



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	/	/	/	6310	/	/
	(based on bore)						
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



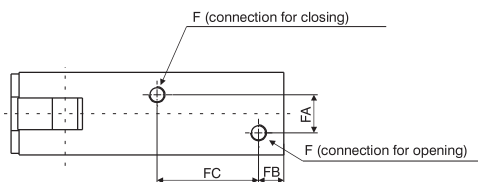
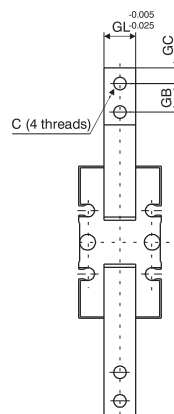
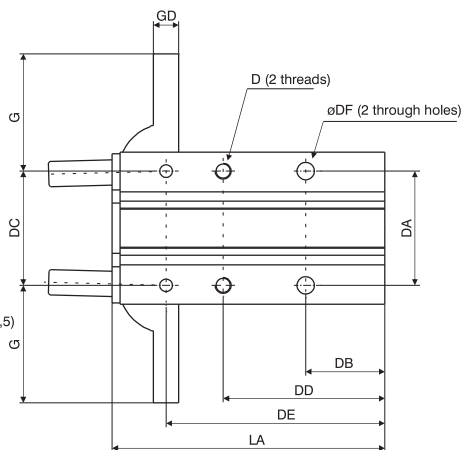
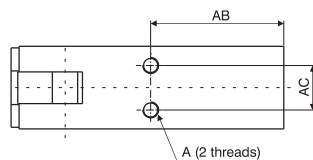
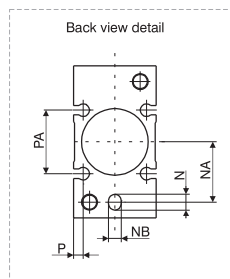
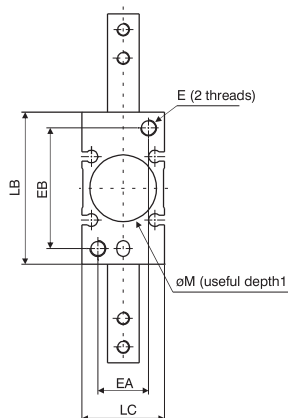
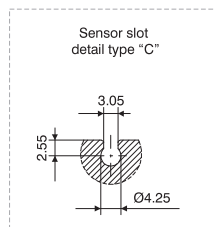
Pneumatic grippers, 180° angular

Coding: 6302.Ø.D

Ø	BORE
10	= Ø10
16	= Ø16
20	= Ø20
25	= Ø25

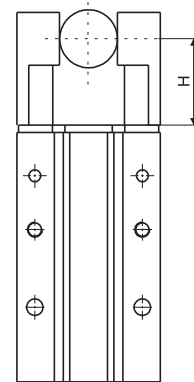
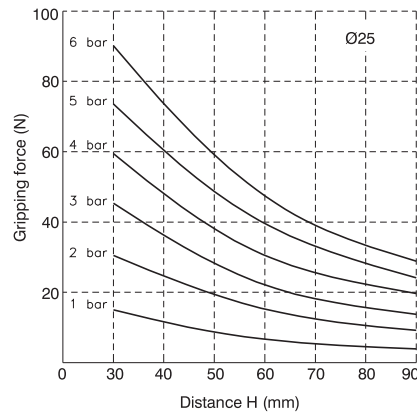
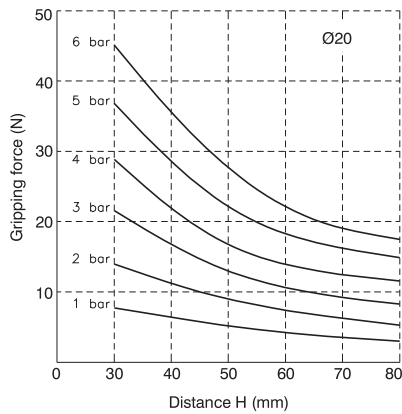
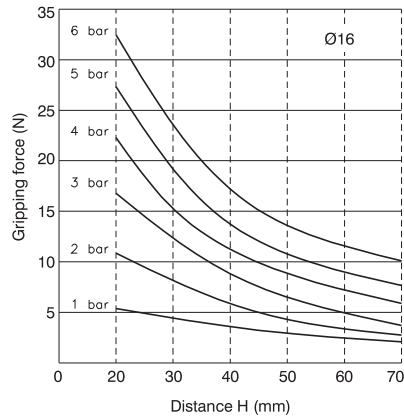
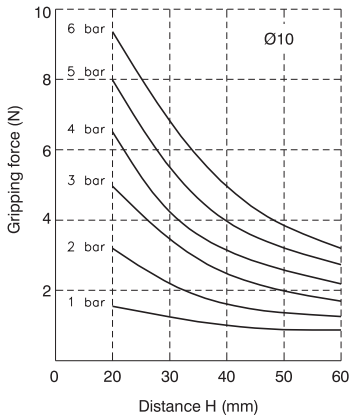
Overall dimensions

Bore		Ø10	Ø16	Ø20	Ø25
A		M3x0,5	M4x0,7	M5x0,8	M6x1
	Useful depth	4	5	8	10
AB		30	33	42	50
AC		9	12	14	16
C		M3x0,5	M3x0,5	M4x0,7	M5x0,8
D		M3x0,5	M4x0,7	M5x0,8	M6x1
	Useful depth	6	8	10	12
DA		24	30	36	42
DB		18	20	25	30
DC		22	28	36	45
DD		35	41	50	60
DE		47,5	55,5	69	86
DF		3,4	4,5	5,5	6,6
E		M3x0,5	M4x0,7	M5x0,8	M6x1
	Useful depth	6	8	10	12
EA		9	12	16	18
EB		24	30	38	46
F		M5x0,8	M5x0,8	M5x0,8	M5x0,8
FA		3	8	12	14
FB		7	7	8	8
FC		23	25	32	42
G		23,5	28,5	37	45
GB		6	7	9	12
GC		3	4	5	6
GD		4	5	8	10
GL		6	8	10	12
LA		58	69	86	107
LB		30	38	48	58
LC		15	20	26	30
N		4	4	5	5
	Useful depth	3	3	4	4
NO		9	15	19	23
ØM ^{H9}		11	17	21	26
ØNB ^{H9}		3	3	4	4
P		2	2,5	3	3
PA		13	18	20	24
Weight (g)		70	150	320	550



Gripping force 5 bar (Nm)

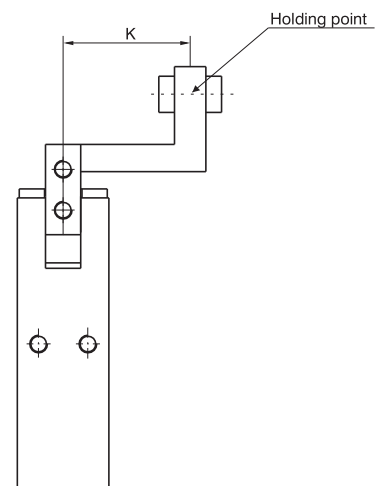
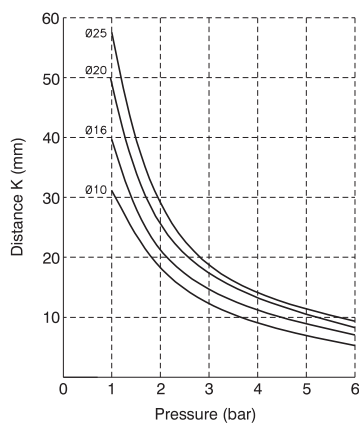
Bore	Ø10	Ø16	Ø20	Ø25
(Nm)	0,16	0,54	1,1	2,28



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PNEUMATIC ACTUATION

Confirmation of Holding point



Applications where the holding point is outside the recommended parameters shown on the above graph might affect the product life.