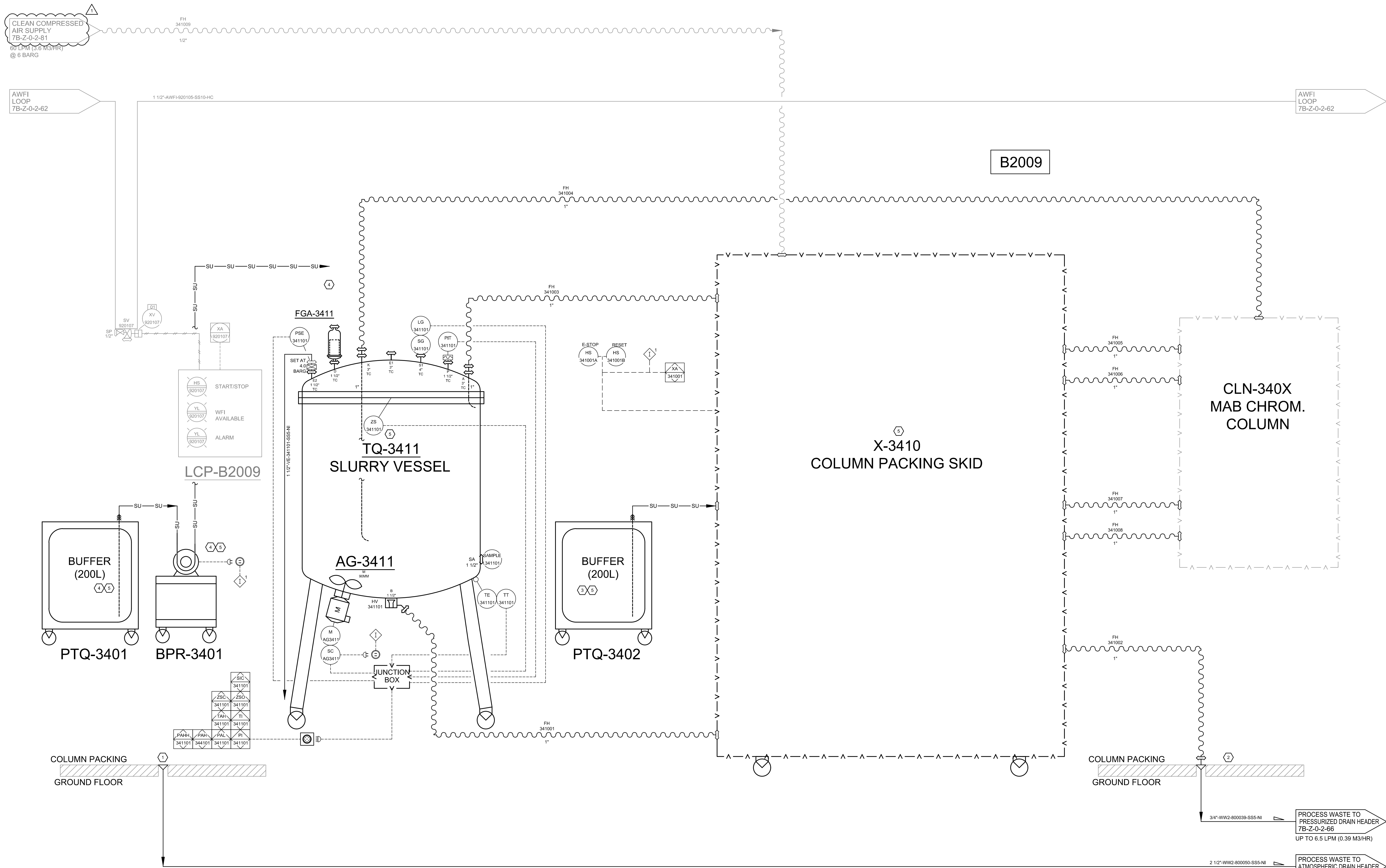


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**X-3410**  
COLUMN PACKING SKID  
TYPE: A000, AUTOMATIC, PORTABLE  
CAPACITY: 2 PUMP  
MANUF/MODEL: SARTORIUS / AUTOPAK  
MOC: 316L SS

**TQ-3411**  
SLURRY TANK  
TYPE: PORTABLE, ATM., CONICAL BOTTOM / FLAT TOP  
CAPACITY: 150L WORKING  
SIZE: 600 mm ID, 600 mm TT, 200 mm CON.  
MOC: 316L SS  
RATING: N/A

**PTQ-3401**  
BUFFER PALLETANK  
TYPE: NON-JACKETED, PORTABLE  
CAPACITY: 200L  
SIZE: 860mm x 660mm x 929mm  
MOC: 304L SS / SILICONE BAG

**BPR-3401**  
BUFFER PUMP  
TYPE: PERISTALTIC  
CAPACITY: UP TO 4 LPM  
MANUF/MODEL: WATSON-MARLOW / 530  
MOC PUMP/TUBING: 316 SS ROLLERS / SILICONE  
PWR: 135 VA, 1/60/380 DC, NEMA 4X CASING

**PTQ-3402**  
BUFFER PALLETANK  
TYPE: NON-JACKETED, PORTABLE  
CAPACITY: 200L  
SIZE: 860mm x 660mm x 929mm  
MOC: 304L SS / SILICONE BAG

*Robert L. De Souza Jr.*  
**ISSUED FOR  
CONSTRUCTION**

SEAL  
THIS IS NOT A  
SEALED DOCUMENT  
DATE: \_\_\_\_\_

#### GENERAL NOTES:

1. ALL COMPONENT & EQUIPMENT NUMBERS ARE PRECEDED BY "7B" TO REPRESENT THE BULK DRUG SUBSTANCE (BDS) BUILDING.
2. ALL AUTOMATIC VALVES FAIL CLOSED (F.C.), UNLESS NOTED FAIL OPEN (F.O.).
3. ALL PLC/COMPUTER CONNECTIONS ARE WITHIN THE PCS UNLESS OTHERWISE NOTED.
4. LAST LINE NUMBER: NONE
5. LINE NUMBER NOT USED: NONE
6. LAST AUTO VALVE NUMBER: NONE
7. AUTO VALVE NUMBERS NOT USED: NONE
8. LAST MANUAL VALVE NUMBER: NONE
9. MANUAL VALVE NUMBERS NOT USED: NONE

#### SHEET NOTES

1. NORMALLY A SEALED DRAIN, OPENED IN THE EVENT OF A SPILL.
2. NORMALLY A SEALED DRAIN, CONNECTED TO EQUIPMENT FOR PROCESS WASTE DRAIN.
3. BUFFER PALLETANK USED FOR EITHER RB BUFFER OR OH BUFFER.
4. BUFFER PALLETANK AND PERISTALTIC PUMP USED FOR BUFFER ADDITION TO SLURRY TANK. SINGLE-USE DISPOSABLE TUBING FROM PALLETANK CONNECTED TO SLURRY TANK AT NOZZLE BEFORE COLUMN PACKING OPERATION.
5. UTILITY CONNECTIONS, ANCILLARY EQUIPMENT AND FLEXIBLE HOISING ARE SHARED BETWEEN ALL EQUIPMENT IN COLUMN PACKING.

#### INTERLOCKS

1. SAFETY INTERLOCK - E-STOP ACTIVATION REMOVES POWER SUPPLY TO PROCESS SKID TO AND REMOVES POWER SUPPLY TO RECEPTACLES (HARDWIRED).

**ips**

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REVISION	DATE	DESCRIPTION	BY
A	28MAY2020	80% BD ISSUE	JJR
B	27NOV2020	DESIGN ISSUE	JJR
C	12FEB2021	90% DO ISSUE	RLD
D	05MAY2021	90% DO ISSUE	RLD
E	02SEP2021	CONSTRUCTION ISSUE	RLD
F	02DEC2021	REVISED CONSTRUCTION ISSUE	RLD

**TESSLER**  
engenharia

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#### REVISION HISTORY

1. REV. 1 - UPDATED COMPRESSED AIR OFF PAGE CONNECTOR TO BE "CLEAN COMPRESSED AIR" INSTEAD OF "COMPRESSED AIR (INSTRUMENT)" AND UPDATED DRAWING NUMBER TO 7B-Z-0-2-61 INSTEAD OF 7B-Z-0-2-72.

#### CONFIDENTIAL

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CLIENT

**Takeda**

**Hemobrás**  
Empresa Brasileira de Hemoderivação e Transfusão de Sangue

**BURITI EPCMV**

DRAWING TITLE

**P&I DIAGRAM  
DRUG SUBSTANCE  
COLUMN PACKING SKID  
X-3410**

ENGINEER	ARCHITECT	DESIGNER	IPS PROJECT #
JJR	BJE	RBN	ITD19439.01
DRAWN BY	REVIEWED BY	SCALE	CADD FILE NAME
RBN	GJC	NONE	7B-Z-0-2-32

XREF FILE(S)

DRAWING NUMBER

**7B-Z-0-2-32**