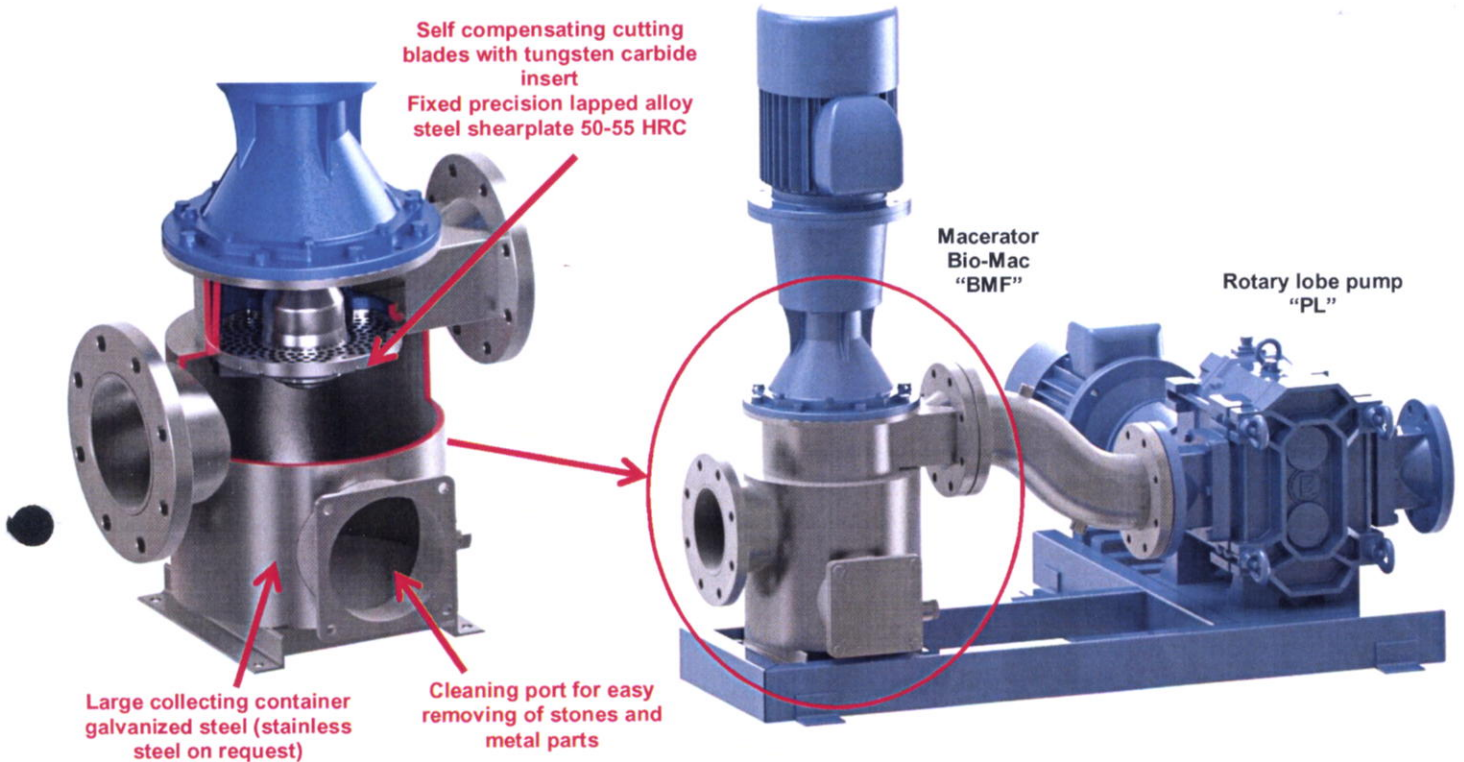




MACERATORS "BIO MAC" FOR BIOGAS



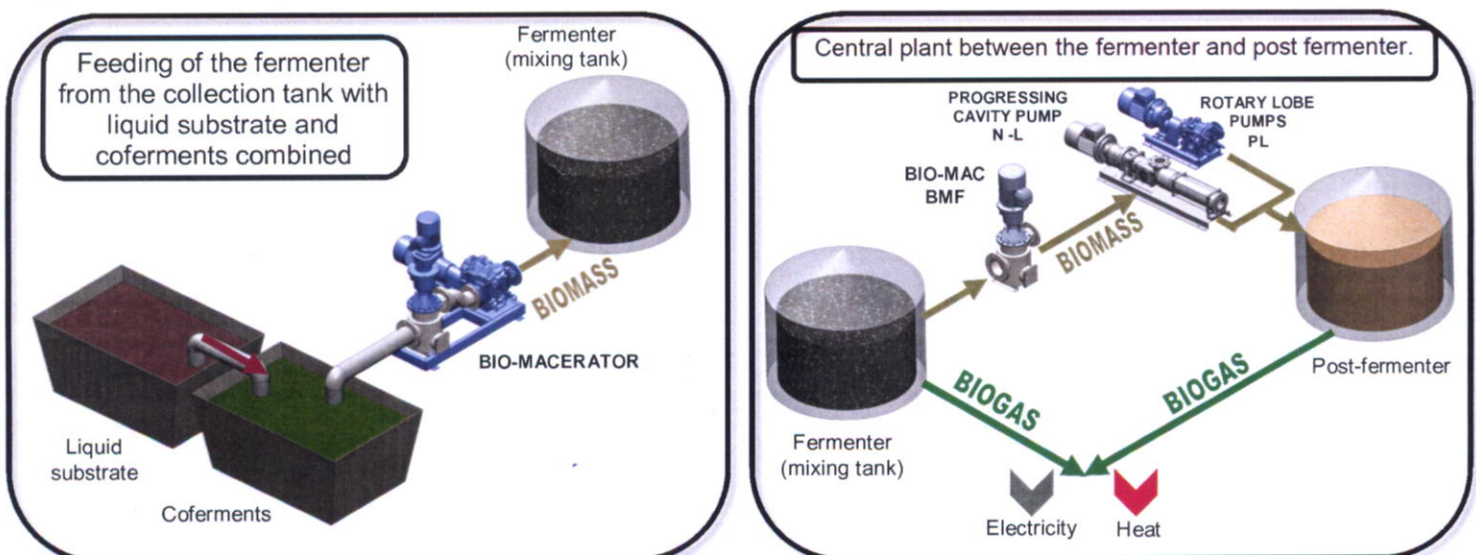
Configuration Bio-macerator (Bio-Mac BMF coupled to rotary lobe pump PL or pcp N - L) for feeding fermenter.

Bio-Macerator: Thorough disintegration and uniform blending of the liquid phase and cosubstrate into a homogeneous biomass substantially increases the efficiency of biogas production. Bellin has developed a compact unit specifically for this purpose. By combining a positive displacement pump (which may be rotary lobe pump or progressing cavity pump) and a powerful macerator into a single unit, Bio-Macerator can prepare superior quality biosuspensions. It can simultaneously feed one or more fermenters and handle additional pumping tasks in the biogas plant when needed. With cutting blades self-compensating, self-lubricated mechanical seal in oil bath, a large collecting container galvanized steel (stainless steel on request), settling out sump for stones and metallic objects, with special opening for easy inspection and cleaning.

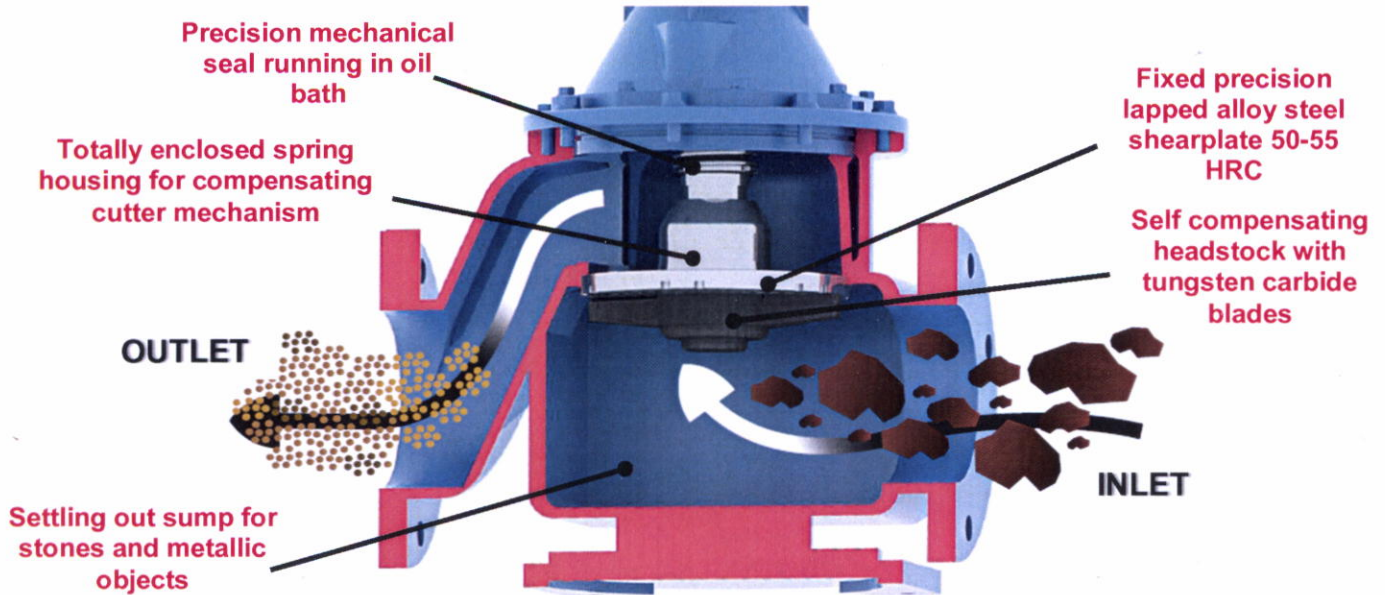
Selection table

| Model | Rated capacity (m ³ /h) | Installed electric motor power (kW) |
|----------------|------------------------------------|-------------------------------------|
| Bio-Mac BMF300 | 20-25 | 3 |
| Bio-Mac BMF300 | 30-40 | 4 |
| Bio-Mac BMF300 | 30-40/45 | 5,5 |
| Bio-Mac BMF400 | 45-60 | 5,5 |
| Bio-Mac BMF400 | 65-100 | 7,5 |

Applications



MACERATORS "BMG" PIPELINE



The **Bellin BMG 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. 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.

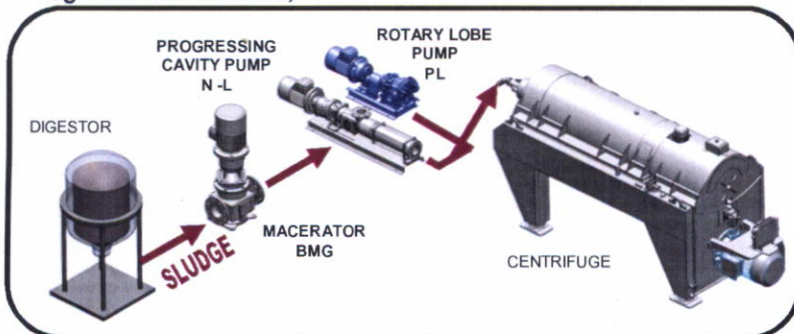
Selection table

| | | BM 150 | BM 200 | BM 300 | BM 400 | BM 400 |
|-------------------------------------|----------------------------------|---------|----------|-----------|----------|----------|
| 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 ³ /h) | 20 | 40 | 100 | 200 | 360 |
| 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 ³ /h) | 10 | 20 | 60 | 120 | 200 |
| 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 ³ /h) | | 20 | 60 | 120 | 200 |

For others medium handled consult our sales department.

Applications

1. Pump protection from fibres and long particules.
2. Waste water plant, for inlet conditioning, screening conditioning, sludge transfer pumping, sludge conditioning, digester recirculation,...



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