

# FENIX 200 DCL

Rockwell | Brinell Hardness Testers

SEMI - **AUTOMATIC**



# FENIX 200DCL

## Fully digital Rockwell hardness testing

The FENIX 200 DCL, constructed around a rock solid C-frame, is equipped with a load cell, closed loop, force feedback test force application system. Perform your hardness test, by easily pressing the START button on the 5" industrial touch screen. Test results can be simply stored up to 50 readings.

The DCL version performs both on Rockwell as Brinell, one of the advantages of the closed loop system. The internal system can be easily serviced by removing the side and top covers, no need to turn the machine upside down.



### HARDNESS SCALES



**ROCKWELL** 10kgf – 150kgf



**BRINELL** 10kgf – 187.5kgf

### ROCKWELL & BRINELL FORCE RANGE

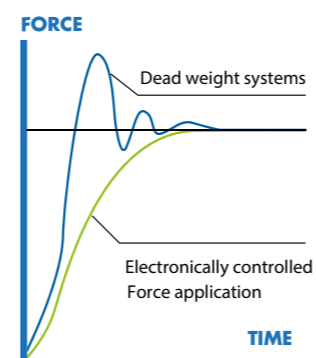
1kgf	10kgf	FENIX 200 DCL	187.5kgf
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## HIGHLIGHTS

- 1 Load cell, closed loop, force feedback, force application system, error <0,25%
- 2 Rockwell scales : A | B | C | D | E | F | G | H | K | L | M | P | R | S | V  
Brinell scales : HBW1/10 | HBW1/30 | HBW2.5/31.25 | HBW2.5/62.5 | HBW2.5/187.5  
HBW5/25 | HBW5/62.5 | HBW5/125 | HBW5/187.5 | HBW10/100
- 3 5" Industrial touch screen for scale indication, dwell time countdown
- 4 Start/stop & menu selection buttons.
- 5 Large internal memory of 50 readings
- 6 Throat depth : 150mm
- 7 Working height : 260mm
- 8 Machine weight (net) : 104kg.
- 9 Machine dimensions : H765mm/W270mm/D555mm



#### TECHNOLOGY OF TODAY



Load cell, closed loop,  
force feedback system

# SENSIBLE INNOVATION



**200 DCL**  
Multi loadcell,  
ball bearing,  
force actuator

**STANDARD**  
Force  
adjustable  
workpiece clamp

## Observe, Think, Try, Change...

Unparalleled in this class of Rockwell hardness testing machines is the electronic Load cell, closed loop, force feedback, force application system. Absolute maintenance free, automatic setting of test forces by choosing the Rockwell hardness scale. Error free operation, due to an automatic test cycle, applying the main load and correct pre-set dwell time.

# Innovative software functions

The I-Touch™ software provides clever multi-function keys for testing, set-up, storing and uploading of test programs, statistic control and more, making tester operation as easy as it can be.

Data export, single or batch readings, with a single press on a button, or just fully automatic over an USB connection to a PC and imported or evaluated in EXCEL. Further advanced features include extended statistics, shape correction for convex, concave or ball shaped specimens, hardness conversion to Rockwell, Brinell or Tensile strength according to ASTM E140 and ISO 18625 with different material tables.

## OPERATING COMFORT WITH I-TOUCH

### INNOVATIVE SOFTWARE FUNCTIONS



1 ACTIVE UPPER LIMIT



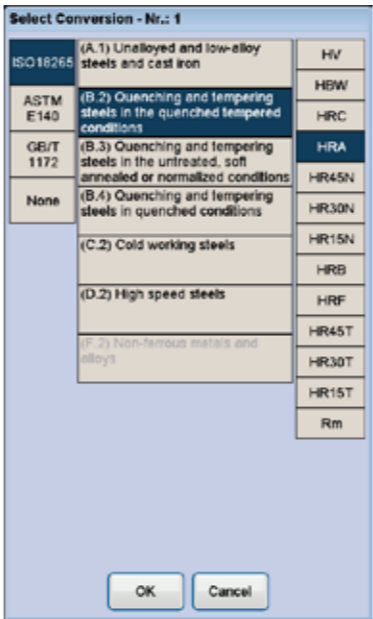
2 ACTIVE LOWER LIMIT



3 MEASUREMENT OVERVIEW



4 CONVERSION SCREEN



5 EXPORT FUNCTIONS



# VARIOUS POSSIBILITIES

The FENIX 200 is larger than most other machines in its class. With a throat depth of 150mm and maximum workpiece height of 240mm, it offers the user a generous workspace. Moreover the FENIX 200 is super rigid, sturdy and can withstand the harshest environments. Compare these parameters with alternative products and find that FENIX is leading in its class.



## INDENTER COVER & CLAMP

The FENIX 200 series is standard equipped with an indenter protection cover that includes an integrated spring loaded workpiece clamp pressing the workpiece firmly on the anvil and eliminating possible workpiece and spindle hysteresis. Adjustable clamp force, to avoid impressions on softer materials.





## SUPPORT YOUR BEST TESTING RESULTS

With our rigid designed Bench stands

- Rock solid bench stands
- 100% retractable drawer, bearing guidance, max 100kg load. Rubber anti slip bottom
- Lockable cabinet, 300mm high
- Adjustable feet, (+/- 50mm height adjustable to reach ergonomic working position)
- Made of corrosion resistant zinc plated steel with RAL powder coating
- Carrying capacity of 400kg
- Top surface made of 50mm Plywood with 1.5mm chemical resistant plastic plating, edges made of shock resistant 3mm ABS side liner
- Industrial quality, for workshop or laboratory

Designed for hardness testing instruments, painted in INNOVATEST® RAL colors matching our testers.



UN-STAND/960 71 x 75 x 80 cm

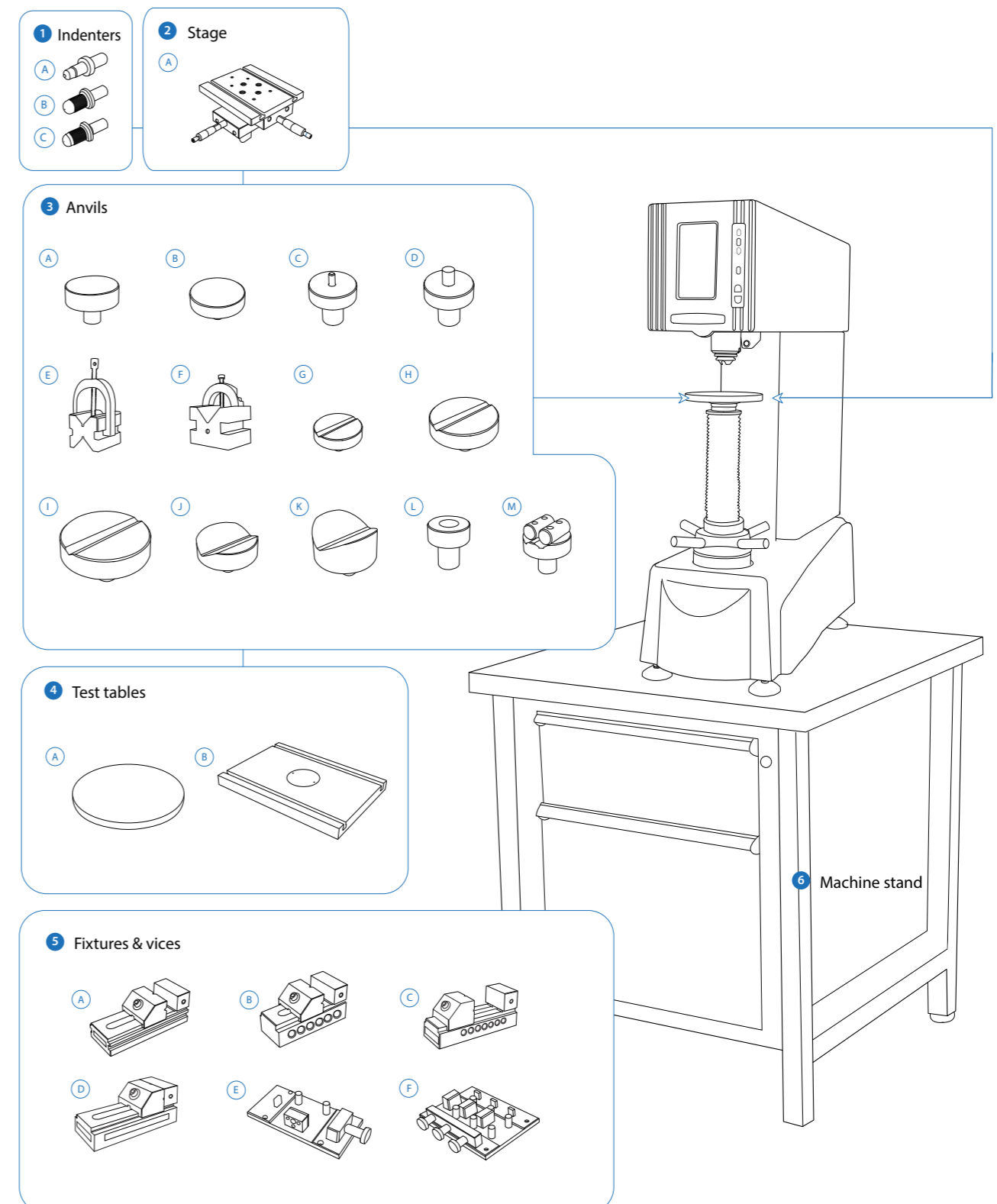


UN-STAND/965 150 x 75 x 80 cm

## ACCESSORIES

## FENIX 200


Schematic overview of the configuration options, standard and optional accessories



Not all accessories are displayed on this page. Full details can be found on the Order details page.

# ORDER DETAILS

## FENIX 200

	Digital, Load Cell Closed Loop, Rockwell hardness tester 10kgf - 150kgf	FENIX 200DCL	
	Plug & Play prepared, calibration, sea & airworthy packing in "non coniferous wood" material	P&PSEAPACK60	

## ACCESSORIES

1	Indenters	A	Rockwell diamond indenter	IN/6005	
		B	1mm Carbide Ball Indenter Ø6.35mm	IN/7000	
			2.5mm Carbide Ball Indenter Ø6.35mm	IN/7005	
			5mm Carbide Ball Indenter Ø6.35mm	IN/7010	
			10mm Carbide Ball Indenter Ø6.35mm	IN/7015	
		C	1/16" Carbide Ball Indenter	IN/7506	
			1/8" Carbide Ball Indenter	IN/7606	
			¼" Carbide Ball Indenter	IN/7706	
2	Stages		½" Carbide Ball Indenter	IN/7806	
			Manual X-Y stage with analogue metric micrometers, 180x160mm Displacement: 25x25mm, scale 0.01 mm, max load 300kg	UN-TESTTABLE/030	
			Lock flange	UN-XYZ BUSH42	
			Mounting plate for lock flange	UN-XYZ30FP40-42	
3	Anvils	A	Flat anvil 60mm	AS3000-19-04	
		B	Flat anvil 80mm	UN-TESTTABLE/002	
		C	Spot anvil 5mm	UN-ANVIL/010	
		D	Spot anvil 10mm	UN-ANVIL/011	
		E	V block with bracket 40x40x50mm (LxBxH)	UN-VBLOCK404050	
		F	Steel, cross type, (X) V-block 60x120x100mm 8-90mm pair	UN-CROSSBLOCK01	
		G	V-anvil ø40mm 6-60mm	UN-ANVIL/005	
		H	V-anvil ø63mm 6-60mm	UN-ANVIL/006	
		I	V-Anvil ø80mm 3.3-20mm	UN-ANVIL/040	
		J	V-Anvil ø80mm 12-80mm	UN-ANVIL/045	
		K	V-Anvil ø80mm 20-140mm	UN-ANVIL/050	
		L	Anvil for round specimen dia. 6-25,4mm	UN-ANVIL/200	
		M	Cylindrical V anvil 6-80mm	UN-CVANVIL680	
			Cylindrical V anvil 50-200mm	UN-CVANVIL50200	
			Test table 100x100mm, V groove 20mm wide, 10mm deep	UN-TESTTABLE/040	
4	Test Tables	A	Testing table flat ø180mm, screwfix	ASV700-00-20	
			Testing table flat ø235mm, screwfix	UN-TESTTABLE/014	
		B	Large flat surface testing table 350x250mm, thickness 30mm with 2 T-slots, for large components	UN-TESTTABLE/015	
			Lock flange	ASV700-21-01	

5	Fixtures and Vices	A	Polished precision vice with lock down system, jaw width 25mm, opens 20mm	UN-VICE/210	
		B	Polished precision vice with lock down system, jaw width 36mm, opens 42mm	UN-VICE/215	
		C	Polished precision vice with lock down system, jaw width 48mm, opens 75mm	UN-VICE/220	
		D	Polished precision vice with lock down system, jaw width 75mm, opens 100mm	UN-VICE/230	
		E	JOMINY Fixture, for 1 quench end test sample, quick release function	UN-JOMFIX1	
		F	JOMINY Fixture, for 3 quench end test sample, quick release function	UN-JOMFIX3	
6	Machine Stand		Cabinet test table with drawer for hardness testers 71x75x80cm	UN-STAND/960	
			Seaworthy packing box for 950/960	PACK/100	
			Direct and Indirect Verification/Calibration & BRINELL Certification in compliance with ISO & ASTM, NADCAP.	CALCEFRDW/1B	
			Direct and Indirect Verification/Calibration & ROCKWELL Certification in compliance with ISO & ASTM, NADCAP.	CALCEFRDW/1R	
		Cover	Anti Static machine cover 320x550x800mm	UN-TESTERCOVER05	

## SOFTWARE

	Connectivity Plus	Interface cable for PC	UN-CABLE/910	
		Utility software; Import test results in MS applications like Excel	UN-SW/905	

# ACCESSORIES

## INDENTERS



## STAGES



## TEST TABLES



## ANVILS



## FIXTURES AND VICES

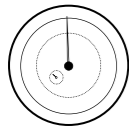


## MACHINE STANDS

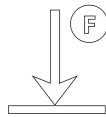


# SPECIFICATIONS

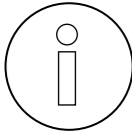
## HARDNESS SCALES

	<b>ROCKWELL</b>	A   B   C   D   E   F   G   H   K   L   M   P   R   S   V
	EN-ISO 6508, ASTM E-18 JIS Z 2245	
	<b>BRINELL</b>	HBW1/30   HBW2.5/31.25   HBW2.5/62.5   HBW2.5/187.5   HBW5/25   HBW5/62.5   HBW5/125   HBW10/100
	EN-ISO 6506, ASTM E92 JIS Z 2243	

## TEST FORCE

	<b>Force application</b>	Load cell, closed loop, force feedback system
	<b>Test forces</b>	Preload : 10kgf, main loads : 15.625   25   30   31.25   60   62.5   100   125   150   187.5kgf
	<b>Force range</b>	FENIX 200DCL 10kgf – 187.5kgf
	<b>Test force tolerance</b>	< 0.25% for test force 10kgf to 187.5kgf
	<b>Dwell time settings</b>	Default 10 seconds, user defined. Up to 999 seconds

## GENERAL

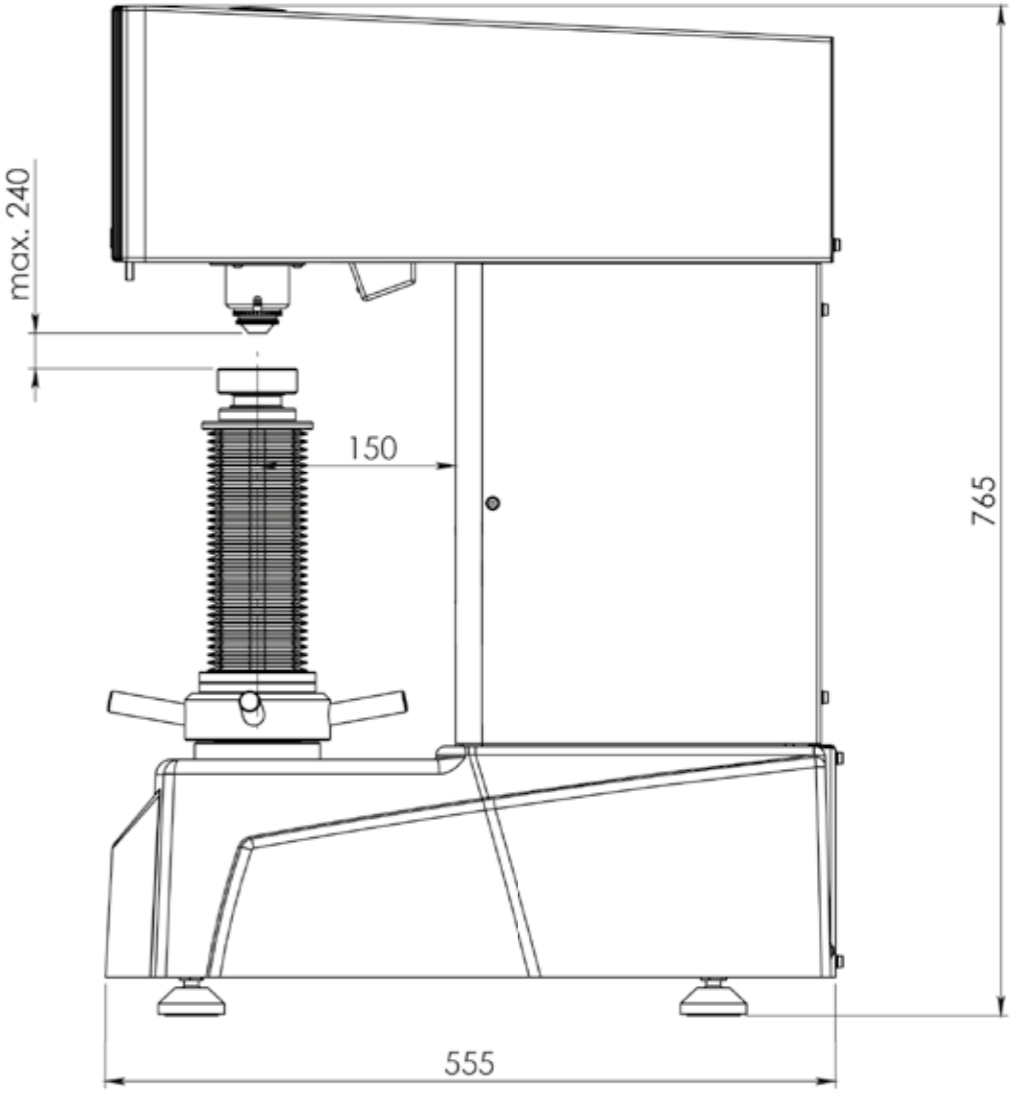
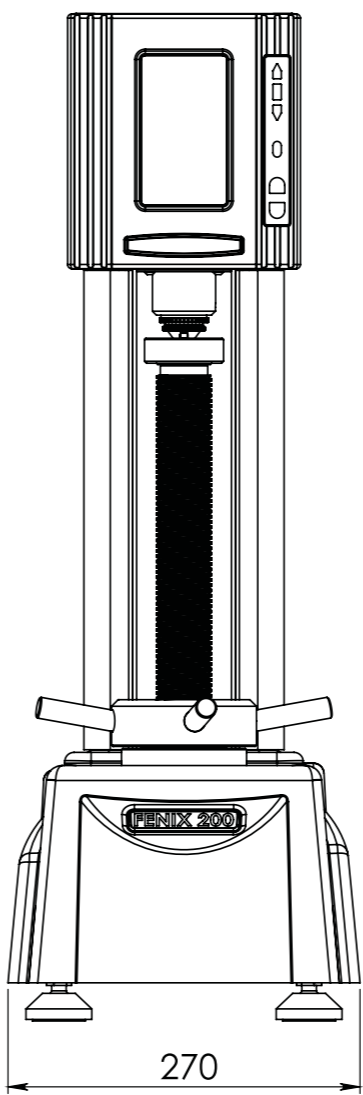
	<b>Machine dimension</b>	765mm x 270mm x 555mm
	<b>Machine weight</b>	104kg
	<b>Power supply</b>	100VAC to 240VAC, 50/60Hz, single phase
	<b>Operating temperature</b>	10°C to 35°C, non-condensing
	<b>Power consumption</b>	10W
	<b>Humidity</b>	10% to 90%, non-condensing

# TECHNICAL DRAWINGS

All dimensions in these drawings are in mm, approximate. Working heights and or workpiece accommodation varies depending on the stages and stage accessories used.

Please contact our sales department for more details.

## FENIX 200DCL



## OTHER MODELS IN THE ROCKWELL RANGE



### NEXUS 605

Load Cell, closed loop  
Rockwell/Superficial Rockwell/  
Brinell hardness tester,  
with full color touch  
screen.

See brochure B18N605/XX



### NEXUS 610

Load Cell, closed loop  
Rockwell/Superficial Rockwell/  
Brinell hardness tester,  
with integrated PC,  
Windows 10, wifi etc.  
full color touch screen.

See brochure B18N610/XX



### VERZUS 720

Load Cell, closed loop  
Rockwell/Superficial Rockwell/  
Brinell hardness tester, with  
direct depth measuring system,  
integrated PC, Windows 10,  
wifi, full color touch screen.

See brochure B18V720/XX



### NEMESIS 6100

Load Cell, Closed loop  
Fully automatic Rockwell/  
Superficial Rockwell  
(Brinell) hardness tester  
with descending test head  
& fixed workpiece position.  
full color touch screen  
operation.

See brochure B18N6100/XX



### NEMESIS 6200

Load Cell, Closed loop  
Fully automatic Rockwell/  
Superficial Rockwell (Brinell)  
hardness tester with  
descending test head & fixed  
workpiece position, integrated  
PC, Windows 10, Wifi, full color  
15 " industrial capacitive touch  
screen.

Includes CNC motorized  
X-Y stage, overview camera  
and advanced software  
(IMPRESSIONS) for automatic  
pattern testing and fixture  
recognition.

See brochure B18N6200/XX



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+LICHT**

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can emerge due to new  
technologies and continuous  
development.

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Brochure B18F200DCL/02/EN

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