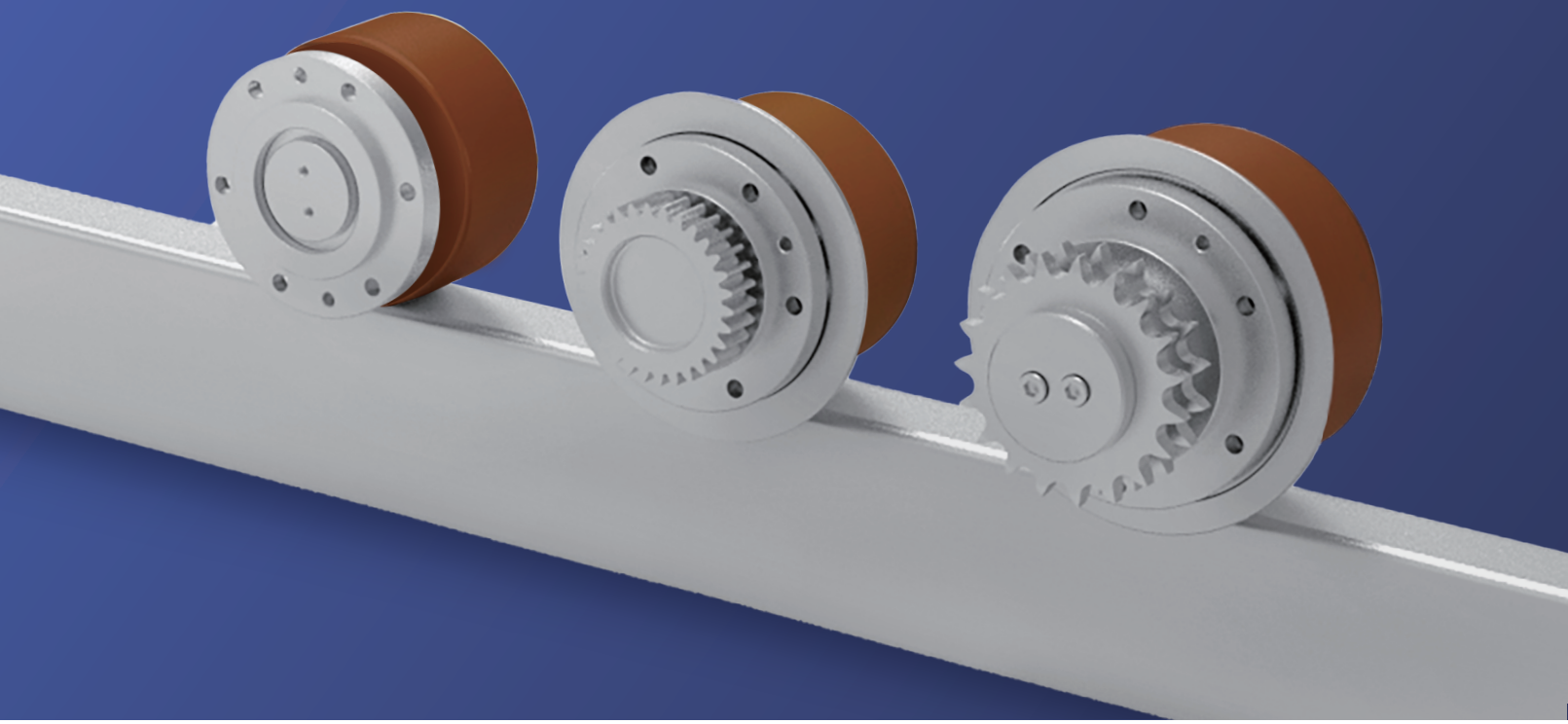
Reliable series products

www.thb-bearings.com



THB Integrated Wheelset

WSD, WSN Series Products

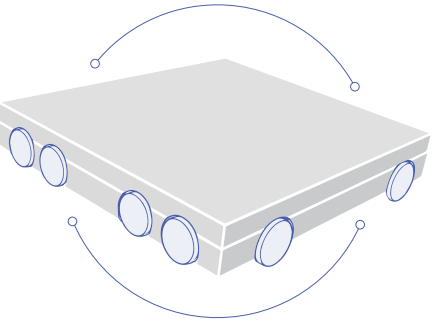
Easy Product Selection

Simple Installation

THB Integrated Wheelset
WSD, WSN Series Products

Application Conditions

Designed for 1-5 t standard and customized four-way shuttles



Combined with high-speed and high-acceleration operating scenarios

Application Challenges

- Combined loads
- Continuous operation
- Reciprocating motion, Rapid start/stop, Hard brake

Common Issues

- High overall costs
- Outer PU wheel wear
- Complex wheel structure with multiple parts, complicated installation and replacement

01. Product Features & Customer Benefits

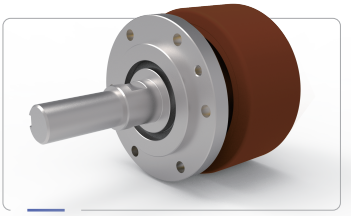
Product Features	Customer Benefits
Dedicated bearings selected for the wheel unit, with a load capacity of up to 5t.	Easy selection: No additional bearing verification required by the user
The wheel unit adopts a minimalist and compact integrated internal design with standardized structural interfaces and standardized wheel dimensions.	Easy installation: Simple mounting, minimal procedures, less failure risk from installation and lower time cost.
Wheel made of NDI for superior wear resistance and extended life cycle.	Integrated Unit: Higher stability and longer service life, ensuring long-term stable operation of four-way shuttles.

02. Output Shaft

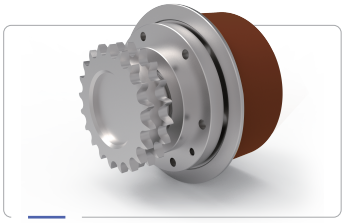
Diverse output shaft

Matching various transmission forms, including chain and sprocket drive, gear drive, and gearbox drive.

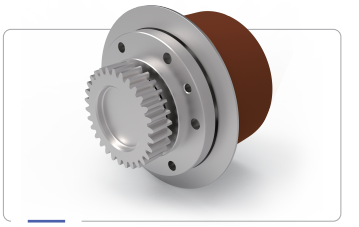
Drive Wheel



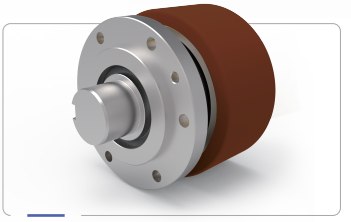
Long Shaft



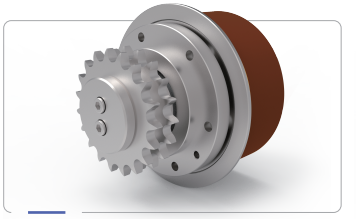
Sprocket Shaft



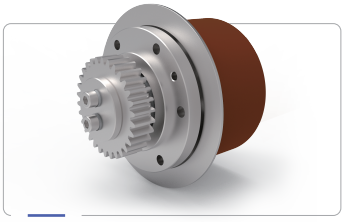
Gear Shaft



Short Shaft

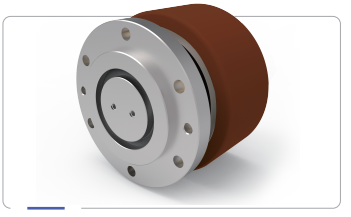


Sprocket (Square Key)



Gear (Square Key)

Driven Wheel



03. Wheel Material

NDI Wheel

Higher Wear Resistance and Longer Service Life

- Excellent mechanical performance
- High toughness
- Excellent dynamic performance
- Superior wear resistance

NDI wheels feature smooth and quiet operation while protecting the track. They can run steadily even under rapid acceleration and deceleration, serving as an alternative to conventional metal wheels. They play a particularly important role in the new energy industry.

04. Technical Specifications

Driven Wheel Series For Standard Wheel Set	NDI Wheel Standard Dimensions (Customizable)					Wheel Set Standard Dimensions (Customizable)						Bearing Load Capacity	NDI Wheel Load Acceleration ≤ 0.5m/s²			
	With Or Without Flange	D	B	B1	D1	C	E	F	G	H	J		Reference Speed			
													≤150m/min	≤150m/min	180m/min	180m/min
Model	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	KN	KG	N	KG	N
WSN 50F116 40100 S	Yes	100	40	50	116	61.6	10	15.4	96	82	65		527	5164.6	439	4302.2
WSN 55F116 45100 S	Yes	100	45	55	116	66.6	10	10.4	96	82	65		593	5811.4	495	4851
WSN 60F116 50100 S	Yes	100	50	60	116	71.6	10	5.4	96	82	65		659	6458.2	550	5390
WSN 40100S	No	100	40	-	-	61.6	10	5.4	96	82	65		527	5164.6	439	4302.2
WSN 45100S	No	100	45	-	-	66.6	10	5.4	96	82	65	Dynamic Load: 57.9	593	5811.4	495	4851
WSN 50100S	No	100	50	-	-	71.6	10	5.4	96	82	65		659	6458.2	550	5390
WSN 50F126 40110 S	Yes	110	40	50	126	61.6	10	15.4	100	85	70		550	5390	459	4498.2
WSN 55F126 45110 S	Yes	110	45	55	126	66.6	10	10.4	100	85	70	Static Load: 78.5	618	6056.4	515	5047
WSN 60F126 50110 S	Yes	110	50	60	126	71.6	10	5.4	100	85	70		687	6732.6	573	5615.4
WSN 40110 S	No	110	40	-	-	61.6	10	5.4	100	85	70		550	5390	459	4498.2
WSN 45110 S	No	110	45	-	-	66.6	10	5.4	100	85	70		618	6056.4	515	5047
WSN 50110 S	No	110	50	-	-	71.6	10	5.4	100	85	70		687	6732.6	573	5615.4
WSN 50F136 40120 S	Yes	120	40	50	136	61.6	10	15.4	110	95	78		571	5595.8	476	4664.8
WSN 55F136 45120 S	Yes	120	45	55	136	66.6	10	10.4	110	95	78	Dynamic Load: 70.0	642	6291.6	535	5243
WSN 60F136 50120 S	Yes	120	50	60	136	71.6	10	5.4	110	95	78		714	6997.2	595	5831
WSN 40120S	No	120	40	-	-	61.6	10	5.4	110	95	78	Static Load: 89.9	571	5595.8	476	4664.8
WSN 45120 S	No	120	45	-	-	66.6	10	5.4	110	95	78		642	6291.6	535	5243
WSN 50120 S	No	120	50	-	-	71.6	10	5.4	110	95	78		714	6997.2	595	5831

Model Naming Convention

WS | N/D | 60F116 | 50100 | D2072 | S

- Standard flange structure, customize available
- 20: Drive shaft diameter
- 72: length
- Flat wheel without flange
- 50: Wheel width (B)
- 100: Wheel diameter (D)
- 60: Total width (B1)
- F: Flanged wheel
- 116: Flange OD (D1)
- N: Idler wheel
- D: Drive wheel
- Four-way shuttle wheel unit

