

ALLROUNDER 320 C GOLDEN EDITION

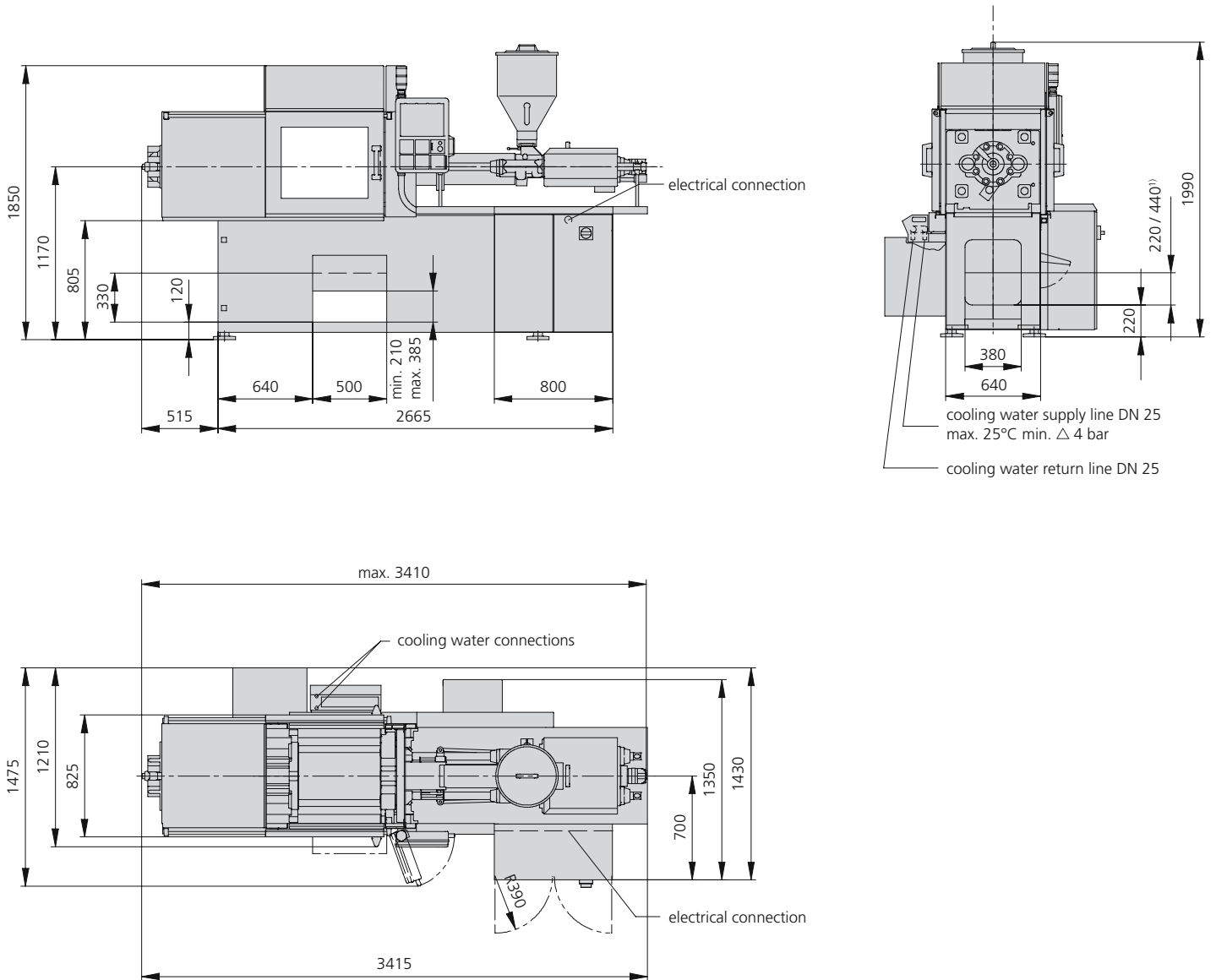
Technical
data

Tie bar distance: 320 x 320 mm

Clamping force: 500 kN

Injection unit (according to EUROMAP): 170

ARBURG



1) Dimension only valid in conjunction with conveyor belt

Machine model		320 C GOLDEN EDITION
EUROMAP size indication ¹⁾		500-170
Clamping unit		
Clamping force	max. kN	500
Closing force	max. kN	35
Opening force / increased	max. kN	25 / 130
Opening stroke	max. mm	350
Mould height	min. mm	200
Daylight	max. mm	550
Distance between tie bars	mm	320 x 320
Platen size (hor. x vert.)	mm	446 x 446
Weight of mov. mould half	max. kg	270
Ejector force	max. kN	30
Ejector stroke	max. mm	125
Hydraulics, drive, general		
Drive power of the hydraulic pump	kW	11
Dry cycle time for opening stroke ⁵⁾	s-mm	1,3-224
Total connected load ²⁾	kW	22,9
Colour: plastic coated, structure light grey / mint green / canary yellow		
Control cabinet		
Safety standard according to		DIN EN 60204
Socket combination (1 single phase, 1 three-phase)		1 x 16 A
Injection unit		
		170
Screw diameter	mm	25 / 30 / 35
Effective screw length	L/D	24 / 20 / 17
Screw stroke	max. mm	120
Calculated injection volume	max. cm ³	59 / 85 / 115
Shot weight	max. g PS	54 / 77 / 105
Material throughput ⁴⁾	max. kg/h PS	10 / 13,5 / 16
	max. kg/h PA 6.6	5 / 7 / 8
Injection pressure ³⁾	max. bar	2500 / 2000 / 1470
Injection flow ³⁾	max. cm ³ /s	66 / 96 / 132
Back pressure positive / negative	max. bar	350 / 200
Circumferential screw speed	max. m/min	35 / 42 / 49
Screw torque	max. Nm	300 / 350 / 350
Nozzle contact force	max. kN	50
Nozzle retraction stroke	max. mm	210
Installed cylinder heating power / heating zones	kW	8,8 / 4
Installed nozzle heating power	kW	0,6
Material hopper capacity	l	50
Machine dimensions and weights of the basic machine		
Oil capacity	l	165
Net weight	kg	2300
Electrical connection (pre-fused) ²⁾	A	63

1) 1st figure: clamping force (kN), 2nd figure: max. dosage volume (cm³) x max. injection pressure (kbar)

2) Values refer to 400 V/50 Hz. The load is symmetrically distributed on three phases (observe phase loading when installing new equipment)

3) A combination of max. injection pressure and max injection flow (max. injection capacity) can be mutually exclusive, depending on the equipment-related motor output

4) Deviations are possible depending upon process settings and material type

5) According to EUROMAP

These technical data specifications refer to the state at the time of printing. We reserve the right to modify specifications in the interest of a continuous program of further development.

Control system and control cabinet

- SELOGICA direct control system (touchscreen user interface for direct data access)
- Available in different language versions
- Language change
- Operating authorisation via chip card
- Cycle sequence programming with symbols
- Cycle step display in sequence diagram
- cycle time diagram
- Swivelling monitor unit, central on the operator's side, with colour monitor
- Process graphics for injection speed, screw stroke and injection pressure
- Quality assurance program with fault evaluation and monitoring chart
- Optimisation and user help, follow-up functions at program end, for freely programmable parameter pages, selectable units
- Modular control cabinet design with self-recognition of plug in circuit board system
- Operating modes:
 - Set up
 - Freely programmed test run
 - Reconfiguration
 - Automatic purging and dosing
- Data record administration via Compact Flash
- Visual warning signal (warning lamp)
- Visual / audible warning signal (flashing light / siren)
- Serial printer interface for hard copy, data record and quality protocol

- Interfaces for: Plotter, robotic system according to EUROMAP 12 or 67, host computer, ALLROUNDER@web, colouring unit, THERMOLIFT and temperature control units for moulds
- Socket combination 1 CEE, 1 Schuko 230 V
- Socket combination 1 CEE, 1 Schuko 230 V
- 1 additional heating regulation circuit for the nozzle
- Heating regulation circuits for moulds (adaptive) (3, 6); 10 A fuse for mould heating
- 4 freely programmable inputs / outputs
- Core pull programs in many versions integrated in the SELOGICA control system

Machine base and hydraulic system

- Free standing machine base on anti-vibration pads
- Ergonomic protection cover with free access to mould and nozzle
- Space for peripheral devices within floor space
- The hydraulic system operates with two energy-saving variable displacement pumps and a servo valve for pressure and speed regulation
- Minimum oil volume, oil change interval every 20,000 hours
- Monitoring of oil level, oil temperature and oil filter contamination
- Fine mesh oil filter in the return line
- Mechanical regulation of hydraulic oil temperature
- Electronic regulation of hydraulic oil temperature. Display and monitoring via screen

- Hydraulic oil preheating program to reduce start-up time
- Separate, continuous oil circulation for additional cooling and filtration
- Manually adjustable, machine-related cooling water circuits with 4 free mould connections
- 6 or 8 free cooling water circuits, manually adjustable
- Programmable, machine and mould-related cooling water circuits
- 1 central switch-off valve for cooling water
- Conveyor belt (electrically driven), height-adjustable in 3 steps, can be integrated into the machine base with or without sorter unit
- Crane with electric hoist to facilitate mould installation

Clamping unit

- Fully-hydraulic clamping system with 4 individually-removable tie bars
- Movement profiles for the mould clamping unit are programmable and regulated. They are driven using two-circuit pump technology (Technology stage 2 - servo-regulated). The closing pressure is regulated. Simultaneous movement of nozzle and ejector is possible
- Closing and opening profiles are 4-stage programmable
- Intermediate stop possible when closing and opening
- Regulated hydraulic mould protection with monitoring of mould protection time. Follow-up functions: Open or stop after 1 or 2 activations of mould protection

- Extended mould protection (e.g. for spring moulds). Freely-programmable start and end
- Automatic ramp course during switch-over to a lower speed and for stop of driven movements
- Hydraulic ejector with rapid release coupling is integrated into the clamping system
- Hydraulic ejector: Forces and speeds, multiple stroke (up to 10) and ejector advanced at end of cycle are programmable
- Mould monitoring via ejector platen safety switch
- Hydraulic core pulls with rapid connect coupling on the movable mould platen
- Hydraulic core pull movement profiles programmable and regulated
- Attachment option for robotic system
- Mould blow unit with pressure relief valve
- Sorter unit (SELECTRON)
- Mechanical mould closing protection

Injection unit

- Central injection unit, can be repositioned and swivelled as a complete assembly
- Plasticising module with universal screw, central coupling and adaptive temperature regulation, available in different diameters
- Thermoplastic cylinder in very high wear resistant execution
- Thermoplastic screws for special applications, e.g. self-dyeing (mixing section), PVC (shear-sensitive), POM, PA (semi-crystalline)
- Programmable nozzle speeds (advance 2, retract 1 stage) and advance and retract delay

- Monitored nozzle contact
- Continuous nozzle contact during the complete cycle
- Programmable nozzle contact force
- Regulated injection speed profile, 5 steps programmable with injection delay
- Measurement, display and monitoring of the injection time, switchover volume and switchover pressure
- Switch over to holding pressure as a volume or time dependent function
- Material cushion monitoring
- Holding pressure profile regulated via polygon with 10 base points
- Programmable delay times for all movements
- Screw circumferential speed display
- Positive and negative programmable back pressure
- Dosage time display with programmable dosage time monitoring
- Dosage possible before or after nozzle retraction
- Material decompression with programmable decompression speed
- Open nozzle with screw-in tip
- Needle type shut off nozzle, spring force actuated
- Zone-dependent monitoring of heating circuits for continuity, short circuit and defective sensors
- Temperature monitoring with release tolerance range and zone-dependent monitoring tolerance
- Automatic temperature sink can be selected in case of fault or after automatic switch off

- 50 litre corrosion proof stainless steel material hopper movable to a blocking and emptying position
- Granulate feed zone, programmable and regulated with monitoring

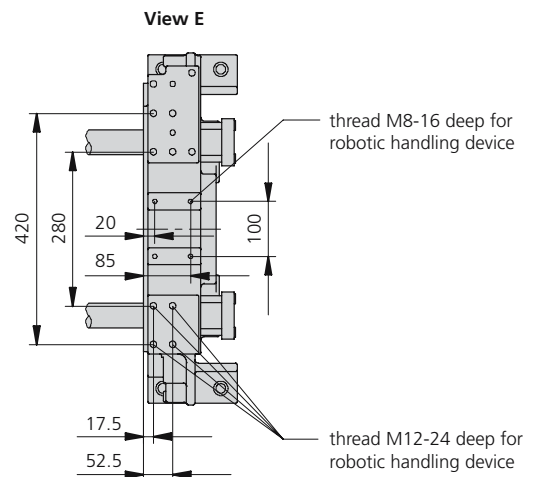
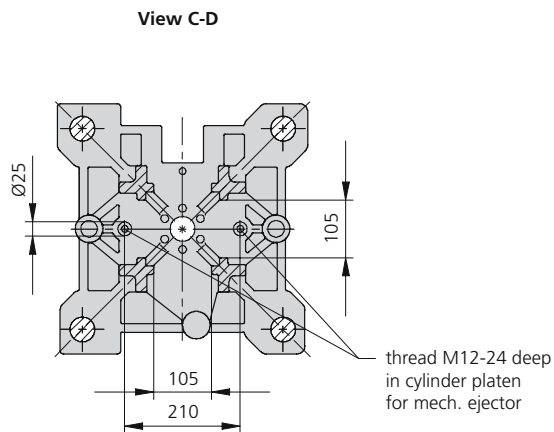
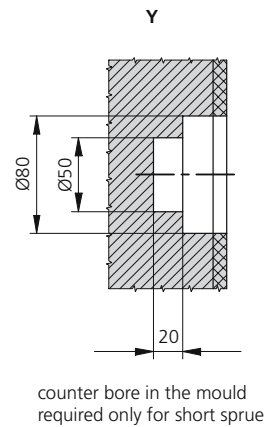
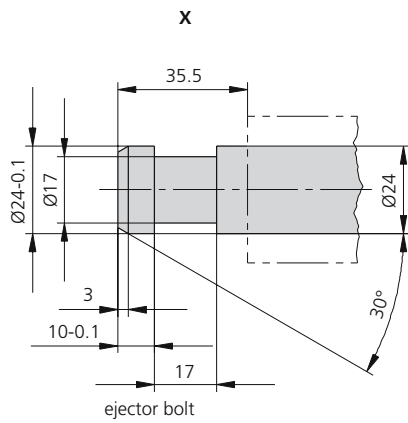
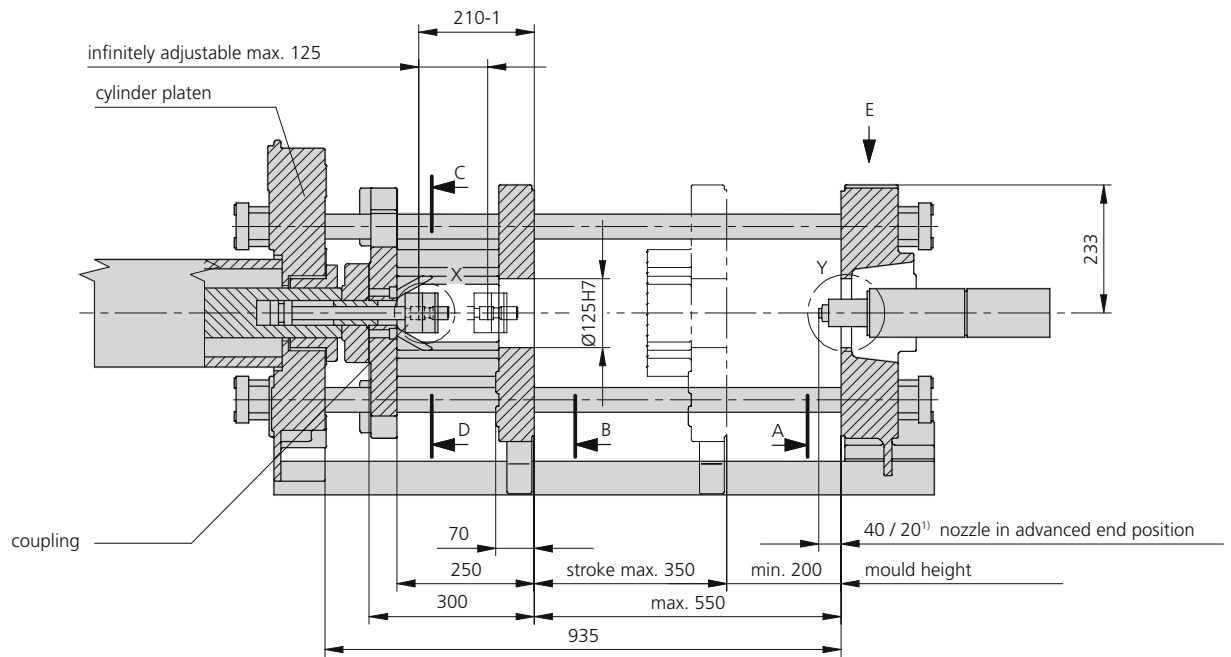
Extended functions

- Extended monitoring of the mechanical sequence of mould and machine for complex applications
- Extended drive movements: Increase in number of movement stages, intermediate stop functions and extended locking force program
- Production control with nominal temperature value control, programmable alarm cycles, programmable switch-on / switch-off sequences as well as time-controlled automatic switch-on/off in second programming level for follow-up batch

Regulated parameters

- Control cabinet temperature
- Hydraulic oil temperature
- Plasticising cylinder temperature (adaptive)
- Screw rotation speed
- Injection flow or injection speed
- Holding pressure
- Movements and force of mould, nozzle and ejector
- Ramp course for movement of mould, ejector and nozzle movement
- Back pressure
- Electrical mould heating circuits (adaptive)
- Mould cooling circuits
- Granulate feed zone temperature

- Basic machine
- Options

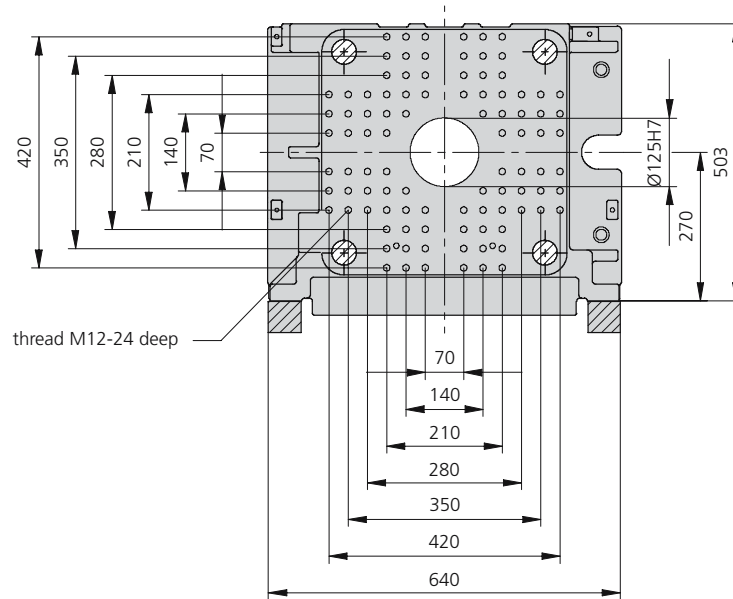


1) Dimensions apply for thermoset moulds

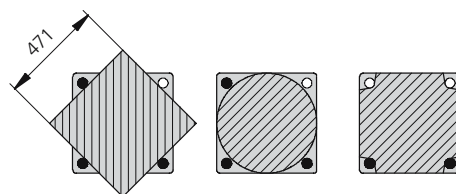
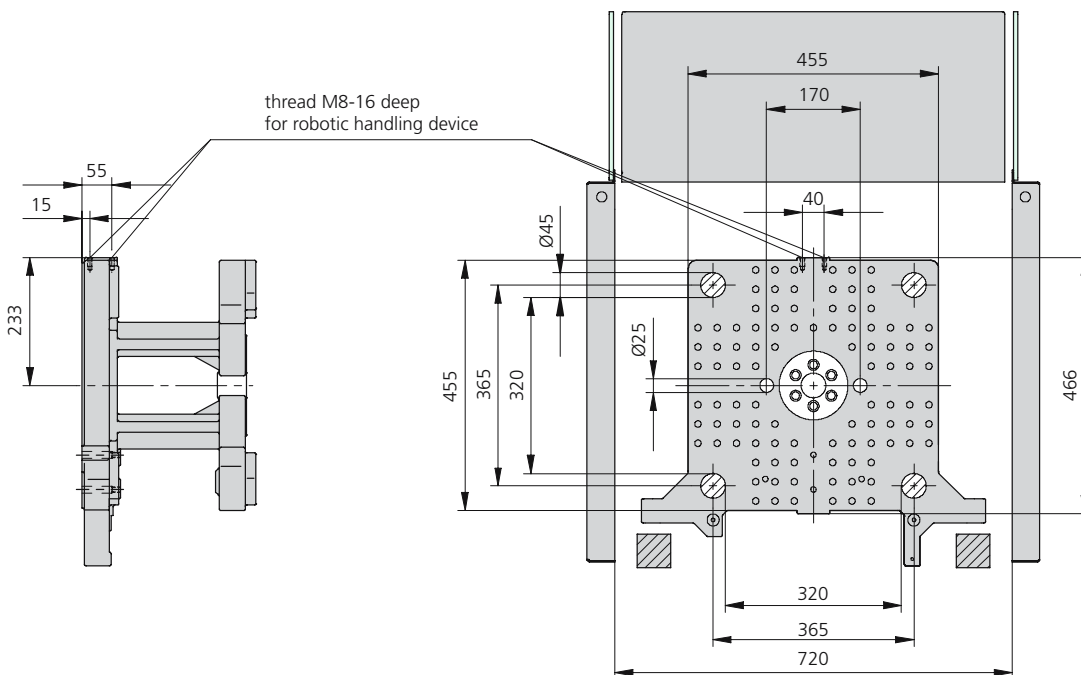
Mould and platen layout

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Fixed platen
View A



Movable platen
View B



Useable mounting surface with tie bars removed

Maximum theoretical shot weights for the most important injection moulding materials (in grams)

Injection units according to EUROMAP		170		
Screw diameter	mm	25	30	35
Polystyrene	PS	54	77	105
Styrene heteropolymerizates	SB	53	76	103
	SAN, ABS ¹⁾	52	74	101
Cellulose acetate	CA ¹⁾	61	87	119
Celluloseacetobutyrate	CAB ¹⁾	56	81	110
Polymethyl methacrylate	PMMA	56	80	109
Polyphenylene ether, mod.	PPE	50	72	98
Polycarbonate	PC	57	81	111
Polysulphone	PSU	58	84	115
Polyamides	PA 6.6, PA 6 ¹⁾	53	77	104
	PA 6.10, PA 11 ¹⁾	50	72	98
Polyoximethylene (Polyacetal)	POM	66	96	130
Polyethylene terephthalate	PET	64	92	126
Polyethylene	PE-LD	41	59	80
	PE-HD	42	60	82
Polypropylene	PP	43	62	84
Fluorpolymerides	FEP, PFA, PCTFE ¹⁾	86	124	169
	ETFE	76	109	148
Polyvinyl chloride	PVC-U	65	94	127
	PVC-P ¹⁾	60	87	118

1) average value

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