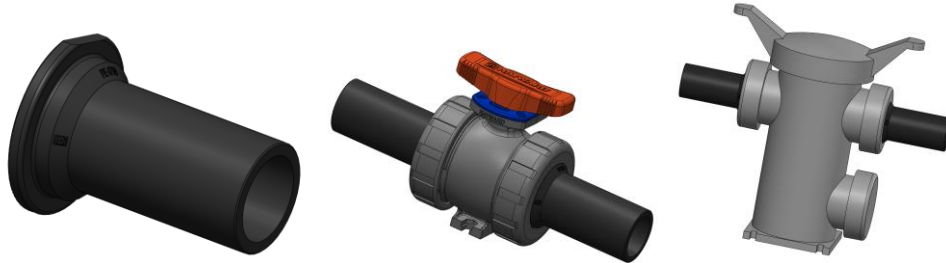




## HAYWARD HDPE END CONNECTOR OPERATION AND MAINTENANCE INSTRUCTIONS



### SAFETY WARNINGS

**PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING HAYWARD SERIES HDPE END CONNECTORS AND HAYWARD PRODUCTS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY, OR EVEN DEATH.**

1. Hayward Flow Control (Hayward), a division of Hayward Industries, guarantees its products against defective material and workmanship only. Hayward assumes no responsibility for property damage or personal injury resulting from improper installation, misapplication, or abuse of any product.
2. Hayward assumes no responsibility for property damage or personal injury resulting from chemical incompatibility between its products and the process fluids to which they are exposed. Determining whether a particular product and material is suitable for an application is the responsibility of the user. Chemical compatibility charts provided in Hayward literature are based on ambient temperatures of 70°F and are for reference only.
3. Hayward products are designed for use with non-compressible liquids.

#### **WARNING**

**Hayward products should NEVER be used or tested with compressible fluids such as compressed air or nitrogen. Use of Hayward products in compressible fluid applications may result in product damage, property damage, personal injury, or even death.**

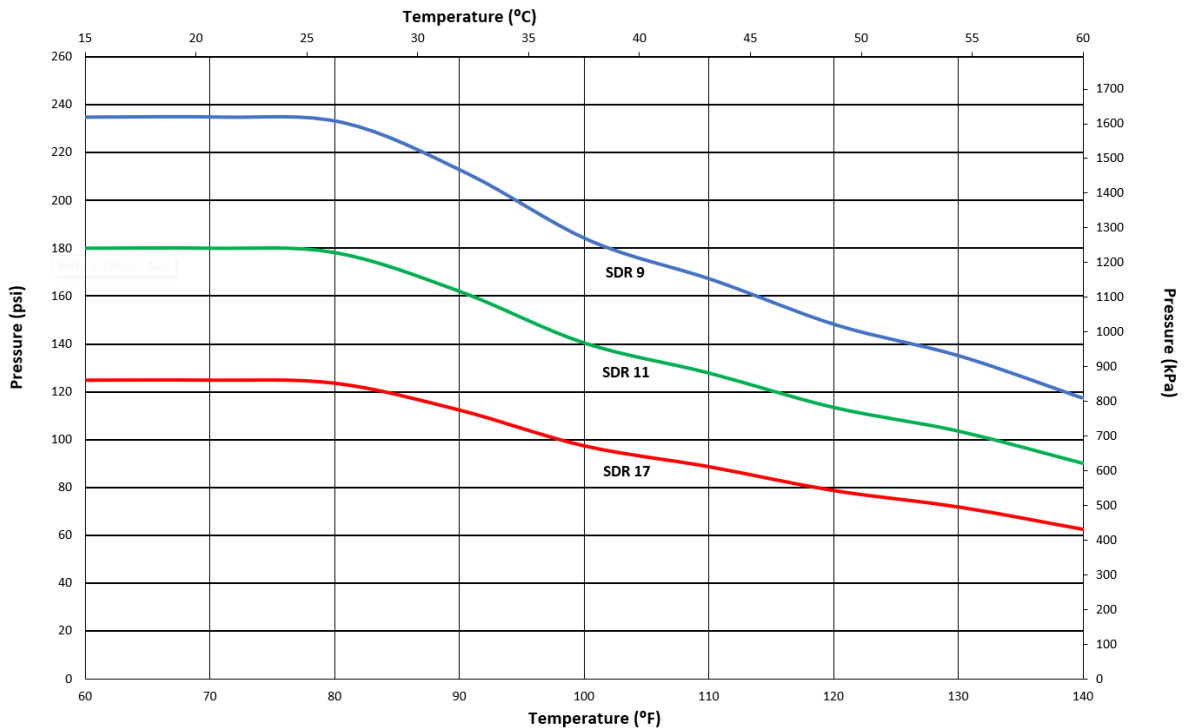
#### **WARNING**

**Hayward products with HDPE or other end connectors are intended for use in liquid service only. Do not attempt to use this product for controlling air or gases. Use of this product in air or gas service may result in product damage, property damage, personal injury, or even death.**

4. The maximum recommended fluid velocity through any Hayward product is eight feet per second (8 ft/s). Higher fluid velocity can result in damage due to the water hammer effect.
5. Installation of HDPE end connectors should follow the fusion procedures (i.e. butt fusion, socket fusion, or electrofusion) of your company.
6. Piping systems must be designed and supported to prevent excess mechanical loading on Hayward products due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction. Additionally, the pipe adjacent to the HDPE end connectors must be fully supported and the user should not rely on the valve, strainer, or filter to anchor or restrain the piping system from movement.
7. The effect of temperature on plastic piping systems must be considered when the systems are initially designed. The pressure rating of plastic systems must be reduced with increasing temperature. Maximum operating pressure is dependent upon material selection as well as operating temperature. Before installing any Hayward product, consult Hayward product literature for pressure vs. temperature curves to determine any operating pressure or temperature limitations. Additionally, the pressure/temperature rating of the HDPE end connector is the lower of either the adjoining piping system, or the valve, strainer, or filter to which it is attached.
8. The HDPE end connectors are transition fittings between the HDPE piping system and the valve, strainer, or filter. Suitability for use or compatibility of the valve, strainer, or filter, with the piping system in a particular application should be determined by the user.
9. Published operating requirements are based on testing of new product using clean water at 70°F. Product performance is affected by many factors including fluid chemistry, viscosity, specific gravity, flow rate, and temperature. These should be considered when sizing and specifying Hayward products.
10. Always follow your site and/or company procedures for any safety training and/or site-specific precautions or warnings in addition to those in this document.

## Hayward HDPE End Connector Technical Data:

<b>Material</b>	<b>High-Density Polyethylene per</b> <ul style="list-style-type: none"> <li>• ASTM D 3350 Cell Classification:             <ul style="list-style-type: none"> <li>• Black - PE445576C CC2 (MRS)</li> <li>• Black - PE445574C CC2 (HDB)</li> </ul> </li> <li>• ASTM PE4710</li> <li>• ISO PE100</li> </ul>
<b>Pipe Sizes</b>	1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 63mm, 3", 4"
<b>SDR Sizes</b>	SDR 9 & 11: 1/2" thru 4" SDR 17: 1-1/4" thru 4"
<b>Connections</b>	Butt Fusion (Male spigot) – Can be used on electrofusion or socket fusion joints
<b>Maximum Operating Pressure at 70°F (Based on usage with water)</b>	The pressure rating of the end connector is the lower of either the adjoining piping system, or the valve, strainer, or filter to which it is attached. In no case should the operating pressure exceed the following:  SDR 9: 235 psi (1620 kPa) @ 70°F (21°C) / 117psi (806kPa) @ 140°F (60°C) SDR 11: 180 psi (1240 kPa) @ 70°F (21°C) / 90psi (620kPa) @ 140°F (60°C) SDR 17: 125 psi (860 kPa) @ 70°F (21°C) / 62psi (430kPa) @ 140°F (60°C)
<b>Max Operating Temp</b>	140°F (60°C)



**Chart 1. Operating pressures for HDPE material at elevated temperatures.**

- The pressure rating of the end connector is the lower of either the adjoining piping system, or the valve, strainer, or filter to which it is attached. In no case should the operating pressure exceed the pressures stated in Chart 1.
- Compare with pressure/temperature chart of the valve, strainer, or filter material to determine final ratings by using the lesser of the pipe rating or the valve, strainer, or filter rating.