

# 853

## PNEUMATIC SEAL

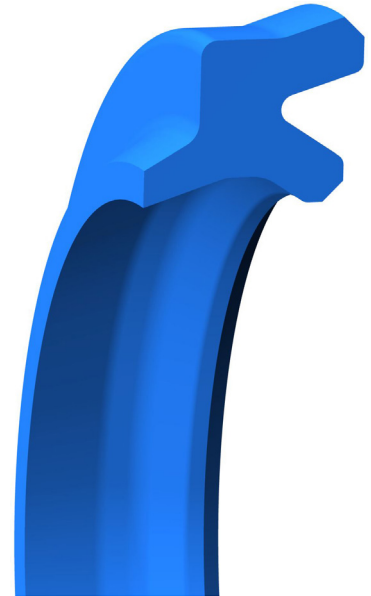
*Single-Acting  
Polyurethane  
Combined Rod Seal and Wiper*

### DESIGN

The Hallite 853 high-performance rod seal and wiper combination is designed specifically for pneumatic applications and to give significant improvements in cylinder performance in low lube air conditions and be used in long and short stroke applications.

The Hallite 853 is manufactured in Hythane® 181, Hallite's high-performance polyurethane, for easy installation, excellent low temperature performance, and long service life.

The material combined with the design of the dynamic sealing lip offers low friction, significantly less than that of a rubber seal, and an ultra-long life.



### FEATURES

- Combined rod seal and wiper
- Ultra-long life
- Effective seal
- Low friction
- Hard wearing
- Excellent temperature range
- Easy to install

### MATERIALS

As standard, this product comes in the following material. Contact your local Hallite technical team if you would like to find out if this profile can be made in a custom material to suit your application. For further material details, please refer to the Hallite Material Table.

| MATERIAL OPTIONS | Name         | Type   | Color |
|------------------|--------------|--------|-------|
| Standard         | Hythane® 181 | TPU-EU | Blue  |



## TECHNICAL DETAILS

| OPERATING CONDITIONS | METRIC      | INCH         |
|----------------------|-------------|--------------|
| Maximum Speed        | 0.1 m/sec   | 0.3 ft/sec   |
| Temperature Range    | -45°C +80°C | -50°F +180°F |
| Maximum Pressure     | 16 bar      | 230 psi      |

**NOTE**

Not designed for scraping ice

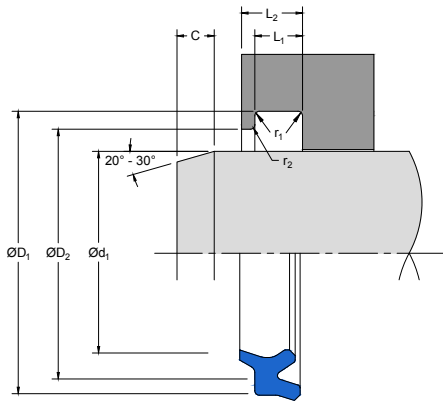
**NOTE**

Data given are maximum values and can apply depending on specific application. Maximum ratings of temperature, pressure, or operating speeds are dependent on fluid medium, surface, gap value, and other variables such as dynamic or static service. Maximum values are not intended for use together at the same time, e.g. max temperature and max pressure. Please contact your Hallite technical representative for application support.

| SURFACE ROUGHNESS                                      | $\mu\text{mRa}$ | $\mu\text{mRz}$ | $\mu\text{mRt}$ | $\mu\text{inRa}$ | $\mu\text{inRz}$ | $\mu\text{inRt}$ |
|--|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| Dynamic Sealing Face $\varnothing d_1$                 | 0.1 - 0.4       | 1.6 max         | 4 max           | 4 - 16           | 63 max           | 157 max          |
| Static Sealing Face $\varnothing D_1, \varnothing D_2$ | 1.6 max         | 6.3 max         | 10 max          | 63 max           | 250 max          | 394 max          |
| Static Housing Faces $L_1$                             | 3.2 max         | 10 max          | 16 max          | 125 max          | 394 max          | 630 max          |

| CHAMFERS & RADII           |      |      |
|----------------------------|------|------|
| Groove Section $\leq S$ mm | 3.00 | 4.00 |
| Min Chamfer C mm           | 2.50 | 3.00 |
| Max Fillet Rad $r_1$ mm    | 0.20 | 0.20 |
| Max Fillet Rad $r_2$ mm    | 0.40 | 0.40 |

| TOLERANCES | $\varnothing d_1$ | $\varnothing D_1$ | $\varnothing D_2$ | $L_1$    |
|------------|-------------------|-------------------|-------------------|----------|
| mm         | f9                | H11               | H11               | +0.20 -0 |



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### PART NUMBER RANGE

| METRIC          |                  |                 |                 |                 |                 |                            |                |             |
|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|----------------------------|----------------|-------------|
| Ød <sub>1</sub> | TOL<br>f9        | ØD <sub>1</sub> | TOL<br>H11      | ØD <sub>2</sub> | TOL<br>H11      | L <sub>1</sub><br>+0.20 -0 | L <sub>2</sub> | PART<br>No. |
| 10.00           | -0.013<br>-0.049 | 16.00           | +0.110<br>0.000 | 12.50           | +0.110<br>0.000 | 4.00                       | 7.00           | 4372800     |
| 12.00           | -0.016<br>-0.059 | 18.00           | +0.130<br>0.000 | 14.50           | +0.110<br>0.000 | 4.00                       | 7.00           | 4467700     |
| 14.00           | -0.016<br>-0.059 | 20.00           | +0.130<br>0.000 | 16.50           | +0.110<br>0.000 | 4.00                       | 7.00           | 4467800     |
| 20.00           | -0.020<br>-0.072 | 26.00           | +0.130<br>0.000 | 22.50           | +0.130<br>0.000 | 4.00                       | 7.00           | 4467900     |
| 25.00           | -0.020<br>-0.072 | 31.00           | +0.160<br>0.000 | 27.50           | +0.130<br>0.000 | 4.00                       | 7.00           | 4372900     |
| 32.00           | -0.025<br>-0.087 | 40.00           | +0.160<br>0.000 | 35.00           | +0.160<br>0.000 | 5.00                       | 8.00           | 4468000     |