

## Thermik™

### RESISTANT TO HIGH TEMPERATURES

LUFH high temperature resistant conveyor belts are designed for the transport of hot materials with a maximum temperature of +280°C or in special applications up to 400°C.

**Thermik™** conveyor belts are resistant to high temperatures and can transport different hot materials: ashes and slag, molding sand, limestone, cement clinker, coke, chemical fertilizers (e.g. urea, ammonium nitrate and others). For conveying materials with temperatures up to +200°C, the belt surface temperature may not exceed +180°C. For conveying materials with temperatures up to +280°C, the belt surface temperature may not exceed +200°C.

To protect the core or carcasses against high temperatures, the T120, T150 and T200 belts are manufactured with rubber covers of the recommended minimum thickness of 4 + 2 mm, while the T400 belts with covers of the recommended minimum thickness of 6 + 2 mm. High temperature resistant conveyor belts are manufactured under the strictest quality controls and within the regulatory standards.

For special applications we offer the **Thermik Optium** belt, which features superior high temperature resistance in the special material conveying applications bearing temperatures of 280 °C, with peak temperatures up to 400°C, manufactured with a high performance polyester fiber carcass called HMLS (High Modulus Low Shrinkage), which maintains a high modulus, high dimensional stability and low shrinkage at high temperatures.

**LUFH-CBS** adopts new materials and performance in high temperature resistant rubber covers as well as its high-tech casings such as nylon, polyester/nylon, aramid/nylon and basalt fiber.



The basalt fiber or aramid fiber is recommended to be used in extreme heat situations where the conveyor belt can be burned. Since different carcass materials have different heat resistance properties, the rubber cover and carcass materials should be reasonably selected according to the specific job. Please consult our LUFH Technical Department for further information.

Heat-resistant fabric and rubber conveyor belts are manufactured on the basis of fabric:

PP - polyamide-polyamide.

EP - polyester-polyamide (does not apply to T280 type belts).

TABLE 2.1 Physical and mechanical properties of **Thermik™** conveyor belt with high-temperature rubber covers.

LUFH VALUES				Equivalent DIN 22102	ISO 4195 test methods	TECHNICAL FEATURES
LUFH QUALITY	Tensile Strength, min. (TS) [Mpa]	Elongation at break, min. (Eb) [%]	Abrasion Resistance, max. [mm <sup>3</sup> ]			
T120	15	350	150	T	Class 2	Heat-resistant, for transporting materials up to 120 °C.
T150	15	350	150	T	Class 2	Heat resistance and thermal insulation performance, suitable for working conditions with material up to 150 °C.
T200	12	400	150	T	Class 3	Heat-resistant, for transporting materials up to 200°C.
T280	12	400	150	T	Class 3	Heat resistance, for transporting materials at high temperatures up to 280 °C.

TABLE 2.2 Range of **Thermik™** conveyor belts manufactured to withstand high temperatures, including standard widths, weights, carcass thicknesses and minimum pulley diameters.

BELT STRENGTH / N°. OF PLYS	Width min. [mm] <sup>1</sup>	Width max. [mm] <sup>1</sup>	Approximate Carcass Thickness S <sub>c</sub> [mm]		APPROXIMATE CARCASS WEIGHT [kg/m <sup>2</sup> ]									Minimum Pulley Diameters [mm] EP Carcass			Minimum Pulley Diameters [mm] PP Carcass		
					T120		T150		T200		T280								
					EP	PP	EP	PP	EP	PP	EP	PP	PP	A	B	C	A	B	C
400/3	500	1400	4,2	-	5,6	-	5,6	-	5,5	-	-	400	315	250	-	-	-		
500/3	500	1400	4,2	-	5,6	-	5,6	-	5,5	-	-	400	315	250	-	-	-		
630/3	500	1800	5,1	4,8	6,1	5,8	6,1	5,8	6	5,7	5,5	500	400	315	400	315	250		
630/4	500	1400	5,6	-	7,5	-	7,5	-	7,3	-	-	630	500	400	-	-	-		
800/3	500	1800	5,7	5,4	6,9	6,3	6,5	6,2	6,4	6,1	5,9	630	500	400	500	400	315		
800/4	500	1800	6,8	6,4	8,2	7,8	8,1	7,7	8	7,6	7,4	800	630	500	630	500	400		
800/5	500	1400	7,0	-	9,4	-	9,3	-	9,2	-	-	800	630	500	-	-	-		
1000/3	650	1800	6,0	5,7	7,3	6,7	7,2	6,7	7,1	6,6	6,4	630	500	400	500	400	315		
1000/4	650	1800	7,6	6,8	9,2	8	9,2	8	9	7,8	7,6	800	630	500	630	500	400		
1000/5	650	1800	8,5	8,0	10,2	9,7	10,2	9,7	10	9,5	9,2	1000	800	630	800	630	500		
1250/3	650	1800	6,9	6,3	8,3	7,4	8,2	7,4	8,1	7,3	7,1	800	630	500	630	500	400		
1250/4	650	1800	8,0	7,2	9,7	8,3	9,6	8,3	9,5	8,1	7,9	800	630	500	630	500	400		
1250/5	650	1800	9,5	8,5	11,6	10	10,9	10	10,7	9,8	9,5	1000	800	630	800	630	500		
1400/4	800	1800	8,4	7,6	10,2	8,9	10,2	8,9	10	8,7	8,5	1000	800	630	630	500	400		
1600/4	1000	1800	9,2	8,4	11	9,9	11	9,9	10,8	9,7	9,5	1000	800	630	800	630	500		
1600/5	1000	1800	10,0	9,5	12,1	11,2	12,1	11,1	11,9	11	10,6	1250	1000	800	800	630	500		
1800/4	1200	1800	9,6	10,4	11,4	11,5	11,4	11,4	11,2	11,3	11	1000	800	630	1000	800	630		
1800/5	1200	1800	10,5	10,5	12,8	12,4	12,7	12,4	12,6	12,2	11,8	1250	1000	800	1000	800	630		
2000/4	1200	1800	9,6	10,4	11,4	11,5	11,4	11,4	11,2	11,3	11	1000	800	630	1000	800	630		
2000/5	1200	1800	11,5	10,5	13,8	12,4	13,7	12,4	13,6	12,2	11,8	1250	1000	800	1000	800	630		
2500/4	1200	1800	12,8	11,2	14,9	12,8	14,9	12,7	14,7	12,5	12,3	1400	1250	1000	1250	100	800		
2500/5	1200	1800	13,0	13,0	15,4	14,3	15,4	14,3	15,2	14,1	13,7	1400	1250	1000	1400	1250	1000		

<sup>1</sup> The types and widths of the belts, other than those determined in Table 2.2, must be agreed with our factory. The minimum recommended pulley diameters [mm] for belts in the tension range of 60-100% are specified according to DIN 22101: **A:** Drive pulleys and other pulleys in the high belt tension range. **B:** Deflection pulleys and other pulleys in the low belt tension range. **C:** Support pulleys (change in the direction of belt movement ≤ 30 degrees).