

# DW series hydraulic cylinders

Boring 40 - 280 mm

Offshore, dredging, industry & civil works

**HYDAC**

## INTRODUCTION

Hycom is the leading specialist in complete hydraulic systems, including their control systems for the industry, offshore, dredging, civil works, mobile equipment & aviation.

The turn-key hydraulic systems engineered and manufactured by Hycom can be found throughout the world. Often hydraulic cylinders are part of the systems delivered by Hycom.

Distinctive characteristics of Hycom hydraulic cylinders are:

- Solid constructions
- Long life time by applying high-grade materials
- Accurate dimensions
- Wide range of piston rod protection
- Very wide range of applications

Hycom is a specialist in all aspects of hydraulic cylinders and has the capability to react quickly to your demands.



## DW SERIES HYDRAULIC CYLINDERS

The Hycom DW series cylinders has been designed to meet hard working conditions. Their solid construction suits the cases of general mechanical engineering when heavy strains of the cylinders are required. Every time, a multitude of mounting combinations allows to erect cylinders according to the way suitable for the working conditions.

The maximum possible stroke depends on the bending strength of the piston rod, on the resulting pushing force and on the kind of mounting of the cylinder. This has to be determined according to the buckling graph.

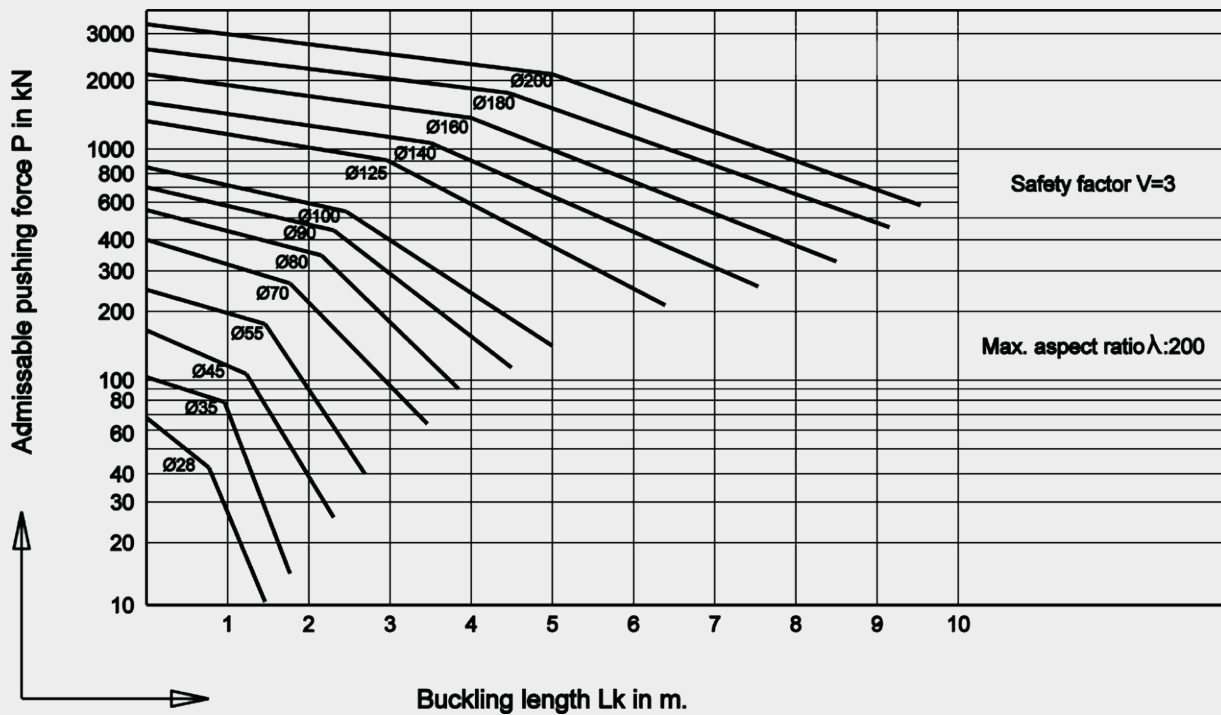
For the DW series culinders we use seamless honed steel tubes. The heads and cylinder bottoms are made of steel. The piston rods are made of high quality material, there are four standard surface treatments available. On request they can be hardened additionally. The interchangeable piston guides and guide bushing are made of bronze.

Also the cylinder can be equipped with cushioning at one or both sides. The seals of the piston rod are re-adjustable. The cylinders are suitable for a standard pressure of 25 MPa (= 250 bar). The standard sealing material has been laid out for a maximum speed of 0,5 m/s.

# PISTON ROD PROCESSING

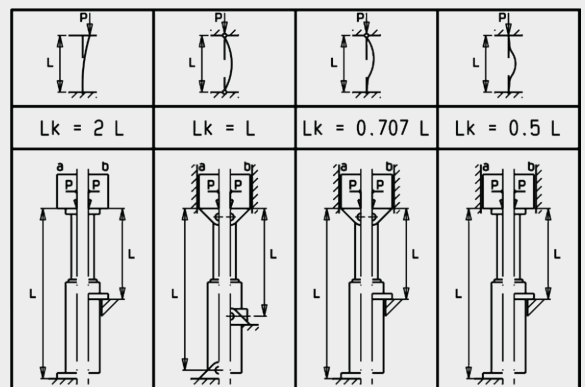
- CODE-1 Carbon steel with galvanic single-layer coating (hard chromium)
  - 1 \* S355 + 0.050mm hard chromium
  - 1.1 \* other base material and/or layer thickness
  
- CODE-2 Carbon steel with galvanic dual-layer coating (nickel-hard chromium)
  - 2 \* S355 + 0.060/0.040mm nickel/hard chromium
  - 2.1 \* other base material and/or layer thickness
  
- CODE-3 Stainless steel with galvanic single-layer coating (Hard Chromium)
  - 3 \* AISI431 + 0.050mm hard chromium
  - 3.1 \* other base material and/or layer thickness
  
- CODE-4 Carbon steel with plasma sprayed coating (ceramic/metal)
  - 4 \* S355 + 0.020/0.200mm inconel625/chromium titanate
  - 4.1 \* other base material
  
- CODE-5 Staal with special surface treatment (tbd)
  - 5 \* S355 + (tbd)
  - 5.1 \* other base material and/or treatment
  
- CODE-6 Carbon steel with HVOF-sprayed coating (metal)
  - 6 \* S355 + 0.020/0.150mm inconel625/chromium carbide-nickel/chromium
  - 6.1 \* other base material

Graph to determine the piston rod diameter on buckling



## Side load of piston rods

Hydraulic cylinders preferably are to be installed in such a manner, that side loads cannot occur. In the event that side loading is unavoidable, the piston rod must be designed for bending loads, as well as for buckling loads.



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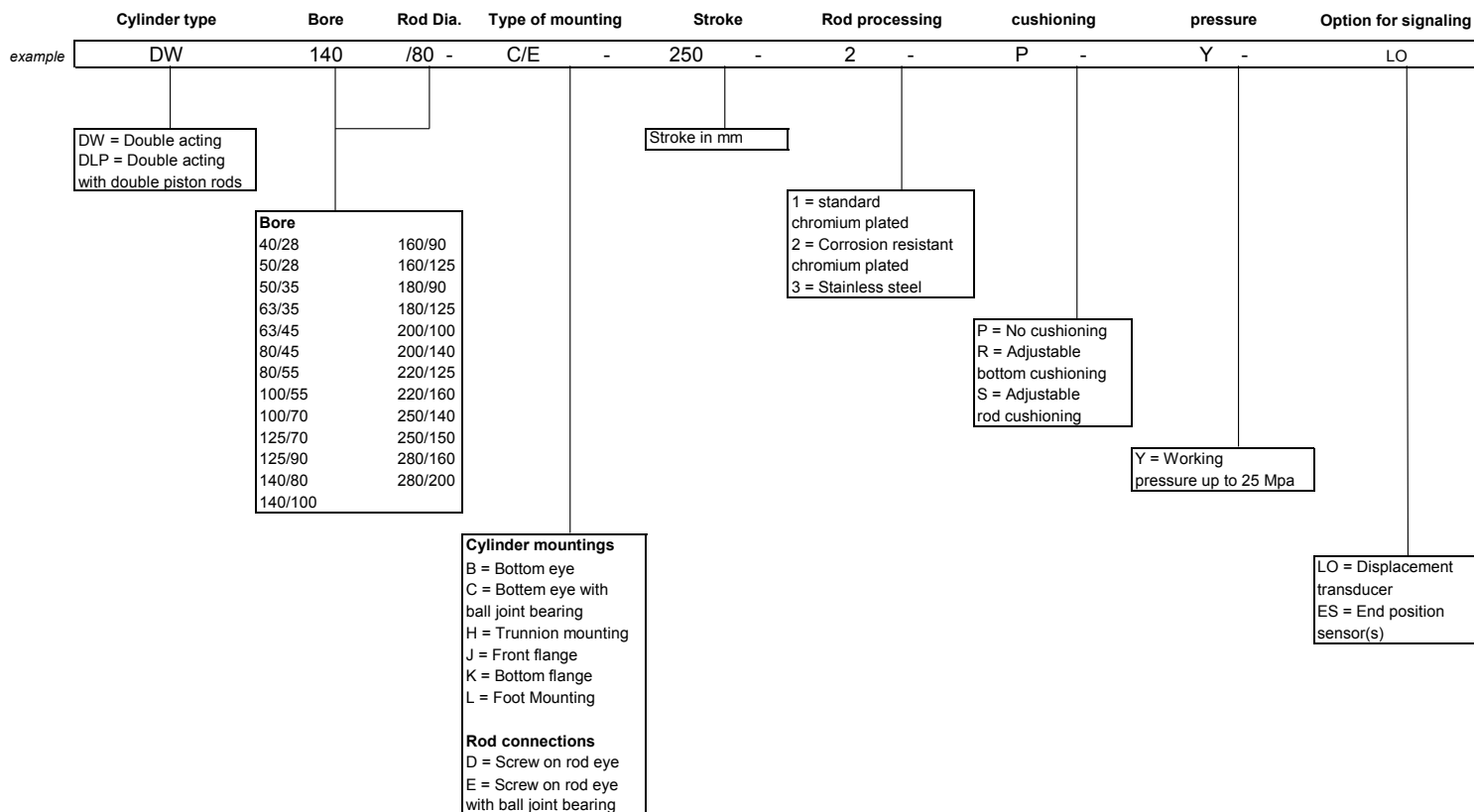
\* Dimensions in mm  
\* Subject to alteration

Type	D	d	A1	A2	φ	theoretical forces at 16 MPa		theoretical forces at 25 MPa	
	(mm)	(mm)	(cm <sup>2</sup> )	(cm <sup>2</sup> )		Push (kN)	Pull (kN)	Push (kN)	Pull (kN)
40/28	40	28	12,57	6,41	1,96	20,1	10,3	31,4	16,0
50/28	50	28	19,63	13,48	1,42	31,4	21,6	49,1	33,7
50/35		35		10,01	1,96		16,0		25,0
63/35	63	35	31,17	21,55	1,45	49,9	34,5	77,9	53,9
63/45		45		15,27	2,04		24,4		38,2
80/45	80	45	50,27	34,36	1,46	80,4	55,0	125,7	85,9
80/55		55		26,51	1,90		42,4		66,3
100/55	100	55	78,54	54,78	1,43	125,7	87,7	196,3	137,0
100/170		70		40,06	1,96		64,1		100,1
125/170	125	70	122,72	84,23	1,46	196,3	134,8	306,8	210,6
125/90		90		59,10	2,02		94,6		147,8
140/80	140	80	153,94	103,67	1,49	246,3	165,9	384,8	259,2
140/1100		100		75,40	2,04		120,6		188,5
160/90	160	90	201,06	137,44	1,46	321,7	219,9	502,7	343,6
160/125		125		78,34	2,57		125,3		195,9
180/90	180	90	254,47	190,85	1,33	407,2	305,4	636,2	477,1
180/125		125		131,75	1,93		210,8		329,4
200/100	200	100	314,16	235,62	1,33	502,7	377,0	785,4	589,0
200/140		140		160,22	1,96		256,4		400,6
220/125	220	125	380,13	257,41	1,47	608,2	411,9	950,3	643,5
220/160		160		179,07	2,12		286,5		447,7
250/140	250	140	490,87	336,94	1,46	785,4	539,1	1227,2	842,3
250/180		180		236,40	2,08		378,2		591,0
280/160	280	160	615,75	414,69	1,48	985,2	663,5	1539,4	1036,7
280/200		200		301,59	2,04		482,5		754,0
320/160	320	160	804,25	603,19	1,33	1286,8	965,1	2010,6	1508,0
320/220		220		424,12	1,90		678,6		1060,3
360/180	360	180	1017,88	763,41	1,33	1628,6	1221,5	2544,7	1908,5
360/250		250		527,00	1,93		843,2		1317,5
400/200	400	200	1256,64	942,48	1,33	2010,6	1508,0	3141,6	2356,2
400/280		280		640,88	1,96		1025,4		1602,2
400/320	400	320	1661,90	452,39	2,77	2659,0	723,8	4154,8	1131,0
460/250		250		1171,03	1,42		1873,6		2927,6
460/300	460	300	2123,72	955,04	1,74	3397,9	1528,1	5309,3	2387,6
460/320		320		857,65	1,94		1372,2		2144,1
520/250	520	250	2642,08	1632,84	1,30	4227,3	2612,5	6605,2	4082,1
520/300		300		1416,86	1,50		2267,0		3542,1
520/350	520	350	3318,31	1161,60	1,83	5309,3	1858,6	8295,8	2904,0
580/300		300		1935,22	1,37		3096,4		4838,1
580/350	580	350	4071,50	1679,97	1,57	6514,4	2687,9	10178,8	4199,9
580/400		400		1385,44	1,91		2216,7		3463,6
650/320	650	320	5026,55	2514,06	1,32	8042,5	4022,5	12566,4	6285,1
650/400		400		2061,67	1,61		5309,3		5154,2
650/480	650	480	720/350	1508,75	2,20	6514,4	2414,0	10178,8	3771,9
720/350		350		3109,39	1,31		4975,0		7773,5
720/420	720	420	800/400	2686,06	1,52	8042,5	4297,7	12566,4	6715,2
720/480		480		2261,95	1,80		3619,1		5654,9
800/400	800	400	5026,55	3769,91	1,33	8042,5	6031,9	12566,4	9424,8
800/480		480		3216,99	1,56		5147,2		8042,5
800/560	560	2563,54	1,96	4101,7	6408,8				

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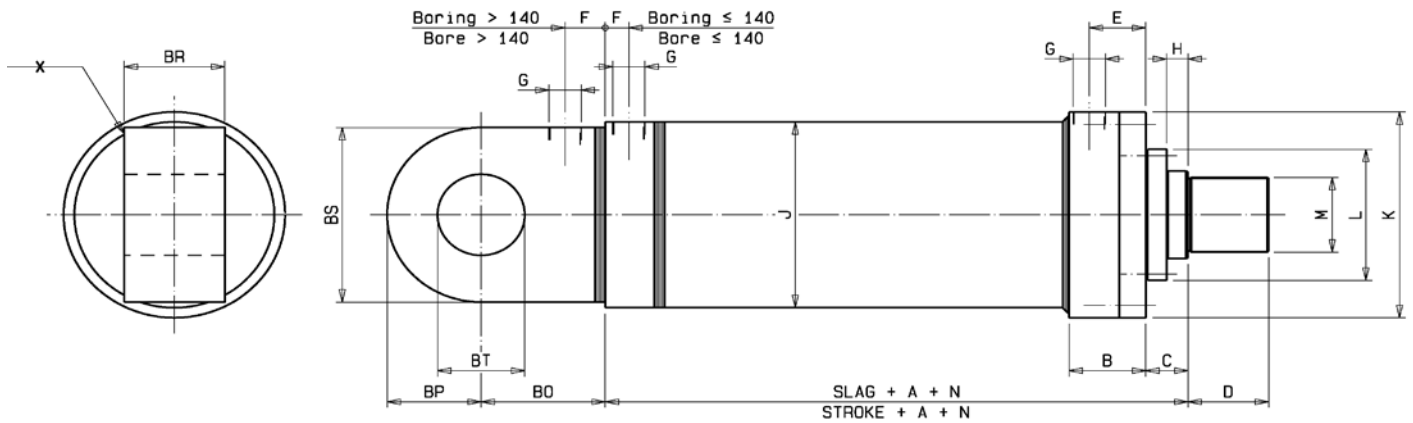
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## Model code for cylinder DW



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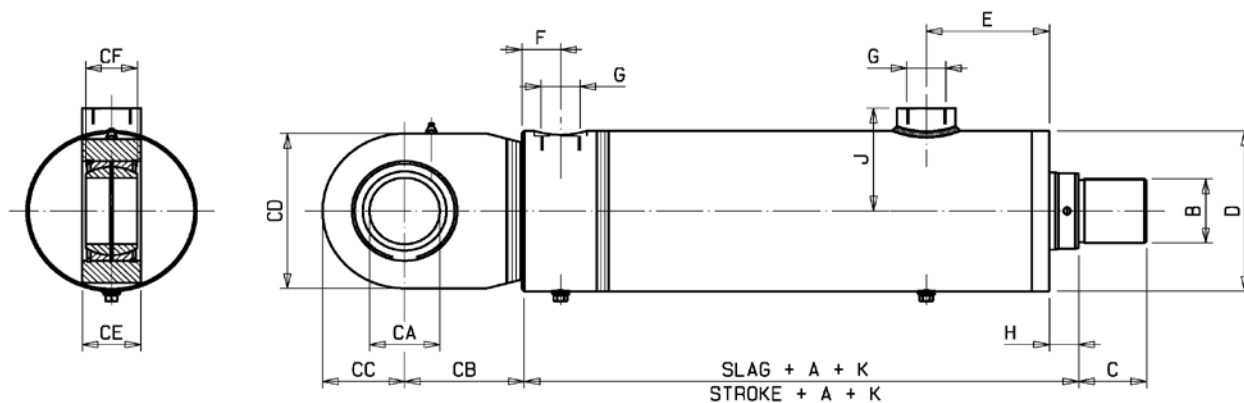


\* Dimensions in mm  
\* Subject to alteration

<b>Bore</b>	40	50	63	80								100	125	140	160	180	200	220	250	280																																																																
<b>Pistonrod</b>	28	28	35	35	45	45								55	55	70	70	90	80	100	90	125	90	125	100	140	125	160	140	180	160	200																																																				
<b>Stroke</b>	≤ 1200														≤ 1750																																																																					
<b>A</b>	180	190	205	220	220								230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460																																																					
<b>Stroke</b>	1201 - 2000														1751-2500																																																																					
<b>A</b>	280	290	305	320	320								330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560																																																					
<b>Stroke</b>	2001 - 3500														2501 - 4000 Longer strokes on request																																																																					
<b>A</b>	430	440	455	470	470								480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710																																																					
<b>B</b>	71	75	68	89	65								90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140																																																					
<b>C</b>	30	35	35	38	38								38								38	40	40	48	50	48	50	52	53	50	55	53	56	55	58																																																	
<b>D</b>	15	20	28		35								45								55								60								70								85								90								100								110								120							
<b>E</b>	55	60	52	73	46								69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110																																																					
<b>F</b>	15	16	23		23								29								35								40								40								40								50								50																							
<b>G</b>	G3/8"	G3/8"	G1/2"		G1/2"								G3/4"								G3/4"								G3/4"								G1"								G1"								G1"								G1"								G 1 1/4"								G 1 1/4"							
<b>H</b>	15	20	20		20								20								20								25								25								25								25								25								25															
<b>J</b>	48	60	76		101								121								152								168								194								219								244								267								299								324							
<b>K</b>	85	90	105		130								142								184								200								220								240								275								295								325								355							
<b>L</b>	65	65	73	73	93	93								100	100	115	115	145	135	155	145	185	145	185	155	200	185	200	200	245	220	265																																																				
<b>M</b>	M16x1,5	M22x1,5	M28x1,5		M35x1,5								M45x1,5								M58x1,5								M65x1,5								M62x3								M62x3								M68x3								M76x3								M90x3								M100x3							
<b>N±(max.)</b>	2	2	2		2								2								3								3								3								3								4								4								4								4							
<b>TypeB</b>																																																																																				
<b>BO</b>	30	35	40		50								60								70								80								110	110	120	135	150	165																																										
<b>BP</b>	25	30	35		40								50								60								70								80	95	105	120	135	150																																										
<b>BR</b>	25	30	40		50								60								70								80								90	100	tJO	125	125	140																																										
<b>BS</b>	45	50	60		70								85								100								110								125	135	145	160	180	200																																										
<b>BT(H8)</b>	25	30	35		40								50								60								70								80	90	100	110	110	120																																										

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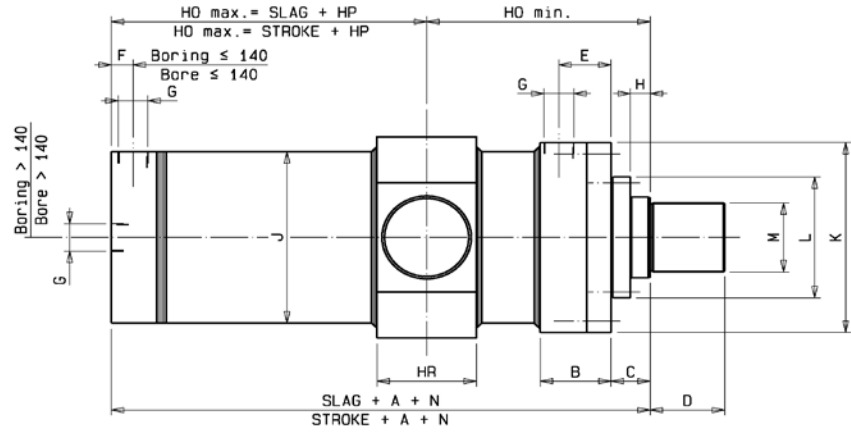
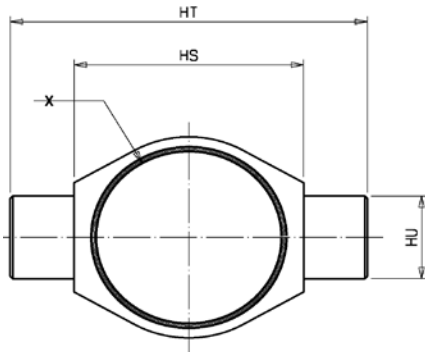


\* Dimensions in mm  
\* Subject to alteration

<b>Bore</b>	40	50	63	80	100	125	140	160	180	200	220	250	280												
<b>Pistonrod</b>	28	28	35	35	45	45	55	55	70	70	90	80	100	90	125	90	125	100	140	125	160	140	180	160	200
<b>Stroke</b>	≤ 1200												≤ 1750												
<b>A</b>	180	190	205	220	220	230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460	
<b>Stroke</b>	1201 - 2000												1751-2500												
<b>A</b>	280	290	305	320	320	330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560	
<b>Stroke</b>	2001 - 3500												2501 - 4000 Longer strokes on request												
<b>A</b>	430	440	455	470	470	480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710	
<b>B</b>	71	75	68	89	65	90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140	
<b>C</b>	30	35	35	38	38	38	38	38	40	40	40	40	48	50	48	50	52	53	50	55	53	56	55	58	
<b>D</b>	15	20	28	35	45	55	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110	120		
<b>E</b>	55	60	52	73	46	69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110	
<b>F</b>	15	16	23	23	29	35	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50		
<b>G</b>	G3/8"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"	G3/4"	G3/4"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	
<b>H</b>	15	20	20	20	20	20	20	20	20	20	20	20	25	25	25	25	25	25	25	25	25	25	25	25	
<b>J</b>	48	60	76	101	121	152	168	194	219	244	267	299	324	355	385	415	445	475	505	535	565	595	625	655	
<b>K</b>	85	90	105	130	142	184	200	220	240	275	295	325	355	385	415	445	475	505	535	565	595	625	655	685	
<b>L</b>	65	65	73	93	93	100	100	115	115	145	135	155	145	185	145	185	155	200	185	200	200	245	220	265	
<b>M</b>	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	M62x3	
<b>N±(max.)</b>	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
<b>TypeC</b>																									
<b>CO</b>	45	51	61	69	88	100	115	130	140	155	175	190	210	130	140	155	175	190	210	230	250	270	290	310	
<b>CP</b>	28	33	42	50	62	70	82	110	120	140	155	165	190	110	120	140	155	165	190	210	230	250	270	290	
<b>CR</b>	23	28	30	35	40	50	55	60	65	70	80	85	100	60	65	70	80	85	100	110	120	130	140	150	
<b>CS</b>	55	65	83	100	123	140	164	170	190	220	240	270	305	170	190	220	240	270	305	330	360	390	420	450	
<b>CT(H8)</b>	25	30	35	40	50	60	70	80	90	100	110	120	130	80	90	100	110	120	130	140	150	160	170	180	
<b>CU</b>	20	22	25	28	35	44	49	55	60	70	70	85	95	55	60	70	70	85	95	105	115	125	135	145	

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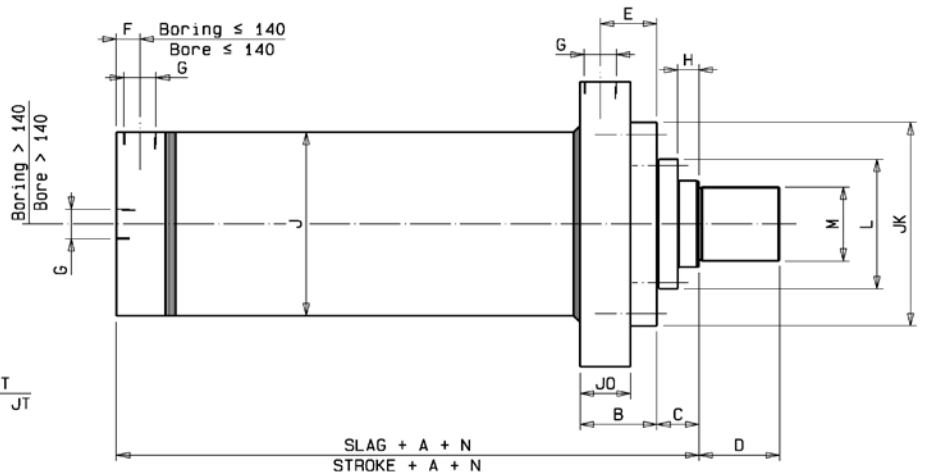
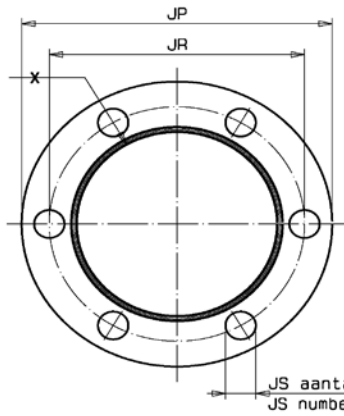


\* Dimensions in mm  
\* Subject to alteration

Bore	40	50	63	80	100	125	140	160	180	200	220	250	280													
Pistonrod	28	28	35	35	45	45	55	55	70	70	90	80	100	90	125	90	125	100	140	125	160	140	180	160	200	
Stroke	≤ 1200												≤ 1750													
A	180	190	205	220	220	230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460		
Stroke	1201 - 2000												1751-2500													
A	280	290	305	320	320	330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560		
Stroke	2001 - 3500												2501 - 4000 Longer strokes on request													
A	430	440	455	470	470	480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710		
B	71	75	68	89	65	90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140		
C	30	35	35	38	38	38	38	38	40	40	40	40	48	50	48	50	52	53	50	55	53	56	55	58		
D	15	20	28	35	45	55	60	73	62	72	72	96	72	96	72	96	70	85	85	90	84	100	93	110		
E	55	60	52	73	46	69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110		
F	15	16	23	23	29	35	40	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50		
G	G3/8"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"	G3/4"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"		
H	15	20	20	20	20	20	20	20	20	20	20	20	25	25	25	25	25	25	25	25	25	25	25	25		
J	48	60	76	101	121	152	168	194	219	244	267	299	324	355	385	415	445	475	505	535	565	595	625	655		
K	85	90	105	130	142	184	200	220	240	275	295	325	355	385	415	445	475	505	535	565	595	625	655	685		
L	65	65	73	73	93	93	100	100	115	115	145	135	155	145	185	145	185	155	200	185	200	200	245	220	265	
M	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M68x3	M76x3	M90x3	M100x3	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M68x3	M76x3	M90x3	M100x3
N±(max.)	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4		
TypeH																										
HO	131	142	138	162	148	173	161	166	176	191	188	198	218	239	218	239	232	248	262	277	274	293	293	313		
HP	127	134	137	152	142	152	133	148	136	151	141	151	230	250	245	265	260	275	268	293	283	303	325	345		
HR	30	35	40	50	60	70	80	90	90	90	90	90	90	90	90	90	100	115	125	125	125	140	140			
HS	90	95	110	135	150	190	205	230	230	260	290	325	365	395	415	445	475	505	535	565	595	625	655	685		
HT	125	135	155	190	220	270	295	330	370	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115		
HU(e8)	25	30	35	45	55	65	70	80	80	90	90	90	100	100	100	100	100	100	100	100	110	110	125	125		

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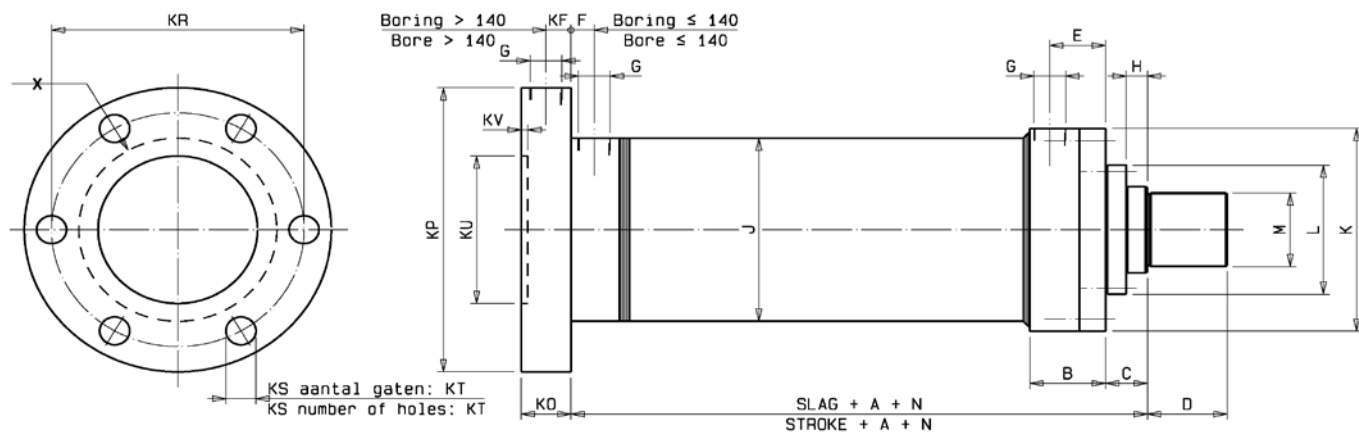


\* Dimensions in mm  
\* Subject to alteration

<b>Bore</b>	40	50	63	80	100	125	140	160	180	200	220	250	280												
<b>Pistonrod</b>	28	28	35	35	45	45	55	55	70	70	90	80	100	90	125	90	125	100	140	125	160	140	180	160	200
<b>Stroke</b>	≤ 1200												≤ 1750												
<b>A</b>	180	190	205	220	220	230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460	
<b>Stroke</b>	1201 - 2000												1751-2500												
<b>A</b>	280	290	305	320	320	330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560	
<b>Stroke</b>	2001 - 3500												2501 - 4000 Longer strokes on request												
<b>A</b>	430	440	455	470	470	480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710	
<b>B</b>	71	75	68	89	65	90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140	
<b>C</b>	30	35	35	38	38	38	38	40	40	48	50	48	50	52	53	50	55	53	56	55	58	55	58		
<b>D</b>	15	20	28	35	45	55	60	72	72	96	72	96	72	96	70	85	90	100	110	120	110	120			
<b>E</b>	55	60	52	73	46	69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110	
<b>F</b>	15	16	23	23	29	35	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50			
<b>G</b>	G3/8 "	G3/8 "	G1/2 "	G1/2 "	G3/4"	G3/4"	G3/4"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G 1 1/4"	G 1 1/4"	G 1 1/4"	G 1 1/4"			
<b>H</b>	15	20	20	20	20	20	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
<b>J</b>	48	60	76	101	121	152	168	194	219	244	267	299	324	355	380	425	460	495	530	565	600	635	670	705	
<b>K</b>	85	90	105	130	142	184	200	220	240	275	295	325	355	385	415	445	475	505	535	565	595	625	655	685	
<b>L</b>	65	65	73	73	93	93	100	100	115	115	145	135	155	145	185	145	185	155	200	185	200	200	245	220	265
<b>M</b>	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M68x3	M76x3	M90x3	M100x3												
<b>N±(max.)</b>	2	2	2	2	2	3	3	3	3	4	4	4	4												
<b>TypeJ</b>																									
<b>JK (e8)</b>	85	90	105	130	142	184	200	220	240	275	295	325	355												
<b>JO</b>	51	55	43	64	43	65	48	55	58	65	65	67	70	75	80										
<b>JP</b>	120	125	155	180	200	245	260	320	340	375	405	435	495												
<b>JR</b>	100	105	130	155	170	215	230	270	290	325	350	380	425												
<b>JS</b>	9	9	11	13	13	17	17	22	22	22	26	26	32												
<b>JT</b>	4	6	8	8	8	11	11	11	11	11	15	15	15												

# DW series hydraulic cylinders

Boring 40 - 280 mm  
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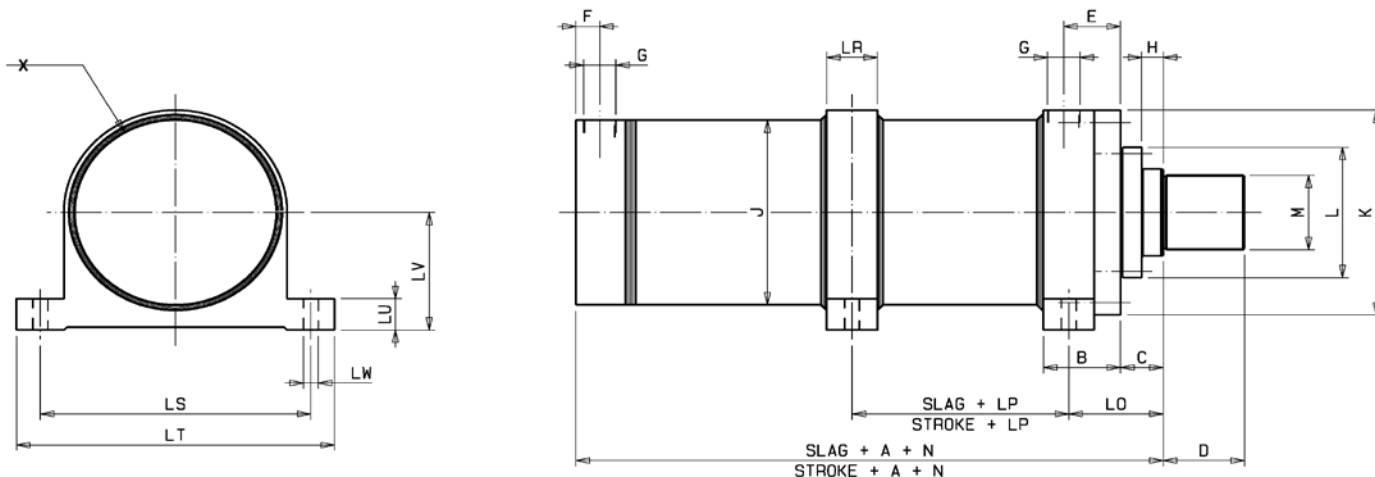


\* Dimensions in mm  
\* Subject to alteration

Bore	40	50	63	80	100	125	140	160	180	200	220	250	280											
Pistonrod	28	28	35	35	45	55	55	70	70	90	100	90	125	90	125	100	140	125	160	140	180	160	200	
Stroke	≤ 1200							≤ 1750																
A	180	190	205	220	220	230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460
Stroke	1201 - 2000							1751 - 2500																
A	280	290	305	320	320	330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560
Stroke	2001 - 3500							2501 - 4000 Longer strokes on request																
A	430	440	455	470	470	480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710
B	71	75	68	89	65	90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140
C	30	35	35	38	38	38	38	40	40	48	50	48	50	52	53	50	55	53	56	55	55	58		
D	15	20	28	35	45	55	60	72	72	96	72	96	70	85	90	100	110	120						
E	55	60	52	73	46	69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110
F	15	16	23	23	29	35	40	40	40	40	40	40	40	40	40	40	40	50	50					
G	G3/8 "	G3/8 "	G1/2 "	G1/2 "	G3/4"	G3/4"	G3/4"	G1"	G1"	G1"	G1"	G1/4"	G1/4"											
H	15	20	20	20	20	20	20	25	25	25	25	25	25											
J	48	60	76	101	121	152	168	194	219	244	267	299	324											
K	85	90	105	130	142	184	200	220	240	275	295	325	355											
L	65	65	73	73	93	93	100	100	115	115	145	155	145	185	145	185	155	200	185	200	200	245	220	265
M	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M68x3	M76x3	M90x3	M100x3											
N±(max.)	2	2	2	2	2	3	3	3	3	4	4	4	4											
TypeK																								
KF	13	18	18	22	27	32	37	30	30	30	30	35	35											
KO	100	115	140	165	185	240	255	65	65	65	75	75	75											
KP	80	95	115	140	160	210	225	305	330	355	395	420	485											
KR	9	9	11	13	13	8	17	22	22	22	26	26	32											
KS	4	6	6	8	8	17	11	11	11	11	11	15	15											
KT	50	65	80	100	120	150	165	190	215	240	260	290	320											
KU(H8)	3	3	3	3	5	5	5	5	5	7	7	7	7											
KV																								

# DW series hydraulic cylinders

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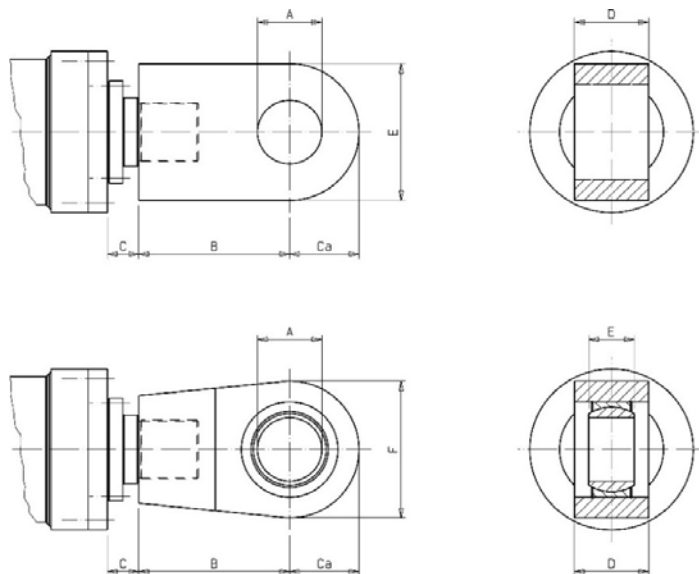


\* Dimensions in mm  
\* Subject to alteration

<b>Bore</b>	40	50	63	80	100	125	140	160	180	200	220	250	280												
<b>Pistonrod</b>	28	28	35	35	45	45	55	55	70	70	90	80	100	90	125	90	125	100	140	125	160	140	180	160	200
<b>Stroke</b>	≤ 1200												≤ 1750												
<b>A</b>	180	190	205	220	220	230	220	235	240	255	255	265	305	330	320	345	340	355	375	395	390	410	440	460	
<b>Stroke</b>	1201 - 2000												1751-2500												
<b>A</b>	280	290	305	320	320	330	320	335	340	355	355	365	405	430	420	445	440	455	475	495	490	510	540	560	
<b>Stroke</b>	2001 - 3500												2501 - 4000 Longer strokes on request												
<b>A</b>	430	440	455	470	470	480	470	485	490	505	505	515	555	580	570	595	590	605	625	645	640	660	690	710	
<b>B</b>	71	75	68	89	65	90	73	78	83	96	88	98	95	119	95	119	100	115	115	120	114	130	123	140	
<b>C</b>	30	35	35	38	38	38	38	38	40	40	40	40	48	50	48	50	52	53	50	55	53	56	55	58	
<b>D</b>	15	20	28	35	45	55	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110	120		
<b>E</b>	55	60	52	73	46	69	53	58	60	73	62	72	72	96	72	96	70	85	85	90	84	100	93	110	
<b>F</b>	15	16	23	23	29	35	40	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50	
<b>G</b>	G3/8"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"	G3/4"	G3/4"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	
<b>H</b>	15	20	20	20	20	20	20	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
<b>J</b>	48	60	76	101	121	152	168	194	219	244	267	299	324	355	385	415	445	475	505	535	565	595	625	655	
<b>K</b>	85	90	105	130	142	184	200	220	240	275	295	325	355	385	415	445	475	505	535	565	595	625	655	685	
<b>L</b>	65	65	73	73	93	93	100	100	115	115	145	135	155	145	185	145	185	155	200	185	200	200	245	220	265
<b>M</b>	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M62x3	M62x3	M68x3	M76x3	M90x3	M100x3												
<b>N±(max.)</b>	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	
<b>TypeL</b>																									
<b>LO</b>	76	83	82	95	82	96	87	92	94	109	99	109	233	254	233	254	252	268	275	290	292	311	303	323	
<b>LP</b>	61	63	70	72	80	76	71	81	67	72	72	72	-93	-94	-78	-79	-107	-108	-105	-95	-127	-126	-88	-88	
<b>LR</b>	25	30	30	35	35	45	45	50	50	50	50	50	190	190	190	190	225	225	260	260	260	260	260		
<b>LS</b>	110	120	140	170	200	240	365	240	270	300	330	365	400	400	400	400	400	400	400	400	400	400	400	400	
<b>LT</b>	135	150	170	205	240	290	330	290	320	365	395	440	470	470	470	470	470	470	470	470	470	470	470	470	
<b>LU</b>	19	24	30	35	50	60	70	45	50	55	60	65	75	75	75	75	75	75	75	75	75	75	75	75	
<b>LV</b>	40	45	55	65	75	95	105	115	130	145	155	170	185	185	185	185	185	185	185	185	185	185	185	185	
<b>LW</b>	11	13	13	17	22	26	33	26	26	33	33	39	39	39	39	39	39	39	39	39	39	39	39	39	
<b>LX</b>																									
<b>LY</b>																									
<b>LZ</b>																									
<b>Min. Slag/Min. Stroke</b>																									

# DW series hydraulic cylinders

Boring 40 - 280 mm  
Offshore, dredging, industry & civil works



\* Dimensions in mm  
\* Subject to alteration

Code	Type D						Type E					
Bore	A (H8)	B	Ca	D	E		A(M7)	B	C	D	E	F
40	25	40	25	25	45		25	50	30	20	23	56
50	30	50	30	30	50		30	60	34	22	28	64
65	35	60	35	40	60		35	70	42	25	30	78
80	40	70	40	50	70		40	85	50	28	35	94
100	50	85	50	60	85		50	105	63	35	40	116
125	60	110	60	70	100		60	130	70	44	50	130
140	70	120	70	80	110		70	150	82	49	55	154
160	80	145	80	90	125		80	210	110	55	60	170
180	90	155	95	100	135		90	240	120	60	65	190
200	100	170	105	110	145		100	265	140	70	70	220
220	110	185	120	125	160		110	290	155	70	70	240
250	110	210	135	125	180		110	315	165	70	80	270
280	120	240	150	140	200		120	355	190	85	85	305



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