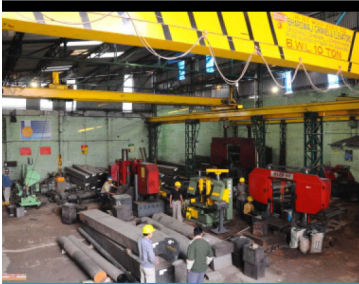
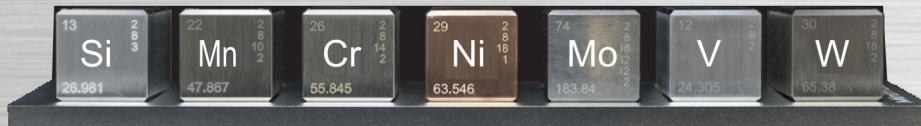


Providing Steels For Shaping.



Ludhiana (Unit-I)

Gurgoan (Unit-II)

Forging Process

Bumper Block

[www.viratsteels.com](http://www.viratsteels.com)

# VIRAT | Special Steels

The Leading company **VIRAT SPECIAL STEELS PVT. LTD.** is one of the largest Importer , Exporter and Distributor of Tool Steel, Die Steel, Mould Steel, Alloy Steel etc.

The company was incorporated in 1957 as Dhingra Mill Store and now as Virat Special Steels Pvt. Ltd in 1994 with its Head Quarter in Gurgaon ( DELHI - NCR ) with global footprints in various countries.

The company maintain biggest steel yards with Hi tech facilities and hold high level of Inventory of Special Steels with association of Domestic and Overseas business partners.

We are in the business for the last about Six Decades and have been dealing with large number of Forging Companies, Automotive, Mining, Power Generation, Petrochemical, Aviation, Railways, Agricultural, Oil & Gas, Hand Tools, Bulk Material Handling Industries Etc. The products, we deal engineered to extend life service, save time and provide optimal performance to our customers. You can rely on us for accurate and timely services o our part to process and execute the orders to match your satisfaction.



## OUR MAIN OF THE PRODUCTS

- ▶ DIE BLOCKS (DIN-1.2714 , DB6, L6, SKT4)
- ▶ HCHCR (D-2, D-3 / 2379 , 2080)
- ▶ HOT DIE STEELS (H-11,H-13 / 2343, 2344)
- ▶ HIGH SPEED STEELS (M-2, M-35, T-1)
- ▶ PLASTIC MOULD STEELS ( P-20 / 2738, 2311)
- ▶ CHIPPER KNIFE STEELS
- ▶ ALLOY STEELS, EN-SERIES ETC.

## STATISTICS

1957

Existence

3500 Tons

Stock

35+

Grades

9001:2008

Accreditation

1000+

Customers









## DIN 2714 (MOD)-DB6

**DIN 1.2714** is highly recommendable for Close Die Forgings due to its characteristics of high wear-resistance, extra toughness, high hardness which is achieved with Cr-Ni-Mo-V high graded alloys.

The equivalent grade DB6 / L6 / SKT4 normally used as a pre hardened condition. The standard hardness is 360 to 420 BHN. DIN 2714 is the upgraded version of DIN 2713 for better performance of dies.

The main quality features of our products are Extra Forging Reduction & Upsetting with Double Tempered to achieve toughness and better Ultrasonic quality. SEP1921, Group 3, Class D/d, E/e.

### Applications

**Dies for Drop Forging Hammers & Mechanical Presses | Die Molds | Shoe Blocks | Die Holder Cassettes | Piston Rods | Cranks | Boaster | Shearing Blades | Tools | Plastic Moulds | Shafts Etc.**

### Standards - DIN 2714 (MOD)-DB6

C	0.50-0.60	S	<0.004	DIN-2714
Si	0.10-0.40	Cr	0.90-1.20	
Mn	0.65-0.90	Ni	1.40-1.65	DB6
P	<0.015	Mo	0.45-0.55	L6
		V	0.07-0.12	SKT4

## Standards DIN 2738 (MOD)-P20

DIN 1.2738 is specially used for Plastic injection die moulds. The characteristics of a material are right sharpening, photo-etching properties with high purity and good homogeneity. DIN 2738 is upgraded version of plastic mold steel Of 2311, which normally supply in Pre hardened condition. Hardness in as supplied condition 280-320 HB with having uniform hardness. The additional nickel content of 1% increases through hardening. It has good machinability, suitable for texturing, fine polishability, adequate corrosion resistance, vacuum-degassed steel.

### DIN 2738-P20 High Hard (HXM 24)

The modified version of 2738 is with High Hardness 360-400 BHN and increase alloy elements to get extra life and outstanding polishing.

C	0.35-0.45	DIN 2738
Si	0.20-0.40	
Mn	1.30-1.60	P20+Ni
P	<0.015	AISI P20
S	<0.004	NAK80
Cr	1.70-2.20	
Ni	0.80-1.10	
Mo	0.15-0.30	

### Applications

P20 is the equivalent grade of DIN 2738 which is applicable for large & small plastic mould dies for Automotive Industries, Mould for Bumpers, Crates, Plastic Furniture, Dashboard, Television Cabinets, Boaster Plates of Presses, Die Holders & Shoe blocks for Drop Hammers, Press Cassettes, Upsetter Blocker, Forging Dies, Different Dies & Mould for Plastic products Etc.

# STEEL COMPARISON CHART

SAE	JIS	ASSAB	BOHLER	C	SI	MN	CR	MO	NI	V	W	OTHERS
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## MOULD AND DIE STEELS

VS 1.2311	(P20)*	...	(UHB 2311)*	M 201	0.4	...	1.5	2.00	0.20	...	...	...
VS 1.2312	P20-S	...	HOLDAX	M 200	0.4	...	1.5	2.00	0.20	...	...	S.O.07
VS 1.2738	(P20+Ni)	...	IMP-SUPREME	M 238	0.4	...	1.5	2.00	0.20	1.00	...	...
VS 1.2083	(420mod)*	...	STAVAX	M 310	0.4	...	...	13.00	...	...	...	...
VS 1.2083 ESR	420ESR	...	...	...	0.4	...	...	13.00	...	...	...	...
VS 1.2316	...	...	RAMAX-S	M 300	0.4	...	...	16.00	1.20	0.30	...	...
VS 1.2316 ESR	420ESR MOD	...	...	...	0.4	...	...	16.00	1.20	0.30	...	...
VS 1.2767	...	...	GRANE	K 600	0.45	...	...	1.40	0.30	4.10	...	...
VS 1.2714	L6	...	ALVAR 14	M 500	0.55	...	...	1.10	0.50	1.70	0.10	...
VS 1.4028	(420)*	...	...	M 330VMR	0.3	1.00	...	13.00	...	...	...	...

## Hot Work Tool Steels

VS 1.2343	H 11	SKD 6	VIDAR Supreme	W300VMR	0.38	...	...	5.00	1.10	...	0.40	...
VS 1.2344 Std.	H 13	SKD 61	8407 Supreme	W 302	0.4	1.00	...	5.00	1.30	...	1.00	...
VS 1.2344 Prm.	H 13	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	...
VS 1.2344 VESR	H 13	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	...
VS 1.2347	H 13+S	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	SO.10
VS 1.2367	...	...	ORD 90	W 303	0.4	...	...	5.00	3.00	...	0.60	...
VS 1.2767	...	...	(GRANE)*	K 600	0.45	...	...	1.40	0.35	4.00	...	...
VS 1.2606	H 12	SKD 62	UHB 2606	W 304	0.37	1.00	...	5.20	1.50	...	0.30	...
VS 1.2885	H 10 A	...	...	W 321	0.39	...	...	2.80	2.80	...	0.50	1.30 Co 2.80

## COLD WORK TOOL STEELS

VS 1.1545	W110	SK 3	UHB 20	K 990	1.00	...	...	...	...	...	...	...
VS 1.2080	D3	SKD 1	XW 5	K 100	2.00	...	...	12.00	...	...	...	...
VS 1.2363	A2	SKD 12	XW 10	K 305	1.00	...	...	5.00	1.00	...	0.20	...
VS 1.2365	H 10	...	...	...	0.30	...	...	3.00	2.80	...	0.55	...
VS 1.2379	D2	(SKD 11)*	XW 42	K 110	1.55	...	...	12.00	0.70	...	1.00	...
VS 1.2601	(D2)*	(SKD 11)*	XW 42	K105	1.65	...	...	11.50	0.60	...	0.30	0.50
VS 1.2436	D6	...	XW 5	K 107	2.10	...	...	12.00	...	...	0.70	...
VS 1.2510	O1	SKS 3	DF 3	K 460	1.00	...	1.00	0.60	...	...	...	0.30
VS 1.2550	S1	(SKS 41)*	M 4	K 455	0.60	...	...	1.10	...	...	0.20	2.00
VS 1.2842	O2	...	AROS	K720	0.90	...	2.00	0.35	...	...	0.10	...

## HIGH SPEED STEELS

VS 1.3243	M 35	SKH 55	...	S 705	0.90	0.30	...	4.00	5.00	...	1.90	6.30 Co 5.00
VS 1.3247	M 42	SKH 59	...	S 500	1.09	...	...	3.90	9.40	...	1.20	1.50 Co 7.80

## ANTI-COERSIVE STEELS

VS 1.4006	(410)*	SUS 410	UHB 4006	N 100	0.11	...	...	13.00	...	...	...	...
VS 1.4057	420	SUS 4201	UHB 4021	N 320	0.20	...	...	13.00	...	...	...	...
VS 1.4057	431	SUS 431	UHB 4057	N 350	0.17	...	...	16.50	...	2.00	...	...
VS 1.4313	F6NM	SCS 5	...	...	<0.05	...	...	13.50	0.60	4.00	...	...
VS 1.4462 Dpx	(B5318s13)*	...	UHB 4462	A 903	<0.03	...	...	22.00	2.00	...	...	No.12
VS 1.4542	630 (15.5 PH)	...	...	...	<0.07	...	...	16.00	...	4.00	...	Co4.00

## MACHINERY STEEL

VS 1.6523	8620	SNM 220	...	E 116	0.20	...	0.80	0.60	0.20	0.60	...	...
VS 1.5752	3310/3415	SNC 815 N	UHB 5752	E 200	0.14	...	...	0.70	...	3.50	...	...
VS 1.5860	...	...	UHB 5860	Bohler G	0.14	...	...	1.10	...	4.50	...	...
VS 1.5919	3115	...	UHB 5919	E 230	0.17	...	...	1.55	...	1.55	...	...
VS 1.7147	5120	SMnC 420	UHB 7147	E 400	0.20	...	1.30	1.20	...	1.95	...	...
VS 1.5920	...	...	UHB 5920	E 220	0.17	...	...	1.95	...	...	...	...
VS 1.7176	5160	SUP 9	...	F 300	0.56	...	0.65	0.90	...	...	...	...
VS 1.8159	6145/6150	SUP 10	UHB 8159	F 530	0.51	...	0.90	1.10	...	0.10	...	...
VS 1.7220	4130	SCM 435	...	...	0.38	...	0.80	1.00	0.25	...	...	...
VS 1.7225	4140	SCM 440	UHB 709	V 320	0.40	...	0.80	1.00	0.25	...	...	...

### Hardness Comparison Table Tensile Strength, Brinell, Vickers and Rockwell Hardness

TENSILE STRENGTH R	Brinell hardness Ball indentation mm		Vickers hardness		Rockwell Hardness		TENSILE STRENGTH R	Brinellhardness Ball indentation mm		Vickers hardness		Rockwell Hardness	
	d	H	HV	HRB	HRC	HRA		d	H	HV	HRB	HRC	HRA
255	6.63	76.0	80	...	...	...	1125	3.34	333	350	...	...	...
270	6.45	80.7	85	41.0	...	...	1155	3.29	342	360	...	...	...
285	6.30	85.5	90	48.0	...	...	1190	3.25	352	370	...	...	...
305	6.16	90.2	95	52.0	...	...	1220	3.21	361	380	...	...	...
320	6.01	95.0	100	56.2	...	...	1255	3.17	371	390	...	...	...
335	5.90	99.8	105	...	...	...	1290	3.13	380	400	...	...	...
350	5.75	105	110	62.3	...	...	1320	3.09	390	410	...	...	...
370	5.64	109	115	...	...	...	1350	3.06	399	420	...	...	...
385	5.54	114	120	66.7	...	...	1385	3.02	409	430	...	...	...
400	5.43	119	125	...	...	...	1420	2.99	418	440	...	...	...
415	5.33	124	130	71.2	...	...	1455	2.95	428	450	...	...	...
430	5.26	128	135	...	...	...	1485	2.92	437	460	...	...	...
450	5.16	133	140	75.0	...	...	1520	2.89	447	470	...	...	...
465	5.08	138	145	...	...	...	1555	2.86	456	480	...	...	...
480	4.99	143	150	78.7	...	...	1595	2.83	466	490	...	...	...
495	4.93	147	155	...	...	...	1630	2.81	475	500	...	...	...
510	4.85	152	160	81.7	...	...	1665	2.78	485	510	...	...	...
530	4.79	156	165	...	...	...	1700	2.75	494	520	...	...	...
545	4.71	162	170	85.0	...	...	1740	2.73	504	530	...	...	...
560	4.66	166	175	...	...	...	1775	2.70	513	540	...	...	...
575	4.59	171	180	87.1	...	...	1810	2.68	523	550	...	...	...
595	4.53	176	185	...	...	...	1845	2.66	532	560	...	...	...
610	4.47	181	190	89.5	...	...	1880	2.63	542	570	...	...	...
625	4.43	185	195	...	...	...	1920	2.61	551	580	...	...	...
640	4.37	190	200	91.5	...	...	1955	2.59	561	590	...	...	...
660	4.32	195	205	92.5	...	...	1995	2.57	570	600	...	...	...
675	4.27	199	210	93.5	...	...	2030	2.54	580	610	...	...	...
690	4.22	204	215	94.0	...	...	2070	2.52	589	620	...	...	...
705	4.18	209	220	95.0	...	...	2105	2.51	599	630	...	...	...
720	4.13	214	225	95.0	...	...	2145	2.49	608	640	...	...	...
740	4.08	219	230	96.7	...	...	2180	2.47	618	650	...	...	...
755	4.05	223	235	...	...	...	...	...	...	...	...	...	
770	4.01	228	240	98.1	20.3	41.7	...	...	...	...	...	...	
785	3.97	233	245	...	21.3	42.5	...	...	...	...	...	...	
800	3.92	238	250	99.5	22.2	43.4	...	...	...	...	...	...	
820	3.89	242	255	...	23.1	44.2	...	...	...	...	...	...	
835	3.86	247	260	101	24	45	...	...	...	...	...	...	
850	3.82	252	265	...	24.8	45.7	...	...	...	...	...	...	
865	3.78	257	270	102	25.6	46.4	...	...	...	...	...	...	
880	3.75	261	275	...	26.4	47.2	...	...	...	...	...	...	
900	3.72	266	280	104	27.1	47.8	...	...	...	...	...	...	
915	3.69	271	285	...	27.8	48.4	...	...	...	...	...	...	
930	3.66	276	290	105	28.5	49.0	...	...	...	...	...	...	
950	3.63	280	295	...	29.2	49.7	...	...	...	...	...	...	
965	3.6	285	300	...	29.8	50.2	...	...	...	...	...	...	
995	3.54	295	310	...	31	51.3	...	...	...	...	...	...	
1030	3.49	304	320	...	32.2	52.3	...	...	...	...	...	...	
1060	3.43	314	330	...	33.3	53.6	...	...	...	...	...	...	





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