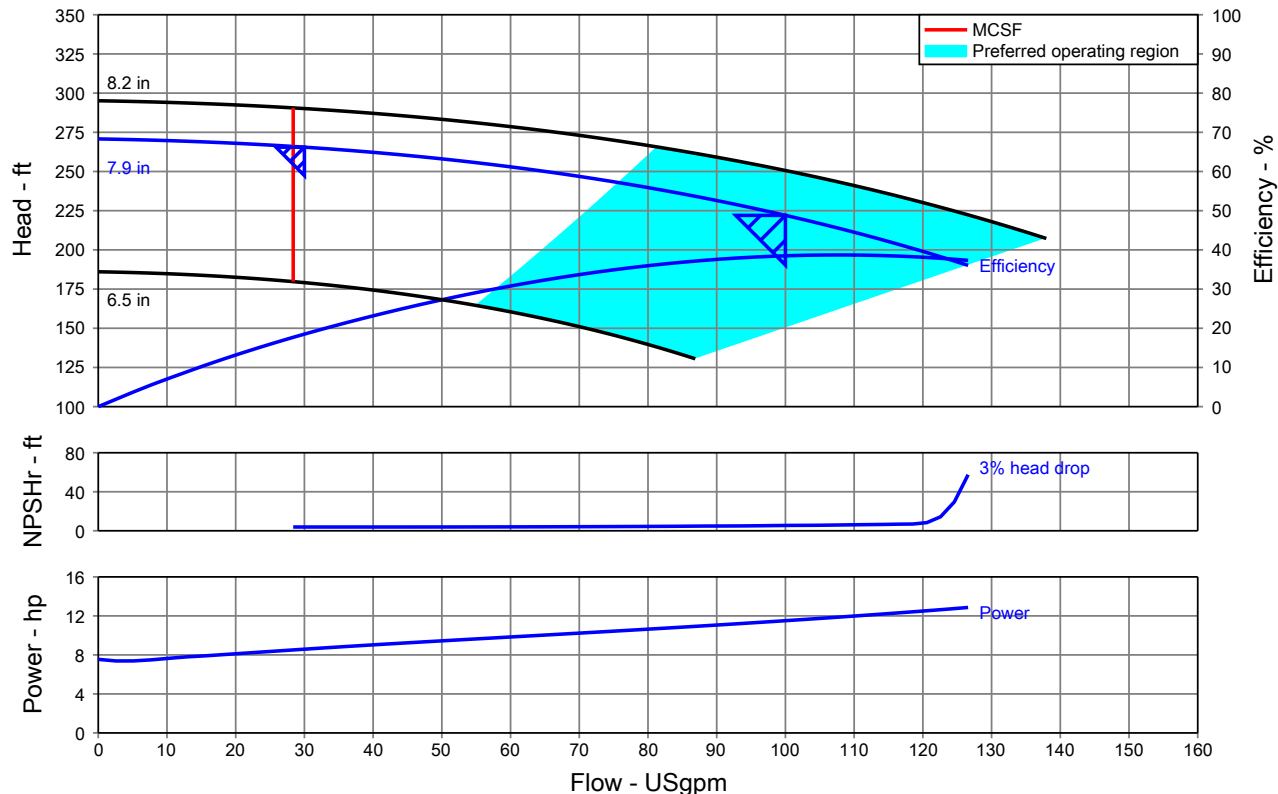


## Pump Performance Datasheet

|                   |                                                |                       |                           |
|-------------------|------------------------------------------------|-----------------------|---------------------------|
| Customer          | : AIR PRODUCTS AND CHEMICALS                   | Sulzer Reference ID   | : USA.5539-AME.22.7766-F0 |
| Inquiry Number/ID | : WEP Renewables - API 610 Centrifugal Pumps F | Type / Size           | : OHH-1.5x3x8-1           |
| Item number       | : 18-P-1823 A/B                                | Stages                | : 1                       |
| Service           | : Carb Diesel Blending Pump                    | Based on curve number | : OHH 70-1-1-04 Rev       |
| Quantity          | : 2                                            | Date of Last Update   | : 21 Sep 2022 20:07       |

| Operating Conditions                            |                         | Liquid                               |                                                 |
|-------------------------------------------------|-------------------------|--------------------------------------|-------------------------------------------------|
| Flow, rated                                     | : 100.0 (30.0) USgpm    | Liquid type                          | : Other                                         |
| Differential head / pressure, rated (requested) | : 222.0 (265.5) ft      | Additional liquid description        | : Carb Diesel                                   |
| Suction pressure, rated / max                   | : -1.2 / 20.0 psi.g     | Solids diameter, max                 | : 0.0 in                                        |
| NPSH available, rated                           | : 39.4 ft               | Solids concentration, by volume      | : 0.0 %                                         |
| Site Supply Frequency                           | : 60 Hz                 | Temperature, rated / max             | : 110.0 / 160.0 deg F                           |
| Performance                                     |                         | Fluid density, rated / max           | : 0.790 / 0.790 SG                              |
| Speed criteria                                  | : Synchronous           | Viscosity, rated                     | : 2.70 cP                                       |
| Speed, rated                                    | : 3520 rpm              | Vapor pressure, rated                | : 0.01 psi.a <span style="color: red;">△</span> |
| Impeller diameter, rated                        | : 7.9 in                | Material                             |                                                 |
| Impeller diameter, maximum                      | : 8.2 in                | Material selected                    | : API S-6                                       |
| Impeller diameter, minimum                      | : 6.5 in                | Pressure Data                        |                                                 |
| Efficiency                                      | : 38.5 (18.5) %         | Maximum casing/bowl working pressure | : 112.6 psi.g                                   |
| NPSH (3% head drop) / margin required           | : 5.5 (3.9) / 0.0 ft    | Maximum allowable working pressure   | : 705.2 psi.g                                   |
| Ns (imp. eye flow) / Nss (imp. eye flow)        | : 632 / 8,447 US Units  | Maximum allowable suction pressure   | : 612.6 psi.g                                   |
| MCSF                                            | : 28.4 USgpm            | Hydrostatic test pressure            | : 1,057.8 psi.g                                 |
| Head, maximum, rated diameter                   | : 270.8 ft              | Driver & Power Data (@Max density)   |                                                 |
| Head rise to shutoff                            | : 22.0 (2.0) %          | Driver sizing specification          | : API 610 / ISO 13709                           |
| Flow, best eff. point                           | : 107.6 USgpm           | Margin over specification            | : 0.0 %                                         |
| Flow ratio, rated / BEP                         | : 92.9 (27.9) %         | Service factor                       | : 1.00                                          |
| Diameter ratio (rated / max)                    | : 96.1 %                | Power, hydraulic                     | : 4.4 (1.6) hp                                  |
| Head ratio (rated dia / max dia)                | : 88.6 %                | Power, rated                         | : 11.5 (8.6) hp                                 |
| Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]                | : 1.0 / 1.0 / 1.0 / 1.0 | Power, maximum, rated diameter       | : 12.9 hp                                       |
|                                                 |                         | Minimum recommended motor rating     | : 15.0 hp / 11.2 kW                             |

Alert: NPSHr values below 1.5m (4.5 feet) are expected, not guaranteed, as they cannot be accurately measured during the NPSH3 test.



Test tolerances as per API 610 11th edition and A8KM-PP-000-50626-A △