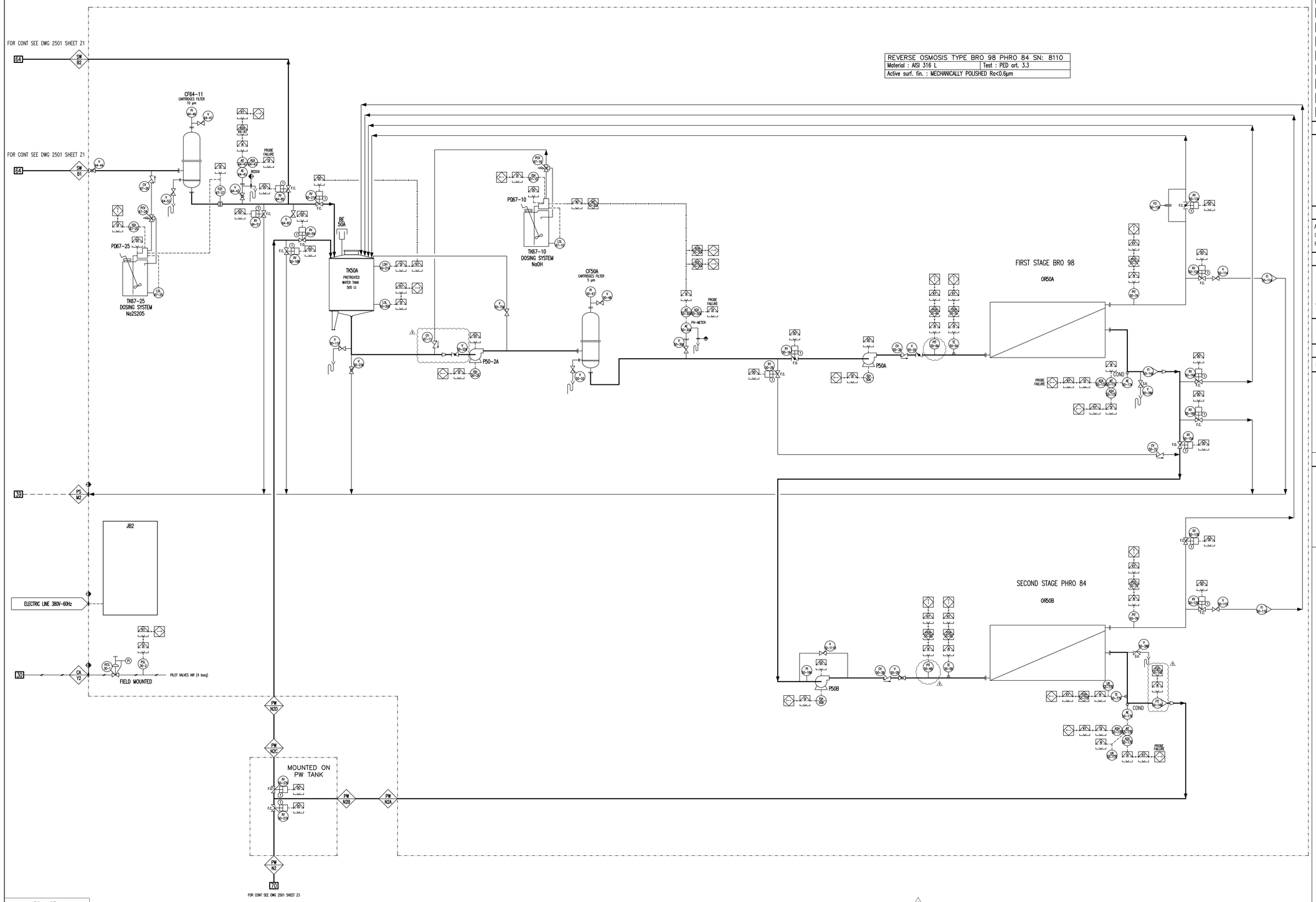

REVERSE OSMOSIS TYPE BRO 98 PHRO 84 SN: 8110	
Material : AISI 316 L	Test : PED art. 3.3
Active surf. fin. : MECHANICALLY POLISHED Ro<0.6µm	

FLUID LIST

01	P	-PROCESS	32	AT	-VENT
09	DW	-DEMI WATER	33	SO	-SODA
10	CWS	-COOLING WATER SUPPLY	38	SS	-SANITARY SEWER
11	MPS	-MEDIUM PRESSURE STEAM	39	PS	-PROCESS SEWER
12	LPS	-LOW PRESSURE STEAM	40	CWR	-COOLING WATER RETURN
13	UG	-UNCONDENSABLE GASES	44	GWS	-GLYCOLE WATER SUPPLY
14	CON	-CONDENSATE	45	GWR	-GLYCOLE WATER RETURN
15	WFI	-WATER FOR INJECTION	47	FW	-FIRE WATER
19	RW	-RAW WATER	48	HSW	-SANITARY HOT WATER
20	CS	-CLEAN STEAM	49	HS	-HUMIDIFICATION STEAM
26	CHWS	-CHILLED WATER SUPPLY	60	W	-POTABLE WATER
27	CHWR	-CHILLED WATER RETURN	64	SW	-SOFT WATER
30	CA	-COMPRESSED AIR	70	PW	-PURIFIED WATER
31	N	-NITROGEN			

LINES IDENTIFICATION

PROCESS LINES
AUXILIARY UTILITIES LINES
PNEUMATIC LINES
ELECTRIC LINES
PLC LINES

LINE SIZE
FLUID CODE
LINE CLASS
INSULATION CLASS

25-PW-10-HC

INSULATION CLASS

AS - ANTI-SWEAT
CC - COLD CONSERVATION
HC - HEAT CONSERVATION
NI - NOT INSULATED
PP - PERSONNEL PROTECTION

LINES CLASS

10 - 316L TUBING EP
11 - 316L TUBING MECH
12 - POLYVINYL CLORIDE
13 - 304L
14 - CARBON STEEL

GENERAL SIMBOLS

SUPPLY LIMITS
CUSTOMER STILMAS

DIRECTIONAL ARROW
PACKAGE BATTERY LIMIT

X
Y
FLUID CODE
TIE IN IDENTIF. CODE

= INTERLOCK - STOP PLANT ALARM MESSAGE BUZZER

ON/OFF VALVES DETAIL #1

FLOWSHEET SYMBOL — ACTUAL HOOK-UP DESCRIPTION

XV
F.C./F.O.

PLANT AIR SUPPLY

SPRING RETURN TO AN OPEN OR CLOSED FAILURE POSITION ON AIR OR ELECTRICAL FAILURE.

REGULAT VALVES WITH INTERNAL I/P OR POSITIONER DETAIL #3

CV
F.C./F.O.

PLANT AIR SUPPLY

SPRING RETURN TO AN OPEN OR CLOSED FAILURE POSITION ON AIR OR ELECTRICAL FAILURE.

FO LIST	
FO	DIAM
FO50-13A	Ø mm

TIE IN	LINES IDENTIFICATION	CONNECTIONS	FLOW RATE	TEMP. °C	PRES. Barg
N2	40-PW-11-NI	1"1/2 TRI-CLAMP	3500 Lt/h	20	0.5
N2A/B	40-PW-11-NI	1"1/2 TRI-CLAMP	3500 Lt/h	20	0.5
N2C/D	40-PW-11-NI	1"1/2 TRI-CLAMP	3500 Lt/h	20	0.5
B1	40-SW-11-NI	1"1/2 TRI-CLAMP	5900 Lt/h	18	2
B2	25-SW-11-NI	1" TRI-CLAMP	3000 Lt/h	18	1.5
M2	65-PS-11-NI	2"1/2 TRI-CLAMP	5900 Lt/h	18	ATM
Y2	6-CA-_-NI	QUICK RELEASE CONNECTOR Ø6mm	20 Nl/h	AMB	MIN 6

INDUSTRIA BIOFARMACEUTICA
REVERSE OSMOSIS BRO98 - PHRO84

REVISION	DATE	DESCRIPTION	ISSUED BY
2	02-09-2010	APRET FAT	U.T.
1	29-06-2010	GENERAL REVISION	Roberto
0	17-05-2010	ISSUED FOR APPROVAL	Roberto

INDEX OF REVISIONS

APPROVALS of this document are in accordance with ISO 9001:2000 Stilmas Quality Management System : PRO 7.3, IST 7.7, MD 71

LEGALY, THE PRESENT DRAWING CAN NOT BE REPRODUCED OR GIVEN TO THIRD PARTY OR MADE PUBLIC WITHOUT OUR PREVIOUS WRITTEN AUTHORIZATION

P. & I. D.

STILMAS S.p.A.

DATE	23-10-2009	SHEET	Z2 OF Z8
MATER.	-		
SCALE	-	REF.	JOB Nr.09/C001
N.PIECES	-		
DRW.	Roberto	DRAWING N.	2501
FILE			