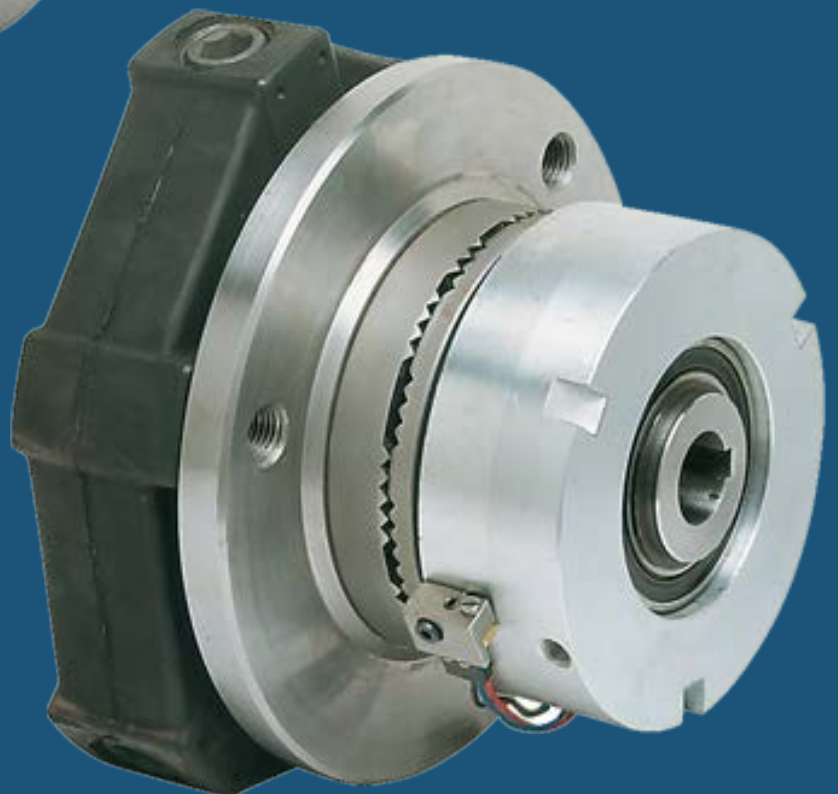




**FU IBERICA**  
TRANSMISIÓN DE POTENCIA

# LIMITADORES DE PAR DE DIENTES DE AJUSTE NEUMÁTICO



### **PNEUMATIC TOOTH-TYPE TORQUE LIMITERS WITH ELECTRIC SIGNAL**

*These limiters are particularly suitable for those transmissions which require maximum power during start-up. This power requirement can be met by varying the pressure; maximum at the start and, once the required speed is obtained, it can be decreased, until reaching the needed operating torque.*

*They are built with carefully selected materials and the components subject to slippage (toothing) are treated to withstand brief slippage without damage.*

*The motion is transmitted only with supply pressure, which by advancing the piston engages the toothing.*

*A set of helical springs which counter the supply pressure are used to completely release the entrainment toothing during a reduction or complete loss of pressure, and thus transmission components are made independent.*

*Therefore, if necessary, these types of limiters may also be used as tooth-type couplings.*

#### **• SUPPLY**

*To ensure that the limiter operates correctly and to enhance transmission safety, the supply pressure must always be constant; therefore, an accumulation tank should be used to compensate for any pressure changes.*

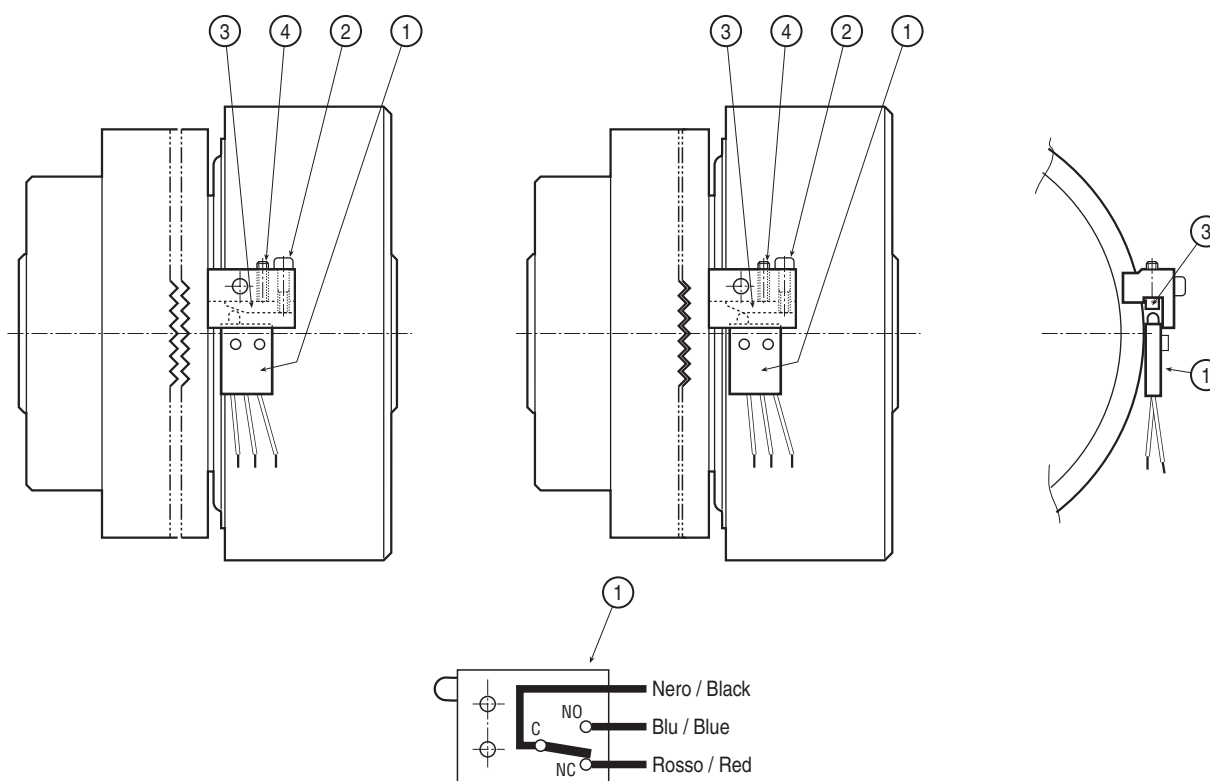
*The control valve must be mounted as close as possible to the supply hole located on the cylinder and it must also be equipped with a blow-off device so that if dangerous loads occur, the microswitch will trip and immediately discharge the pressure, thus completely releasing the transmission components, and protecting the unit.*

## MICROSWITCH

The fixed casing includes a microswitch that operates when slip-page occurs due to a reduction in the supply pressure or when excessive loads occur.

## MOUNTING

MODEL MI 010  
CODE 51.92.010.01



1. MICROSWITCH
2. SCREW FOR PIN
3. SETTING PIN FOR MICROSWITCH
4. SOCKET SET SCREW FOR MICROSWITCH ADJUSTMENT

## MICROSWITCH CONTACTS

BLACK - BLUE = ON  
BLACK - RED = OFF

## ADJUSTMENT

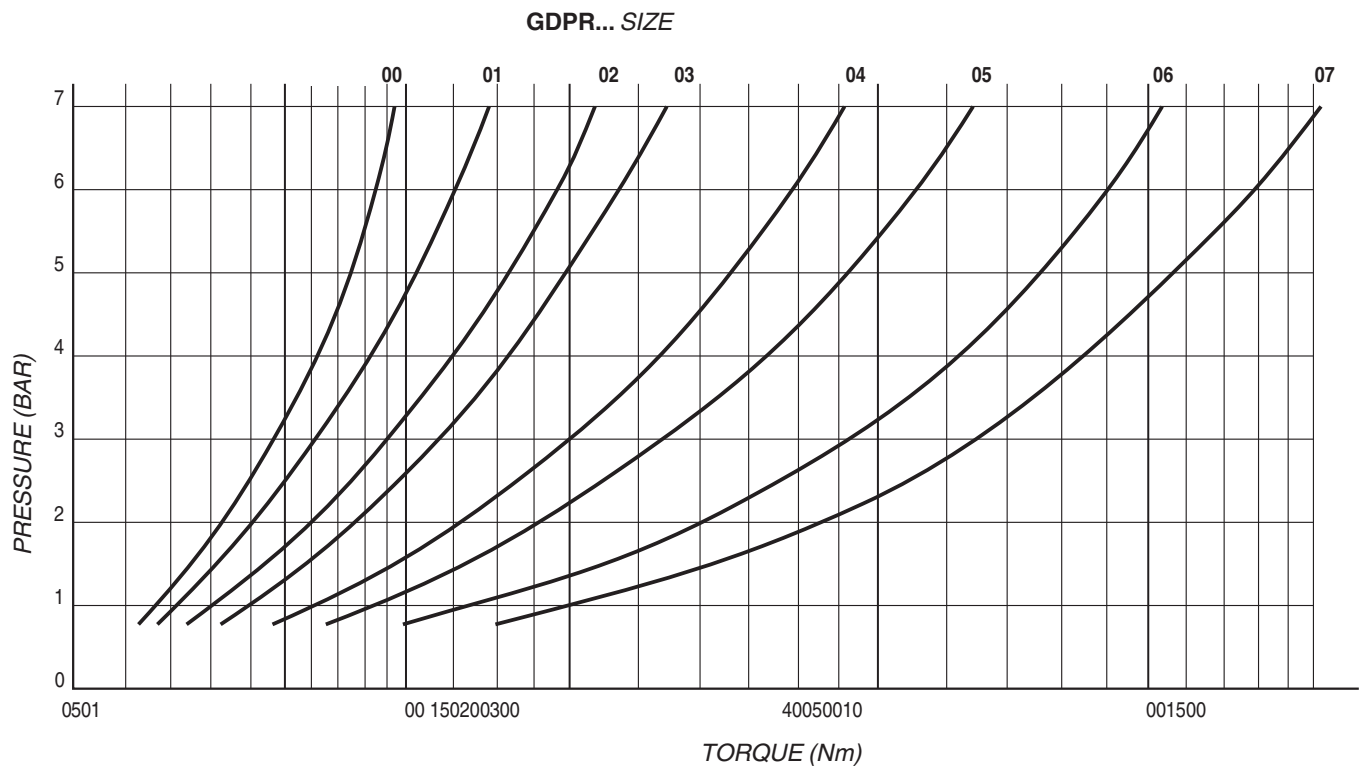
To adjust the microswitch:

1. Fully engage the torque limiter.
2. Check that the microswitch correctly signals the engagement.
3. Slightly loosen the screw (2).
4. Adjust the socket set screw (4).
5. Tighten anew the screw (2).
6. Stop supplying air to disengage the torque limiter and to check the adjustment.

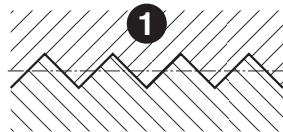
Repeat this procedure until you obtain the preferred degree of sensibility.

### TORQUE ADJUSTMENT

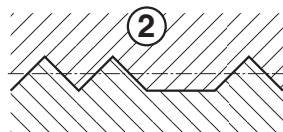
The torque is directly proportional to the supply pressure, so it can be adjusted by varying the pressure itself. In fact, increasing the pressure increases the torque and decreasing the pressure reduces the torque, as illustrated in the following diagram.



### TRIANGULAR TOOTHING ① (standard)

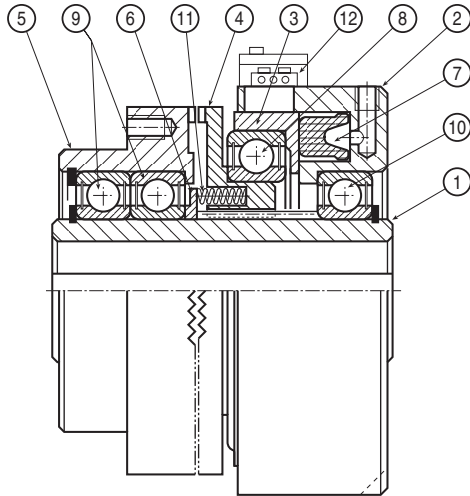


### TOOTHING WITH ONE OR MORE FIXED REFERENCE POSITIONS ② (on request)

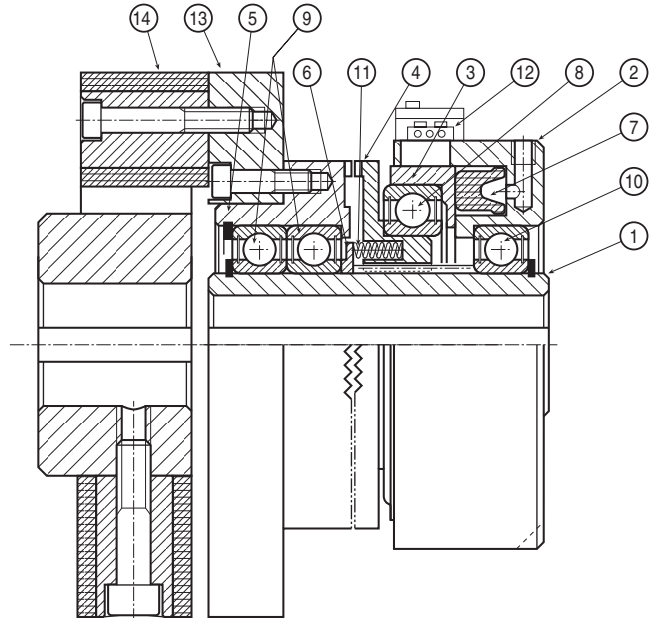


With these two types of toothing, the torque values reported in the table will not vary. Different torque values can be obtained by creating special teeth with different pitches.

## GDPR



## GDPG

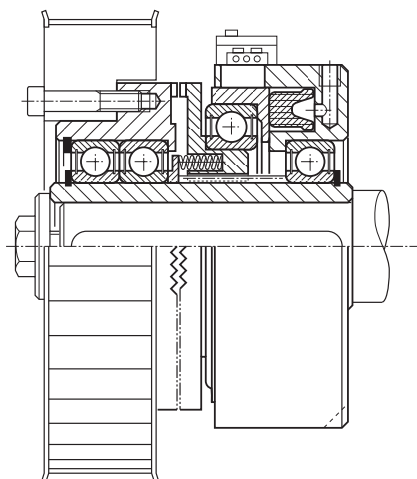


### PARTS LIST

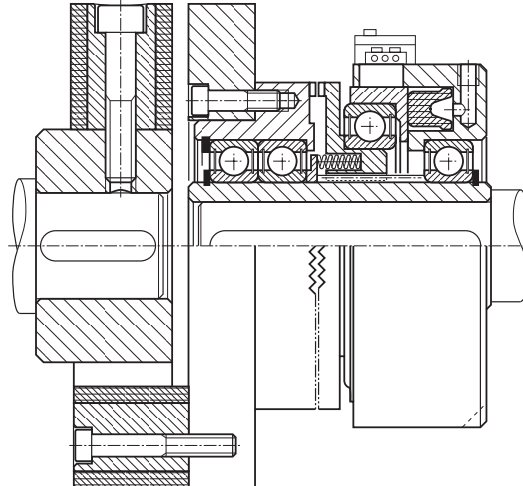
1. CENTRAL HUB
2. CYLINDER
3. PISTON
4. TOOTHED RING
5. TRANSMISSION SLEEVE
6. SPRING COMPRESSION RING
7. SEAL RING
8. PISTON BEARING
9. SLEEVE BEARING
10. HUB BEARING
11. SPRING
12. MICROSWITCH
13. COUPLING FLANGE
14. FLEXIBLE COUPLING

### EXAMPLES OF MOUNTING

GDPR



GDPG

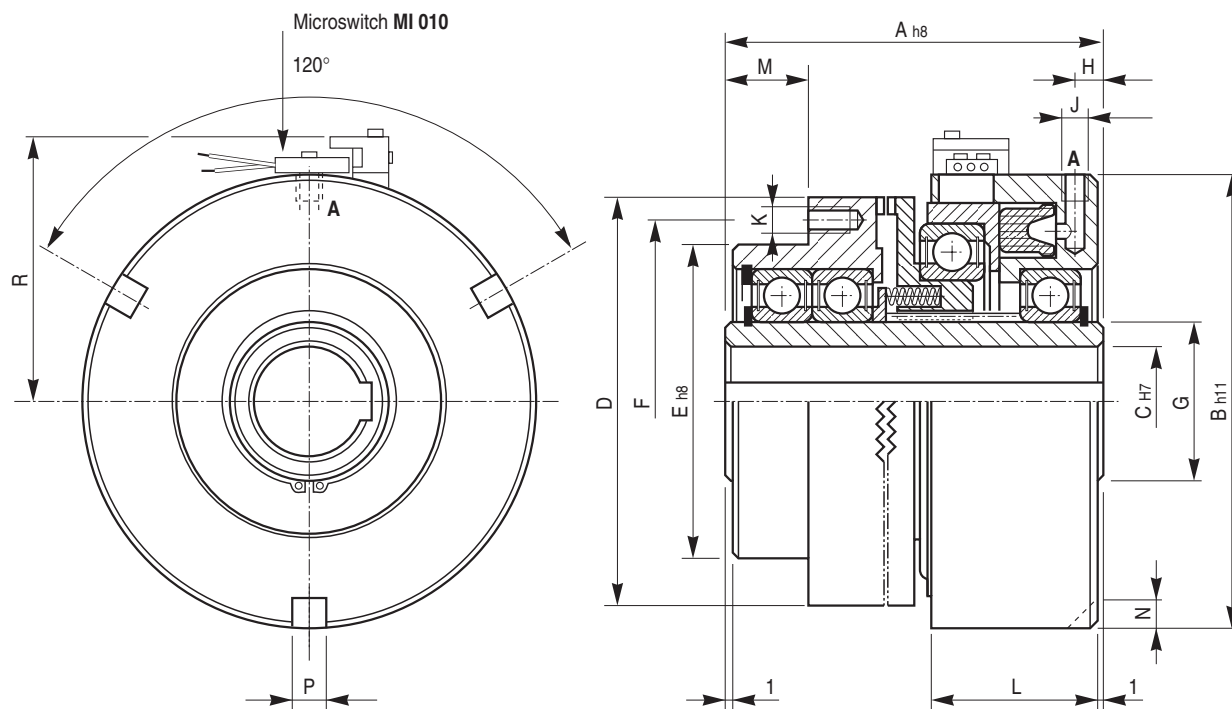


**PNEUMATIC TOOTH-TYPE TORQUE LIMITERS WITH  
WITH TRANSMISSION HUB AND MICROSWITCH**

GDPR ...

**02**

<b>MODEL</b>	GDPR □□
<b>CODE</b>	02.60.□□.01



A = Air supply

□□	Torque Ms (Nm)	R.P.M. max.	Working pressure (bar)	Cylinder volume (cm <sup>3</sup> )	Weight (kg)
00	78	3000	6	6	3,5
01	120	3000	6	8	4,2
02	180	2400	6	12	6,1
03	226	2400	6	15	7,4
04	382	2000	6	25	10,6
05	530	2000	6	30	12,5
06	880	1600	6	40	18,1
07	1300	1400	6	50	26

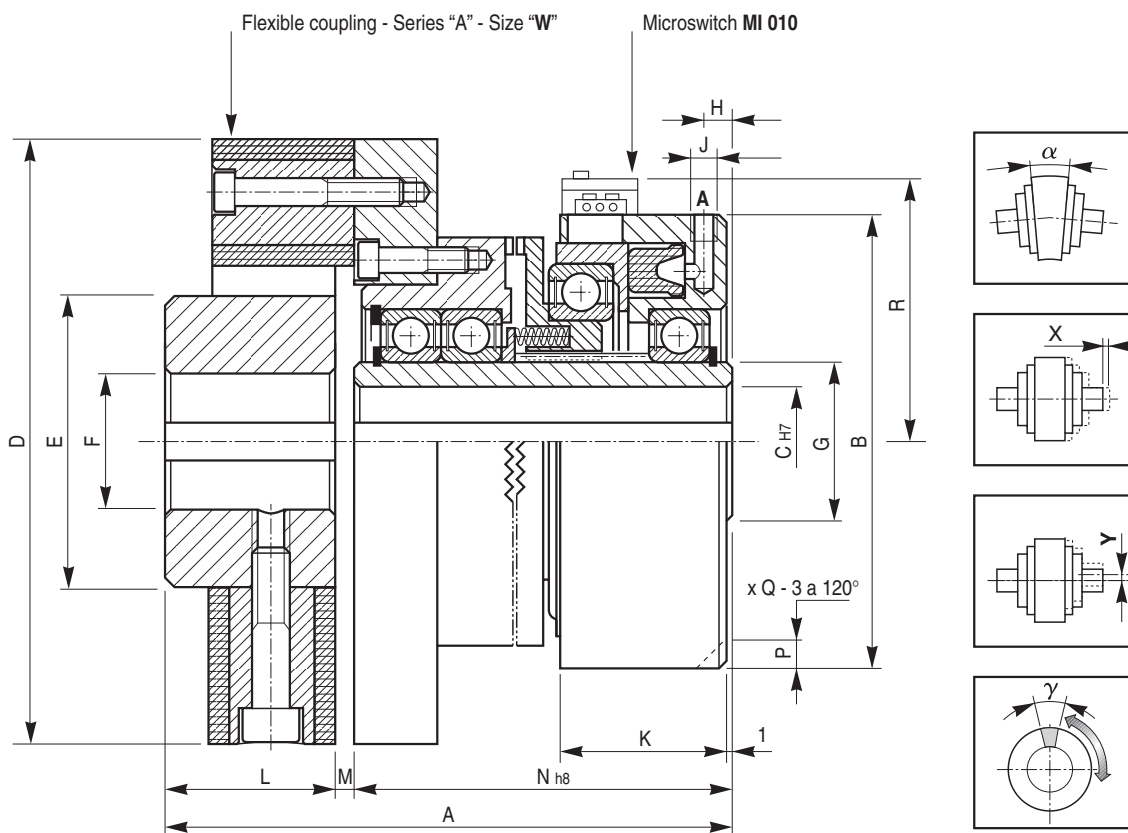
□□	A	B	C		D	E	F	G	H	J	K	L	M	N	P	R
			min	max							n° x Ø					
00	86	97	14	20	92	65	82	30	7	1/8"	3 x M 6	38	18	9	10	64
01	93	115	15	25	99	72	88	35	7	1/8"	3 x M 6	46	19	10	10	73
02	98	127	18	34	115	88	102	45	7	1/8"	3 x M 6	44	20	10	10	79
03	101	134	18	34	124	88	108	45	7,5	1/8"	3 x M 6	45	20	10	10	82
04	112	153	20	46	137	102	120	60	9	1/4"	6 x M 6	49	23	12	12	92
05	113	167	25	50	153	112	135	65	9	1/4"	6 x M 8	55	22	12	12	99
06	129	193	30	60	178	132	155	75	9	1/4"	6 x M 8	60	23	12	12	112
07	146	216	30	68	209	145	180	85	9	1/4"	6 x M10	65	32	14	14	123

**PNEUMATIC TOOTH-TYPE TORQUE LIMITERS WITH  
FLEXIBLE COUPLING AND MICROSWITCH**

**GDPG...**

**02**

<b>MODEL</b>	<b>GDPG</b> □□
<b>CODE</b>	02.62.□□.01



A = Air supply

□□	Torque - LIMITING COUPLING Ms (Nm)	R.P.M. max.	Working pressure (bar)	Cylinder volume (cm <sup>3</sup> )	Coupling size W	Weight (kg)
00	78	3000	6	6	8	6,2
01	120	3000	6	8	8	6,4
02	180	2400	6	12	12	8,3
03	226	2400	6	15	16	11,3
04	382	2000	6	25	22	14,7
05	530	2000	6	30	28	18,3
06	880	1600	6	40	50	27,1
07	1300	1400	6	50	90	45,0

□□	A	B	C		D	E	F		G	H	J	K	L	M	N	PxQ	R	X	Y	α	γ
			min.	max			min.	max													
00	132	97	14	20	120	60	12	38	30	7	1/8"	38	42	4	86	9x10	64	2	1	1°	7°
01	139	115	15	25	120	60	12	38	35	7	1/8"	46	42	4	93	10x10	73	2	1	1°	7°
02	144	127	18	34	122	60	12	38	45	7	1/8"	44	42	4	98	10x10	79	2	1	1°	4°
03	157	134	18	34	150	70	15	48	45	7,5	1/8"	45	50	6	101	10x10	82	2	1	1°	4°
04	168	153	20	46	150	70	15	48	60	9	1/4"	49	50	6	112	12x12	92	3	1	1°	4°
05	174	167	25	50	170	85	15	55	65	9	1/4"	55	55	6	113	12x12	99	3	1	1°	4°
06	203	193	30	60	200	100	20	65	75	9	1/4"	60	66	8	129	12x12	112	3	1	1°	4°
07	234	216	30	68	260	125	30	85	85	9	1/4"	65	80	8	146	14x14	123	3	1	1°	7°