

Model : VNC Series : S20

Features

- ▶▶ Hard Anodized Aluminum profile (round) type cylinder barrel.
- ▶▶ Bore Size 32 to 250 mm.
- ▶▶ Adjustable cushioning at both ends with elastomer pads.
- ▶▶ Magnetic and Non-Magnetic cylinder.
- ▶▶ Wide range of mountings as per VDMA 24562 standards.
- ▶▶ Magnetic sensor common for all sizes.
- ▶▶ Modern design and consistent engineering.
- ▶▶ Double slots on 3 sides of cylinder position sensors.
- ▶▶ An extensive range of mounting accessories make it possible to install the solution virtually anywhere.
- ▶▶ Allen screws with internal thread for mounting components.
- ▶▶ Additional cushioning rings in the end-positions for absorbing residual energy from high speeds and fast machine cycles.



Technical Specifications

Bore Size (mm)	32	40	50	63	80	100	125	160	200	250	
Cushion Stroke (mm)	21	23	23	23	28	28	40	40	40	50	
Standard Stroke* (mm)	25, 50, 80, 100, 125, 160, 200, 250, 300, 350, 400, 450, 500										
Media	Compressed Air - Filtered - Lubricated										
Working Pressure	0.5 ~ 10 Bar										
Temperature	-20 °C ~ 80 °C max. (For Viton O to 180 °C)										
Material of Construction	Aluminum, Brass, Nitrile, Steel, Acetal, Polyurethane, Viton										
Mounting & Accessories	Male Clevis Female Clevis Clevis Foot Bracket Rod End Fork	Foot Mounting Front Trunnion Wall Bracket Mounting Rod End Aligner	Front Flange Rear Trunnion Trunnion Bracket Rod End Spherical Eye	Rear Flange Adjustable Center Trunnion Mounting							

* For Non Standard or longer stroke cylinders, available on request.

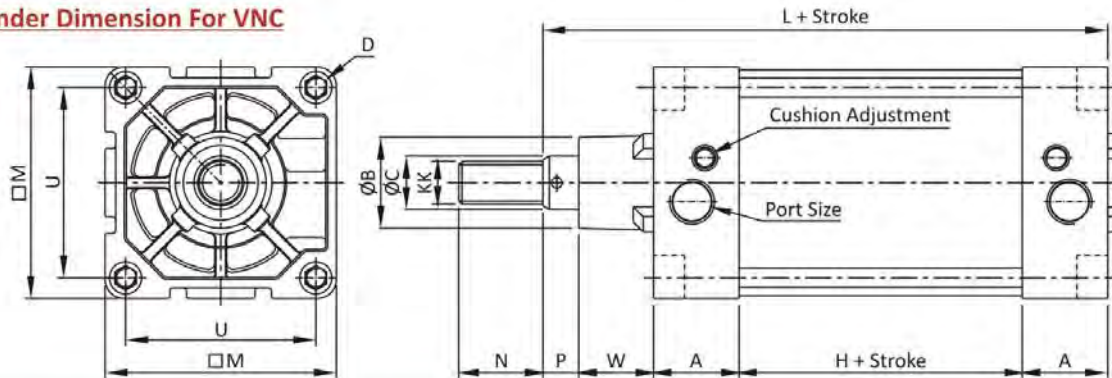
Output Force

(force in N : 1N = 0.1 kgf)

Bore dia in mm	Rod dia in mm	Action	Working Pressure in Bar								
			2	3	4	5	6	7	8	9	10
32	12	Extend	145	217	289	362	434	507	579	651	724
		Retract	124	187	249	311	373	435	498	559	621
40	16	Extend	226	339	452	565	678	792	905	1018	1130
		Retract	190	285	380	475	570	665	760	855	950
50	20	Extend	353	530	706	884	1060	1237	1414	1590	1767
		Retract	297	445	594	742	891	1039	1187	1336	1484
63	20	Extend	561	842	1122	1403	1683	1964	2244	2525	2805
		Retract	505	757	1009	1261	1514	1766	2018	2270	2523
80	25	Extend	905	1357	1809	2262	2714	3167	3619	4072	4524
		Retract	816	1225	1633	2041	2449	2857	3266	3674	4082
100	25	Extend	1414	2120	2828	3534	4241	4948	5655	6362	7069
		Retract	1325	1988	2650	3313	3976	4640	5300	5965	6625
125	32	Extend	2209	3313	4417	5522	6626	7731	8835	9940	11044
		Retract	2064	3096	4128	5160	6192	7224	8256	9288	10320
160	40	Extend	3619	5428	7238	9047	10857	12666	14476	16286	18095
		Retract	3392	5089	6785	8482	10178	11875	13571	15268	16964
200	40	Extend	5654	8482	11309	14137	16964	19792	26619	25446	28274
		Retract	5428	8143	10857	13571	16266	19000	21714	24429	27143
250	50	Extend	9817	14726	19635	24544	29452	34361	39270	44179	49087
		Retract	9425	14137	18850	23562	28274	32987	37699	42412	47124

(Above values have been worked out taking frictional loss into consideration)

Basic Cylinder Dimension For VNC



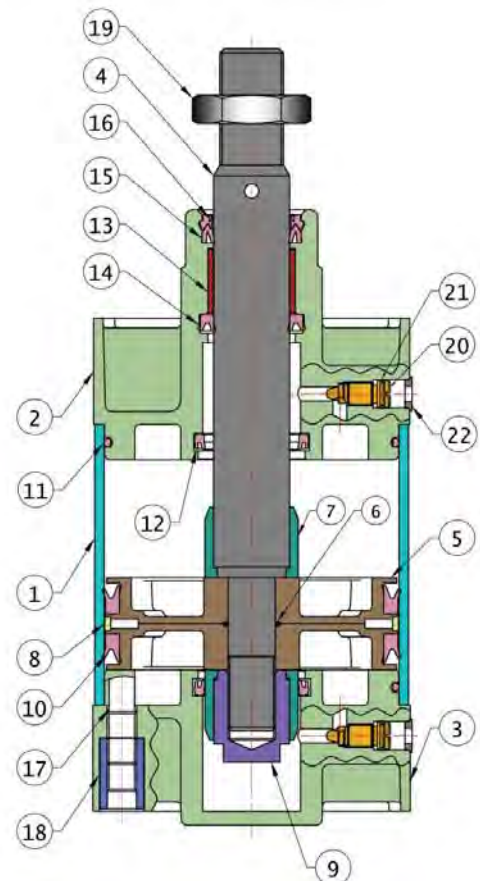
Bore dia	KK	H	A	W	P	N	U	□M	∅B	∅C	L	D	K*	Port Size
32	M10X1.25P.	43	25.5	18.5	7.5	22	32.5	45	30	12	120	M6	40	G1/8"
40	M12X1.25P.	47	29	20.5	9.5	24	38	51	35	16	135	M6	63	G1/4"
50	M16X1.5P.	48	29	28	9	32	46.5	64	40	20	143	M8	98	G1/4"
63	M16X1.5P.	51	35	27.5	9.5	32	56.5	74	45	20	158	M8	165	G3/8"
80	M20X1.5P.	56	36	34	12	40	72	94	45	25	174	M10	220	G3/8"
100	M20X1.5P.	58	40	35	16	40	89	111	55	25	189	M10	360	G1/2"
125	M27X2P.	70	45	46	19	50	110	134	60	32	225	M12	613	G1/2"
160	M36X2P.	78	51	38	20	72	140	182	65	40	238	M16	1000	G3/4"
200	M36X2P.	88	46	55	20	72	175	222	75	40	255	M16	1570	G3/4"
250	M42X2P.	85	56	75	25	84	220	272	90	50	297	M20	2450	G1"

*K = Psh Force at 5 Kg/cm²

Manufacturing Standard : ISO 15552

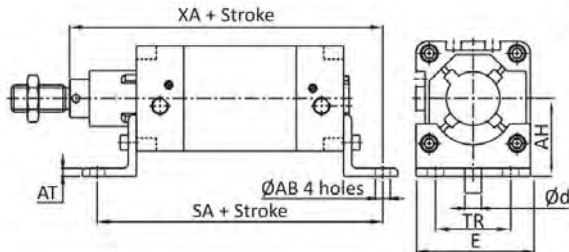
Testing Standard : ISO 10099

No.	Item Name	Material
1	Round Pipe	Aluminium Alloy HE9WP (6063-T6) (IS : 733)
2	Top Cover	Aluminium Alloy ALsi 132 (BS 1490)
3	Bottom Cover	Aluminium Alloy ALsi 132 (BS 1490)
4	Piston Rod	BS-970-90, EN-8, (080M40)
5	Piston	Aluminium Alloy ALsi 132 (BS 1490)
6	O-Ring For Piston	Nitrile Buna - N Gr. 80
7	Delrin Collar	Delrin Acetal copolymer
8	Delrin Ring	Delrin Acetal copolymer
9	Piston Lock Nut	BS-970-90, EN-8, (080M40)
10	V-Seal For Piston	Hi - Nitrile
11	Diameter Ring	Nitrile Buna - N Gr.80
12	Cushion Seal	Nitrile Buna - N Gr.80
13	D. U. Bush	M. S.
14	Shaft V-Seal	Nitrile Buna - N Gr.80
15	V-Seal (Nut Ring)	Nitrile Buna - N Gr.80
16	Wiper Ring	P.U. Gr. 96
17	Stud	BS-970-90, EN-8, (080M40)
18	Allen Key	BS-970-90, EN-8, (080M40)
19	Nut For Shaft	BS-970-90, EN-8, (080M40)
20	Cushion Pin	Brass (CuZn39Pb3)
21	O-Ring For Cushion Pin	Nitrile Buna - N Gr. 80
22	Bush For Cushion Pin	Nylon Gr. 66



Model : VNC Series : S20

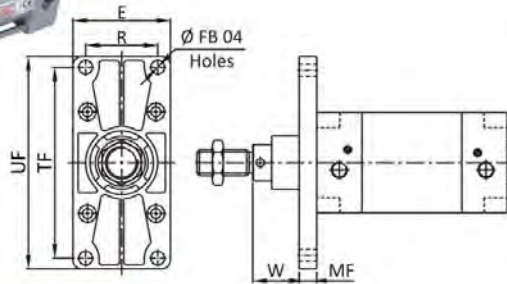
Foot Mounting (NCML) - L



Bore die	TR ±0.3	AB H13	AH Js±15	AT	E	d*	SA	TOL	KA	Recommended Bolt Size
32	32	6.5	32	3	46	5.8	142	±1.25	144	M6
40	36	9	36	4	52	7.8	159		163	M8
50	45	9	45	6	65	7.8	170		175	M8
63	50	9	50	5	80	7.5	197	±1.6	190	M8
80	63	12	63	5	95	9.8	210		215	M10
100	75	14	71	7	126	11.8	220		230	M12
125	90	16	90	8	157	---	253	±1.6	272	M12
160	115	18.5	115	10	180	11.8	300		320	M16
200	135	24	135	12	220	11.8	320		345	M16
250	165	28	165	12	274	---	347	375	M20	

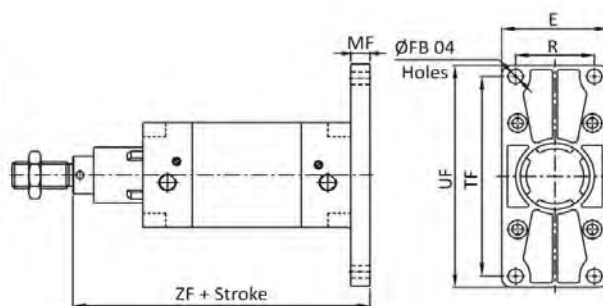
* Suitable for reaming

Front Flange Mounting (NCMF) - F



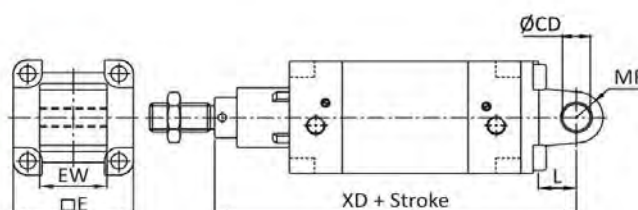
Bore die	TF ±0.3	R ±0.3	FB H13	MF	UF	E	W	TOL	Recommended Bolt Size
32	64	32	7	10	80	50	16	±1.25	M6
40	72	36	9	10	90	53	20		M8
50	90	45	9	12	110	64	25		M8
63	100	50	9	12	125	80	25	±1.5	M8
80	126	63	12	16	155	95	30		M10
100	150	75	14	16	185	120	35		M12
125	180	90	16	20	224	134	45	±1.5	M12
160	230	115	18	20	280	178	60		M16
200	270	135	22	25	320	221	70		M16
250	330	165	26	25	395	275	75	±2.5	M20

Rear Flange Mounting (NCRM) - R



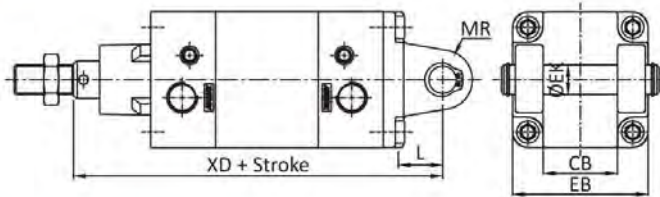
Bore die	CD H9	EW ±0.2 ±0.6	L	MR	E max.	XD	TOL
32	10	26	12	11	45	142	±1.25
40	12	25.5	15	13	51	160	
50	12	31.5	15	13	64	170	
63	16	38	20	17	74	190	±1.5
80	16	48.5	20	17	94	210	
100	20	59	25	21	111	230	
125	25	70	30	26	135	275	±2
160	30	90	35	31	180	293	
200	30	90	35	31	220	320	
250	40	110	45	41	272	367	

Male Clevis Mounting (NCMS) - S



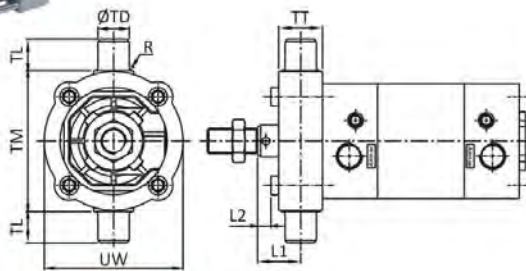
Bore die	CD H9	EW ±0.2 ±0.6	L	MR	E max.	XD	TOL
32	10	26	12	11	45	142	±1.25
40	12	25.5	15	13	51	160	
50	12	31.5	15	13	64	170	
63	16	38	20	17	74	190	±1.5
80	16	48.5	20	17	94	210	
100	20	59	25	21	111	230	
125	25	70	30	26	135	275	±2
160	30	90	35	31	180	315	
200	30	90	35	31	220	340	
250	40	110	45	41	272	367	

Female Clevis Mounting (NCMD) - D



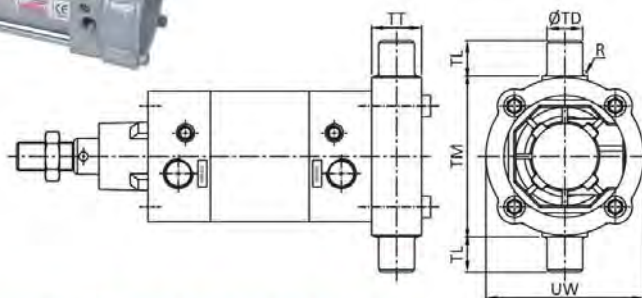
Bore die	EK e8	CB H14	L	MR	EB max.	XD	TOL
32	10	26	12	11	56	142	±1.25
40	12	28	15	13	65	160	
50	12	32	15	13	73	170	
63	16	40	20	17	86	190	±1.5
80	16	50	20	17	106	210	
100	20	60	25	21	129	230	
125	25	70	30	26	157	275	±2
160	30	90	35	31	191	293	
200	30	90	35	31	191	320	
250	40	110	45	41	221	367	

Front Trunnion Mounting (NCMT) - M



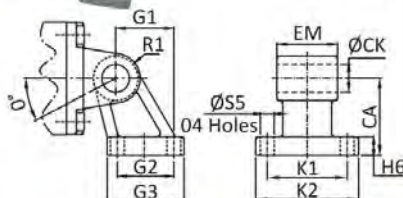
Bore die	ØTD e9	TL h14	TM h14	UW	TT	R	L1	TOL	L2 Approx.
32	12	12	50	50	16	1	18	±1.5	2
40	16	16	63	55	22	1.5	19		0
50	16	16	75	75	24	1.6	25		3
63	20	20	90	86	28	1.6	23	±1.8	-1
80	20	20	110	110	32	1.6	30		1.8
100	25	25	132	135	40	2	31		-1.2
125	25	25	160	131	50	2	40	±2.0	---
160	32	32	200	195	49	2.5	55.5	±2.5	11.5
200	32	32	250	248	49	2.5	70.5		26.5
250	40	40	320	320	60	---	70		---

Rear Trunnion Mounting (NCMT) - N



Bore die	TD e9	TL h14	TM h14	UW	TT	R	L3	TOL	L4 Approx.
32	12	12	50	50	16	1	128	±1.5	16
40	16	16	63	55	22	1.5	146		19
50	16	16	75	75	24	1.6	155		22
63	20	20	90	86	28	1.6	172	±1.8	24
80	20	20	110	110	32	1.6	190		29
100	25	25	132	135	40	2	209		33
125	25	25	160	131	50	2	250	±2	33
160	32	32	200	195	49	2.5	262.5		29
200	32	32	250	248	49	2.5	279.5		33
250	40	40	320	320	60	---	327	33	

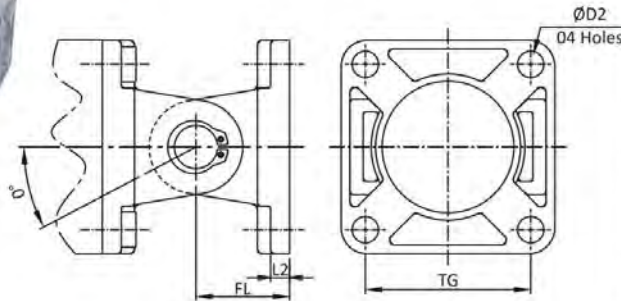
Swivel Flange Clevis Foot Bracket (NCVA) - DC



Bore die	K1 Js14	G2 Js14	S5 H13	CA Js15	CK H9	EM -0.2 -0.6	G1 Js14	H6	R1 max.	K2	G3	Recommended Bolt Size
32	38	18	6.6	32	10	26	21	8	10	51	31	M6
40	41	22	6.6	36	12	28	24	10	11	54	35	M6
50	50	30	9	45	12	32	33	12	13	65	45	M8
63	52	35	9	50	16	40	37	12	15	67	50	M8
80	66	40	11	63	16	49	47	14	15	86	60	M10
100	76	50	11	71	20	59	55	15	19	96	70	M10
125	94	60	14	90	30	70	70	20	22.5	124	90	M12
160	118	88	14	115	30	90	97	25	31.5	156	126	M16
200	122	90	18	135	30	90	105	30	31.5	162	130	M16
250	150	110	22	165	40	110	128	35	40	200	160	M20

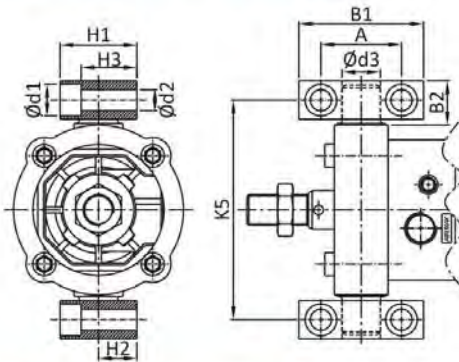
Model : VNC Series : S20

Wall Bracket Mounting (NCAW) - DS



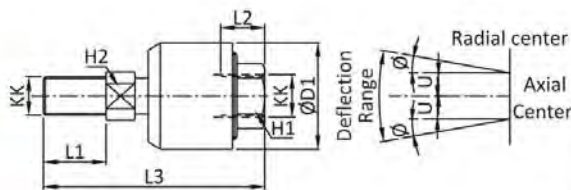
Bore die	TG	D2	L2	FL	Ø°	Recommended Bolt Size
32	32.5	6.6	5.5	22	90	M6
40	38	6.6	5.5	25	90	M6
50	46.5	9	6.5	27	90	M8
63	56.5	9	6.5	32	90	M8
80	72	11	10	36	60	M10
100	89	11	10	41	60	M10
125	110	14	10	50	60	M12
160	140	17	10	55	80	M16
200	175	17	14	65	90	M16
250	220	22	---	70	90	M20

Trunnion Bracket Mounting (NCTB)



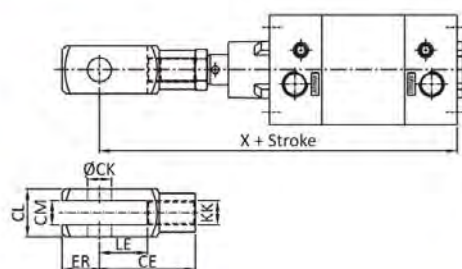
Bore die	B1	B2	A ±0.2	d1	d2 H13	d3 H9	H1	H2 ±0.2	H3	K5 Jst4
32	46	18	32	11	6.6	12	30	15	23	71
40	55	21	36	15	9	16	36	18	27	87
50	55	21	36	15	9	16	36	18	27	99
63	65	23	42	16.5	11	20	40	20	29	116
80	65	23	42	16.5	11	20	40	20	29	136
100	75	28.5	50	20	14	25	50	25	37	164
125	75	28.5	50	20	14	25	50	25	37	192
160	92	40	60	25	18	32	60	30	43	245
200	92	40	60	25	18	32	60	30	43	295
250	140	50	90	30	22	40	70	35	43	375

Rod End Aligner Mounting (NCRA)



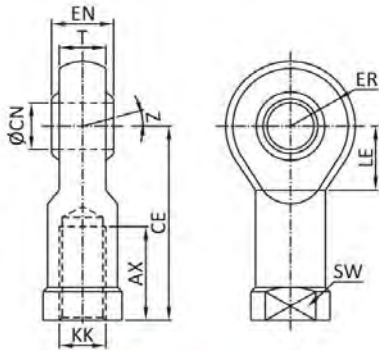
Bore die	KK	L1	L2	L3	H1	H2	D1	U	±Ø°
32	M10X1.25P	20	14	65	17	8	28	0.75	5
40	M12X1.25P	22	18	75	19	10	32	1	5
50 / 63	M16X1.50P	25	22	91	27	13	41	1	5
80 / 100	M20X1.50P	30	28	112	32	16	50	1.5	5
125	M27X2.00P	ON REQUEST							

Rod End Fork Mounting (NCAF) - A



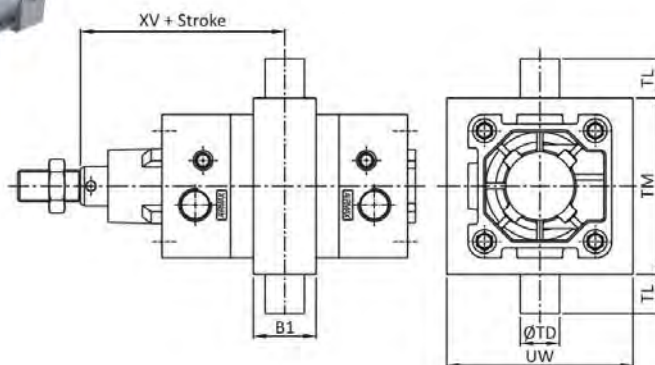
Bore die	KK	CE	CK F8	CM B12	LE	ER max.	CL	X
32	M10X1.25P	40	10	10	20	16	20	165
40	M12X1.25P	48	12	12	24	19	24	190
50	M16X1.50P	64	16	16	32	25	32	215
63	M16X1.50P	64	16	16	32	25	32	230
80	M20X1.50P	80	20	20	40	32	40	264
100	M20X1.50P	80	20	20	40	32	40	279
125	M27X2.00P	110	30	30	54	38	55	347
160	M36X2.00P	144	35	35	72	44	70	396
200	M36X2.00P	144	35	35	72	44	70	413
250	M42X2.00P	128	35	35	---	39	70	441

Rod End Spherical Mounting (NCAP) - G



Bore die	KK	CN H9	T	EN h12	CE	LE min	ER max	AX	SW	Z
32	M10X1.25P	10	10.5	14	43	15	14	20	17	13°
40	M12X1.25P	12	12	16	50	17	16	22	19	
50 / 63	M16X1.50P	16	15	21	64	22	21	28	22	15°
80 / 100	M20X1.50P	20	18	25	77	26	25	33	30	
125	M27X2.00P	30	25	37	110	---	35	51	36	
160 / 200	M36X2.00P	35	28	43	125	41	40	56	50	
250	M42X2.00P	35	30	44	133.5	45.5	45.5	60	60	

Center Trunnion Mounting (NCTM) - T



Bore die	B1	TD	UW	TM	TL	R	XV
32	30	12	65	48	12	1	73
40	32	16	75	63	16	1.6	82.5
50	34	16	95	75	16	1.6	90
63	41	20	105	90	20	1.6	97.5
80	44	20	130	105	20	1.6	110
100	48	25	145	122	25	2	120
125	50	25	175	160	25	2	145
160	49	32	195	200	32	2.5	148
200	49	32	248	250	32	2.5	165
250	60	40	320	320	40	---	198.5