machines
- In-house test facility for stainless steel chimney systems and silencers
- Computer-based simulations



CE-CERTIFICATE NUMBER

0036 CPR 9174 085
0036 CPR 9174 088

CE-CLASSIFICATION ACC. TO DIN EN 1856-1

T600 - H1 - D - V2 - L50050 - 0xx

CE-CLASSIFICATION ACC. TO DIN EN 1856-2

T600 - H1 - D - V2 - L50050 - 0100M
T600 - H1 - D - V2 - L99050 - 0100M

xx = distances from combustible materials are Ø-dependent, see the declaration of performance



SYSTEM DW-POWER

DOUBLE-WALLED, PRESSURE-TIGHT STAINLESS STEEL EXHAUST SYSTEM

DESCRIPTION

Double-walled, pressure-tight stainless steel exhaust system with gaskets in the outer casing, which allows stress-free thermal expansion of the inner tube hence no compensators needed.

MATERIAL

Inside: 1.4404 (AISI 316L)
Outside: 1.4301 (AISI 304)

SURFACE

Highly polished
Optional: matt, brushed

WALL THICKNESS

Inside: 0.5 mm / Outside: 0.6 mm

INNER DIAMETER

100 - 500 mm

INSULATION

Mineral insulation with 57.5 mm thickness
Optional: insulation with 32.5 mm thickness

CONNECTION

Push-in connection (outer tube)

LOCKING BAND / SEAL JOINT

Included

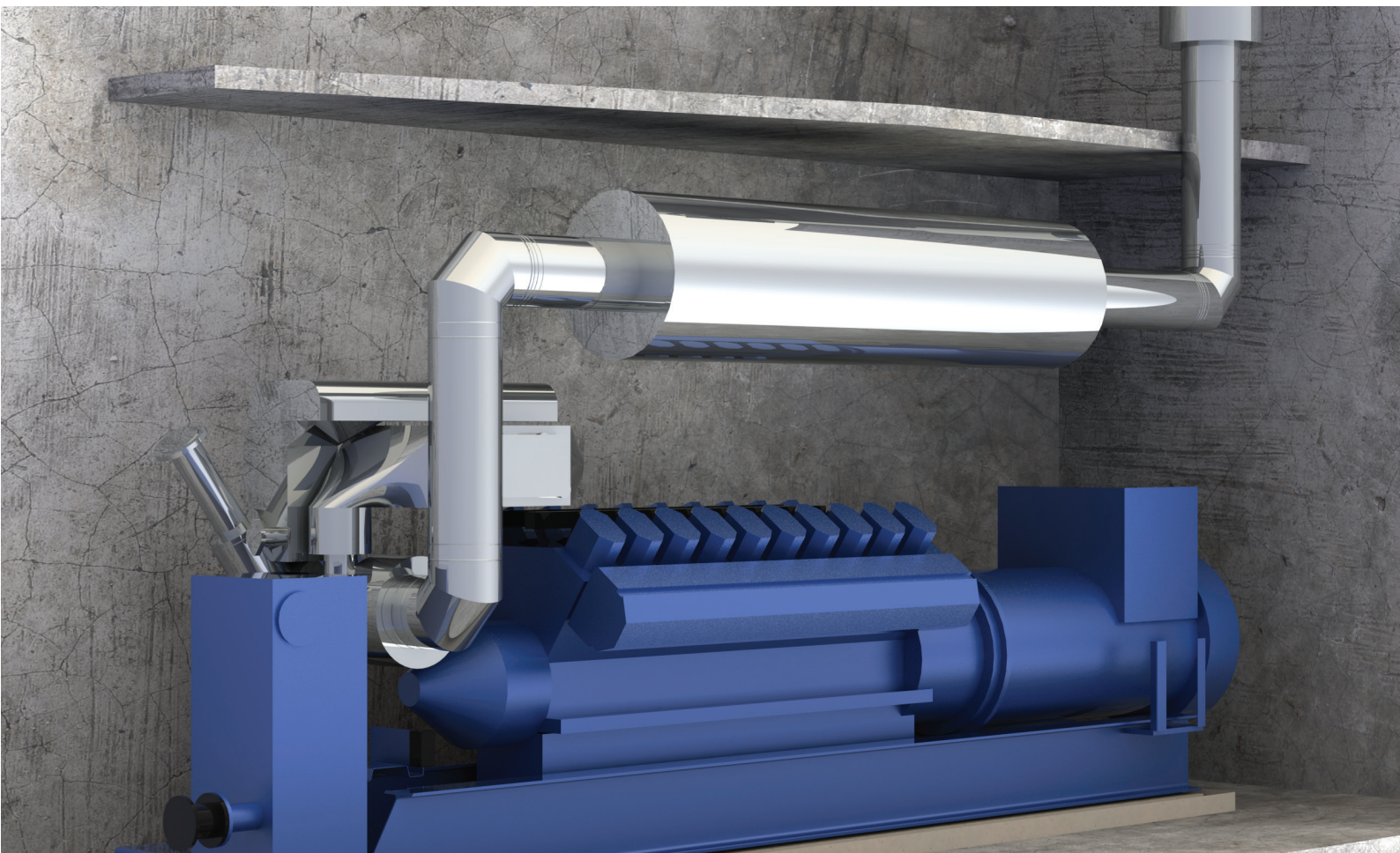


CHARACTERISTICS

- Easy to install and disassemble
- For high temperatures up to 600°C
- Not suitable for condensing operation
- Pressure-tight up to 5000 Pa
- Gaskets in the outer casing
- Stress-free thermal expansion of the inner tube possible
- No expansion joints/compensators required

APPLICATION AREAS

- Emergency generators / emergency power systems
- Gas and diesel generators (without heat exchanger)
- Industrial processes



SYSTEM PROPERTIES



SYSTEM PROPERTIES

Easy to handle, fast installation, light weight, these keywords summarize the basic advantages of all Jeremias exhaust systems. This is also true for our double-walled high-performance exhaust system, DW-POWER 2.0. As compared to the costly system of welding pipes at site made of heavy steel, it is better to go for DW-POWER 2.0 which is easy to handle, cost effective, doesn't require special tools on site and easy to install by simply connecting the individual elements.

APPLICATION AND CERTIFICATION

Due to its outstanding properties with regard to temperature and pressure resistance the DW-POWER 2.0 exhaust system is ideally suited for use in the industrial sector, emergency generators, power supply systems as well as for gas and diesel engines. DW-POWER 2.0 is CE-certified like all other Jeremias exhaust systems. Numerous measures of quality assurance, such as our own test stands and a modern machine park ensure a consistent high product quality.

Ø in mm	Outside									
	215	245	265	295	315	365	415	465	515	615
Ø 100	X									
Ø 130		X								
Ø 150			X							
Ø 180				X						
Ø 200					X					
Ø 250						X				
Ø 300							X			
Ø 350								X		
Ø 400									X	
Ø 500										X





NO COMPENSATORS REQUIRED

At an average exhaust temperature of 470°C, the thermal expansion of a meter long exhaust gas-carrying stainless steel pipe is more than 9 mm. This means that the conventional flues need compensators to accommodate the linear expansion. In contrast the DW-POWER 2.0 system doesn't need compensators as each element of the inner pipe can expand unstressed by thermal heating thanks to the special plug-in connection. Hence the expensive compensators and their complex assembly is not required.

PRESSURE-TIGHT CONNECTION

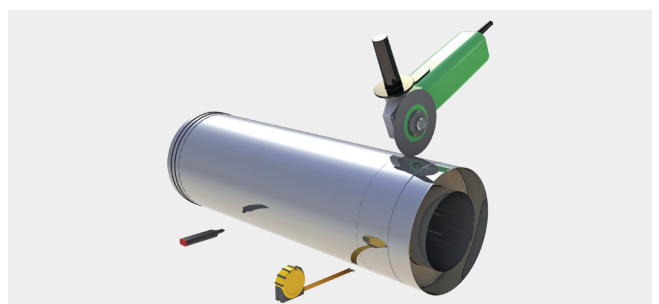
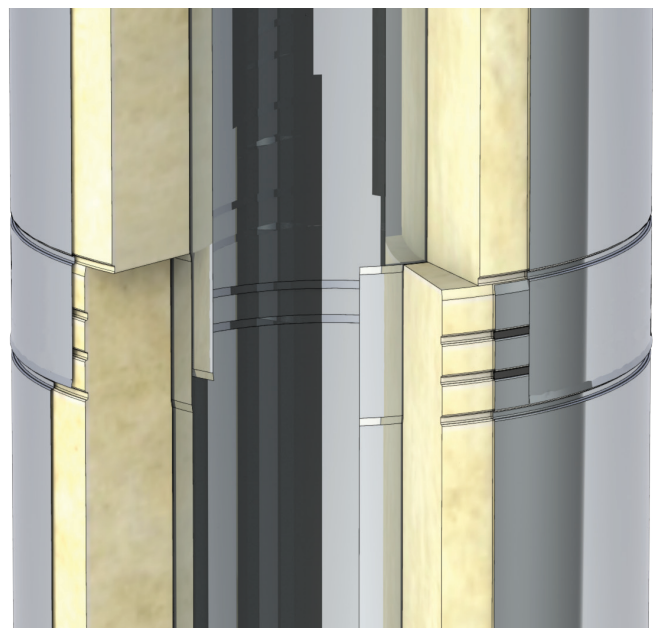
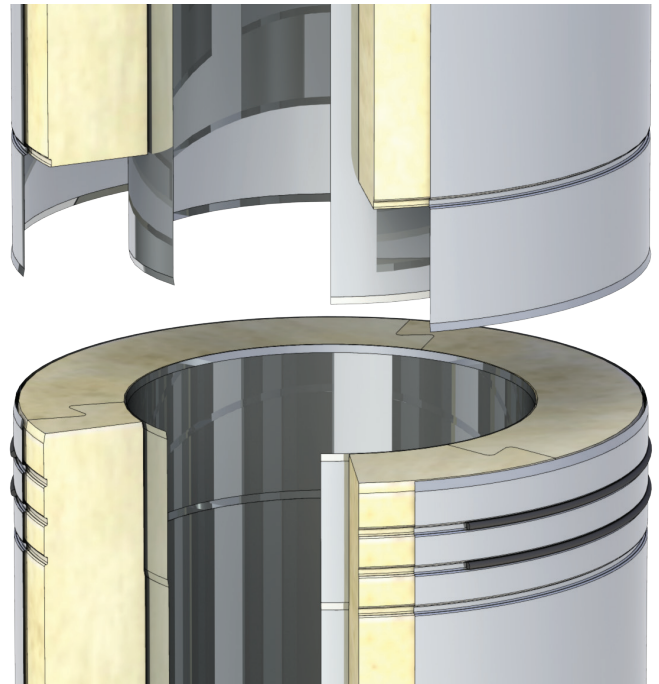
In DW-POWER 2.0 system, the exhaust gas-carrying inner tubes of the components are connected by means of sleeve-bead connector system. The system becomes pressure tight by cylindrically reduced outer tube connection ends and two integrated sealing rings made of silicone. The system is tested for pressure up to 5000Pa and also suitable for lasting exhaust gas temperatures of 600°C. Flanged connections with customized flange dimensions are available to connect the system to the engine exhaust nozzles.

HIGH-QUALITY MATERIALS

The inner stainless steel 1.4404 (316L) pipes are made with TIG or laser welded longitudinal seams ensuring maximum corrosion resistance. The same standards apply to the outer pipes made in high gloss from stainless steel 1.4301 (304), which are also available in matt or brushed depending on the request. To avoid the thermal bridges between exhaust leading internal and external pipe high quality insulation shells are used. The pressed mineral insulating material with a very high density of 120kg / m³ and a standard insulation thickness of 57.5 mm provides even at high exhaust gas temperature a relatively cool surface of the outer pipe. Hence the required clearances to combustible components can be correspondingly low. Depending on the project and the required surface temperature, the insulation can also be reduced to 32.5 mm.

SHORTENABLE LENGTH ELEMENTS

All the length elements of the DW-POWER 2.0 system can be shortened at the socket side (female). The quick and flexible adjustment of the length at the installation site helps saves time and costs.



SYSTEM DW-POWER

LIGHT MOUNTING / DEMOUNTING:

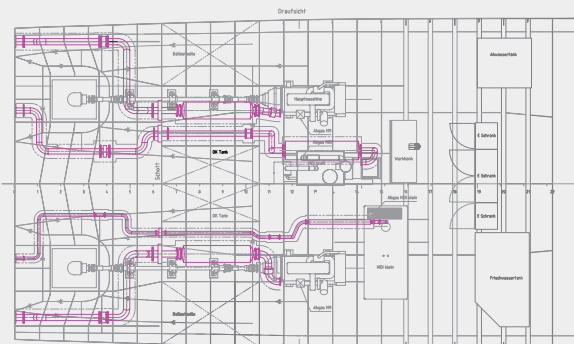
- Modular exhaust system made of pluggable system elements
- Quick and easy installation without crane
- No welding work needed on site
- Low weight of components compared to conventional exhaust systems
- Sturdy outer casing thanks to the circumferential bead
- Fixed insulation shells and fixed spacers ensure a tightly fixed inner tube
- Due to the absence of locking mechanism the components can be dismantled without any special tools and can be reused without any problems

OTHER ADVANTAGES:

- High efficiency of the insulated insulation shells
- Lower temperatures on the outer jacket allow installations at a closer distance to combustible components
- High pressure resistance due to double sealing
- Placing the seals in the socket of the outer jacket ensures a long service life
- Production of the elements with high-quality stainless steel 1.4404 (inner pipe) and 1.4301 (outer pipe)
- 25 years jeremias warranty on corrosion resistance

JEREMIAS SERVICE PACKAGE

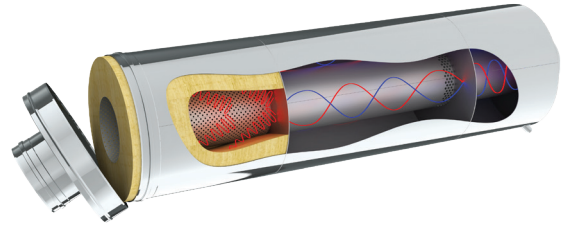
- Production of special parts on customer request
- Assistance in planning your project
- Supervised assembly possible by own experienced installers
- Professional customer service and on-site consultation by trained employees
- If needed we also offer steel construction solutions





SILENCERS

The operating noise of the engine is emitted via the exhaust pipe to the environment which is often perceived as unpleasant. For years Jeremias has been actively developing noise damping technical solutions by providing suitable silencers for various exhaust systems. Middle and high frequency sound is absorbed by a porous material such as mineral wool, whereas the low frequencies are attenuated by special resonance chambers.



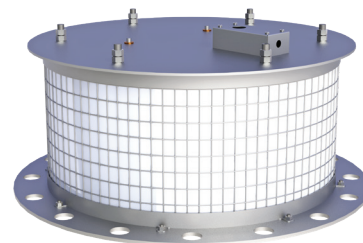
MOTORISED FLUE DAMPERS

Flue dampers are installed in the connecting line between the engine and the chimney and seal the exhaust path to the chimney, if no longer required. Securing the flow prevents cooling of the boiler and the installation room and contribute significantly to saving energy.



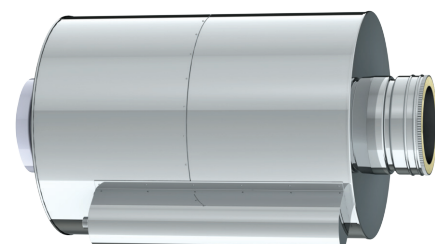
PRESSURE RELIEF VALVES

In combustion engines, it may occur that through valve clearance unburnt gases enter the exhaust pipe. This can cause an explosion or flash fire and cause excessively high pressure peaks. Thereby, the exhaust system could be permanently damaged. Jeremias explosion flaps are reusable and close after an explosion independently again. The opening pressure can be adjusted in the system.



SPARK ARRESTOR

In the combustion process, debris are released from the engine or from the exhaust gas line and are directed with the exhaust gas flow towards the chimney mouth. If these hot carbon particles or sparks get into the environment unhindered, they present an enormous risk for combustible materials in the surrounding area. The installation of a spark arrestor in the exhaust pipe is therefore advisable or even mandatory. On entering the spark arrestor, the exhaust flow is forced into a rotating path. The centrifugal force then causes the heavy particles to be pushed outwards and finally collected in a special soot box. This ensures that we don't cause any danger to the environment.



PRODUCT OVERVIEW

Cantilevers
Type I 350 mm



DWPW391

Cantilevers
Type II 500 mm



DWPW392

Cantilevers
Type II 500 mm



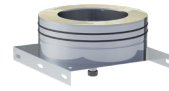
*1 DWPW393

Cantilevers
Type IV 1030 mm



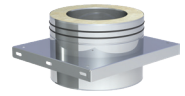
*1 DWPW407

Base plate with 1/2" outside socket, screw plug and condensate drain below



DWPW05Ø

Base plate for intermediate support



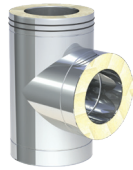
DWPW07Ø

Inspection length with door for up to 600° C / 5000 Pa



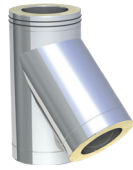
DWPW10HTDØ

T-90°



DWPW317Ø

T-45°



DWPW12Ø

Length 1000 mm



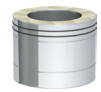
DWPW13Ø

Length 500 mm



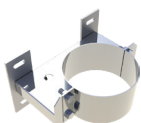
DWPW14Ø

Length 250 mm



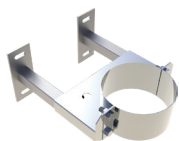
DWPW15Ø

Wall bracket rigid 50 mm



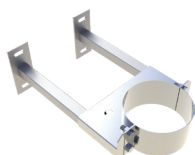
DWPW45Ø

Adjustable wall bracket 100 - 150 mm



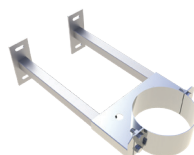
DWPW46Ø

Adjustable wall bracket 150 - 250 mm



DWPW47Ø

Adjustable wall bracket 250 - 360 mm



DWPW48Ø

Mat for sound decoupling suitable for DW45, DW46, DW47 and DW48




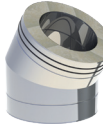

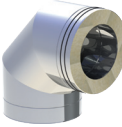
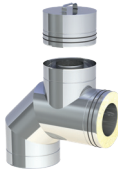

ZUAC2246

Mat for sound decoupling suitable for DW45, DW46, DW47 and DW48





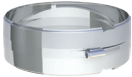
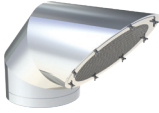

ZUAC2247



Elbow 15°	Elbow 30°	Elbow 45°	Elbow 90°	Inspection elbow 90° suitable in combination with DWPW07	Inspection elbow 90°
					
DWPW16Ø	DWPW17Ø	DWPW18Ø	DWPW60Ø	DWPW63HTDØ	DWPW19HTDØ

End cap	Deflector hood with drain and end cap	End cap with rain flap	Storm collar	Wall-/Ceiling plate 0° one-piece	Adaptor EW-KL / DW-POWER
					
DWPW32Ø	DWPW34Ø	DWPW1623Ø	DWPW31Ø	DWPW70Ø	DWPW37Ø

Adaptor DW-POWER / EW-KL	Adaptor DW-POWER / Factory standard flange	Adaptor Factory standard flange / DW-POWER	Inspection length 250 mm with 1/2" drain and screw plug	Drain length 250 mm for horizontal and vertical installation	T-cap with handle till 600 °C / 5000 Pa, with insulation, locking band with quick clamp and drain
					
DWPW37AØ	DWPW856AØ	DWPW856Ø	DWPW51Ø	DWPW1494Ø	DWPW44

3 point guy wire bracket	Lightning protection clamp	Locking band (Spare part)	Exhaust terminal elbow 90° with bevel 45° and mesh	Lubricant Ovaltube free of chloride 75ml
				
DWPW42Ø	DWPW69Ø	DWPW989Ø	DWPW863Ø	750GLEIOVT

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