

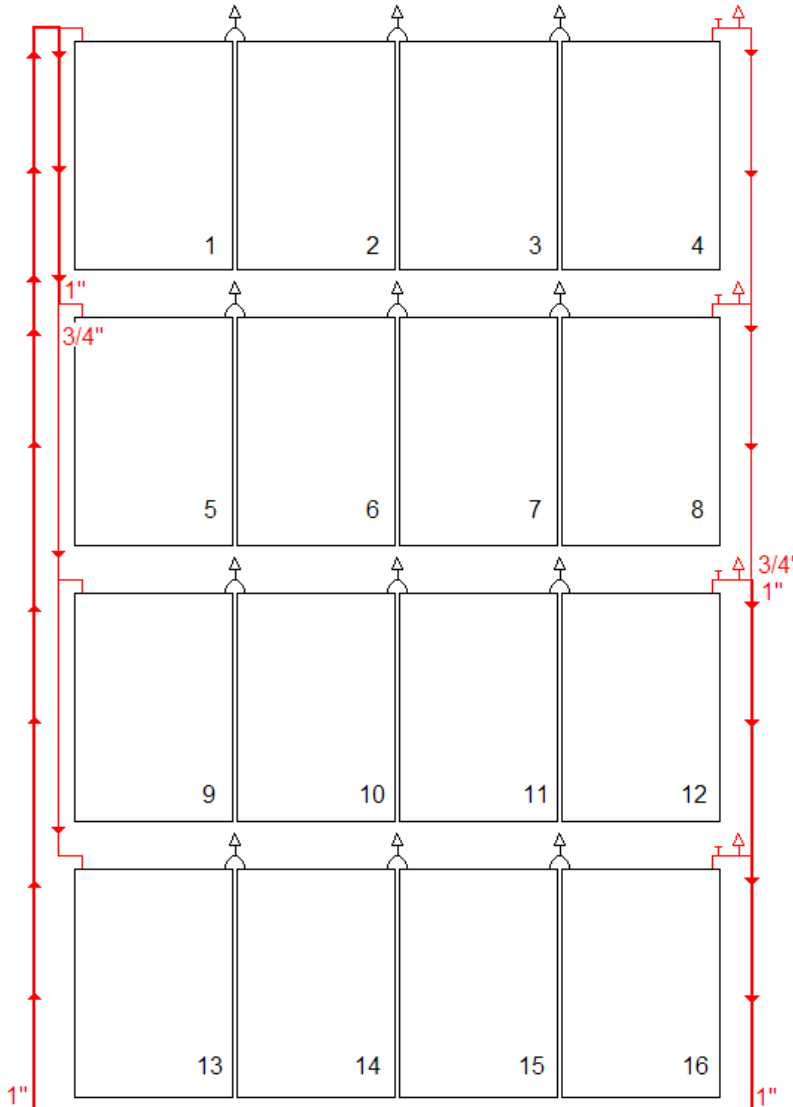
## HLT Energies Pipe Sizing for Stiebel Eltron Sol 25 Plus C Collectors

Allowable collector flow rate range: 50 to 300 l/hr (0.8 – 5 L/min, 0.22 – 1.32 US Gal/min)

| Collector(s) | Flow Rate<br>L/min<br>(US Gal/min) | Pipe Size<br>(hard copper) | Pipe Size<br>(soft copper) |
|--------------|------------------------------------|----------------------------|----------------------------|
| 1            | 5 (1.3)                            | 1/2"                       | 5/8"                       |
| 2            | 5 (1.3)                            | 1/2"                       | 5/8"                       |
| 3            | 5 (1.3)                            | 1/2"                       | 5/8"                       |
| 4            | 5 (1.3)                            | 1/2"                       | 5/8"                       |
| 6 (2 rows)   | 10 (2.6)                           | 3/4"                       | 7/8"                       |
| 8 (2 rows)   | 10 (2.6)                           | 3/4"                       | 7/8"                       |
| 12 (3 rows)  | 15 (4.0)                           | 1"                         | 1 1/8"                     |
| 16 (4 rows)  | 20 (5.3)                           | 1"                         | 1 1/8"                     |

Hard Copper – Minimum of Type L should be used.

Soft Copper – ACR (Air Conditioning and Refrigeration) piping should be used.



The collectors are connected in rows up to 4 collectors in series. Adding additional collectors to a single row (i.e. more than 4 collectors) will result in high temperatures in the end collectors. The end collectors will have a reduced performance and possible reduction in life expectancy.

The Tichelmann or series parallel pipe system (shown) is the optimal way to plumb the collectors to ensure equal pressure drop, and therefore equal flow, in each row of collectors. The fluid in each row travels the same distance and through the same pipe sizes.

If pipe lengths become significant or many bends are required, the piping diameter may need to be increased to reduce pressure drop. When pressure drop is too high, the pump flow rate may be too low and system performance may suffer.