

NSK

ULTRA-LARGE SPLIT SPHERICAL ROLLER BEARINGS

ADVANCED SOLUTIONS FOR BOF AND CONVERTER TRUNNIONS



STAY IN MOTION. STAY IN CONTROL.



MADE WITH METTLE

BEARINGS FOR STEEL AND METALS MACHINERY

Massive loads. Intense heat. Extreme high speeds, ultra-low speeds, and everything in between. Staggering shock loads, misalignment, and contamination from mill scale and water vapor. From primary iron and steel making through rolling and forming mills, the operating conditions of the entire process are severe. The reliable, uninterrupted performance of rolling components is critical for accelerated production. For NSK, our product development and design is focused squarely on withstanding the manifold operating stresses of these applications with:

- › increasing capacities for high loads and high speeds
- › advanced materials for durability, wear resistance and longer life
- › lubrication and seal technology for smooth and clean running

Our product solutions are designed to optimize the performance of machinery and equipment, to assure predictable reliability and to deliver total cost-efficiency.

ULTRA-LARGE SPLIT BEARINGS

Conventional bearing replacement for BOF's and Converters can be an exhaustive and critically time-consuming enterprise, requiring extensive dismantling of surrounding equipment and components in order to access inboard bearing installations. With NSK's split spherical bearing design, removing the bull gear and/or furnace tilt drive in order to gain access is eliminated, and actual bearing replacement is simplified. As result, maintenance time and costs are significantly reduced, as is the impact to productivity in subsequent processes.

And in this case convenience does not come at a cost or compromise.

NSK Ultra-Large Split Bearings are engineered to operate with stability at high temperatures, accommodating heavy loads, low speeds and oscillating motion with predictably reliable efficiency.



Split inner and outer rings

Split roller/cage assemblies

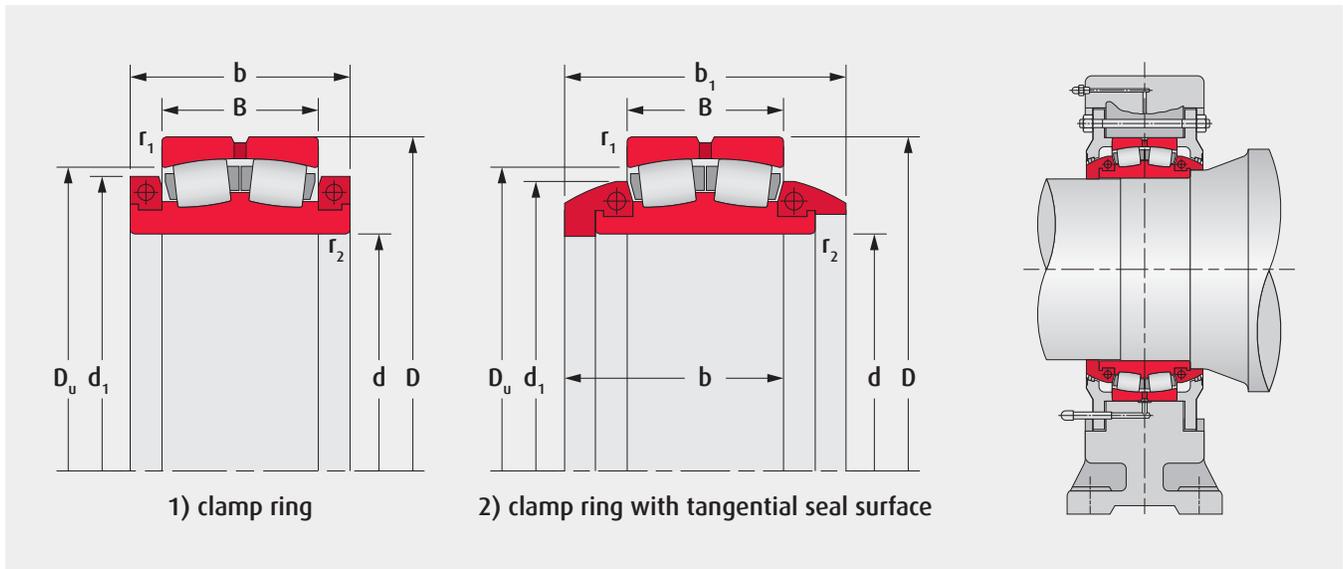
Split fastening ring with contact-type sealing surface

Fastening ring is also used as a seal sliding surface

PROVEN ADVANTAGES

- › Simplified, faster installation with split design
- › Split bearings can be replaced without extensive dismantling, reducing maintenance time and costs
- › Reduced downtime mitigates production loss in subsequent processes

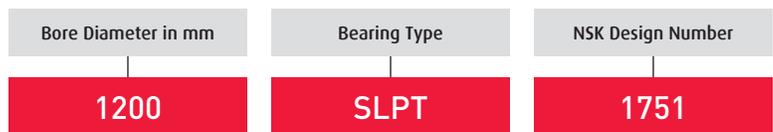
BEARING DIMENSIONS AND OPERATING VALUES

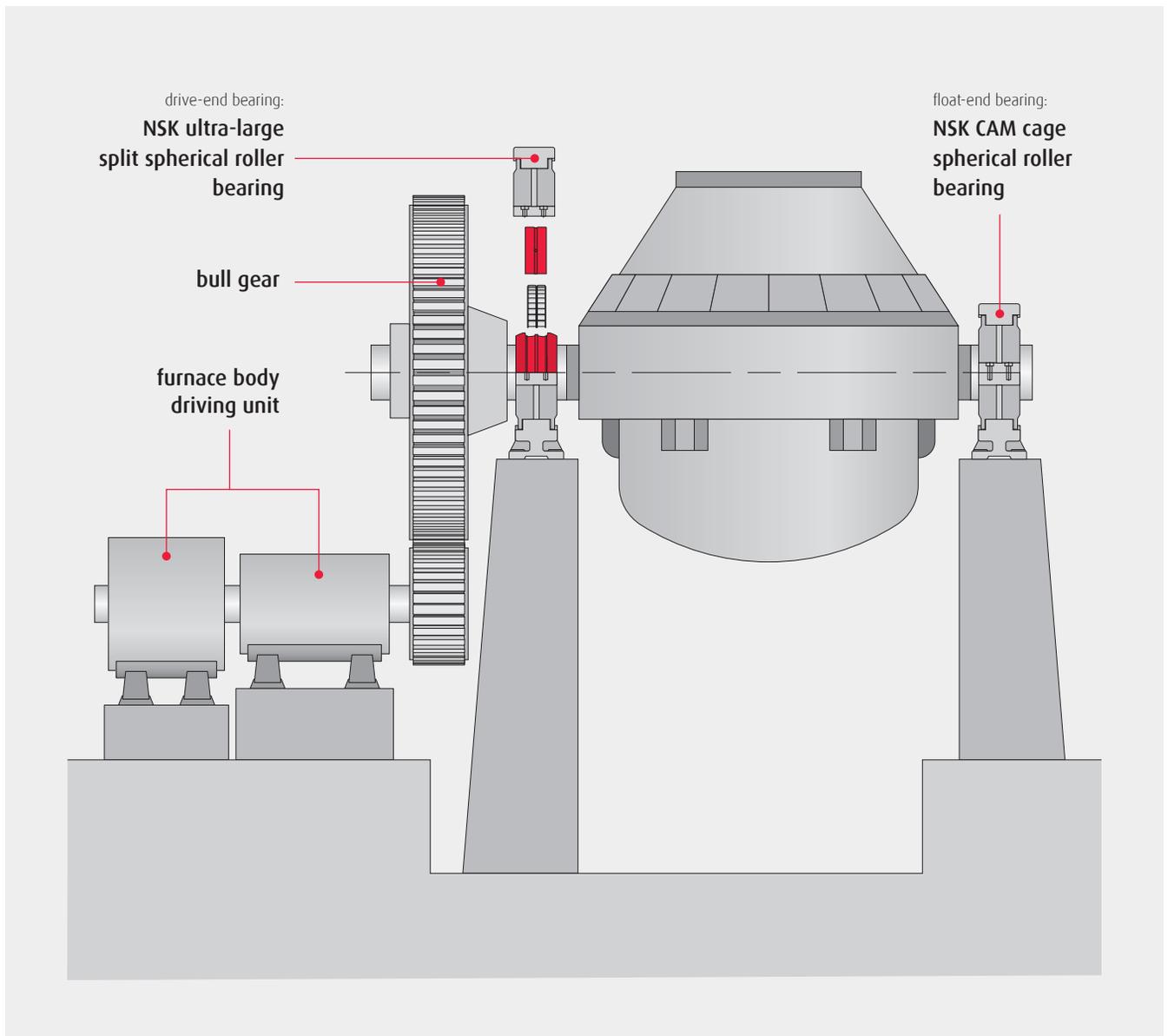


BASIC BEARING NO.	BEARING DIMENSIONS									BASIC LOAD RATINGS		DESIGN
	mm									kN		
	d	D	B	b	b ₁	D ₁	D _u	r ₁ (min)	r ₂ (min)	Dynamic	Static	
750SLPT1051	750	1 000	250	355	--	905	914	6.0	7.5	6 800	18 300	1
SL850-7	850	1 120	272	385	--	1 015	1 025	6.0	6.0	8 000	21 600	1
900SLPT1251	900	1 250	285	410	--	1 100	1 142	7.5	19.0	9 850	24 200	1
950SLPT1451	950	1 400	300	520	600	1 182	1 265	7.5	28.0	12 300	27 900	2
SL1120-3	1 120	1 580	320	633	698	1 400	1 445	9.5	30.0	13 200	32 000	2
1200SLPT1751	1 200	1 700	410	780	780	1 470	1 536	9.5	31.0	17 300	43 500	2*
1200SLPT1752		1 700	410	660	730	1 470	1 536	9.5	19.0	17 300	43 500	2
1320SLPT1851	1 320	1 850	530	815	814	1 600	1 670	12.0	31.0	22 500	63 500	2
1400SLPT1951	1 400	1 900	530	880	880	1 680	1 710	12.0	31.0	22 800	65 000	2*
1400SLPT1953		1 900	530	810	860	1 680	1 710	12.0	31.0	22 800	65 000	2*

Bearing designs indicated 2* differ slightly from illustration
 Additional bearing sizes are available. Please contact NSK
 for additional information.

DESIGNATION SYSTEM





MAINTENANCE COST BENEFITS

- › Simplified and faster installation with split design
- › Split bearings can be replaced without extensive dismantling, reducing maintenance time and costs
- › Reduced downtime mitigates production loss in subsequent processes

Field Test: Comparison of bearing replacement time

Conventional solution: solid-type spherical roller bearing	100%
Advanced solution: split spherical roller bearing	65%
Maintenance reduction	35%

The bearing replacement period represents the actual result for bearings with bore diameter of 1200 mm to 1400 mm.



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