

# DD SERIES GUIDE ROD DIESEL PILE HAMMER

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## DD series guide rod diesel pile hammer

are used for piling machinery with two-stroke diesel engines. It has simple structure, be simple to operate and maintain, and high quality. It can be widely used for a variety of piles, including wooden pile, metal pile, prefabricated concrete pile, lime soil pile, concrete poured pile, and concrete tamped pile. These DD series guide rod diesel pile hammers are the ideal equipments for constructions of ports, docks, airports, bridges, water conservancies, highways and high-rise buildings, etc..

As the widely used impulse type piling equipment, we have successfully developed full series guide rod diesel pile hammers. It has multiple patents, and its performance indicators reached the international advanced level. It will overall meet the requirements of various projects.

### Note:

1. With the advances in technology, the above specifications may be subject to change. Please pay attention to the improvement and development of our company's products.
2. The type of hammers with guide distance 5', 10', 12", 14" are channel steel, the type of hammers with distance 12", 24" are steel tube, the specification is  $\varnothing 70$ ,  $\varnothing 102$ .
3. DD55, DD65, DD75 type of hammer has enhancement tube hammer, the max explosive power of them will be raised by 10~15 percent.
4. The multi-guide rod diesel pile hammer can be provide for mid-large hammers by our company, it is our patented product.



### Technical parameters for DD series guide rod diesel pile hammer

Description	Unit	DD1	DD3	DD4	DD6	DD12	DD18	DD25	DD35	DD45	DD55	DD65	DD75	DD85	DD105	DD128	DD160	DD180	DD200
Cylinder complex mass	Kg	150	300	400	600	1200	1800	2500	3500	4500	5500	6500	7500	8500	10500	12800	16000	18000	20000
Max. cylinder stroke	m	1.2	1.5	1.6	1.9	2.1	2.1	2.5	2.8	3	3	3	3	3	3	3	3	3	3
Impact frequency	Min-1	60-80	60-70	60-70	45-60	45-60	45-60	35-50	40-50	35-50	35-50	35-50	35-50	35-50	35-50	35-50	35-50	35-50	35-50
Max. energy	Kj	1.8	4.5	6.3	12.8	29.8	37.8	57.5	89.6	120	157	189	219	235	310	380	480	540	600
Oil consumption	l/h	1	1.6	2.1	3.1	4.5	6.9	10	12	14.5	16.5	18	21	25	31	38	46	48	50
Force of explosion pile	KN	110	160	213	258	445	596	968	1250	1430	1690	1980	2280	2560	2950	3460	4325	4510	4750
Suitable for driving pile	Kg	400	1000	1500	2000	4000	5000	6000	7000	9000	13000	16000	18500	22000	30000	38000	48000	55000	60000
Reduction ratio		18	18	18	18	18	18	22	22	22	22	22	25	25	25	28	28	30	30
Hammer mass	Kg	300	610	1000	1350	2550	3350	4200	5400	7900	10000	13000	14000	15800	19600	24200	30200	34800	38900
Guide distance	mm	120/240	120/240	U steel 10#	300/330	360/330	360/330	360/330	360/330	330	330	330	330	330/600	330/600	330/600	600	600	600



## D series air-cooled diesel pile hammers

are brand-new products, which are manufactured with complete design and manufactured by IAI with the absorb of domestic and abroad advanced technology it is also the most widely used for foundation construction equipment at present. These products, using the principle and technology of the diesel engines, has a powerful continuous piling benefit, unique forced lubrication technology and working life is longer. It used the most advanced injection system in the world, make the product compact structure, convenient operation and maintenance. These D series of hammers overcome shortcomings that general diesel pile hammer can't drive in batter piling.

D series AIR-cooled pile hammers have some advantage: strong working power, low oil consumption, high working efficiency, good economics performance and longer working life and etc.. It suitable used for wooden pile, prefabricated concrete pile, steel pipe pile, steel plate piles and etc foundation operation. These D series diesel pile hammers not only driving flexibility in all kind of land or sea engineering construction, but also have intentional support.



### Technical data for D series diesel pile hammer

Model		Unit	D12	D16	D19	D25	D30	D36	D46	D50	D62	D80	D100	D128	D138	D160	D180		
			Batter piling forward and backward up to									Batter piling forward and backward up to							
			1:2	1:3/ 1:1	1:3/ 1:1	1:3/ 1:1	1:3/ 1:1	1:3/ 1:1	1:3/ 1:1	1:3/ 1:1	1:2/1:1	1:2/1:1	1:2/1:1	1:5/1:1	1:2	1:2	1:2	1:2	
Impact weight (piston)		kg	1280	1600	1820	2500	3000	3600	4600	5000	6200	8000	10000	12800	13800	16000	18000		
Energy per blow		Nm	46080~20500	53460~25585	65520~45680	90000~39975	102300~47970	122760~55450	165600~70850	180000~80000	218960~107050	266830~171085	333540~213860	417000~250200	461000~295000	544000~331840	610000~384300		
Numbers of blows		min-1	35~52	36~52	35~42	35~52	36~52	36~53	35~53	35~52	36~50	36~45	36~45	36~45	36~45	36~46	36~46		
Force of explosion pressure on pile max.		KN	606	686	686	1304	1304	1695	1695	1770	1800	2600	2600	3600	3985	4600	5100		
Suitable for driving piles up to		kg	5000	5000	6600	7500	9000	12000	16000	20000	25000	30000	40000	50000	70000	90000	10000		
Permissible rope diameter for deflector sheave of tripping device max.		mm	20	20	20	22	22	38	38	25	38	30	30	30	30	38	38		
Consumption	Diesel oil	L/h	4.5	5.5	7.5	8	10	11.5	16	17.6	20	25	30	36	39	45	54		
	Lubricant	L/h	0.5	1	0.6	1	1	1.5	1.5	3	3.2	2.9	2.9	3.6	4	5	5		
Volume	Diesel oil tank	L	24	32	32	67	67	89	89	83	98	155	155	190	190	240	240		
	Lube tank	L	6.5	9	9	19	19	17	17	20.9	31.5	32	32	60	60	80	80		
Weight	Diesel pile hammer approx.	kg	2735	3250	3550/3695	5330/5810	6030/6310	7990/8400	8990/9400	11400	11870/12280	16365/16905	19820/20360	23500/24320	25900	31200	34030		
	Tripping device approx.	kg	100	100	100	180	180	400	400	600	400	750	750	750	750	1300	1300		
	Transport bracket/ cradle approx.	kg	11	11	11	20	20	31.5	31.5	45	72	135	135	135	135	150	150		
	Transport guard approx.	kg	15	15	15	23	23	25	25	25	34	220	220	220	220	220	220		
	Tool box approx.	kg	75	75	75	100	100	100	100	100	0.125	125	125	125	125	125	125		
Dimension	Length of diesel pile hammer(a/a1)	mm	4770	4730/5570	4865/5705	5450/6290	5450/6290	5470/6285	5470/6285	5560	5910/6910	6200/7200	6358/7358	6663/7783	7983	7855	8365		
	Outer diameter of impact block(b)	mm	440	440	440	560	560	660	660	670	710	820	820	910	910	1045	1045		
	Overall dimension measured over fastening screws of the guide jaws (c)	mm	560	560	560	780	780	880	880	900	828	1110	1110	1210	1210	1260	1260		
	Width of diesel pile hammer (d)	mm	440	485	485	640	640	785	785	1002	800	890	890	1030	1030	1156	1156		
	Width for connection of guide jaws(e)	mm	320	320	320	540	540	640	640	660	560	800	800	850	850	900	900		
	Center of diesel pile hammer up to pump guard (f)	mm	335	345	345	405	405	445	445	460	490	550	550	560	560	610	610		
	Center of diesel pile hammer up to center of threaded hole for fastening screw of the guide jaws (g)	mm	245	280	280	235	235	275	275	320	380	350	350	370	370	440	440		
	Depth of diesel pile hammer (h)	mm	610	665	665	715	715	848	848	880	970	1110	1110	1220	1220	1420	1420		
	Standard distance from center of diesel pile hammer up to the center of lead (H)	mm	340	360	360	440	440	500	500	544	560	720	720	765	765	950	950		
	Leads width (L)		mm	330 × (Ø70)									600 × (Ø102)						



## Hydraulic walking pile driving frame

supports all kinds basis construction machinery plant pile. The mechanical products walking pile driving frame used boat-shape track, a small ground pressure area ratio, unit stable, multi-funtional characteristics. According to the construction requirements are allocated leveraged derivative linked diesel hammer, drum diesel hammer, vibration hammer, long drilling rig equipment, and other work, the shape of various pile construction. Our pile frame with multi-purpose and reliable performance, mobile convenient, efficient construction, is the ideal equipment for foundation work.

**Technical parameters for Hydraulic Walking Pile Driving Frame**

Description	Unit	ZJB40	ZJB60	ZJB90	ZJB150	ZJB200	ZJB60H	ZJB90H	ZJB150H
Diameter of leader column	mm	Ø426	Ø630	Ø720	Ø820	Ø1120	Ø630	Ø720	Ø820
Leader rated capacity	KN	240	320	400	600	800	320	400	600
Leader support mode	3- point support								
Leader guide	mm	330* Ø70	330* Ø70	330* Ø70 600*Ø102	600*Ø102	600*Ø102 900*Ø121	330*Ø70	330*Ø70 600*Ø102	600*Ø102
Leader inclination	Forward tilt 9° , backward tilt 5°								
Slope climbing capacity	°	3°	3°	3°	2°	2°	2°	2°	2°
Platform rotation angle	°	15° /time	15° /time	15° /time	15° /time	15° /time	± 180°	± 180°	± 180°
Platform rotating speed	r/ min						0.32	0.3	0.25
Long bridge step pace	m	2	2	2	2	2	2	2	2
Long bridge moving speed	m/ min	4	3.5	3	3	3	3.5	3	3
Short bridge step pace	m	0.8	0.8	0.8	0.8	0.8			
Short bridge moving speed	m/ min	4	3.5	3	3	3			
Average ground pressure	Mpa	0.035/0.045	0.04/0.055	0.046/0.06	0.05/0.065	0.055/0.07	0.05/0.11	0.055/0.13	0.06/0.16
Type of winch		2JM3-5	2JM5	2JM8-10	2JM10-12	2JM12-16	2JM5	2JM8-10	2JM10-12
Hydraulic system motor power	KW	22	30	37	45	55	37	45	45
Hydraulic system oil pressure	Mpa	16	20	20	20	20	20	20	20
Total height	m	22-24.5	24-29	24-33	24-39	24-39	24-39	24-39	24-39
Total weight	T	41	50	58	76	90	55	66	82
Applicable pilling hammer max.		DD53 D50 DZ60KS	DD83 D62 DZ75KS	DD180 D150 DZ180KS	DD180 D180 DZ180KS	DD220 D225 DZJ240	DD83 D62 DZ90KS	DD103 D100 DZ120KS	DD160 D150 DZJ200
Applicable earth auger max.		Ø400*18	Ø600*24	Ø800*28	Ø800*32	ZLD180/1000-3	Ø600*24	Ø800*28	Ø800*32

**Note:**

1. Demonstration of the type: ZJ-pile driving frame, B-walking, H-swing type.
2. With the advances in technology, the above specifications may be subject to change, please pay attention to the improvement and development of our company's products.
3. Our company can also satisfy nonstandard designs and production according to the requirements of users, such as mast type pile driving frame.

# CYLINDER TYPE DIESEL PILE HAMMER

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