

GRIFOLS
ENGINEERING
WE
KNOW
HOW



PBO
PLASMA
BAG
OPENER

GRIFOLS



PBO PLASMA BAG OPENER



GRIFOLS ENGINEERING'S PLASMA BAG OPENER (PBO) IS DESIGNED TO PERFORM THE FOLLOWING TASKS. FIRST, THE MACHINE PERFORMS A SKIN-THAW ON THE FROZEN PRODUCT TO CREATE A LIQUID FILM INSIDE THE BAG. THE OUTER SURFACE OF THE BAG IS THEN RINSED WITH FRESH DI WATER OR WFI, REMOVING ANY PARTICLES ADHERED TO IT. THE PBO, NEXT, DRIES THE OUTER SURFACE OF THE BAG TO START THE MANUFACTURING PROCESS. WITH A ROBOTIC SYSTEM, THE PLASMA BAG IS CUT AND THE PLASMA IS THEN REMOVED FROM THE BAG AND TRANSFERRED INTO THE PROCESS TANK.

THE AUTOMATED PLASMA THAWING AND BAGS EMPTYING PROCESSES OFFER MAXIMUM SAFETY AS PLASMA IS NOT HANDLED BY THE OPERATOR WHILE THE BAGS ARE OPEN, THEREBY MINIMIZING POSSIBLE EXTERNAL CONTAMINATION AND ALSO REDUCING COSTS AND INCREASING PERFORMANCE.

MAIN FEATURES

· Machine parts:

- 1. Thawing tunnel:** Thawing of bags through recirculating hot purified water.
- 2. Washing station:** Rinsing with purified water.
- 3. Drying unit:** bags are dried by means of air jet.
- 4. Cutting and Emptying:** Bags cutting and opening mechanically performed by robot (safety system for the operator).
- 5. Automated Emptying system:** Checking of the proper placement of the bags.
- 6. Control:**
 - PLC Control for traceability.
 - Optional connection to plant control system.

- Nominal throughput up to 900 bags/hour.
- Maximum security: automated opening and emptying of plasma bags. Avoids human contamination.
- Loading of completely frozen plasma bags.
- Robot suitable to work in clean areas.
- Possibility to connect the machine to a shredder for empty bags.
- Drastic bioburden reduction.
- User friendly human machine interface control.
- Sanitary construction. cGMP design.
- CE mark, UL, ASME
- Complete documentation DQ/IQ/OQ





**GRIFOLS WE
ENGINEERING KNOW
HOW**

ENGINEERING

PROJECT MANAGEMENT
BIOTECH PROCESSES
GENERAL PROCESSES
IV SOLUTIONS PLANTS

MACHINERY

TAILOR-MADE SOLUTIONS
PHARMACEUTICAL ROBOTICS
STANDARDIZED PROCESSES

CONSULTING

ANALYSIS OF REGULATORY REQUIREMENTS
TECHNICAL STUDIES
TECHNICAL TRAINING



GRIFOLS

Grifols Engineering, S.A.

C/Palou 6, 08150 Parets del Vallès - Barcelona - SPAIN - Tel. [34] 93 571 00 42

Grifols Engineering USA

2410 Lillyvale Avenue, Los Angeles - California 90032 - USA

8368-US Hwy 70 West, Clayton- North Carolina 27520 - USA - Tel. +1(919)359-7842

info.ge@grifols.com - www.grifolsengineering.com

