GRINDING, MIXING AND

PELLETING PLANT FOR ANIMAL FEED

TYPE C5-3

MAIN TECHNICAL SPECIFICATIONS:

Output 5-6 tons/hour mash or 3 t/h pellets (see design standards).

Bulk intake raw materials	: 60 m^3/h.
Bulk storage	: Option.
Drying system	: Option.
Storage raw materials	: 4 bins, 25 m^3 tons/each.
Dosing system	: Electronic batch weigher, 500 kgs.
Grinding	: High efficiency hammer mill 55 kW.
Mixing	: 1000 ltr. "Turbo Mixer" .
Oil dosing	: Dosing capacity ± 24 ltr/min – Option.
Micro dosing system	: Option.
Molasses dosing	: Option.
Pelleting	: Pellet press 55 kW.
Finished product storage	: 4 bins, total approx. 100 m^3
Bagging	: ± 8 tons/hour- Option.
Electric control	: Included for the whole plant .
Automation	: Electric control.
Installed power	: ± 215 kW
Required transformer	: > 300 kVA
Shipped weight	: ± 75 tons
Shipped volume	: 3 x 20 ft + 1 x 40 ft OT containers
ERECTION TIME	: ± 3 - 4 WEEKS

SUMMARY OF PRICES :

A.	Intake raw materials and dosing section.	EUR.	90.240, =
B.	Grinding mixing unit.	EUR.	81.520, =
C.	Pelleting section.	EUR.	103.710, =
D.	Finished product section.	EUR.	32.650, =
E.	Electric control and automation.	EUR.	69.500, =
F.	Oil dosing system.	EUR.	7.790, =

	Price Ex Works Moerkapelle - Aalten	EUR.	385.410, =

OPTION:

G.	Micro dosing system.	EUR.	45.800, =
C9	Crumbler with feeder.	EUR.	18.730, =

CONDITIONS OF DELIVERY

Our prices are: free on board Dutch port, excluding all customs duties, taxes, etc. outside Holland.
Costs of inspections, tests, certification, etc. are for the buyer's account.
Delivery is limited to the items and services specified in the text of this offer.
Itemised prices are only valid within the full scope of supply.
Specification may change due to detail engineering.
Operating and maintenance instructions will be supplied in 2-fold in the English language.
It is the buyer's responsibility that the agreed conditions and execution of equipment are in conformity with the ruling law of the importing country.
Our offer is without engagement.

DELIVERY TIME

Delivery F.O.B., approx. 5 - 6 months after reception of the down payment and the confirmation of the Letter of Credit and after clarification of all technical details.

TERMS OF DELIVERY

All contracts and tenders are governed by:
The ORGALIME General Conditions for the supply and erection of mechanical, electrical and associated electronic products (SE 94) of September 1994.
We herewith explicitly reject any other conditions.

PAYMENT

30%	Down payment at order by Telegraphic Transfer.
70%	By irrevocable sight credit in Euros confirmed by a well known Dutch bank. Payable against presentation of shipping documents, or warehouse receipt.

The transfer of the down payment and the opening and confirmation of the letter of credit have to take place within a period of 2 weeks after the contract has been signed. We reserve the right to amend the delivery date(s) and the price(s) after this period.
Partial shipments and transshipment should be allowed.

VALIDITY

The validity of the prices is 90 days.

GUARANTEE

We guarantee the good function of this new equipment for a period of 1 year after delivery ex works, or 2000 working hours whichever comes first. The guarantee expires when original Ottevanger parts are replaced by non original parts.

OTTEVANGER MILLING ENGINEERS B.V.

E.W. Ottevanger

A. **INTAKE RAW MATERIALS, STORAGE AND DOSING SECTION.**
Intake capacity 60 m³/h.

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
A-1	**1**	**ROAD INTAKE HOPPER.** Dimensions ± 4000 x 1500 x 1000 mm. Suitable for back tipping trucks. Made of reinforced concrete.	*Local supply*
A-2	**2**	**AIRFILTERS.** Automatically reverse-jet cleaned. Total filter area 45 m². With delta- P module. Ventilator for the filters. Capacity 6.000 m³/hr. Driven by a 2 x 5.5 kW motor.	*Optional*
A-3	**1**	**DISCHARGE SCREW CONVEYOR. (feeding elevator 1)** Type 250. Length ± 8 mtr. Equipped with: - overflow relief valve. - sensor detection for product overflow. Drive with a 5.5 kW geared motor with chain transmission and drive guard.	
A-4	**1**	**BUCKET ELEVATOR. (1)** Type : 200 x 200 S Features/ Accessories : • dust-tight construction • self-cleaning pulleys • belt tensioner • trapezium-shaped hatch for mounting belt and buckets • inspection opening in the head • 2 clean-out panels in the boot • connecting piece Dimensions : ≅ 20 meters length. Drive : 11 kW geared motor with coupling motor mount and drive guard ***Hot dip galvanised and weather proof.***	
A-5	**1**	**VALVE BOX.** Dimensions 300 x 300 mm. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
A-6	**2**	**DIVIDING SCREW CONVEYORS ON TOP OF THE SILOS.** Type 250. Length ± 7 mtr. Equipped with: - overflow relief valve. - sensor detection for product overflow. Drive with a 2,2 kW geared motor with flexible coupling and drive guard.	
A-7	**4**	**PNEUMATIC OPERATED OUTLET SLIDES.** Dimensions 200 x 200 mm. Half-round slide, shaped to the trough of the conveyor. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	
A-8	**4**	**ROUND DOSING BINS.** Total capacity ± 100 m^3. The bins are built up of prefabricated corrugated standard panels.	
A-9	**4**	**HIGH LEVEL SWITCHES.** Complete with their mounting brackets.	
A-10	**4**	**DISCHARGE SCREW CONVEYORS.** Type 200. Length ± 2 mtr. Equipped with variable pitch in the inlet. Drive with a 1,5 kW frequency controlled geared motor with chain transmission and drive guard. Outlets connected to the cover of the weigher.	
A-11	**1**	**BATCH WEIGHER.** Type 500-s. Weighing capacity 500 kgs. Bin made of prefabricated panels with supports for the electronic weighing system. Equipped with: - special stabilisers. - quadruple-hinged mounting for the load cells. - dummies for erection. - flexible, dust tight connection with the cover. Outlet connected to a discharge chain conveyor.	

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
A-12	**2**	**BUTTERFLY VALVES.** Type 300.	
A-13	**1**	**SCREW CONVEYOR.** Type 250. Length ± 7mtr. Equipped with: - overflow relief valve. - sensor detection for product overflow. - outlet with flexible connection to conveyor underneath. Drive with a 2.2 kW geared motor with chain transmission and drive guard.	
A-14	**1**	**SET OF MOUNTING MATERIALS.** Supports for the different machines, pipe sections, fittings and welding materials.	

B. **GRINDING AND MIXING SECTION:**
Capacity ± 5-7 tons/hour mash, (see design standards).

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
B-1	**1**	**ELEVATOR TO LIFT THE PRODUCT UP TO THE GRINDING BIN.** Type 150 x 150 S. Length ± 14 mtr. See attached specification. Complete with connecting spouting. Drive with a 2,2 kW geared motor with flexible coupling, backstop and drive guard.	
B-2	**1**	**GRINDING BIN OVER THE HAMMER MILL.** Capacity one complete batch. Made of 3-mm sheet steel with the necessary reinforcements. Equipped with: - man hole. - cover. - dust hose. - inspection glass.	
B-3	**1**	**LOW LEVEL SWITCH.** Complete with mounting bracket.	
B-4	**1**	**PNEUMATIC OPERATED OUTLET SLIDE.** Dimensions 300 x 300 mm. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	
B-5	**1**	**BUFFER BIN OVER THE HAMMER MILL.** Capacity ± 300 kgs. Made of 3-mm sheet steel with the necessary reinforcements. Equipped with: - cover. - dust hose. - inspection glass.	

ITEM	QTY	DESCRIPTION	PRICE
B-6	1	**FEEDER FOR THE HAMMER MILL.** Entirely enclosed vibrator system, to feed the hammer mill evenly and at full load. Connencted to the automatic capacity regulating system with overload protection and power-cut safety. Equipped with: - motor-driven capacity regulation slide. - easy cleanable, high density, permanent magnet. - pneumatic operated emergency valve. Drive with a 0,37 kW geared motor with V-belt transmission and drive guard.	
B-7	1	**LOW LEVEL SWITCH.** Complete with mounting bracket.	
B-8	1	**HIGH EFFICIENCY, HEAVY-DUTY HAMMER MILL.** Type 650-375. See attached specification. Equipped with: - fully welded grinding chamber. - easy and quick changing of the screen without stopping the motor. - large access door. - heavy, cast iron breaker plates. - over-dimensioned bearings with labyrinth dust protection. - heavy base plate for mounting the motor and the grinding chamber. - 4 vibration absorbers. Drive with motor of 55 kW/3000 rpm with 3-parted flexible coupling .	
B-9	1	**ASPIRATION BIN UNDER THE HAMMER MILL.** Made of 3-mm sheet steel with the necessary reinforcements.	
B-10	1	**ASPIRATION FILTER FOR THE HAMMER MILL.** Automatic reverse jet filter. Filter area 20 m². The filter is built-in in the bin above the mixer. Equipped with automatic timer.	

ITEM	QTY	DESCRIPTION	PRICE
B-11	**1**	**VENTILATOR.** Equipped with: - vibration absorbers. - flexible connections with the air ducts. Complete with connecting air ducts between the aspiration bin, filter and ventilator and air duct trough the roof with rain cap. Drive with 5,5 kW motor.	
B-12	**1**	**PNEUMATIC OPERATED AIR VALVE** in the aspiration system . Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - 2 sensors for the position of the valve.	
B-13	**1**	**SCREW CONVEYOR.** Type 200. Length ± 3,5 mtr. Equipped with: - overflow relief valve. - sensor detection for product overflow. - air flap. Drive with a 2,2 kW geared motor with chain transmission and drive guard.	
B-14	**1**	**ELEVATOR.** To lift the all mash product up to the bin over the mixer. Type 150 x 150 S. Length ± 14 mtr. Complete with connecting spouting. Drive with a 2,2 kW geared motor with flexible coupling, backstop and drive guard.	
B-15	**1**	**HOLDING BIN OVER THE MIXER.** Capacity one complete batch. Made of 3-mm sheet steel with the necessary reinforcements. Equipped with manhole - inspection glass. - Cover	
B-16	**1**	**LOW LEVEL SWITCH.** Complete with mounting bracket.	

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
B-17	**1**	**PNEUMATIC OPERATED SLIDE.** Above the mixer. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	
B-18	**1**	**OTTEVANGER "TURBO MIXER".** For outstanding mixing accuracy and short mixing time. Type RM 1000. Contents 1000 ltr. Equipped with: - special dust-seals for the shaft. - specially constructed, heavy shaft. - double mixing spiral and bars in high quality steel. Drive with a 5,5 kW shaft mounted gearbox.	
B-19	**2**	**PNEUMATIC OPERATED OUTLET SLIDE.** Dimensions 250 x 250 mm. Half-round slide, shaped to the trough of the mixer. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	
B-20	**1**	**BIN UNDER THE MIXER.** Made of 3-mm sheet steel with the necessary reinforcements. Equipped with: - man hole. - inspection glass. - cover.	
B-21	**1**	**LOW LEVEL SWITCH.** Complete with mounting bracket.	
B-22	**1**	**AIR COMPRESSOR.** The air compressor supplies all the necessary pressurised air for the operation of the installation and filter. It includes a holding tank and all the pipes and nylon tubes to the air cylinders, air filter, etc. Drive with a 4 kW motor.	*Local supply*

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
B-23	**1**	**PRE ASSEMBLING & STEEL SUPPORTING STRUCTURE.** Floors in the frames of chequered plate. Two stairs of 700-mm width, with intermediate platforms, the steps of galvanised grids, including support and railing.	*Local supply*
B-24	**1**	**SET OF MOUNTING MATERIALS.** Supports for the different machines, pipe sections, fittings and welding materials.	

C. **PELLETING SECTION:**
Capacity ± 3 tons/hour mash, (see design standards).

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
C-1	**1**	**ELEVATOR TO LIFT THE PRODUCT UP TO THE PRESS MEAL BIN.** Type 150 x 150 S. Length ± 14 mtr. See attached specification. Complete with connecting spouting. Drive with a 2,2 kW geared motor with flexible coupling, backstop and drive guard.	
C-2	**1**	**PRESS MEAL HOLDING BIN.** Made of 3-mm sheet steel with the necessary reinforcements. Equipped with: - man hole. - inspection glass. - cover.	
C-3	**1**	**HIGH LEVEL SWITCH.** Complete with mounting bracket.	
C-4	**1**	**FEEDER-CONDITIONER FOR THE PRESS.** Feeding screw conveyor. Diameter 200 mm. Length ± 2 mtr. Equipped with: - variable pitch in the inlet section. - overflow relief valve. - sensor detection for product overflow. - product detecting flap complete with sensor. Driven by a 2,2 kW frequency controlled geared motor to adjust the capacity of the pellet press. **MIXER CONDITIONER.** Made in stainless steel. Equipped with: - 2 injection openings for steam and molasses. - shaft fitted with easy exchangeable hardened steel knives. - 2 large cleaning doors for easy access to the inside of the mixer. - high density, permanent magnet between feeder screw and conditioner. Drive with a 7,5 kW / 1500 rpm motor with V-belts and drive guard.	

ITEM	QTY	DESCRIPTION	PRICE
C-5	**1**	**PELLET MILL.** Type 75-304. Equipped with: - hand operated quick dump feed chute. - 2 adjustable knives. - stainless steel door. - quick and easy die change with clamb. - roller lubrication from central point Complete with base plate and drive. Motor of 55 kW/1500 rpm with flexible coupling and drive guard.	
C-6	**1**	**DIE.** Size 4 x 40-mm. In wear resistant manganese steel. Internal diameter 304-mm. Internal width 78-mm.	
C-7	**1**	**ELEVATOR TO LIFT THE PRODUCT UP TO THE GRINDING BIN.** Type 150 x 150 S. Length ± 9 mtr. See attached specification. Complete with connecting spouting. Drive with a 2,2 kW geared motor with flexible coupling, backstop and drive guard.	
C-8	**1**	**COUNTER FLOW PELLET COOLER.** Type 14 x 14. See attached specification. Equipped with: - stainless steel air lock, 0,55 kW. - fire detector. - extraction control system. - hood and walls in stainless steel. Drive for the extraction slide with 1,1 kW geared motor.	

ITEM	QTY	DESCRIPTION	PRICE
C-9	1	**CRUMBLER.** Type : Cr 1-540 Dimension : 250 mm roll diameter 540 mm width Features/ Accessories : • single pair (2) rollers • hand wheels for roller distance adjustment • valve box with position indication (by-pass) and roll feeder are an option . Drive : • 1 x 1,5 kW motor • 1 x 2,2 kW motor	*Option*
	1	**FEEDER** Feeder unit with roll type feeder and 0,55 kW drive Incl. bypass valve.	
C-10	1	**CYLONE FOR THE COOLER.** Diameter 900 mm.	
C-11	1	**AIRLOCK UNDER THE CYCLONE.** Type ATC 230 Drive with a 0,37 kW shaft mounted geared motor.	
C-12	1	**HAND OPERATED VALVE BOX UNDER THE CYCLONE.** To direct the dust back to the press, or to the bagging-off mouth when changing formula. Diameter 150 mm. In leak proof execution. Equipped with: - 2 sensors for the position of the valve. - steel cables for operating the valve from ground level.	
C-13	1	**VENTILATOR FOR THE COOLER.** Equipped with: - vibration absorbers. - flexible connections with the air ducts. - adjustable capacity regulation valve in the duct. Complete with connecting air ducts between the cooler, cyclone and ventilator and air duct trough the roof with rain cap. Direct drive with 4 kW motor.	

ITEM	*QTY*	*DESCRIPTION*	*PRICE*
C-14	**1**	**SCREW CONVEYOR UNDER THE COOLER.** Type 250. Length ± 3 mtr. See attached specification. Equipped with: - overflow relief valve. - sensor detection for product overflow. Drive with a 1,5 kW geared motor with chain transmission and drive guard.	
C-15	**1**	**ELEVATOR FOR PELLETS.** Type 150 x 150 S. In low-speed execution. Length ± 16 mtr. See attached specification. Complete with connecting spouting. Drive with a 2,2 kW geared motor with flexible coupling, backstop and drive guard.	
C-16	**1**	**PELLET SCREEN.** Type 800-2 In double deck execution. Equipped with supporting structure. Shaft mounted drive with 0,55 kW geared motor.	
C-17	**1**	**MANUAL OPERATED VALVE BOX.** To direct the dust back to the press, or to the bagging-off mouth when changing formula. Diameter 150 mm. In leak proof execution. Equipped with: - 2 sensors for the position of the valve. - steel cables for operating the valve from ground level.	
C-18	**1**	**PIPING SYSTEM FOR BAGGING-OFF DUST.** Pipes to convey the dust from the cyclone and from the screen to ground level. Bagging-off mouth with slide and bag holder.	

D. **FINISHED PRODUCT SECTION:**

ITEM	*QTY*	*DESCRIPTION*	*P R I C E*
D-1	**1**	**SCREW CONVEYOR.** Type 200. Length ± 10,5 mtr. Equipped with: - overflow relief valve. - sensor detection for product overflow. - air flap. Drive with a 2,2 kW geared motor with chain transmission and drive guard.	
D-2	**4**	**PNEUMATIC OPERATED SLIDES.** The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - sensor for the position of the valve.	
D-3	**4**	**ROUND FINISHED PRODUCT BINS.** Total capacity of ± 100 m3. The bins are built up of pre-fabricated corrugated panels.	
D-4	**1**	**STEEL STRUCTURE FOR BULK OUTLOADING BY TRUCKS.**	*Local supply*
D-5	**4**	**HIGH LEVEL SWITCHES.** Complete with their mounting brackets.	
D-6	**4**	**OUTLET SLIDES.** Dimensions 300 x 300 mm. The slide is running on ball bearings. In fully enclosed execution for extra hygiene and safety.	
D-7	**1**	**SET OF MOUNTING MATERIALS.** Supports for the different machines, pipe sections, fittings and welding materials.	

E. **CONTROL PANELS AND AUTOMATION:**

Voltage 3 x 400 Volts, 50 cycles.
Control voltage 24 V DC.

E-1 **1** **ELECTRIC CONTROL.**

Central control panel.
Voltage 3 x 400 volts, 50 cycles, built according to the IEC standards.
The whole plant is controlled and supervised from this panel which is provided with a flow diagram of the plant.
Further the main control panel is provided with push buttons for operating the motors and with ammeters for the hammer mill and the pellet press.
A volt meter for the incoming current, warning lamps for thermal overload of motors and high level of product are also incorporated in the panel front.
The pellet press has an electric-operated capacity regulation with overload safety.
As far as necessary the motors are interlocked.
All motors are provided with safety switches.
Circuit breakers < = 22 kW are of the resetable type.

1 **CABLING.** *Local supply*

All cables between the main control panel and the motors and indicators are **excluded** , including the necessary mounting materials as pipes, cable troughs, etc.
Please note: the feeding cable to the main control panel is **not** part of our delivery.

F. **OIL DOSING SYSTEM.** OPTION

Oil dosing system on the main mixer.
For oils **not** solidifying at ambient temperatures.
Dosing capacity ± 24 ltr/min.
The wanted amount of oil is to be pre-set on the counter on the control panel. Addition is further automatic and timely.

ITEM	*QTY*	*DESCRIPTION*	*P R I C E*
F-1	**1**	**DOSING/PROPORTIONING PUMP.** Capacity ± 24 ltr/ minute. Pump and motor built to one unit. Drive with 1,5 kW motor. All built together on a frame with leakage reservoir.	
F-2	**1**	**ELECTRONIC OIL COUNTER.** Made of stainless steel. Shuts-off the pump and closes the shut-off valve when the amount of oil, as pre-set, is metered into the mixer.	
F-3	**1**	**PNEUMATIC OPERATED SHUT-OFF VALVE.** To prevent flow after the pump has stopped. Equipped with: - heavy–duty pneumatic cylinder complete with solenoid valve. - 2 sensors for the position of the valve.	
F-4	**1**	**TUBING WITH FITTINGS.** Between pump and mixer with a total length of 10 mtr. and 3 hand operated ball valves for easy maintenance.	
F-5	**1**	**MULTIPLE INJECTION POINTS IN STAINLESS STEEL ON THE MIXER.**	

ITEM	*QTY*	*DESCRIPTION*	*P R I C E*
F-6	**1**	**EXTRA ELECTRIC MATERIALS FOR CONTROLLING THIS INSTALLATION AS:** - switches, cables and mounting materials. - incorporation in the mimic diagram. - litre counter with pre-set on the control panel. - oil "Yes/No" switch. For easy installation the main components are already fitted together and are installed in the unit in our workshop. **PLEASE NOTE.** The storage tank(s), inlet filter(s) and the piping between the storage tank and dosing pump are to be supplied locally. The storage tank should be placed at a height of minimal +1 mtr, depending on the distance to the dosing pump.	

G. **HIGH ACCURACY MICRO DOSING SYSTEM TYPE MD 1-9 S.** **OPTION**
For free flowing powdery products as premixes, additives, drugs, etc.

ITEM	*QTY*	*DESCRIPTION*	*P R I C E*
	9	**HOLDING AND DOSING BINS.** Contents approx. 300 ltr. Fabricated of 3 mm mild steel .	
	9	**DOSING SCREWS.** For accurate discharge from the bins and dosing into the weigher .Diameter 100 mm . Geared motor 0,55 kW	
	1	**PRECISION WEIGHER.** Fully enclosed hopper scale with a weighing capacity of max. 100 kg.	
	2	**PNEUMATIC OPERATED BUTTERFLY VALVES.** Situated under the hopper scale and at the inlet of the flite conveyor .	
	1	**SUPPORTING FRAME.** Frame dimensions 2,10 x 4,00 mtr. Height 2,3 mtr. Complete with stairs ,railings etc.	
	1	**FLITE CONVEYOR.** For rest - free conveying of micro ingredients to the mainstream of ground macro ingredients . Type 200. Length 4,00 mtr . Drive with 1,1 kW shaft mounted geared motor .	

PROPOSED SPARE / WEAR PARTS.
For one year production (± 10.000 tons).
(not part of the offer!)

Hammer mill	:15	sets of screens,
	15	sets of beaters,
	5	set of beater pins,
	1	set of breaking plates,
	1	set of screen guides,
	1	set of screen frames,
	1	set of rubbers for the coupling,
	1	bearing with casing.
Filter	: 1	filter timer,
	1	set of filter bags.
Conveyors	:20	screw blades,
	20	mtr chain,
	30	mtr elevator band,
	10	elevator buckets,
	2	bearings.
Press	: 1	die,
	1	set of complete rollers,
	2	sets of press roller shells,
	1	set of oil seals and bearings for the rollers,
	10	shear pins.
Electric plant	:	switches, lamps, fuses, etc.,
	1	geared motor.
Pneumatic control	: 3	air cylinders,
	5	solenoid valves,
	1	filter for the compressor.
Sewing machine	:25	needles,
	1	box rolls (± 24 kg) of thread.

ERECTION / INSTALLATION

For the erection of the mechanical and electrical plant we send at your disposal;

--1 leading engineer for a period of ± 8 weeks, supervising the erection, commissioning and giving training on the job.

--1 electrotechnical engineer for a period of ± 2 weeks.

Price for supervision EUR 3.500, =/man/week.

One week is to be considered 55 hours, travelling included.
Should our engineer(s) stay longer due to circumstances beyond Ottevanger's control, we will have to charge the buyer correspondingly.
Overtime is charged extra and accordingly. It is assumed that our supervisor is working the normal daytime hours. When this is not possible, or it is required that the supervisor should work in the night-hours, or in the weekend we will have to charge an extra 25% over this period.
The date of arrival of the supervisor is to be mutually agreed upon at least 2 weeks in advance.

Airway tickets from Amsterdam to your mainport v.v. are not included in the price.

FOR THE RESPONSIBILITY OF THE CLIENT ARE:

Erection team.

-- Erectors/fitters (about 10 competent fitters/erectors and 10 assistants) for a period of 8 weeks.
-- Electricians (about 1 competent person and 2 assistants) for a period of 2 weeks.

It is necessary that one of them, being the leading one, speaks German or English.
With this team, we estimate an erection time of 8 weeks, including commissioning of the plant.

Equipment.

-- A 15 tons crane for building up, for the entire construction period.
-- 2 Welding machines, min. 150 A with all accessories and extra long cables (20 mtr).
-- Mounting platforms for silo mounting (Ottevanger will supply the design).
-- Impact wrench for silo mounting.
-- Hoists (1 ton) with singles.
-- Ladders.
-- Angle grinders with disks.
-- Thread cutter.
-- Private tool boxes for every erector and electrician.
-- All other items necessary for a successful erection.

Electric power for mounting.

3 x 400 volts, 50 cycles, 150 amps, complete with contact plugs and cables for distribution.

Building–shed.

Complete with lighting, heating/cooling and sanitary, as well as for storing small materials.

Accommodation.
Suitable hotel accommodation, food, drinks and local transport as well as communication facilities (telephone/fax).

STANDARDS
(brand names as stated or equal)

Main voltage	: 400 Volt, 50 cycles.
Control voltage	: 24 V DC.
Make of electrical components	: ABB, Klöckner-Müller
Make of electric motors protection class IP 54. tropicalised.	: ROTOR/DUTCHI.
Make of geared motors protection class IP 54. tropicalised.	: SEW / Flender.
Make of proximity switches	: IFM
Make of air cylinders	: Doedeins VDMA
Make of solenoid valves	: Doedeins VDMA
Make of dust filters	: DCE.
Make of load cells	: Philips.
Make of PLCs	: Siemens.
Make of main bearings	: SKF.
Paint: (for machines and container unit)	: primer, thickness 40 μ. finish, thickness 40 μ.
(for structures, etc.)	: primer, thickness 40 μ.

DESIGN STANDARDS;
The strength of the storage bins is calculated for a s.w. of max. 0,8 tons/m³. Bin decks are calculated for a load of 250 kg/m².

The capacity is based on continuous production of the same formula with raw materials with a s.w. of min. 0,55 ton/m³, a moisture content of max. 14% and a hammer mill screen of 4-mm.

Pellet press capacity is based on the assumption of chicken feed rations, with min. 60 % cereals and the use of dry steam on a die with 4,5 mm holes.

Power consumption of transport equipment is calculated with a s.w. of 0,75 ton/m³. Raw materials must have reasonable flowing properties, for difficult flowing products alternative solutions are available.