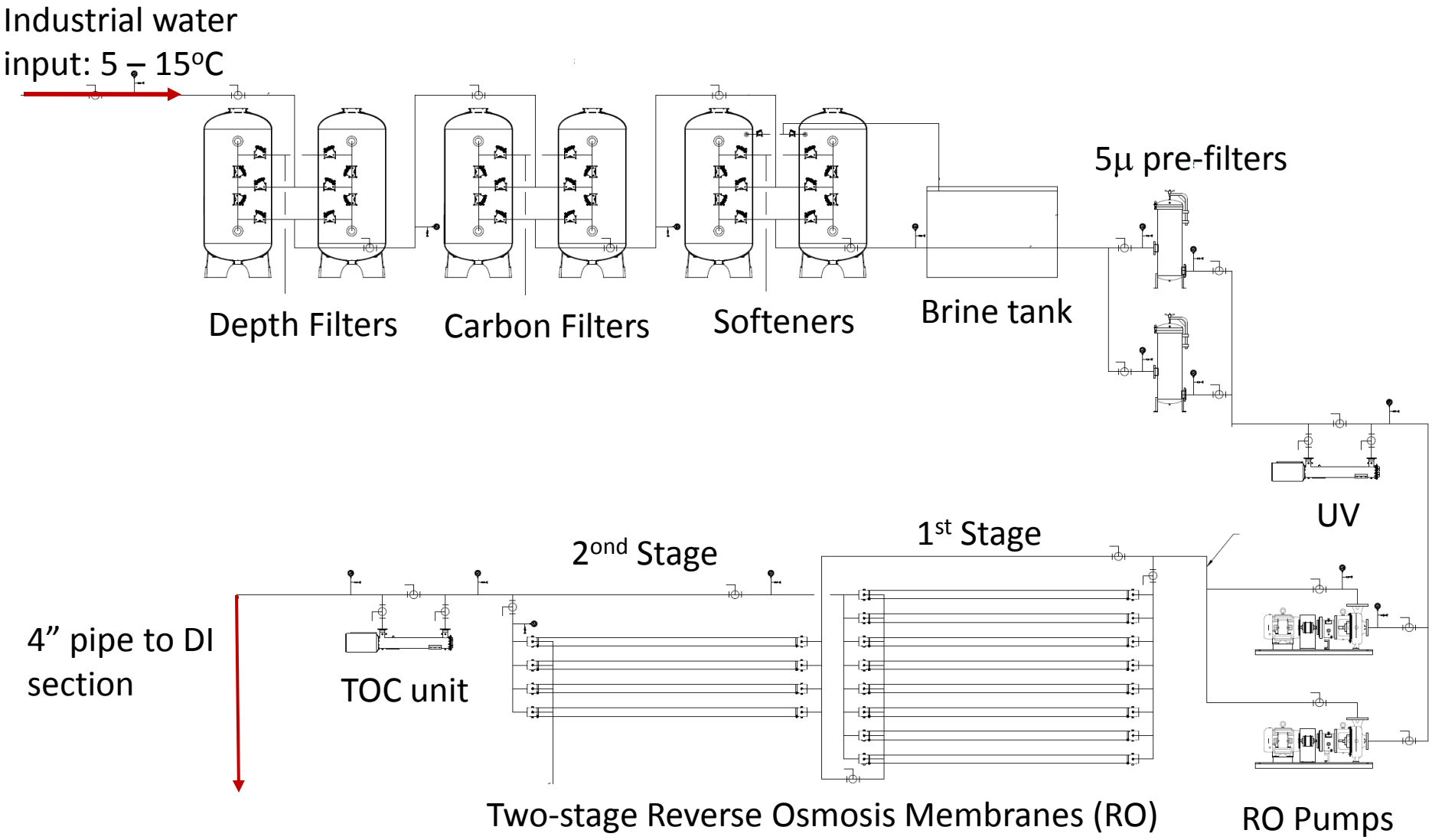Pre-treatment