



**Johnson  
Screens**

A brand of  
Aqseptence Group

## The Shur-Align® drop pipe system allows for a quick and easy installation of submersible pumps

Shur-Align drop pipe has the longest inlet bell in the industry, funneling and aligning the pipe before the threads engage—eliminating cross threading and speeding up the assembly process.

The Shur-Align drop pipe system, with threaded integral bell, does not require a separate coupling - reducing the possibility of leaks and speeding up assembly time.

The entire joint of the Shur-Align drop pipe system — not just the threaded integral bell — is formed from SCH 120 PVC for maximum strength and durability, making installation of submersible pumps quicker and easier.

### Advantages of the Shur-Align drop pipe system:

- Reduced installation costs
- No additional couplings
- Easy alignment and engagement
- Eliminates cross threading
- Quick makeup
- Beveled shoulder for easier pump service





# Installing submersible pumps is now quicker and easier than ever before

The Shur-Align drop pipe's patented design allows for quicker and easier installations of submersible pumps

## Technical Data – Shur-Align (sch 120) threaded PVC drop pipe

Nominal Pipe Size (in.)	Approx. Bell OD (in.)	Approx. Pipe OD (in.)	Min. Wall (in.)*	Approx. Weight (lbs./ft.)	Pressure Rating (psi)*	Recommended Maximum Depth (ft) vs. Discharge Pressure (psi) @ 8 fps**				Calc. GPM @ 8 fps flow velocity**	Rec Max Tensile Load @ 60 PSI (Lbs)***
						30 psi	40 psi	50 psi	60 psi		
1	1.80	1.32	0.20	0.45	360	600	590	570	550	16	478
1.25	2.20	1.66	0.22	0.63	300	520	500	480	460	29	636
1.5	2.40	1.90	0.23	0.75	270	470	450	430	410	41	760
2	3.00	2.38	0.25	1.03	240	430	400	380	360	68	1031

\* ASTM Standards

\*\* CAUTION: flow rates > 8 fps result in turbulent flow and potentially harmful surge pressures!

\*\*\* Load includes combined weight of pump, motor, electric cable, water filled pipe and other accessories.  
The information above includes a safety factor of 8:1.

## PVC pipe behavior at different temperatures\*

Temperature (F°)	40.0	50.0	60.0	70.0	73.4	80.0	90.0	100.0	110.0	120.0	130.0	140.0
Temperature (C°)	4.0	10.0	16.0	21.0	23.0	27.0	32.0	38.0	43.0	49.0	54.0	60.0
Conversion Factor	1.4	1.3	1.15	1.04	1	0.88	0.75	0.62	0.51	0.4	0.31	0.22

\* Source: Plastic Pipe and Fittings Association



PVC pipe exhibits a decreasing pressure rating and stiffness with increasing temperature. As with dimensions, the pressure ratings and published pipe stiffness figures for PVC pipe are listed at an ambient temperature of 73°F.

To determine the pressure ratings and stiffness of PVC pipe at higher or lower temperatures, multiply the pressure rating, pressure class, and the stiffness/deflection by the pipe's conversion factor.

Consult the manufacturer of your pipe for specific data. The typical upper limit for continuous use of PVC pipe is 140°F.

The PVC materials used in the Johnson Screens brand are listed by NSF International and comply to NSF Standard 61, safe for use in potable water applications. ASTM Standard D1784, standard specification for rigid PVC compounds, uses a cell classification system to call out minimum physical property requirements (base resin, minimum impact strength, tensile strengths, modulus of elasticity, heat deflection temperature under load, and flammability when tested per applicable ASTM standards) of compounds that are used in the production of PVC pipe and fittings. Rigid PVC compound used for manufacture of pipe has a Cell Classification of 12454 per ASTM D1784 and is also known as Type I, Grade I PVC, or PVC 1120.

# Flow properties – Shur-Align (SCH 120) drop pipe

**Table 1**

Flow (GPM)	1 in. Pipe		1.25 in. Pipe		1.5 in. Pipe		2 in. Pipe	
	V	HD	V	HD	V	HD	V	HD
5	2.4	3.0	1.3	0.7	1.0	0.3	0.6	0.1
7	3.4	5.6	1.9	1.3	1.4	0.6	0.8	0.2
10	4.9	10.8	2.7	2.6	1.9	1.1	1.2	0.3
15	7.3	22.8	4.0	5.4	2.9	2.4	1.7	0.7
20	9.8	38.9	5.4	9.2	3.9	4.1	2.3	1.2
25	12.2	58.8	6.7	13.9	4.9	6.3	2.9	1.8
30	14.6	82.4	8.1	19.5	5.8	8.8	3.5	2.5
35	17.1	109.6	9.4	26.0	6.8	11.7	4.1	3.3
40	19.5	140.4	10.8	33.3	7.8	14.9	4.6	4.3
45	22.0	174.6	12.1	41.4	8.7	18.6	5.2	5.3
50	24.4	212.2	13.5	50.3	9.7	22.6	5.8	6.5
55	26.8	253.2	14.8	60.0	10.7	27.0	6.4	7.7
60	29.3	297.4	16.2	70.5	11.7	31.7	7.0	9.1

V = Flow velocity in ft./sec.      Hd = Friction loss in ft./100 ft. of pipe

The numbers in red exceed the recommended velocity for this pipe size.

## Assembly Tips

- Apply a good quality, non-petroleum, pipe paste sealant, approved for PVC, to each thread joint
- Do not pre-assemble pipe lengths; assemble or disassemble one length at a time in a vertical position
- Tighten joints 1 to a maximum of 2 turns beyond finger tight – **DO NOT OVERTIGHTEN**
- Avoid using tools which may gouge or damage PVC; this can lead to premature failure
- Contact the Customer Service for PVC handling and storage instructions, and a free Drop Pipe Design Program

## Best Practices

- Using Table 1, select the diameter of Shur-Align drop pipe for your application
- Keep flow rate in pipe lower than 8 fps
- Torque arrestors are recommended in all submersible pump installations
- Water hammer suppressors, 100 psi pressure relief valves placed within 30 ft. of well head, torque arrestors and/or soft start controls are always recommended for PVC pipe (required for 40 HP or higher pumps)
- Good system design will take into consideration appropriate outlet flow rates and pressures when selecting pump size
- Information only applies when Johnson Screens products are stored, handled and installed correctly.

Contact your local Johnson Screens product representative for higher or lower pressures, or different system design conditions.

The Shur-Align drop pipe has the longest inlet bell in the industry; funneling and aligning the pipe before the threads engage, eliminating cross threading and speeds up the assembly process.



## Johnson Screens Water Well Screens

North and South America  
Phone +1 651 636 3900  
[info.us@johnsonscreens.com](mailto:info.us@johnsonscreens.com)

Europe, Middle East & Africa  
Phone +3 3 23 75 05 42  
[info.fr@johnsonscreens.com](mailto:info.fr@johnsonscreens.com)

Asia Pacific  
Phone +61 7 3867 5555  
[info.au@johnsonscreens.com](mailto:info.au@johnsonscreens.com)

[johnsonscreens.com](http://johnsonscreens.com)

© 2022 Johnson Screens Inc. All rights reserved. Johnson Screens Inc. assumes no liability for possible catalogues, brochures and other printed material errors. The technical data in this brochure is subject to change and for illustrative purposes only and should not be applied as published to your individual case. Johnson Screens reserves the right to alter its products without notice. Any reproduction, distribution, display or use of this information in whole or in part without the written authorization of Johnson Screens is strictly prohibited.

22-WW-0066-v2-4-Eng