

SPECIFICATION FLUCTUS FEEDINGBARGE

F700XL



(Illustreringsbilde)

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1. DESCRIPTION OF BARGE

1.1 Dimensions of the barge

Length:	40.00 m
Width:	13.00 m
Height to main deck:	4.00 m
Height to silo deck:	7.60 m
Height to control room deck:	10.00 m

1.2 Silo og tank capacities

Total gross silo volume (8stk):	1200.00 m ³
Calculated fill rate at 0.65t/m ³ :	700.00 tonnes
Diesel tank:	40 m ³ (20m ³ + 20m ³)
Fresh water tanks (4stk):	4 x 1000 litres
Grey water tank:	4 m ³

1.3 Surface treatment

The hull is sandblasted (SA 2.5) and surface treated according to Hempel's recommendations. The barge will also be metallized externally above the waterline, and there will be zinc anodes mounted below the waterline. 26 pieces of zinc anodes of 10kg.

2. DESCRIPTION OF THE BARGE

2.1 General

The barge is built according to NS9415 and is certified for general locations with $V_c \leq 1,5\text{m}$ and $H_s < 6,5$ for

The hull is built in ship steel according to ship standard and preparation of steel must be done according to ISO standard 8501-3: 2006

2.2 External description of the barge

Doors

Exterior doors on main deck have opening of 700mm (width) and door threshold of 600mm. The doors are of weatherproof class. Doors on silo deck (from living area to silo deck) are of splash-proof class, according to approved class companies.

Hatches

On silo deck there are hatch frames of 2,4m x 2,2m on each silo.
The construction of silo hatches is designed to achieve high degree of filling.



There is also one inspection hatch at the crossing point of the silos, for easy inspection of the level in all silos. One hatch for each silo deck.

There is one ladder in each silo.

Lights are mounted in the crossing point to illuminate the silos.

Mounting point for mobile fall block is mounted in inspection hatches.



On main deck there are six flush hatches, one for each silo room, one for aft end room and one in centre room. The flush hatches have drainage through the side of the barge.



There is emergency exit with counterweight or stairs to main deck in each end room.



All tanks are equipped with manholes for access/inspection.



Crane Foundation

The foundation is ready for mounting optional crane up to max 33 t/m.



Crane type Palfinger PK 33001(M). The crane is delivered with winch with 1875kg capacity. Remote control is included.

Towing points

The barge has towing points in both ends.

Platforms

There are 2 high platforms for feeding pipes and selectors on the side of the barge. With access from silo deck



Rescue equipment

Lifebuoys are mounted on each long side of the barge. There are also rescue ladders integrated in the hull. Life raft for 8 persons on silo deck.

Mounting point for mobile fall block is mounted in inspection hatches.



Handrails and bollards

All handrails around the barge have a height of 1000mm.

The bollards for mooring of boats along the entire barge. All bollards are marked with their Safe Working Load (SWL).

Barge mooring

The barge has mooring pipes in each corner. Each mooring pipe is designed for 2 mooring chain each on 56 tonnes.

The locking plate is designed for max 42mm chain.



2.3 Internal description of the barge

2.3.1 Below deck

Endroom Aft

Diesel transfer pump
Concrete floor painted with epoxy paint.
Walls and roof in painted steel.
The room is insulated.
Concrete floor painted with epoxy paint.
2 pcs bilge pumps

Silo room 1

Walls and roof in painted steel.
Concrete floor painted with epoxy paint.
Under silos are augers for transport of feed to sluices.
Sluices and sluice boxes are mounted between silos.
Blowers for feeding system.
20m³ diesel tank
4 pcs bilge pumps

Center room

Walls and roof in painted steel. Concrete floor painted with epoxy paint.
Main switch board
315kVA trafo
Foundation for air-compressor
Foundation for future generators
IT-Rack 42u
4 pcs water tanks for freshwater system
200l boiler
PLC-cabinet for feeding system.
High concrete above stiffeners.
2 pcs bilge pumps
Stair up to main deck

Silo room 2

Walls and roof in painted steel.

Concrete floor painted with epoxy paint.

Under silos are augers for transport of feed to sluices.

Sluices and sluiceboxes are mounted between silos.

Cabinets for feeding system.

20m³ diesel tank

Blowers for feeding system

4 pcs bilge pumps



End room fore

Walls, floor and roof in painted steel.

2 pcs bilge pumps

2.3.2 Main Deck

General

There are panels on the walls, parquet on the floor and system roofing. In the floor there are thermostatic controlled heating cables. Windows with 8 mm soot-stained glas.

Bathroom

There are wet room panels on the walls, tiles on the floor and system roofing. In the floor there are thermostatic controlled heating cables.

The bathroom interior consists of a sink with hot and cold water, a cabinet under the sink.

Washing machine and tumble dryer

Linen closet next to washer and dryer

Wall mounted toilet



Wardrobe/workshop

There are wet room panels on the walls, tiles on the floor and system roofing. In the floor there are thermostatic controlled heating cables.

Wardrobe with cabinets, type of cabinets will be decided together with Customer.

Steel sink with hot and cold water, and retractable shower



Control room

There are panels on the walls, parquet on the floor and system roofing. In the floor there are thermostatic controlled heating cables.

The office is equipped with an office desk and an office chair. Cabinets for storing of office supplies and binders.

Many electrical sockets for electronic components



Cabins

There are panels on the walls, tiles on the floor and system roofing. In the floor there are thermostatic controlled heating cables.

Bunk bed and a nightstand next to it, and a high closet



Kitchen

Oven
Refrigerator and freezer
Inbuilt microwave oven
Dishwasher
Cooking hood, induction
Kitchen grinder
Ventilation



Living area

There are panels on the walls, parquet on the floor and system roofing. In the floor there are thermostatic controlled heating cables.
Dining table and chairs for six persons.



3. PIPES AND SANITARY

3.1 Below deck

End room Aft

2 pcs bilge pumps

Piping from diesel tank to possible future generators

Piping for lubrication oil tank, and for waste oil tank.

Silo room 1

Piping for feeding system

Piping for storage tank for ensilage

4 pcs bilge pumps



Centre room

Fresh water tanks

Boiler

Central vacuum cleaner

2 pcs bilge pumps



Silo room 2

Piping for feeding system
4 pcs bilge pumps

Endroom Fore

Piping for high pressure cleaner
2 pcs bilge pumps



3.2 Main Deck

Bathroom

Piping for sink, washing machine, tumble dryer and toilet.

Drainage in floor

Ventilation

Wardrobe/ Workshop

Drainage in floor

Ventilation

Sink with retractable showerhead

Veterinary Room

Sink with hot and cold water

Outlet for high pressure cleaner

Piping for acid to mill tank

Control room

Ventilation

Heating pump

Kitchen/Living Area

Piping for kitchen sink and dishwasher

Kitchen grinder under sink

Ventilation

Heating pump

Cabins

Ventilation

Office

Ventilation

Platforms

Piping for feeding system

4. ELECTRIC

4.1 External

GPS controlled flash in top of mast.

Floodlights with lightning for silo decks and short ends on main deck. Lights all around the barge both on main deck and around living area.

Prepared for shore power connection.

Piping and cables for possible future installations.

Rooftop junction box

Acid protection tank, heavy duty grinder, acid pump and deck washing pump are placed according to drawings.

Lights in chemical room.

Lights, power outlets and quick heater for water in veterinarian room.

Two cage light cabinets (2 x 63A)

Connection for deck washing pump.

4.2 Internal

4.2.1 Below deck

Endroom aft

Lights, emergency lights and fire alarm
Diesel transfer pump

Silo room 1

Blower for feeding system with frequency inverters
Control cabinet for feeding system
Sluices for feeding system
Augers for feeding system
Lights, emergency lights and fire alarm
Alarm system for feeding system
Bilge pumps



Centre room

Main switch board
Central vacuum cleaner
Boiler for freshwater system
Pump for freshwater system
Bilge pumps
Lights, emergency lights and fire alarm

Silo room 2

Blowers for feeding system with frequency inverters
Control cabinet for feeding system
Sluices for feeding system
Augers for feeding system
Lights, emergency lights and fire alarm
Alarm system for feeding system
Bilge pumps

End room fore

Pump for ensilage mill tank
High pressure cleaner
Lights, emergency lights and fire alarm
Bilge pumps

4.2.2 Main deck

Wardrobe/Workshop

Lights, emergency lights and fire alarm
Heating cables in floor
Emergency switches for feeding system and ventilation
Fire alarm central

Bathroom

Lights and sockets
Fan
Heating cables

Control room

Heating cables
Ventilation
Lights
Heating pump
Network sockets

Kitchen

Integrated stove
Integrated microwave oven
Refrigerator and freezer
Dish washer
Cooking top and cooking hood
Ventilation
Heating cables
Lights

Living Area

Heating cables
Ventilation
Antenna outlet
Lights
Heating pump
Network sockets

Cabins

Heating cables
Ventilation
Lights
Network sockets

5. FLUCTUS FEEDSYSTEM WITH 8 LINES, PREPARED FOR 12 LINES

Fluctus software for PC and PLC

PC-for feeding

8 frequency inverters 30kW

8 blowers Kaeser blowers 30kW with noise reduction cabinet

8 sluices with sluice boxes and sensors

8 pcs augers

Restrainers for feeding lines without selector valves

8 empty silo sensors

Hatch for pipe-cleaning sponges

Tests are showing that Fluctus feeding system are creating very small amount of breakage of pellets.

Cooling pipes are integrated into the hull of the barge and shows very efficient cooling of the air.

6. EQUIPMENT

Description of what equipment included in offer

1. Fendering around the barge
2. Outlet for central vacuum cleaner in centre room, wardrobe and living area
3. Heating pump in living area/control room
4. Starting up and training of operators on site
5. Fire extinguishers in silo rooms, end rooms, wardrobe/living area
6. Filling station for diesel to work boats on main deck, with pistol and counter
7. Life raft for 8 persons
8. Deck washing pump
9. LED-lights over entire barge
10. IT-solution according to IT-spec, prepared cabling, sockets and rooftop junction box
11. Inspection hatch, ladders, and lights in all silos. Mounting point for mobile fall block
12. Traceable fire alarm
13. Generator type Himoina/Iveco med synk (2 X 250kVA + 100kVA)
14. Concrete floor
15. Cran Palfinger PK33002 with winch and remote control
16. Silohatches prepared for feed packed in big bags
17. 2 x 2 person cabin for sleeping and living
18. Veterinary working room
19. Strong hosing connections for feeding pipes