

LEXSYS COMPONENTS

COMPONENTS FOR FLEXIBLE SUSPENSION OF EXHAUST LINES



LOGGERS

1 LEXSYS

Vibration and noise have a major negative impact on all the related systems, the environment and in case of a ship even on the crew and the ship itself. This requires special attention to be paid to the exhaust line and its course. The exhaust line system must be capable to handle the stress caused by thermal expansions and contractions. In addition, the engine caused vibration needs to be isolated in order to minimize the effects on the vessel, its equipment and crew. Loggers flexible solution for exhaust lines, LEXSYS[®], has been specifically developed to cope with these typical challenges.

LEXSYS[®] combines our technologically advanced engineering skills with our experience in vibration and noise control. LEXSYS[®] ensures that thermal expansions and contractions are completely compensated within the exhaust line and minimizes the impact of engine caused vibrations and noise. The system protects the exhaust line and the hull of the ship by fully compensating the thermal expansion and contraction within the exhaust line itself. Besides that the system isolates the vibrations and noise caused by the engine. LEXSYS[®] is used by clients worldwide for the elastic suspension of exhaust gas systems throughout the shipbuilding, offshore and machinery industry.

LEXSYS[®] is basically built up from the following components which guarantee flawless function of the engine's exhaust line:

- Stainless steel expansion joints (Balance[®] series)
- Fixed supporting points
- Sliding points
- Deck conduits and rain caps

This datasheet covers typical LEXSYS[®] components, such as fixed supporting points, sliding points, deck conduit units and rain caps. The datasheets of stainless steel expansion joint are available for download on our website. Click [here](#) to access our online download center.

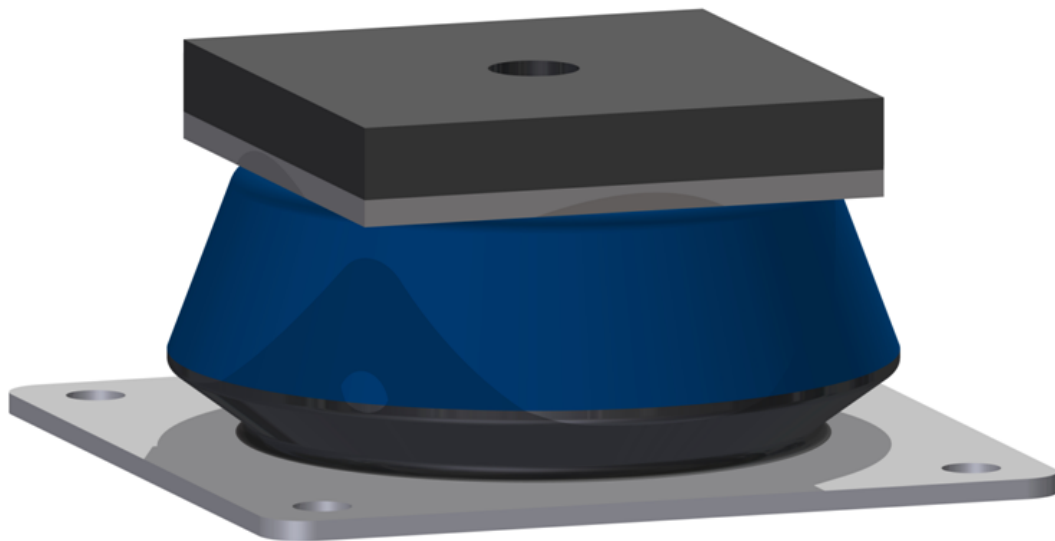
2 FIXED SUSPENSION POINTS

The main function of fixed points is to carry the weight of the exhaust system. Because these elements are fixated on the ship's foundation or structure, they determine the direction of the expansion movement. The first fixed point is always located as close as possible to the engine but always after the first compensator. This protects the engine from the system expansion.

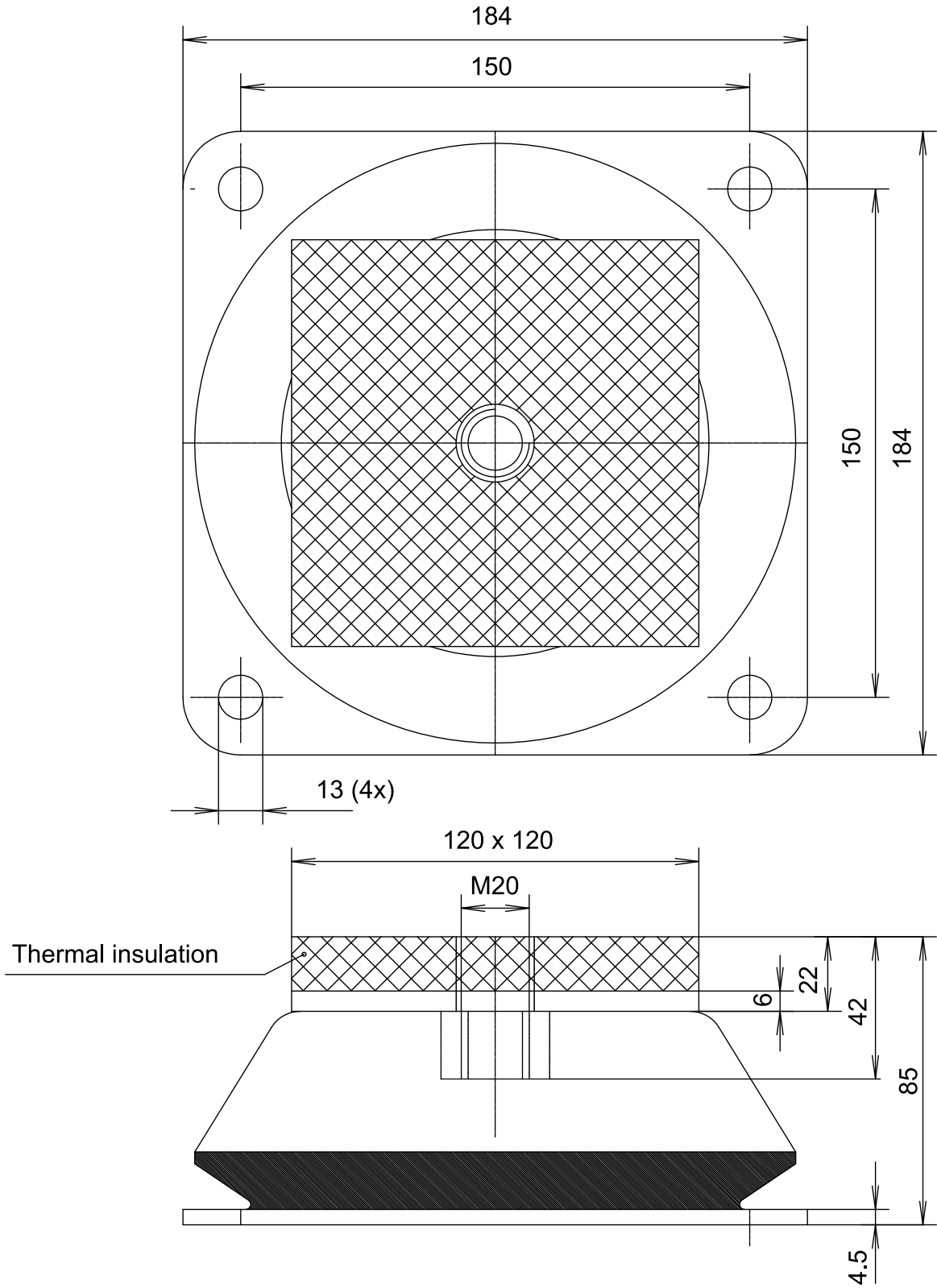
The rubber elements of these fixed points ensure that vibrations are not transmitted to the rest of the ship. The fixed points are engineered in such a way that they can withstand the static and dynamic forces which occur inside a ship.

Our portfolio consists of various fixed points, both suspended and standing versions. Additionally, the fixed points are available in different rubber shore grades to ensure the best vibration isolation level possible. This datasheet contains the specifications of the following fixed suspension points:

- VP-210
- VP-211
- VP-213
- VP-214
- VOP-021
- VOP-025
- VOP-026
- VOP-027



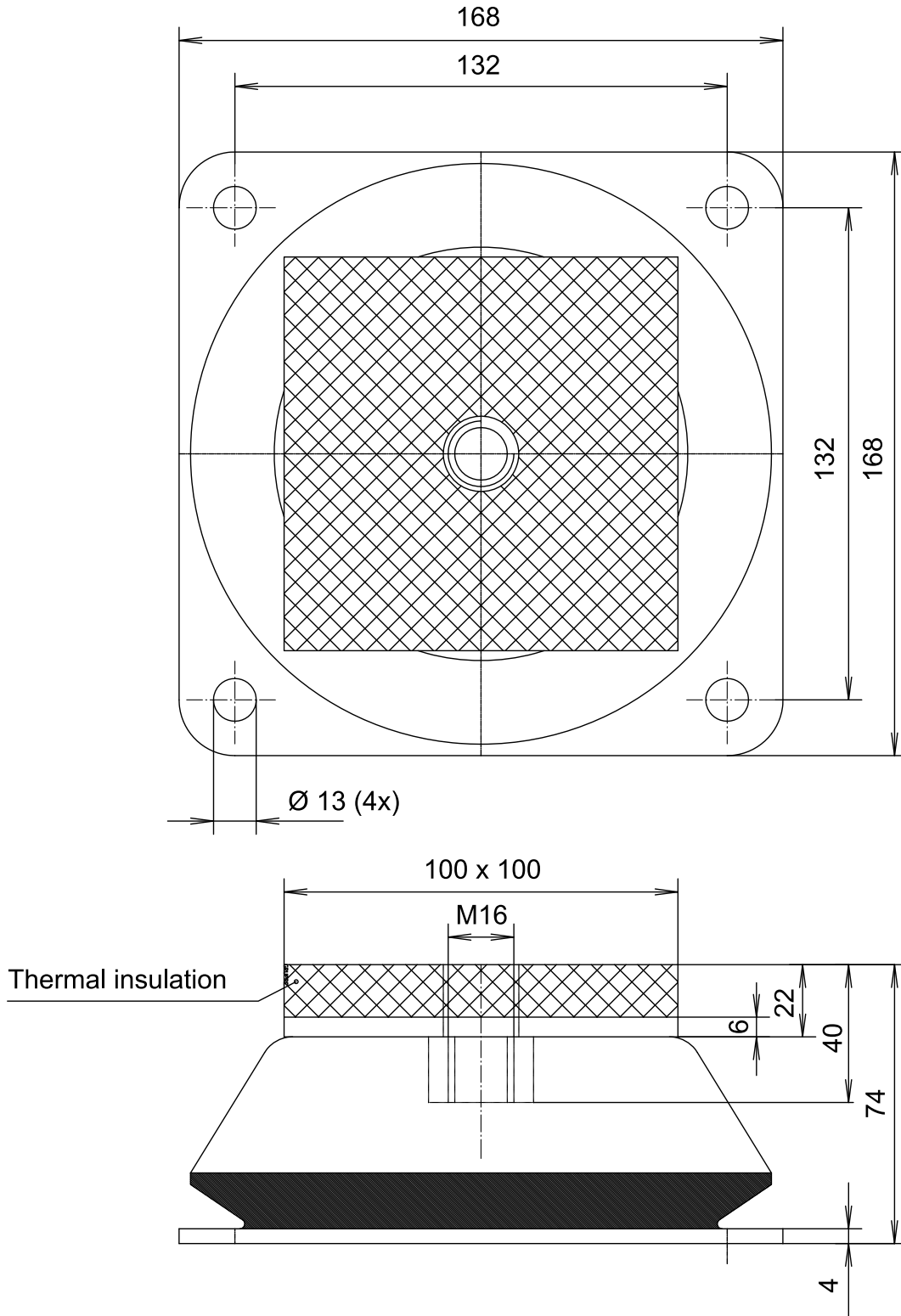
VP-210



Dimensions are in millimeters (mm)

Type	Maximum Load		
	(45° sh.)	(60° sh.)	(70° sh.)
VP-210	1000 kg	1600 kg	2400 kg

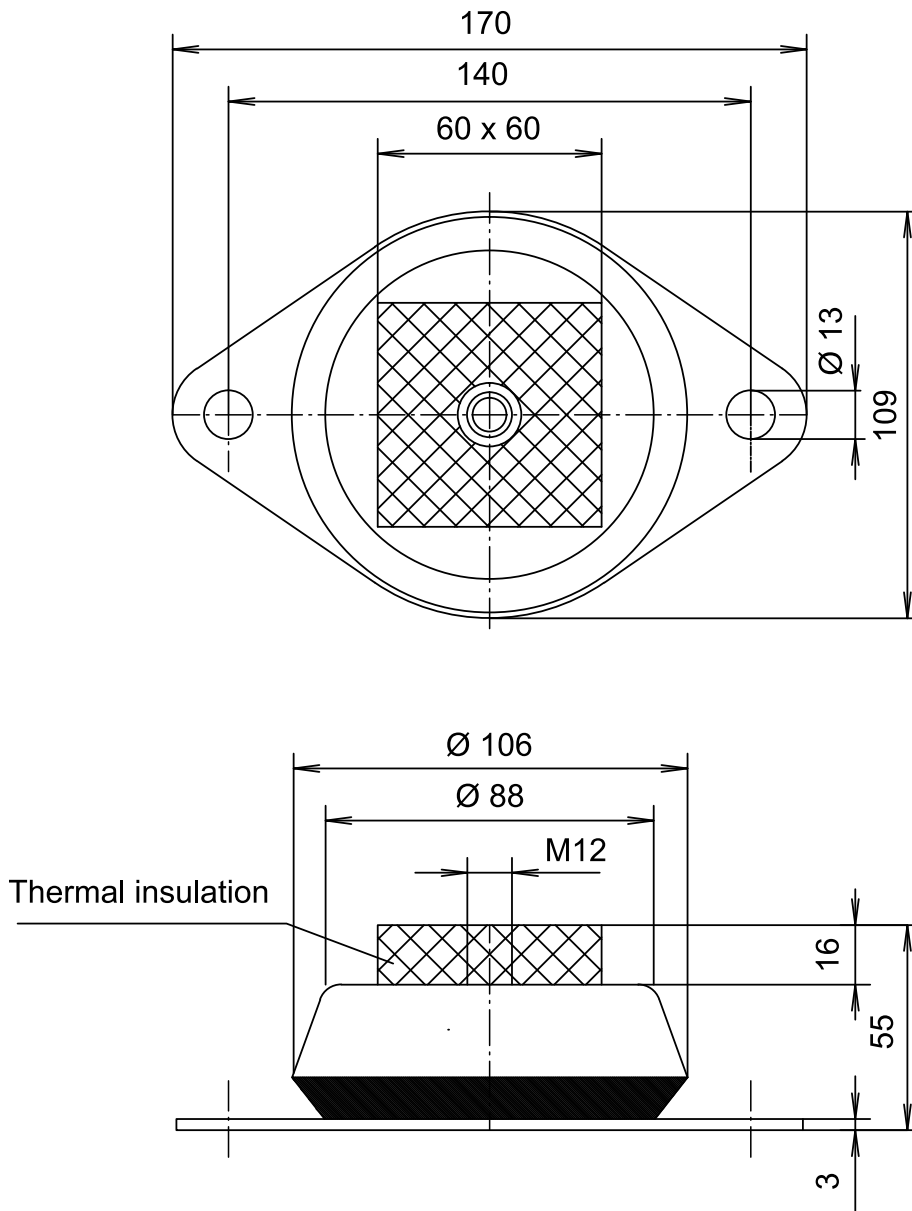
VP-211



Dimensions are in millimeters (mm)

Type	Maximum Load		
	(45° sh.)	(60° sh.)	(70° sh.)
VP-211	450 kg	840 kg	1250 kg

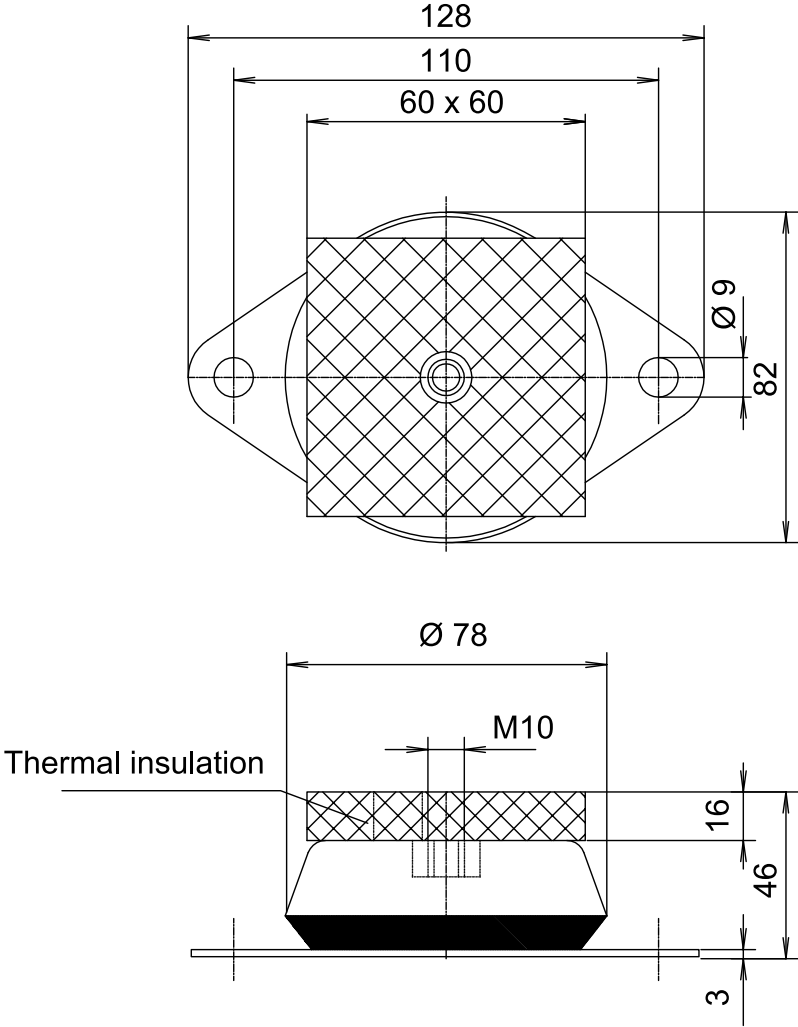
VP-213



Dimensions are in millimeters (mm)

Type	Maximum Load		
	(45° sh.)	(60° sh.)	(70° sh.)
VP-213	165 kg	330 kg	500 kg

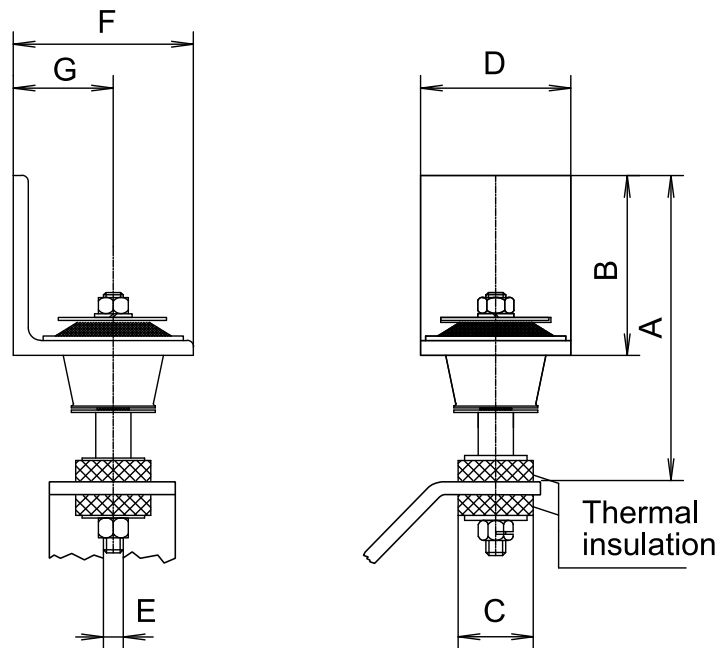
VP-214



Dimensions are in millimeters (mm)

Type	Maximum Load		
	(45° sh.)	(60° sh.)	(70° sh.)
VP-214	100 kg	165 kg	230 kg

VOP-021 / VOP-025 / VOP-026 / VOP-027



Dimensions are in millimeters (mm)

Type	Dimension (mm)							Max. Load (60° sh.)
	A	B	C	D	E	F	G	
VOP-021	145	70	40	90	M 10	70	40	65 kg
VOP-025	200	100	60	120	M 16	100	60	180 kg
VOP-026	220	120	60	120	M 16	120	70	300 kg
VOP-027	230	130	60	130	M 16	130	75	700 kg

3 SLIDING POINTS

Sliding points allow the longitudinal movement within the system caused by the thermal expansion and contraction in the exhaust line. The rubber elements in the sliding points ensure that the vibrations are not transmitted to the rest of the ship.

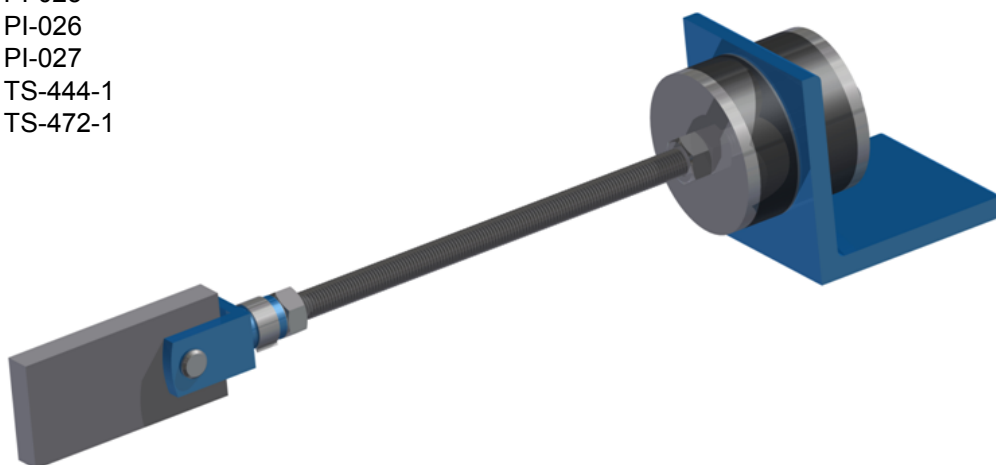
Loggers' sliding points are designed to handle both tension and contraction forces. If required, these components can be shortened to fit any situation, so that they are able to cope with a very wide range of weights and distances. In addition, the sliding points can be mounted at different locations and various positions, such as:

- Hanging position
- Support position
- Funnel position (stabilization of the exhaust line in vertical direction)

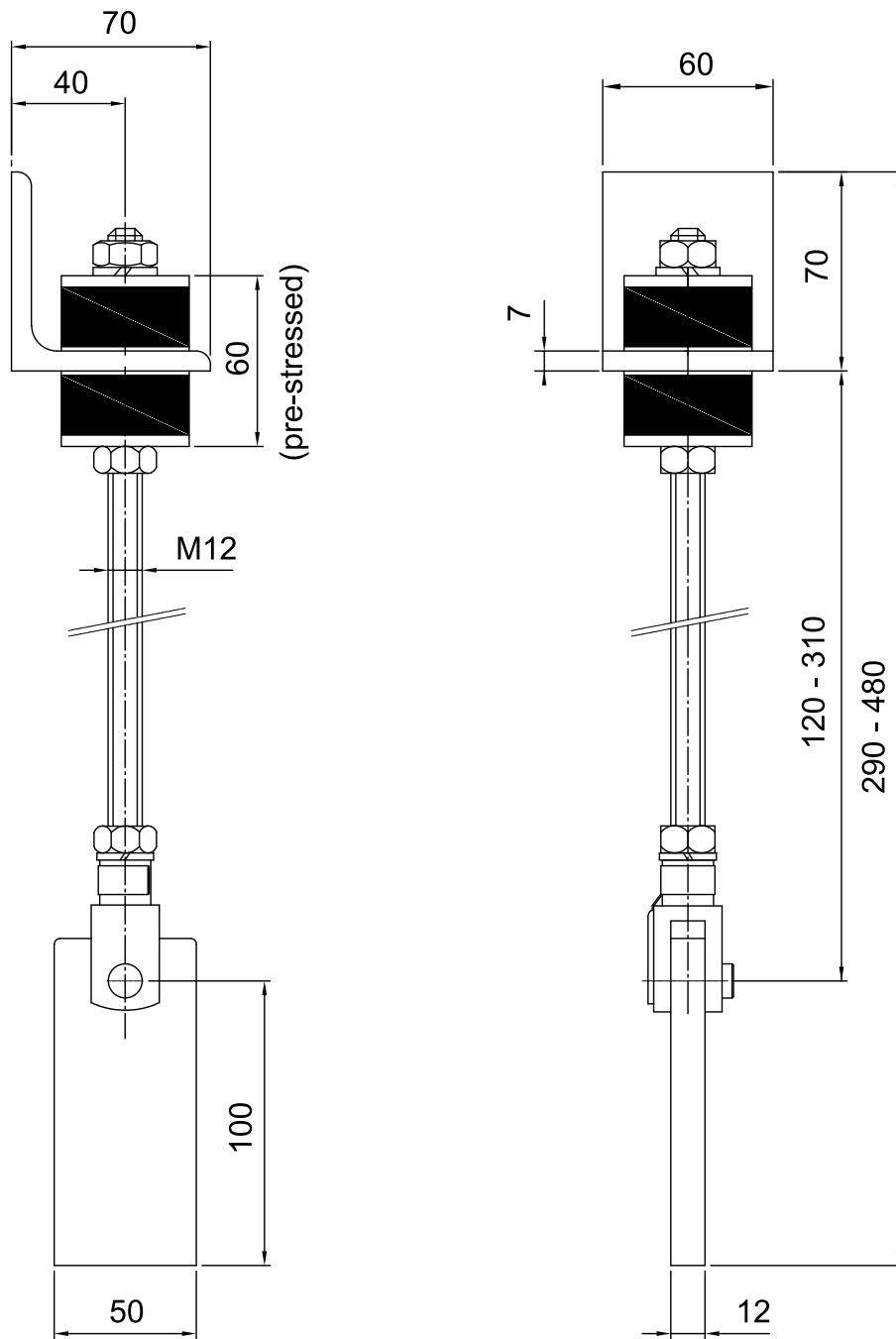
The sliding points are typically mounted in pairs at an angle of 90 degrees. When the pipe of the exhaust line is placed horizontally, the sliding points are even capable to carry the weight of the system.

Loggers' LEXSYS®-portfolio contains, amongst others, sliding points in different strengths and shapes. This datasheet covers the following types of sliding points used for the flexible suspension of exhaust lines:

- TI-100
- TI-250
- TI-800
- PI-021
- PI-025
- PI-026
- PI-027
- TS-444-1
- TS-472-1



TI-100



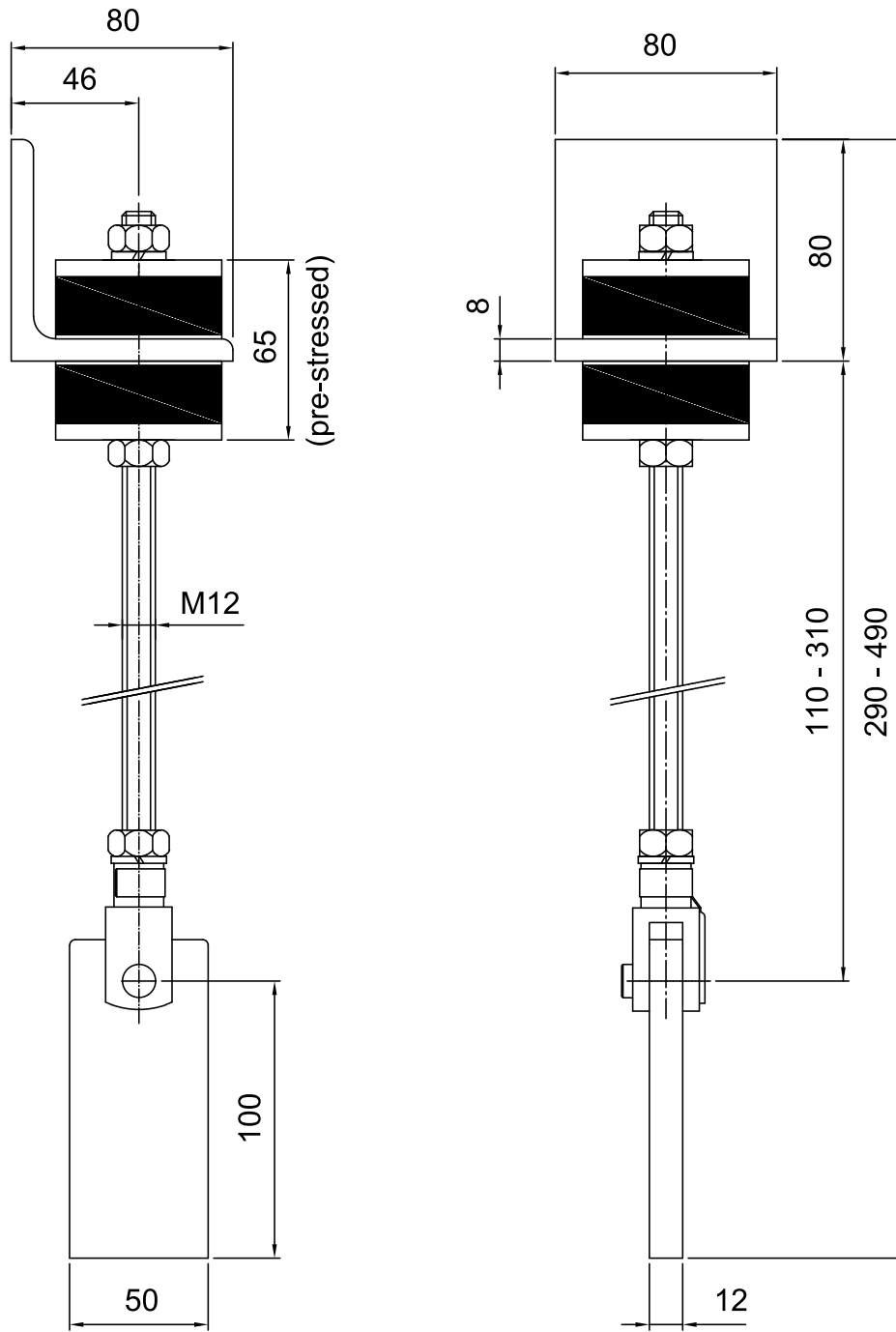
Dimensions are in millimeters (mm)

Sliding point type: TI-100

Maximum load: 100 kg



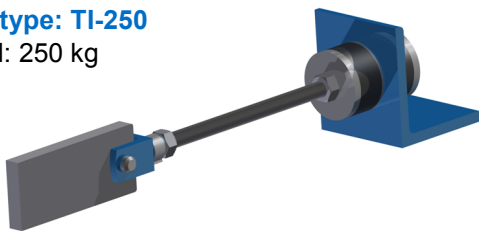
TI-250



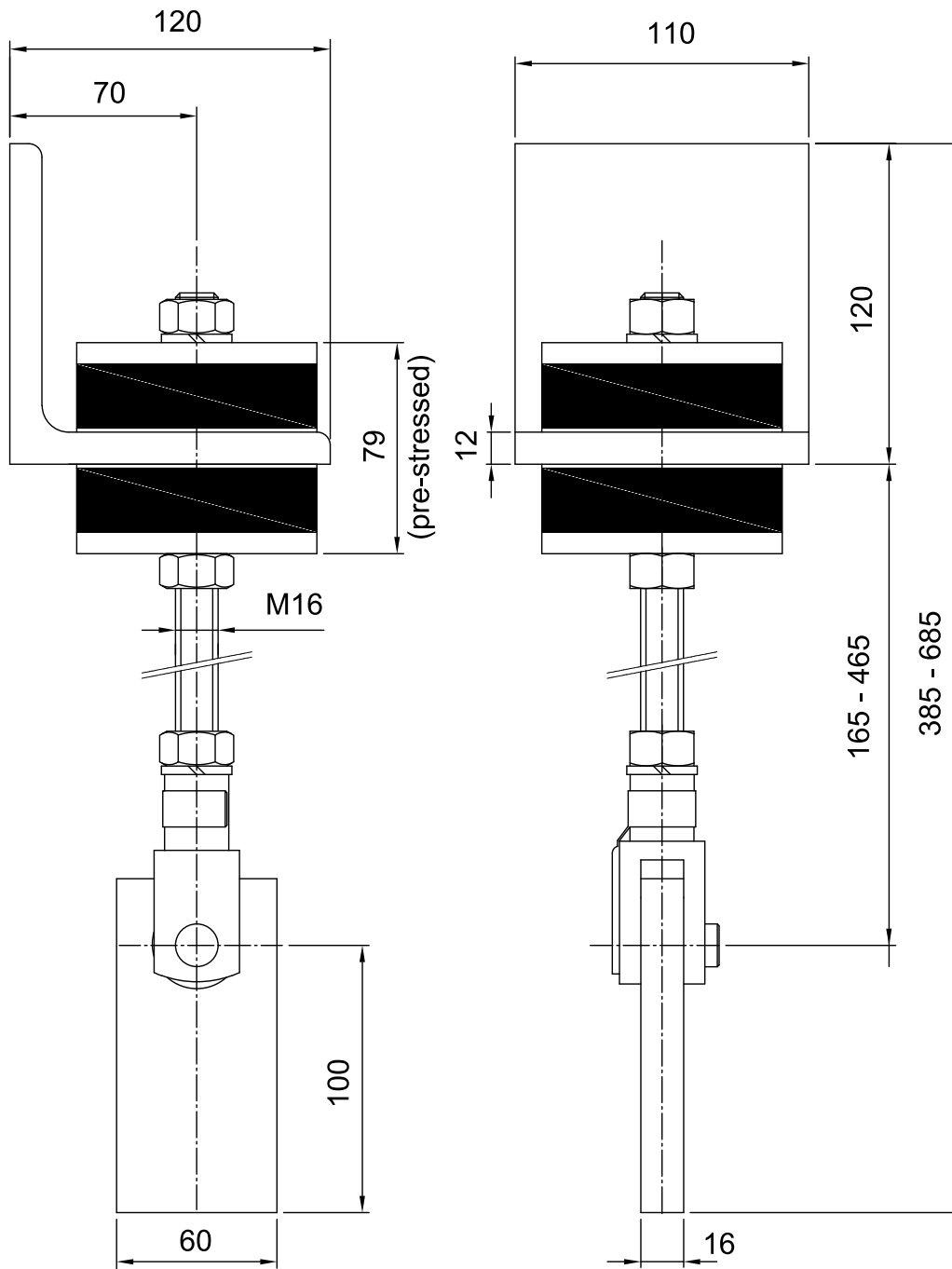
Dimensions are in millimeters (mm)

Sliding point type: TI-250

Maximum load: 250 kg

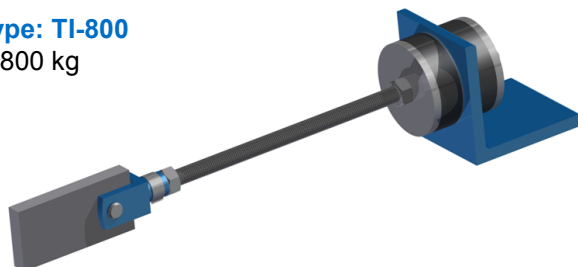


TI-800

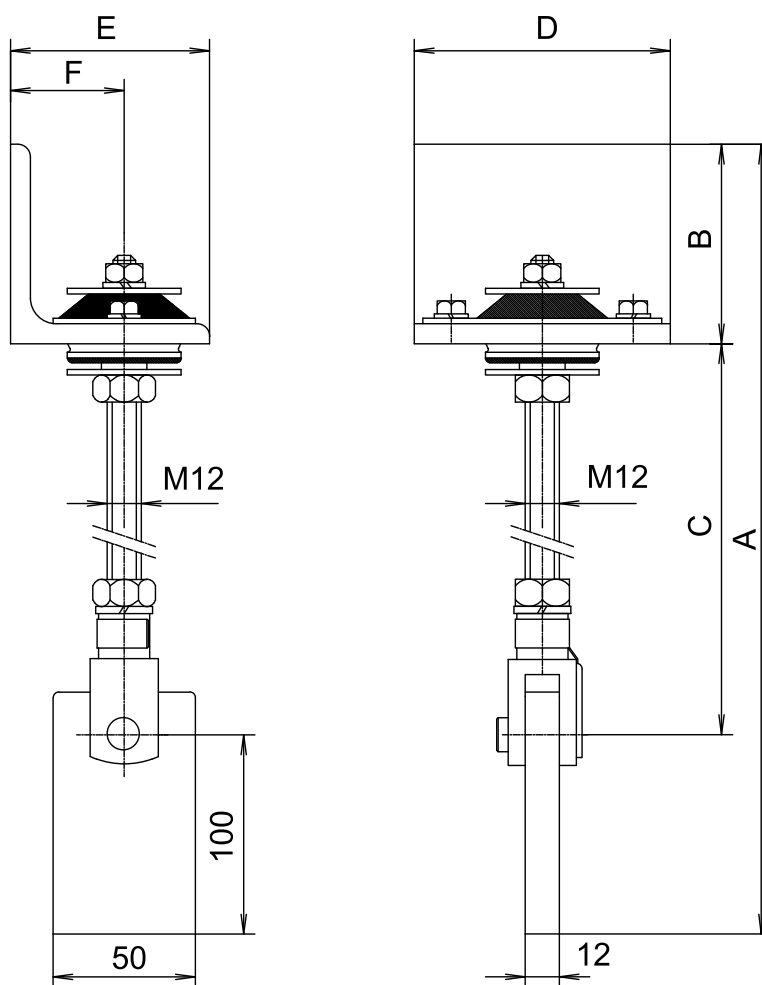


Dimensions are in millimeters (mm)

Sliding point type: TI-800
 Maximum load: 800 kg

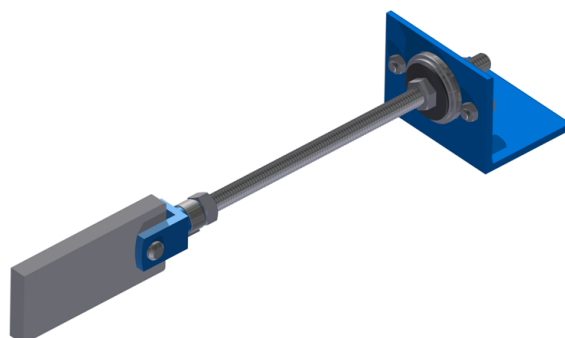


PI-021 / PI-025

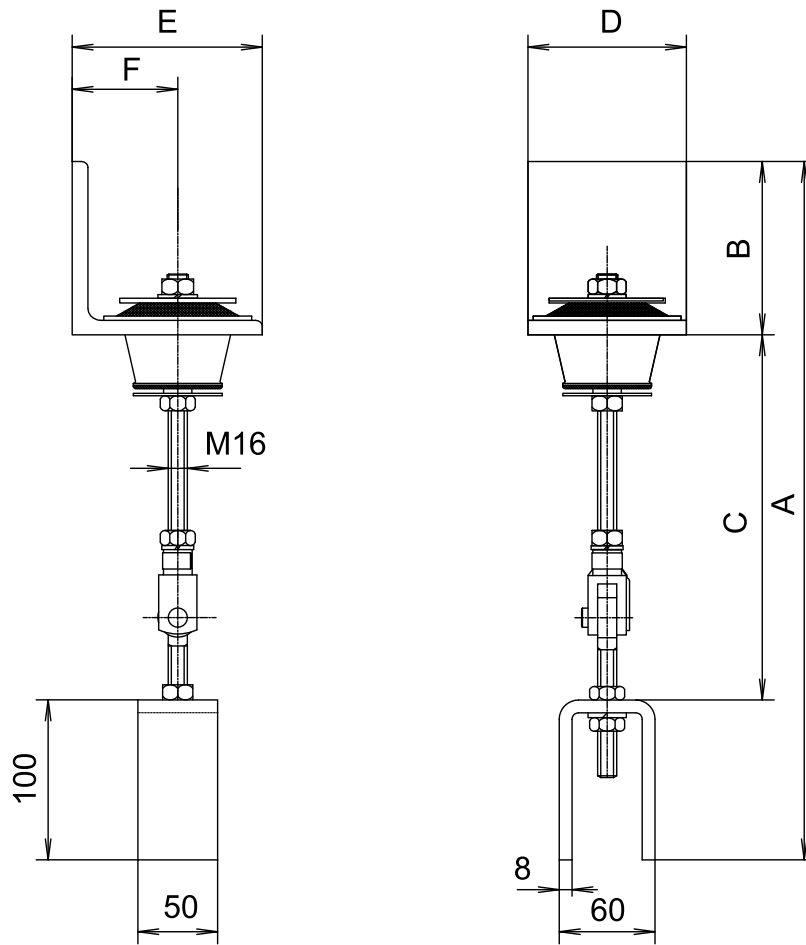


Dimensions are in millimeters (mm)

Type	Dimension (mm)						Max. load (60° sh.)
	A	B	C	D	E	F	
PI-021	290-490	70	120-320	90	70	40	78 kg
PI-025	320-510	100	110-310	120	100	60	180 kg



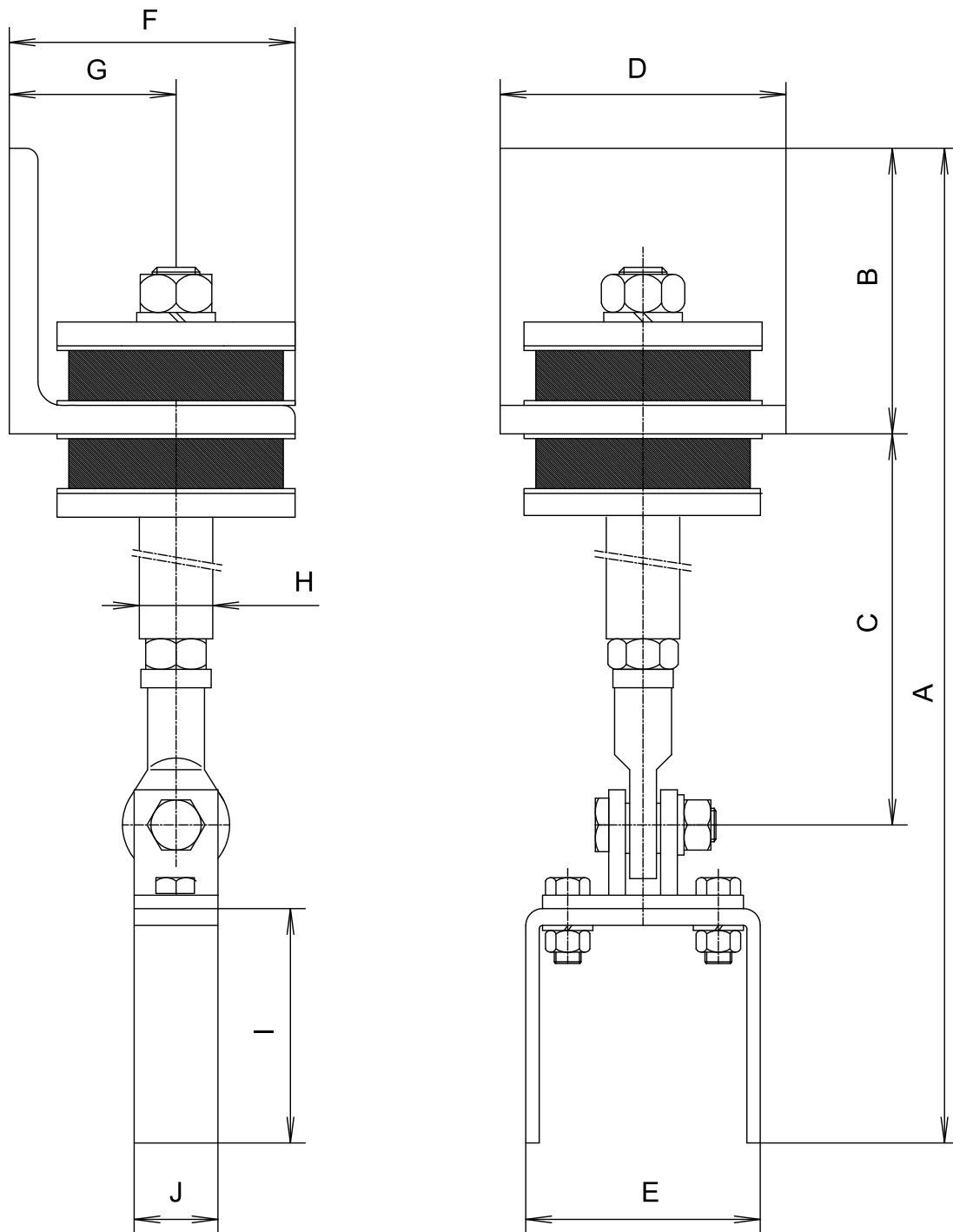
PI-026 / PI-027



Dimensions are in millimeters (mm)

Type	Dimension (mm)							Max. load (60° sh.)
	A	B	C	D	E	F	G	
PI-026	420-770	120	200-550	120	120	70	M 16	300 kg
PI-027	450-780	130	200-550	130	130	75	M 16	700 kg

TS-444-1 / TS-472-1



Dimensions are in millimeters (mm)

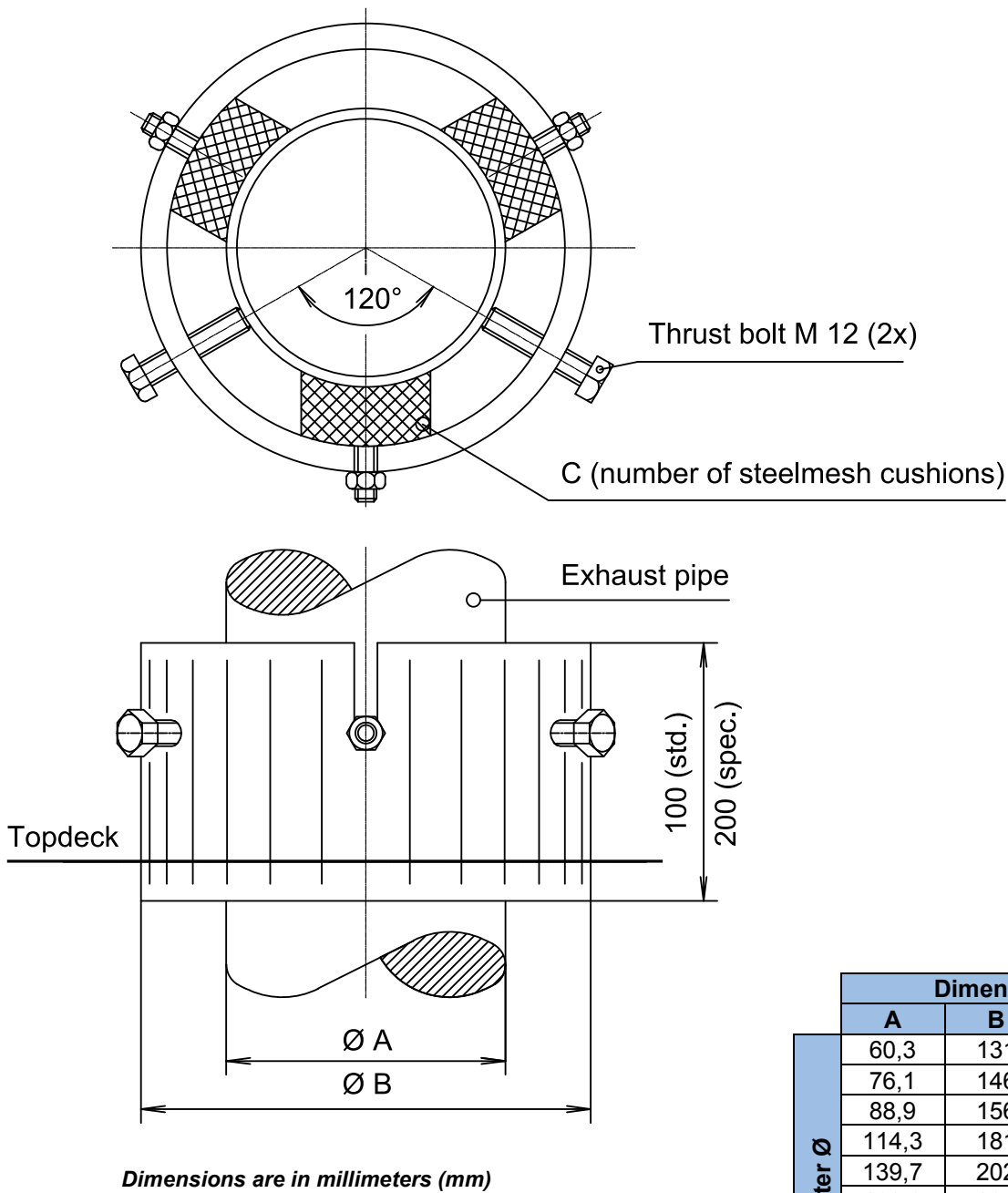
Type	Dimension										Max. Load
	A	B	C	D	E	F	G	H	I	J	
TS-444-1	760	120	450	120	140	120	70	Ø 25	140	50	1000 kg
TS-472-1	840	200	450	175	140	200	110	Ø 35	140	50	2950 kg

4 DECK CONDUIT UNITS & RAIN CAPS

The last part including the outlet of exhaust lines are often exposed to extreme (marine) conditions, as they are positioned outside. Some relatively simple yet effective countermeasures, such as the application of LEXSYS® deck conduit units and rain caps, prevent damage.

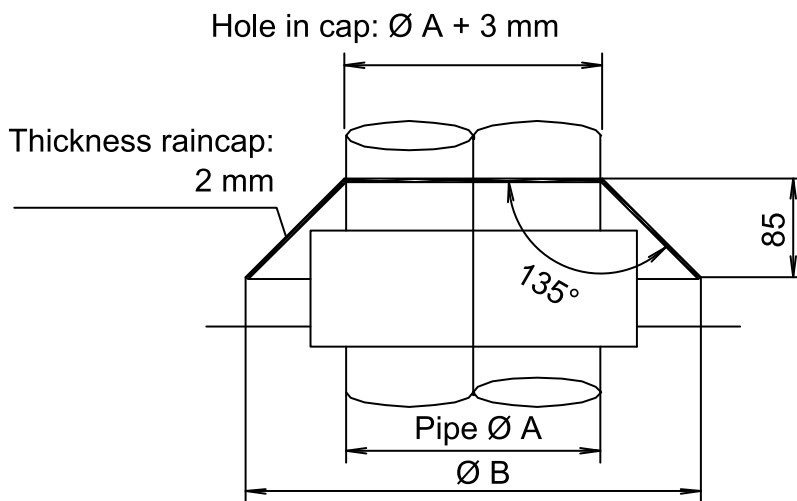
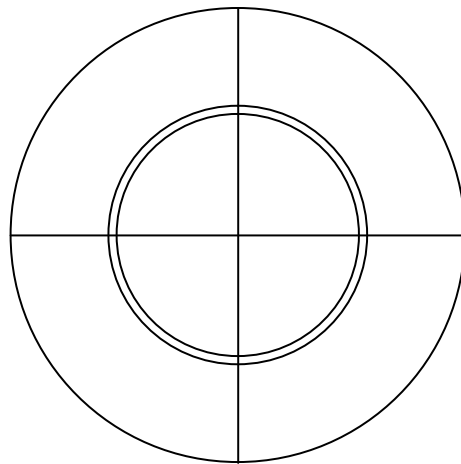
Deck conduit units protect the exhaust line at the intersection with the top deck and prevent the transfer of vibrations to the ship's structure. Rain caps prevent water from entering the vessel through the deck penetration of the exhaust line. As LEXSYS® is a complete solution, the portfolio also contains components for each specific application.

DECK CONDUIT UNIT



	Dimension		
	A	B	C
Exhaust line pipe diameter Ø	60,3	131	3
	76,1	146	3
	88,9	156	3
	114,3	181	3
	139,7	202	3
	168,3	231	3
	193,7	256	3
	219,1	281	3
	273	335	3
	323,9	386	4
	355,6	418	4
	406,4	468	4
	457	519	5
	508	570	5
	610	672	6
711	773	6	
813	875	6	
914	976	6	

RAIN CAP



Dimensions are in millimeters (mm)

	Dimension	
	A	B
Exhaust line pipe diameter Ø	60,3	233
	76,1	250
	88,9	262
	114,3	287
	139,7	313
	168,3	342
	193,7	367
	219,1	392
	273	446
	323,9	497
	355,6	530
	406,4	580
	457	630
	508	681
	610	783
711	884	
813	986	
914	1087	

ABOUT LOGGERS

Loggers is **thought leader** and international recognized solution provider in the field of shock, vibration and noise control. With **excellent technical know-how** in combination with proven market knowledge and experience Loggers designs, develops and engineers **innovative solutions** for the most complex and challenging situations for leading clients worldwide for over 90 years.

Loggers understands all difficulties in the area of vibration, shock and noise control entirely.

We bring up the best and most cost effective solution for every challenge, regardless of its complexity. Loggers defines and engineers all deliverables necessary for solving your problem, ranging from standard to tailor-made solutions. Loggers' state-of-the-art portfolio contains all products and services to provide you with the optimal solution for relatively simple as well as the most complex challenges.

Products

- Vibration mounts
- Expansion joints
- Shock mounts

Services

- Measurement (on site)
- Analysis design including construction drawings
- Structural design and stress analysis of structures
- Vibration measurement and analysis, if needed on site
- Solution definition based on:
 - standard products
 - customized products, or even
 - tailor-made new products, including prototyping
- Complete simulation of solution to ensure its effectiveness
- Testing including certification by independent certification authorities
- On site support during installation

Loggers understands both business and technology and brings both worlds together in satisfying customers' needs in rapidly changing environments. By working closely with clients Loggers enables them to realize their strategic targets through solving specific operational issues in the following market segments:

- Shipbuilding
- Dredging
- Defense
- Machinery
- Offshore
- Transport



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