



TECHNICAL DATA SHEET

|  |  | <p align="center"><b>DATA SHEET FOR COMPACT<br/>PRETREATMENT UNITS</b></p> |                                       |
|---|--|--|---------------------------------------|
| <b>ESTRUMAT SL</b>  |  |  |                                       |
| Granollers / Spain  |  |  |                                       |
| <b>CLIENT</b>   | KISH FRE ZONE ORGANIZATION, KISH WATER COMPANY                           | <b>ISSUED FOR</b>  | <b>APPROVAL</b>                       |
| <b>CONTRACTOR</b>   | JYANE CONSTRUCTION COMPANY   | Doc NO   | EAR 02.07.C.1                         |
| <b>LOCATION</b>   | KISH ISLAND  | ITEM NO.   | 7                                     |
| <b>CONTRACT</b>   | KISH ISLAND WASTE WATER TREATMENT PLANT                                  | <b>CONTRACT NO.</b>  | <b>PO 538</b>                         |
|   |  | <b>DATE</b>  | <b>10.06.11</b>                       |
| No.:  | TECHNICAL CHARACTERISITCS  | UNIT   | DATA / VALUE                          |
| <b>1</b>  | <b>GENERAL DATA:</b>   |  |                                       |
|   | Name of equipment:   |  | COMPACT PRETREATMENT UNIT             |
|   | PMS - number:  |  |                                       |
|   | Quantity:  | pcs.   | 2                                     |
|   | Type:  |  | Compact                               |
|   | Manufacturer:  |  | ESTRUMAT S. L.                        |
|   | Brand  |  | ESTRUAGUA                             |
|   | Country of origin:   |  | Spain / EU                            |
|   | Design Standard:   |  | DIN                                   |
| <b>2</b>  | <b>CONDITIONS OF SERVICE:</b>  |  |                                       |
|   | Medium:  |  | Municipal Waste Water                 |
|   | pH-value:  |  | 6,0 to 8,0                            |
|   | Ambient temperature:   | ° C  | 0 - +45 (max.)                        |
|   | Air moisture   | %  | 60-75%                                |
|   | Installation location:   |  | Outdoor (Pre-treatment Station (PTS)) |
| <b>3</b>  | <b>Main characteristics:</b>   |  |                                       |
|   | Model No   |  | PCP - 020                             |
|   | unit length  | mm   | 13818                                 |
|   | unit width   | mm   | 2212                                  |
|   | unit height  | mm   | 4700                                  |
|   | grit chamber length  | mm   | 13018                                 |
|   | grit chamber width   | mm   | 2212                                  |
|   | Deposit's height   | mm   | 1950                                  |
|   | nominal Flow (Q <sub>n</sub> )*  | m <sup>3</sup> /h  | 576                                   |
|   | * 90% grit removal with grain size ≥0,20 mm guaranteed at Q <sub>n</sub> |  |                                       |
|   | max. Flow (Q <sub>max</sub> )  | m <sup>3</sup> /h  | 936                                   |
|   | Commissioning position   |  | on concrete floor                     |
|   | Inlet pipe flange connection size  | DN   | 600                                   |
|   | Bypass pipe flange connection size                                       | DN   | 600                                   |
|   | Outlet pipe flange connection size                                       | DN   | 600                                   |
|   | Air pipe flange connection size  | DN   | 25                                    |
| <b>4</b>  | <b>Screening zone:</b>   |  |                                       |
|   | Model no.  |  | Tdt-020 690                           |
|   | Screen type  |  | Inclined conveyor screen              |
|   | screening mesh size  | mm   | 5                                     |
|   | mesh geometry  |  | round hole                            |
|   | max. Flow (Q <sub>max</sub> )  | m <sup>3</sup> /h  | 936                                   |
|   | Cylinders Width  | mm   | 690                                   |
|   | By Pass Manual Screen  |  | 15 mm Mesh                            |
|   | internal transporting and compacting system                              |  | included                              |
|   | Solids discharge hopper  |  | included                              |
|   | Solid's dry substance after screenings compacting                        | %  | ≥30                                   |
|   | Cleaning system in compacting zone                                       |  | incl.                                 |
|   | level measurement inlet  |  | incl.                                 |
|   | cleaning system type   |  | spray water nozzles                   |
|   | required cleaning water flow (during screen cleaning mode)               |  | 1 l/s à 5 bar                         |
|   | cleaning water connection type   |  | 3/8" screw connection                 |
|   | Compacted solids discharge height  | mm   | 1500                                  |
|   | Drive  |  | NORD                                  |
|   | Electric engine  |  | NORD                                  |
|   | Reference of the motor   |  | SK4282AF-90S/4                        |
|   | Power  | kW   | 1,1                                   |
|   | screen turning speed   | rpm  | 10                                    |
|   | Protection class:  |  | IP55                                  |
|   | Isolation class:   |  | F                                     |
|   | Voltage  | V / Hz   | 220/380-400 / 50 Hz                   |
| <b>5</b>  | <b>Degreasing zone</b>   |  |                                       |
|   | Lateral de greasing with revolving scraper and                           |  | included                              |
|   | Counter flow wall  |  | included                              |
|   | Counter flow wall type   |  | lamella wall                          |
|   | lamella dimensions L x W x H   | mm   | 400 x 60 x 30                         |
|   | scum discharge pipe diameter   | DN   | 150                                   |
|   | Grease discharge height  | mm   | 1030                                  |
|   | Drive  |  | NORD                                  |
|   | Electric engine  |  | NORD                                  |
|   | power  | KW   | 0,12                                  |

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| Granollers / Spain  |   |  |  |
| CLIENT  | KISH FRE ZONE ORGANIZATION, KISH WATER COMPANY                                | ISSUED FOR                                       | APPROVAL   |
| CONTRACTOR  | JYANE CONSTRUCTION COMPANY  | Doc NO   | EAR 02.07.C.1  |
| LOCATION  | KISH ISLAND   | ITEM NO.   | 7  |
| CONTRACT  | KISH ISLAND WASTE WATER TREATMENT PLANT                                       | CONTRACT NO.                                     | PO 538   |
|   |   | DATE   | 10.06.11   |
| No.:  | TECHNICAL CHARACTERISITCS   | UNIT   | DATA / VALUE   |
|   | Reference of the motor  |  | SK1SI63/31 FH-IEC63-63S/4  |
|   | Protection class:   |  | IP55   |
|   | Isolation class:  |  | F  |
|   | Voltage   |  | 220/380-400V / 50 Hz   |
| <b>6</b>  | <b>Degritting zone</b>  |  |  |
|   | Model No.   |  | Cah-015. 160   |
|   | Type  |  | longitudinal degritter   |
|   | Separation grade at $Q_n$ (576m <sup>3</sup> /h) for grit size $\geq 0,20$ mm | %  | 90   |
|   | horizontal grit collection conveyor screw diameter                            | mm   | 160  |
|   | horizontal conveyor type  |  | hollow axis  |
|   | Inclined grit transport conveyor screw diameter                               | mm   | 160  |
|   | inclined conveyor type  |  | hollow axis  |
|   | Discharge hopper on inclined conveyor   |  | included   |
|   | Grit discharge height   | mm   | 1900   |
|   | Drainage socket   | DN   | 80   |
|   | Drainage height   |  | 150  |
|   | Sedimentation zone  |  | included   |
|   | Support structure   |  | included   |
|   | Unit cover  |  | included   |
|   | Conveyor drive  |  | NORD   |
|   | Conveyor electric engine  |  | NORD   |
|   | Power (horizontal grit transport conveyor)                                    | kW   | 0,18   |
|   | Reference of the motor  |  | SK2382AF-63L/4   |
|   | Power (inclined grit transport conveyor)                                      | kW   | 0,18   |
|   | Reference of the motor  |  | SK2382AF-63L/4   |
|   | Protection class:   |  | IP55   |
|   | Isolation class:  |  | F  |
|   | Voltage   |  | 220/380-400 V / 50 Hz  |
| <b>7</b>  | <b>Aeration system</b>  |  |  |
|   | Type  |  | coarse bubble aeration   |
|   | aeration system   |  | perforated PVC pipe diffusers  |
|   | air diffusers and internal piping   |  | included   |
|   | aeration flange connection  | DN   | 25   |
|   | required income air quantity per unit   | m <sup>3</sup> /h                                | 75   |
|   | required pressure difference dp   | bar  | 0,5  |
| <b>8</b>  | <b>Scope Of Supply</b>  |  |  |
|   | Screening zone  |  | yes  |
|   | Degreasing zone   |  | yes  |
|   | Degritting zone   |  | yes  |
|   | Coarse bubble bubble diffusers and internal piping                            |  | yes  |
|   | Control panel   |  | yes  |
|   | Anchoring plugs   |  | yes  |
|   | Structural Supports   |  | yes  |
|   | Local push button box (on/off/emergency stop) incl. cabling to gearbox        |  | INCLUDED IN MAIN CONTROL PANEL   |
|   | Level switches and solenoid valves  |  | YES  |
|   | internal cabling  |  | YES  |
|   | Unit Control panel and internal instrumentation                               |  | yes  |
|   | fastening material for unit   |  | yes  |
| <b>9</b>  | <b>Materials</b>  |  |  |
|   | Carcass (screening, degritting, degreasing unit)                              |  | AISI 316   |
|   | Supports  |  | AISI 316   |
|   | Cover   |  | AISI 316   |
|   | grit collection conveyors   |  | Cement lined steel F-1515  |
|   | Coarse bubble diffusers   |  | PVC  |
|   | Air pipes internal  |  | PVC  |
|   | Anchoring plugs   |  | AISI 316   |
|   | Structural Supports   |  | AISI 316   |
|   | fastening material for unit   |  | AISI 316   |
| <b>10</b>   | <b>Finishing</b>  |  |  |
|   |   |  | welding rust removal<br>+ Silver metallic bi component paint                                       |
| <b>11</b>   | <b>DIMENSIONS AND WEIGHTS:</b>  |  |  |
|   | Packing dimensions of the unit; L x W x H (approx.):                          | m  | 2 pcs. à 6734 x 2118 x 1950 mm<br>2 pcs. à 1000 x 2118 x 1950 mm<br>2 pcs. à 6084 x 2118 x 1950 mm |
|   | unit weight empty (approx.)   | kg   | 6000   |
|   | unit weight full (approx.)  | kg   | 31000  |