



Transport weight: 1755-1868kg Net engine power: 10.8kW





## **CHOOSE TOUGH.**

THE NEW GENERATION JCB MINI EXCAVATORS HAVE BEEN DESIGNED AND BUILT TO WITHSTAND THE TOUGHEST OF JOB SITES. WITH LONG-LASTING COMPONENTS AND EASY, COST EFFECTIVE REPAIRS, THEY PROVIDE MINIMUM DOWNTIME AND MAXIMUM PROFITS.

#### Designed to last.

1 Full width rear cast counterweight gives full protection against site damage.

All hydraulic components are assembled within a hydraulic clean room and go through multi-stage hot tests and oil detection processes to ensure reliability.

Improved dig end pins with ARCO coating protects pins against corrosion, helping towards reduced cost of ownership.

- State of the art manufacturing processes to achieve ultimate build quality, reliability, durability, service life and machine uptime. Our in-house paint process is a case in point, guaranteeing quality and lasting protection.
- The standard heavy-duty kingpost optimises service life and lowers the cost of ownership due to the durable re-bushable pivots.
- The top mounted boom ram reduces the risk of damage on site, for instance when loading dumpers.
- ☐ Hoses are routed through the boom, dipper and kingpost for ultimate durability. All three models use O-ring faced seal hydraulics which provides excellent sealing capabilities.











#### Strong and durable.

- The I 8Z is JCB's first zero tailswing model within its class, it protects the machine and surrounding environment from accidental damage.
- Solid cast rear door for maximum impact resistance compared to glass reinforced plastic.
- Three single flanged bottom rollers allied with short pitch tracks ensures a smooth ride. Long pitch rubber or steel tracks are optional for more arduous applications.
- The strong, durable H frame undercarriage provides rigid support with an open design allowing spoil to fall readily preventing excessive componentry wear.

For ultimate rigidity, the extending undercarriage beams are constructed from 25mm solid steel plate.







#### Making life easy.

Easy pre-start checks allows you to check fluid oil levels whilst an analogue hour meter gives you quick and easy viewing without having to turn the machine on.

Standard two speed tracking is operated by a button on the dozer. Auto kick down is standard on the 19C-1 EP and optional on the 18Z-1 and 19C-1.

- New right hand positioned panel with easy button functions, easy to read indicators and warnings allow the operator to always be aware of the machines status as well as potential risks.
- ☑ Electro proportional control as standard on the 19C-1 EP enables new finer control through an auxiliary thumb switch to allow for precision control of attachments.







#### Supporting productivity.

- 180° opening bi-fold service door to access all cleaning and maintenance points with a separate, daily checks door.
- Our hydraulic system allows you to travel in a straight line at the same time as selecting excavator functions, increasing productivity.
- Spacious cab with large door entry, excellent visibility and intuitive controls. 24% bigger than the previous model. Easily accessible external lockable fuel tank provides extra security.











6 IBZ-I/I9C-I/I9C-I EP MINI DXCAVATOR

## **CHOOSE SIMPLE.**

**DESIGNED TO SIMPLY GET ON WITH WORKING,** THE NEW GENERATION MINIS ARE ALL DESIGNED WITH YOUR PROFITS IN MIND. WITH A SIMPLE, **CLASSIC DESIGN, LOW COST MAINTENANCE AND EASY REPAIRS EQUALS MACHINES TAILORED TO** YOUR NEEDS, WHY CHOOSE ANYTHING ELSE?

### User-friendly environment.

- 1 Large glass area gives increased visibility. 70/30 split line and clear joining split gives perfect visibility down to the dozer blade.
- Flat glass which is easier to replace and more cost effective than curved options, with the added benefit of sun reflecting tinted glass for operator comfort.
- The 19C-1 EP boasts new Instrumentation with an integrated membrane switch immobiliser pad.
- Improved 2 speed heater with three multipositioned vents for ultimate operator comfort.











### Ultimate convenience.

- ☐ Graphite impregnated bushes with industries lowest greasing intervals of 500 hours, means no need for daily greasing.
- 6 Hydraulic connections reduced along with increased straight hoses and combined control valves; all deliver improved hydraulic efficiency and reduced component complexity.

Premium or rental specifications to help choose the right machine. Zero tailswing or Conventional tailswing plus cab or canopy options across the range.





Reduced minimum front swing radius for a compact machine that can tuck up to work in the tightest of conditions without compromise to load







## **CHOOSE QUICK.**

WHEN TIME IS MONEY AND GETTING FROM THE LAST JOB TO THE NEXT JOB QUICKER IS A HUGE ADVANTAGE, THE NEW GENERATION MINIS DON'T HANG ABOUT. QUICK CLEANING, TRANSPORTING AND ATTACHMENT CHANGES ALL ADD UP TO **BIGGER PROFITS FOR YOU.** 



### Ultimate versatility.

- 1 Industry standard bucket centres and pin sizes (30mm) for maximum attachment versatility.
- Factory ready hydraulic quick hitch circuit on the 19C-1 EP allows the operator to switch between attachments quickly and safely.
- Choose from JCB's range of specially designed attachments. They provide ultimate performance. full JCB warranty compliance, and optimum fit and operation. Dual hydraulic flow is available as an option.







#### Low cost of ownership.

- New dig end geometry allows the machines to load dumpers without the need to re-position speeding up arduous jobs on site.
- 5 Sloping undercarriage track legs gives minimal soil retention and enables fast cleaning.
- The new dozer geometry allows the blade to become free of material build up. With easy to use swing out dozer wing extensions, there's no need for any tools for operation.
- No daily greasing with easy to access maintenance and cleaning means quicker turnaround times.
- With low operating weights, the 18Z-1, 19C-1 and 19C-1 EP can be easily towed to wherever they're needed.
- 10 tie down and lifting points ensure compliant, speedy machine transportation.









JCB







# SAFE & SECURE.

**WORKING QUICKER IS ALSO ABOUT WORKING** SMARTER. AS WORKING CONDITIONS BECOME MORE AND MORE RESTRICTED, SAFETY BECOMES MORE AND MORE IMPORTANT. JCB HAS ALWAYS BEEN AT THE FOREFRONT OF SITE SAFETY AND PROVIDES INNOVATIVE WAYS TO IMPROVE IT.

### Work smart.

- 1 The new cabs are fully ROPS and FOPS compliant, for increased protection laminated glass is available as an option.
- All services, including tracking and dozer, are isolated when the control pod is raised as an additional safety precautionary measure.
- Lift overload audible warning system on the 19C-1 EP ensures maximum stability and safety when working efficiently.
- 4 A lockable internal toolbox provides safe tool stowage on all models.

Optional operator presence and seat belt isolation switches for increased on site safety.







### Safely does it.

- Optimum seat position with large glass area and bodywork design combine to give excellent all round visibility for increased on site safety. As a result, the 18Z-1, 19C-1 and 19C-1 EP do not require mirrors to meet EU regulations.
- 5 JCB's unique 2GO system gives an additional layer of safety meaning all controls are fully isolated unless the 2GO button is activated.

For increased safety, there is a Thatcham approved immobiliser\*, eliminating the possibility of an unauthorised start. Having the software system Livelink and Datatag\* on the minis, will allow you to set a geofence and machine working restrictions.

A key benefit of the Livelink and immobiliser combination is the remote pin code management system, which allows you to remotely authorise or deny the usage of the machine. Up to 14 individual pin codes can be programmed into the system, offering the option to customise operator preferences by embedding a separate auxiliary mode in each code (19C-1 EP only).

\* Region specific.











## **VALUE ADDED.**

JCB'S WORLDWIDE CUSTOMER SUPPORT IS FIRST CLASS. WHATEVER YOU NEED AND WHEREVER YOU ARE, WE'LL BE AVAILABLE OUICKLY AND EFFICIENTLY TO HELP MAKE SURE YOUR MACHINERY IS PERFORMING TO ITS FULL POTENTIAL.









3 JCB Assetcare offers comprehensive extended warranties and service agreements, as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as



Note: JCB LIVELINK and JCB ASSETCARE may not be available in your region, so please check with your local dealer.





Mad	thine model		18z-i	19 <sub>0-1</sub>	19C-1 EP
Α	Sprocket idler centres	mm	1218	1218	1218
В	Track length on ground	mm	1220	1220	1220
С	Undercarriage overall length - rubber	mm	1578	1578	1578
	Undercarriage overall length - steel	mm	1578	1578	1578
D	Kingpost clearance	mm	409	409	409
Е	Tailswing radius	mm	685	1103	1103
F	Overall width of superstructure	mm	996	996	996
G	Height over cab	mm	N/A	2328	2328
	Height over canopy	mm	2340	2345	2345
Н	Ground clearance	mm	162	162	162
L	Track gauge - retracted/extended	mm	750-1110	750-1110	750-1110
J	Width over tracks / rubber / steel - retracted	mm	980	980	980
	Width over tracks / rubber / steel - extended	mm	1330	1330	1330
K	Transport length	mm	3547	3860	3862
L	Track height	mm	367	367	367
М	Counterweight clearance	mm	434	434	434

ENGINE		
Machine model		18z-1, 19c-1, 19c-1 EP
Model		403D-07
Fuel		Diesel
Cooling		Water cooled
Gross power ISO 14396	kW	11.7 @ 2550 rpm
Net power	kW	10.8 @ 2550 rpm
Max. torque ISO 14396	Nm	45.6 @ 2000 rpm
Displacement	cc	762
Gradeability	degrees	35°
Starter motor	kW	1.2
Battery	volt / amps	12V / 65AH
Alternator	amps (aircon)	60

UNDERCARRIAGE				
Machine model		18z-ı	19c-i	19c-1 EP
		Retractable	Retractable	Retractable
No. of bottom rollers		3	3	3
Track width rubber	mm	230	230	230
Track width steel	mm	230	230	230
Travel speed – low	kph	2.4	2.4	2.4
Travel speed – high	kph	4.1	4.1	4.1
Tractive effort	kΝ	13.2	13.2	13.2

Machine model		18z-ı	19c-i	19c-i EP
Pump	cc	18	18	18
Nominal output @ 2000rpm	lpm	36	36	36
Excavator/track main relief pressure	bar	235	235	235
Slew main relief pressure	bar	167	167	167
Auxiliary hydraulic pressure (Aux 1)	bar	200	200	200
Auxiliary hydraulic pressure (Aux 2)	bar	N/A	N/A	200
Auxiliary hydraulic flow (Aux 1)	lpm	32	32	32
Auxiliary hydraulic flow (Aux 2)	lpm	N/A	N/A	32
Hydraulic pump		Piston	Piston	Piston

Machine model		18z-ı	190	SI .	19c	I EP
		Canopy	Canopy	Cab	Canopy	Cab
Operating weight*	kg	1749	1830	1910	1863	1943
FOPS (Falling Object Protective Structure) guard	kg	N/A	N/A	15	N/A	15
Steel tracks	kg	81	81	81	81	81
Long dozer	kg	9	9	9	9	9
Mechanical quickhitch	kg	14	14	14	14	14
Hydraulic quickhitch (without hoses)	kg	N/A	N/A	N/A	24	24
Gravemaster dipper	kg	N/A	N/A	N/A	5	5
Shipping weight**	kg	1655	1736	1816	1769	1849
Ground bearing pressure (rubber tracks)	kg/cm <sup>2</sup>	0.33	0.35	0.36	0.36	0.37
Ground bearing pressure (steel tracks)	kg/cm <sup>2</sup>	0.35	0.36	0.38	0.38	0.39
Transport weight (operator weight - 75kg)	kg	1674	1755	1835	1788	1868

and a 75kg operator. \*\*Shipping weight to ISO 6016 is mass of the base machine without operator, with fuel level at 10% of tank capacity.

SERVICE CAPACITIES				
Machine model		18z-ı	19c-1	19c-I EP
Fuel tank	ltr	20.5	18.5	18.5
Engine coolant	ltr	Canopy model: 4.2	Canopy model: 4.2 Cab model: 4.7	Canopy model: 4.2 Cab model: 4.7
Engine oil	ltr	2.5	2.5	2.5
Hydraulic system	ltr	28	28	28
Hydraulic tank	ltr	15	15	15

Machine model		18z-ı	19c-1	19C-I EP
Cab/canopy height	mm	2346	2330 / 2347	2330 / 2347
Cab/canopy height with FOGS guard LEVEL I	mm	2346	2349 / 2347	2349 / 2347
Cab/canopy length with FOGS guard LEVEL I	mm	1107	1236 / 1427	1236 / 1427
Cab/canopy length	mm	1107	1202 / 1427	1202 / 1427
Cab/canopy width	mm	978	976 / 978	976 / 978

Machine model		18z-ı	19c-i	19c-1 EF
Dozer length (STD) centre of boss	mm	787	787	787
Max. height above ground	mm	239	239	239
Dig depth below ground	mm	225	225	225
Approach angle	degrees	25.3	25.3	25.3
Width (without wings)	mm	980	980	980
Width (with wings)	mm	1340	1340	1340
Height	mm	234	234	234







	5 4 3 2 1 0	-1 -2	Metres		
			18z-1 / 19c-1 / 19c-1 EP (950mm Dipper)	18z-1 / 19c-1 / 19c-1 EP (1100mm Dipper)	19C-I EP (1344mm Gravemaster Dipper)
	Boom length	mm	1800	1800	1800
Α	Max. digging reach	mm	3899	4043	4247
В	Max. digging reach on ground	mm	3834	3981	4220
С	Max. digging depth – dozer up	mm	2271	2421	2665
	Max. digging depth – dozer down	mm	2426	2576	2819
D	Max. digging height	mm	3556	3667	3847
Ε	Max. dump/load-over height	mm	2598	2637	2818
F	Max. height to dipper nose pivot pin	mm	3116	3154	3335
G	Max. vertical wallcut depth	mm	1933	2139	2375
Н	Min. front swing radius (no offset)	mm	1488	1517	1565
	Min. front swing radius (fully offset)	mm	1171	1196	1236
-1	Boom swing left	degrees	75°	75°	75°
J	Boom swing right	degrees	55°	55°	55°
	Bucket rotation	degrees	201°	201°	201°
	Dipper rotation	degrees	126°	126°	126°
	Bucket tearout (power position)	kN	18	18	18
	Dipper tearout	kN	10.1	9.1	7.9
	Slew speed	rpm	7.9	7.9	7.9

EQUIPMENT				
Machine model	18z-ı	19c-i	19C-I EP	Machine model
SERVICE AND MAINTENANCE				PROTECTION AND S
Beacon ready kit	•	•		ROPS, TOPS & FO
Single element air cleaner				ROPS & TOPS cert
500 hours dig end greasing intervals				Internal lockable too
Grease gun & cartridge	+	+	+	Protected boom wo
Toolkit	+	+	+	2GO hydraulic isola
Automatic glow plug			+	Cesar Data Tag (UK
				Battery isolator (Eur
TRACKS AND UNDERCARRIAGE				Rotating beacon
230mm short pitch rubber tracks				Seat belt engaged g
Two speed tracking				LiveLink
Retractable undercarriage				Pin pad immobiliser
Extendable dozer blade				Key immobiliser
Auto kick down track motors				Polycarbonate front
Heavy duty recoiled tracked tensioners				Boom LED workligh
230mm long pitch rubber tracks	+	+	+	FOGS guard level 1
230mm steel tracks				White noise travel a
	+	+	+	
Long dozer blade	+	+	+	EXTERNAL EQUIPM
Auto kick down track motors	+	+		Standard dipper (mi
				Tie down points
OPERATOR STATION				LED beacon
Full audio visual warning systems	•	•	•	Dipper options (mn
Full control isolation	•	•	•	Halogen work lights
12 volt power socket	•	•	•	Heavy duty kingpos Exterior mirrors
ISO servo controls	•	•	•	
Static seat	•	•	•	Full bucket range
Electro-proportional thumb controlled dual flow auxiliary			+	Mechanical quick hit Hydraulic quick hitch
Dual pattened controls (ISO/SAE changeover)	+	+	+	
Fabric suspension seat		+	+	Thumb ready dippe
Vinyl suspension seats	+	+	+	
LED interior lights		+	+	STANDARD •
Sunblind	+	+	+	
Fire extinguisher	+	+	+	OPTIONAL +
Track lever pedals	+	+	+	
Full radio kit		+	+	
HYDRAULICS				
Hydraulic slew travel lock				
Single acting auxillary circuit				
Variable displacement pump				
Straight line travel circuit	:			
ORFS hydraulics		•	•	
Quick release auxillary couplers	•		•	
Double acting auxilaries	+	+	+	
Auxiliary vent			+	

Machine model	18z-ı	19c-i	19C-1 EP
PROTECTION AND SAFETY			
ROPS, TOPS & FOGS certified canopy	•	•	
ROPS & TOPS certified cab		+	+
Internal lockable toolbox	•	•	
Protected boom work light	•	•	
2GO hydraulic isolation	•	•	
Cesar Data Tag (UK ONLY)	•		
Battery isolator (Europe)	•	•	
Rotating beacon	+	+	+
Seat belt engaged green beacon	+	+	+
LiveLink	+	+	+
Pin pad immobiliser	+	+	+
Key immobiliser	+	+	
Polycarbonate front screen protection	+	+	+
Boom LED worklight & guard	+	+	+
FOGS guard level 1	•	+	+
White noise travel alarm	+	+	+
EXTERNAL EQUIPMENT			
Standard dipper (mm)	950	950	1100
Tie down points	•	•	
LED beacon	+	+	+
Dipper options (mm)	1100	1100	950/1344
Halogen work lights	+	+	+
Heavy duty kingpost	•		
Exterior mirrors	+	+	+
Full bucket range	+	+	+
Mechanical quick hitch	+	+	+
Hydraulic quick hitch			+
Thumb ready dipper	+	+	+

LIFT CAPAC	ITIES - 230M	IM RUBBE	R TRACKS,	1800MM B0	DOM, HOOM	1M DIPPER,	NO BUCK	ET.																	18Z-1
Load Point		1.5	5m			2.0	0m			2.	5m			3.	0m			3.	5m		Ca	pacity at m	aximum re	ach	
	ð	4	=	=	f	4	<b>=</b>	₩	ð	ł	-	=	b	4	=	=₽	4	ł	=	<b>=</b>	4	4	=	=	
Height	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dazer Up	Dozer Down	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dozer Up	Dazer Down	Extended	Retracted	Dozer Up	Dozer Dawn	Extended	Retracted	Dozer Up	Dazer Down	Distance
m	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
2.5					387*	164	398*	304*	336*	155	313*	351*									301*	280*	346*	139	2690
2.0					379*	159	390*	329*	331*	255*	311*	315*	218	115	245*	420*					218	212	420*	115	3000
1.5					364*	151	374*	426*	383*	143	370*	400*	221	107	257*	386*					175	173	359*	87	3300
1.0	751*	305	827*	950*	452*	185	535*	621*	293	136	279	492*	263	97	215	424*	203*	80	170	364	203*	170	364*	80	3500
0.5	714	207	529	976*	492	167	377	742*	321	123	279	540*	218	100	216	437*	199*	74	167	348	199*	167	348*	74	3500
0	458	171	446	932*	357	146	350	733*	401	100	242	541*	202	95	195	411*					170	165	331*	76	3400
-0.5	615	161	438	835*	327	125	314	631*	274	99	241	484*	197	100	197	359*					179	193	312*	86	3250
-1.0	392	209*	402	686°	263	125	287	555*	212	106	221	403*	183	92	196	298*					183	196	298*	92	3000
-1.5	396	214	406	464*	269	128	292	383*	269												236	255	342*	114	2200

Load Point		1.5	5m		2.0m				2.5m					3.0	0m		Capacity at maximum reach				
	4	ł	=	=₽	4	4	=\$>	₩	4	4	₩	⇔	ł	4	₽	=₽	4	4	₩	=\$>	
Height	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dazer Up	Dozer Down	Extended	Retracted	Dozer Up	Dazer Down	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dazer Up	Dozer Down	Dis
m	kg	kg	kg	kg	kg	kg	kg	kg	n												
2.5									401*	270	404*	420*					401*	270	404*	420*	2
2.0									372*	363*	376*	396*	404*	224	392*	412*	404*	224	392*	412*	3
1.5					465	439*	479*	506*	432*	278	445*	460*	398*	211	397*	417*	367*	188	371*	394*	3
1.0	942*	496	952*	987*	698	380	694*	732*	522*	280	524*	550*	430*	228	430*	451*	296	187	316	396*	3
0.5	718*	443	766	985*	599	348	617	806*	437	275	443	585*	343	214	363	460*	286	191	303	378*	3
0	840*	463	902*	885*	573	349	581	753*	435	269	449	586*	346	215	346	437*	346*	189	361*	363*	3
-0.5	856*	410	799*	820*	642	306	606*	634*	505*	258	452*	463*	385*	204	345*	345*	323*	197	313*	318*	3
-1.0	616*	403	668*	668*	509	302	518*	518*	383*	251	372*	372*					296*	231	295*	294*	- 2
-1.5					403*	298	413*	308*									330°	252*	338*	252*	1

LIFT CAPACI	TIES - 2301	MM RUBBE	R TRACKS,	1800MM BC	OM, IIOOM	IM DIPPER,	NO BUCK	ET.																	I9C-I EP
Load Point	1.5m				2.0m				2.5m				3.0m				3.5m				Capacity at maximum reach				
	b	4	-	-	b	4	e#D	<b>=</b>	4	4	-	e	b	4	<b>E</b>	=	4	b	-	<b>e</b>	ł	4	=	-	
Height	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dozer Up	Dazer Down	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dozer Up	Dazer Down	Extended	Retracted	Dozer Up	Dozer Down	Extended	Retracted	Dozer Up	Dozer Down	Distance
m	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
2.5					520*	417	540*	439*	332*	319*	292*	301*									290*	277	270*	327*	2690
2.0					564*	410	586*	476*	334*	321*	297*	311*	373*	219	341	357*					373*	219	341	357*	3000
1.5					615*	396	634*	615*	402*	298	375*	392*	385*	220	356	375*					296	181	281	349*	3300
1.0	689*	430	837	962*	644*	407	613*	646*	494*	286	461*	482*	395*	218	380	398*	274	170	264	336*	274	170	264	336*	3500
0.5	665	417	789	986*	591	359	634	812*	451	273	454	575*	339	209	390	433*	267	165	272	344*	267	165	272	344*	3500
0	780	490	795	958*	566	359	599	769*	424	267	439	552*	257	205	353	438*					306*	170	328*	332*	3400
-0.5	918*	494	902*	920*	673*	359	590	724*	492*	272	432	532*	371*	214	378	392*					308*	191	313*	324*	3250
-1.0	701*	479	705*	788*	551*	350	559*	596*	424*	266	421*	442*	290*	248*	323*	334*					290*	248*	323*	334*	3000
-1.5	512*	476	480*	527*	460*	360	412*	428*													354*	298	348*	388°	2200

Lit appetly over front.

Lit appetly but orde.



ONE COMPANY, OVER 300 MACHINES.

Your nearest JCB dealer

### Mini Excavator 18z-1/19c-1/19c-1 EP

Transport weight: 1755-1868kg Net engine power: 10.8kW

JCB Sales Limited, Rocester, Staffordshire, United Kingdom ST14 5JP.
Tel: +44 (0) 1889 590312 Email: salesinfo@jcb.com
Download the very latest information on this product range at: www.jcb.com

©2009 JCB Sales. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB Sales. All references in this publication to operating weights, sizes, capacities and other performance measurements are provided for guidance only and may vary dependant you the exact specification of machine. They should not therefore be relied upon in relation to suitability for a particular application. Guidance and advice should always be sought from your JCB Dealer. JCB reserves the right to change specifications without notice. Illustrations and specifications shown may include optional equipment and accessories. All images are correct at time of print. The JCB logo is a registered trademark of J.C Bamford Excavators Ltd.





