

IDC Ergoloader Single SD PGV



Overview

IDC's 300mm Single SD (Static Docking) Person Guided Vehicle, the Ergoloader, is designed to facilitate the manual intrabay transfer of 300mm FOUPs between stockers and process tools within a bay. It is an ergonomically correct device that allows operators to safely handle 300mm FOUPs that typically weigh up to 8 Kg each. The PGV can easily interface with any process tool that conforms to the SEMI E15.1 loadport standard, and is equipped with a SEMI E83 compatible PGV docking Fork. Typical applications for PGV loading within a fab include: Metrology Steps, Engineering/Hot Lots, Intrabay AMHS back-up (Hoist Fail-over), and Low Throughput Manual Bays.

Features:

Single Static Docking Design for one FOUP Held at 900mm Height Minimizes Operator Work Exertion

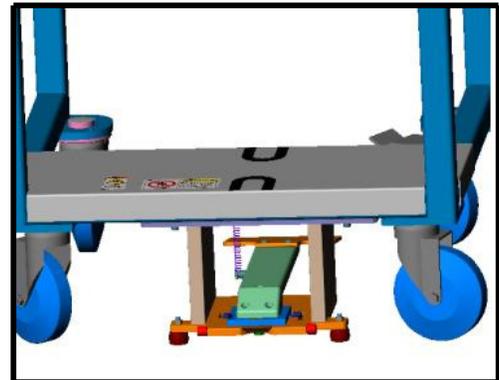
Ergonomic Loading Device with Cam Actuated Z Motion for Efficient FOUP Transfer

Easy to Maneuver Push Vehicle with FOUP facing forward

Easy Nose-In Docking to right and left with Self Aligning and Latching mechanism

Vibration Absorbing system and "Zero" Turning Radius for Easy and Safe Transport

Class 1 Cleanroom Compatible Design with Electro-Polished Stainless Steel Surfaces Provide Easy Cleaning



I.D.C. INDUSTRIES DEVELOPMENT CORPORATION (1996) LTD.

New Industrial Park, Hamada 5 St. P.O.B. 642, Yokneam 20692, ISRAEL

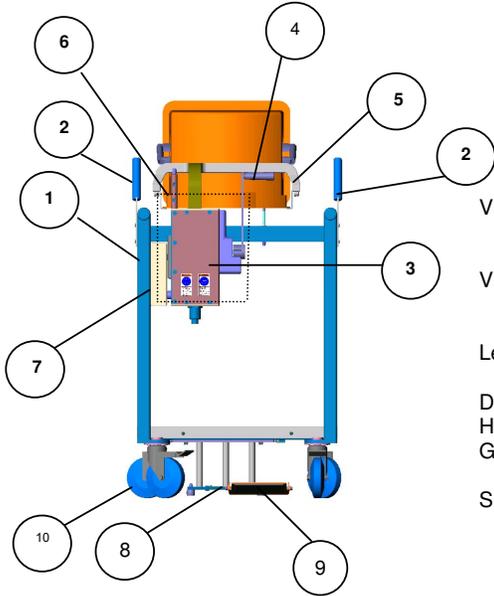
Tel: 972-4-909-8000 Fax: 972-4-909-8001

Web: www.idc-rd.com E-mail: idc@idc-rd.com

Information in this document is subject to change without notice.

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System Specifications



Vehicle Configuration

Vehicle type:	Single FOUP Docking Fork and Transfer Mechanism
Vehicle Weight:	65Kg Without Counter Weights 54Kg Light 47Kg
Length:	0.610m + 0.050m Extended Docking
Depth:	0.660m
Height:	1.260m
Gripper type:	Passive, Conveyor Rail Gripper
Safety Systems:	Designed to meet S2/CE

Performance

Payload:	300mm FOUP
Docking Cycle Time:	5 sec
Transfer Cycle Time:	8 sec
UnDock Cycle Time:	2 sec

DESCRIPTION	ITEM #
CART	1
PUSH HANDLES	2
Z-BOX	3
Z-LEVER	4
TRANSFER GRIPPER	5
X- HANDLE	6
TRANSFER MECHANISM	7
DOCKING FORK	8
DOCKING REALESE PEDAL	9
WHEELS/CASTORS	10

Facility Requirements

Electrical Power:	None
Floor Loading:	Vehicle 65 Kg
Loadports:	SEMI E15.1 E64-0698
Docking Flange:	SEMI E83-0699

PGV Operation:

1. Push PGV along bay, Stopping Close to Process Tool Loadport
2. Perform Dock and Loading Operations:
 - 2.1 Push Vehicle toward Loadport, Aided by Alignment Marks Until Docking Mechanism Latches onto the Docking Bar
 - 2.2 Swing Cam Arm Through 90° to Lift FOUP
 - 2.3 Push FOUP Carriage, Extending FOUP Over Loadport KC
 - 2.4 Release Cam Arm 90° Lowering FOUP Onto Loadport KC
 - 2.5 Pull FOUP Carriage Back Over PGV Platform
3. Press Docking Release Pedal, and simultaneously pull PGV back from Tool.