BSK®-Clear Water Decanters for SBR-WWTPs

Questionnaire as Basis for a Quotation

For the discharge of treated wastewater out of Sequenced Batch Reactors our BSK®-decanters have been proven as outstanding equipment for long-term reliable operation and excellent standing. Worldwide, more than hundred systems are operating for the full satisfaction of our customers. A detailed description of the BSK®-decanters is provided with our info bulletin no. 065, where function and construction are accurately described. Moreover, at our homepage (www.biogest-international.de) plenty of additional information is available.

In order to simplify the fill-in of the following questionnaire, it is recommended to take a look in the info-bulletin no. 065, which contains plenty of details regarding the construction, function and material of BSK®-decanters. Based on this product-information it is easier to fill-in the questionnaire.

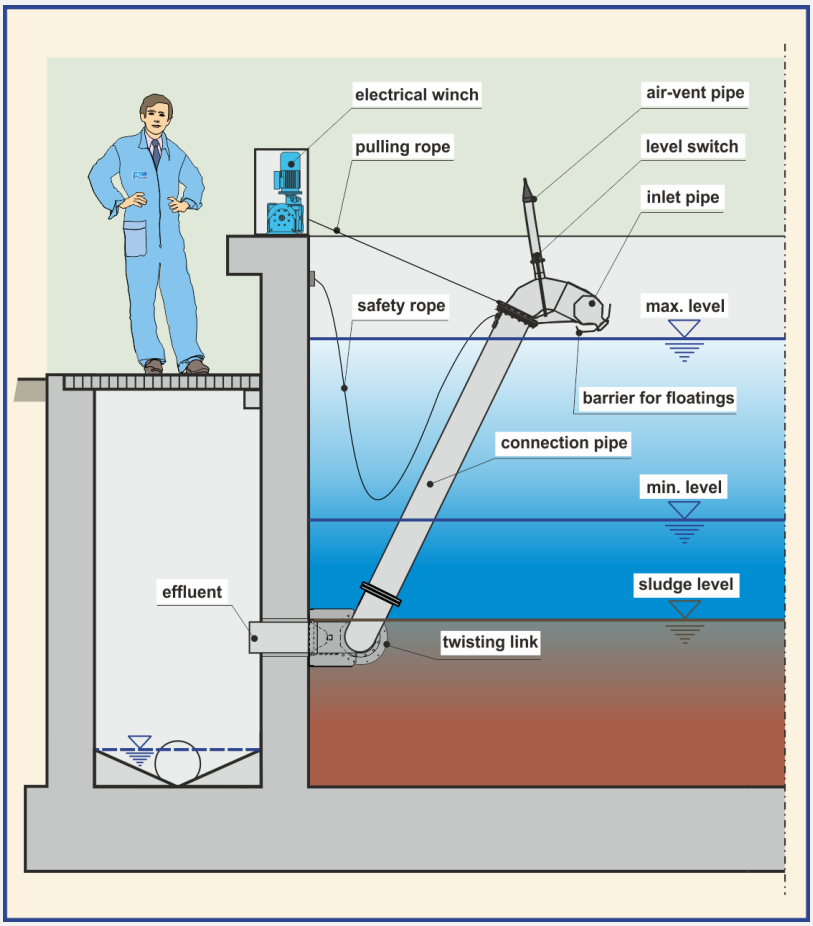
We are looking forward to the submittal of the project-information and will be eager to provide you with an interesting and competitive offer.

1. Basic Information

1.1	**Project code | Project no.:**		
1.2	**Your name :**		
1.3	**Detailed personnel information:**	☐ outlook office business card is attached ☐ see following information	
1.4	**Your company (name):**		
1.5	**Company address:**	postal code town street	
1.6	**Country | Town:**		
1.7	**Your office phone number:**		
1.8	**Your mobile phone number:**		
1.9	**E-Mail-address:**		
1.10	**Skype-address:**		
1.11	**Other communication choices:**		

2. Detailed Project Information

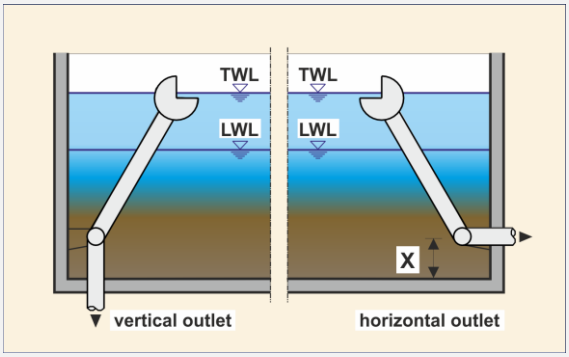
2.1	**Project location:**	country: town:
2.2	**Expansion or new construction?**	☐ expansion ☐ new construction
2.3	**Quantity of SB-Reactors:**	each
2.4	**Quantity of decanters per reactor:**	each
2.5	**Kind of reactor:**	☐ circular ☐ square ☐ rectangular
2.6	**Imbedding of reactor below ground:**	m



General layout of a BSK®-decanter

2.7	**Geometrical figures of the SB-Reactor(s):**	☐ diameter (circular tanks): m ☐ length x width at rectangular/ square tank(s): x m clear height of reactor: m
2.8	**Material of SB-Reactor:**	☐ concrete material ☐ steel material ☐ glass coated steel ☐ others:
2.9	**Drawing of SB-Reactor / project:**	☐ attached ☐ not available ☐ freehand-sketch attached
2.10	**Covering of reactor:**	☐ without cover ☐ with cover
2.11	**In case of cover: Kind of covering:**	☐ plastic dome ☐ concrete floor ☐ others:
2.12	**Hydraulic performance data (hydraulic capacity of each decanter):**	☐ discharge quantity/reactor: m³ ☐ decanting time: ☐ requested number of decanters/reactor: ea. ☐ resulting hydraulic capacity of each decanter: m³/h
2.13	**Special requirements with respect to the discharge hydraulic:** **(recommendation: decreasing of discharge quantity)**	☐ discharge quantity must be relatively constant ☐ discharge quantity should decrease with increasing proximity to the sludge level (to avoid whirling up close to the sludge level) ☐ max. allowed discharge quantity per reactor (by possible limits at the discharge side): m³/h

2.14	**Maximum water level (“TWL”):** **Minimum water level (“LWL”):** **Distance of the effluent pipe above bottom of tank (“X”):** (Please see following illustration)	m m ☐ not less than m ☐ not more than m ☐ exactly m ☐ no preference



2.15	**Direction of discharge pipe:**	☐ horizontally through the reactor wall ☐ vertically downwards through the reactor bottom
2.16	**Decanter-pipe end designed as:**	☐ DIN-flange ☐ free pipe end with pipe coupling
2.17	**Kind of outflow condition behind the decanter:**	☐ free discharge without counterpressure ☐ discharge into a storage basin with max. back pressure above bottom of the reactor m
2.18	**Requested material for all parts of the decanter** (parts below water (wetted parts)**:**	☐ stainless steel, 1.4301 (V2A) – AISI 304 ☐ stainless steel, 1.4571 (V4A) – AISI 316 ☐ special material request: see 2.19
2.19	**Individually requested special material:**	

2.20	**Is the WWTP located within an ex-zone?**	☐ yes ☐ according to ATEX zone ☐ no
2.21	**Available electrical supply:**	☐ 400 V / 50 Hz / 3 phases – or ☐ special conditions: Volt / Hz
2.22	**Shadow temperatures** (summer/winter) **and humidity:**	☐ maximum summer temperature: + °C ☐ minimum winter temperature: - °C ☐ low air humidity ☐ high air humidity
2.23	**Specific requests for operation control** (immersion- and operation control):	☐ standard control with limit switches (winch) ☐ immersion control with conductive sensor ☐ immersion control with pressure sensor ☐ sludge density control (turbidity sensor) ☐ local switch box
2.24	**Other requested equipment – individual requirements of our customer:** (if necessary, detailed requirements could be attached to this questionnaire)	

Example of a local switchbox for one BSK®-decanter. The cabinet could be produced by use of glass fiber reinforced plastic (GRP) or stainless steel. Moreover, the front side could be covered by a moveable door with glass-window (for protection of dust).

Example of a local stand-alone control system (plug and play), operating two (2) BSK®-decanters completely independent to the customer's PLC. This cabinet is equipped with a moveable cover with glass window. glass-window (for protection of dust).

2.25	**Electrical control of the decanting process:**	☐ a local control of the winch-operation is provided by our customer (based on information by Biogest International) ☐ a local switchbox for test-run shall be delivered by Biogest International (wire connection to the central PLC) ☐ a complete control panel including all necessary equipment for operating the decanter shall be delivered by Biogest International ☐ additional requirements or specific requests:

2.26	**Additional equipment of the electrical winch:**	☐ Biogest-standard is sufficient (not covered) ☐ complete moveable cover (aluminium) ☐ tropicalisation of gear drive ☐ including heating and isolation of the cover

BSK®-decanting winch including drum, electrical drive and limit switchbox

Emergency limit switch to prevent uncontrolled lifting of the decanter

3. Additional Information and Specific Requests for our Quotation

3.1	**Project background:**	☐ only feasibility study ☐ current project (shortly tendered) ☐ already published public tender ☐ already published private tender ☐ project realization time frame (MM/YYYY): /
3.2	**Individual background:**	☐ decanter for own needs (I am plant operator) ☐ planning office (wants to include BSK®-decanters) ☐ reseller (we are buying and selling for a concrete project) ☐ others:
3.3	**Requested delivery time (in case of order):**	months after placement of the order
3.4	**Requested delivery term:** **(Incoterms 2010)**	☐ ex works (EXW) ☐ free carrier ☐ delivered at place (DAP) ☐ free harbour (CIF) ☐ name of harbour ☐ transport will be organized by client ☐ requested kind of transport (container / truck / etc.):
3.5	**Requested service performed by Biogest International:**	☐ only delivery (as defined under 3.4) ☐ only supervision of assembly (assembly by customer) ☐ including complete assembly ☐ installation control before start-up ☐ start-up and training of local personnel

3.6	**Technical documentation:**	☐ German ☐ English ☐ French ☐
3.7	**Language of offer:**	☐ German ☐ English ☐ French ☐
3.8	**Required submittal date of quotation:**	☐ occasionally, not top-urgent, but latest at ☐ asap, latest ☐ Immediately!! We need the quotation until
3.9	**Additional documents to be added as attachment of the quotation:** (please attach these documents to the offer)	☐ reference list ☐ history cases ☐
3.10	**Attached documents / information to complete this questionnaire:**	☐ task description ☐ detailed technical specification ☐ extract of tender documents ☐ project drawing(s) ☐
3.11	**Kind of delivery of the reque sted quotation:**	☐ by e-mail ☐ by conventional mail ☐
3.12	**Responsible person for this questionnaire and address for quotation:**	name: direct dial: e-mail:

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(Place) (Date)

