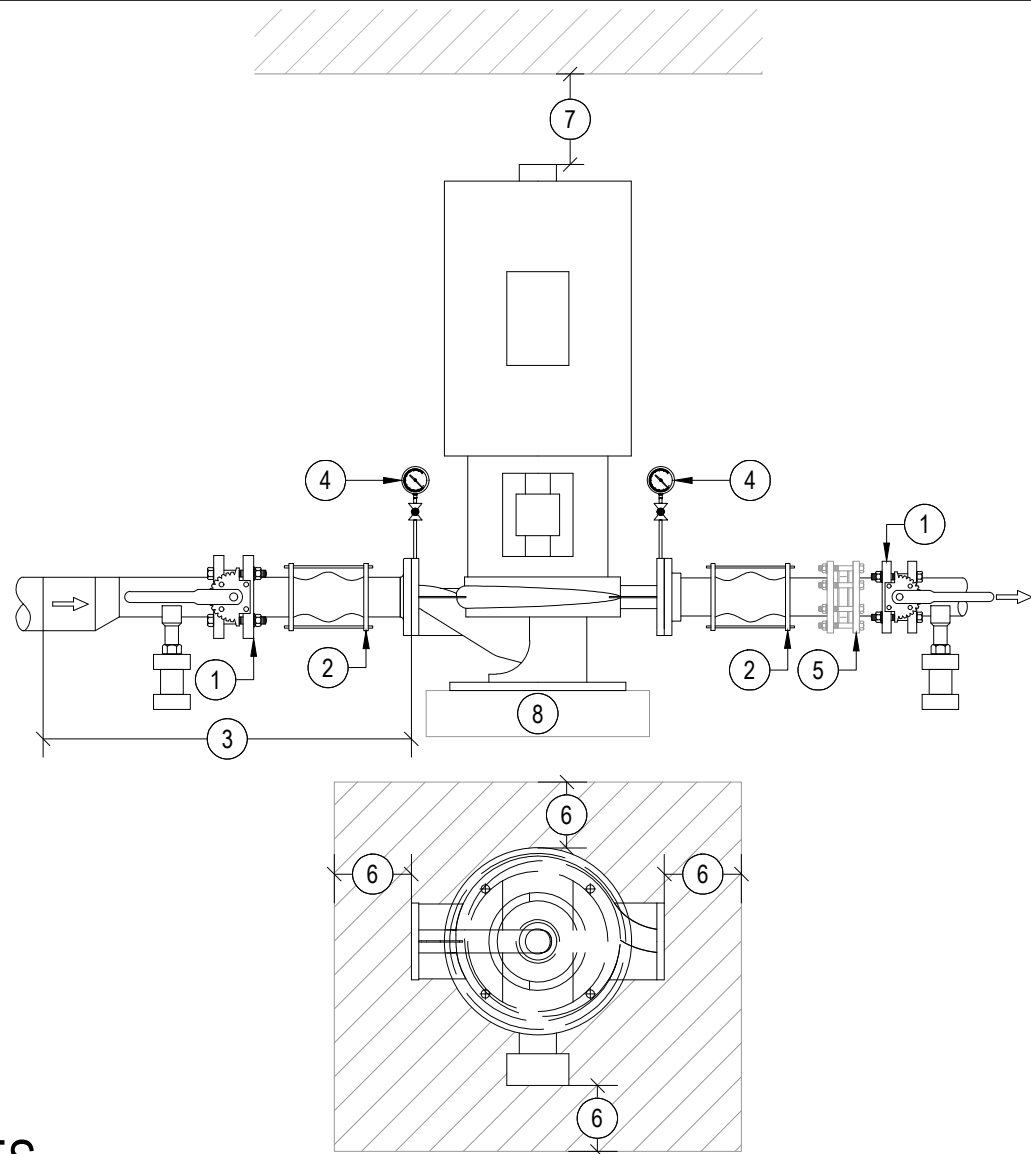


## GENERAL NOTES

- ① - TWO (2) BUTTERFLY OR GATE VALVES. SUCTION SIDE IS OPTIONAL BUT DISCHARGE SIDE IS REQUIRED FOR PUMP PRIMING AND STARTING. SEE PLANS FOR LINE SIZE. [I&O 2.9 AND 2.10]
- ② - RUBBER OR METAL EXPANSION JOINT ARE RECOMMENDED TO BE INSTALLED A MINIMUM OF 1 PIPE DIAMETER FROM THE INLET AND PUMP OUTLET FLANGE.
- ③ - RUN INLET PIPE AS DIRECT AS POSSIBLE FOR A LENGTH 10 TIMES THE PIPE DIAMETER. PIPE SHOULD BE ONE OR TWO LINE SIZE LARGER THAN SUCTION CONNECTION SIZE. USE AN ECCENTRIC REDUCER PRIOR TO ISOLATION VALVE TO MATCH INLET SIZE. ENSURE THE PIPE IS PROPERLY SUPPORTED AND NOT PUTTING ANY STRAIN ON THE PUMP. [I&O 2.9]
- ④ - INSTALL TWO (2) PRESSURE GAUGES WITH ISOLATION VALVES ON GAUGE TAPS PROVIDED ON THE SUCTION AND DISCHARGE FLANGE. VALVES ARE TO BE REGULARLY CLOSED AND ONLY OPENED TO GATHER READING. [I&O 2.9]
- ⑤ - OPTIONAL RECOMMENDED CHECK VALVE. SEE PLANS FOR COORDINATED LINES SIZES.
- ⑥ - FOR ALL SIZES PROVIDE A MINIMUM OF 18" OF CLEARANCE. [I&O 2.4]
- ⑦ - PROVIDE ENOUGH VERTICAL CLEARANCE FOR EQUIPMENT TO LIFT PUMP FOR MAINTENANCE. [I&O 2.4]
- ⑧ - THE PUMP BASE FRAME IS MOUNTED TO A CONCRETE HOUSE KEEP PAD, MOUNTING PAD, OR SPRING ISOLATION BASE USING SUITABLE ANCHOR BOLTS. ENSURE PUMP IS PROPERLY LEVEL BEFORE OPERATING PUMP. [I&O 2.6]



## 1 ELEV AND PLAN VIEW WITH NOTES

SCALE: NTS



DRAWING TITLE:  
GRUNDFOS VLS VERTICAL INLINE CENTRIFUGAL  
PUMP WITH CAST IRON STAND AND HORIZONTAL  
PIPING DETAIL

DRAWING NUMBER:  
019

DRAWN BY  
BM

LAST REVISED  
01/23/2023

DRAWING SCALE  
NTS

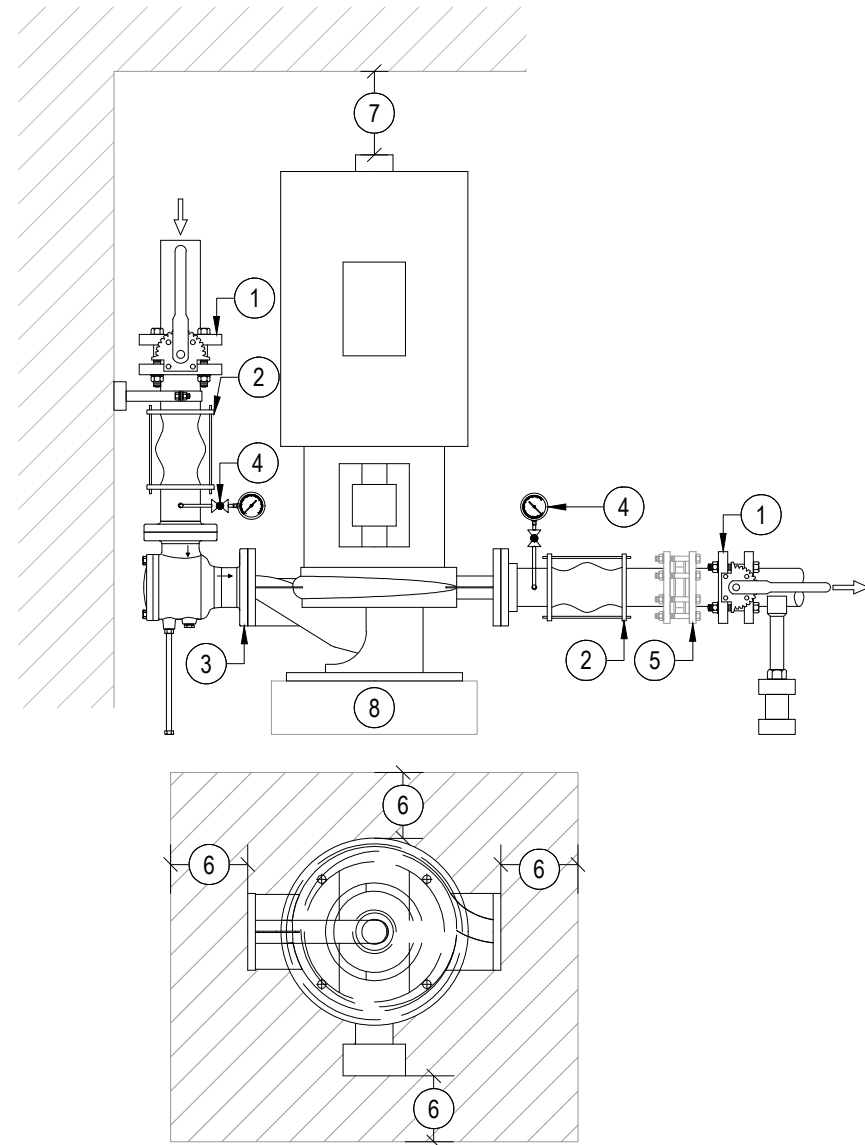
THE DOCUMENT AND ALL INFORMATION SHOWN IS PROPERTY OF HURLEY ENGINEERING, INC. THIS DOCUMENT IS NOT TO BE REDISTRIBUTED OR COPIED OR USED FOR THE MANUFACTURING OF EQUIPMENT WITHOUT PRIOR WRITTEN CONSENT FROM HURLEY ENGINEERING, INC.

QR CODE



## GENERAL NOTES

- ① - TWO (2) BUTTERFLY OR GATE VALVES. SUCTION SIDE IS OPTIONAL BUT DISCHARGE SIDE IS REQUIRED FOR PUMP PRIMING AND STARTING. SEE PLANS FOR LINE SIZE. [I&O 2.9 AND 2.10]
- ② - RUBBER OR METAL EXPANSION JOINT ARE RECOMMENDED TO BE INSTALLED A MINIMUM OF 1 PIPE DIAMETER FROM THE INLET AND PUMP OUTLET FLANGE.
- ③ - RUN INLET PIPE AS DIRECT AS POSSIBLE WITH MINIMAL BENDS. PIPE SHOULD BE ONE OR TWO LINE SIZE LARGER THAN SUCTION CONNECTION SIZE AND NOT CONFIGURED TO NOT HAVE AIR POCKETS. SUCTION DIFFUSER ARE ALWAYS SUGGESTED IN VERTICAL INSTALLATIONS, ENSURE SUCTION DIFFUSER IS PROPERLY SUPPORTED AND NOT PUTTING ANY STRAIN ON THE PUMP. [I&O 2.9]
- ④ - INSTALL TWO (2) PRESSURE GAUGES WITH ISOLATION VALVES ON GAUGE TAPS PROVIDED ON THE SUCTION AND DISCHARGE FLANGE. VALVES ARE TO BE REGULARLY CLOSED AND ONLY OPENED TO GATHER READING. [I&O 2.9]
- ⑤ - OPTIONAL RECOMMENDED CHECK VALVE. SEE PLANS FOR COORDINATED LINES SIZES.
- ⑥ - FOR ALL SIZES PROVIDE A MINIMUM OF 18" OF CLEARANCE. [I&O 2.4]
- ⑦ - PROVIDE ENOUGH VERTICAL CLEARANCE FOR EQUIPMENT TO LIFT PUMP FOR MAINTENANCE. [I&O 2.4]
- ⑧ - THE PUMP BASE FRAME IS MOUNTED TO A CONCRETE HOUSE KEEP PAD, MOUNTING PAD, OR SPRING ISOLATION BASE USING SUITABLE ANCHOR BOLTS. ENSURE PUMP IS PROPERLY LEVEL BEFORE OPERATING PUMP. [I&O 2.6]



## 1 ELEV AND PLAN VIEW WITH NOTES

SCALE: NTS



DRAWING TITLE:  
GRUNDFOS VLS VERTICAL INLINE CENTRIFUGAL  
PUMP WITH CAST IRON STAND AND VERTICAL  
PIPING DETAIL

DRAWING NUMBER:  
020

DRAWN BY  
BM

LAST REVISED  
01/23/2023

DRAWING SCALE  
NTS

THE DOCUMENT AND ALL INFORMATION SHOWN IS PROPERTY OF HURLEY ENGINEERING, INC. THIS DOCUMENT IS NOT TO BE REDISTRIBUTED OR COPIED OR USED FOR THE MANUFACTURING OF EQUIPMENT WITHOUT PRIOR WRITTEN CONSENT FROM HURLEY ENGINEERING, INC.

QR CODE

