

## CONTACT

### **Fives North American Combustion, Inc.**

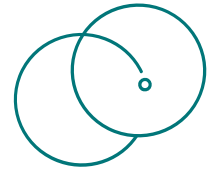
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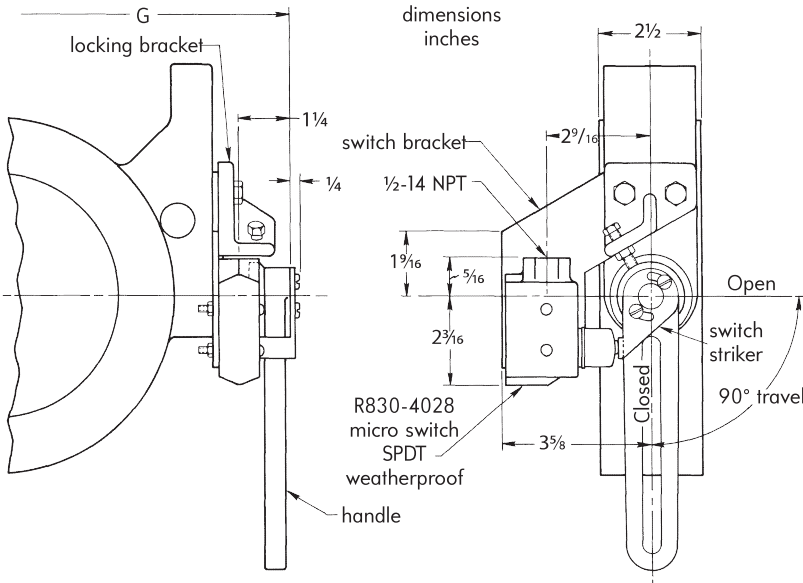
PROCESS  
TECHNOLOGIES

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## North American 1145 and 1155 Wafer Valves with Low Fire Switches

Sheet 1145-1  
Ref: Bulletin 1136-1156

### DIMENSIONS AND ASSEMBLY OF 1145 AND 1155-6 THROUGH -8 VALVES WITH LOW FIRE SWITCH

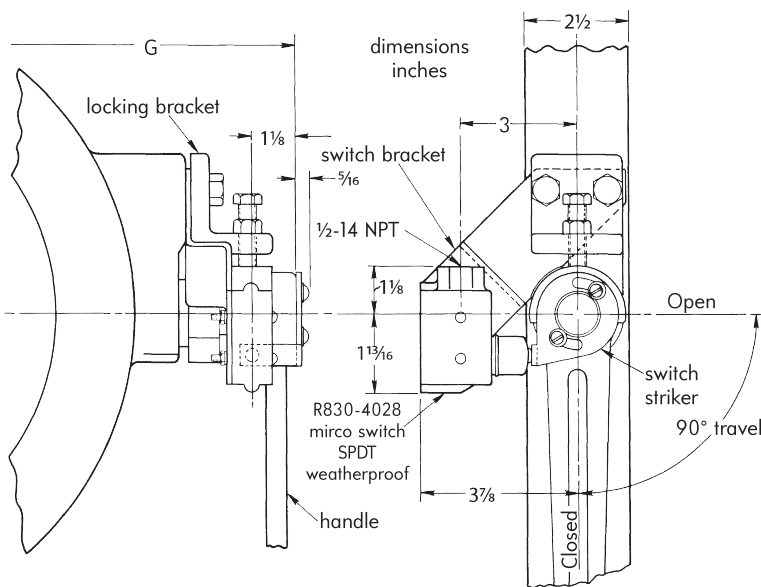


North American offers, as an Engineering special, any size 1145 or 1155 Manual Wafer Valve with low fire switch assembled. Add-on cost for the switch is a constant regardless of valve size. Dimensions and assembly are shown below for all valve sizes (refer to Bulletin 1136-56 for valve dimensions).

This special is ordered by giving valve designation along with corresponding assembly number, which is 2-6432-1 for valve sizes -6 through -8, and 2-6433-1 for valve sizes -9 through -24.

*Examples:* Special 1155-8 Valve complete with low fire switch per assembly 2-6432-1  
Special 1145-20 Valve complete with low fire switch per assembly 2-6433-1

### DIMENSIONS AND ASSEMBLY OF 1145 AND 1155-9 THROUGH -24 VALVES WITH LOW FIRE SWITCH



DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

**WARNING:** Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Components in combustion systems may exceed 160°F (71°C) surface temperatures and present hot surface contact hazard. Fives North American Combustion, Inc. suggests the use of combustion systems that are in compliance with all Safety Codes, Standards, Regulations and Directives; and care in operation.

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# North American 1146 and 1156 Wafer Valves Torque Requirements

Sheet 1146-2

## Maximum Torque Requirements Inch-Pounds

1146,1156 Valve Size		Upstream Pressure, psi							
		4	8	12	16	24	32	40	
-6	3"	70	70	70	70	70	70	70	
-7	4"	70	70	70	70	70	80	80	
-8	6"	70	70	80	80	90	100	100	
-9	8"	70	80	90	90	110	120	130	
-10	10"	80	90	100	110	130	150	170	
-12	12"	80	100	110	130	160	200	230	
-14	14"	90	110	140	150	200	240	280	
-16	16"	90	120	150	180	240	300	350	
-18	18"	100	140	180	210	290	360	430	
-20	20"	110	160	200	250	340	434	536	
-22	22"	130	180	230	290	405	530	656	
-24	24"	140	200	260	335	486	637	788	
DISCONTINUED	-30	30"	221	362	502	642	923	1204	1484
	-36	36"	597	924	1252	1579	2235	2890	3545
	-42	42"	806	1262	1717	2173	3083	3994	4905

### DRIVE MOTOR SELECTION PROCEDURE

Select wafer valve size based on required flow and allowable pressure drop in system.

Read maximum torque required to drive valve at air pressure to be used. Select drive motor having at least this much torque.

### NOTES

Table lists maximum torque required, which is a minimum for drive motor selection. Maximum torque occurs during opening, but may occur at different degrees of opening with different pressures and valve sizes.

Torque table is based on tests conducted with North American "code flow" burners (40-50 fps cold air velocity). Code assumes about one-sixth of the total pressure available is spent in pipe loss, another sixth in control valve drop, and the remainder in metering and burner orifices.

Table can be used for valves supplying single or multiple burners if pipe is properly sized. North American cannot supply torque data for higher velocities.

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## North American Resilient Seat Wafer Valves



### 1154A Resilient Seat Wafer Valves

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- Cast-in actuator flange is universally designed in accordance with ISO 5211 standard dimensions.
- Bi-directional stem seal suitable for pressure or vacuum.
- Stem seal and seat provide total isolation of body and stem parts from stream.