

**DUT KOREA**  
Solution for Polyurethane

HIGH PRECISION VARIABLE DISPLACEMENT PISTON

# DMP METERING PUMP



**DUT**  
Solution for Polyurethane  
[www.dutkorea.com](http://www.dutkorea.com)



**DUT KOREA is a specialist of PU machine and offers high pressure mixing head, metering pump, foaming machine and all kinds of PU solutions.**

## **DUT KOREA**

DUT was established in 1992 and became a leading company as manufacturer & specialist in the field of high-pressure PU solutions including foaming machine, mixing head, metering pump and all kinds of PU applications in Korea.

DUT started as a PU business with a high-quality mixing head, which is the core of PU technology, then the business expanded to various kinds of PU applications.

DUT's market share of this field is increasing rapidly and customer satisfaction for DUT's quality and service have been making strong brand power.

## **Solutions for Polyurethane**

DUT's slogan is "Solutions for Polyurethane". It means we do not just sell products but care for products until customer satisfaction has been reached.

Our technology of polyurethane starts with the needs of customers and finishes with their satisfactions.

## **Foaming Machine**

DUT's foaming machine has ultimate stability.

Essential parts including mixing head, metering pump and S/D valve for the foaming machine has been designed organically. (DUT is the only company which manufactures all these products in the same place)

The simple and stable design help the operator maintain and make repairs to the machine easily. The self-developing PLC allows the operator to control the foaming machine conveniently.

## **Huge Sales Network**

The sales department has a large international network over 57 countries including USA, Germany, Italy, UK, Poland, Hungary, Egypt, China, Mexico, Japan, India, Iran, Thailand, New Zealand, and Brazil so our customers can contact us easily in their regions.



## DUT KOREA introduces premium foaming machine

DUT KOREA's products are focused on operators and offer optimized machine. In addition, innovative technologies on an accumulation of experiences are supplied to customer's entire line.

### **Compatibility**

DUT's foaming machine has ultimate stability.  
It gives you perfect compatibility with your previous models.

### **Convenience**

'MAMIX' offers various types of options depending on customer's needs.  
Also, its simple design makes it easy and convenient for operators.

### **Cost efficiency**

Customers are able to assemble through various options so  
unnecessary parts can be excluded to make an economical machine.

## INTRODUCTION OF 'DMP'

DUT has newly developed metering pump 'DMP' and it is the 'Variable Displacement Axial Piston' type.

The pump is designed to improve from the weaknesses of previous A2VK type metering pump.

Screws for 'Mechanical Adjusting Gear' have replaced by 'Fine Pitch', so operators are able to make the precise adjustment of output.

Although parts inside are all changed and improved, it still has perfect compatibility with your previous models (A2VK type).

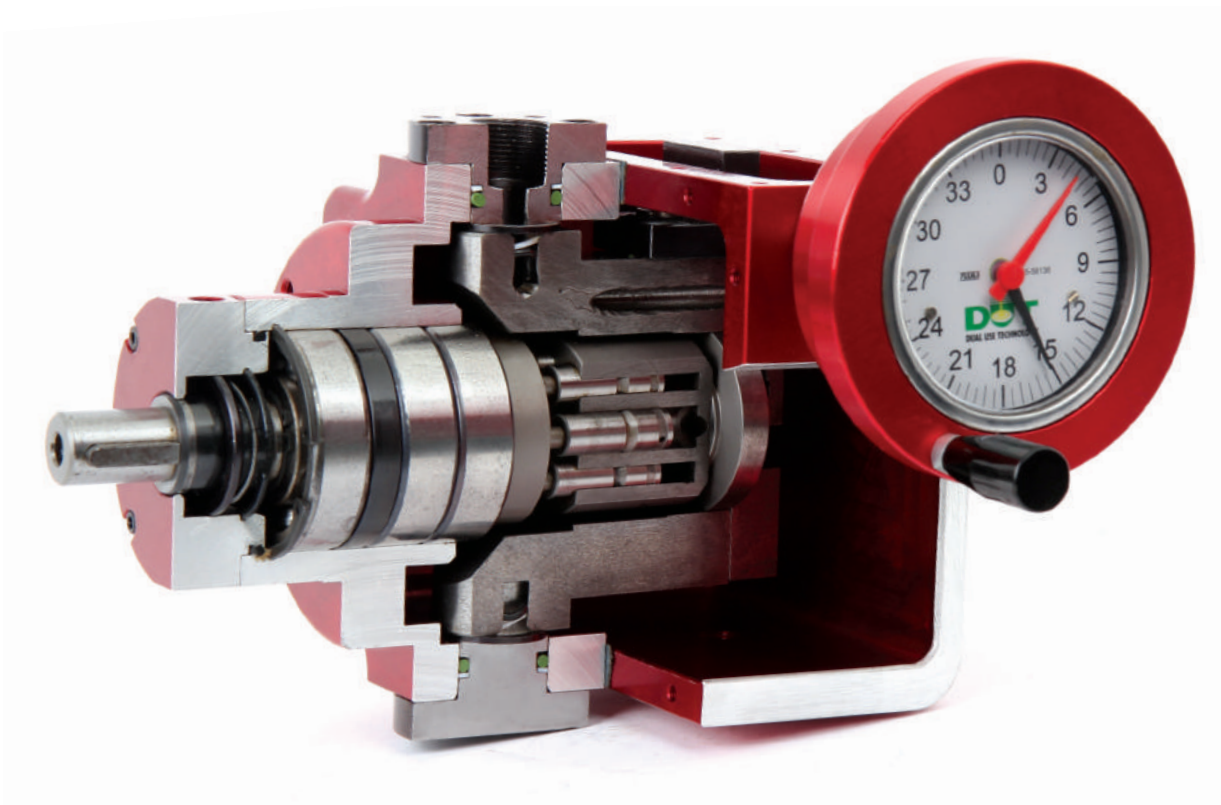
And weight lightening technology has applied via parts-simplification inside and using duralumin case.

Simplifications of design help an operator to maintain and repair the pump, so they can work more efficiently.



## FEATURES

- High level of metering accuracy
- Operating pressure up to 250bar
- Very little pulsation of flow
- Quiet operation
- Optimum volumetric available
- Low suction pressure, even when pumping highly viscous materials
- Perfect compatibility with previous model (A2VK type)



# SPECIFICATION

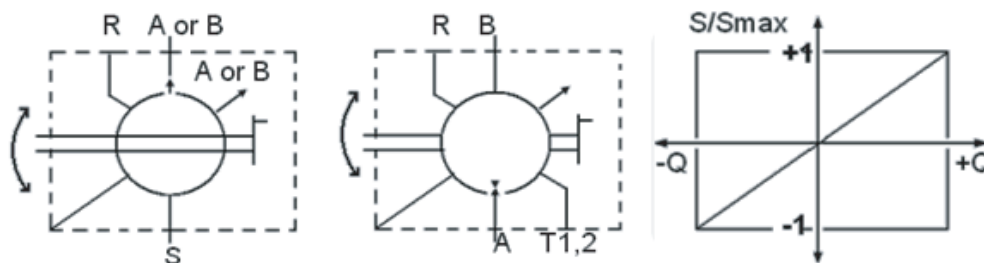
Model		DMP 5	DMP 12	DMP 28	DMP 55	DMP 107
Displacement $V_g$ max	cm <sup>3</sup>	4.8	11.6	28.1	54.8	107
Flow $Q_{max}$ In Open circuit and at speed (At a viscosity of $\nu=36\text{mm}^2/\text{s}$ )	n = 735rpm l/min	3.5	8.3	20	39	76
	n = 970rpm l/min	4.7	10.9	26	51	100
	n = 1,450rpm l/min	7.0	16.3	39	77	150
Power at $\Delta p = 220\text{bar}$ and speed	n = 735rpm kW	1.2	3	7.2	14	27.3
	n = 970rpm kW	1.5	3.9	9.3	18.3	35.9
	n = 1,450rpm kW	2.3	5.9	14	27.6	53.9

# DIRECTION OF FLOW

Swivel Direction	Clockwise Open circuit	Rotation	Anti-Clockwise Open circuit	Rotation Closed circuit
Anti-Clockwise	S to A	B to A B plugged	S to A	A to B A plugged

# MA MANUAL CONTROL

By turning hand wheel, the pump swivel body and thus the displacement or output flow is infinitely varied within the range  $Q_0$  to  $Q_{max}$  via a self-locking added spindle.



Specification		DMP5	DMP12	DMP28	DMP55	DMP107
Rotations of hand wheel $V$ go to $V_g$ max	Us	15	21	25	31	30
Max operating force on hand wheel	Kp	7	7	7	8	12
Pumps weight (Approx)	Kg	5	11	19	35	64

## OPERATION PRESSURE RANGE-Inlet Side

OPEN CIRCUIT : Pre pressure 1~3bar absolute at section port S  
 CLOSED CIRCUIT : Sum of combined pressure at A and B ≤ 250 bar  
 (315 bar for short period), fit leakage at port T

## OPERATION PRESSURE RANGE-Outlet Side

Pressure at port A or B  
 Nominal pressure ----- Pn = 250 bar  
 Peak pressure ----- Pmax = 315 bar  
 (Pressure data to DIN 24312)

## ORDERING CODE (It has perfect compatibility with the pump 'A2VK' from Rexroth.)

	<b>DMP</b>	<b>12</b>	<b>MA</b>	<b>0</b>	<b>R</b>	<b>P</b>	<b>1</b>	
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**Pump Types**  
DMP

**Size**

4.8cm <sup>3</sup>	<b>5</b>
11.6cm <sup>3</sup>	<b>12</b>
28.1cm <sup>3</sup>	<b>28</b>
54.8cm <sup>3</sup>	<b>55</b>
107cm <sup>3</sup>	<b>107</b>

**Control device**  
(only permits manual control)

Manual control **MA**

**Type of circuit**

Open type **0**

Closed type **G**

**Direction of hand wheel**

**1**  
Hand wheel in left side

**2**  
Hand wheel in right side  
(View on drive shaft)

**Shaft end**

Parallel Keyed **P**

Parallel Keyed (Lengthens) **PL**

**Direction of rotation**  
(View on drive shaft)

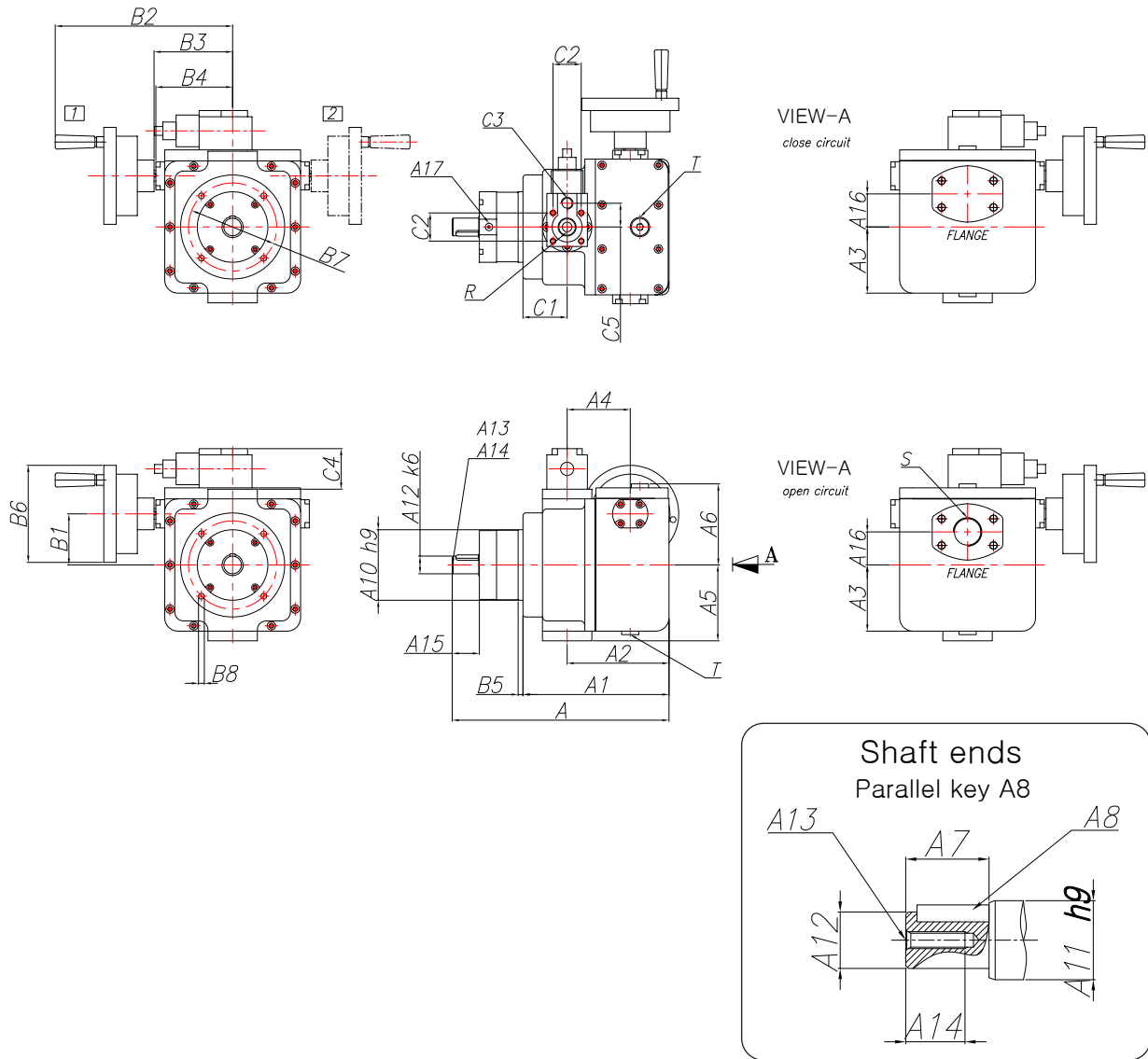
Clockwise **R**

Anti-Clockwise **L**

If customer place order of **DMP12MAORP1-SO2**,

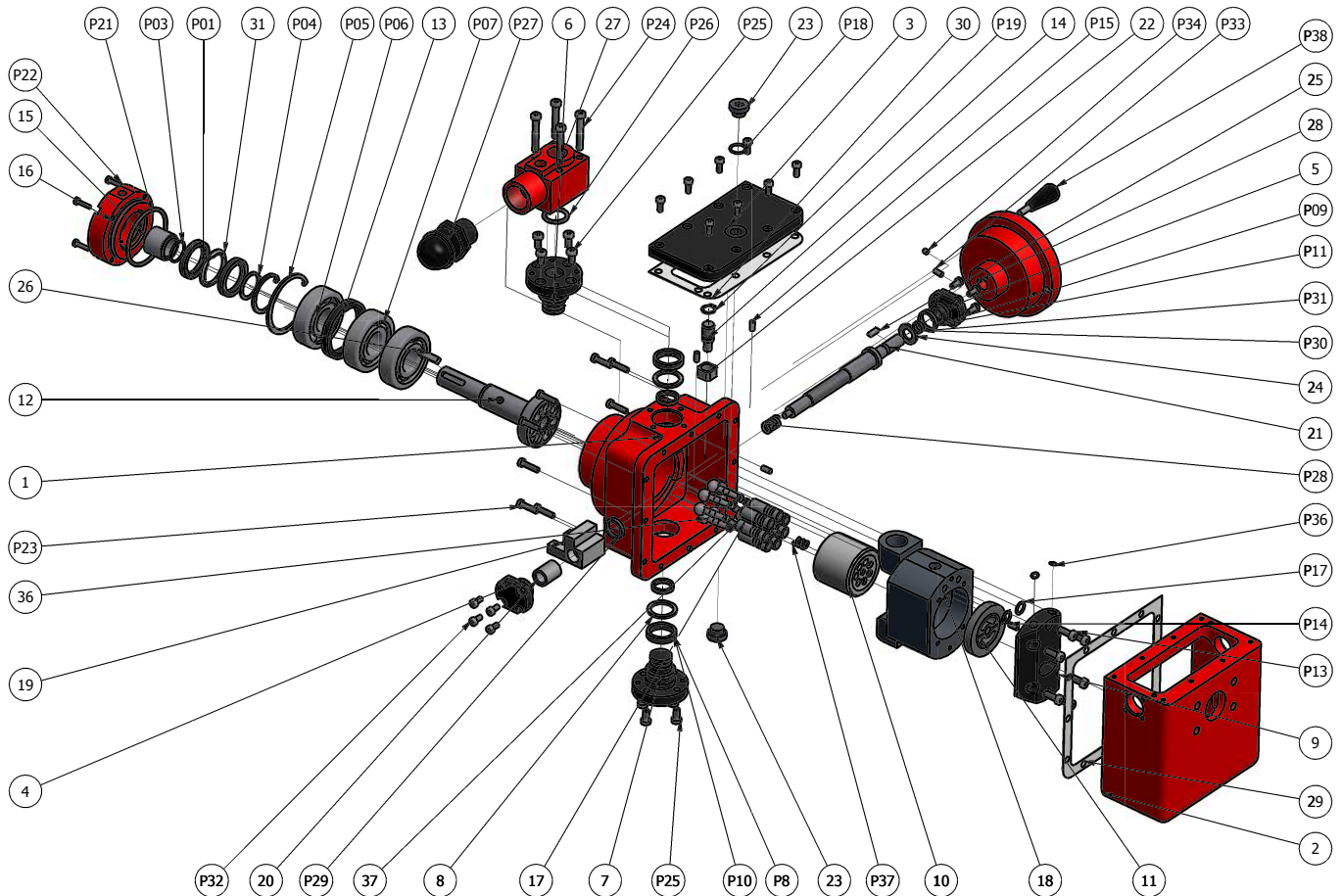
- Pump type : **DMP 12**
- Manual control : **MA**
- Open type circuit : **0**
- Clockwise rotation : **R**
- Parallel Keyed : **P**
- Hand wheel in left side : **1**
- Anticorrosive version : **SO2**

# DIMENSION OF METERING PUMP



DMP	A	A1	A2	A3	A4	A5	A6	A7	A8	A10	A11	A12	A13	A14	A15	A16	A17
5cc	200	128	88	61	55	72	78	29.5	6x6x25L	66	28	20	M6	20	31	31	PT1/8"
12cc	245	166	116	75	72	86	92	29.5	6X6X25L	80	28	20	M6	21	31	38	M10
28cc	307	207	145	90	84	103	107	44.5	8X7X39L	100	34	25	M10	27	46	45	M10
55cc	362	239	181	107	104	122	125	49	8X7X46L	125	40	30	M 12	35	50	57	M10
107cc	449	289	218	125	143	140	145	68	12X8X63L	160	50	40	M 12	28	68	70	M10
DMP	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	R	T	S	
5cc	44	188	76	73	4.5	100	86	M8	40	26	PF1/4"	46	27	M16 x P1.5	PF1/4"	3/4"	
12cc	58	202	90	87	5.5	110	100	M8	50	32	PF1/4"	46	27	M22 x P1.5	PF1/4"	1 1/4"	
28cc	71	222	110	107	8	110	125	M10	62	40	PF3/8"	50	35	M27 x P1.5	PF1/4"	1 1/2"	
55cc	83	244	132	129	10	150	160	M16	58	48	PF1/2"	66	45	M33 x P2	PF1/4"	2"	
107cc	101	267	155	154	12	150	208	M16	71	48	PF1/2"	66	45	M33 x P2	PF1/4"	2 1/2"	

# INSTRUCTION - PART LIST FOR DMP PUMP-SERIES




<b>P01</b>	<b>P02</b>	<b>P03</b>	<b>P04</b>	<b>P05</b>	<b>P06</b>	<b>P07</b>	<b>P08</b>	<b>P09</b>	<b>P10</b>	<b>P11</b>	<b>P13</b>
SEAL	SNAP RING	O-RING	SNAP RING	SNAP RING	BEARING	BEARING	O-RING	O-RING	BACK-UP RING	BACK-UP RING	WRENCH BOLT
<b>P14</b>	<b>P15</b>	<b>P16</b>	<b>P17</b>	<b>P18</b>	<b>P19</b>	<b>P20</b>	<b>P21</b>	<b>P22</b>	<b>P23</b>	<b>P24</b>	<b>P25</b>
PIN	PIN	PIN	O-RING	O-RING	SNAP RING	WRENCH BOLT	O-RING	WRENCH BOLT	WRENCH BOLT	WRENCH BOLT	WRENCH BOLT
<b>P26</b>	<b>P27</b>	<b>P28</b>	<b>P29</b>	<b>P30</b>	<b>P31</b>	<b>P32</b>	<b>P33</b>	<b>P34</b>	<b>P35</b>	<b>P36</b>	<b>P37</b>
O-RING	RELIEF VALVE	SPRING	O-RING	O-RING	BACK-UP RING	WRENCH BOLT	SET SCREW	SET SCREW	INDIGATOR	SEALING PLUG	SPRING
<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>	<b>09</b>	<b>10</b>	<b>11</b>	<b>12</b>
HOUSING	END CASING	COVER	SEAL COVER(1)	SEAL COVER(2)	TOP COVER	BOTTOM COVER	SLEEVE	END PLATE	PISTON HOUSING	VALVE PLATE	DRIVING SHAFT
<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
SPACER	PIN	RUNNING BUSH	FRONT COVER	CENTER PIN	SWASH BLOCK	ADJUSTER	HANDLE STOPPER	SCREW ADJUSTER	KEY	PLUG	COLLAR
<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>36</b>	<b>37</b>			
KEY	KEY	RELIEF BLOCK	HANDLE	GASKET	GRAND PACKING	COLLAR	PISTON	CON ROD			

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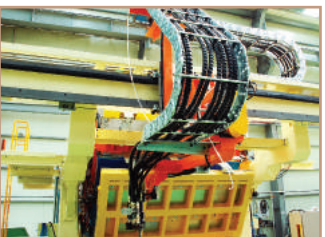
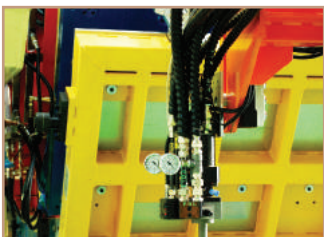
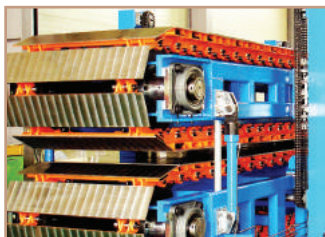


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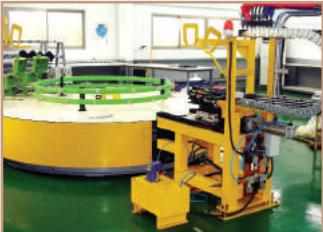
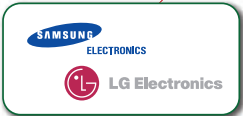
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HIGH PRECISION VARIABLE DISPLACEMENT PISTON

# DMP METERING PUMP

## R&D

DUT's R&D Team consists of PU specialists. Their considerations are always to solve the customer's difficulties and DUT's innovative technology is created from the customer's requirement. DUT's R&D center is totally set by customers.

## Q/A

To offer reliable products, Q/A team has been working to control product's quality. The technical data and troubleshooting are stored in a DUT's Q/A database, and it helps to produce DUT's better products.

## PRODUCTION

The Production team has organized by skilled engineers and they manufacture DUT's innovative products by reliable equipment.

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