

# ACTUADORES NEUMÁTICOS / PNEUMATIC ACTUATORS

## ACTUADOR NEUMÁTICO DE SIMPLE Y DOBLE EFECTO DE 1/4 DE VUELTA SPRING RETURN & DOUBLE ACTING 1/4 TURN PNEUMATIC ACTUATOR



**TECFLW**

**TF-PNA**

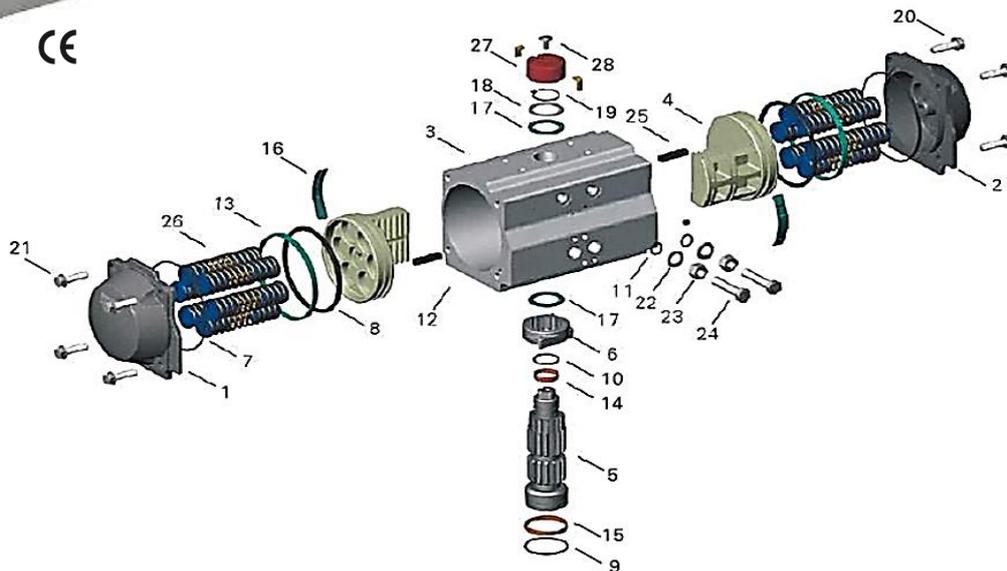


### UTILIZACIÓN / APPLICATION :

Accionamiento neumático para válvulas de 1/4 de vuelta.  
Pneumatic action for any 1/4 turn valve.

### CARACTERÍSTICAS GENERALES / GENERAL CHARACTERISTICS :

Cuerpo de aluminio extrusionado y anodizado de alta calidad.  
Extrusion of high quality aluminum alloy cylinder block with hard anodized surface.  
Conexión NAMUR para electroválvulas / NAMUR interface to connect solenoid valves.  
Presión de trabajo hasta 8 bar / Working pressure up to 8 bar.  
Conexión a válvulas / Connection to valves according to : ISO 5211 DIN3337 (F03-F25).  
Conexión para cajas de final de carrera / Connection for Limit switch boxes .  
Temperatura de trabajo / Working Temperature : - 20 °C / + 80 °C.



### MATERIALES / CONSTRUCTION :

No.	Nº de Piezas No. of each type	Pieza Part	Material Material
1	1	Tapa Izquierda Left Cover	Aluminio Aluminum Die Casting
2	1	Tapa derecha Right Cover	Aluminio Aluminum Die Casting
3	1	Cuerpo Block	Aluminio Aluminum Extrusion
4	2	Pistón Piston	Aluminio Aluminum Die Casting
5	1	Eje Shaft	Acero Carbono Carbon Steel
6	1	Leva de ajuste Cam adjustment	A.Inoxidable Stainless Steel
7*	2	Junta tórica (Tapa) O-Ring (Cover)	NBR
8*	2	Junta tórica (Pistón) O-Ring (Piston)	NBR
9*	1	Junta tórica O-Ring (Out shaft bottom)	NBR
10*	1	Junta tórica O-Ring (Out shaft at the top)	NBR
11*	2	Junta tórica O-Ring (adjusting screw)	NBR
12*	2	Tapón Plug (Cylinder)	NBR
13*	2	Cojinetes Bearings (Piston)	Compuertos de PVDF PVDF Composites
14*	1	Cojinete Bearings (output shaft at the top)	Nylon 46

No.	Nº de Piezas No. of each type	Pieza Part	Material Material
15*	1	Cojinete Bearings (output shaft bottom)	Nylon 46
16*	1	Cojinetes de guía Guide bearings (piston back)	Nylon 46
17*	2	Cojinetes de empuje Thrust bearings (output shaft)	Nylon 46
18	2	Junta de Eje Cover (output shaft)	Nylon 46
19	1	Circlip Flexible Ring file	A.Inoxidable Stainless Steel
20	8/12/16 (1)	Tornillo de Tapa Cover bolt	A.Inoxidable Stainless Steel
21	8/12/16 (1)	Junta de Tapa Cover gasket	A.Inoxidable Stainless Steel
22	2	Junta Gasket	A.Inoxidable Stainless Steel
23	2	Tuerca Nut	A.Inoxidable Stainless Steel
24	2	Tornillo de ajuste Adjustment bolt	A.Inoxidable Stainless Steel
25	2	Guía Block-oriented	Nylon 66 + 30% FG
26	5-12	Componentes del muelle Spring Components	Aleación de acero Alloy spring steel
27	1	Indicador posición Position Indicator	Polipropileno PP + 30% GF Polypropylene + 30% GF
28	1	Tornillo Screw	A.Inoxidable Stainless Steel

(1) Tapa con 8 tornillos en modelos AT50 hasta AT-240. Modelos AT265 hasta AT330 dispone de 12 tornillos. / Models AT50 to AT240 cover bolts to 8. Models AT265 to AT330 for the 12 cover bolts.

\* Mantenimiento recomendado, repuestos, incluidos en el pack de repuestos. / Recommended maintenance, spare parts, including spare parts package.

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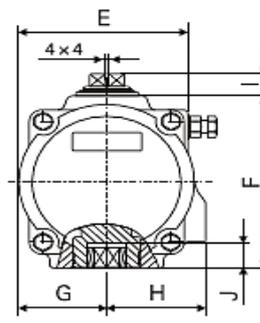
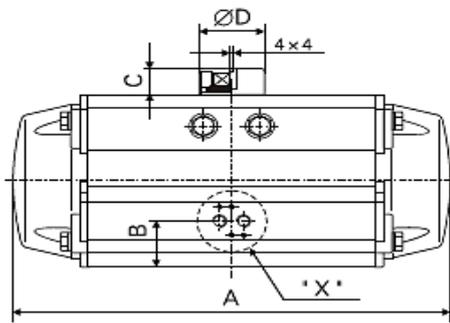
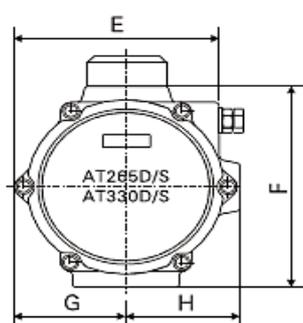
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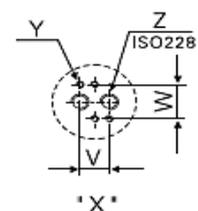
DIMENSIONES Y CONEXIÓN / DIMENSIONS & CONNECTION:

Model	AT050	AT063	AT075	AT088	AT100	AT115	AT125	AT145	AT160	AT180	AT200	AT240	AT265	AT330
	D/S													
ISOflange	F04	F05	F05-07	F05-07	F07-10	F07-10	F07-10	F10-12	F10-12	F12	F14	F16	F16	F16
A	140.5	158.5	210.5	247.5	268.5	315	345	408.5	437.5	487	543	633	728	876
B	26.5	30	30.5	32.5	37.5	42.5	45	47.5	52	58.5	62.5	78.5	165	187
C	20	20	20	20	20	30	30	30	30	50	50	50	50	50
∅D	40	40	40	40	40	56	56	65	65	80	80	115	115	115
E	59	72	84.5	97.5	111	127	136	156.5	169	190.5	213	251	298.5	383
F	69	85	102	115	127	145	157	177	196	220.5	245	298.5	330	405
G	29	36	42.5	49.5	56	64	69.5	80	88	99	110	131	163.5	201
H	41.5	47	52	56.8	67	77	82	91.5	99	105	112	131	166	204.5
I	14.5	14.5	14.5	14.5	14.5	24.5	24.5	24.5	24.5	44.5	44.5	44.5	44.5	44.5
Jmim	12	16	16	19	19	24	24	29	29	29	38	38	48	57
K	11	11	17	17	17	27	27	27	27	36	36	36	36	36
L	80	80	80	80	80	80	80	80	80	130	130	130	130	130
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	4	8	8	8	8	8	8	8	8	8	8	8	8	8
∅O1	42	50	50	50	70	70	70	102	102	125	140	165	165	165
∅O	-	-	70	70	102	102	102	125	125	-	-	-	-	-
P1	4-M6	4-M6	4-M6	4-M6	4-M8	4-M8	4-M8	4-M10	4-M10	4-M12	4-M16	4-M20	4-M20	4-M20
P	-	-	4-M8	4-M8	4-M10	4-M10	4-M10	4-M12	4-M12	-	-	-	-	-
□Q	11	14	14	17	17	22	22	27	27	27	36	36	46	55
V	24	24	24	24	24	24	24	24	24	24	24	40	40	40
W	32	32	32	32	32	32	32	32	32	32	32	45	45	45
Y	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M5×8	M6×10	M6×10	M6×10
Z	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	1/2"	1/2"

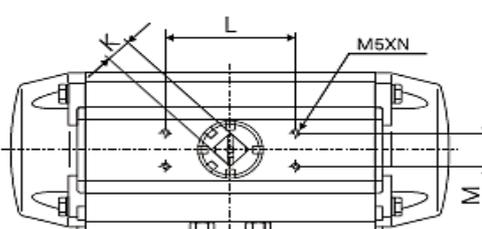
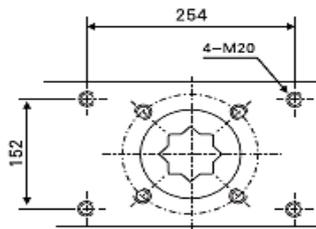
Connection standard ISO5211/VDI/VDE3845



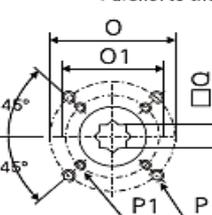
Standard NAMUR connection



AT330D/S Connection size



LD: Parallel to the angle



Upward view



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## INFORMACIÓN DEL ACTUADOR / ACTUATOR INFORMATION

Model	Maximum air supply pressure	Rotation	Operating temperature (°C)	Stroke adjustment for each 1° turns	Cylinder diameter $\phi$ (mm)	Cylinder capacity (L) open to the commissioner to		Switching time (seconds)(A)open to the commissioner to		Weight (kg) (B) Each spring each				
AT050	Clean dry or lubricated compressed air 8 bar	90° ± 4° or full stroke 0° ~ 90°	ST (standard) nitrile rubber O-ring -20~+80	1/6	50	0.1	0.2	D0.2	D0.3	D1.1	----			
AT063								S0.3	S0.3	S1.2	0.01			
AT075				1/6	63	0.2	0.3	D0.3	D0.3	D1.6	----			
AT088								S0.3	S0.4	S1.8	0.02			
AT100				1/5	75	0.3	0.5	D0.3	D0.4	D2.8	----			
AT115								S0.4	S0.5	S3.2	0.03			
AT125				1/5	88	0.5	0.8	D0.4	D0.5	D4.0	----			
AT145								S0.5	S0.6	S4.7	0.06			
AT160				1/5	100	0.7	1.1	D0.5	D0.6	D5.9	----			
AT180								S0.7	S0.9	S6.7	0.07			
AT200				1/5	115	1.2	1.8	D0.7	D0.8	D8.5	----			
AT240								S0.9	S1.1	S10.0	0.13			
AT265				1/4	125	1.5	2.3	D0.9	D1.1	D10.7	----			
AT330								S1.2	S1.4	S12.5	0.16			
AT050				Clean dry or lubricated compressed air 8 bar	90° ± 4° or full stroke 0° ~ 90°	HT (high temperature) Viton O-ring -15~+150	1/4	145	2.4	3.8	D1.2	D1.4	D15.5	----
AT063											S1.5	S1.8	S18.3	0.25
AT075	1/4	160	3.1				4.9	D1.5	D1.7	D19.5	----			
AT088								S1.8	S2.1	S23.3	0.36			
AT100	1/4	180	4.3				6.9	D2.0	D2.2	D26.7	----			
AT115								S2.4	S2.8	S32.8	0.50			
AT125	1/4	200	5.9				9.5	D2.7	D3.2	D35.6	----			
AT145								S3.5	S4.0	S43.6	0.62			
AT160	1/4	240	10.0				15.2	D3.5	D4.0	D58.2	----			
AT180								S4.1	S4.6	S71.0	1.12			
AT200	1/4	265	14.5				21.4	D4.0	D4.5	D78.8	----			
AT240								S4.5	S5.0	S96.5	1.56			
AT265	1/4	330	25.0				40.0	D6.0	D7.0	D130	----			
AT330								S7.5	S8.5	S163	2.95			

## PARES DOBLE EFECTO / DOUBLE ACTING TORQUE: Nm

Actuator Model	2.5bar	3.0bar	3.5bar	4.0bar	4.5bar	5.0bar	5.5bar	6.0bar	7.0bar	8.0bar
AT032D	3.6	4.3	5	5.7	6.4	7.3	8	8.7	10	11.6
AT050D	8.3	10.0	11.6	13.3	15.0	16.6	18.3	19.9	23.3	26.6
AT063D	14.7	17.6	20.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
AT075D	29.1	34.9	40.7	46.5	52.3	58.2	64.0	69.8	81.4	93.0
AT088D	45.7	54.9	64.0	73.2	82.3	91.5	101	110	128	146
AT100D	66.5	79.7	93.0	106	120	133	146	160	186	213
AT115D	107	129	150	172	193	215	236	258	301	344
AT125D	138	166	194	221	249	277	304	332	387	443
AT145D	217	261	304	348	391	434	478	521	608	695
AT160D	283	340	397	453	510	567	623	680	793	907
AT180D	383	459	536	612	689	765	842	918	1071	1224
AT200D	531	638	744	850	956	1063	1169	1275	1488	1700
AT240D	935	1122	1309	1496	1683	1870	2057	2244	2618	2992
AT265D	1347	1617	1886	2156	2425	2695	2964	3234	3772	4311
AT330D	2350	2821	3291	3761	4231	4701	5171	5641	6581	7521

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## PARES SIMPLE EFECTO / SPRING RETURN TORQUE: Nm

Actuator Model	Spring quantity	Air Pressure Torque																		Torque spring return					
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar		8.0bar		0°	90°		
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	Start	End		
AT050S	05	4.9	3.4	6.6	5.1	8.2	6.8	9.9	8.4	11.6	10.1	13.2	11.7									4.9	3.4		
	06	4.2	2.5	5.9	4.1	7.6	5.8	9.2	7.4	10.9	9.1	12.5	10.8	14.2	12.4							5.8	4.1		
	07			5.2	3.2	6.9	4.8	8.5	6.5	10.2	8.1	11.9	9.8	13.5	11.5	15.2	13.1					6.8	4.7		
	08					6.2	3.8	7.9	5.5	9.5	7.2	11.2	8.8	12.8	10.5	14.5	12.1	17.8	15.5			7.8	5.4		
	09							7.2	4.5			8.9	6.2	10.5	7.8	12.2	9.5	13.8	11.2	17.2	14.5	20.5	17.8	8.8	6.1
	10									8.2	5.2	9.8	6.9	11.5	8.5	13.2	10.2	16.5	13.5	19.8	16.8	19.8	16.8	9.7	6.8
	11											9.2	5.9	10.8	7.6	12.5	9.2	15.8	12.5	19.1	15.9	19.1	15.9	10.7	7.4
AT063S	05	9.1	6.2	12	9.1	15	12	17.9	15	20.8	17.9	23.7	20.8									8.5	5.5		
	06	8	4.5	10.9	7.4	13.8	10.3	16.8	13.3	19.7	16.2	22.6	19.1	25.6	22.1							10.2	6.7		
	07			9.8	5.7	12.7	8.7	15.7	11.6	18.6	14.5	21.5	17.4	24.5	20.4	27.4	23.3					11.8	7.8		
	08					11.6	7	14.6	9.9	17.5	12.8	20.4	15.8	23.3	18.7	26.3	21.6	32.1	27.5			13.5	8.9		
	09							13.4	8.2	16.4	11.1	19.3	14.1	22.2	17	25.2	19.9	31	25.8	36.9	31.6	36.9	31.6	15.2	10
	10									15.3	9.4	18.2	12.4	21.1	15.3	24.1	18.2	29.9	24.1	35.8	29.9	35.8	29.9	16.9	11.1
	11											17.1	10.7	20	13.6	22.9	16.5	28.8	22.4	34.7	28.2	34.7	28.2	18.6	12.2
AT075S	05	18	11.7	23.8	17.6	29.6	23.4	35.4	29.2	41.2	35	47.1	40.8									17.3	11.1		
	06	15.8	8.3	21.6	14.1	27.4	19.9	33.2	25.7	39	31.5	44.8	37.3	50.7	43.2							20.8	13.3		
	07			19.4	10.6	25.2	16.4	31	22.3	36.8	28.1	42.6	33.9	48.4	39.7	54.3	45.5					24.2	15.5		
	08					23	13	28.8	18.8	34.6	24.6	40.4	30.4	46.2	36.2	52	42	63.7	53.7			27.7	17.7		
	09							26.6	15.3	32.4	21.1	38.2	27	44	32.8	49.8	38.6	61.5	50.2	73.1	61.8	73.1	61.8	31.1	19.9
	10									30.2	17.7	36	23.5	41.8	29.3	47.6	35.1	59.2	46.7	70.9	58.4	70.9	58.4	34.6	22.1
	11											33.8	20	39.6	25.8	45.4	31.7	57	43.3	68.7	54.9	68.7	54.9	38.1	24.3
AT088S	05	27.4	16.8	36.5	26	45.7	35.1	54.8	44.3	63.9	53.4	73.1	62.6									28.9	18.3		
	06	23.7	11.1	32.8	20.2	42	29.3	51.1	38.5	60.3	47.6	69.4	56.8	78.6	65.9							34.7	22		
	07			29.2	14.4	38.3	23.6	47.5	32.7	56.6	41.9	65.7	51	74.9	60.1	84	69.3					40.4	25.7		
	08					34.6	17.8	43.8	26.9	52.9	36.1	62.1	45.2	71.2	54.4	80.4	63.5	98.6	81.8			46.2	29.4		
	09							40.1	21.2	49.3	30.3	58.4	39.5	67.5	48.6	76.7	57.7	95	76	113	94.3	113	94.3	52	33
	10									45.6	24.5	54.7	33.7	63.9	42.8	73	52	91.3	70.2	110	88.5	110	88.5	57.8	36.7
	11											51.1	27.9	60.2	37	69.3	46.2	87.6	64.5	106	82.8	106	82.8	63.5	40.4
AT100S	05	41.1	27	54.4	40.3	67.7	53.6	81	66.8	94.2	80.1	108	93.4									39.4	25.3		
	06	36.1	19.1	49.3	32.4	62.6	45.7	75.9	58.9	89.2	72.2	103	85.5	116	98.8							47.3	30.4		
	07			44.3	24.5	57.6	37.8	70.8	51.1	84.1	64.3	97.4	77.6	111	90.9	124	104					55.2	35.4		
	08					52.5	29.9	65.8	43.2	79.1	56.5	92.3	69.7	106	83	119	96.3	146	123			63.1	40.5		
	09							60.7	35.3	74	48.6	87.3	61.9	101	75.1	114	88.4	140	115	167	142	167	142	71	45.5
	10									68.9	40.7	82.2	54	95.5	67.3	109	80.5	135	107	162	134	162	134	78.8	50.6
	11											77.2	46.1	90.5	59.4	104	72.7	130	99	157	126	157	126	86.7	55.6
AT115S	05	63.3	41.8	87.8	63.3	109	84.7	131	106	152	128	174	149									65.6	41		
	06	58.1	28.7	79.6	50.1	101	71.6	123	93.1	144	115	165	136	187	158							78.7	49.3		
	07			71.3	37	92.8	58.5	114	80	136	101	157	123	179	144	200	166					91.8	57.5		
	08					84.6	45.4	106	66.9	128	88.3	149	110	171	131	192	153	235	196			105	65.7		
	09							97.9	53.8	119	75.2	141	96.7	162	118	184	140	227	183	270	226	270	226	118	74
	10									111	62.1	133	83.6	154	105	176	127	219	170	261	212	261	212	131	82
	11											124	70.5	146	92	167	113	210	156	253	199	253	199	144	90.3
12													138	78.8	159	100	202	143	245	186	245	186	157	98.5	

Las especificaciones del producto están sujetas a modificaciones sin previo aviso. The specifications of the presented products are open to modifications without previous advice.

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### PARES SIMPLE EFECTO / SPRING RETURN TORQUE: Nm

Actuator Model	Spring quantity	Air Pressure Torque																		Torque spring return			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar		8.0bar		0°	90°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	Start	End
AT125S	05	85.9	55.9	114	84	141	111	169	139	197	167	224	194									82.5	52.5
	06	75.4	39.4	103	67	131	95	158	122	186	150	214	178	241	205							98.9	62.9
	07			92.6	50.6	120	78	148	106	176	134	203	161	231	189	259	217					115	73.4
	08					110	62	137	89.4	165	117	193	145	221	173	248	200	304	256			132	83.9
	09							127	72.9	155	101	182	128	210	156	238	184	293	239	348	294	148	94.4
	10									144	84	172	112	200	140	227	167	283	223	338	278	165	105
	11											161	95.3	189	123	217	151	272	206	327	261	181	115
AT145S	05	135	88.2	178	132	222	175	265	219	309	262	352	305									129	82.3
	06	119	62.4	162	106	205	149	249	193	292	236	336	280	379	323							155	98.7
	07			146	80.1	189	124	232	167	276	210	319	254	363	297	406	341					181	115
	08					173	97.7	216	141	259	185	303	228	346	272	390	315	477	402			206	132
	09							200	115	243	159	286	202	330	246	373	289	460	376	547	463	232	148
	10									227	133	270	177	313	220	367	263	444	350	531	437	258	165
	11											254	151	297	194	340	238	427	324	514	411	284	181
AT160S	05	171	117	228	174	285	231	341	287	398	344	455	401									166	112
	06	149	84	206	141	262	197	319	254	376	311	432	367	489	424							199	135
	07			183	108	240	164	296	221	353	278	410	334	466	391	523	448					233	157
	08					217	131	274	188	331	244	387	301	444	358	501	414	614	528			266	179
	09							252	154	308	211	365	268	422	324	478	381	592	494	705	608	299	202
	10									286	178	343	235	399	291	456	348	569	461	683	575	332	224
	11											320	201	377	258	433	315	547	428	660	541	365	247
AT180S	05	225	146	301	222	378	299	454	375	531	452	607	528									237	158
	06	193	98.3	270	175	346	251	423	328	499	404	576	481	652	557							284	190
	07			238	127	315	204	391	280	468	357	544	433	621	510	697	586					332	221
	08					283	157	359	233	436	310	512	386	589	463	665	539	818	692			379	253
	09							328	186	404	262	481	339	557	415	634	492	787	645	940	798	426	284
	10									373	215	449	291	526	368	602	444	755	597	908	750	474	316
	11											418	244	494	320	571	397	724	550	877	703	521	347
AT200S	05	319	216	425	323	532	429	638	535	744	641	850	748									315	212
	06	277	153	383	260	489	366	595	472	702	578	808	685	914	791							378	255
	07			340	197	447	303	553	409	659	515	765	622	872	728	978	834					441	297
	08					404	240	510	346	617	452	723	559	829	665	935	771	1148	984			504	340
	09							468	283	574	389	680	496	787	602	893	708	1105	921	1318	1133	567	382
	10									532	326	638	433	744	539	850	645	1063	858	1275	1070	630	425
	11											595	370	702	476	808	582	1020	795	1233	1007	693	467
AT240S	05	501	319	688	506	875	693	1062	880	1249	1067	1436	1254									616	434
	06	414	196	601	383	788	570	975	757	1162	944	1349	1131	1536	1318							740	521
	07			514	259	701	446	888	633	1075	820	1262	1007	1449	1194	1636	1381					863	608
	08					614	323	801	510	988	697	1175	884	1362	1071	1549	1258	1923	1632			986	695
	09							714	387	901	574	1088	761	1275	948	1463	1135	1837	1509	2211	1883	1109	782
	10									815	451	1002	638	1189	825	1376	1012	1750	1386	2124	1760	1233	869
	11											915	514	1102	701	1289	888	1663	1262	2037	1636	1356	955
AT265S	05	780	565	1050	834	1319	1104	1589	1373	1858	1643	2128	1912									783	567
	06	667	408	936	678	1206	947	1475	1217	1745	1486	2014	1756	2284	2025							939	680
	07			823	521	1092	791	1362	1060	1631	1330	1901	1599	2170	1869	2440	2138					1096	794
	08					979	634	1249	904	1518	1173	1787	1443	2057	1712	2326	1981	2865	2520			1252	907
	09							1135	747	1405	1017	1674	1286	1943	1555	2213	1825	2752	2364	3291	2903	1409	1021
	10									1291	860	1561	1130	1830	1399	2100	1668	2638	2207	3177	2746	1565	1134
	11											1447	973	1717	1242	1986	1512	2525	2051	3064	2590	1722	1247
AT330S	05	1333	1017	1803	1487	2273	1957	2743	2427	3214	2897	3684	3367									1334	1017
	06	1130	750	1600	1220	2070	1690	2540	2161	3010	2631	3480	3101	3950	3571							1600	1221
	07			1396	954	1866	1424	2337	1894	2807	2364	3277	2834	3747	3304	4217	3774					1867	1424
	08					1663	1157	2133	1627	2603	2097	3073	2567	3543	3037	4013	3508	4954	4448			2134	1628
	09							1930	1360	2400	1831	2870	2301	3340	2771	3810	3241	4750	4181	5690	5121	2400	1831
	10									2196	1564	2666	2034	3136	2504	3607	2974	4547	3914	5487	4854	2667	2035
	11											2463	1767	2933	2237	3403	2707	4343	3648	5283	4588	2934	2238
12													2729	1971	3200	2441	4140	3381	5080	4321	3200	2442	

Las especificaciones del producto están sujetas a modificaciones sin previo aviso. The specifications of the presented products are open to modifications without previous advice.