



TALON® II FAIL-SAFE

TAL-II SERIES

WAFER EDGE-GRIPPING SMART END-EFFECTORS

FEATURES

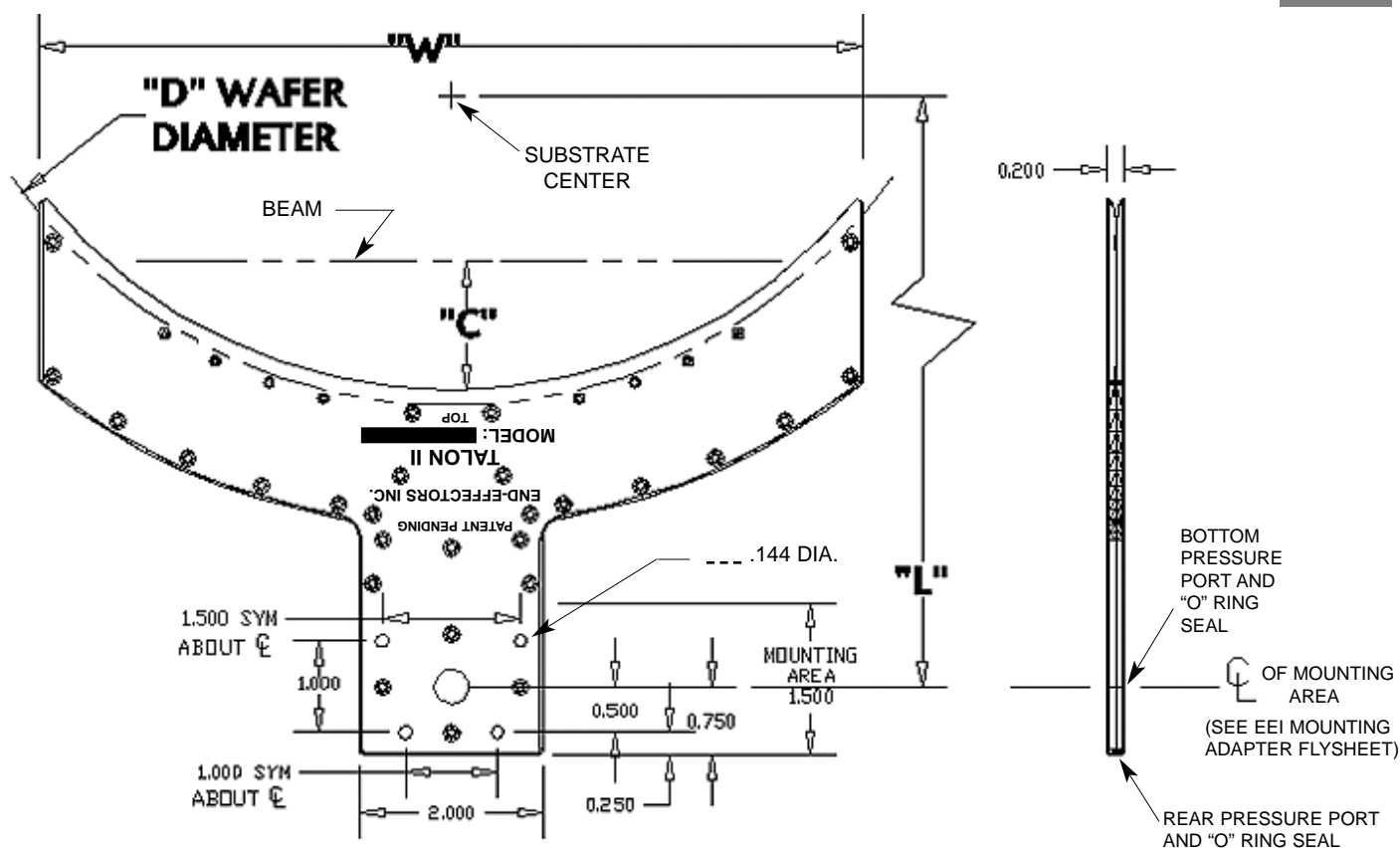
- Surpasses Semi® Specs
- Operates in vacuum and atmosphere
- 100% fail safe, won't drop wafer
- No backside contamination or damage
- Electro-static dissipating
- Optical wafer sense
- Holds flatted & non-flatted wafers
- Works with any wafer carrier
- Adaptable to any robot
- High holding forces - 5G min.
- Light weight construction
- High speed operation
- Patents pending

The TALON® II series of 1mm edge gripping, pressure driven, end-effectors are supplied in configurations for 100 to 300 mm wafers. The TALON® II is designed as a *fail-safe* end-effector which surpasses Semi® specifications for non-intrusion, edge gripping, wafer handling. The TALON® II operates on 30 to 60 psi of dry nitrogen which permits operation in *both atmosphere and vacuum chambers*. The fail-safe feature is standard on the TALON® II and will retain the wafer being transported in case of *any* catastrophic system failure. The TALON II® provides a minimum 5 "G" holding force which translates into faster operating speeds for robots. Positive holding, fast operating speeds, operation in atmosphere or vacuum and no back-side contamination all come standard with the TALON® II. The TALON® II also negates failures from inadequate vacuum supplies and small system leaks. As with the TALON® I, the TALON® II can signal the robot when safe or unsafe wafer positioning conditions exist, this is a standard supplied feature which can be employed at the user's discretion. Additionally the TALON® II can be supplied with photonic non-contact sensors to determine wafer presence and exact location as well as an ESD dissipation system which will discharge static electric charges without damage to the device being handled.

EEI END-EFFECTORS, INC.

1230 Coleman Avenue, Santa Clara, California 95050-4338
408/727-0100 FAX 408/727-2100 www.fjaind.com

"Giving Robotics A Hand"



PART NUMBER FORMAT: TAL - II - VERSION - PORTING - OPTIONS

EXAMPLE: TAL - II - 300 - 1 - ES - PS

TYPE: FAIL-SAFE, PRESSURE DRIVEN: The fail safe configuration assures that the product being handled is always held securely even though the drive system may fail. The pressure drive permits operation in atmosphere and vacuum. This configuration requires a custom pressure application routine which

is essentially the inverse of a vacuum clamping end-effector routine.

DASH NO.	D	L		W
-100	4.00in./100mm	5.039in./128.0mm	3.00in./76.2mm	
-125	5.00in./125mm	5.532in./140.5mm	4.00in./101.6mm	
-150	6.00in./150mm	6.023in./153.0mm	5.00in./127.0mm	.557in./14.2mm
-200	8.00in./200mm	7.007in./178.0mm	6.00in./152.4mm	.676in./17.2mm
-300	12.00in./300mm	8.976in./228.0mm	9.00in./228.6mm	

PORTING: -1 = Bottom location; -2 = Rear location

OPTIONS: ES — The ES option designation signifies an Electro-Static-Discharge (ESD) System which is built into the Talon end-effector; This system permits the slow discharge of static electricity by contacting the wafer's edge and routing the charge through a dissipation resistor to ground.

PS — The PS option designation signifies a Photon Sense System which is built into the Talon end-effector. This system permits the visual interrogation of the wafer storage or holding device for wafer presence and location. The sensor is located on the Talon's clamping center-line and can also be used for positioning.