



SU+ Line TR-F Series

SOOSAN HYDRAULIC BREAKERS

SU+ Line TR-F Series



Head office / Hwaseong Plant

260, Jeongmunsongsan-ro, Yanggam-myeon, Hwaseong-si, Gyeonggi-do, Korea
TEL +82-31-350-5112 FAX +82-31-350-5259

Soosan China

Soosan Machinery (Qingdao) Co., Ltd.

North of Keyun-Road, East of Zhengyuan-Road, Qingdao National High-Tech Industrial Development Zone, Qingdao, Shandong Province, China
TEL +86-532-8796-5655 FAX +86-532-6868-2362

Soosan Machinery & Equipment (Xiamen) Co., Ltd.

23 Rixin-Road, XingLin-District, Xiamen-City, FuJian-Province, China
TEL +86-592-621-1230 FAX +86-592-621-3231

Soosan Europe

Ohmweg 18, 3208 KE, Spijkenisse, The Netherlands
TEL +31-181-64-7194 FAX +31-181-64-1038

Soosan Dubai

P.O. BOX : 262280, LOB14-313 Jebel Ali Free Zone, Dubai, UAE
TEL +971-4-881-0502 FAX +971-4-881-0503

Regional Contact Point

Asia : asia@soosan.co.kr
Australia, Oceania : australia@soosan.co.kr
Russia, CIS : russia@soosan.co.kr
Middle East : me@soosan.co.kr
Africa : africa@soosan.co.kr
Europe : eu@soosan.co.kr
North, Central, South America : america@soosan.co.kr

POWER TO
SUCCESS



www.soosan.co.kr

Copyright Soosan. Soosan reserves the right to alter specifications without prior notice

Printed in Korea
English Ver. 2015. 1



Improvement of the world's most famous breaker, Advanced breaker of **SU+** Line

- Maximized energy efficiency
 - More powerful & impact frequency
- Bounce-controlled percussion system
- Anti-scratch system
- Enlarged accumulator capacity



SU+ is the latest design of Soosan hydraulic breakers. It is the result of more than 2 decades of experience since the company's inception in 1984. Through active communication and monitoring of a large group of valuable customers from around the world, we have gained working experience from quarry, mining and construction industries. The **SU+** line is practically an innovative hydraulic breaker while maintaining the superiority of the percussion mechanism and easy maintenance of the existing SB line.

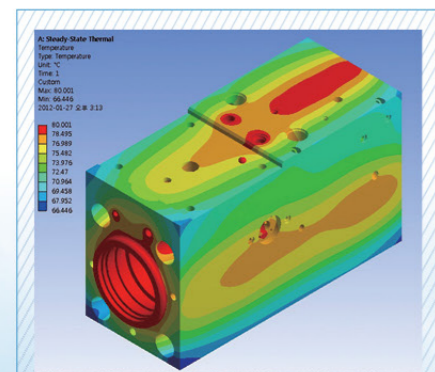
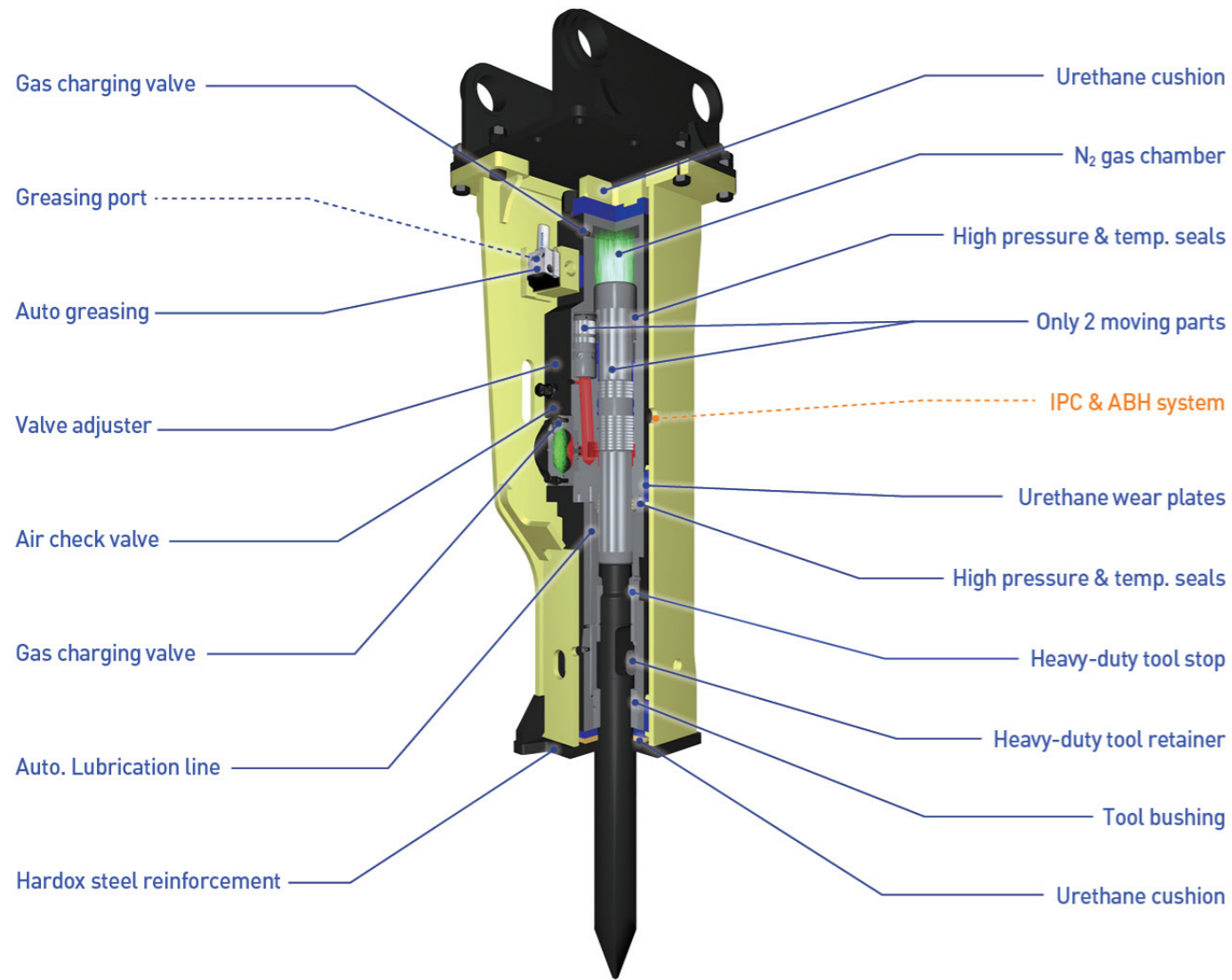
We are proud to say that **SU+** have one of the highest power to weight ratio among equivalent models. IPC & ABH (Integrated Power Control & Anti-Blank Hammering) system and remarkably increased impact frequency allowed us to maximize production efficiency. We also adopted a newly developed bounce-controlled percussion system to minimize the recoils during the hammering work. It helps to reduce damage at the hammer and the carrier as well as improving operator's comfort.



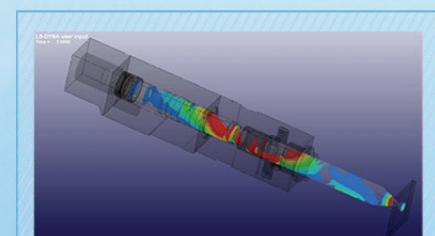
In the case of a breaker getting too hot, we have adopted "Thermal Stress Analysis" to control the heat generation. As a result, our breakers maintain the same percussion frequency at high temperatures and the enlarged accumulator capacity allows a more stable hydraulic system and surging reduction. Moreover, Anti-scratch system allows safe operation and durability even in harsh working conditions and specially developed devices prevent foreign substances flowing into the cylinder.

We believe managing the least energy loss from the excavator benefits both the operator's cost and the environment. In order to achieve it, we applied "Piston floating system".

In addition, pressure-resistant hydraulic hose is adopted to reduce hose vibrating and extended tool bushing prevents consequential damages of piston and cylinder caused by misaligned tool hammering.



STEADY-STATE THERMAL ANALYSIS



IMPACT ENERGY ANALYSIS

High power to weight ratio

The use of high quality materials and highest technology results with less weight & higher performance.

Slim profile with robust structure

State of art slim profile for better visibility in narrow trench work. Hardox steel reinforcements at the lower end of the housing, protect the casing and power cell.

Improved vibration damping system

Fully isolated power cell with premium quality urethane cushions and wear plates absorb shock and vibration resulting in reduced wear.

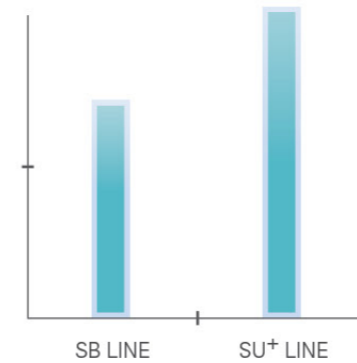
Impact power mechanism analysis

Keeping dynamical stability through optimum design using LS-DYNA analysis tool.

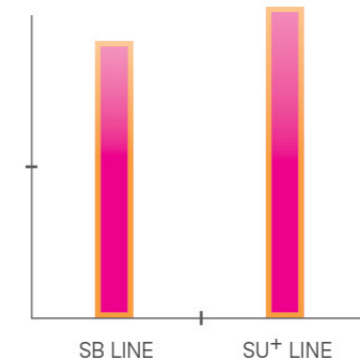
Advantages of SU+ Line

Features	SB Line	SU+ Line
IPC & ABC	-	Standard
Working mode	Single	3 modes
ABH system (Anti-blank hammering)	Hyd. Damping	Mechanically & Hyd. Damping
Anti-scratch system	-	Standard
Bounce-controlled percussion system	-	Standard

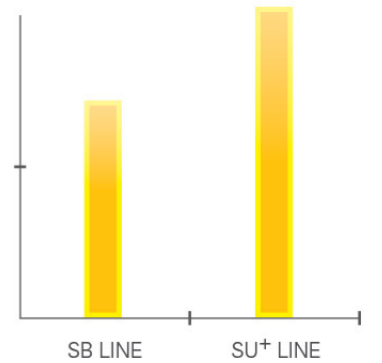
• Impact energy



• Impact frequency(long Stroke)



• Work efficiency



In-house production and heat treatment

Allows continuous technical developments, maintain homogenizing quality level



The selection of materials through the close quality test

: Cylinder, Front head and Piston etc.



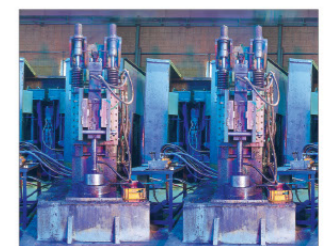
Machining : MCT process

- Major components are manufactured by computerized automatic machinery.
- Allows standardized tolerance and clearance.



Heat Treatment

Most of the components are heat-treated by our own know-how and facilities.

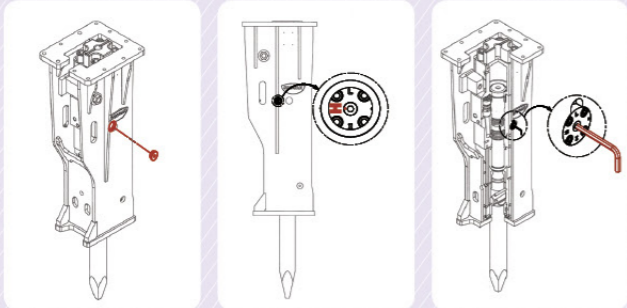


Main body test shop

All breakers are tested in accordance with ISO quality control system before delivery.

IPC & ABH SYSTEM CONTROL

| Technical Specifications SU+ series |



Selector Switch offers three operating modes and can be simply altered to each mode :

- **H - mode** : Long stroke with maximum power, ABH is off
- **L - mode** : Short stroke with maximum frequency, ABH is off
- **X - mode** : Long stroke with maximum power, ABH is on
(Blank hammering → Auto stop)
- **Easy start**

Power control & Anti blank hammering system

H - mode : Long stroke & Extra power, ABH is OFF

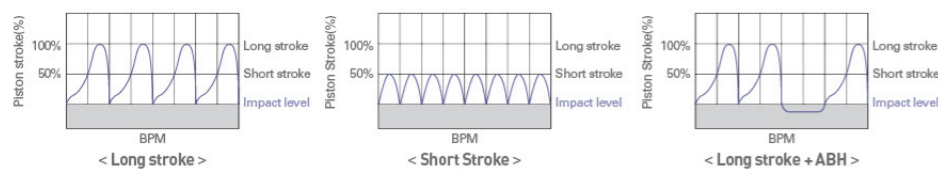
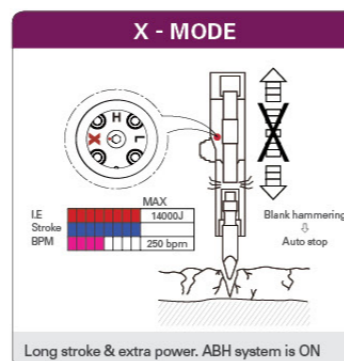
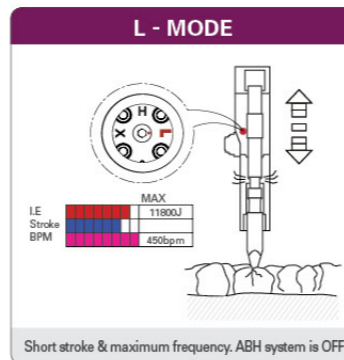
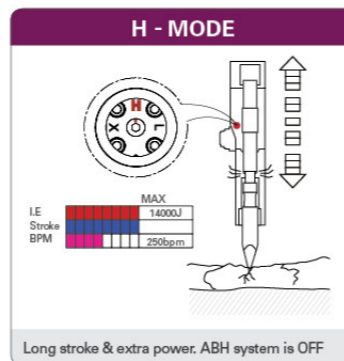
- Mode used for hard rock breaking such as primary breaking, trench works and foundation works where the rock condition is constant.
- Hammer can be started without applying contact pressure to the working tool.

L - mode : Short stroke & Maximum frequency, ABH is OFF

- Hammer can be started without applying contact pressure to the working tool.
- This mode is used for soft rock and semi-hard rock breaking.
- High impact frequency and normal power provides higher productivity and reduces strain on the hammer and the carrier

X - mode : Long Stroke & Extra power, ABH is ON

- This mode is used for hard rock breaking such as primary breaking, trenching work, and secondary reduction works, where the rock condition is not constant.
- In ABH (Anti-blank hammering) working mode, it switches off the hammer automatically and prevents the blank hammering, as soon as the material is broken.
- The hammer can be easily restarted when minimal contact pressure is applied to the working tool.
- The ABH system reduces strain on the hammer and the carrier.



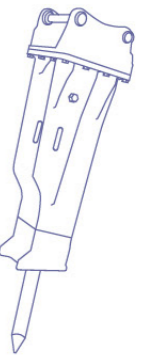
SU+ LINE TR-F SERIES

Applications ;

- Primary and secondary breaking in quarries
- Site preparation, foundation works
- Road construction
- Demolition works, highly reinforced concrete
- Trenching
- Tunneling
- Bench leveling
- General construction works

Features & advantages ;

- Vibration damping by high strength urethane cushions.
- Service friendly & robust structure housing.
- IPC & ABH system allows you to choose 3 different working modes.
- Auto shut-off & easy start.
- Valve adjuster : oil flow can be adjusted in accordance with on-site work conditions.
- Auto lubrication connection(option).



Specifications

Medium range

Description	Unit	SU+55 TR-F	SU+85 TR-F	SU+105 TR-F	SU+125 TR-F
Operating weight	kg (lbs)	1,032 (2,275)	1,812 (3,995)	2,051 (4,522)	2,569 (5,664)
Carrier weight	ton (lbs)	12~16 (26,455~35,274)	18~26 (39,683~57,320)	25~30 (55,116~66,139)	28~35 (61,729~77,162)
Height	mm (inch)	2,475 (97)	2,818 (111)	3,047 (120)	3,215 (127)
Required oil flow	l / min (g / min)	80~110 (21.1~29.1)	120~180 (31.7~47.6)	150~210 (39.6~55.5)	180~240 (47.6~63.4)
Operating pressure	bar (psi)	150~170 (2,176~2,466)	190~210 (2,756~3,046)	190~210 (2,756~3,046)	190~210 (2,756~3,046)
Impact rate	H-mode	400~650	400~550	350~500	350~500
	L-mode	650~850	500~700	430~580	430~580
Tool diameter	mm (inch)	100 (3.9)	135 (5.3)	145 (5.7)	155 (6.1)

Heavy-duty range

Description	Unit	SU+145 TR-F	SU+155 TR-F	SU+165 TR-F
Operating weight	kg (lbs)	3,164 (6,975)	3,818 (8,417)	4,555 (10,042)
Carrier weight	ton (lbs)	28~45 (61,729~99,208)	40~55 (88,185~121,254)	45~70 (99,208~154,324)
Height	mm (inch)	3,486 (137)	3,736 (147)	3,830 (151)
Required oil flow	l / min (g / min)	200~260 (52.8~68.7)	210~290 (55.5~76.6)	230~320 (60.8~84.5)
Operating pressure	bar (psi)	180~240 (2,611~3,481)	190~240 (2,756~3,481)	190~250 (2,756~3,626)
Impact rate	H-mode	250~400	250~400	250~400
	L-mode	300~500	320~470	300~450
Tool diameter	mm (inch)	155 (6.1)	175 (6.9)	175 (6.9)

The above specifications are subject to change without prior notice.