



**BELLIN**  
THE POWER OF EXPERIENCE

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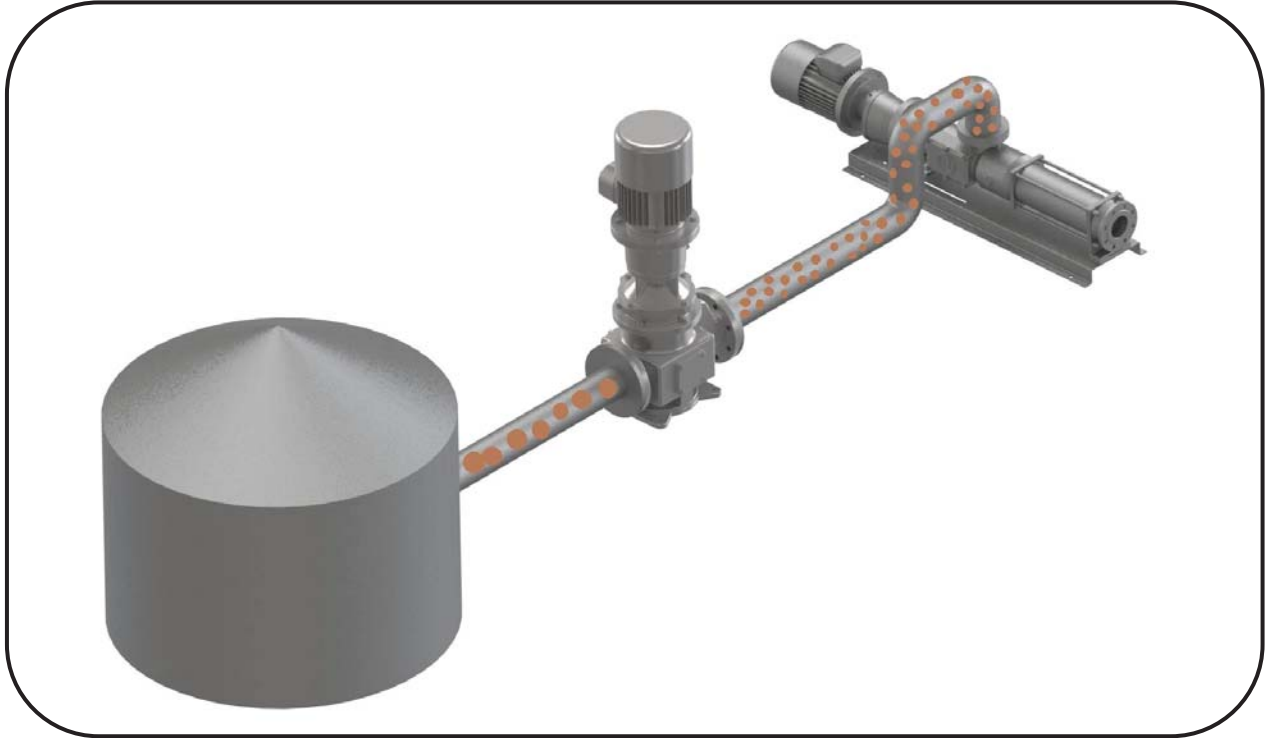
Organizzazione con sistema di gestione certificato  
ISO 9001:2008

# **MACERATOR BM PIPELINE**

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The **Bellin BM Pipeline** range provides a reliable, straightforward system for disintegration, maceration or conditioning of solids in flow.



Typical **Macerator BM Pipeline** installation showing conditioning of sludge.

The **Bellin BM Pipeline** is designed to fit into the suction line of raw sewage or sludge pump, homogenizing the medium to improve downstream process, whilst protecting high performance pumps from tramp and rag debris in the medium.

It is a disintegrating device for raw sewage and sludges up to 6% solid matter in a pipeline under operating conditions ranging from – 1 bar to + 4 bar.

The range consists of a conditioning cutterhead co-axially mounted specifically designed to handle raw sewage and sludge. An external method of pumping is required. The cutters consist of a steel headstock with tungsten carbide wear blades rotating against a stationary alloy steel shearplate with a hardness of 50-55 HRC. The size of the holes in the shearplate may be specified to suit the application. The cutters can be replaced without disturbing the mechanical seal. The seal will rotate in an oil bath to ensure adequate cooling and lubrication which have a sealing rings of differing grades of tungsten carbide.

## Benefits

### Of the equipment:

- lower running costs
- optimal cutting performance
- less power requirement
- higher performance
- fewer spare parts
- easier to maintain
- reduced downtime for routine servicing

### For the process

- protection of the pump reliability
- creation of a pre-conditioned medium
- replacement for in-flow grinders

## Bellin BM Pipeline 150/200/300/400 Specification

**OPERATING CONDITIONS:** For raw sewage and sludges up to 6% solid matter in a pipeline under operating conditions ranging from – 1 bar to + 4 bar;

**CASING:** Cast iron;

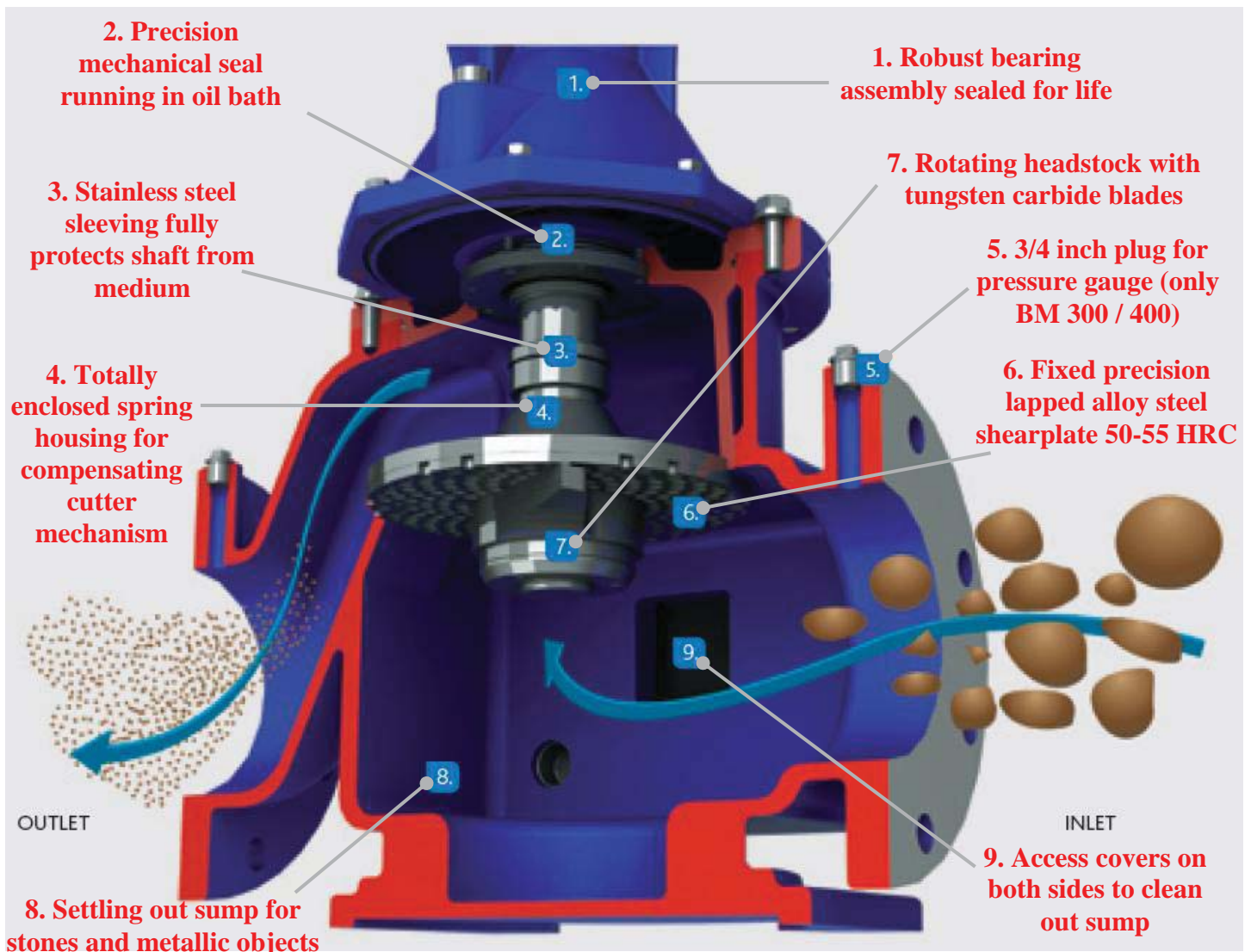
**MOTOR INTERFACE:** Standard IEC motor flange dimensions.

**BEARINGS:** Heavy duty, sealed for life.

**SEALS:** Mechanical seal, tungsten carbide faces lubricated within oil bath.

**CUTTERHEAD ASSEMBLY:** Consists of a self compensating headstock tipped with tungsten carbide inserts rotating against a stationary hardened tool steel shearplate with holes within it.

**SHEARPLATE:** All macerator are fitted with standard cut shearplates, smaller hole sizes are available on application, noting that capacities will reduce with hole size.

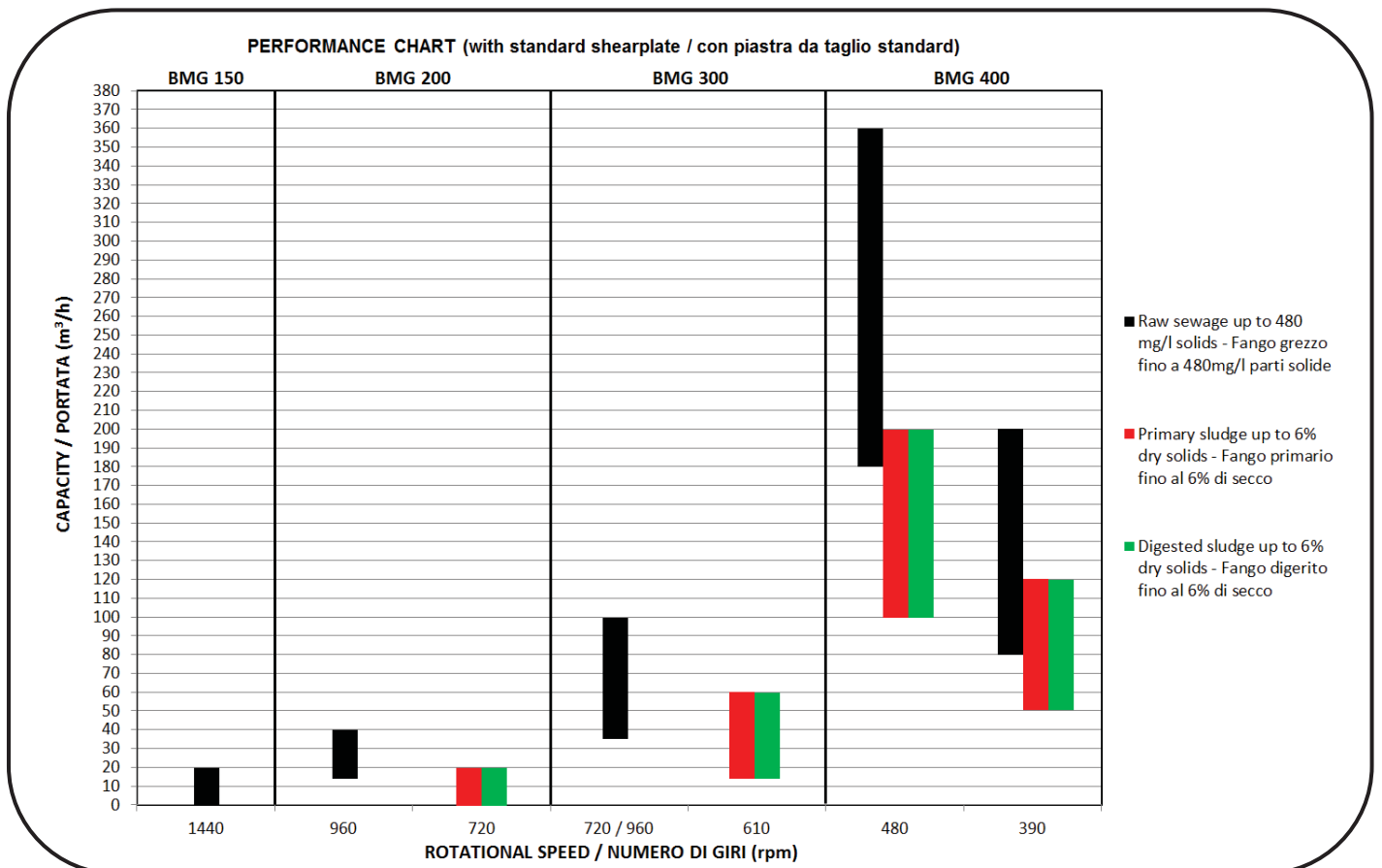


## Selection table

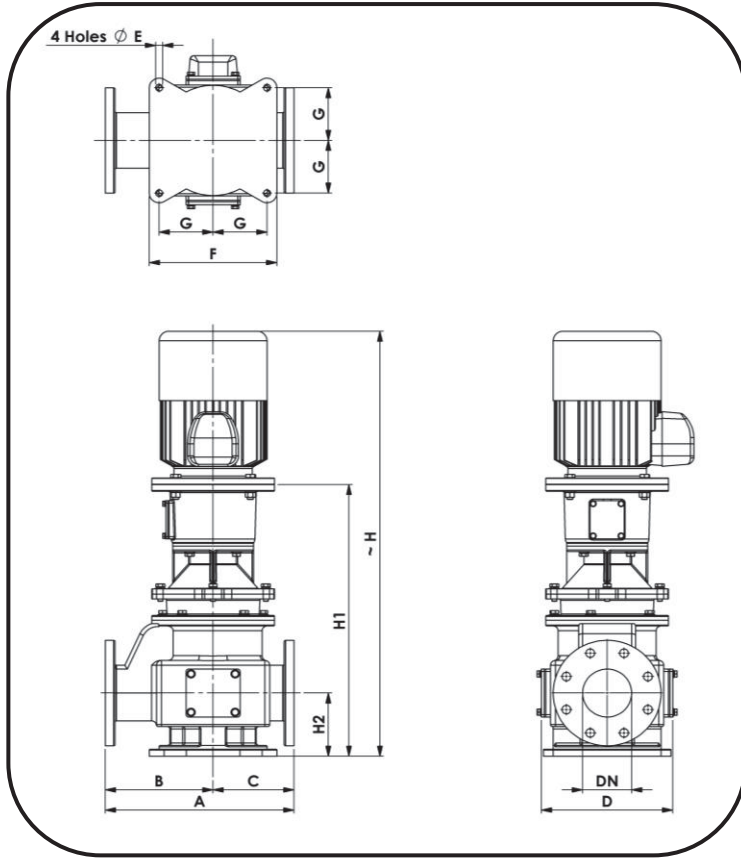
			BM 150	BM 200	BM 300	BM 400/1	BM 400/2
<b>A</b>	Raw sludge up to 480 mg/l solids	IEC	90 (B5)	112 (B5)	132 (B5)	132 (B5)	132 (B5)
		P (kW)	1,5	2,2	2,2 / 3	5,5	7,5
		rpm	1440	960	720 / 960	390	480
		Capacity max (m <sup>3</sup> /h)	20	40	100	200	360
<b>B</b>	Primary sludge up to 6% dry solids	IEC	90 (B5)	112 (B5)	132 (B5)	132 (B5)	132 (B5)
		P (kW)	1,5	1,5	3	5,5	7,5
		rpm	1440	720	610	390	480
		Capacity max (m <sup>3</sup> /h)	10	20	60	120	200
<b>C</b>	Digested sludge up to 6% dry solids	IEC		112 (B5)	132 (B5)	132 (B5)	132 (B5)
		P (kW)		1,5	3	5,5	7,5
		rpm		720	610	390	480
		Capacity max (m <sup>3</sup> /h)		20	60	120	200

For others medium handled consult our sales department.

## Performance chart



## Dimensions



	DIMENSIONS (mm)				
	BMG 150	BMG 200	BMG 300	BMG 400/1	BMG 400/2
A	385	385	500	640	640
B	220	220	290	330	330
C	165	165	210	310	310
D	268	268	360	660	660
E	11	14	14	18	18
F	260	260	320	540	540
G	110	110	135	250	250
H1	555	567	755	799	799
H2	132	132	160	200	200
H (A)	840	907	1185 / 1145	1419	1459
H (B)	840	907	1296	1419	1459
H (C)	/	907	1296	1419	1459
DN Inlet (EN 1092-1 / PN 16)	100	100	150	200	200
DN Outlet (EN 1092-1 / PN 16)	100	100	150	200	200
Weight BARESHAFT (kg)	70	70	140	320	320

## Constructions shearplate

Under the table with the standard shearplate hole size mounting of the macerator Bellin.

Model Macerator	Standard shearplate hole size
BM 150	13/14 mm multi-holed
BM 200	10/12/13 mm multi-holed
BM 300	10 mm
BM 400	11/15/18 mm multi-holed

Available more dimensions of shearplate hole.

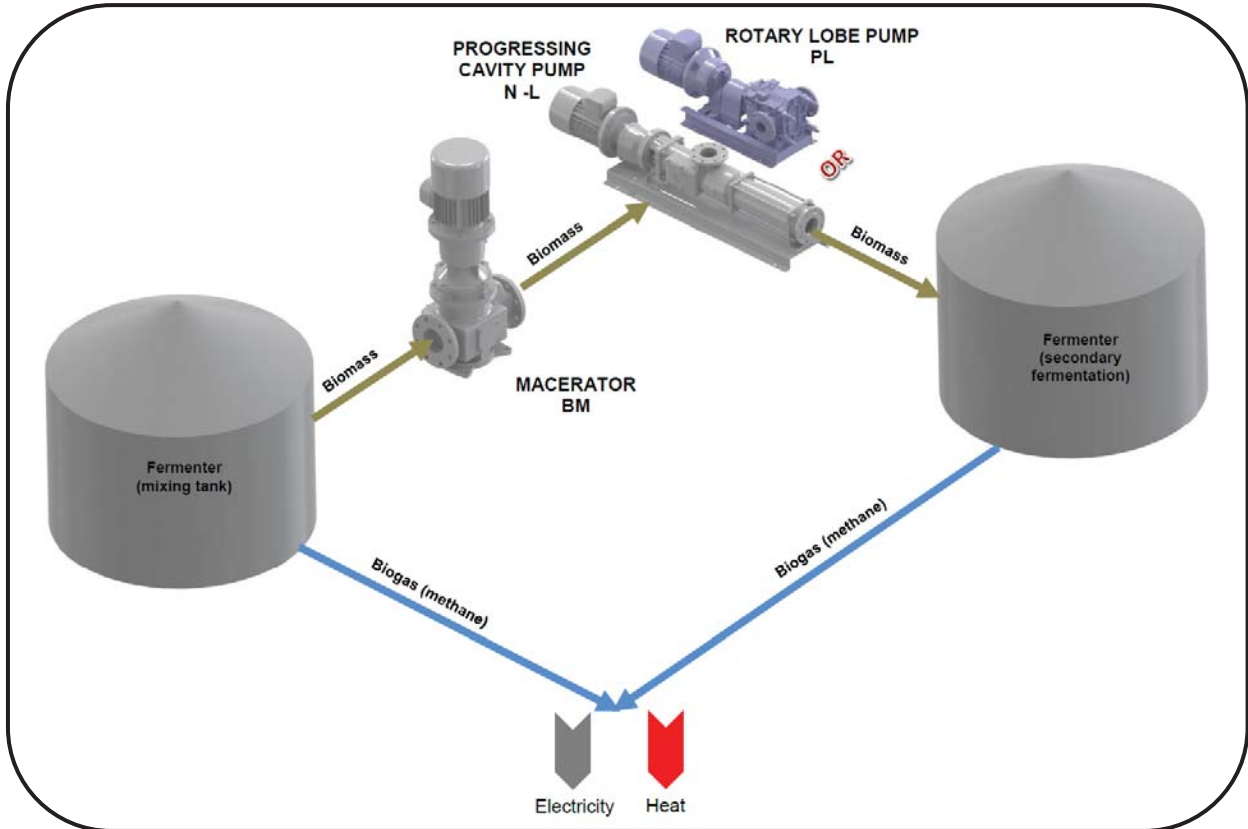
Below the table with the size of the solid particles out of the macerator, and with the maximum size of the particles recommended inlet.

Holes size for shearplate (mm)	Outlet particle size (mm)	Max inlet particle size (mm)
4	1-2	10 (*)
6	3-4	15
10	6-8	20
15	11-13	>20
20	16-18	>20

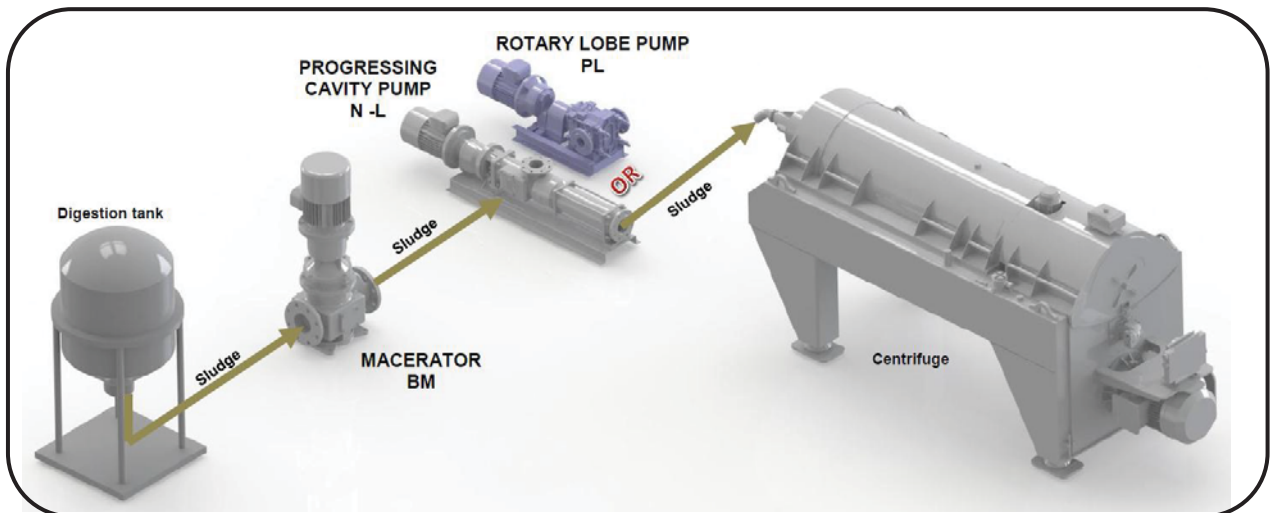
(\*): Recommended.

## Applications

1. Pump protection from fibres and long particules.
2. Biogas plant.



3. Waste water plant, for inlet conditioning, screening conditioning, sludge transfer pumping, sludge conditioning, digester recirculation,...



4. Industrial plant, Municipal or Industrial Incineration.
5. Protection for pumping stations on raw sewage.
6. Maceration and mixing in industries (paper - breweries food - agriculture - oil...).