



PDC

Polycrystalline Diamond Compact

IPDC Series



www.ILJINDIAMOND.com

ILJIN Diamond Global Network

KOREA ILJIN Head Office

15, Maeokjungang 14-ro, Gangseo-gu, Seoul, Republic of Korea
T. +82-2-3777-8400 F. +82-2-3777-8491 E. dia@iljin.co.kr

JAPAN ILJIN JAPAN Co., Ltd.

Hamamatsucho General B/L 7F, 2-2-15, Hamamatsu-cho, Minato-ku,
Tokyo, 105-0013, Japan
T. +81-3-5405-2820 F. +81-3-5405-3577 E. djap@iljin.co.kr

CHINA SHANGHAI ILJIN DIAMOND Co., Ltd.

3F-C, BaoNa B/D(LP Tower), NO.25, Xianteng St., Minhang District,
Shanghai, 201103, China
T. +86-21-61268711 F. +86-21-61268713 E. diachina@iljin.co.kr

AMERICA ILJIN USA, Inc.

15995 N. Barkers Landing Rd. #310, Houston, TX 77079, USA
T. +1-281-448-5111 F. +1-281-448-5114 E. diausa@iljin.co.kr

EUROPE ILJIN EUROPE GmbH

Kölner Str. 3, 65760 Eschborn, Germany
T. +49-6196-88759-0 F. +49-6196-88759-20 E. dlaeu@iljin.co.kr

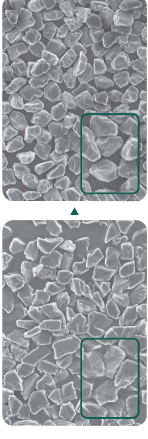
IPDC

ILJIN Polycrystalline Diamond Compact

For decades, ILJIN Diamond has been producing top quality superhard materials. As a result of unceasing technological innovation and accumulative experience, ILJIN Diamond presents IPDC for the utmost drill bit performance. The Oil & Gas industry will be able to lower costs while drilling faster through the use of IPDC.

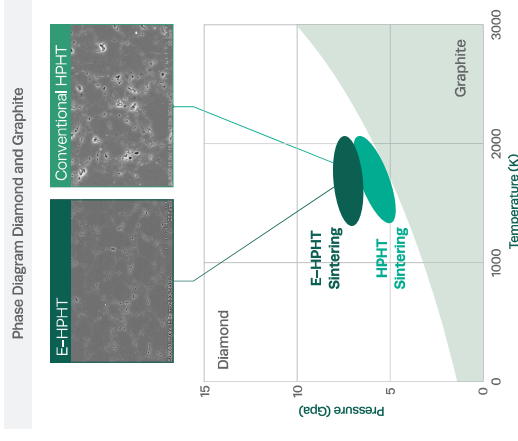
High Quality Diamond Powder

- Optimization of Packing Density by Shape Control of the Diamond Powder
- Increase Diamond to Diamond Direct Bonding by Controlling Impurities



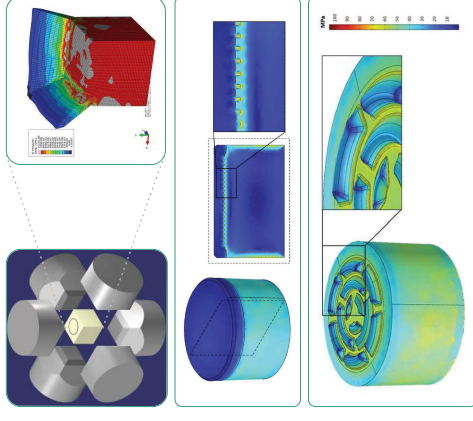
Series	Product Family	Product Grade	Application	Key Feature		
 K-SERIES X-SERIES UP-SERIES	Abrasion • Cost effective	K6	Impact	• Cost Effective • They can be supplied in various types. (Cyl, Stud, Other geometrix) • Stud type		
				Balance • Higher pressure sintering • Denser diamond with toughness and abrasion resistance	General Purpose	• UP product having a combination of high abrasion & high impact performance via extremely HPHT sintering
				Enhanced Toughness • Very refined diamond facets • Thicker diamond table • New nonplanar interfaces • Higher pressure sintering • Impurity control process	Impact Oriented	• Thick diamond layer thickness (up to 3mm) • The new technique applied for control of the impurity via substrate during sintering. • New capsule design for improved pressure efficiency during the sintering

Extremely High Pressure Sintering Process (~8GPa)



Reduced Residual Stress

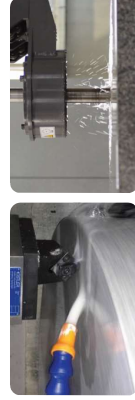
- Finite Element Analysis (FEA)



Reliable Performance Test System

- VTL & Drilling Test

- Abrasion
- Thermal Stability
- Drop Test
- Impact



Quality Control

- Vision Measuring System (Optical)

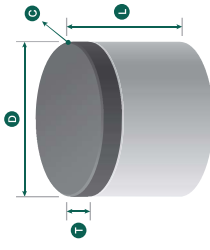
- Measuring size
- 3D modeling
- Surface profiling
- Surface Roughness
- Shape Analysis

- C-Scan



Grade	13	16	STD	(C0.3)
Grade	Product size D + L			
Grade	Diamond table thickness T			Diamond chamfer length C
Wear resistance Grade	1308	1313	1316	C0.2
Impact resistance Grade	1608	1613	1616	C0.3
Balance Grade	1913	1916	1919	C0.4
	35	3.5mm	0.5mm	C0.5
	40	4.0mm		

Standard Carbide Chamfer is 0.25mm



*The specification and design of IPDC can be customized to satisfy the customer's request.