

[CatalogNo.] IB90E240620C

## **Thruster Disc Brake Features:**

Spring applied, electro-hydrically release **IB35 type** disc brake are provided with the brake pad-wear SSC (Self syncronized compensator) except IB30V.

### •SSC(Self Synchoronize Compensator)

Ican has developed a auto centering device, that is mechanically linked with the AWA (Automatic Wear Adjustor). These inter-linked systems work continuously to maintain both the right and left brake pad air gaps and to insure sufficient thruster reserve stroke. Benefits include longer optimum brake pad life and optimum braking performance.

# •Significantly less impact when braking

Much less impact when the brake is applied mpact noise nuiisance is without. Consequently the adverse effect of impact to the brake body and associated equipment is suppressed.

## • Stable brake torque

Compared to the curved friction surface of the drum brake, the flat friction surface effectively discharges abrasion powder during operation, minimizing the decrease of brake friction and providing a stable braking performance.

#### High peripheral speed of brake disc allowable

The high thermal conductivity of the lining provides improved heat dissipation and prevents the deterioration of the brake friction, accordingly supporting high peripheral speeds.



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## Summary

The worldwide trend continues towards a change from drum brakes to disc brakes. From diverse industrial applications to container handling crane, disc brakes continue to outlast and outperform other brakes.

Known around the globe for its built-in safety features, Ican Super-Stop disc brake remains the choice of major manufactures of transportation systems and industrial equipment around the globe.

## SSC Features (International Patent Pending)

1 Elimination of routine air gap adjustments

2 Maintains stable braking performance

③ Prevents uneven brake lining wear and disc damage ④Extended lining life

## IB35 series Ican Super-Stop Disc Brake Main Design Features - The Basis for Reliability

- 1. Equipped with Automatic Wear Adjustment device. (AWA) 7. Thruster brake release for 3-phase AC supply.
- 2. Adoption of SSC as standard
- 3. Quick responce of bake comparable to magnetic brakes attained.
- 4. All component parts designed for maximum durability.
- 5. High durability and stable operation owing to oil-free and long-life bushings in important swinging parts
- 6. Non oil required lublicating bushings used for other swing parts.

### **Ease of Maintenance**

- 1. Easy replacement work of linings thanks to streamlined design
- 2. Simple and straight design ensure reduction of half of normal required maitenace work
- 3. Simple initial setting and adjustment

#### Optional items for increase safety

- 1. Equipped with Manual release Device (MRD)
- 2. Brake monitoring system (IMS) for automatic and or unmaned operation of cranes, and labor saving of maintenance 2-1 Brake pad (lining) wear sensor
  - 2-2 Thruster stroke sensor
  - 2-3 Brake pad (lining) temperature sensor
- 2-4 Brake force sensor 2-5 Sensor for opening detection
- (limit switch or proximity switch)
- 3. Manual opening sensor (limit switch or proximity switch)
- 4. Microcomputer control system for deceleration and stop position control

### Ican Service & Maintenance Network

The consistent production system from engineering to parts inventory is applied , and a reconditioning service system is established so that Ican disc brakes can always function safely and reliably. Reconditioning is recommended every 3 to 5 years subject to operating conditions. Same time rental brakes necessary for reconditioning work time is available.

- 8. Sintered metal brake linings for high speeds.
- 9. Thruster can be installed horizontally for industrial vertifcal-motor
- 10.Enclosed adjustable brake spring with torque scale.
- 11. Precise torque selecyion for verious requirment
- 12. Available for either left and or right hand use

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[CatalogNo.] IB95E240510C

## How to select the size of Brake and Disc

- 1. **d4>A** 
  - d4 is the allowable space diameter for hub diameter A.

A is determined by shaft diameter on gear box or motor shaft. When select ensure d4 is greater than A.

- 2. Safety factor : SF
  - (2-1) 2.0 to 3.0 for hoisting
    - A safety factor of at least 2.0 is recommended for hoisting on a one disc one brake set up.
    - When using a 2-brake system we recommend a safety factor of 3.0 to be used.
    - e.g. Each brake has a safety factor 1.5
    - SF=2.0 to 3.0 for hoisting
    - 2.0: Normal hoisting (one disc with one brake)
    - 3.0: Two brake on one disc (when dynamic emergency test stop required by one of two brakes)
  - (2-2) 1.5 or more is recommended for trolley drive and gantry travelling. In case of limited stopping distance for trolly and or travelling additional operational data concerned will be helpful for examination.
- 3. Select the diameter of the brake disc
  - The diameter of the brake disc of approximately same as taht of the driving motor is recommended.
- 4. When attempting to chose brake and disc for use on buckets and conveyors, specialist technical advises are avilable from ICAN.

Reference : Motor Torque on motor shaft = ( 9550 x kW ) / RPM [Nm]

- kW : Motor Power RPM : Motor Speed
- Actual torque on motor shaft = (F x D) / (2 x i ) [Nm]
- ${\sf F}$  : All rope tension on rope paid out fron drum  $[{\sf N}]$
- D: Diameter of the drum i : Gear Ratio

## Layout Drawing (Thruster)





## Thruster Disc Brake IB35-11

[CatalogNo.] IB35175E240620C



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## Thruster Disc Brake IB30V-111

[CatalogNo.] IBV160E230330C



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## Thruster Disc Brake

[CatalogNo.] IB35115E230330C



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[CatalogNo.] IBV155E230330C

**IB30V-131** 

**IB30V-132** 





					Type of	Brake	IB30V-131	IB30V-132	
					Type of	Thruster	25	33	
					Weigh	ıt (kg)	45	50	
		Dim	Brake Troque (Nm)						
d2	b1	d1	d4	е	k1	CE	Mbrmax		
200	12	150	60	75	15	565	200	300	
225	12	175	85	88	28	565	230	350	
250	12	200	110	100	40	565	260	400	
280	12	230	140	115	55	565	300	460	
315	12	265	175	133	73	565	350	530	
355	12	305	215	153	93	565	400	610	
400	12	350	260	175	115	565	460	700	

#### Type of Brake example : IB30V-131-25-200x12-1R

		Thruster Type	-	Disc dia. (d2) mm	×	Disc thickness (b1) mm	-	Thruster layout			
								Disc shaft direction	Electric outlet direc.	Layout No.	Left or Right
Brake Type	-										
	1							Vertical	Parralel to disc surface	1	LorR
IB30V-131	-	25	-	200	Х	12	-		1		R

[Option] ◎Automatic Wear Centering Device (ACD) ◎ Manual Release Lever (MRD) ◎ Sensor for Release Monitoring ◎ Sensor for Brake Lining Wear Monitoring

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