



Rentals • Sales • Leasing
24/7 • (800) 227-1966

75,000 pph Low NOx, 750 psig / 750°F Skid-Mounted Superheat Boiler

Nationwide Boiler's low NOx, 75,000 pph, 750 psig / 750°F design (350 - 650 psig operating) superheat steam, skid-mounted package O type Babcock & Wilcox watertube boiler is set to burn natural gas or #2 oil. It is fully piped and wired and includes the following components:

- Low NOx Burner
- EconoStak Economizer
- Burner Management System
- Parallel Positioning Combustion Controls
- Forced Draft Fan, Motor & Starter
- Complete Fuel Train & Pilot Ignition System
- Water Column & Site Glass
- Steam Pressure Gauge
- Low-water Cutoffs
- Safety Valves
- Feedwater Control, Stop & Check Valves
- Blowdown Valves
- Continuous Blowdown Metering Valve
- Chemical Feed Valve
- Steam Non-return Valve (loose)
- Stack (loose)
- NEMA 4 Electrical Enclosures
- Low NOx CataStak™ SCR System **(optional)**
- Weatherproofed (except for freezing)
- Meets FM, NFPA 85 & IRI Insurance Standards
- Operating Manuals with Drawings



Fuel Consumption:

Natural Gas: 109,000 SCFH

Connection Sizes:

Main Steam: 8"-600# FLG
 Natural Gas: 4"-150# FLG
 Feedwater: 2½"-600# FLG
 Bottom Blowdown: 1½"-600# FLG
 Continuous Blowdown: ¾" NPT
 Chemical Feed: ½" NPT
 Instrument Air: ½" NPT
 Water Column Drain: ¾" NPT

Electrical Power Service Requirements:

480 VAC, 3 ph, 60 hz, 250 AMPS

Boiler Base Dimensions & Weights:

Length / Width / Height: 25' 0" / 10' 0" / 14' 0"
 Shipping Weight: 143,300 lbs
 Operating Weight: 191,700 lbs

Emissions Data (natural gas):

NOx (corr. to 3% O₂): 30 ppm
 CO (corr. to 3% O₂): 50 ppm

Ask About Our **Green Solutions**

CataStak™
 Ultra Low NOx Solutions

EconoStak™
 Energy Saving Solutions

42400 Christy Street / Fremont, CA 94538 / (510) 490-7100 / www.nationwideboiler.com / info@nationwideboiler.com

True Nationwide Coverage & Beyond. Representatives Located Worldwide.



PREDICTED BOILER EMISSION DATA

NATURAL GAS FIRING

NBI MODEL NO	75-B&W-O-750 SH	
BOILER MFG AND MODEL	BABCOCK & WILCOX FMO-74	
BURNER MFG AND MODEL	TBD	
BOILER CAPACITY	75,000	
DESIGN PRESSURE, PSIG	750	
OPERATING PRESURE, PSIG	650	
STEAM TEMPERATURE, DEG F	750	
FUEL HEAT INPUT, MMBTU	109.0	
FUEL FLOW, SCFH	109,000	
FLUE GAS OUTLET TEMP, DEG F	350	
FLUE GAS FLOW, LB/HR	95,510	
FLUE GAS SPECIFIC VOLUME, CF/LB	21.3	
STACK OUTLET DIA., IN	57	
STACK OUTLET FLOW AREA, SQ FT	17.7	
STACK GAS EXIT VELOCITY, FPM	1,911	
STACK GAS EXIT FLOW, ACFM	34,045	
	PPMVD	#/MMBTU
NOx @ 3% O ₂	30	0.036
CO @ 3% O ₂	50	0.037
VOC @ 3% O ₂	10	0.004
PM10 @ 3% O ₂	-	0.010
EXCESS AIR, %	15	15

DATE: 3/31/15

NATIONWIDE BOILER INCORPORATED

42400 CHRISTY STREET, FREMONT, CA 94538-3141



PROPOSAL ARRANGEMENT
75,000 LB/HR, 750PSIG/750°F

INDEX OF DRAWINGS		
FMO-74-T-01	TITLE SHEET, INDEX OF DRAWINGS	REV. A
FMO-74-G-02	GENERAL ARRANGEMENT	REV. A
FMO-74-L-03	MECHANICAL LEGENDS	REV. A
FMO-74-F-04	PROCESS FLOW DIAGRAM	REV. A
FMO-74-I-05	PIPING AND INSTRUMENT DIAGRAM	REV. A

WARNING: DO NOT SCALE. DRAWING MAY BE REDUCED.		CONTRACT NO.		 Nationwide Boiler Incorporated 42400 Christy Street • Fremont, California 94538-3141 510/490-7100 • 800/227-1966 • FAX 510/490-0571
		APPROVALS	DATE	
DRAWN	JDA	01/07/15	PROPOSAL ARRANGEMENT DRAWING 75,000 LB/HR, 750PSIG/750°F TITLE SHEET/INDEX OF DRAWINGS	
DESIGN				
CHECKED			SIZE	FSCM NO.
ISSUED			D	DWG. NO.
			SCALE	NONE
			FILE NAME	Proposal-FMO-74
			SHEET	1 OF 1
			DWG. NO.	FMO-74-T-01
			REV.	A

8 7 6 5 4 3 2 1

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B

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A

A

TRAILER MOUNTED 75,000 LB/HR SUPERHEAT BOILER.

BOILER DATA:

CONTINUOUS CAPACITY	75,000 LBS/HR
DESIGN PRESSURE	750 PSIG
OPERATING PRESSURE	250 - 675 PSIG
STEAM TEMPERATURE	750°F
FEEDWATER TEMPERATURE	227°F
FURNACE VOLUME	1,077 CU. FT.
SUPERHEATER HEATING SURFACE	465 SQ. FT. (ASME)
TOTAL HEATING SURFACE	5,857 SQ. FT. (ASME)

FUEL REQUIREMENTS:

NATURAL GAS	
SUPPLY PRESSURE	15 PSIG REGULATED
CONSUMPTION	109,000 SCFH (WITH ECONO)
NO.2 FUEL OIL (BACK UP)	760 GPH @ 150 PSIG (WITH ECONO)
STEAM ATOMIZING	775 LBS/HR @ 70-90 PSIG

EMISSIONS (NATURAL GAS):

NOx	30 PPM @ 3% O ₂ (.036#/MKB)
CO	50 PPM @ 3% O ₂ (.037#/MKB)

UTILITY REQUIREMENTS:

ELECTRICAL POWER	480 VOLT AC 3PH, 60HZ, 250 AMPS (F.D. FAN 125 HP, OIL PUMP 5HP SEPARATE SKID)
INSTRUMENT AIR	25 SCFM @ 80 PSIG MIN. 100 PSIG MAX.

SHIPPING WEIGHT:

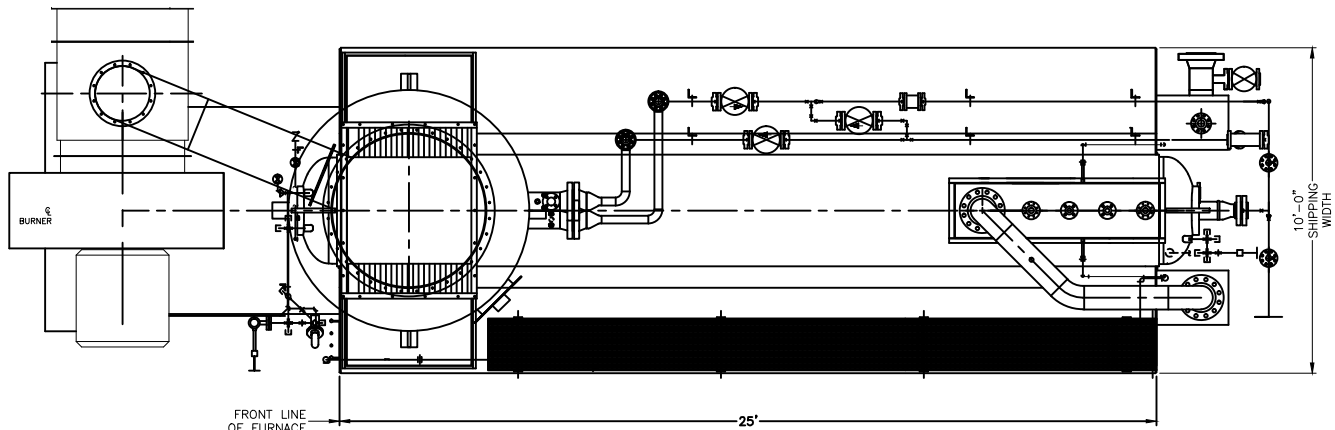
BOILER AND TRAILER	143,300 LBS
ECONOMIZER	15,900 LBS

FLOODED WEIGHT:

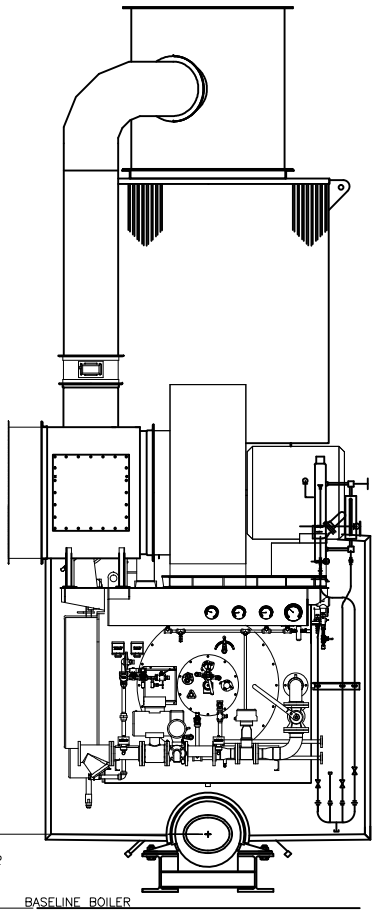
BOILER, ECON & TRAILER	191,700 LBS
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CONNECTIONS

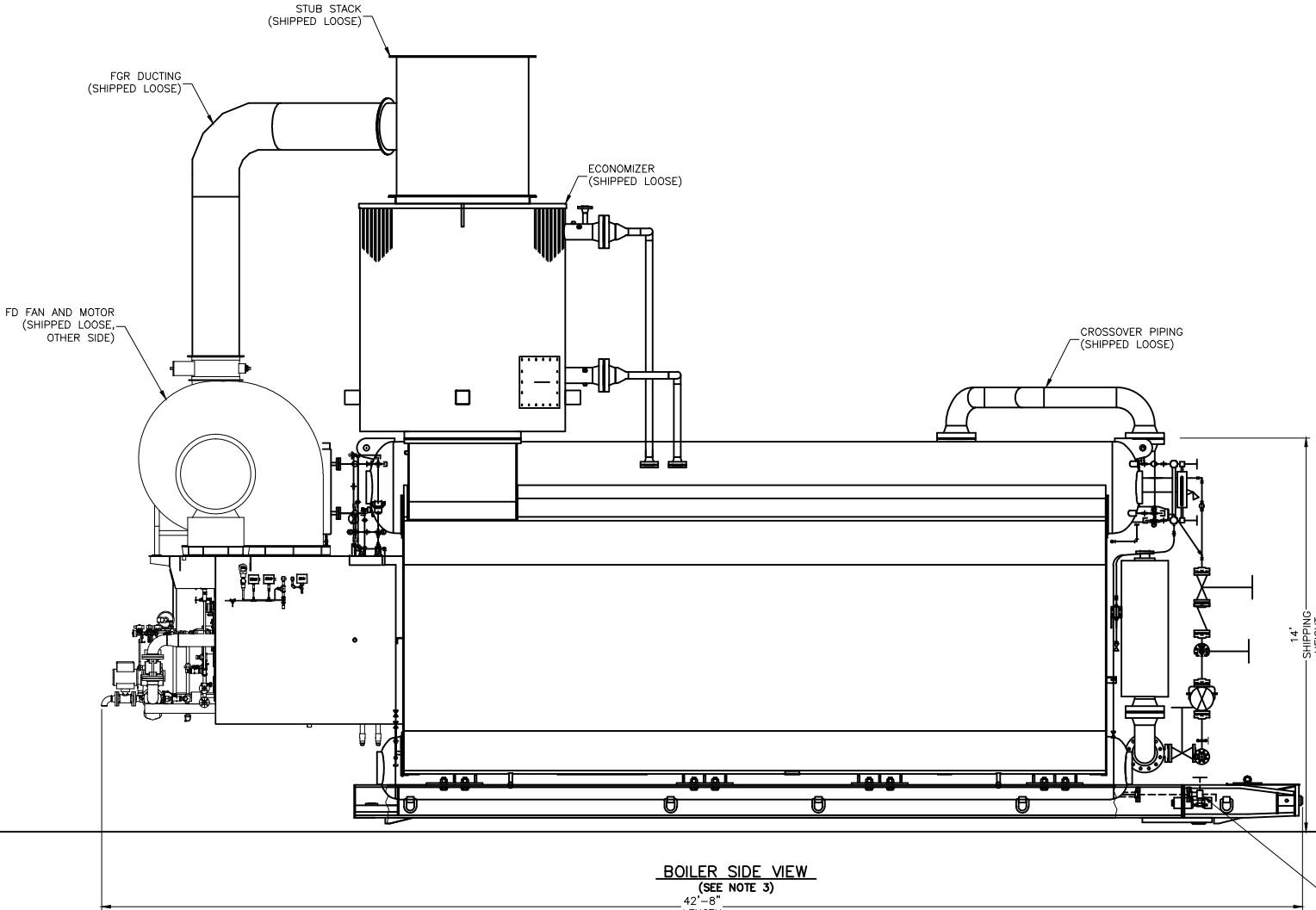
CB - CONT. BLOWDOWN	3/4" NPT
FO - FUEL OIL SUPPLY	1" NPT
AS - ATOMIZING STEAM	1" NPT
NG - NATURAL GAS	4" - 150# R.F.
I - INT. BLOWDOWN	1 1/2" - 600# R.F.
S - STEAM	8" - 600# R.F.
FW - FEEDWATER INLET	2 1/2" - 600# R.F.
CF - CHEMICAL FEED	1/2" NPT
IA - INSTRUMENT AIR	1/2" NPT
WC - WATER COLUMN DRAIN	3/4" NPT
SD - SUPERHEATER DRAIN	3/4" NPT (2)



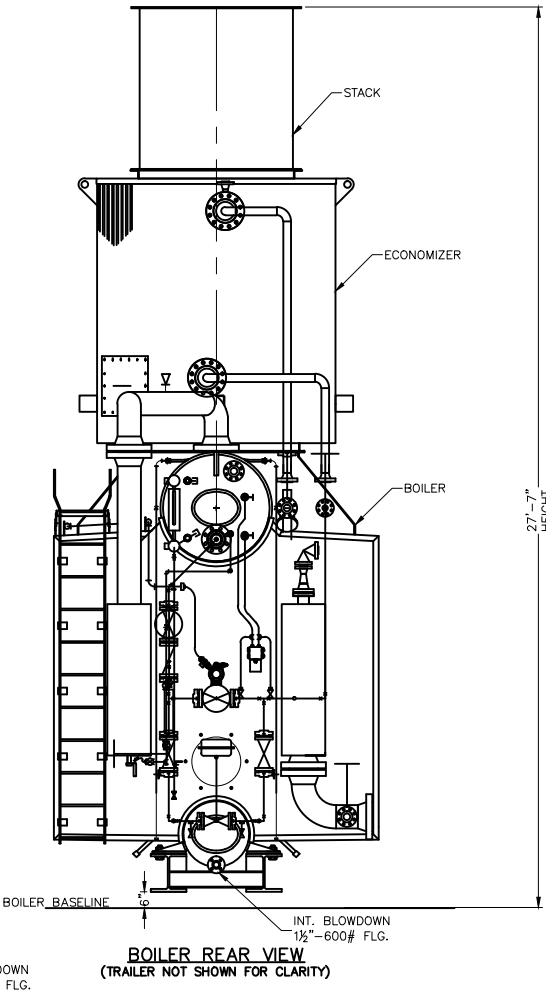
PLAN VIEW
(TRAILER NOT SHOWN FOR CLARITY)



BOILER FRONT VIEW
(TRAILER NOT SHOWN FOR CLARITY)



BOILER SIDE VIEW
(SEE NOTE 3)
42'-8"
LENGTH



BOILER REAR VIEW
(TRAILER NOT SHOWN FOR CLARITY)

NOTES:

- 1) UNIT TO BE COMPLETELY DRAINED PRIOR TO SHIPMENT.
- 2) GOOSE NECK AND RUNNING GEAR ARE REMOVABLE.
- 3) GOOSE NECK AND 4TH AXLE ARE REMOVED FOR CLARITY. FUEL OIL SKID NOT SHOWN BUT PROVIDED IF FIRING BOILER ON OIL.

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CONTRACT NO.

APPROVALS

DATE

DRAWN

JDA

01/07/15

DESIGN

CHECKED

ISSUED



Nationwide
Boiler Incorporated 42400 Christy Street • Fremont, California 94538-3141
810/480-7100 • 800/227-1966 • FAX 510/480-0571

PROPOSAL ARRANGEMENT DRAWING
75,000 LB/HR, 750PSIG/750°F
GENERAL ARRANGEMENT

SIZE FSCM NO.

D

DWG. NO.

FMO-74-G-02

REV.

A

SCALE

NONE

FILE NAME Proposal-FMO-74

SHEET 1 OF 1

8

7

6

5

4

3

2

1

8		7		6		5		4		3		2		1	
L E G E N D															
SYMBOL		IDENTIFICATION		SYMBOL		IDENTIFICATION		SYMBOL		IDENTIFICATION		INSTRUMENT DESIGNATION			
		GENERAL SYMBOLS				SELF-ACTUATED REGULATOR SYMBOLS				AIR ACTUATED SAFETY SHUTOFF VALVE		INSTRUMENT SHALL BE IDENTIFIED BY A SYSTEM OF LETTERS AND NUMBERS AS FOLLOWS: A. IDENTIFICATION LETTERS SHALL BE PER TABLE SHOWN BELOW B. ID NUMBER SHALL BE UNIQUE THE INSTRUMENT DESIGNATIONS SHALL BE: PROCESS VARIABLE (FIRST LETTER) READOUT OR PASSIVE FUNCTION (SUCCEEDING LETTER) OUTPUT FUNCTION (SUCCEEDING LETTER) ID NUMBER			
		EQUIPMENT IDENTIFICATION EQUIPMENT NUMBER				PRESSURE REDUCING REGULATOR, SELF-CONTAINED				AIR ACTUATED FLOW CONTROL VALVE					
		BREAK POINT INTERFACE BETWEEN VENDOR SKID MOUNTED SCOPE OF SUPPLY AND INTERCONNECTING PIPING				PRESSURE REDUCING REGULATOR WITH EXTERNAL PRESSURE TAP									
		INSTRUMENT FOR SINGLE MEASURED VARIABLE SYMBOLS (SYMBOL SIZE MAY VARY ACCORDING TO SIZE AND TYPE OF DOCUMENT)				ELECTRIC MOTOR									
		LOCALLY MOUNTED				MODULATING ELECTRIC MOTOR									
		PANEL MOUNTED				SOLENOID									
		MOUNTED INTERNAL TO CONTROL PANEL													
		RELATED ELECTRICAL AND CONTROL SYMBOLS				PRIMARY ELEMENT SYMBOLS									
		INTERLOCK LOGIC				PROPELLER METER		ABBREVIATION		EQUIPMENT IDENTIFICATION					
		ELECTRIC MOTOR DRIVE				REDUCER		A		AGITATOR					
		POWER CORD TO 110V AC RECEPTACLE				WYE STRAINER WITH BLOW-OFF VALVE AND PLUG		B		BOILER					
		INSTRUMENT LINE SYMBOLS				STEAM OR LIQUID TRAP		BNR		BURNER					
		INSTRUMENT AIR (PNEUMATIC)				DAMPER OR LOUVER		BT		BRINE TANK					
		MECHANICAL LINK				PILOT		CIP		CHEMICAL INJECTION PUMP					
		ELECTRIC SIGNAL				INJECTOR OR EDUCTOR		F		FAN					
		CAPILLARY TUBE				PIPING MATERIAL CLASS CHANGE		FI		FILTER/AIR INLET					
		HYDRAULIC				AIR DAMPER		FS		DEAERATOR OR FEEDWATER SYSTEM					
		BY N.B.I.				DESUPERHEATER		M		MOTOR					
		VALVE SYMBOLS				EQUIPMENT SYMBOLS		P		PUMP					
		SWING CHECK VALVE				FAN OR BLOWER		S		SOFTENER					
		STOP CHECK ANGLE VALVE (NON-RETURN)				MIXER OR AGITATOR		SC		SAMPLE COOLER					
		ANGLE VALVE				ACCUMULATORS, RECEIVERS, PRESSURE VESSELS ATMOSPHERIC TANK		SP		BLOWDOWN TANK					
		MAKE-UP LEVEL CONTROL OR FLOAT VALVE				CENTRIFUGAL PUMP		T		TANK					
		PRESSURE SAFETY, RELIEF OR SAFETY-RELIEF VALVE				FILTER/SILENCER		ABBREVIATION		PROCESS PIPING DESIGNATION					
		GATE VALVE				METERING PUMP		BFW		BOILER FEEDWATER					
		GLOBE VALVE				SAMPLE COOLER		CBD		CONTINUOUS BLOWDOWN					
		PLUG VALVE						CF		CHEMICAL FEED					
		NEEDLE VALVE						COND		CONDENSATE					
		BALL VALVE						CW		CITY WWATER					
		NORMALLY CLOSED VALVE						D		DRAIN					
		MANUAL OPERATED FUEL CONTROL VALVE						DG		DIGESTER GAS					
		COUPLING						FW		FEEDWATER					
		DIAPHRAGM VALVE						IA		INSTRUMENT AIR					
		BUTTERFLY VALVE						NG		NATURAL GAS					
								PROP		PROPANE					
								STM		STEAM					
								V		VENT					

IDENTIFICATION LETTERS PER ISA STANDARD ISA-5.1-1984 (R 1992)				
FIRST-LETTER		SUCCEEDING-LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL
D	DENSITY, (MASS)	DIFFERENTIAL		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	
F	FLOW RATE	RATIO (FRACTION)		
G	GAUGING (DIMENSIONAL)		GLASS, VIEWING DEVICE	
H	HAND (MANUALLY INITIATED)			HIGH
I	CURRENT (ELECTRICAL)		INDICATE	
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME, RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT (PILOT)	LOW
M	MOISTURE, HUMIDITY	MOMENTARY		MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION	
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION	
Q	QUANTITY, EVENT	INTEGRATE, TOTALIZE	INTEGRATOR	INTEGRATOR
R	RADIATION		RECORD	
S	SPEED, FREQUENCY	SAFETY		SWITCH
T	TEMPERATURE			TRANSMIT
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER
W	WEIGHT, FORCE		WELL	
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE 'OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT

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DESIGN			
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ISSUED			
SIZE FSCM NO.		DWG. NO.	
D		FMO-74-L-03	
SCALE NONE		REV. A	
FILE NAME Proposed-FMO-74		SHEET 1 OF 1	

