

## Pronamic® Technology Comparison

Each client has unique requirements – Pronamic® parts and services offer flexibility on choice of abrasion-resistant materials, specific designs depending on the grinding media and refurbishment services.

Key: ● Possible ○ Limited ✕ Not possible

	Pronamic® Parts		
	Pronamic® H1 H2-Multilayer	High-chromium white irons (Ni-Hard IV) <i>Note: Cromodur no longer available</i>	Metal-matrix-ceramic
Return on investment: optimisation through choice of abrasion-resistant materials	● Choices of H1 or H2-Multilayer. Other experimental materials are being developed.	✕ No options are available	✕ No options are available
Base material not wasted on replacement: the cost of base material (casting) can be diluted over several refurbishments	● Standard in all Pronamic® parts	○ Pronamic® Services are possible (limited by the existence of brittle cracks in the base material)	✕ Base material cannot be re-used; the worn part should be scrapped.
Service life	● Customer choice: H1 or H2-Multilayer. Service life factors: x1.5 and x2.24 relative to Ni-Hard IV	○ Service life factors: Ni-Hard IV: x1	● Service life factor: 2.5
Continued services after purchase of parts	● Pronamic® in-situ Services	● Pronamic® in-situ Services	✕ Not available
Minimisation of inventory cost	● Pronamic® refurbishment = less inventory of replacement parts	● Pronamic® refurbishment = less inventory of replacement parts	✕ Stock of new parts necessary
Options for (a) parts only or (b) parts & services	● Pronamic® Services are available after purchase of Pronamic® parts	● Pronamic® Services are available after purchase of Pronamic® parts	✕ No services are available

	Pronamic® Services Predictive/preventive maintenance or refurbishment services		
	With Pronamic® Parts	With high-chromium white iron parts (example: Ni-Hard IV)	With metal-matrix-ceramic parts
Targets: to maintain the throughput and specific power consumption in spite of wear – continuous refurbishment	● Flexible wear top-up frequency. Customer has option of mill audits and/or mill optimisations	● Flexible wear top-up frequency. Customer has option of mill audits and/or mill optimisations	○ Parts cannot be reconstituted. However, the customer has a choice of Pronamic® mill audit and/or mill optimisation
Dependability: ability to refurbish anytime, even in an emergency	● Partial in-situ top-up is possible with short lead times	● Partial in-situ top-up is possible with short lead times	✕ There are no reliable repair methods available; the parts should be replaced
Re-using the base material – reconstitution to the original profile (a worn tire may still retain 80% or more of the original mass when new)	● Possible, both in-situ or in the workshop	○ Possible, both in-situ or in the workshop (however limited to maximum 50mm deposit thickness due to the intrinsic base material brittleness)	✕ Not possible; the parts should be replaced.
Loesche original specifications: always maintained, without adulteration or risks to operation.	● Full compliance	● Full compliance	○ Only if parts are purchased directly from Loesche Customer Services
Slag and cement mills normally require frequent refurbishment	● Possible with short lead times	● Possible with short lead times	✕ Worn parts must be replaced
Improved health and safety	● In-situ service removes the need to remove and refit heavy components	● In-situ service removes the need to remove and refit heavy components	✕ It is not possible to service the parts in-situ, which demands handling the heavy parts
In high labour cost countries: the cost of refurbishing in-situ is less than the cost of replacing the parts	● In-situ service is available	● In-situ service is available	✕ Refurbishment not possible.