

TNB-Hydraulic Breakers

Ver.02



TNB-Hydraulic Breakers Features

- Advanced accumulator free technology enables simple structure yet efficient.
- Simple design allows less parts and realizes low running cost.
- Adaptable for wide range of oil pressure and flow.

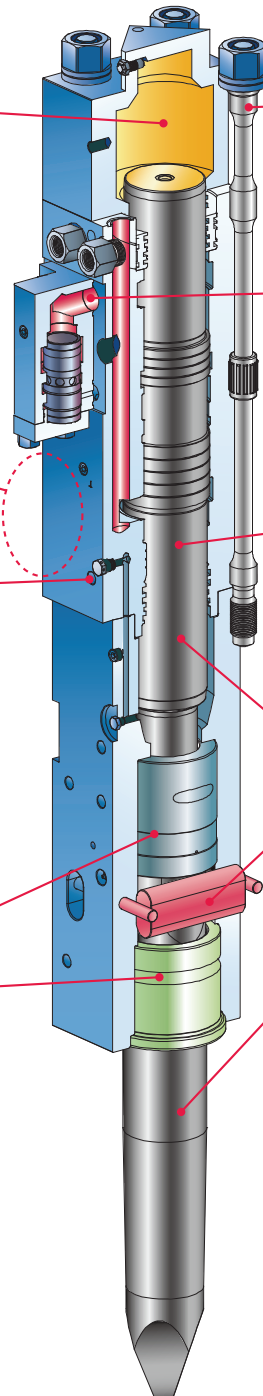
Breaker body

Cushion Chamber: It is an important impact source since TNB-breakers source **its Impact Energy 70% from Nitrogen Gas Pressure** of cushion chamber and the rest of **30% from the Operation Oil Circuit**.

Accumulator Free Breaker Structure allows easy and low cost maintenance.

Dust Preventing Valve takes cleaner air from upper area into the impact chamber and blows out the dusty air to bottom. This valve port is also used for **Underwater Application** to lead the high pressure air from a compressor.

Direct and Independent Grease Supply to **Chisel Bush** and **Chisel Holder Bush**. A chisel is the most consumed item and this system contributes well for the long life of chisel.



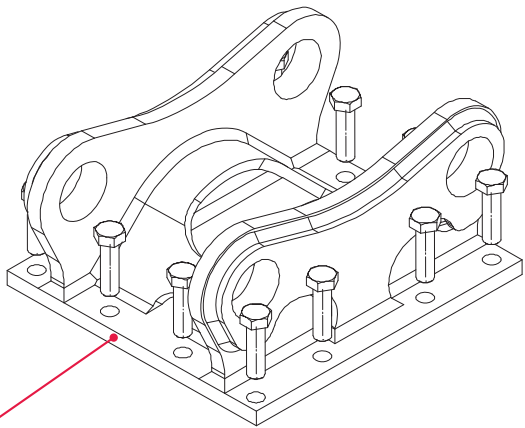
Durable Side Bolts: It has stress scattered structure and partially rubber coated for anti-vibration.

Short Oil Path: The oil path between control valve and cylinder is taken shortest as less as possible to avoid any secondary trouble.

Long Stroke Pistion: It gives more powerful impact energy and brings a stable breaker operation.

Dual Oval Retainer Pins are robust and guarantees correct tool aliignment and long life.

50/50 Piston to Tool Weight Ratio efficiently transfers blow energy into the material and reduces recoil.



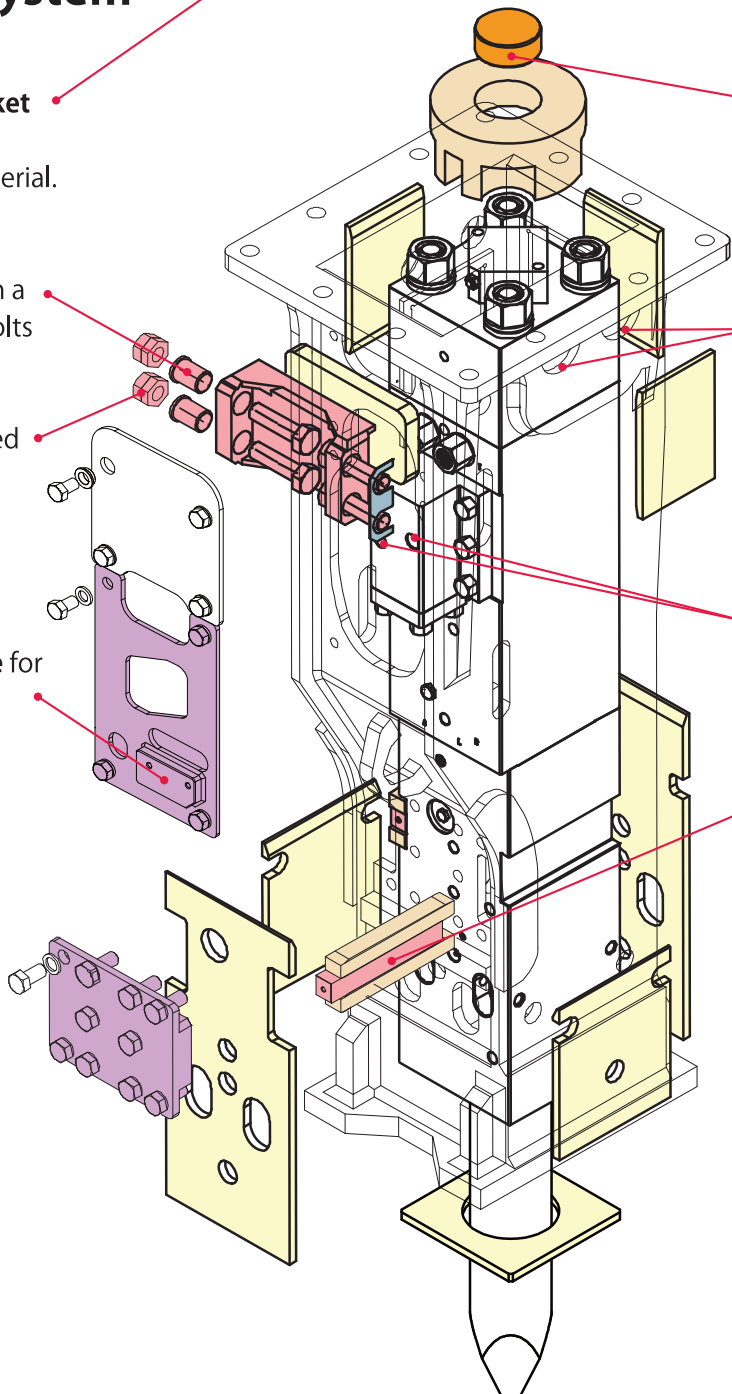
Box Bracket system

New design for the **Bracket Adapter** with enforced rigidity using thicker material.

Durable **Guide Plate** with a collar of bolts to avoid bolts shearing.

Hard lock nuts are applied to prevent the nuts from slacking.

Prefabricated Base Plate for Auto-Grease adoption.



Hard Urethan Core to hold a distance between cylinder head and bracket adapter.

New Windows to check the marking for slack of side bolt nuts.

High and Low-Pressure Oil Port for driving a retrofit Auto-grease.

The Key to hold breaker body and the urethan sandwich system absorbs the vibration of breaker body.

All 15 Models line up

Mini range : 6 models

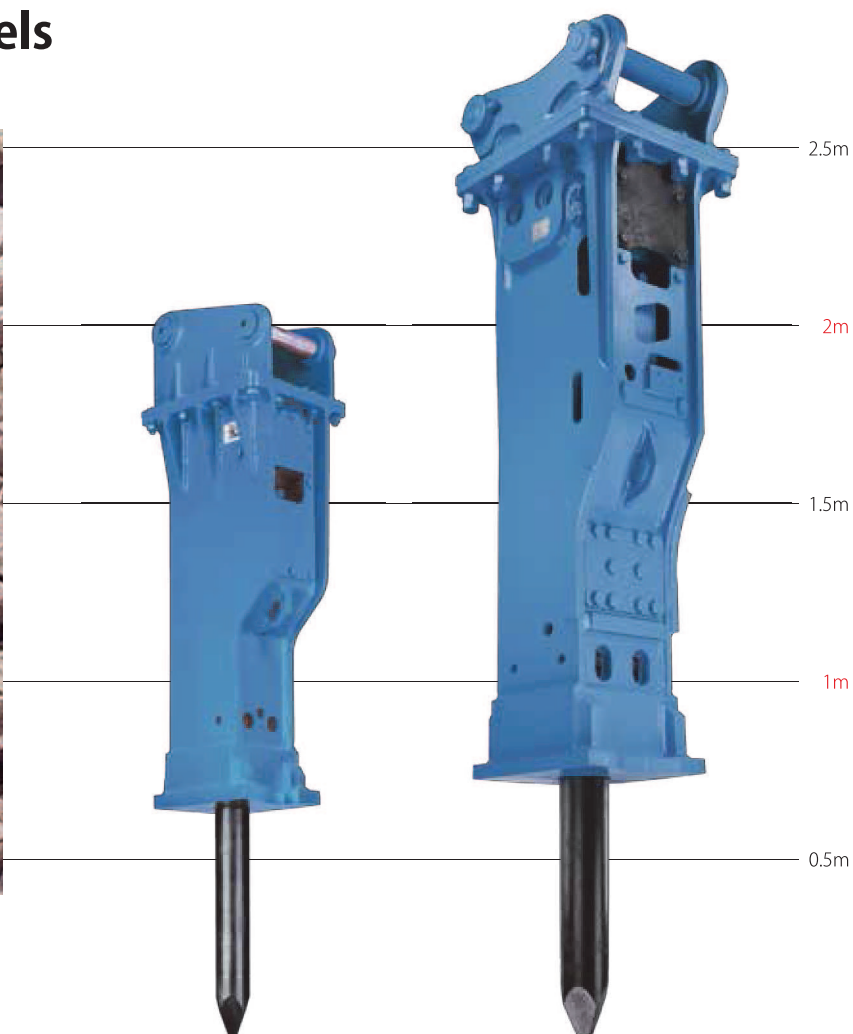


TNB-3MB

TNB-5M

MODEL		TNB-08M	TNB-1M	TNB-2M	TNB-3MB	TNB-4M	TNB-5M	
Impact rate	bpm	930-1300	700-1200	600-1150	550-1000	580-1060	550-1000	
Tool diameter	mm	φ40	φ45	φ50	φ58	φ64	φ75	
	inch	1.57	1.77	2.0	2.3	2.5	3.0	
Working weight	1pc top mount type	kg	75	85	110	190	220	305
		lbs	165	187	242	418	484	671
	2pc top mount type	kg	75	100	140	210	255	315
		lbs	165	220	308	462	561	693
Box case	kg	90	120	165	255	320	385	
	lbs	198	264	363	561	704	847	
Oil flow	L/min	18-25	20-30	20-35	25-45	30-55	35-60	
	G/min	4.8-6.6	5.3-7.9	5.3-9.2	6.6-12	8-14.5	9.2-16	
Operating pressure	MPa	6-13	7-14	8-15	10-15	10-16	10-16	
	PSI	853-1850	996-1991	1138-2133	1422-2133	1422-2276	1422-2276	
Hose I.D.	Inch	3/8	1/2	1/2	1/2	1/2	1/2	
Gas pressure	MPa	0.8	0.8	0.8	0.8	0.8	0.8	
	PSI	114	114	114	114	114	114	
Carrier range	ton	0.7-1.5	1-2	1.5-2.5	2.4-4	3-4.5	3.8-6	

Medium range : 5 models

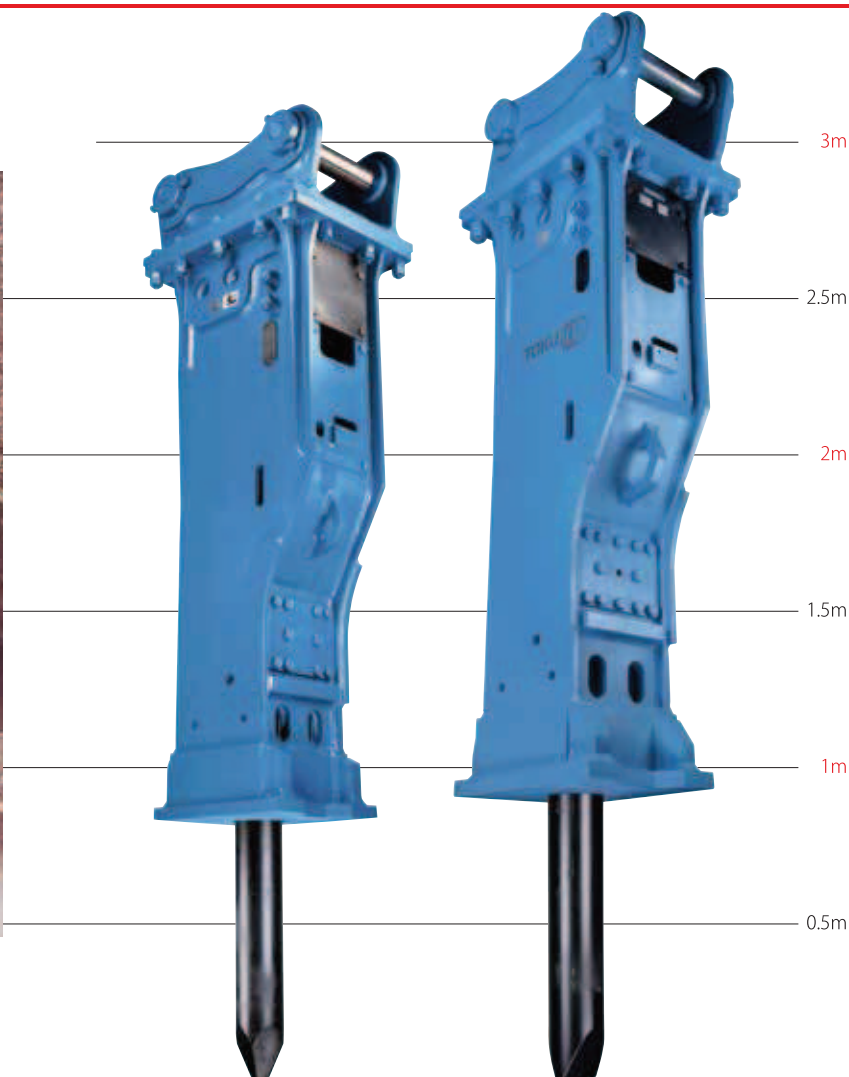


TNB-6E

TNB-151LU1

MODEL		TNB-6M	TNB-6E	TNB-7J	TNB-100	TNB-151LU1
Impact rate	bpm	600-1050	550-1000	450-700	430-600	490-630
Tool diameter	mm	φ 75	φ 95	φ 105	φ 115	φ 135
	inch	3.0	3.7	4.1	4.5	5.3
Working weight	1pc top mount type	kg	365	420	1060	1650
		lbs	803	924	2332	3630
Working weight	2pc top mount type	kg	350	450	1120	1800
		lbs	770	990	2464	3960
Box case	kg	410	570	950	1240	1830
	lbs	902	1254	2090	2728	4026
Oil flow	L/min	40-70	45-80	80-120	100-140	160-200
	G/min	10.6-18.5	12-21	21.1-31.6	26.4-37	42.3-52.8
Operating pressure	MPa	10-16	10-16	14-18	12-17	14-18
	PSI	1422-2276	1422-2276	1991-2560	1707-2418	1991-2560
Hose I.D.	Inch	3/4	3/4	3/4	1"	1"
Gas pressure	MPa	1	0.8	1.1	0.8	1.1
	PSI	143	114	157	114	157
Carrier range	ton	5.5-8	6-11	8-14	14-20	18-25

Large range : 4 models

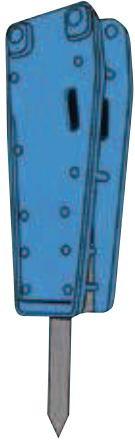


TNB-230LU1

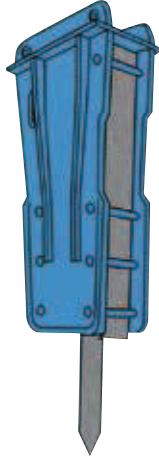
TNB-310LU1

MODEL		TNB-190LU	TNB-230LU1	TNB-310LU1	TNB-400LU
Impact rate	bpm	370-490	380-450	370-470	370-470
Tool diameter	mm	φ140	φ146	φ160	φ178
	inch	5.5	5.75	6.3	7.0
Working weight 2pc top mount type	kg	2050	2800	3400	4450
	lbs	4510	6160	7480	9790
Box case	kg	2250	2690	3800	4550
	lbs	4950	5918	8360	10010
Oil flow	L/min	160-210	180-230	240-300	280-390
	G/min	42.3-55.5	47.6-60.8	63.4-80	74-103
Operating pressure	MPa	14-18	13-18	14-18	14-18
	PSI	1991-2560	1849-2560	1991-2560	1991-2560
Hose I.D.	Inch	1"	1"	1" -1/4	1" -1/4
Gas pressure	MPa	0.8	0.8	0.8	0.8
	PSI	114	114	114	114
Carrier range	ton	20-30	27-40	38-50	45-70

Bracket type :

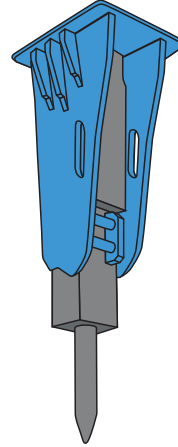


1 pc top mount type



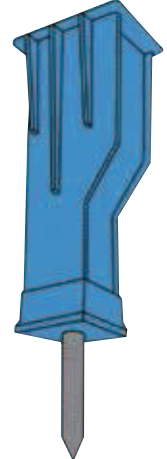
2 pc top mount type

- Available for all models
- Heavy duty type
- Ideal for trenching



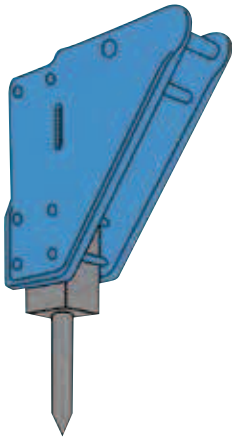
2 pc open box type

- Available for TNB-08M~TNB-7E
- Light weight type
- Easy maintenance



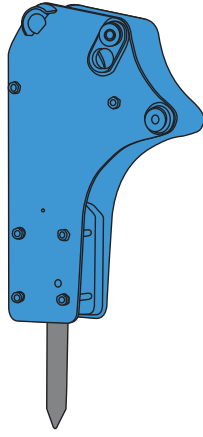
Box (silenced) type

- Available for TNB-1M~TNB-400
- Suitable for work in residential area

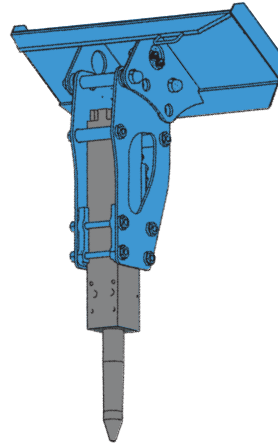


Side mount type

- Available for TNB-08M~TNB-310
- Easy handling



Backhoe loader type



Skid steer type

Tool selection :

Type	Purpose	Application	Shape
Moil point	Largely breaking	Reinforced concrete rock bed	
Flat	Wedge action	Trenching and slope finishing	
Flat end	Large stone into small	Boulders and concrete	

“Long type tools are available as option”

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Main Plant



Kamimine Plant



Hirokawa Plant



Kishima Plant



Kiyama Plant



FS 89391 / ISO 9001:2008
EMS 89393 / ISO 14001:2004

Distributor