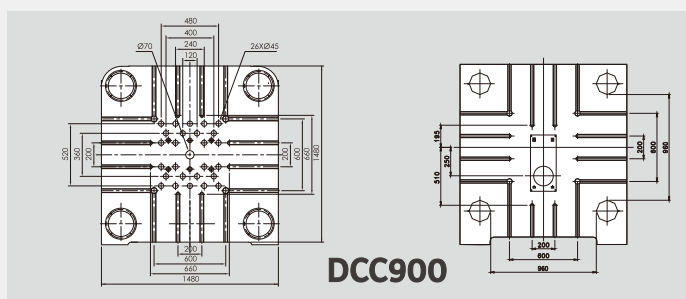
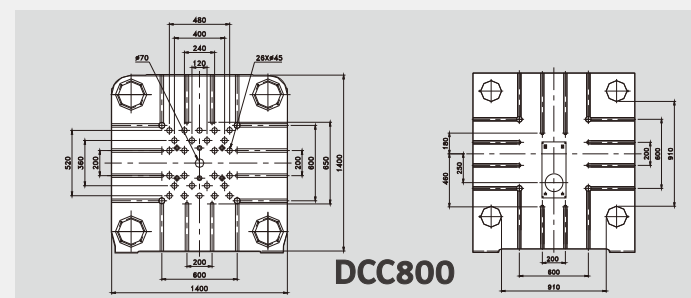
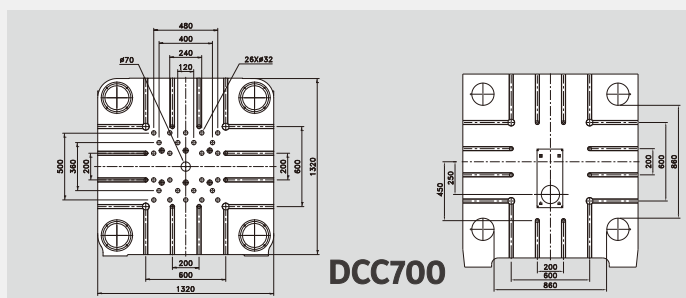
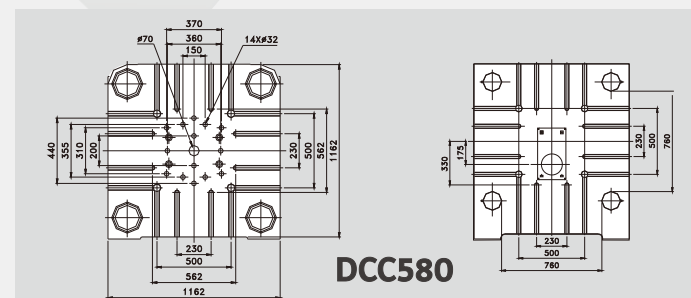
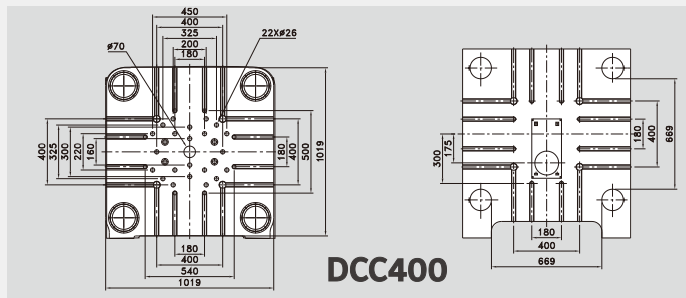
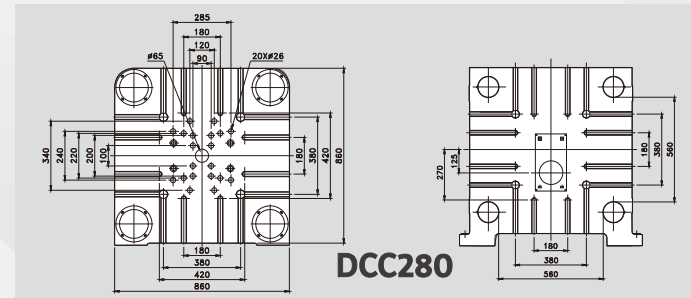
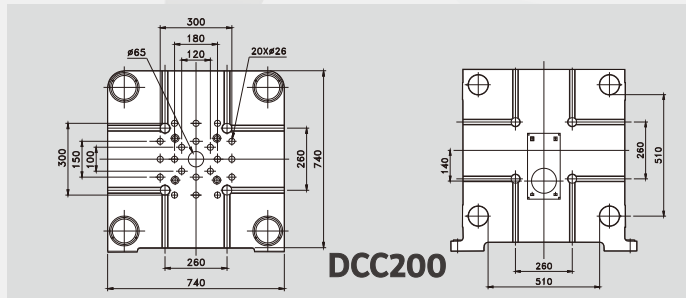
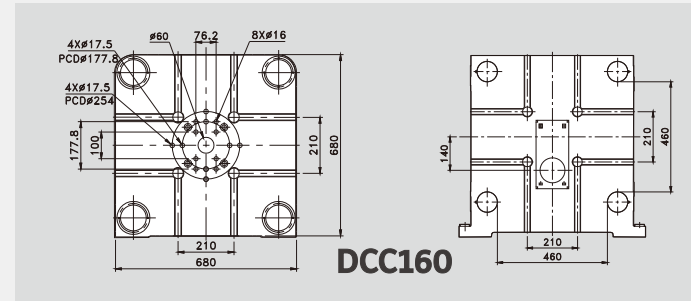
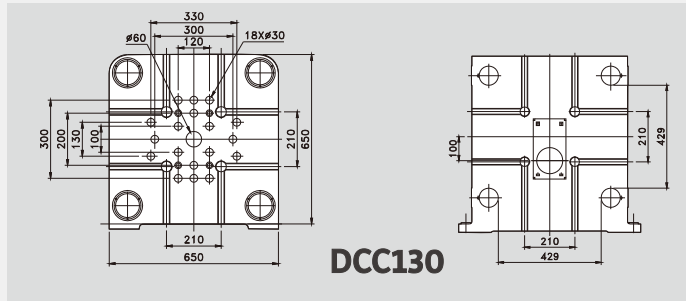


# Platen Dimensions



# IMPRESS-PLUS

Energy Efficient Cold Chamber Die Casting Machine

## LK Machinery International Limited

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Facebook



Website

CAT. NO.: E21-05-28

# To Be Better in Every Way

## 1 Energy saving system

Saving on average >50% of energy consumption by equipping with servo motor.

## 2 Quick die change system (optional)

Reduces manpower and machine idle time during mold change.

## 3 Smart die height adjustment

Customer just need to set the target clamping force, machine will automatically adjust the die height accordingly to each die tool, thus, tool change time is brought to a minimum.

## 4 Meter out injection control

Injection speed is controlled at the outlet side of the cylinder allowing faster acceleration in the transition phase. The plunger can be decelerated at the end of injection avoiding pressure spikes which cause flash and damage on die.

## 5 Intuitive control

The simple operator panel layout and integrated display panel make operation easier.

## 6 Platen surface hardening technology (optional)

Platen surface is heat-treated to prevent horizontal pits.



\* The machine shown includes floor mounted door (optional)

# Capable Injection, Steady Quality And Great Efficiency

## Advanced control system

LK Control system technology allows effortless production. IMPRESS-PLUS is equipped with multiple automated features developed to simplify machine operation and maximize machine production time. In addition to the standard features, many other peripheral equipment can be configured to create a fully automated production cell.

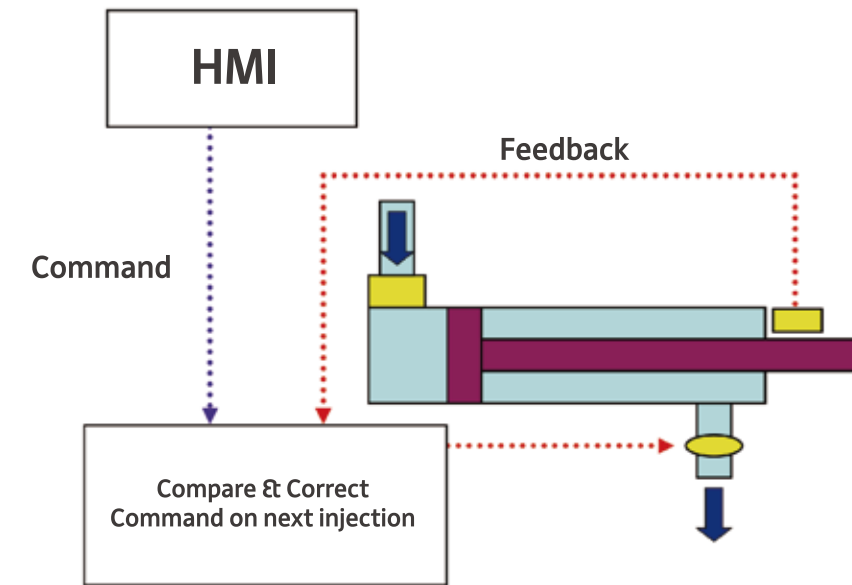


## All-round monitoring

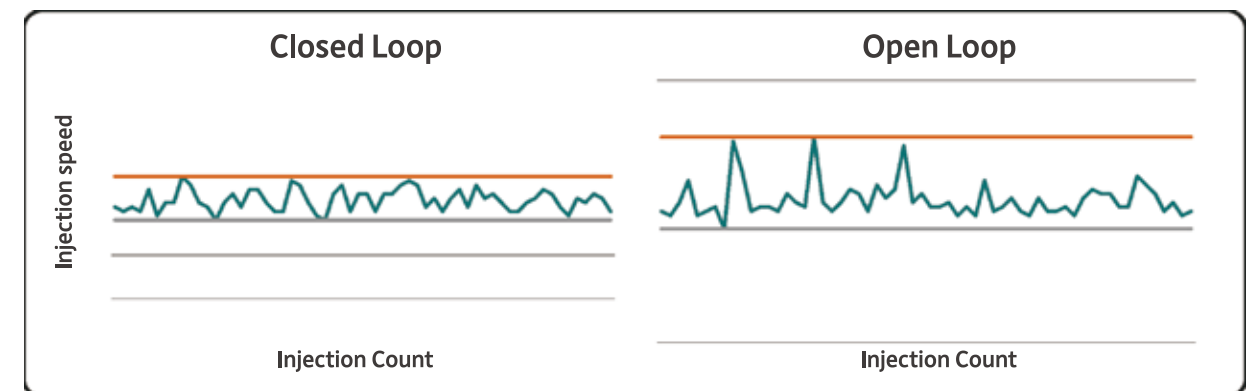
IMPRESS-PLUS is equipped with injection curve display to monitor each casting shot. Online quality monitoring allows defective casting to be detected if injection speed is out of range. The entire machine can be monitored from easy navigate pages.

## Highly capable smart injection control system

IMPRESS-PLUS is equipped with a comprehensive injection control system simplifying the setup process. Speed and position values are directly inputted to create the injection profile for each product. The control system has the ability to store these settings for future use to improve setup efficiency.

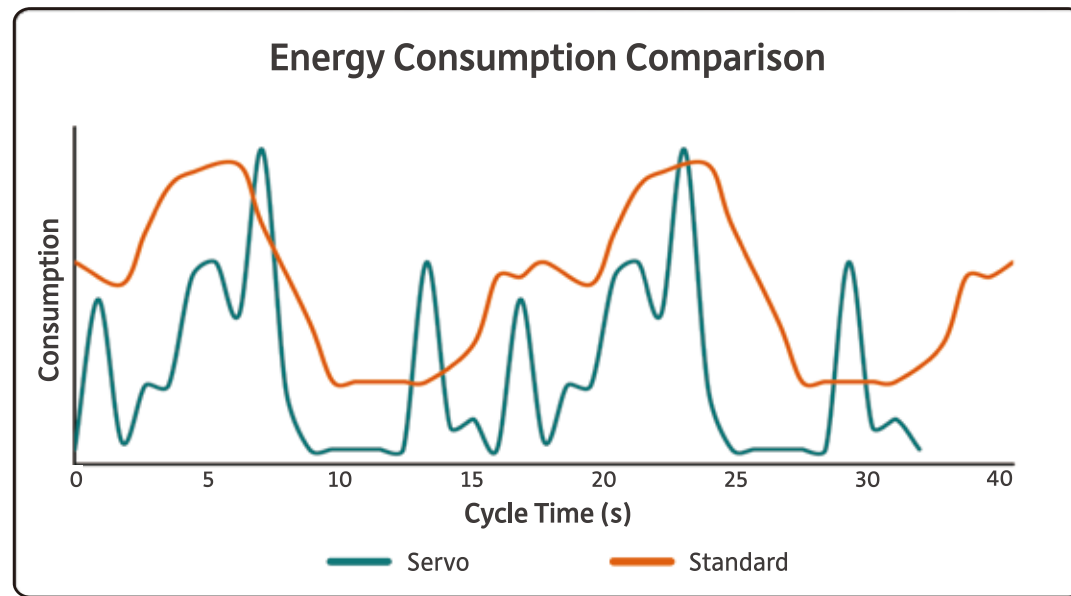


The LK Smart Injection Control System provides highly repeatable injection performance by using closed loop system. The system includes real-time control in the slow phase and fast phase speed adjustment on the following injection. The deceleration capability prolongs the service life of the die tool and eliminates flashes in the product.



# Energy Saving System

IMPRESS-PLUS will provide savings from the very beginning of production operation. A die casting machine is idle at about 80% of a production cycle. IMPRESS-PLUS is equipped with servo motor where energy is only consumed when required. It will achieve more than 50%\* reduction in electricity consumption compared to standard motors. Dry cycle time is reduced by the fast response of servo motor to directly control hydraulic oil flow and pressure.



Contents	Standard motor (A)	Servo motor (B)	Actual energy saving (A-B)	Percentage of energy saving
Energy consumed per cycle	0.19 kWh	0.07 kWh	0.12 kWh	63.16%
Energy consumed per hour	14.34 kWh	5.74 kWh	8.6 kWh	59.97%
Energy consumed per day <small>(assuming 22 hours operation per day)</small>	315.44 kWh	126.26 kWh	189.18 kWh	59.97%
Energy consumed per Month <small>(assuming 26 working day operation per month)</small>	8201.34 kWh	3282.71 kWh	4918.63 kWh	59.97%
Energy consumed per year	98416.03 kWh	39392.50 kWh	59023.53 kWh	59.97%

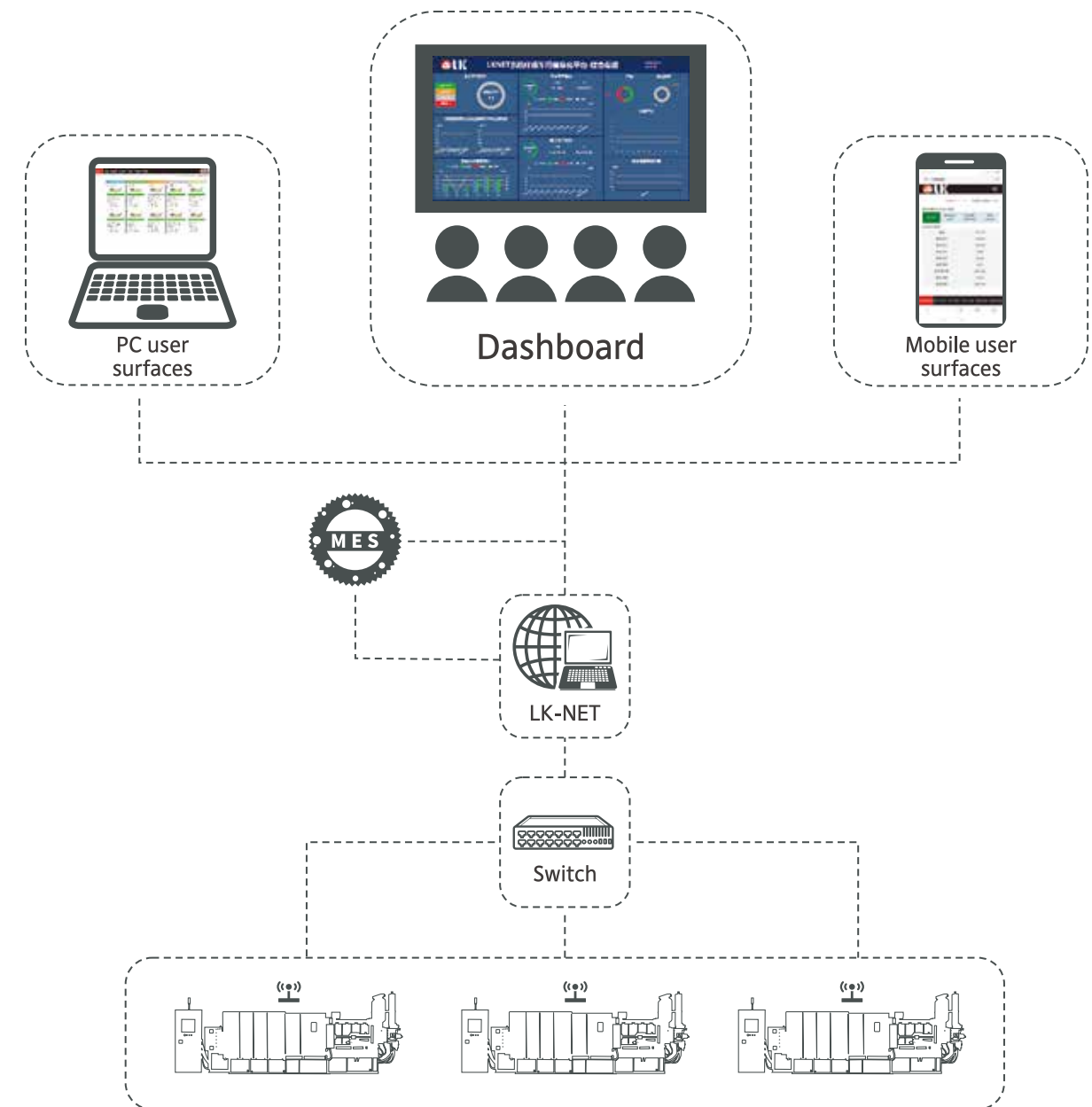
• Energy consumption data of DCC400 obtained from a client producing automotive parts.

# LK-NET (optional)

The unique monitoring system from LK monitors the production status of the die casting machine and the peripherals using Ethernet on a real-time basis, achieving remote monitoring on the user's computer or mobile phone.

It provides an alternative way for administrators and operators to check the operation status.

- Real-time monitor on production status
- Real-time cycle monitoring on equipment/die
- Overview of the plan and actual
- Real-time overview of the production shopfloor
- Analysis on Overall Equipment Effectiveness (OEE)





# High Performance Peripherals



## LN Series 5-axis ladler

Model	LN-02	LN-04	LN-06
Applicable DCM	130-400T	580-800T	900T
Ladle amount	1.0-3.5 kg	3.5-8 kg	8-20 kg
Ladling accuracy	± 2 %	± 2 %	± 2 %
Ladle cup size	1 / 1.5 / 2.5 / 3.5 / 4.5 / 6 / 8 / 10 / 12 kg		
Min. crucible diameter	480 mm	580 mm	800 mm
Ladle motor	0.2 kW	0.2 kW	0.4 kW
Arm motor	0.75 kW	0.75 kW	1.5 kW
Control system	Controlled by die casting machine control cabinet		
Position control	Digital setting on screen		



## ST-V Series servo sprayer

Model	ST-01V	ST-02V	ST-03V	ST-04V
Applicable DCM	130-200T	280-400T	580T	700-900T
No. of sprayer nozzles on fixed platen	Total no. 10 (2 rows x 5 pieces)	Total no. 14 (2 rows x 7 pieces)	Total no. 18 (2 rows x 9 pieces)	Total no. 18 (2 rows x 9 pieces)
No. of sprayer nozzles on moving platen	Total no. 10 (2 rows x 5 pieces)	Total no. 14 (2 rows x 7 pieces)	Total no. 18 (2 rows x 9 pieces)	Total no. 18 (2 rows x 9 pieces)
Air blow amount	Total no. 10 (Moving platen: 5, fixed platen: 5)	Total no. 14 (Moving platen: 7, fixed platen: 7)	Total no. 16 (Moving platen: 8, fixed platen: 8)	Total no. 16 (Moving platen: 8, fixed platen: 8)
Sprayer head control unit	Controlled based on row, 1 unit per row totaling 4 units			
Vertical stroke	650mm	800mm	1100mm	1300mm
Base stroke	250mm	250mm	400mm	400mm
Servo motor power	3.0 kW	3.0 kW	3.0 kW	4.4 kW
Control system	Controlled by die casting machine control cabinet			
Method of spraying time adjustment	Digital setting on screen			



## EP-V Series servo extractor

Model	EP-01V	EP-02V	EP-03V	EP-04V
Applicable DCM	130-200T	280-400T	580T	700-900T
Gripper diameter	40-80 mm	40-80 mm	50-90 mm	60-110 mm
No. of gripper fingers	2	2	3	3
Extracting force	68 kgf	68 kgf	98 kgf	98 kgf
Max. extracting stroke	250mm	250mm	300mm	300 mm
Air pressure	6 kgf / cm <sup>2</sup>	6 kgf / cm <sup>2</sup>	6 kgf / cm <sup>2</sup>	6 kgf / cm <sup>2</sup>
Casting weight	3 kg	4 kg	6 kg	6 kg
Servo motor power	0.85kW	0.85 kW	1.3 kW	1.3kW
Control system	Integrated control on DCM's screen			

# IMPRESS-PLUS Series Specifications

ITEM	UNIT	DCC130				DCC160				DCC200				DCC280			
Clamping force	kN	1450				1600				2000				2800			
Die open stroke	mm	350				380				400				460			
Ejector force	kN	108				108				108				150			
Ejector stroke	mm	85				85				100				105			
Die height (min. - max.)	mm	250-500				200-550				200-600				250-650			
Die platen size (H×V)	mm	650×650				680×680				740×740				860×860			
Space between tie bars	mm	429×429				460×460				510×510				560×560			
Shot position	mm	0	-100	0	-70	-140	0	-140	0	-125	-140	0	-125	-140	0	-125	-140
Injection stroke	mm	320				340				370				400			
Injection force (Intensify)	kN	220				270				270				330			
Plunger diameter	mm	40	50	60	40	50	60	50	60	70	50	60	70				
Shot weight (Al)	kg	0.7	1.15	1.6	0.8	1.3	1.8	1.35	1.95	2.65	1.5	2.1	2.9				
Casting pressure (Intensify)	MPa	175	112	77	214	137	95	137	95	70	168	116	85				
Casting area	cm <sup>2</sup>	82	129	186	74	116	167	145	209	285	166	239	326				
Casting area max. (40MPa)	cm <sup>2</sup>	362				400				500				700			
Chamber flange diameter	mm	110				101.6				101.6				101.6			
Height of pressure chamber flange	mm	10				12				12				12			
Plunder penetration	mm	115				135				140				140			
Working pressure	MPa	14				14				14				14			
Oil tank capacity	L	480				520				550				670			
Machine dimensions (L×W×H)*	mm	5770×1750×2590				5770×1780×2570				6060×1850×2605				6300×1960×2675			
Machine Weight #	T	6.5				7				8				11.5			

■ Optional  
CAT. NO.: E21-05-28

\* The machine dimensions does not include furnace and control cabinet.  
# Machine weight does not include any options or peripherals

		DCC400				DCC580				DCC700				DCC800				DCC900			
		4000				5800				7000				8000				9000			
		550				580				720				760				800			
		180				240				315				315				360			
		125				140				160				180				190			
		300-700				350-850				350-900				400-950				400-1000			
		1019×1019				1162×1162				1320×1320				1400×1400				1480×1480			
		669×669				760×760				860×860				910×910				960×960			
		0	-175	0	-175	0	-175	0	-175	0	-250	0	-250	0	-250	0	-250	0	-250		
		500				580				700				760				760			
		410				480				590				680				775			
		60	70	80	70	80	90	80	90	100	80	90	100	80	90	100	80	90	100	110	
		2.7	3.6	4.7	4.2	5.4	6.9	6.5	8.3	10	7.1	9	11.2	7.1	9	11.2	7.1	9	11.2	13.5	
		145	106	81	124	95	75	117	92	75	135	106	86	154	121	98	81	81	81	81	
		275	375	490	465	607	768	596	754	931	591	748	924	583	738	912	1103	1103	1103	1103	
		1000				1450				1750				2000				2250			
		101.6				165				165				200				200			
		12				15				15				20				20			
		200				250				250				295				300			
		14				14				14				14				14			
		800				1000				1200				1300				1400			
		7250×2120×2810				7750×2240×2855				8565×2360×2945				8940×2480×2995				9360×2660×3355			
		15.5				20.5				29				31.5				37.5			

• We reserve the right to make any technical improvement without further notice.