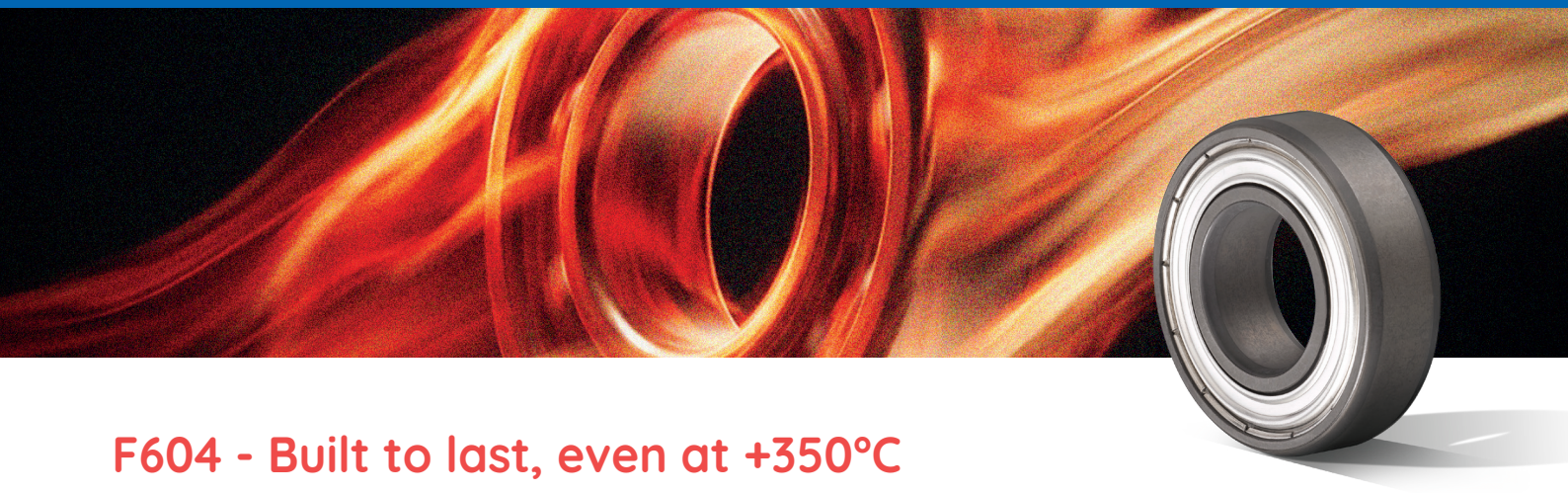
Brand of **NTN Group**

TOPLINE F604

DEEP GROOVE BALL BEARINGS FOR VERY HIGH TEMPERATURES



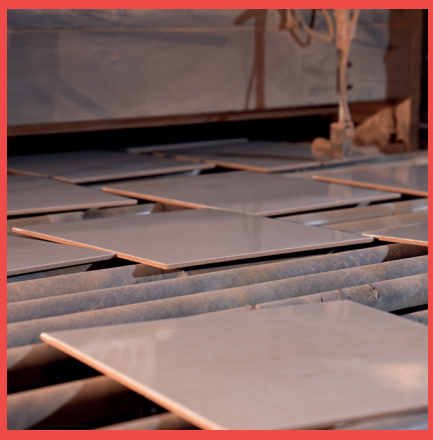
F604 - Built to last, even at +350°C

APPLICATION CONSTRAINTS	TECHNICAL RESPONSE	CUSTOMER BENEFIT
Extreme conditions → high temperatures unsuitable for standard bearings	Thermal resistance up to +350°C thanks to a special design (surface treatment + lubrication adapted to high temperatures)	Reduced downtime → continuous reliability in extreme conditions
Thermal expansion → risk of galling	Components for a regular, high-performance fit (optimized internal clearance)	Longer machine life → longer maintenance intervals
Inefficient conventional lubrication at high temperatures	Lubricating paste ensuring high-performance and long-lasting lubrication at high temperatures	Reduced overall cost → fewer interventions, more machine availability
Complex assembly in harsh environments	Standard-dimension bearings (6000, 6200, 6300 series)	Simplified assembly/disassembly → no need to modify existing housings
Need for compliance and proven reliability	Bearings designed and developed in France, approved, and tested in NTN Europe R&D centres	Guaranteed security, compliance, and quality

RELEVANT APPLICATIONS

Steel Industry

Food & Beverage



Sanitary ceramics

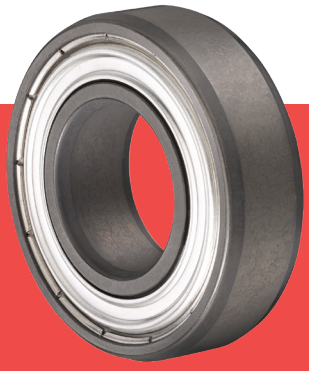
THREE SOLUTIONS TO MEET THE REQUIREMENTS OF YOUR APPLICATION

F605

Open version, untreated

F600

Open version with surface treatment (MoS_2)



F604

Sealed version with surface treatment (MoS_2) and dry lubrication (graphite)

TECHNICAL SPECIFICATIONS

Products	Cage	Internal radial clearance	Lifetime lubrication	Sealing	Other specificities	Temperature range
F605	Steel	A multiple of C5		-	Reference engraved on the material	Temperature range between 200°C and 350°C (continuous or per cycle)
F600	Steel	A multiple of C5		-	Specific surface treatment (phosphating + MoS_2 deposition)** Reference engraved on the material	
F604	Steel	A multiple of C5	Suitable for very high temperatures. Polyalkylene glycol-based oil + inorganic solid lubricant (graphite)*	Steel deflectors		

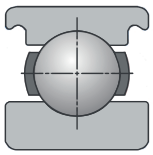
TECHNICAL FOCUS

DRY LUBRICATION*

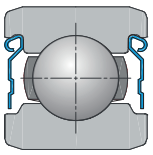
Lubricating paste composed of a synthetic polyalkylene glycol-based oil and graphite. The evaporation of oil above 200°C forms a graphite film that adheres to the surfaces. This film ensures effective lubrication up to 400 °C, even in the absence of oil, and provides long-lasting protection against wear and seizure under heavy loads.

MOLYCOTAGE**

Solid anti-friction coating based on molybdenum disulfide (MoS_2). It forms a stable lubricating film up to 400°C, greatly reduces friction and protects against galling and wear when conventional lubricants evaporate.



Open versions
(F605/F600)



Shielded version
(F604)

Reference				Lubricant quantity (g)	Dimensions (mm)			Speed limit (tr/min)	Shoulders and fillets (mm)			Mass	Maximum recommended permissible load per roller bearing (kN)							
													Idler wheel (2 bearings per wheel)				Axle on two bearings (1 bearing per wheel)			
	F605	F600	F604		d	D	B		ra max (mm)	Da max (mm)	da min (mm)	kg	200°	250°	300°	350°	200°	250°	300°	350°
6004	X	X	X	1,4	20	42	12	140	0,6	38	24	0,07	1,7	1,5	1,3	1	2,4	2,3	2	1,6
6005	X		X	1,4	25	47	12	120	0,6	43	29	0,08	1,9	1,7	1,5	1,2	2,8	2,6	2,3	1,9
6007	X	X	X	3,2	35	62	14	90	1	57	40	0,15	3,4	3,1	2,6	2,1	4,9	4,6	4,1	3,3
6008	X	X	X	3,9	40	68	15	80	1	63	45	0,19	3,8	3,5	2,9	2,3	5,5	5,2	4,6	3,7
6201	X		X	1	12	32	10	200	0,6	28	16	0,04	1	0,9	0,8	0,6	1,5	1,4	1,2	1
6204	X	X	X	2,3	20	47	14	130	1	42	25	0,1	2,2	2	1,7	1,3	3,2	3	2,6	2,1
6205	X	X	X	2,7	25	52	15	110	1	47	30	0,13	2,6	2,4	2	1,6	3,8	3,6	3,2	2,5
6206	X	X	X	4	30	62	16	100	1	57	35	0,19	3,7	3,4	2,8	2,3	5,4	5,1	4,5	3,6
6207	X	X	X	5,7	35	72	17	80	1	65,5	41,5	0,27	5	4,6	3,8	3,1	7,3	6,9	6,1	4,9
6208	X	X	X	7,6	40	80	18	70	1	73,5	46,5	0,35	5,9	5,4	4,5	3,6	8,6	8,1	7,2	5,7
6209	X	X	X	9,3	45	85	19	70	1	78,5	51,5	0,39	6,8	6,2	5,1	4,1	9,8	9,2	8,2	6,6
6210	X	X	X	10,8	50	90	20	60	1	83,5	56,5	0,44	7,7	7	5,8	4,6	11,1	10,4	9,3	7,4
6211	X	X	X	13,5	55	100	21	60	1,5	92	63	0,58	9,6	8,7	7,3	5,8	13,9	13,1	11,6	9,3
6212	X	X	X	17,7	60	110	22	50	1,5	102	68	0,73	11,9	10,8	9	7,2	17,3	16,2	14,4	11,5
6213	X		X	20,4	65	120	23	50	1,5	112	73	0,94	13,2	12	10	8	19,2	18	16	12,8
6214	X	X	X	24,5	70	125	24	40	1,5	117	78	1,03	14,5	13,2	11	8,8	21,1	19,8	17,6	14,1
6217		X		-	85	150	28	40	2	139	96	1,79	21,1	19,2	16	12,8	30,7	28,8	25,6	20,5
6305	X	X	X	5,1	25	62	17	100	1	55,5	31,5	0,24	4	3,7	3,1	2,4	5,9	5,5	4,9	3,9
6306	X			6,9	30	72	19	90	1	65,5	36,5	0,35	5,2	4,7	4	3,2	7,6	7,1	6,3	5,1
6307	X			-	35	80	21	80	1,5	72	43	0,45	6,4	5,8	4,8	3,8	9,2	8,6	7,7	6,1
6309	X	X	X	18,9	45	100	25	60	1,5	92	53	0,83	10,4	9,5	7,9	6,3	15,1	14,2	12,6	10,1
6310	X			-	50	110	27	50	2	101	59	1,07	12,5	11,4	9,5	7,6	18,2	17,1	15,2	12,2
6311	X	X	X	31,1	55	120	29	50	2	111	64	1,35	14,7	13,4	11,1	8,9	21,4	20	17,8	14,2
6312	X	X		-	60	130	31	50	2	119	71	1,68	17,2	15,6	13	10,4	25	23,4	20,8	16,6

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