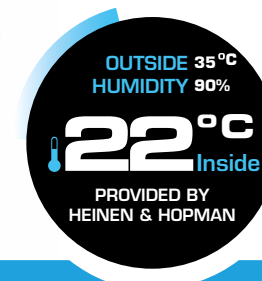




HEINEN & HOPMAN

PRODUCTS

> Dampers - AL



Heating



Ventilation



Air Conditioning



Refrigeration

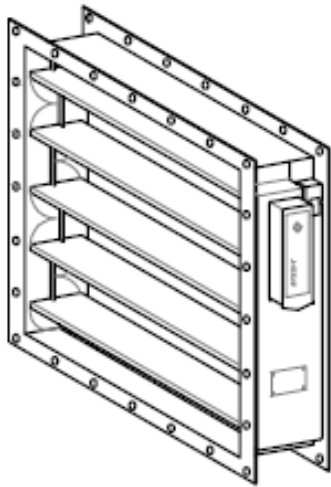
DAMPERS

There are different types of dampers:

- Fire and gas dampers
- Shut-off dampers
- Smoke dampers
- Non-return valves
- Non-return dampers
- Air-flow diffusers

Fire and gas dampers

Fire and gas dampers prevent the spread of fire, smoke and gas between ventilation ductwork, where people must have the maximum amount of time to react to possible fire. The dampers are type-approved according to A-0 (A-60).



ALFD fire and gas dampers

Frame: Hot-dip galvanized steel.

Thickness: 3-5 mm.

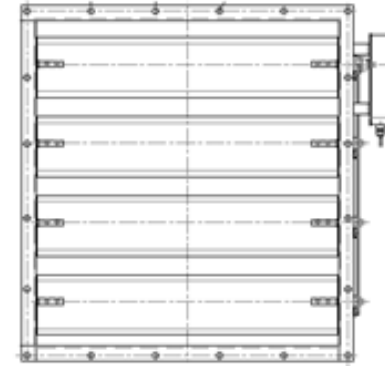
Blades: opposed blades filled with fire-resistant mineral wool sealed with thermal expanding gasket.

Sizes: 100x100 ~ 1400x1500 mm.

Operation system: electrical, pneumatic or manual.

Shut-off dampers

ALCT shut-off dampers shut off the airflow in ductwork. The dampers can be used as functional isolating dampers or as fire closure of main external ventilation openings as required by SOLAS.



ALCT shut-off dampers

Frame: Hot-dip galvanized steel. (Preservation with set of marine paints available on request.)

Thickness: 5 mm (other available on request).

Blades: Hot-dip galvanized steel.

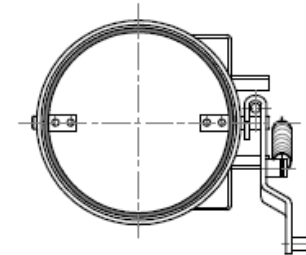
Sizes: defined by customer.

Operation system: electrical, pneumatic or manual.

Modules possible.

Smoke dampers

ALSD smoke dampers prevent the spread of smoke and gases through the pipework in case of fire.



ALSD smoke dampers

Frame: Hot-dip galvanized steel.

Thickness: 3 mm.

Blades: Hot-dip galvanized steel. Rotary flap peripheral sealed with rubber gasket.

Circular connection pieces: DN 80 ~ DN 250.

Operation system: electrical, pneumatic or manual.

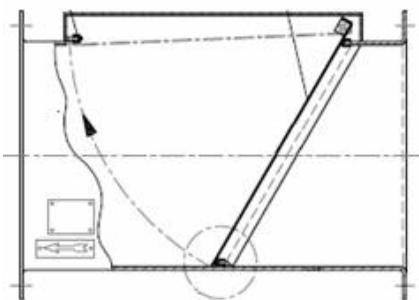
Modules possible.

Alternatives available on request.

Due to continued product development, Heinen & Hopman reserves the right to introduce alternations without prior notice.

Non-return valves

ALNV non-return valves are installed in ventilation ductwork of ships and off-shore objects to prevent the backflow of air through the ventilation ducts.



ALNV non-return valves

Frame: Hot-dip galvanized steel. (Preservation with set of marine paints or stainless steel available on request.)

Thickness: 1-2 mm.

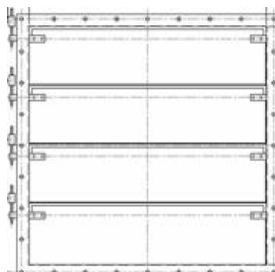
Blades: Hot-dip galvanized steel.

Sizes: 100x100 ~ 400x800 mm.

Operation system: by static air pressure.

Non-return dampers

ALND non-return dampers are installed in ventilation ductwork of ships and off-shore objects to prevent the backflow of air through the ventilation ducts.



ALND non-return dampers

Frame: Hot-dip galvanized steel. (Preservation with set of marine paints or stainless steel available on request.)

Thickness: 1-2 mm.

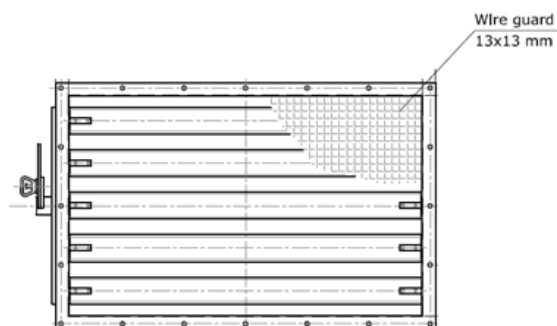
Blades: Hot-dip galvanized steel.

Size: defined by customer.

Operation system: by static air pressure. Maximum pressure across the dampers: 4000 Pa. Maximum air velocity: 16 m/s.

Air flow diffusers

ALAD air flow diffusers are installed in ventilation ductwork of seagoing ships and off-shore objects. ALAD air flow diffusers enable adjustment of the supplied air flow direction or the closing air supply.



ALAD air flow diffusers

Frame: Hot-dip galvanized steel. (Preservation with set of marine paints or stainless steel available on request.)

Thickness: 2 mm.

Blades: Hot-dip galvanized steel.

Size: defined by customer.

Operation system: by static air pressure. Maximum pressure across the dampers: 1000 Pa. Maximum air velocity: 12 m/s.

Control

The dampers can be controlled electrically, pneumatically or manually. In case of fire, the fire and gas dampers will close automatically.

The electrically and pneumatically controlled dampers are driven by an actuator.

Belimo actuators: as standard actuator.

Schischek actuators: actuator used in explosion-proof areas or if the actuator must open/close within 3 s/90°.



Classification ALFD

- RMRS



- GL



- ISO 9001



- ABS



ALFD fire and gas dampers

ALFD fire and gas dampers prevent the spread of fire, smoke and gas between the ventilation ductwork, where people must have the maximum amount of time to react to possible fire. The dampers are type-approved according to A-O (A-60).

The dampers have a flanged steel casing with opposed blades with thermal expanding gasket. The fail-safe is made by a thermal release device which operates if the temperature inside the duct increases above 72 °C (optionally 90 °C). If the power supply is interrupted, a spring return actuator closes the blade. The actual position of the blade is marked on the casing.

The dampers have electric or pneumatic actuators, both with a single-action return spring.

Electric actuator: 24V or 230V | 50/60 Hz | IP54 | 3-8 W | release time 20 s, reset time 150 s

Pneumatic actuator: 5-8 bar | release time < 5 s, reset time < 5 s

Electrically and pneumatically controlled dampers are manufactured in standard and explosion-proof executions, with non-sparking movable co-operating elements and EExdIICT6-class electrical equipment.

Part	Material	Finishing
Frame	Steel	Painted or galvanized
Blades	Steel, filled with resistant mineral wool	Galvanized
Bearings	Galvanized steel / Stainless steel (optional)	-
Shafts	Galvanized steel / Stainless steel (optional)	-

Dimensions and material thickness

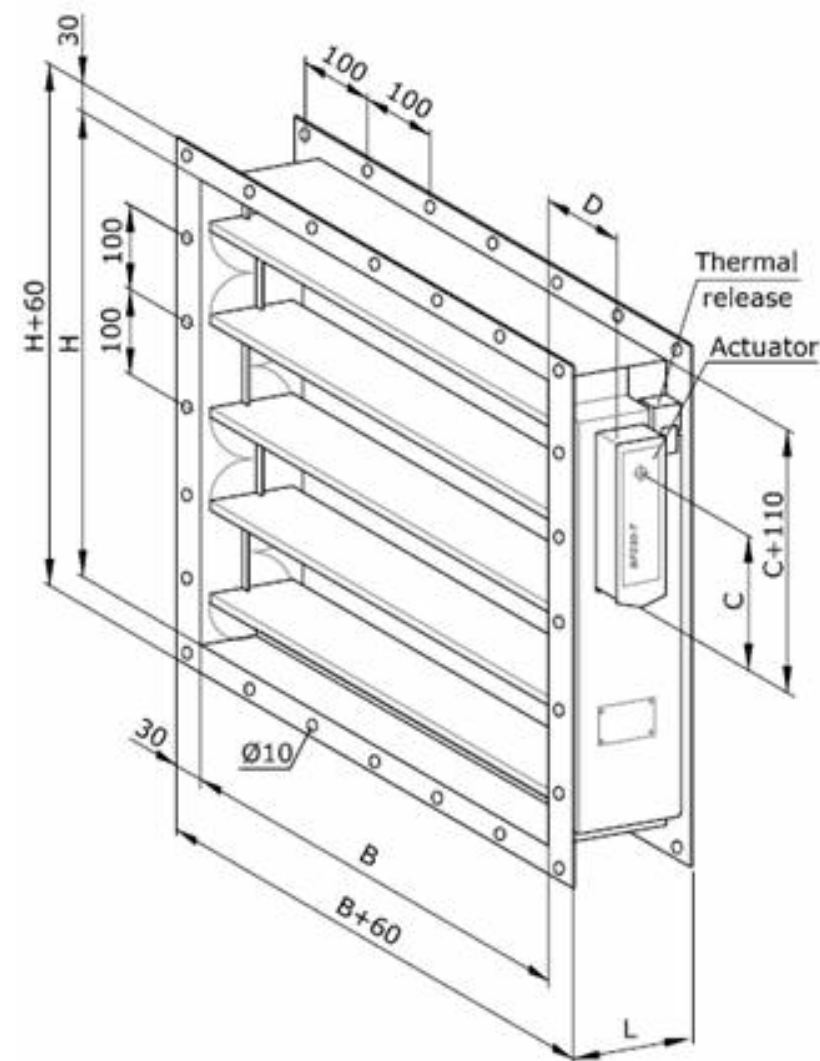
ALFD The dampers have been fire-tested in accordance with approval procedure in IMO resolution A.754(18) 1994.

Certificates: Lloyds Approval Certificate NO 50 7000 03 HH
EC-type examination
Mark of Conformity 0801-03 (MED)

Frame Thickness according to SOLAS

BxH	For B or H mm	S mm
100 x 100 ~ 1400 x 1500	100 - 315	3
	400 - 500	4
	630 - 1500	5

L mm	C mm	D mm	
220	200	100	Standard execution
300	230	210	Dampers with EExd electrical actuator



Alternatives available on request.

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ALCT shut-off dampers

ALCT shut-off dampers shut off the airflow in ductwork. The dampers can be used as functional isolating dampers or as fire closure of main external ventilation openings as required by SOLAS. The dampers have a mild-steel frame and rotary blades actuated electrically, pneumatically or manually. The voltage or the working pressure of the control air must be specified at order.

Drive:

EL24 – electric actuator 24V

EL230 – electric actuator 230V

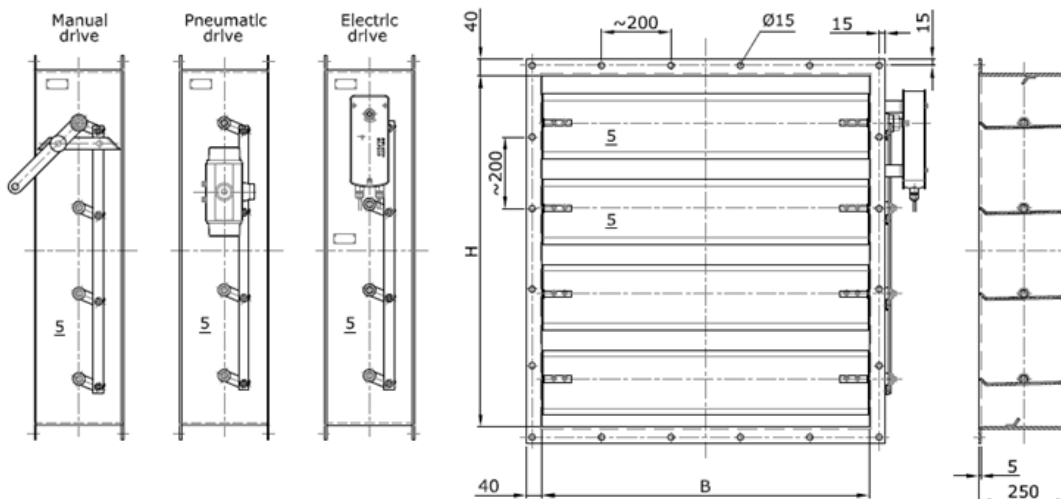
PN – pneumatic actuator

MAN - manual

Part	Material	Finishing	
Frame	Steel	Galvanized	Paints available on request
Blades	Steel	Galvanized	-
Bearings	Steel	Galvanized	-
Shafts	Steel	Galvanized	-

Dimensions and material thickness

The thickness of the blades and the casing is 5 mm, other available on request. The dimensions BxH must be defined by the customer.



ALSD smoke dampers

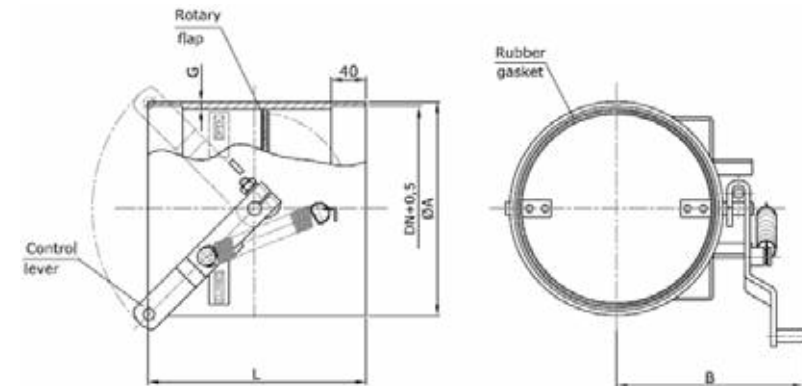
ALSD smoke dampers prevent the spread of smoke and gases through the pipework in case of fire. The dampers have a steel casing with spiro pipe connections on both ends and with a manually operated rotary flap, peripherally sealed with a rubber gasket. The actual open/closed position is secured with a fixing spring and labeled on the casing.

Part	Material	Finishing
Frame	Steel	Hot-dip galvanized
Frame	Steel	Painted on request
Blades	Mild steel	Hot-dip galvanized
Bearings	Stainless steel	-
Shafts	Stainless steel	-

Dimensions and material thickness

The thickness of the blades and the casing is 3 mm.

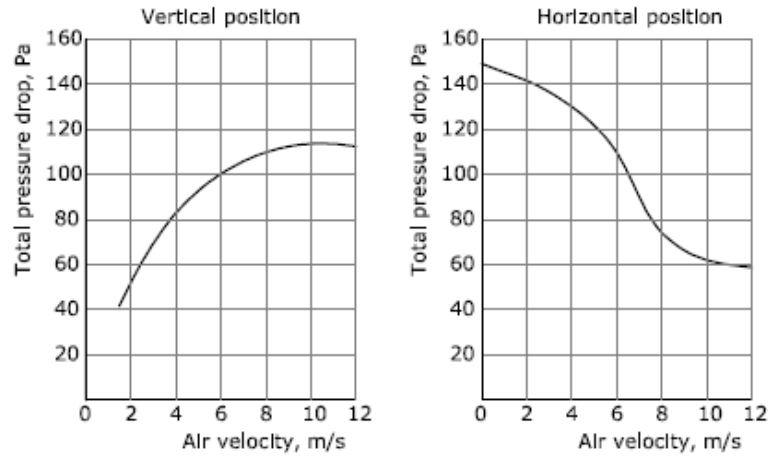
DN	ØA*G	L mm	B mm	Weight (kg)
80	86x3	120	110	1.08
100	106x3	120	125	1.32
125	131x3	130	140	1.95
160	166x3	140	160	2.68
200	206x3	160	185	4.05
250	256x3	180	210	6.10



ALNV non-return valves

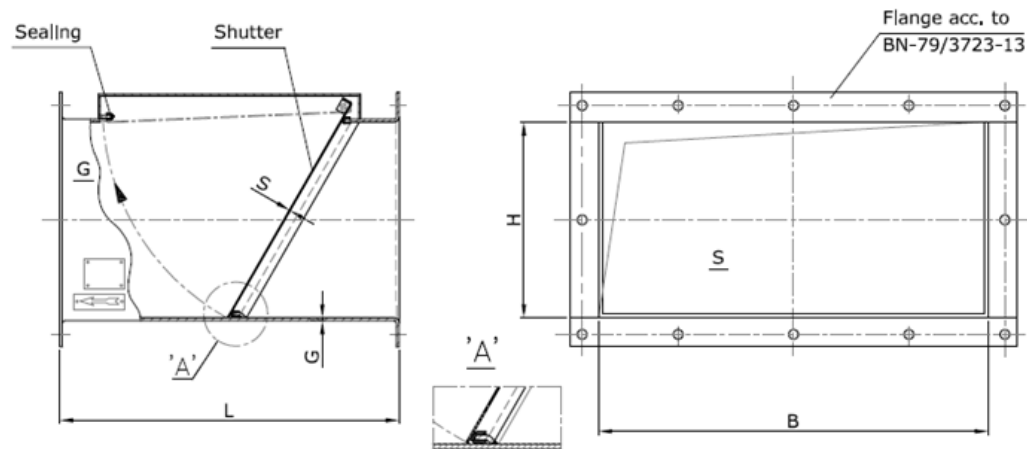
ALNV non-return valves are installed in ventilation ductwork of ships and off-shore objects to prevent the backflow of air through the ventilation ducts. The valves must be installed horizontally or vertically.

Performance chart (air static pressure that opens the flap)



Part	Material	Finishing
Frame	Steel	Hot-dip galvanized
Blades	Aluminium	-
Bearings	Stainless steel	-
Shafts	Stainless steel	-

H mm	B mm	L mm	G mm	S mm	Weight kg
100	100	240	2	1	3,5
	160				3,9
	200				4,4
	250				4,9
160	200	300	2	1	5,3
	250				6,1
	315		3		7,3
	400				9,1
200	250	350	2	1	5,5
	315				7,8
	400		3		9,7
	500				12
250	400	400	3	1	11,8
	500				13,3
	630				15,6
315	400	450	3	2	12,2
	500				14,1
	630		4		18
	800				19,8
400	500	560	3	2	17,3
	630				19,8
	800		4		22,5



Alternatives available on request.

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ALND non-return dampers

ALND non-return dampers are installed in ventilation ductwork of ships and off-shore objects to prevent the backflow of air through the ventilation ducts. The dampers do not require an actuator or motor. The dampers must be installed horizontally or vertically. The dampers can be easily adjusted by adjusting the weight of each damper/installation or by adjusting the weights fitted to the blade shafts. The minimum opening force can be easily adjusted by the counterweights fitted to the blade shafts.

- Standard construction places weights on the right-hand side. Weights on the left-hand side are available as an option.
- Maximum duct pressure: 4000 Pa. Maximum air velocity: 16 m/s.

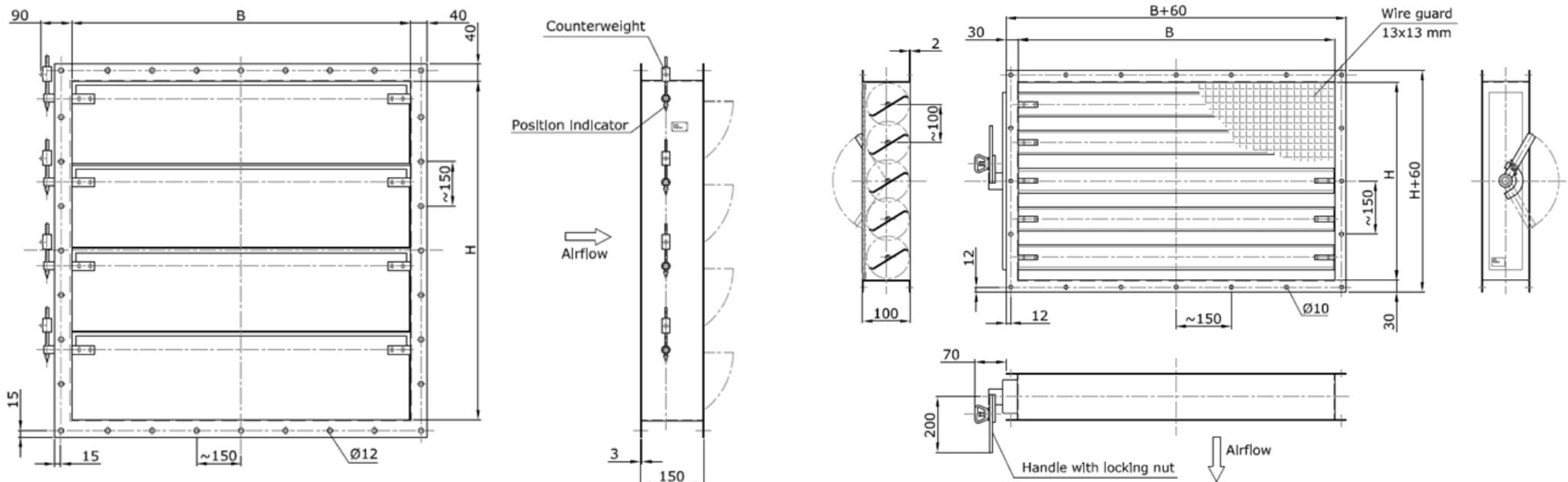
Part	Material	Finishing	Note
Frame	Steel	Galvanized	Painted or stainless steel on request
Blades	Steel	Galvanized	Painted or stainless steel on request
Bearings	Stainless steel	-	-
Shafts	Stainless steel	-	-

ALAD air flow diffusers

ALAD air flow diffusers are installed in ventilation ductwork of seagoing ships and off-shore objects. The diffusers enable adjustment of the supplied air flow direction or the closing air supply. The diffusers have a flanged casing with rotary shutter blades made of galvanized steel sheet. The diffusers have a protecting wire guard fitted to the air outlet side.

- The blades can be fixed in any position between 0° (diffuser closed) and 130°.
- Maximum pressure across the dampers: 1000 Pa. Maximum air velocity: 12 m/s.

Part	Material	Finishing	Note
Frame	Steel	Galvanized	Painted or stainless steel on request
Blades	Steel	Galvanized	Painted or stainless steel on request
Bearings	Stainless steel	-	-
Shafts	Stainless steel	-	-



Alternatives available on request.

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Heinen & Hopman encourages a more sustainable world. By providing eco-friendly solutions and services we offer our clients the option of reducing energy consumption and thus CO2 emissions. Visit greenmanifest.info for more information.



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