

# New Grateful for Fraserburgh



Grateful

Newbuilding "Grateful" was named, launched and handed over to owners Eshcol Fishing Co Ltd (Whyte family), Fraserburgh, Scotland from Karstensen Shipyard recently.

The hull for "Grateful" was built with Nauta Shipyard in Gdansk, Poland and arrived in Skagen October 2016.

Arriving home in Fraserburgh on the high tide at lunchtime on 25th July, skipper of the Grateful William Whyte said he and the crew were delighted with how the new boat had

handled on an albeit calm North Sea crossing from Skagen in Denmark.

At just under 70m - to avoid the requirement in Norway for pilots to take command of boats over 70m within harbour limits - the Grateful, which was launched at Karstensens in mid-July, is elegant yet substantial. She squeezed through the narrow channel to moor in the outer Balaclava Basin.

"We're going to have a few days at home after a long spell away, have a barbecue to celebrate, before we go

off to the herring in mid-August," said the skipper.

"We are all really pleased with the boat and looking forward to getting her out to sea and fishing for real after all the trials and testing."

The Whyte-family previously operated the 64m Forever Grateful, which was sold to Norway in December 2016 and renamed Trygvason. The new vessel will operate along the same pattern as the existing vessel, with a traditional pelagic trawl fishery,

where target species are mackerel and herring.

William (Sr) and Andrew Whyte headed the family business for 3 decades, but have now passed the task on to the next generation with William Whyte (Jr) as skipper, Nathan and Aaron Whyte as well as son-in-law Derek Cardno also being onboard the vessel. The family has a long history in the fishing industry stretching back to William and Andrews grandfather in the early 1900's with the small inshore vessel Excelsior, FR 887.

Owners and Yard have a long standing relationship, as William (Sr) and Andrew were the first to take a Scottish fishing vessel to Karstensen Shipyard for a major refit back in 1983.

The vessel design, specification and arrangements is a result of an extensive and close cooperation between owners and yard. Main focus has been set on optimizing working, safety and comfort for the crew, optimizing catch handling- and storage facilities and optimizing of fuel consumption.

Amongst other things, the vessel will be the first fishing vessel in the Scottish fleet to boost a retractable thruster, supplied by Brunvoll. This thruster can work as a drop-down Azimuth, functioning as a take-me-home device, or even used during slow steaming, dodging or stern pumping.



Crew Mess



Engine Room



Grateful Crew



Skipper William Whyte at the helm

## GENERAL LAYOUT

The hull is built in steel with two continuous decks; main deck and shelter deck, and with long forecandle- and boat decks. Wheelhouse, boat decks, funnel and masts are built in aluminium.

Hull shape is of round bilge construction with bulbous bow and stern skeg, flared stem and transom stern.

Below main deck the hull is subdivided into the following watertight compartments: Forepeak, sonar room, room for retractable thruster, insulated RSW-tank pumps- and manifolds, engine room with main engine connected to one reduction gearbox with one, ducted propeller and aftpeak with fuel- and lub oil tanks.

On main deck the hull is arranged with: Forepeak, store room and trunking for retractable thruster, RSW-hold/trunk section with central corridors, forward containing vacuum pump room and midship RSW-machinery room. Aft hold section SB accommodation area, PS/CL engine store/workshop, control room, hydraulic room and all aft PS/CL store with steering gear and SB store. Accommodation is arranged with 4 single crew cabins, all with

en-suite toilet/shower facilities, laundry, trim room and stairs and corridors. In order to create best possible design for low noise, the accommodation is located as far away from the propeller as possible. In addition a number of constructive steps are made, in order to create a low noise level.

On shelter deck arrangements are: Store room in forepeak, generator room and aft/under forecandle store room. Aft forecandle fish receiving deck, with centre deck house with water separator and hatches for the 11 RSW-tanks.

Aft midship, full width superstructure. Accommodation in superstructure is arranged with: 2 1- and 2 2 man crew cabins and hospital, all with en-suite toilet/shower facilities, oil skins room, changing room with duty mess and stairways and corridors. PS of superstructure to contain trawl workshop.

Aft superstructure trawl deck with 2 net drums in waterfall arrangement. At transom hydraulic stern gate and hydraulic operated guiding pins.

On forecandle deck, anchor- and mooring winches in dedicated house, together with mooring equipment. Aft of this, roll reduction tank and forecandle deck.



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Best Wishes to the Whyte family & crew on the new FV Grateful

We are delighted to have supplied the SeaQuest Crane & Fish Pump Package  
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## KARSTENSEN SHIPYARD A/S

### SETTING THE STANDARD



**Congratulations to the Whyte Family on their new vessel GRATEFUL**

Karstensen Shipyard; Skagen, Denmark, ph. +45 98 44 13 11, [www.karstensens.dk/en](http://www.karstensens.dk/en)

**DECK EQUIPMENT:**

Hydraulic winches: - all supplied by Rapp Marine, main system:

2 x Trawl winches	90,0 t
1 x Topline winch	73,0 t
1 x Tail-end winch	46,7 t
2 x Netdrums	92,6 t
5 x Mooring winches	11,1 t
1 x Anchor windlass	
1 x Netsounder winch	
1 x Hydraulic hose reel	
1 x Fish hose reel	

Fish pumping equipment delivered by Sea Quest of Killybegs, Ireland 2 x Sea Quest fish pumps, 24".

Deck cranes: - all supplied by Sea Quest:

1 x Fore deck crane, 4 tonnes x 18,0 m.
2 x Fish pump / net crane aft, 4 tonnes x 14,0 m.

HP hydraulics: Complete drives systems (2 off) winches and cranes, respectively fish pump and associated equipment, supplied by Rapp Marine:

6 x 160 kW pump-unit.
3 x 108 kW pump-unit.
1 x 120 kW pump unit.

Trawl blocks Brdr. Markussen, Blue Line  
Anchors & chains AC-14, supplied through Max Fodgaard.

*Seaquest*, Killybegs were awarded the contract for the Grateful's deck cranes and fish pumps. The forward deck Crane is a 4 ton with 18 mtr reach with 4t & 2t winches and the aft gantry crane is also rated 4 ton with a SeaQuest PB02 type Powerblock, with Endless 360deg rotation.

All cranes are supplied with SeaQuest Radio Control System Radio and as controls are interchangeable should one be damaged during operation allowing crew to switch the controls for continued use while at sea.

As standard with SeaQuest Cranes, all hinge pins, cylinder rods, hydraulic fittings & pipework were supplied in Stainless Steel and all parts are Shotblasted & Metalised before painting. Two 24" SeaQuest Fish pumps were supplied with 20" Outlets and for trawling use

**ELECTRONICS:**

Extensive array of electronic equipment (navigation, fish finding and communication): Main supplies by Echomaster, Woodsons, Aberdeen, Furuno-UK and Scanmar-UK. All installations by KS Elektro.

Main items:

LF sonar:	Simrad SX-93, 20-30 kHz.
MF sonar:	Kaijo Denki KCS3885Z (M-118), 94 kHz.
HF sonar:	Kaijo Denki KCH3180 (M-90), 164 kHz.
Echo sounder:	Simrad ES-80 sounder system 120 resp. 200 kHz Chirp, with 2 processor units and 2 split beam transducers.
3D sonar:	Sea-Pix 150 kHz 3D sonar system.
Current indicator:	Furuno CI68.
Net monitor:	Scanmar ScanScreen, 4 hydrophones.
Trawl sonar:	Simrad FM90 (multibeam omni).
Catch sensors:	Simrad PI.
Radar 1 (3 cm):	Furuno FAR3210, chart radar with Ecdis.
Radar 2 (10 cm):	Furuno FAR3230S.
Ecdis:	Furuno FMD3200.
Plotter 1:	Trax.
Plotter 2:	Olex, 3D
Gyro compass:	Simrad GC80.
Autopilot:	Simrad AP80-system.
V-sat communication:	Excel @ SEA1m.
Sat-TV system:	Intellian T130.
GMDSS:	Sailor equipment for A3 navigation.
VHF's:	Sailor.
Wheelhouse monitors:	Hatteland, 26".
Monitor switching:	Kramer.
Autotrawl system:	Rapp Marine.
ME remote control:	Scana Volda Neptune-II CPP.
Intercom:	PhonTech.



Helm

Forecastle deck is connected with boat deck 01 aft, by walkways SB and PS. On forecastle-/boat deck level main foredeck crane is mounted.

On boat deck 01 abaft midship, deck house in centre. Accommodation in deck house with: Day room/lounge, cinema room, mess room, galley with provision room (and separate fridge-/freezer rooms) and stairways and corridors. PS fan room for ventilation for engine rooms and hydraulic pump room, as well as exhaust trunks.

Abaft deck house (on boat deck 01), 2 off trawl winches and 1 topline winch. All aft PS fish pump deck, with fish pump and hydraulic hose reel. Integrated in aft ship construction and boat deck 01 is also trawl gallow, which accommodates 2 main towing blocks as well as tail-end and top line blocks. Net sounder winch is fitted on top of gallow.

On boat deck 02, deck house with ventilation room and accommodation. Accommodation contains: 3 officer cabins with en-suite toilet/shower facilities, instrument room and stairways and corridors. On PS of deckhouse MOB deck and -davit.

Design principles for main engine / auxiliary arrangement are as follows:  
On reduction gearbox, 1 Power-Take-Off, mounted with a shaft alternator, producing 2500 kWe.

To supply additional electric power, the vessel is fitted with 2 auxiliary engines / gen-sets and 1 auxiliary/harbour gen-set, producing 2 x 820 respectively 1 x 600 kWe.

During heaving/shooting operations at fishing, when the winch system is in use, the gearbox PTO will be clutched in, and electric power will be supplied from the shaft alternator. When there is demand for full power on the winch(es), there will normally

not be same demand for power on the main engine. Following the main engine will be power source for both propulsion and winch system.

During normal towing, the shaft alternator will/can be disengaged (from switchboard), and the electrical power will/can be supplied by either of the gen-sets.

The 3 gen-sets will be able to connect into main switchboard, controlled by the vessels DEIF Power-Management-System. Further on bus-bar breaker is fitted in main switchboard, allowing aft thruster to be fed off shaft alternator and forward thrusters and vessels hotel load off the diesel generator sets.

Electrical power system is fitted for sliding frequency (60-50 Hz), by means of frequency converters for 400/440 V and static converter/UPS for stable 230 V supply. This will allow main engine and propeller rpm to be reduced with 17%. Further on, the vessel will be fitted with a 2-speed gearbox, giving 2 fixed propeller speed steps.

**Swan Net-Gundry midwater trawls**

Grateful began to fish herring with two midwater trawls made by Swan Net-Gundry (SNG) onboard. This continues the owners' association with the Killybegs company, whose net performed well on their previous vessel Forever Grateful.

Recent orders by skipper William Whyte include an 870m herring net, and a 1024m dual-purpose herring/mackerel net, both of which have hexagonal mesh round the mouth. The mesh size in the top and side panels of these nets is 12.80m full mesh and the lower panel is 6.4m full mesh. The nets are built with Nylex braid in the front end. This twine has held outstanding reliable strength results for SNG over the years.

During the forthcoming autumn



SeaQuest 24 inch Pump



Fore Deck



Main Trawl deck

mackerel season in the North Sea, skipper William Whyte expects to use either 1280m or 1434m mackerel nets. These nets also have hexagonal mesh around the mouth and are made with Nylex twine.

The new vessel also took delivery of two new 70m, wider-design, eight-panel brailers.

The new brailers are of the latest design, which has received outstanding results for other vessels.

The mesh size is 50mm FM (double and single) on the inside and 160mm FM (double and single) on the cover netting, complete with all-new rigging.

Grateful took delivery of Thyborøn Type 20VFS 13m<sup>2</sup> trawl doors to spread the midwater trawls and 2 x 2150m of 38mm Bridon 6 x 26 Starfish trawl wire.

**ENGINES AND MACHINERY:**

Main engine:	MaK 9M32C, 4500 kW @ 600 rpm.
Propeller plant:	Scana Volda CP95/4, d4200 mm.
Reduction gearbox:	Scana Volda ACG-850/PS680, 2-speed, 130/105 propeller rpm.
Shaft alternator:	AvK DSG 114 K1-6W, 2500 kW / 3125 kVA @ 1200rpm.
Auxiliaries:	2 x Mitsubishi S12A2-MPTAW, 820 kWe @ 1800 rpm.
Harbour set:	1 x Mitsubishi S6R-Z3 MPTAW, 580 kWe @ 1800 rpm.
Steering gear:	Rolls Royce Tenford SR 662 - 170 kNm.
Thrusters:	1 x Brunvoll FU-63-LTC-1750, 950 kW / 1292 HP. 1 x Brunvoll AR-63-LTC-1750, retractable combi thruster, 850 kW / 1156 HP.

Starting Air compr: Sperre HL2/77.

Fuel oil separator: Alfa Laval PA 615.

Lub oil separator: Alfa Laval PA 615.

FO transfer pumps: 2 x Bombas Azcue.

Remote sounding: Emerson / MCS.

Pumps: Main engine cooling: Bombas Azcue.

Deckwash-, fire- and bilge pumps: Bombas Azcue.

Hydraulic cooling - and fish room cooling pumps: Bombas Azcue.

Box coolers: GEA Bloksma (all engines main components FW cooled).

Bilge ejectors: Ellehammer.

FW pressure sets: 2 x Bombas Azcue.

Hot water tank: OSO, 200 l/ 2x15kW.

Sewage pumps: 2 x Bombas Azcue.

Sewage syst: Jets.

**FISH TANKS:**

RSW-system: 2 x Johnson Controls (York/Sabroe), each 1345 kW / 1.156.000 kCal/h.

Circulation pumps 2 x 950 cum/h

Condenser pumps 2 x 300 cum/h

RSW circulation system with remote operated RSW-valves through Johnson Controls control system.

Actuators for valves: Eltorque (Lyng).

Vacuum-system: C-Flow:

4 x 66 kW compressor units. 2 x 4200 l tanks.

**MAIN DIMENSIONS:**

Length overall	69,95 m	RSW-tanks	2033 cum
Length between PP	63,60 m	Fuel Oil	570 cum
Breadth moulded	15,00 m	Fresh Water	57 cum
Depth main deck	6,50 m	Forepeak	105 cum
Depth shelter deck	9,20 m	Design:	Karstensens Skibsværft A/S
Scantling draught	8,50 m	Trial speeds / average;	17,2 knots
Frame spacing	600 mm	Hull: - built by	Nauta Shipyard,
Tonnage	2388 GT	Gdansk, Poland.	
Accommodation and outfitting for a total crew of 16.		Class: Det norske Veritas, +1A1 Fishing Vessel, hull: Ice-C.	



# SWAN NET GUNDRY



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