

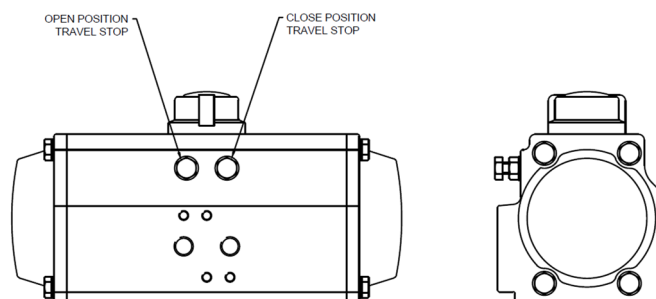
## HP Series - Pneumatic Rack and Pinion Actuators

HP-50 > HP-200



Actuator Construction	
Body	Hard Anodized Aluminium
End Caps	Polyester coated Diecast Aluminium
Pistons	Diecast Aluminium
Pinion shaft	Nickel plated Alloy Steel
Piston Guides	PPGF (self-lubricating)
Seal Options	NBR (Viton available on request)
Types:	Double Acting (e.g. HP-50) Spring Return (e.g. HP-50S) Actuators can be converted by adding or removing springs
Travel Stops	+/- 5° at the end of each stroke
Certification	SIL2, ATEX, PED, CE, RINA (Marine)

Specification	
Working pressure	2.5 to 8 Bar (Double Acting and Spring Return)
Air Supply	Air or non-corrosive gas (ie. Nitrogen)
Working Temperature	From -20°C to +80°C (-35°C to +80°C & -20°C to +150°C options available)
Rotation	Anti-clockwise opening To reverse actuator rotation, invert pistons
Movement	Rotation 90° (Adjustable ±5° each end of stroke)
Lubrication	Lubricated for normal working life

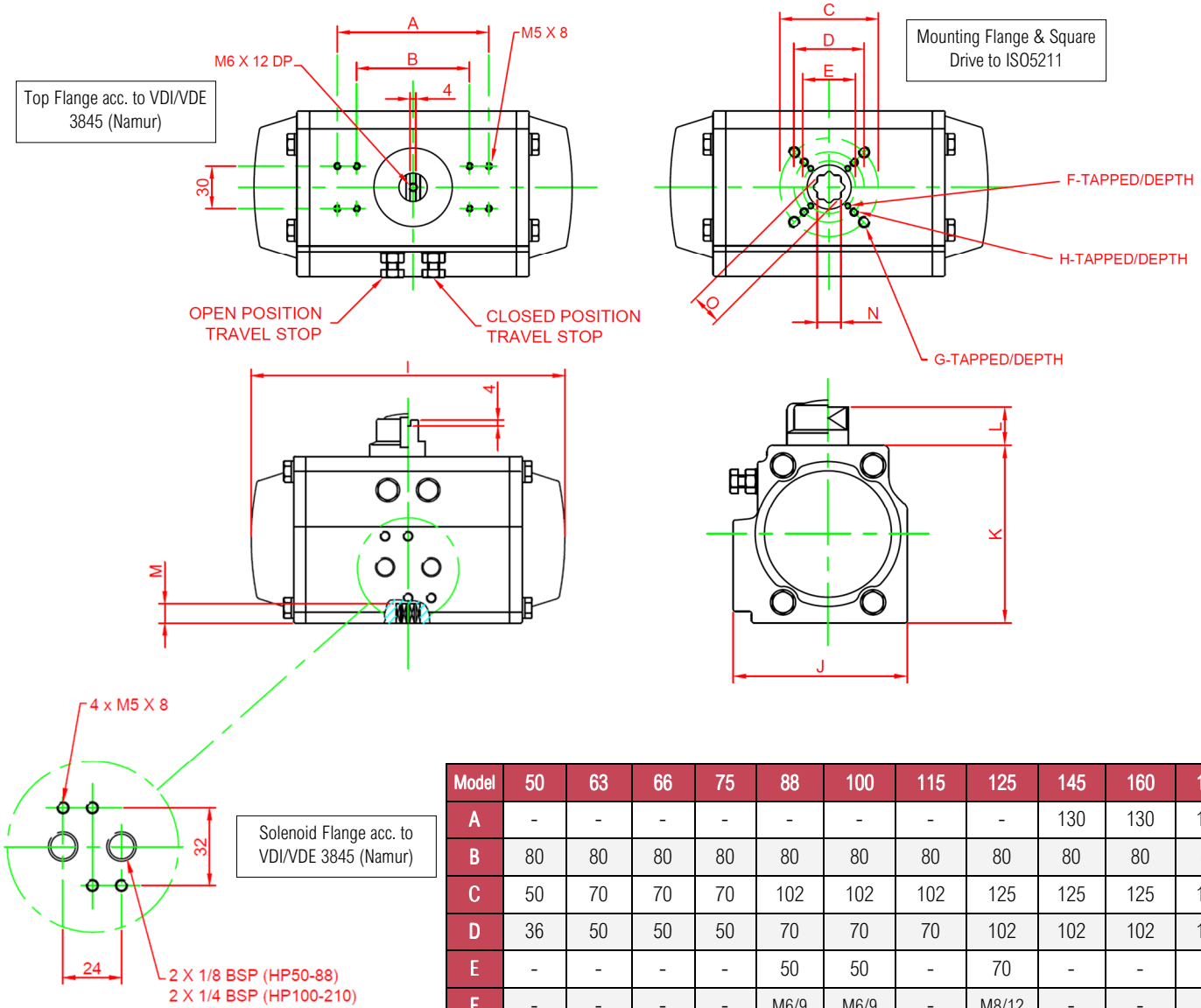


Model	Air Volume/Stroke (Litres)		Operating time at 6 Bar (s)			Weight (KG)	
	Spring Return	Double Acting	Double Acting	Spring Return Opening	Spring Return Closing	Double Acting	Spring Return
HP-50	0.1	0.3	<1	<1	<1	1.1	1.4
HP-63	0.2	0.5	<1	<1	<1	1.8	2
HP-66	0.2	0.5	<1	1	<1	2.3	2.6
HP-75	0.3	0.8	<1	1	1	3	3.5
HP-88	0.5	1.3	<1	1	1	4.6	5.3
HP-100	0.7	1.8	<1	1	1	5.8	6.8
HP-115	1.2	3.0	1	1.5	1.5	8.9	10.3
HP-125	1.5	3.8	1	3	2	11.3	13.2
HP-145	2.4	6.2	2	3	2	16.7	20
HP-160	3.1	7.3	2	3	2	22	26.5
HP-180	4.3	11.2	2	3	2	28	35
HP-200	5.9	15.4	2	4	3	39	48



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HP-50 > HP-200



Model	50	63	66	75	88	100	115	125	145	160	180	200
A	-	-	-	-	-	-	-	-	130	130	130	130
B	80	80	80	80	80	80	80	80	80	80	80	80
C	50	70	70	70	102	102	102	125	125	125	125	140
D	36	50	50	50	70	70	70	102	102	102	102	-
E	-	-	-	-	50	50	-	70	-	-	-	-
F	-	-	-	-	M6/9	M6/9	-	M8/12	-	-	-	-
G	M6/9	M8/12	M8/12	M8/12	M10/15	M10/15	M10/15	M12/18	M12/18	M12/18	M12/18	M16/24
H	M5/8	M6/9	M6/9	M6/9	M8/12	M8/12	M8/12	M10/15	M10/15	M10/15	M10/15	-
I	144	163	202	210	247	268	316	347	414	467	497	555
J	72	85	85	96	108	123	141	151	172	190	206	227
K	73	87	87	104	116	128	146	159	179	196	221	247
L	20	20	20	20	20	20	20	20	30	30	30	30
M	14	18	18	22	22	22	32	32	36	36	39	39
N	11	14	14	17	17	17	22	22	27	27	36	36
O	14.2	18.2	18.2	22.2	22.2	22.2	28.2	28.2	36.2	36.2	48.2	48.2

### Torque Double Acting

Model	2.5 Bar	3 Bar	3.5 Bar	4 Bar	4.5 Bar	5 Bar	5.5 Bar	6 Bar	7 Bar	8 Bar
HP-50	8.3	10	12	13	15	17	18	20	23	27
HP-63	15	18	21	24	27	30	33	36	42	47
HP-66	21	25	30	34	38	42	46	50	59	67
HP-75	29	35	40	46	52	57	63	69	80	92
HP-88	46	55	65	74	83	92	100	111	129	147
HP-100	68	82	96	109	123	137	150	164	191	214
HP-115	108	129	151	172	194	215	237	258	301	344
HP-125	139	166	194	222	249	277	305	332	388	443
HP-145	218	261	305	348	392	435	479	522	609	696
HP-160	284	341	397	454	511	567	624	681	794	908
HP-180	383	459	536	612	689	766	842	919	1072	1225
HP-200	532	638	744	851	957	1063	1170	1276	1489	1702

Torque = Nm

### Torque Spring Return

ACTUATOR	No. of Springs	Actuation by springs		TORQUE FROM AIR STROKE (Nm)																	
		End	Start	3.5 Bar		4Bar		4.5Bar		5Bar		5.5Bar		6Bar		7Bar		8Bar			
				0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
HP 50S	S07	5	7	7	5	9	7	10	8	12	10	14	12	15	13	19	17				
	S08	5	8	6	4	8	6	10	7	11	9	13	11	15	12	18	16				
	S09	6	9	6	3	7	5	9	6	11	8	12	10	14	11	17	15	21	18		
	S10	7	10			7	4	8	5	10	7	12	9	13	10	17	14	20	17		
	S11	7	11					8	4	9	6	11	8	13	9	16	13	19	16		
	S12	8	12									10	7	12	8	15	12	19	15		
	S12	8	12	13	9	16	12	19	15	22	18	25	21	28	24	34	30				
HP 63S	S07	8	12	12	7	15	10	18	13	21	16	24	19	27	22	33	28				
	S08	9	14	11	6	14	9	17	12	20	15	23	18	26	21	32	27	37	32		
	S09	10	15			13	7	16	10	19	13	22	16	25	19	31	25	36	30		
	S10	11	17					15	8	18	11	21	14	24	17	30	23	35	28		
	S11	12	19									21	14	24	17	30	23	35	28		
	S12	13	20									20	13	23	16	29	22	34	27		
	S12	13	20									20	13	23	16	29	22	34	27		
HP 66S	S07	11	17	19	13	23	17	27	21	31	25	36	29	40	34	48	42				
	S08	12	19	17	10	21	14	26	19	30	23	34	27	38	31	47	39				
	S09	14	22	16	8	20	12	24	16	28	20	32	25	37	29	45	37	54	45		
	S10	15	24			18	10	23	14	27	18	31	22	35	26	43	35	52	43		
	S11	17	26					21	11	25	16	29	20	34	24	42	32	50	41		
	S12	18	29									28	17	32	22	40	30	49	38		
	S12	18	29									28	17	32	22	40	30	49	38		
HP 75S	S07	16	24	25	16	30	22	36	28	42	33	48	39	53	45	65	56				
	S08	18	28	23	13	28	18	34	24	40	30	46	36	51	41	63	53				
	S09	20	31	20	9	26	15	32	21	38	26	43	32	49	38	61	49	72	61		
	S10	22	35			24	11	30	17	35	23	41	29	47	34	58	46	70	57		
	S11	24	38					27	14	33	19	39	25	45	31	56	42	68	54		
	S12	27	42									37	22	42	27	54	39	66	51		
	S12	27	42									37	22	42	27	54	39	66	51		
HP 88S	S07	26	40	39	24	48	33	57	43	67	52	76	61	85	70	103	89				
	S08	29	46	35	18	44	28	54	37	63	46	72	55	81	64	100	83				
	S09	33	52	32	13	41	22	50	31	59	40	68	49	78	59	96	77	114	95		
	S10	37	58			37	16	46	25	56	34	65	44	74	53	92	71	110	89		
	S11	40	64					43	20	52	29	61	38	70	47	89	66	107	84		
	S12	44	69									57	32	67	41	85	60	103	78		
	S12	44	69									57	32	67	41	85	60	103	78		
HP 100S	S07	36	55	60	40	74	54	87	68	101	81	115	95	128	109	156	136				
	S08	41	63	55	33	69	46	82	60	96	74	110	87	123	101	151	128				
	S09	46	71	50	25	64	38	77	52	91	66	105	79	118	93	146	120	168	143		
	S10	51	79			59	30	72	44	86	58	99	71	113	85	140	112	163	135		
	S11	56	87					67	36	81	50	94	63	108	77	135	104	158	127		
	S12	61	95									89	56	103	69	130	97	153	120		
	S12	61	95									89	56	103	69	130	97	153	120		
HP 115S	S07	57	92	93	59	115	80	136	102	158	123	179	145	201	166	244	209				
	S08	66	105	85	46	106	67	128	89	149	110	171	132	192	153	235	196				
	S09	74	118	77	33	98	54	120	76	141	97	163	119	184	140	227	183	270	226		
	S10	82	131			90	41	112	63	133	84	155	106	176	127	219	170	262	213		
	S11	90	144					103	50	125	71	146	93	168	114	211	157	254	200		
	S12	98	157									138	80	160	101	203	144	246	187		
	S12	98	157									138	80	160	101	203	144	246	187		
HP 125S	S07	74	115	121	79	148	107	176	134	204	162	231	190	259	218	314	273				
	S08	84	132	110	62	138	90	165	117	193	145	221	173	249	201	304	256				
	S09	95	148	100	46	127	74	155	101	183	129	210	157	238	185	293	240	349	295		
	S10	105	165			117	57	144	84	172	112	200	140	228	168	283	223	338	278		
	S11	116	181					133	68	161	96	189	124	217	152	272	207	327	262		
	S12	126	198									179	107	207	135	262	190	317	245		
	S12	126	198									179	107	207	135	262	190	317	245		
HP 145S	S07	115	180	190	125	233	168	277	212	320	255	364	299	407	342	494	429				
	S08	132	206	173	99	216	142	260	186	303	229	347	273	390	316	477	403				
	S09	148	232	157	73	200	116	244	160	287	203	331	247	374	290	461	377	548	464		
	S10	165	258			183	90	227	134	270	177	314	221	357	264	444	351	531	438		
	S11	181	283					211	109	254	152	298	196	341	239	428	326	515	413		
	S12	198	309									281	170	324	213	411	300	498	387		
	S12	198	309									281	170	324	213	411	300	498	387		
HP 160S	S07	157	233	240	164	297	221	354	278	410	334	467	391	524	448	637	561				
	S08	180	266	217	131	274	188	331	245	387	301	444	358	501	415	614	528				
	S09	202	299	195	98	252	155	309	212	365	268	422	325	479	382	592	495	706	609		
	S10	224	332			230	122	287	179	343	235	400	292	457	349	570	462	684	576		
	S11	247	365					264	146	320	202	377	259	434	316	547	429	661	543		
	S12	269	399									355	225	412	282	525	395	639	509		
	S12	269	399									355	225	412	282	525	395	639	509		
HP 180S	S07	221	332	315	204	392	281	468	357	545	434	621	510	698	587	851	740				
	S08	253	379	283	157	360	234	436	310	513	387	589	463	666	540	819	693				
	S09	285	426	251	110	328	187	404	263	481	340	557	416	634	493	787	646	940	799		
	S10	316	474			297	139	373	215	450	292	526	368	603	445	756	598	909	751		
	S11	348	521					341	168	418	245	494	321	571	398	724	551	877	704		
	S12	379	568									463	274	540	351	693	504	846	657		
	S12	379	568									463	274	540	351	693	504	846	657		
HP 200S	S07	298	441	446	303	553	410	659	516	765	622	872	729	978	835	1191</					

### HP Series Standard Accessories

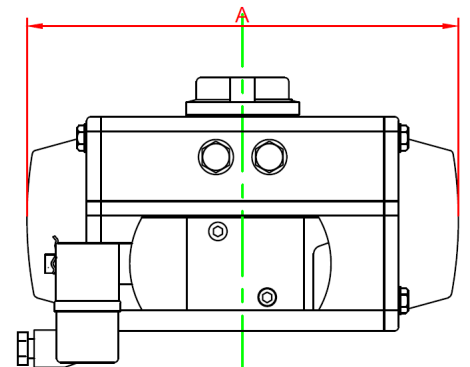
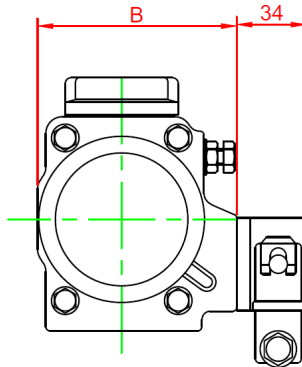
HP-50 > HP-200

#### NAMUR Solenoid Valve

The HP series Actuators feature a VDI/VDE 3845 interface enabling the use of a Namur Solenoid Valve.

Features:

- 5/2 (Double Acting) 3/2 (Spring Return)
- 1/4" BSP inlet ports
- 1/8" BSP exhaust ports
- Screwdriver Override
- IP65 and SIL4 Rated
- Available in all standard voltages

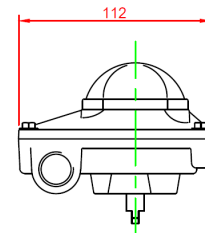
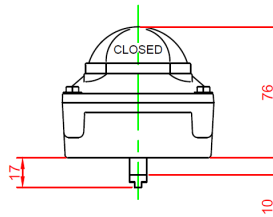
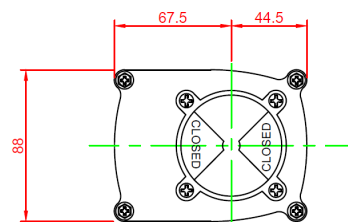
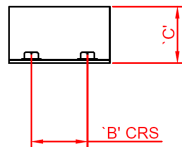
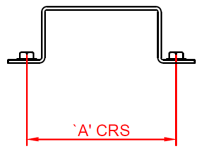


Specification	Actuator	Solenoid	Model	50	63	66	75	88	100	115	125	145	160	180	200
Pressure	3 to 8 Bar	2 to 8 Bar	A	144	163	202	210	247	268	316	347	414	467	497	555
Temperature	-20°C to +80°C	-25°C to +60°C	B	72	85	85	96	108	123	141	151	172	190	206	227

#### Switch Box

For open and closed position feedback a switch box can be fitted to the VDI/VDE 3845 NAMUR interface using a stainless steel mounting bracket:

Bracket	A	B	C	Application
MBP-100	80	30	30	80 x 30 x 20
MBP-200	80	30	40	80 x 30 x 30
MBP-300	130	30	40	130 x 30 x 30
MBP-400	130	30	60	130 x 30 x 50



For potentially explosive environments, an ATEX explosion proof or intrinsically safe Solenoid Valve can be provided.



#### Switch Box Specification

Enclosure	IP67 Die Cast Aluminium IP67 (IP68 option available)
Finish	Polyester Powder Coating
Shaft Material	Stainless Steel
Cable Entries	2 x M20 (PH13.5 & 1/2" NPT also available)
Limit Switch Type	2 x SPDT, Mechanical (Gold Contacts available)
Voltage/Amps	250V AC/16A, 125V AC/16A, 250VDC/0.3A, 125VDC/0.6A, 30VDC/10A
Ambient Temp	-20°C to +80°C
Beacon Indicator	2 way (3 way indication option available)
Options	ATEX certification, inductive Sensors

