

| MATERIAL PROPERTIES                   |                                          |                                     |                                        |                                                   |
|---------------------------------------|------------------------------------------|-------------------------------------|----------------------------------------|---------------------------------------------------|
|                                       | POLYPROPYLENE (PP)                       | POLYAMIDE (PA)                      | ALUMINIUM (AL)                         | THERMOPLASTIC ELASTOMER (TPE)                     |
| MECHANICAL PROPERTIES                 |                                          |                                     |                                        |                                                   |
| Izod Impact Strength (Notched, 23°C)  | >40 KJ/m <sup>2</sup><br>ISO 180         | >5 KJ/m <sup>2</sup><br>ISO 180     | --                                     | --                                                |
| Izod Impact Strength (Notched, -30°C) | >6 KJ/m <sup>2</sup><br>ISO 180          | >2 KJ/m <sup>2</sup><br>ISO 180     | --                                     | --                                                |
| Modulus of elasticity                 | 1200-1250 N/mm <sup>2</sup><br>ISO 527-2 | 2000 N/mm <sup>2</sup><br>ISO 527-2 | 70,000 N/mm <sup>2</sup>               | 3,6 N/mm <sup>2</sup> (MODULUS@100)<br>ASTM D 412 |
| Tensile strength                      | >23 N/mm <sup>2</sup><br>ISO 527-2       | >60 N/mm <sup>2</sup><br>ISO 527-2  | >160 N/mm <sup>2</sup><br>DIN EN 10002 | >3,95 N/mm <sup>2</sup><br>ASTM D 412             |
| Hardness                              | >80<br>ISO 2039-2 (Rockwell-R)           | >70<br>ISO 878 (Shore D)            | >80<br>Brinell hardness                | >85<br>ASTM D 2240 (Shore A)                      |
| Temperature range                     | -30°C/90°C                               | -40°C/120°C                         | Max. 300°C                             | -40°C/120°C                                       |
| CHEMICAL PROPERTIES                   |                                          |                                     |                                        |                                                   |
| Acids, Solvents                       | Conditionally Consistent                 | Conditionally Consistent            | Conditionally Consistent               | Conditionally Consistent                          |
| Hydrocarbons, Mineral oils            | Conditionally Consistent                 | Consistent                          | Consistent                             | Consistent                                        |
| Alcohol, Seawater, Other oils         | Consistent                               | Consistent                          | Consistent                             | Consistent                                        |

All metal parts are made of carbon steel St 37-2 (S235JR EN 10025) as a standard. Stainless steel (AISI 304, AISI 316) is also available upon request.