

SUNWARD



**SWD DOWN-THE-HOLE DRILLING RIG**

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X-II-Z-4 SWD EN 2016-05(MACM)



Advanced Assembly Line



**Before sales**

Personalized service with optimum solution, perfect designing & manufacturing system, Free technical training and honest marketing.



**On sales**

Executing contracts and promises in good faith.



**After sales**

Service program of free training, routine inspection on site, parts distribution center close to dealers and service supports provided throughout the machine's service life.

SWD series down-the-hole drill rig is widely used in mining and construction, such as cement, metallurgy, coal mine, quarry, railway, hydropower and national defense construction. The rig is equipped with high pressure drilling system, which offers accurate and efficient drilling. The rig gives an economic alternative with extraordinary performance for drilling holes in the 90~255 mm diameter range.

Drilling system, power system and air compressor are mounted on a compact structure, giving a remarkably nimble machine.



All hydraulic operations are centrally controlled with the Pilot Joystick.

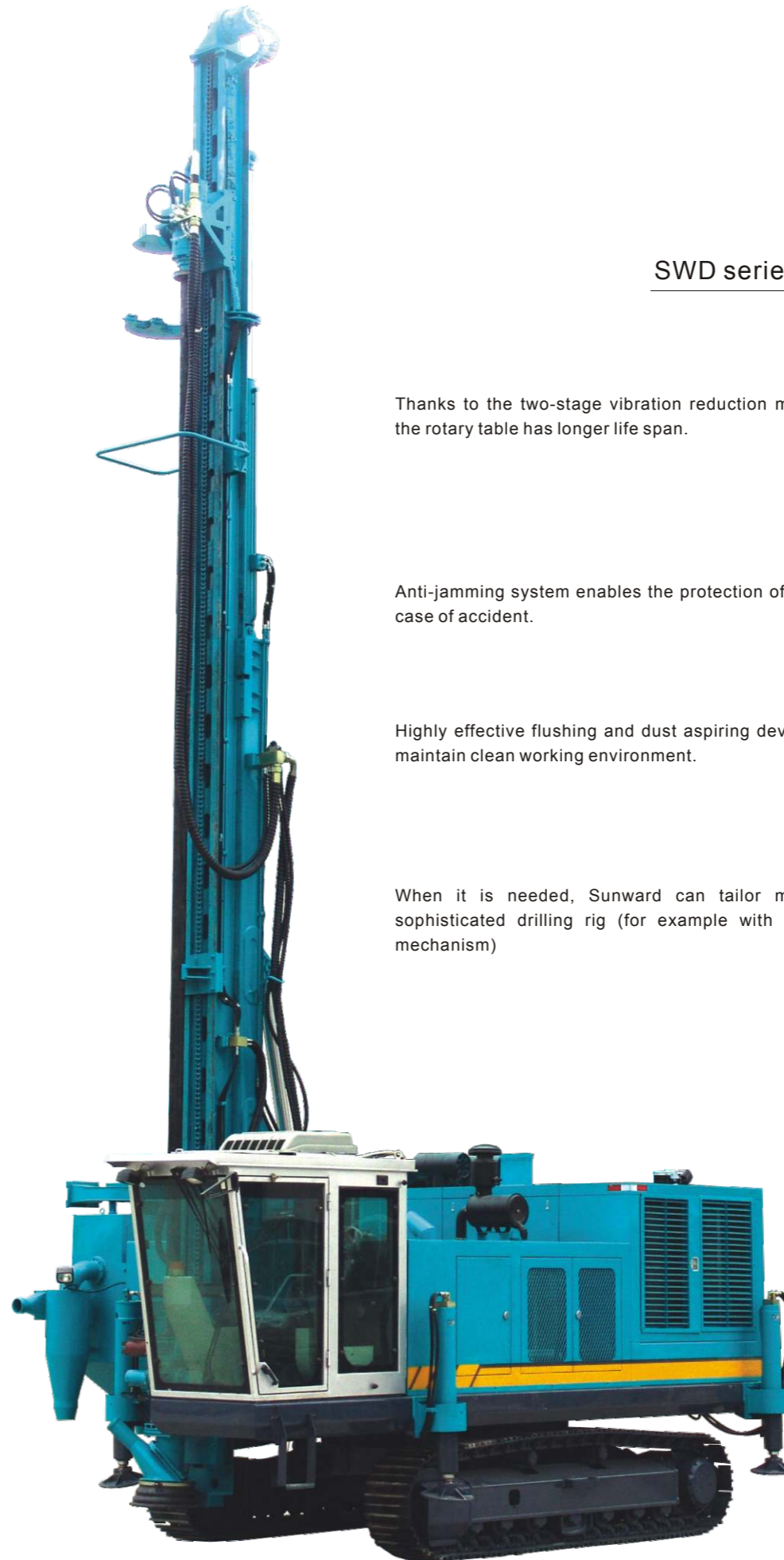
Equipped with air conditioning, the cab is operator friendly and comfortable.



The SWD drilling rig is equipped with highly reliable crawler system.



The drilling system has a carousel tube handling system with deep hole capacity and free selection of drill tubes, enabling to increase working efficiency.



SWD series of Hydraulic Downhole Drilling Rig

Thanks to the two-stage vibration reduction mechanism, the rotary table has longer life span.



Anti-jamming system enables the protection of drill rod in case of accident.

Highly effective flushing and dust aspiring device help to maintain clean working environment.



When it is needed, Sunward can tailor make more sophisticated drilling rig (for example with auto-swing mechanism)



Drilling system, power system and air compressor are mounted on a compact structure, giving a remarkably nimble machine.

Optimized power matching is guaranteed by the separate power drives (one for hydraulic system and the other for compressor).

The SWD drilling rig is equipped with a floating chassis. Additionally, four service hydraulic cylinders allow keeping the machine perfectly stable when drilling on a slope or on a rocky surface.

Hydraulic drilling boom operates smoothly, flexibly, precisely and quickly.

The SWDE drilling rig features long reach and large coverage area.



When the drilling boom is unfolded, the main machine body is exposed to less harmful impact caused by drilling vibration and dust pollution. Consequently, not only does the machine have longer life span, but also the drilling precision is much improved.

The drilling system has a carousel tube handling system with deep hole capacity and free selection of drill tubes, enabling to increase working efficiency.

Highly effective flushing and dust aspiring device help to maintain clean working environment.

Equipped with air conditioning, the cab is operator friendly and comfortable.



Operating system and monitoring system are located on the same board, which offers the possibility of easy to use and to maintain.

Based on SWD DTH Drilling Rig for mining, SWDW Offshore DTH Drilling Rig is specially designed for underwater and offshore works. Mounted on an engineering vessel or on a barge, Offshore DTH Drilling Rig is the very adapted machine for dredging, blasting of submerged reef and offshore earthmoving works.



All hydraulic operations are centrally controlled with the Pilot proportional Joystick.

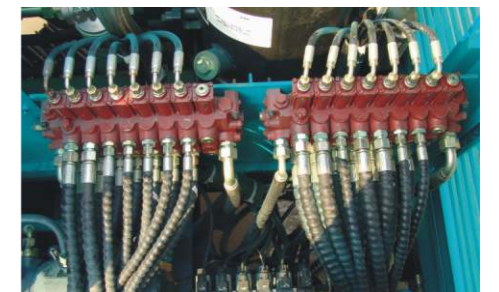
Hydraulic clamper guarantees the guidance of casing and precise positioning.

The machine moves back and forth on rail, and the drive system can be either hydraulic motor or electric motor coupled with a reducer.

Reliable braking is ensured by four hydraulic brakes and one additional spare manual brake.

Two stage operating platforms offer maintenance access, and can be folded while off-duty.

The main winch and the auxiliary one offer sufficient power, making the drill's auxiliary service and maintenance work far more easier.



SUNWARD is a leading supplier of down-the-hole drilling rig in China, thanks to its superior capacity of R&D and manufacturing. Since its mass production and marketing, SUNWARD's market share keeps ever increasing. Our prestigious customers includes Huaxin Cement, Jindong Cement, Wuhan Steel and Anshan Steel etc. Moreover, SUNWARD DTH down-the-hole drilling rig has been winning confidence of overseas customers from Canada, Australia, Nigeria, Russia, Kazakhstan, Mongolia, Vietnam and Burma.



Rock quarry in Vietnam



Lead zinc ore mine in Iran



Job site in Lake Baikai, Russia



Jobist Mongolia



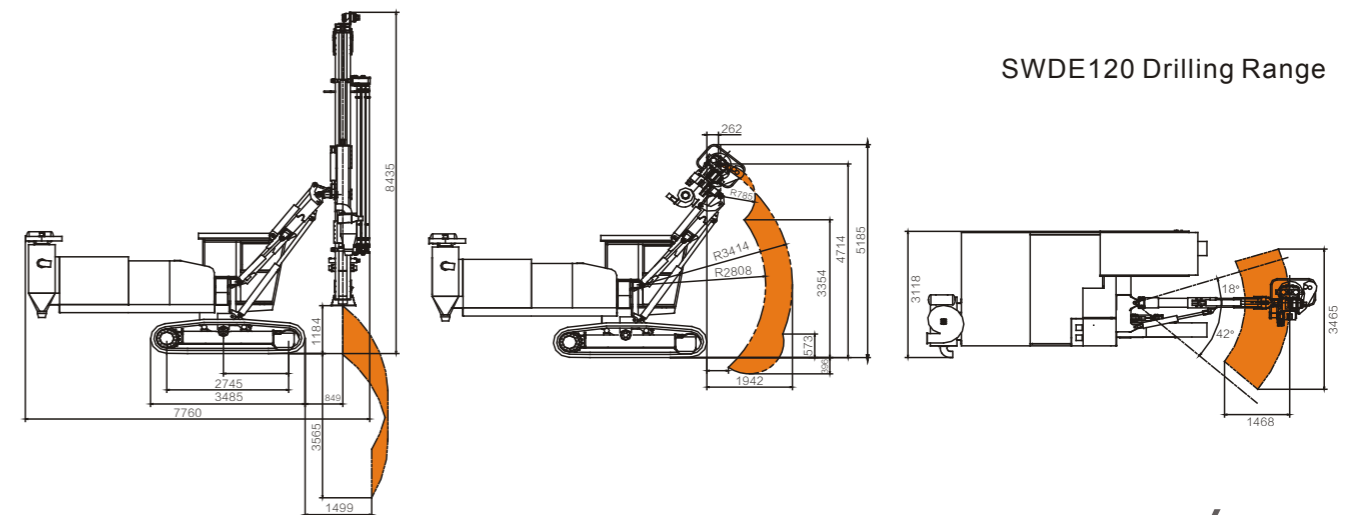
Jobist High speed railway in Libya



Jobist Myitkyina Jade mine in Myanmar

**Specification**

PARAMETER	UNIT	SWDB 120	SWDE 120	SWDF 138
Drilling range	mm	90 138	90 138	90 152
Drill hammer		3.5", 4"	3.5", 4", 5"	3.5", 4", 5"
Drill rod diameter	mm	89	83	83
Drill rod length	m	7.5m×3	4m×6	3m×6
Drilling depth	m	22	24	18
<b>AIR COMPRESSOR</b>				
Model		550RH	550RH	—
Air pressure		0.65 1.7	0.65 1.7	1.38 1.9
Air volume of work	m <sup>3</sup> /min	15.5	15.5	12 21.2
Power	kW/rpm	179/1800	179/1800	—
<b>ENGINE</b>				
Model		4BT3.9	4BT3.9	4BT3.9
Power	kW/rpm	60/2200	75/2200	75/2200
Fuel tank	L	360	470	140
<b>PROPELLING</b>				
Length of drillrig	mm	10500	6920	5920
Thrust stock	mm	8000	4380	3800
Feed extension	mm	1200	1200	800
Thrust speed	m/s	0.5	0.8	0.8
Thrust capacity	kN	32	32	32
Pitch degree	°	—	140	140
Overturn degree	°	—	-20 90	-20 90
<b>BOOM</b>				
Boom length, total	mm	—	2800	2200
Lifting angle	°	—	50 -30	50 -30
Swing angle	°	—	15(L) / 45(R)	15(L) / 45(R)
<b>TRAVELLING</b>				
Travel speed	km/h	2	3.2	3.2
Max. traction force	kN	100	100	100
Grade ability	°	25	25	25
Crawler pendulum feet frame	°	—	± 10	± 10
Max. rising height from ground	mm	440	480	480
<b>ROTARY POWER HEAD</b>				
Model		DLT18B	DLT18B	DLT18B
Rotary speed	rpm	70	70	70
Rotary torque	Nm	3000	3000	3000
<b>DIAMENSION</b>				
Gross weight	t	15.5	15.5	—
Working state (L×W×H)	mm	6.5×4.2×10.8	10.3×3.12×3.5	8.2×2.5×3.2
Transportation state (L×W×H)	mm	10.8×3.2×3.4	7.76×3.12×8.44	6.3×2.5×6.2



SWDE120 Drilling Range

**Specification**

PARAMETER	UNIT	SWDA 165	SWDB 165	SWDA 165C	SWDE 165		
Drilling range	mm	138 180	138 180	138 180	138 180		
Drill hammer		5", 6"	5", 6"	5", 6"	5", 6"		
Drill rod diameter	mm	110、133	110、133	110、133	110		
Drill rod length	m	8.5m×3	8.5m×3	8.5m×3	6m×6		
Drilling depth	m	25	25	25	36		
<b>AIR COMPRESSOR</b>							
Model		E750XH	825XH	E750	BESJ1000	DLQ825XH	BDSJ1070
Air pressure		1.38	1.38	1.38	2.07	1.38	2.1
Air volume of work	m <sup>3</sup> /min	21.2	23.4	21.2	28.3	23.4	30.3
Power	kW/rpm	185	216/2200	185	315	216/2200	328/1800
<b>ENGINE</b>							
Model		Y200-4	4BT3.9	4BT3.9+Y200-4	4BT3.9		
Power	kW/rpm	60	75/2200	75/2200+60	75/2200		
Fuel tank	L	—	600	200	580		
<b>PROPELLING</b>							
Length of drillrig	mm	11500	11500	11500	9230		
Thrust stock	mm	9000	9000	9000	6500		
Feed extension	mm	1800	1800	1800	1300		
Thrust speed	m/s	0.8	0.8	0.8	0.5		
Thrust capacity	kN	40	40	40	40		
Pitch degree	°	—	—	—	140		
Overturn degree	°	—	—	—	-20 90		
<b>BOOM</b>							
Boom length, total	mm	—	—	—	3200		
Lifting angle	°	—	—	—	50 -30		
Swing angle	°	—	—	—	15(L) / 45(R)		
<b>TRAVELLING</b>							
Travel speed	km/h	2	2	2	2		
Max. traction force	kN	125	125	125	125		
Grade ability	°	25	25	25	25		
Crawler pendulum feet frame	°	—	—	—	± 10		
Max. rising height from ground	mm	480	480	480	480		
<b>ROTARY POWER HEAD</b>							
Model		DLT40B	DLT40B	DLT40B	DLT40B		
Rotary speed	rpm	60	60	60	50		
Rotary torque	Nm	4000	4000	4000	4000		
<b>DIAMENSION</b>							
Gross weight	t	23	23	28	23		
Working state (L×W×H)	mm	7.2×4.3×12	7.2×4.3×12	8.1×4.65×12	11×3.2×3.6		
Transportation state (L×W×H)	mm	12×3.2×3.14	12×3.2×3.14	12×3.4×3.14	9.5×3.65×9.6		

PARAMETER	UNIT	SWDA 200	SWDB 200	SWDA 200C	SWDE 200	SWDF 200
Drilling range	mm	180 255	180 255	180 255	178	180 255
Drill hammer		6", 8"	6", 8"	6", 8"	6", 8"	6", 8"
Drill rod diameter	mm	146	146	146	146	146
Drill rod length	m	10m×3	10m×3	10m×3	4m×6、6m×3	4m×6
Drilling depth	m	30	30	30	18	24
<b>AIR COMPRESSOR</b>						
Model		BESJ1000	BDSJ1070	BESJ1000	XRVS1050	—
Air pressure		2.07	2.07	2.07	2.5	1.38 2.5
Air volume of work	m <sup>3</sup> /min	28.3	30.3	28.3	29.8	21.2 30.3
Power	kW/rpm	315	328/1800	315	328/1800	—
<b>ENGINE</b>						
Model		Y200-4	6BT5.9	4BT3.9+Y200-4	6BT5.9	4BT3.9
Power	kW/rpm	60	97/2200	75/2200+60	97/2200	75/2200
Fuel tank	L	—	700	200	300	500
<b>PROPELLING</b>						
Length of drillrig	mm	13200	13200	13200	9800	6920
Thrust stock	mm	10500	10500	10500	6500	4380
Feed extension	mm	1800	1800	1800	1300	1200
Thrust speed	m/s	0.8	0.8	0.8	0.5	0.4
Thrust capacity	kN	75	75	75	75	75
Pitch degree	°	—	—	—	140	140
Overturn degree	°	—	—	—	-20 90	-20 90
<b>BOOM</b>						
Boom length, total	mm	—	—	—	2600	2200
Lifting angle	°	—	—	—	50 -30	50 -30
Swing angle	°	—	—	—	15(L) / 45(R)	15(L) / 45(R)
<b>TRAVELLING</b>						
Travel speed	km/h	2	2	2	4 / 2.1	3.2
Max. traction force	kN	175	175	175	175	100
Grade ability	°	25	25	25	25	25
Crawler pendulum feet frame	°	—	—	—	—	± 10
Max. rising height from ground	mm	480	480	480	480	480
<b>ROTARY POWER HEAD</b>						
Model		DLT60	DLT60	DLT60	DLT60	DLT60
Rotary speed	rpm	50	50	50	55	35
Rotary torque	Nm	6000	6000	6000	6000	6000
<b>DIAMENSION</b>						
Gross weight	t	30	30	30	30	17
Working state (L×W×H)	mm	8.3×4.15×13.9	8.3×4.15×13.9	8.3×4.15×13.9	12×3.4×3.6	9.04×2.95×3.4
Transportation state (L×W×H)	mm	13.9×3.35×3.45	13.9×3.35×3.45	13.9×3.35×3.45	9.2×4.1×9.8	7.79×2.95×7.8

To meet the requirements of civil explosive market, Sunward developed SWDR series rotary cutting drill rig based on mature excavator platform. The rig is equipped with efficient feed system and with air compressor for flushing. The rig drills at high cutting speed, capable of replacing pneumatic pick and other manual works, which offers high productivity at low cost.



### Low Energy Consumption and High Drilling Efficiency

Dujiangyan job site, Chengdu: 3.2m hole drilled in 40 second



### High Mobility and Flexibility

Mounted on crawler chassis, operating platform can swing 360



### Comfortable Cab

Spacious cab gives good moveability and comfort for the operator

## SWDR Series of Hydraulic Drilling Rig Specification

PARAMETER	UNIT	SWDR 80A	SWDR 100	SWDR 125	SWDR 138	SWDR 150
Drilling range	mm	80	80 100	80 100	105 152	115 152
Drill rod diameter	mm	51	51	51、57	83	83
Drill rod length	m	3.66	4.3	4.35	4	5
Drilling depth	m	3.2	4	4	24	15
Upper rotation	°	360	360	360	360	—
<b>AIR COMPRESSOR</b>						
Model		TA-120	SZ2.4-7	SZ4-7	550RH	650SHP
Air pressure	Mpa	0.7	0.7	0.7	1.7	1.9
Air volume of work	m <sup>3</sup> /min	1.5	2.4	4	15.5	18.4
Power	kW/rpm	11	16	22	179/1800	194/1800
<b>ENGINE</b>						
Model		V3300-DI	4TNV106T-SHL	AA-4BG1TCP	6BG1TRP	6BG1TRP
Power	kW/rpm	54.9/2600	74.3/2200	89/2100	125/2100	125/2100
Fuel tank	L	140	175	260	300	300
<b>PROPELLING</b>						
Length of drillrig	mm	4800	5830	5830	8200	8000
Thrust stock	mm	3500	4000	4000	4500	5500
Thrust speed	m/s	0.5	0.6	0.6	0.8	0.8
Max. thrust capacity	kN	10	12.5	12.5	40	40
Max. lifting force	kN	30	30	30	50	50
Arm swing	°	—	—	—	—	+20 40
<b>TRAVELLING</b>						
Travel speed (Max./Min.)	km/h	4.5 / 3.1	4.2 / 2.5	5.4 / 3.3	5.6 / 3.45	3.2 / 1.6
Max. traction force	kN	55	65	115	160	125
Grade ability	°	25	25	25	25	25
Ground clearance	mm	338	348	410	480	480
Ground pressure	bar	0.435	0.428	0.45	0.5	0.7
Crawler pendulum feet frame	°	—	—	—	—	± 10
<b>ROTARY POWER HEAD</b>						
Model		—	DLT12	DLT12	DLT40R	DLT40R
Rotary speed	rpm	320	300	300	200	200
Rotary torque	Nm	870	1200	1200	4000	4000
<b>DIAMENSION</b>						
Gross weight	t	7.8	9	15	24	22
Working state (LxWxH)	m	6.1×2.2×5.02	6.35×2.32×5.85	7.95×2.5×6.0	11×3.4×8.5	8.5×3.2×8.5
Transportation state (LxWxH)	m	8.5×2.2×3.15	9.15×2.32×2.75	10.55×2.5×2.85	14.8×3.4×3.5	12.7×3.2×3.4