



Series 6300

Pneumatic grippers from the 6300 series are typically used in complex systems such as assembly machines, robots, manipulators etc. This series covers the wide range requirements of this sector, allowing a variety of applications. The range includes grippers equipped with holding fingers operating from -10° to +30° degrees, with 180° degree opening, or a parallel guided gripper with great rigidity throughout the stroke. The parallel grippers cater for larger openings (three different strokes for each diameter) with synchronised operation via a pinion-rack system with high strength thanks to a double piston mechanism. For the typical application of supplying a piece upon to a machine tool, make provision for an automatic three-pronged movement carried along by a wedge mechanism, containing the elevated force dimensions. The holding fingers can have a tolerance reference as a precise fixing device for the catching mechanism. Every type of "hand" offers different functional levels of performance at varying diameters and lengths, secondary to the application by the "fingers".

Construction characteristics

	Materials	Series					
Body	Anodized aluminium	6301	6302	6303	6310	6311	6312
Piston	AISI 303 stainless steel	6301	/	/	/	/	/
	Aluminium	/	6302	6303	/	6311	6312
	Aluminium or stainless steel (based on bore)	/	/	/	6310	/	/
Fingers	Steel	6301	6302	6303	6310	/	6312
	Anodized aluminium	/	/	/	/	6311	/
Rear end cap	Anodized aluminium	6301	6302	6303	6310	/	/
Seals	oil resistant NBR rubber	6301	/	/	6310	/	/
Piston rod	Steel	/	/	/	/	6311	/
Rack	Steel	/	/	/	/	6311	/
Pinion	Steel	/	/	/	/	6311	/
Wedge	Steel	/	/	/	/	/	6312

Operational characteristics

All series							
Fluid	filtered and preferably lubricated air or not (if lubricated the lubrication must be continuous)						
Working pressure	1 ... 6 bar (double acting) - 2.5 ... 6 bar (single acting)						
Working temperature	-5 °C ... +70 °C						
	6301	6302	6303	6310	6311	6312	
Opening total stroke	-10° ... 30°	-3° ... 180°	-5° ... 180°	/	/	/	
Maximum operating frequency	from Ø10 to Ø25, 190 cycles/minute	from Ø10 to Ø25, 60 cycles/minute	from Ø20 to Ø25, 60 cycles/minute from Ø32 to Ø50, 30 cycles/minute	from Ø10 to Ø25, 180 cycles/minute	/	from Ø16 to Ø25, 120 cycles/minute from Ø32 to Ø63, 60 cycles/minute from Ø80 to Ø125, 30 cycles/minute	
Working pressure	/	/	/	/	Ø10: 1.5 ... 6 bar Ø16 ... Ø40: 1 ... 6 bar	2 ... 6 bar (Ø16-Ø20-Ø25) 1 ... 6 bar (Ø32 ... Ø125)	
Function	/	/	/	/	Double acting	Double acting	
6301							
	Bore	Double acting		Single acting			
Holding force (Nm) at 5 bar	Ø10	0,1		0,07			
	Ø16	0,4		0,30			
	Ø20	0,7		0,55			
	Ø25	1,35		1,08			



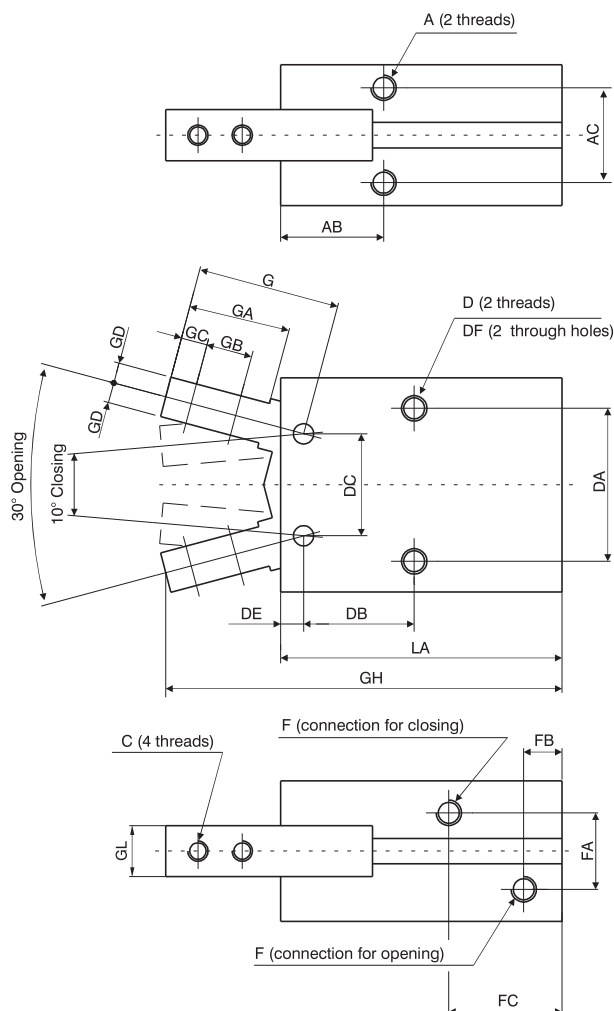
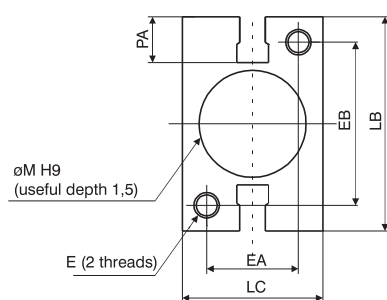
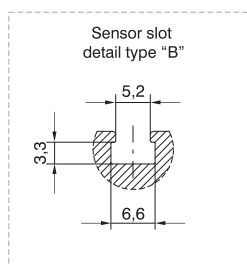
Pneumatic grippers, angular - Standard version

Coding: 6301.Ø.V

Overall dimensions

Ø	BORE
	10 = Ø10
	16 = Ø16
	20 = Ø20
V	25 = Ø25
	VERSION
	D = Double acting
	S = Single acting (N.O.)

Bore		Ø10	Ø16	Ø20	Ø25
A	Useful depth	M3x0,5	M4x0,7	M5x0,8	M6
		6	6,5	8	10
		11,6	14,6	20,2	23,9
AB		11,4	16	18,6	22
AC		M2,5x0,45	M3x0,5	M4x0,7	M5x0,8
D	Useful depth	M3x0,5	M4x0,7	M5x0,8	M6
		5	8	10	12
		16	24	30	36
DA		12,8	16,2	21,7	25,8
DB		10	16	20	25
DC		2,8	3,9	4,5	4,6
DE		2,6	3,4	4,3	5,1
DF		M3x0,5	M4x0,7	M5x0,8	M6
E	Useful depth	6	8	10	12
		12	15	18	22
		18	22	32	40
EA		M3x0,5	M5x0,8	M5x0,8	M5x0,8
EB		11	13	15	20
FB		7,2	7	7,5	7,7
FC		18,8	18,3	22,2	23,5
G		17,2	22,6	28	37,5
GA		12	16	20	27
GB		5,7	7	9	12
GC		3	4	5,2	8
GD		2	3,5	4	5
GH		52,4	62,5	78,7	92
GL ^{0/0,1}		6,4	8	10	12
LA		38,6	44,6	55,2	60,4
LB		23	30,6	42	52
LC		16,4	23,6	27,6	33,6
M ^{H9}		11	17	21	26
PA		5,4	5,8	9	11,5
Weight (g)		40	90	180	315



Gripping force 5 bar (Nm)

Bore	Ø10	Ø16	Ø20	Ø25
Double acting (Nm)	0,1	0,4	0,7	1,35
Single acting (Nm)	0,07	0,3	0,55	1,08

Note: Bore selection should be made considering a holding force 10 to 20 times the component weight.
In case of acceleration/deceleration a further margin of safety should be considered.

Double acting

Single acting

