



Doosan Infracore Introduction



April, 2013
Doosan Infracore Co., Ltd.

Contents

DOOSAN INFRACORE CORPORATE OVERVIEW

01 Introduction of Doosan Group

02 Introduction of Doosan Infracore

03 Introduction of Engine BG



「Introduction of Doosan Group」

In an ever-changing world, the leading global infrastructure support business is the one that adapts with it.



About Doosan

Korea's Oldest Enterprise with a proud history of 115 years

1896~

Established as Korea's first modern retail business

1980~

Ventured into publishing and advertising, and focusing on becoming international

1950~

Diversified into construction, food/beverages, machinery, electronics, etc., based on brewing and international trade

**NEW
Start**

2000~

Transition to an ISB-driven business portfolio through the acquisitions of Korea Heavy Industries & Constructions, Daewoo Heavy Industries & Machinery, etc.

1996~

Integrating 23 affiliates into 4 companies (Doosan Corp, Engineering & Construction, Packaging, and Oricome)



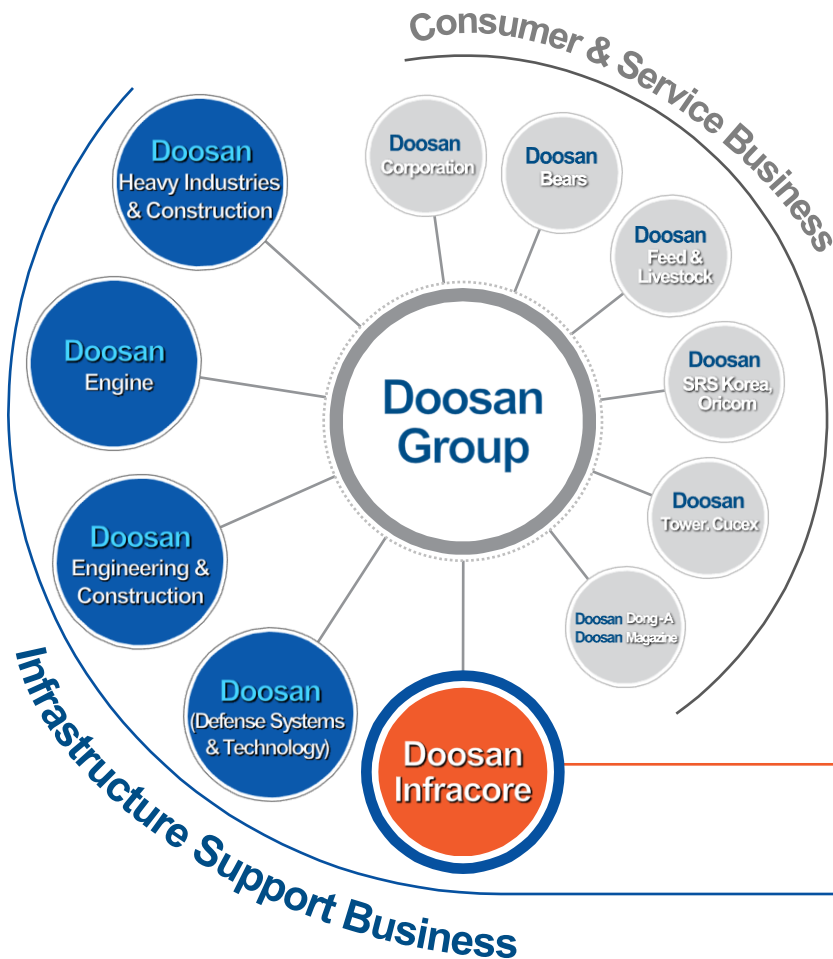
Park Seungjik Store was founded in 1896



Currently, ranked 12th in Korea

Changing the worlds landscape since 1896

Doosan has been striving to improve quality of life through Infrastructure support business



Construction equipment



Machine tools



Engines



Power generation



Nuclear energy



Desalination



Construction

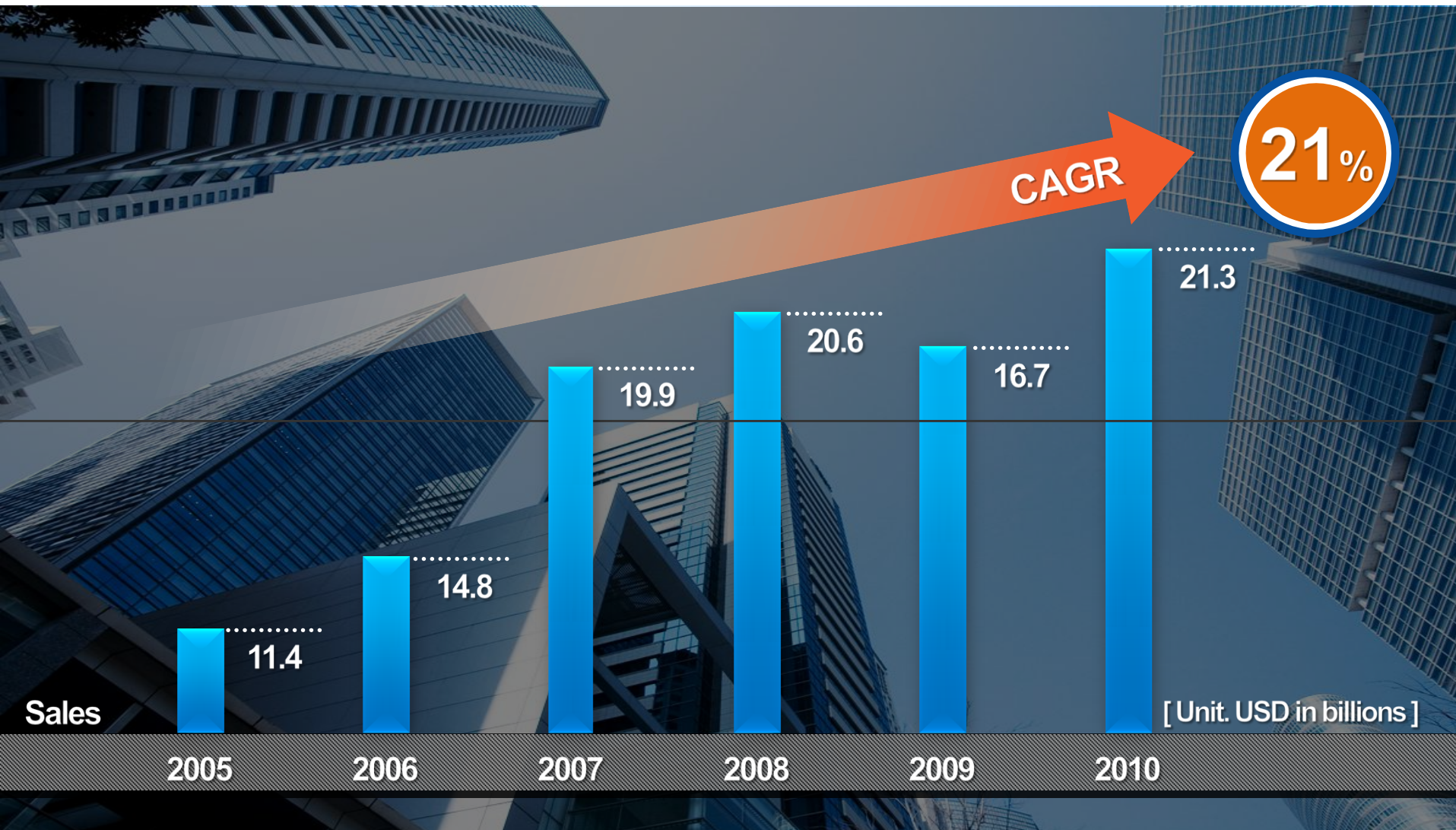



Large ship engine



DST (Defense Systems & Technology)

Doosan's Status_Revenue





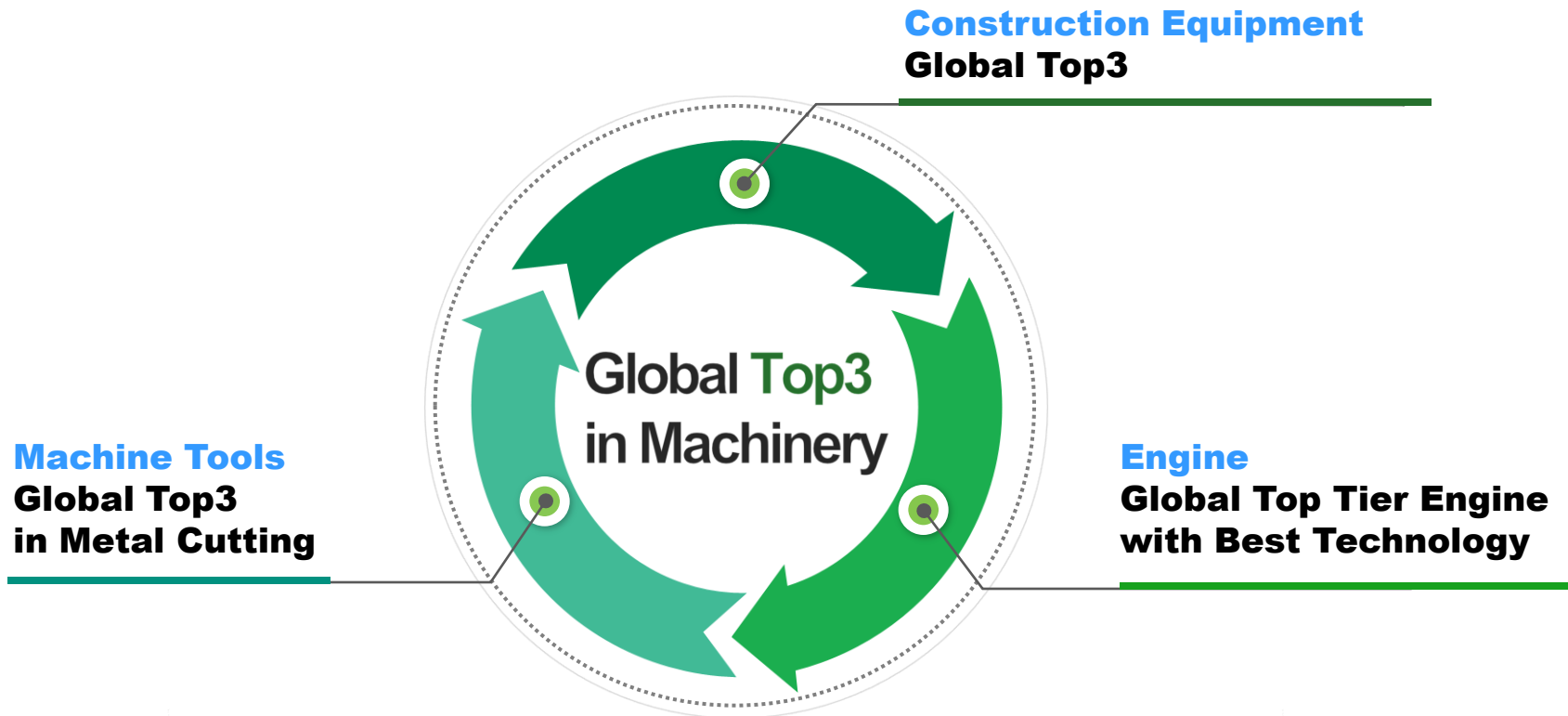
Introduction of Doosan Infracore

A comprehensive company with various business groups
and an extensive product lineup that is able to effectively
respond to every need



Reaching for Greatness_Vision

Vision of reaching the global Top 3

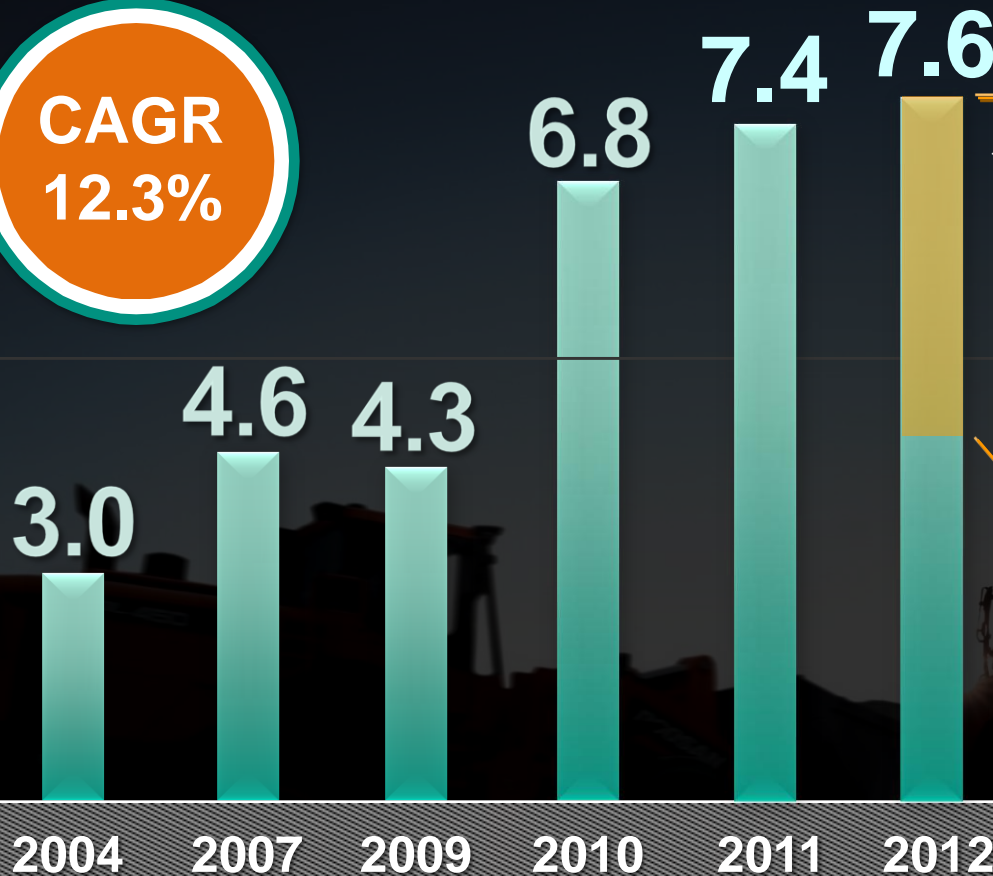


Reaching for Greatness_Growth

Astonishing growth averaging 12.3% every year since 2004

Revenue (USD in billions)

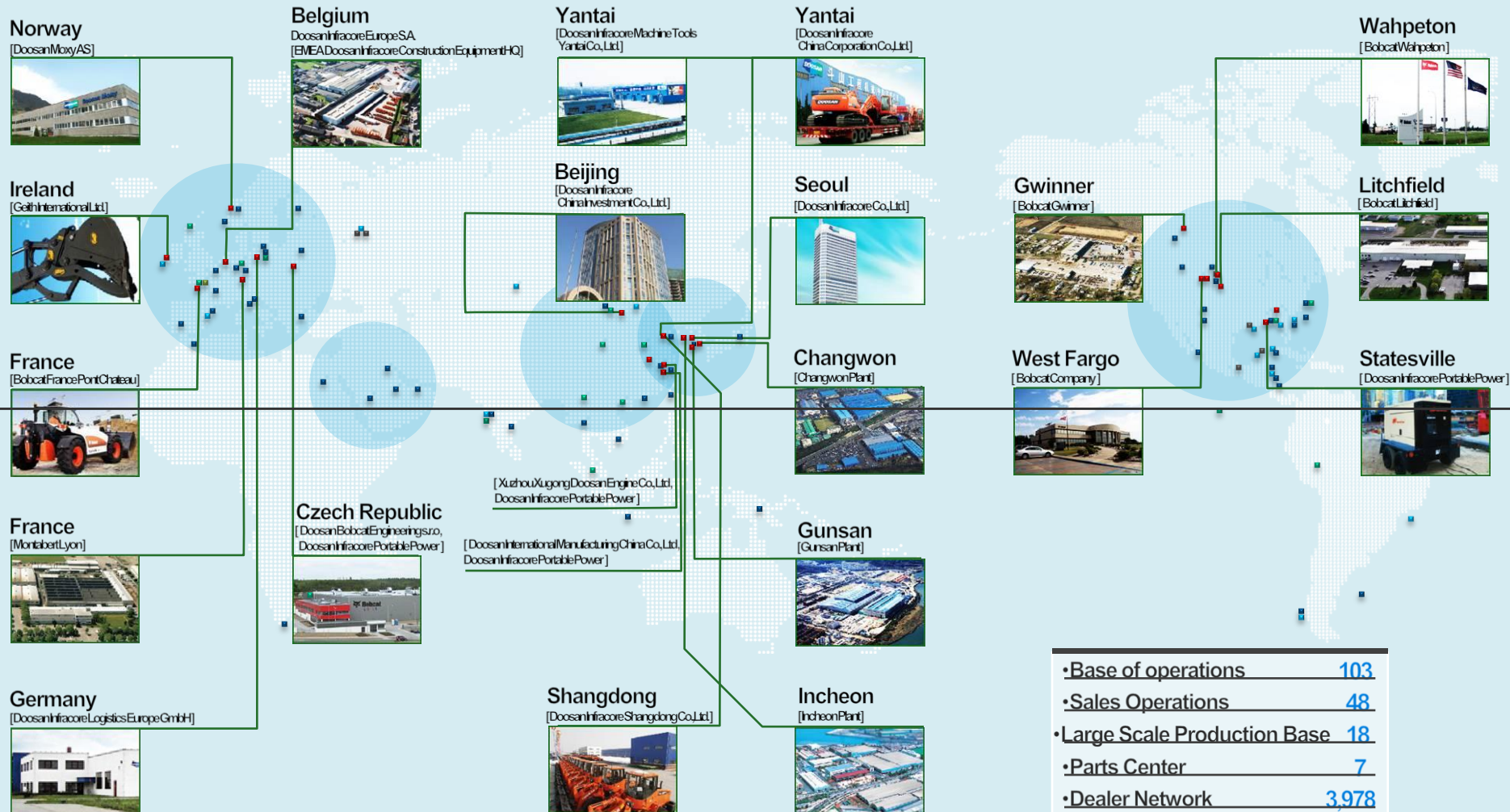
CAGR
12.3%



- ✓ **Rapid growth with Bobcat**
 - In 2007, DI acquired Bobcat, Global No.1 SSL/CTL Maker.
 - Bobcat account for over 46% of total Revenue
 - 2007 \$2.8B → 2012 \$3.5B

Extensive Global Business Network

An extensive global business network



Equipped for Success

An excellent portfolio and extensive lineup

DOOSAN**DOOSAN
MOXY****TRAMAC**

[Excavators]



[Wheel loaders]



[Articulated
dump trucks]



[Attachments]



[Skid steer loaders]



[Compact equipment]



[Generators]

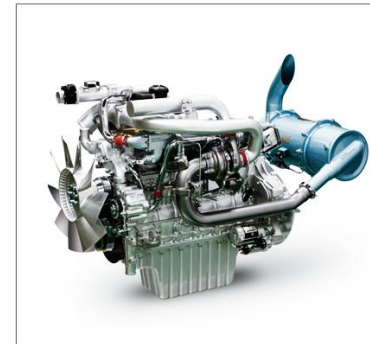
Powering a New Generation

A global world-class engines manufacturer

[Diesel / gas engines
for generators]



[Diesel engines for
industrial use]



[Diesel / gas engines
for vehicles]



[Diesel engines
for marines]

Being Known as the Best

Leading the world with precise and innovative technology

[Turning centers]



[Horizontal boring mills]



[Swiss turning centers]



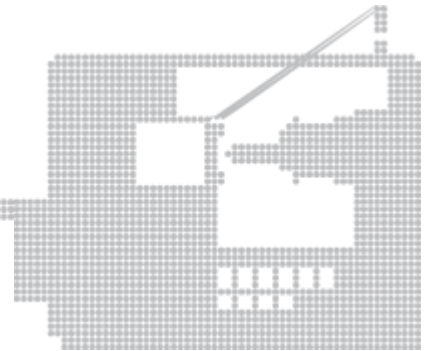
[Machining centers]



[Wire-cut EDM]



[Double column machining centers]



「Introduction of Engine BG」

Engine is the heart of power generation,
commercial vehicles, and general
machinery



History of Engine BG

1950~70's → 1980~90's → 2000's → 2010's

1950's

1958 Marine Engine
(AVL)

1970's

1975 Medium Engine
(MAN License)
– D0846, D2156
(7.6ℓ) (10.4ℓ)

Engine Plant
Established

1979 Small Engine
(ISUZU License)
– 4BA1, 6BB1
(2.8ℓ) (5.4ℓ)

1980's

1983 Large Engine
(MAN License)
– D28 Series
(14.6, 18.3, 21.9ℓ)

1985 'STORM' Engine,
the first in house
designed engine

1988 Small Engines
– 3AB1, C223, C240, 4BC2
(1.8ℓ) (2.2ℓ) (2.4ℓ) (3.3ℓ)

1990's

1995 'DE & DV' series
of Own Development

1999 'GE' series
– CNG Engine for
Commercial Vehicle

2000's

2001 Tier II Engine

2004 Euro III Engine

2006 Received GM Group
Supplier Of the Year
(SOY) award

2007 Euro IV Engine

2008 Started G2 engine
development

CNG Engine
Assembly Plant
in Atlanta, USA
– US07 Certified

2009 Joint Venture with
XCMG in China
: XDEC

2010's

2010 Euro V Engine.
US10 CNG Engine
(supplied to LAMTA)

2011 Tier IV-Interim Engine

2012 XDEC, Start of
Production

Started to produce
the G2 engine for
forklift from October

2013 Start to produce the
G2 engine for Bobcat
from August

Global Operation (Incheon HQ)

- Engine shop : 38,300 m²
- Foundry shop : 20,000 m²

- Capacity
 - Engines: 172,000 units/year
 - Materials: 50,000 tons/year
- Employee : 1,130
 - Mgt. Staff : 560 (R&D:230)
 - Production Worker : 570

- G2 Engine: 100,000/year
- Compact: 20,000/year
- Medium : 40,000/year
- Large: 12,000/year

<3.4L
<5.9L
<11.1L
<22.2L



Global Operation



Production Facilities



Dealer Network

	Total	Asia	Europe	America	Africa /Middle East	China
DEALER NETWORK	226	71	40	30	23	62

Business Overview



- Engine BG is No.1 Diesel and CNG Engine Maker in Industrial and Marine & Generator Engines in Korea

Application

①



Industrial Engine

- Excavator,
Wheel Loader
Forklift

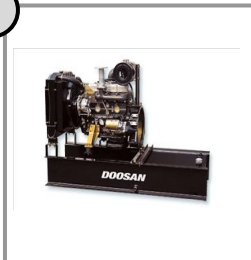
②



Commercial Vehicle

- MDT, HDT
- Medium/Heavy Bus
- Special Purpose Vehicle

③



Marines & Generator

- Mobile / Stand-by Generator
- Commercial Boat

Major Customer

- DI CE BG
- Bobcat
- Doosan Forklift
- Tata Daewoo
- Daewoo Bus
- PSI, SDMO, Generac, Himinsa, Etc

Product Overview

Buses

Daewoo Bus



Trucks

Tata / Dealers



Industrial

Doosan CE/FL BG



CNG

CNG Vehicle Manufacturers



Generators

Domestic / Overseas Dealers



Marines

Domestic / Overseas Dealers

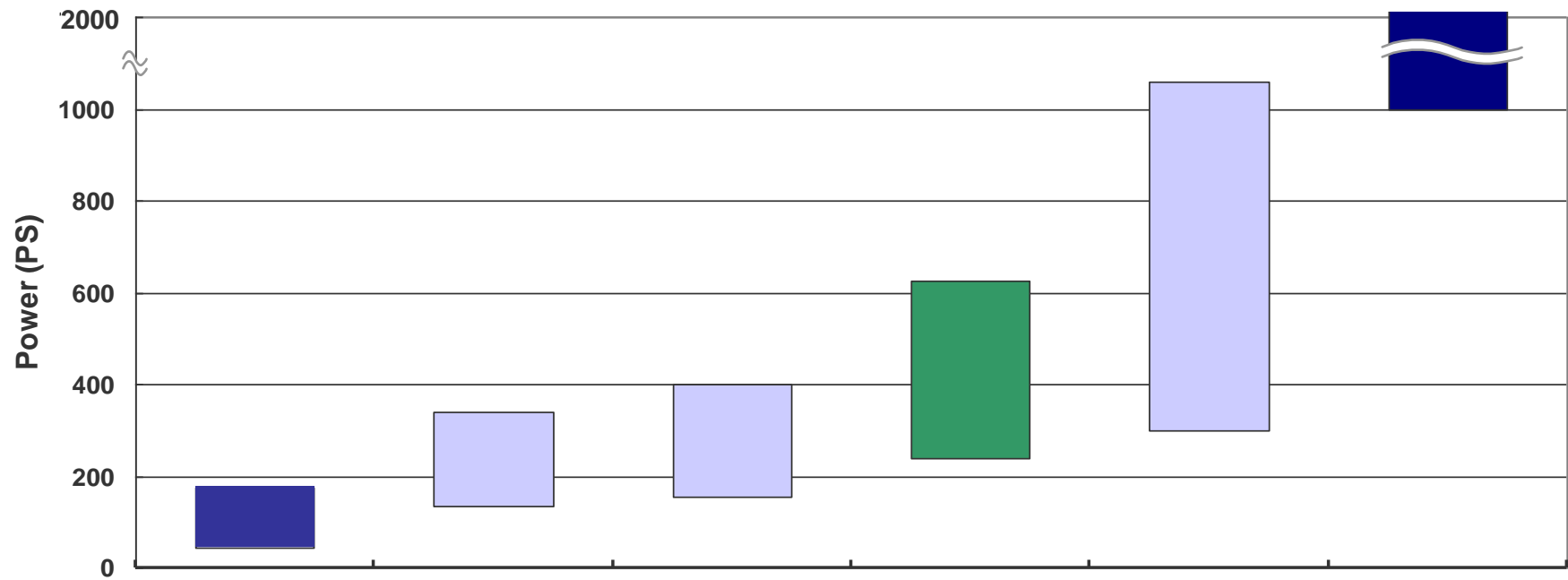


Product Line-up

Under Developed
Gas Engine

Key facts

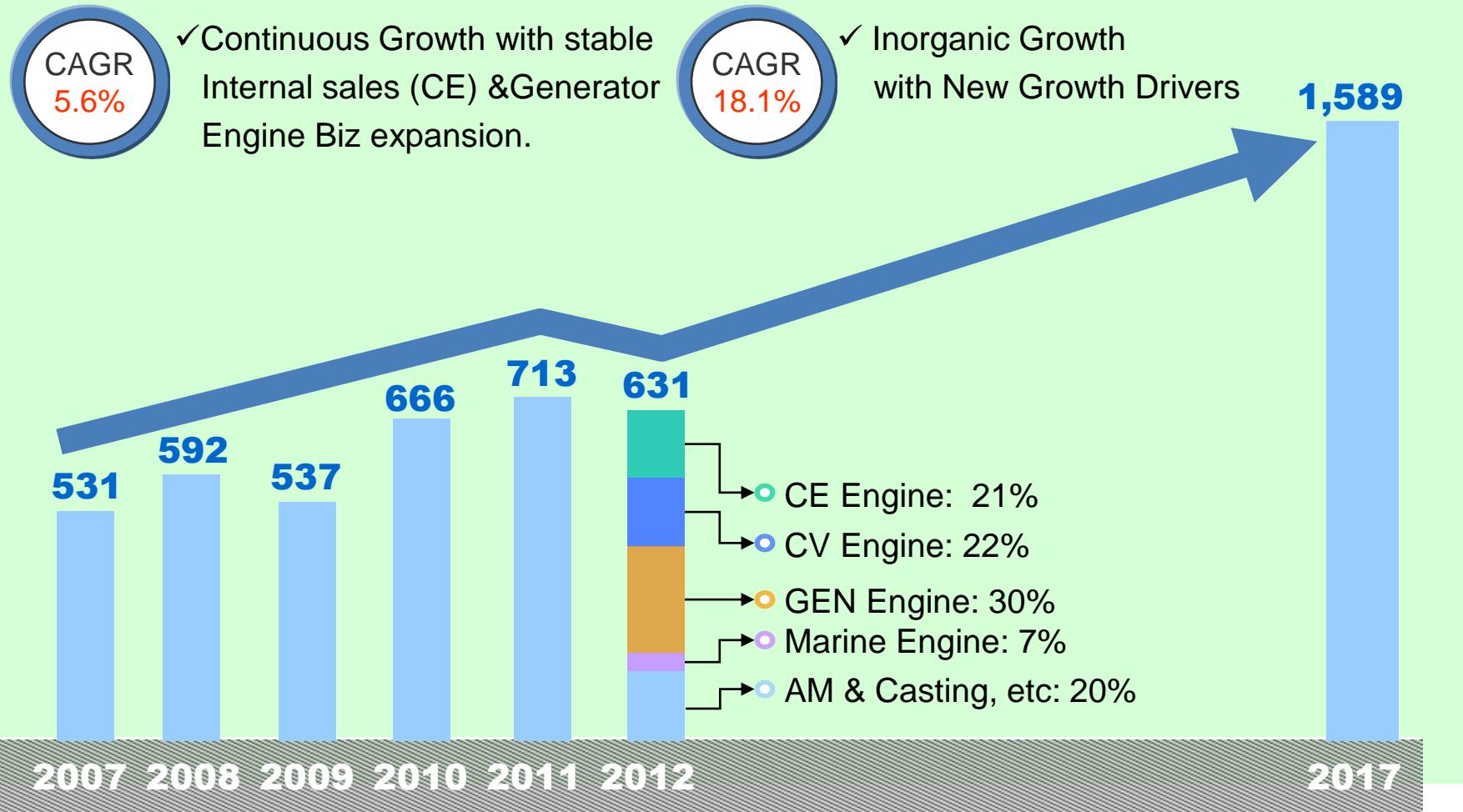
Engine Families



Series	G2	DL	DE	GE & GV	DV	(VX)
Displ. (Litres)	1.8 ~ 3.4	5.8 ~ 7.6	8.1 ~ 11.1	8.1 ~ 21.9	14.6 ~ 21.9	18 ~ 27
Power (PS)	43 ~ 125	270 ~ 340	156 ~ 400	240 ~ 625	300 ~ 1200	1000 ~ 2000

Financial Performance

Continuous & Sustainable Growth (USD in Millions)





Building your tomorrow today

Doosan Infracore