

# Data sheet

Sheet No.: HPM 1.01 RevB

Date: February 2010

# HD-Series

## Torque Ratings – (Pneumatic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators

#### HD-Series

Actuator Model	See Bettis' Definitions	Operating Pressure (Bar)									
		3	4	5	6	7	8	9	10	12	14
		Pressure Torque Output Start/Min./End (Nm)									
HD 521	Start/End	335	447	559	670	782	894	1006	1117	1341	1564
	Minimum	197	262	328	393	459	524	590	656	787	918
HD 721	Start/End	709	946	1182	1419	1655	1891	2128	2364		
	Minimum	400	533	667	800	934	1067	1200	1334		
HD 722	Start/End	1452	1937	2421							
	Minimum	819	1092	1366							
HD 731	Start/End	1005	1340	1675	2010	2345	2680	3015	3350	4020	4690
	Minimum	538	717	896	1075	1254	1433	1613	1792	2150	2508
HD 732	Start/End	2062	2749	3437	4124	4811	5499	6186			
	Minimum	1129	1506	1882	2258	2635	3011	3387			

### Spring-Return Actuators

#### HD-Series

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure (Bar)									
			3	4	5	6	7	8	9	10	12	14
		Pressure Torque Output Start/Min./End (Nm)										
HD 521-SR40	Start	176	217	328	440	552	664	775	887	999	1222	1446
	Min.	82	103	169	235	301	367	432	498	563	694	826
	End	108	141	252	364	476	588	699	811	923	1146	1370
HD 521-SR60	Start	264		268	380	492	603	715	827	939	1162	1386
	Min.	123		121	188	254	319	385	451	517	648	779
	End	162		155	266	378	490	602	713	825	1049	1272
HD 521-SR80	Start	342			327	439	550	662	774	886	1109	1333
	Min.	159			144	211	278	344	409	475	607	738
	End	210			180	292	403	515	627	739	962	1186
HD 521-SR100	Start	428				382	494	606	718	829	1053	1276
	Min.	198				164	231	298	364	430	562	693
	End	261				198	309	421	533	645	868	1091
Actuator Model	Spring Torque Start/Min./End (Nm)		Pressure Torque Output Start/Min./End (Nm)									
			3	4	5	6	7	8	9	10	12	14
		Operating Pressure (Bar)										

**BETTIS**™



www.emerson.com/bettis

Copyright © Emerson. The information in this document is subject to change without notice.

Updated data sheets can be obtained from our website www.emerson.com/bettis or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 53 09 50 (fax +36 22 54 37 00) Asia/Pacific: +65 650 14 600 (fax +65 626 80 028)

**Data sheet**

Sheet No.: HPM 1.02 RevB

Date: February 2010

**HD-Series**

# Torque Ratings – (Pneumatic)

All Published Torques are Guaranteed Minimum Values.

**Spring-Return Actuators**

**HD-Series (cont.)**

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure (Bar)										
			3	4	5	6	7	8	9	10	12	14	
			Pressure Torque Output Start/Min./End (Nm)										
HD 521-SR125	Start	542							530	642	754	977	1201
	Min.	250							235	302	369	501	633
	End	329							295	407	518	742	965
HD 521-SR150	Start	650									680	903	1127
	Min.	301									309	442	575
	End	396									399	623	846
HD 521-SR200	Start	870										753	976
	Min.	403										319	454
	End	532										379	603
HD 721-SR40	Start	331	482	725	967	1210	1452	1695	1937	2180			
	Min.	147	224	361	498	635	771	908	1044	1181			
	End	201	323	566	808	1051	1293	1536	1778	2021			
HD 721-SR60	Start	555		581	829	1078	1326	1575	1823	2072			
	Min.	246		244	386	527	667	807	946	1086			
	End	339		316	564	813	1061	1310	1558	1807			
HD 721-SR80	Start	743			687	935	1184	1432	1681	1930	2427		
	Min.	330			275	419	560	700	840	980	1260		
	End	455			335	583	832	1080	1329	1578	2075		
HD 721-SR100	Start	931				794	1043	1291	1540	1788	2285		
	Min.	413				306	451	593	734	874	1154		
	End	570				354	602	851	1099	1348	1845		
HD 721-SR125	Start	1070							1043	1273	1504	1964	2425
	Min.	479							431	565	698	961	1223
	End	655							535	765	996	1457	1917
HD 721-SR150	Start	1268								1138	1368	1829	2290
	Min.	564								448	584	850	1113
	End	766								524	754	1215	1675
HD 721-SR200	Start	2149											1806
	Min.	909											599
	End	1161											599
Actuator Model	Spring Torque Start/Min./End (Nm)		Pressure Torque Output Start/Min./End (Nm)										
			3	4	5	6	7	8	9	10	12	14	
			Operating Pressure (Bar)										



**Data sheet**

Sheet No.: HPM 1.03 RevB

Date: February 2010

**HD-Series**

# Torque Ratings – (Pneumatic)

All Published Torques are Guaranteed Minimum Values.

**Spring-Return Actuators**

**HD-Series (cont.)**

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure (Bar)												
			3	4	5	6	7	8	9	10	12	14			
			Pressure Torque Output Start/Min./End (Nm)												
HD 722-SR40	Start	833	1020	1529	2038										
	Min.	337	412	705	993										
	End	416	510	1019	1528										
HD 722-SR60	Start	1288		1249	1758	2267									
	Min.	522		442	744	1036									
	End	644		461	970	1479									
HD 722-SR80	Start	1665			1530	2039									
	Min.	674			510	826									
	End	831			511	1020									
HD 722-SR100	Start	2126					2266								
	Min.	861					855								
	End	1061					964								
HD 732-SR40	Start	1085	1352	2023	2694	3365	4036	4707	5378	6049					
	Min.	439	551	936	1316	1694	2072	2449	2826	3202					
	End	541	686	1357	2028	2699	3370	4041	4712	5383					
HD 732-SR60	Start	1631		1690	2361	3032	3703	4374	5045	5716					
	Min.	660		626	1020	1403	1783	2162	2539	2917					
	End	814		690	1361	2032	2703	3374	4045	4716					
HD 732-SR80	Start	2226			2077	2764	3451	4139	4826	5513					
	Min.	882			699	1102	1489	1871	2251	2630					
	End	1113			716	1403	2090	2778	3465	4152					
HD 732-SR100	Start	2721				2363	3034	3705	4376	5047					
	Min.	1103				700	1176	1568	1954	2336					
	End	1360				701	1372	2043	2714	3385					
HD 732-SR125	Start	3399						3302	3973	4644	5986				
	Min.	1375						1166	1572	1964	2732				
	End	1691						1213	1884	2555	3897				
HD 732-SR150	Start	4090								4218	5560				
	Min.	1656								1557	2349				
	End	2039								1711	3053				
Actuator Model	Spring Torque Start/Min./End (Nm)		Pressure Torque Output Start/Min./End (Nm)												
			3	4	5	6	7	8	9	10	12	14			
			Operating Pressure (Bar)												



# Data sheet

Sheet No.: HPM 1.04 RevB

Date: February 2010

# HD-Series

## Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

### Double-Acting Actuators

#### HD-Series

Actuator Model	See Bettis' Definitions	Operating Pressure (Bar)										
		35	50	65	70	80	90	100	120	140	160	175
		Pressure Torque Output Start/Min./End (Nm)										
H251.5	Start/End		554	720	775	886	997	1107	1329	1550	1772	1938
	Minimum		324	421	453	518	582	647	777	906	1035	1132
H352.1	Start/End	1055	1508	1960	2111	2412	2714	3015	3618	4221	4824	5277
	Minimum	617	881	1145	1233	1410	1586	1762	2115	2467	2819	3084

### Spring-Return Actuators

#### HD-Series

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure (Bar)											
			35	50	65	70	80	90	100	120	140	160	175	200
			Pressure Torque Output Start/Min./End (Nm)											
H251.5-SR540	Start	178	262	426	590	645	754	863	973	1191	1410	1628	1792	2066
	Min.	83	131	229	327	359	424	488	553	683	812	941	1038	1200
	End	109	185	349	513	568	677	787	896	1114	1333	1552	1715	1989
H251.5-SR560	Start	268	201	365	529	584	693	802	912	1130	1349	1567	1731	2005
	Min.	125	80	180	278	310	375	441	506	635	765	894	991	1153
	End	164	86	250	414	469	578	687	797	1015	1234	1452	1616	1890
H251.5-SR580	Start	347		312	476	530	639	749	858	1077	1295	1514	1678	1951
	Min.	162		135	235	268	333	398	463	593	723	852	949	1111
	End	213		163	327	381	490	600	709	928	1146	1365	1529	1802
H251.5-SR5100	Start	434			418	473	582	692	801	1019	1238	1457	1621	1894
	Min.	202			187	220	286	351	416	546	677	807	904	1066
	End	264			231	286	395	504	614	832	1051	1269	1433	1707
H251.5-SR5125	Start	550					506	615	724	943	1162	1380	1544	1817
	Min.	256					221	288	354	484	614	745	842	1005
	End	333					267	376	486	704	923	1141	1305	1579
H251.5-SR5150	Start	658						540	649	868	1086	1305	1469	1742
	Min.	307						224	292	425	555	685	783	945
	End	401						256	365	584	802	1021	1185	1458
Actuator Model	Spring Torque Start/Min./End (Nm)		Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	70	80	90	100	120	140	160	175	200
			Operating Pressure (Bar)											

# BETTIS™



www.emerson.com/bettis

Copyright © Emerson. The information in this document is subject to change without notice.

Updated data sheets can be obtained from our website www.emerson.com/bettis or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 53 09 50 (fax +36 22 54 37 00) Asia/Pacific: +65 650 14 600 (fax +65 626 80 028)

**Data sheet**

Sheet No.: HPM 1.05 RevB

Date: February 2010

**HD-Series**

# Torque Ratings – (Hydraulic)

All Published Torques are Guaranteed Minimum Values.

**Spring-Return Actuators**

**HD-Series (cont.)**

Actuator Model	Spring Torque Start/Min./End (Nm)		Operating Pressure (Bar)											
			35	50	65	70	80	90	100	120	140	160	175	200
			Pressure Torque Output Start/Min./End (Nm)											
H251.5-SR5150	Start	658						540	649	868	1086	1305	1469	1742
	Min.	307						224	292	425	555	685	783	945
	End	401						256	365	584	802	1021	1185	1458
H251.5-SR780	Start	689						578	796	1015	1233	1397	1671	
	Min.	322						231	366	498	629	726	889	
	End	422						251	470	688	907	1071	1344	
H251.5-SR7125	Start	1070									949	1113	1386	
	Min.	500									391	493	659	
	End	655									441	605	878	
H251.5-SR7150	Start	1268											1250	
	Min.	589											537	
	End	766											636	
H352.1-SR740	Start	1006		875	1322	1470	1768	2066	2363	2958	3554	4149	4595	5339
	Min.	428		259	580	671	851	1030	1208	1562	1917	2271	2537	2979
	End	501		259	705	854	1151	1449	1747	2342	2937	3532	3979	4723
H352.1-SR760	Start	1512					1459	1757	2055	2650	3245	3840	4287	5031
	Min.	643					533	729	915	1275	1632	1987	2253	2696
	End	754					533	831	1128	1723	2319	2914	3360	4104
H352.1-SR780	Start	2014						1745	2341	2936	3531	3977	4721	
	Min.	858						514	973	1340	1700	1970	2413	
	End	1007						514	1109	1705	2300	2746	3490	
H352.1-SR7100	Start	2521									2626	3221	3668	4412
	Min.	1074									1024	1400	1673	2123
	End	1260									1085	1680	2126	2870
H352.1-SR7125	Start	3151										2847	3293	4037
	Min.	1339										911	1282	1752
	End	1567										911	1357	2101
Actuator Model	Spring Torque Start/Min./End (Nm)		Pressure Torque Output Start/Min./End (Nm)											
			35	50	65	70	80	90	100	120	140	160	175	200
			Operating Pressure (Bar)											



www.emerson.com/bettis

Copyright © Emerson. The information in this document is subject to change without notice.

Updated data sheets can be obtained from our website www.emerson.com/bettis or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 53 09 50 (fax +36 22 54 37 00) Asia/Pacific: +65 650 14 600 (fax +65 626 80 028)