

BALL VALVES

Hercules - High pressure

Carbon steel ball valve - high ciclicity

features

features & benefits

diagrams, break away torque and flow rate

codes, dimensions and materials

drives



Features

General features

Ends: Threaded ends EN ISO 228 o NPT

Working temperature:-from -20 °C to +100 ° with NBR Oring

from -20 °C to +160 °C with FKM Oring (on request)

Working pressure: PN500/7000 psi DN6, DN10, DN15

PN400/6000 psi DN20 e DN25

PN320/4500 psi DN32, DN40, DN50

Fluid range: Different fluids, liquid and gaseous, compatible with the constituent materials

Antistatic device

Fire safe design

Special execution on request

For other applications, please contact our technical department

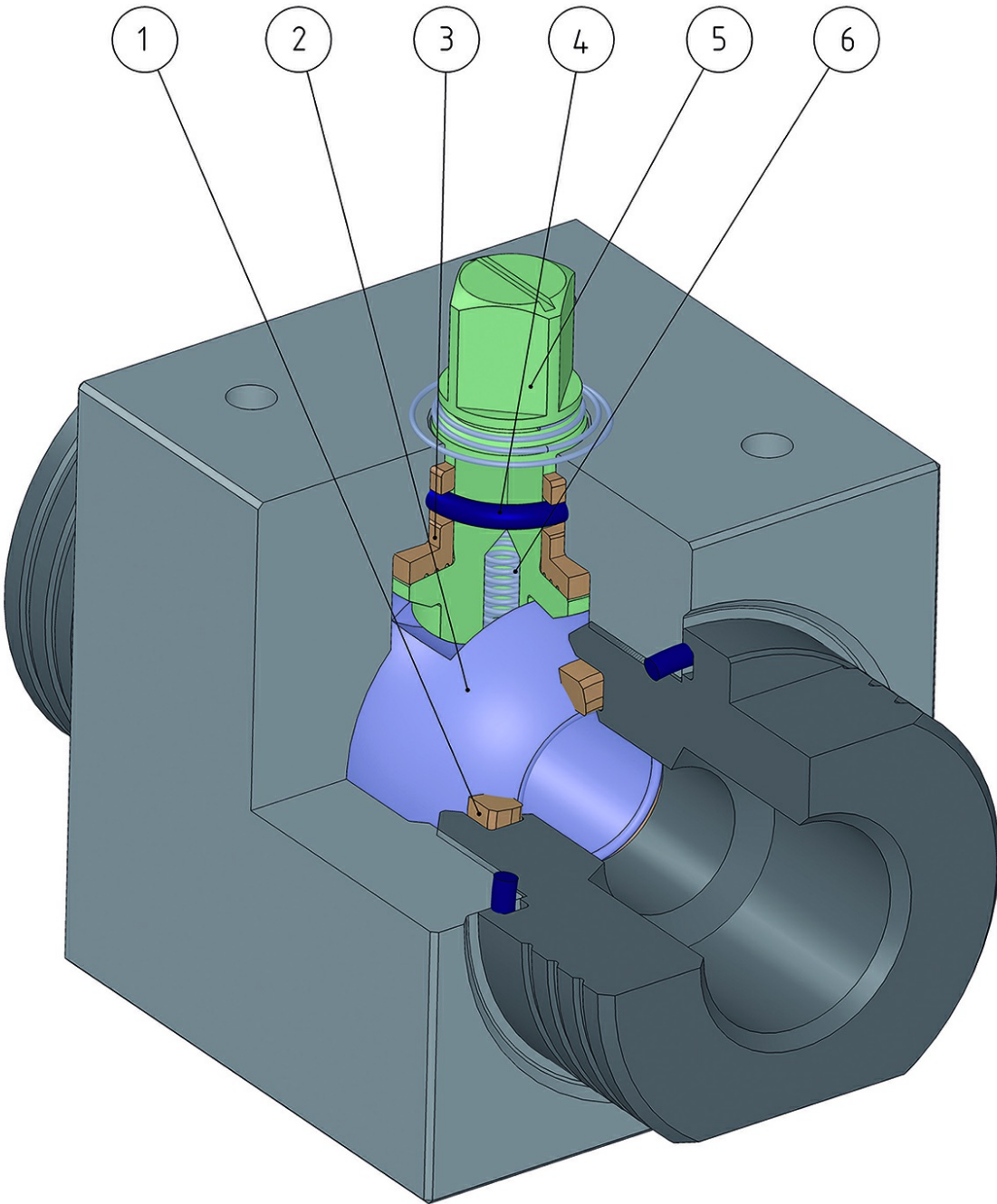
Approvals:

ATEX version in conformity with directive 94/9/EC

ATEX certificate on request

PED CE1115 version for size ≥DN32





1	Seat in "EXTREME"***	Less wear comparing with not modify seat
		High resistance to stress
		Less break away torque is granted
2	Stainless steel ball, coated with 40µm Hard Chrome	Longer seal life due to the low wear of the ball
3	"POWERAMMIDE"* stem bush	It grants a perfect alignment of the shaft on the body and prevents oscillations with high pressure
		No seizing
		High number of cycles
4	Elastomer O-Ring with a hardness of 85 Shore A	No deterioration with quick operations
4	Low-permeability O-ring "Rapid Gas Decompression"	Good resistance to explosive decompression
5	Stem in 17-4 PH H900	Increased mechanical strenght about 5 times more compared to a standard AISI 316
5	Shaft rolling	Less wear of the seals due to the low roughness (0,4 micron Ra) which facilitate the sliding of the shaft

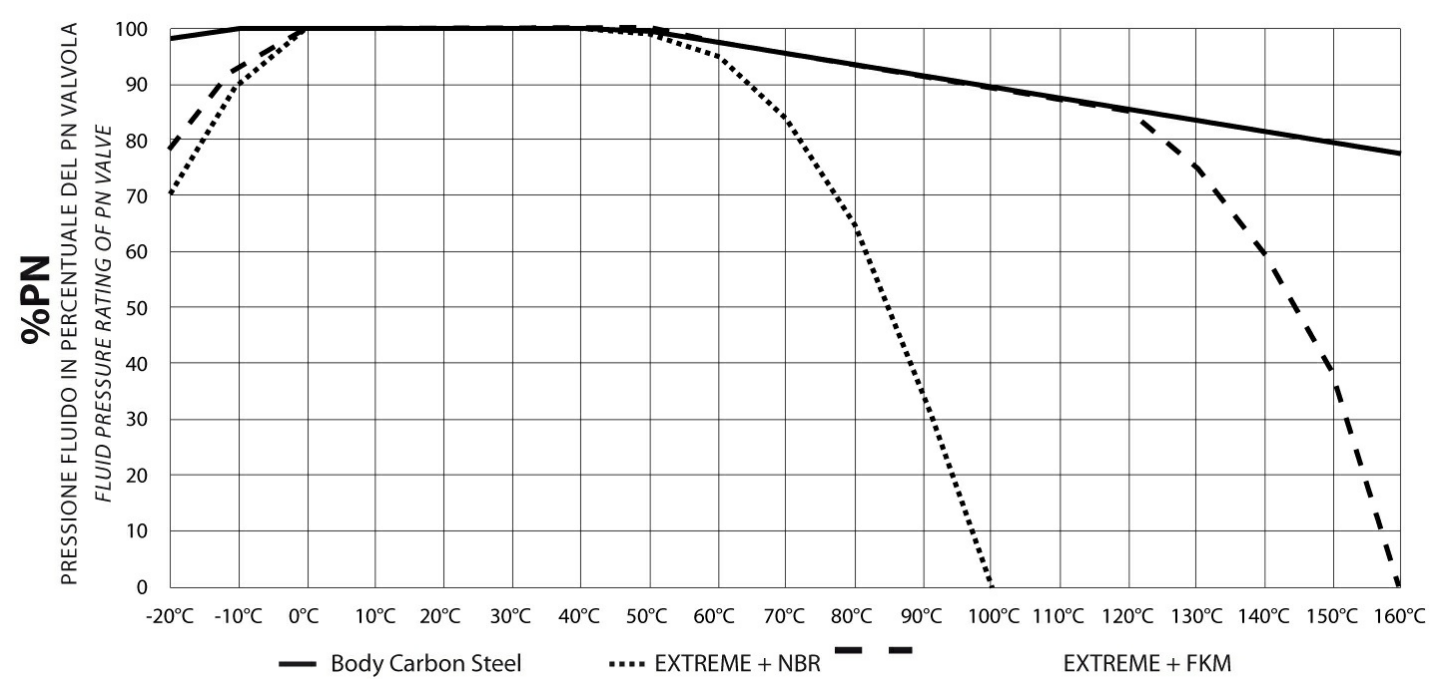
6	Antistatic device (electrical continuity between ball, stem and body)	Static electricity is avoided which can cause sparks and fire in an inflammable/explosive environment
		Contact safety throughout the entire life of the valve
	PED Certificate	Full compliance with European safety standards for pressure equipment (for DN ≥ 32)
	Fire safe design	Guarantees the tightness of the valve also in case of fire
	Atex Certificate	Installation is possible in a potential explosive environment

*Blend of polymers and aramid filler

**Aromatic polyamide long chemical structure

diagrams, break away torque and flow rate

pressure/temperature diagram



DN6, DN10, DN15	PN500/7000 psi
DN20 e DN25	PN400/6000 psi
DN32, DN40, DN50	PN320/4500 psi

break away torques Nm and FLOW RATE KV m³/h

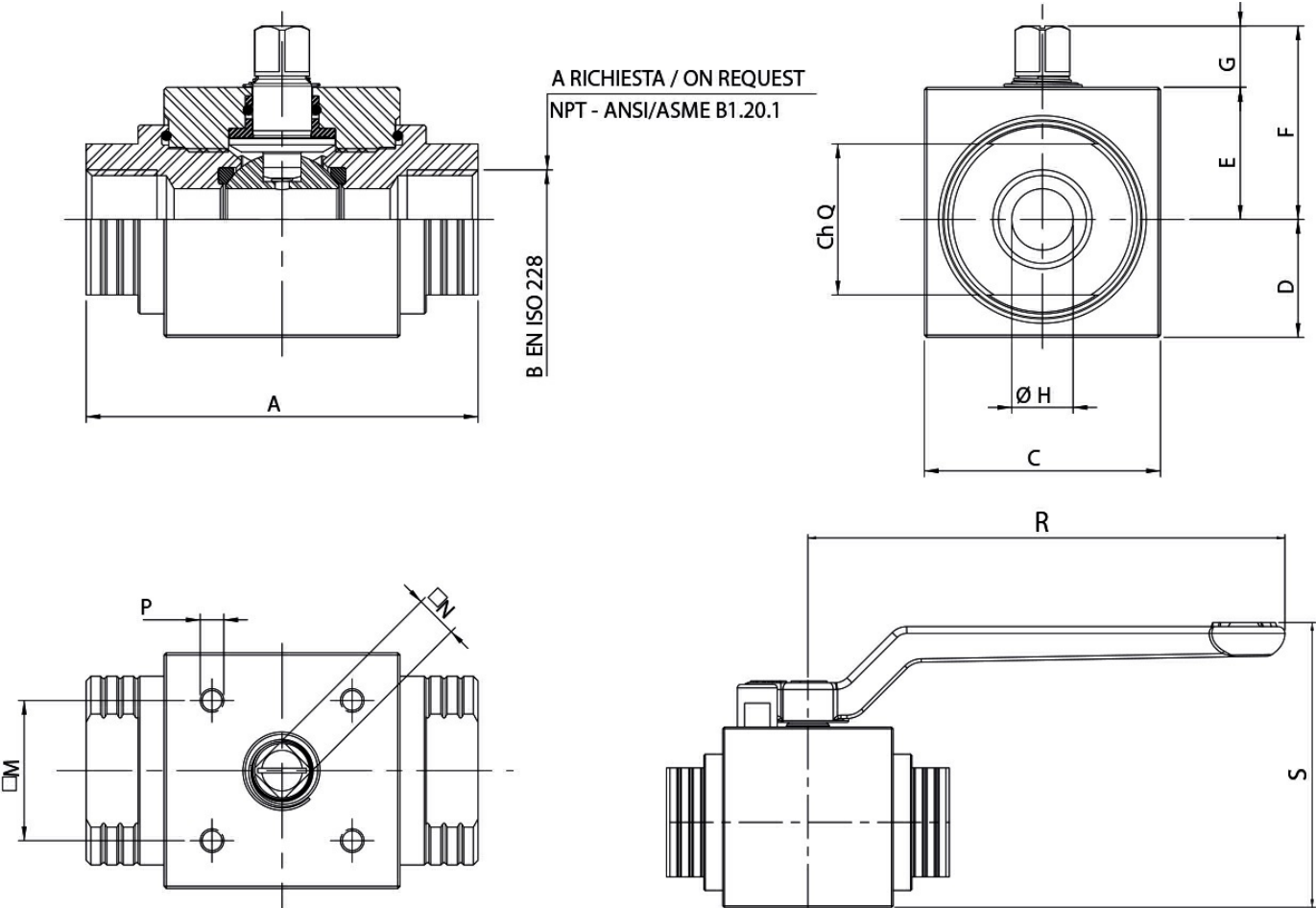
break away torques Nm									
Size	DN 6 1/8"	DN8 1/4"	DN 10 3/8"	DN 15 1/2"	DN 20 3/4"	DN 25 1"	DN 32 1"1/4	DN 40 1"1/2	DN 50 2"
PN									
PN 500 bar	10		18	20					
PN 400 bar					31	40			
PN 320 bar							61	83	125
flow rate KV m³/h									
KV m³/h	5,2		11	20	60	100	130	170	280

Kv is the coefficient, expressed in m³/h (with water at 15 °C) causing a pressure loss of 1 bar.

HERCULES VALVE CODES FREE SHAFT AND WITH LEVER

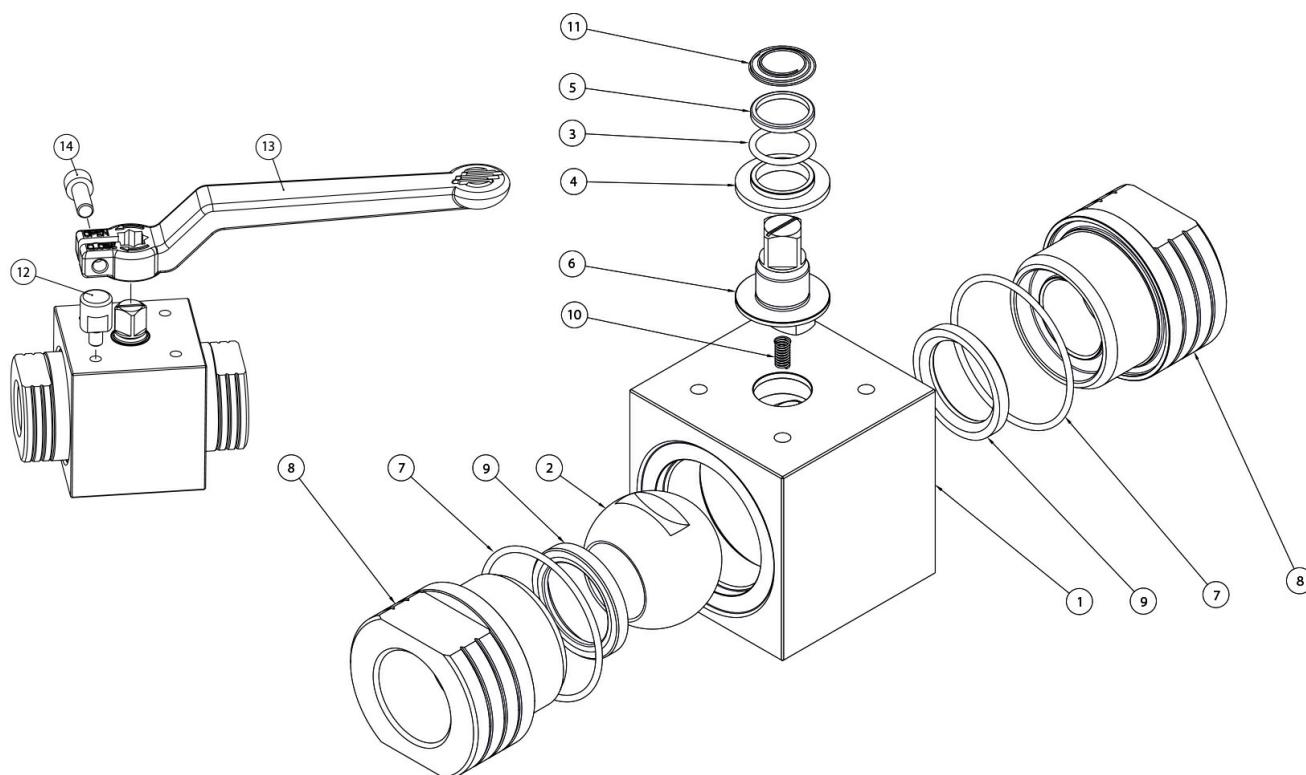
size	DN 6 1/8"	DN 8 1/4"	DN 10 3/8"	DN 15 1/2"	DN 20 3/4"	DN 25 1"	DN 32 1"1/4	DN 40 1"1/2	DN 50 2"
Free shaft-ISO228 version	VHA5AABAB01	VHA5AABAB02	VHA5AABAB03	VHA5AABAB04	VHA5AABAB05	VHA5AABAB06	VHA6AABAB07	VHA6AABAB08	VHA6AABAB09
Free shaft - NPT Version	VHA5AABAB41	VHA5AABAB42	VHA5AABAB43	VHA5AABAB44	VHA5AABAB45	VHA5AABAB46	VHA6AABAB47	VHA6AABAB48	VHA6AABAB49
With lever-ISO228 version	LHA5AABAB01	LHA5AABAB02	LHA5AABAB03	LHA5AABAB04	LHA5AABAB05	LHA5AABAB06	LHA6AABAB07	LHA6AABAB08	LHA6AABAB09
With lever-NPT Version	LHA5AABAB41	LHA5AABAB42	LHA5AABAB43	LHA5AABAB44	LHA5AABAB45	LHA5AABAB46	LHA6AABAB47	LHA6AABAB48	LHA6AABAB49
Lever kit	KLVVH501	KLVVH501	KLVVH503	KLVVH503	KLVVH505	KLVVH505	KLVVH507	KLVVH507	KLVVH509
Seals Kit - STD vers.	KGBVHPV01D	KGBVHPV01D	KGBVHPV03D	KGBVHPV04D	KGBVHPV05D	KGBVHPV06D	KGBVHPV07D	KGBVHPV08D	KGBVHPV09D
weight Kg.	0,31	00.30	0,68	1,12	1,45	2,34	3,13	5,13	9,22

A = Standard line with NBR O-ring. – with FKM O-ring on request, letter V



DIMENSIONS TABLE

Size	A	B	C	D	E	F	G	H	Ch.Q	M	N
DN 6 - 1/8"	69	1/8"	30	13	17	27	10	6	19	21x30	6
DN 8 - 1/4"	69	1/4"	30	13	17	27	10	6	19	21x30	6
DN 10 - 3/8"	72	3/8"	45	19,7	25,3	38,3	13	9	24	29,7 (F04)	9
DN 15 - 1/2"	83	1/2"	50	25	28	41	13	13	32	29,7 (F04)	9
DN 20 - 3/4"	95	3/4"	55	27,5	31	46	15	19	37	35,36 (F05)	11
DN 25 - 1"	113	1"	65	32,5	35	50	15	25	45	35,36 (F05)	11
DN 32 - 1"1/4	111	1"1/4	80	38	42	62	20	32	55	49,5 (F07)	14
DN 40 - 1"1/2	130	1"1/2	90	44	46	66	20	38	65	49,5 (F07)	14
DN 50 - 2"	140	2"	120	59	61	81	20	51	80	49,5 (F07)	17

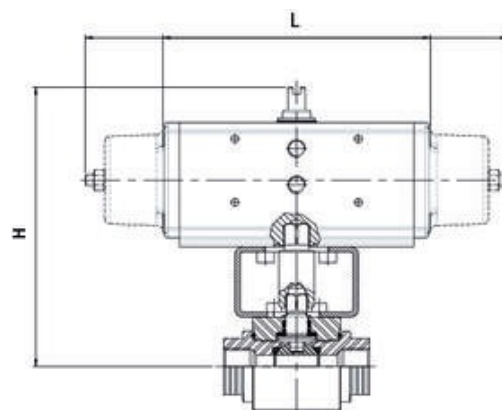


MATERIALS TABLE

1	Body	≤DN25: 1.0737 (11SMnPb37); ≥DN32: 1.0577 (S355J2) Zinc coated
2	Ball	A217 CA15 + Hard chromium plated
3*	O-ring	NBR (FKM on request)
4*	Lower bush	POWERAMMIDE (Blend of polymers and aramid filler)
5*	Upper bush	POWERAMMIDE (Blend of polymers and aramid filler)
6	Stem	AISI630 (17-4 PH)
7*	O-ring	NBR (FKM on request)
8	Ends	≤DN25: 1.0737 (11SMnPb37); ≥DN32: 1.0577 (S355J2) Zinc coated
9*	Seats	EXTREME (Aromatic polyamide long chemical structure)
10	Antistatic device spring	1.4310 - X12CrNi17-7
11	Upper antistatic device spring	1.4310 - X12CrNi17-7
12	Holder screw	X5CRNiM01713 - AISI316
13	Lever	EN AB 46100 - AL SI 11 CU (FE) Painted
14	Screw	A2 - 70



Drives - double acting pneumatic actuator



EN ISO 228 VERSION

Model	Actuator	Mounting kit	DN mm	size	L mm	H mm	Weight Kg
DHA5AABAB01AABA0	DA015401S	KCF034565	6	1/8"	114	129,4	1,29
DHA5AABAB02AABA0	DA015401S	KCF034565	8	1/4"	114	129,4	1,28
DHA5AABAB03AACA0	DA030401S	KCF034569	10	3/8"	130,2	145,7	1,94
DHA5AABAB04AACA0	DA030401S	KCF034569	15	1/2"	130,2	148,4	2,38
DHA5AABAB05AADA0	DA045402S	KCF044562	20	3/4"	144,1	156,7	3,02
DHA5AABAB06AAEA0	DA060402S	KCF044562	25	1"	152	165,4	4,22
DHA6AABAB07AAFA0	DA090401S	KCF054564	32	1"1/4	168,6	179,5	5,41
DHA6AABAB08AAHA0	DA120401S	KCF054564	40	1"1/2	183,9	202,4	8,36
DHA6AABAB09AAIA0	DA180401S	KCF074563	50	2"	212,2	227	13,11

A = Standard line with NBR O-ring. – with FKM O-ring on request, letter V

The sizing of pneumatic actuators has been done considering a minimum supply pressure of 5,6 barg.

NPT VERSION

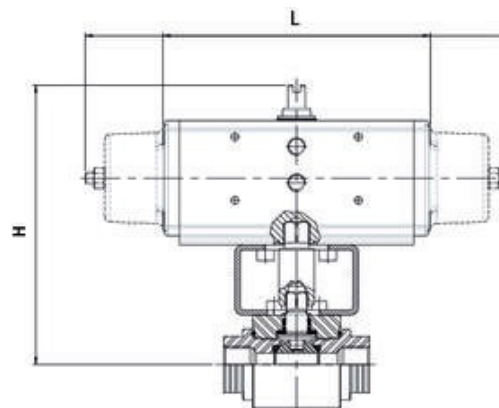
Model	Actuator	Mounting kit	DN mm	size	L mm	H mm	Weight Kg
DHA5AABAB41AABA0	DA015401S	KCF034565	6	1/8"	114	129,4	1,29
DHA5AABAB42AABA0	DA015401S	KCF034565	8	1/4"	114	129,4	1,28
DHA5AABAB43AACA0	DA030401S	KCF034569	10	3/8"	130,2	145,7	1,94
DHA5AABAB44AACA0	DA030401S	KCF034569	15	1/2"	130,2	148,4	2,38
DHA5AABAB45AADA0	DA045402S	KCF044562	20	3/4"	144,1	156,7	3,02
DHA5AABAB46AAEA0	DA060402S	KCF044562	25	1"	152	165,4	4,22
DHA6AABAB47AAFA0	DA090401S	KCF054564	32	1"1/4	168,6	179,5	5,41
DHA6AABAB48AAHA0	DA120401S	KCF054564	40	1"1/2	183,9	202,4	8,36
DHA6AABAB49AAIA0	DA180401S	KCF074563	50	2"	212,2	227	13,11

A = Standard line with NBR O-ring. – with FKM O-ring on request, letter V

The sizing of pneumatic actuators has been done considering a minimum supply pressure of 5,6 barg.



Drives - Spring return pneumatic actuator



EN ISO 228 VERSION

Model	Actuator	Mounting kit	DN mm	size	L mm	H mm	Weight Kg
SHA5AABAB01AACAO	SR015401S	KCF034565	6	1/8"	221	137,4	1,86
SHA5AABAB02AACAO	SR015401S	KCF034565	8	1/4"	221	137,4	1,85
SHA5AABAB03AAEA0	SR030402S	KCF044571	10	3/8"	240,2	155,7	2,96
SHA5AABAB04AAEA0	SR030402S	KCF044571	15	1/2"	240,2	158,4	3,4
SHA5AABAB05AAFA0	SR045401S	KCF054573	20	3/4"	293,6	168,5	4,3
SHA5AABAB06AAHA0	SR060401S	KCF054573	25	1"	319,5	191,4	6,29
SHA6AABAB07AAIA0	SR090401S	KCF074574	32	1"1/4	357	208	8,24
SHA6AABAB08AAJA0	SR120401S	KCF074574	40	1"1/2	368,2	222,4	12,34
SHA6AABAB09AAKA0	SR180401S	KCF104575	50	2"	435,5	249	19,38

A = Standard line with NBR O-ring. – with FKM O-ring on request, letter V

The sizing of pneumatic actuators has been done considering a minimum supply pressure of 5,6 barg.

NPT VERSION

Model	Actuator	Mounting kit	DN mm	size	L mm	H mm	Weight Kg
SHA5AABAB41AACAO	SR015401S	KCF034565	6	1/8"	221	137,4	1,86
SHA5AABAB42AACAO	SR015401S	KCF034565	8	1/4"	221	137,4	1,85
SHA5AABAB43AAEA0	SR030402S	KCF044571	10	3/8"	240,2	155,7	2,96
SHA5AABAB44AAEA0	SR030402S	KCF044571	15	1/2"	240,2	158,4	3,4
SHA5AABAB45AAFA0	SR045401S	KCF054573	20	3/4"	293,6	168,5	4,3
SHA5AABAB46AAHA0	SR060401S	KCF054573	25	1"	319,5	191,4	6,29
SHA6AABAB47AAIA0	SR090401S	KCF074574	32	1"1/4	357	208	8,24
SHA6AABAB48AAJA0	SR120401S	KCF074574	40	1"1/2	368,2	222,4	12,34
SHA6AABAB49AAKA0	SR180401S	KCF104575	50	2"	435,5	249	19,38

A = Standard line with NBR O-ring. – with FKM O-ring on request, letter V

The sizing of pneumatic actuators has been done considering a minimum supply pressure of 5,6 barg.

