

# ***FORNAX*** ***Cutting Tools***

## **STANDART SOLID END MILL & STANDART SOLID CARBIDE DRILL**

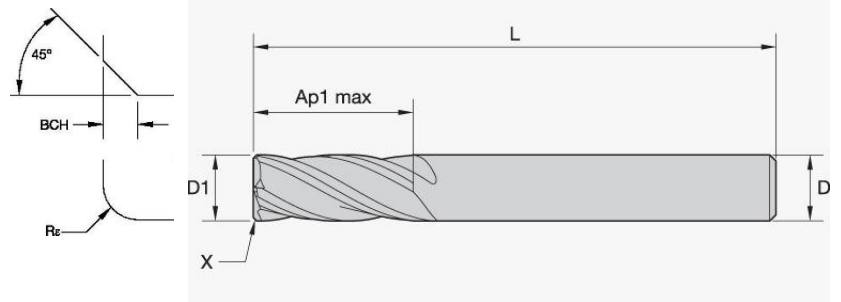
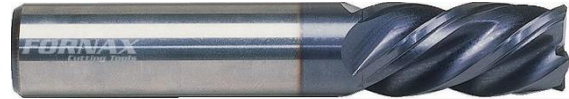
### **CATALOGUE**

## STANDART SOLID END MILL

### Application



### Workpiece Material



Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7101000	HPEM03030080500000004	FP15PE	Straight-Cylindrical	3	3	8	50	0	0	4
7101009	HPEM04040100500000004	FP15PE	Straight-Cylindrical	4	4	10	50	0	0	4
7101018	HPEM05050120500000004	FP15PE	Straight-Cylindrical	5	5	12	50	0	0	4
7101027	HPEM06060130570000004	FP15PE	Straight-Cylindrical	6	6	13	57	0	0	4
7101036	HPEM08080190630000004	FP15PE	Straight-Cylindrical	8	8	19	63	0	0	4
7101045	HPEM10100220720000004	FP15PE	Straight-Cylindrical	10	10	22	72	0	0	4
7101054	HPEM12120300830000004	FP15PE	Straight-Cylindrical	12	12	30	83	0	0	4
7101063	HPEM14140300830000004	FP15PE	Straight-Cylindrical	14	14	30	83	0	0	4
7101072	HPEM16160400920000004	FP15PE	Straight-Cylindrical	16	16	40	92	0	0	4
7101081	HPEM18180400920000004	FP15PE	Straight-Cylindrical	18	18	40	92	0	0	4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7101090	HPEM20200381040000004	FP15PE	Straight-Cylindrical	20	20	38	104	0	0	4
7101099	HPEM03030080500000004	FP15PE	Straight-Cylindrical	3	3	8	50			4
7101108	HPEM04040100500000004	FP15PE	Straight-Cylindrical	4	4	10	50			4
7101117	HPEM05050120500000004	FP15PE	Straight-Cylindrical	5	5	12	50			4
7101126	HPEM06060130570000254	FP15PE	Straight-Cylindrical	6	6	13	57		0.25	4
7101135	HPEM08080190630000304	FP15PE	Straight-Cylindrical	8	8	19	63		0.3	4
7101144	HPEM10100220720000354	FP15PE	Straight-Cylindrical	10	10	22	72		0.35	4
7101153	HPEM12120300830000404	FP15PE	Straight-Cylindrical	12	12	30	83		0.4	4
7101162	HPEM14140300830000454	FP15PE	Straight-Cylindrical	14	14	30	83		0.45	4
7101171	HPEM16160400920000504	FP15PE	Straight-Cylindrical	16	16	40	92		0.5	4
7101180	HPEM18180400920000604	FP15PE	Straight-Cylindrical	18	18	40	92		0.6	4
7101189	HPEM20200381040000604	FP15PE	Straight-Cylindrical	20	20	38	104		0.6	4
7101198	HPEM03030080500050004	FP15PE	Straight-Cylindrical	3	3	8	50	0.5		4
7101207	HPEM04040100500050004	FP15PE	Straight-Cylindrical	4	4	10	50	0.5		4
7101216	HPEM05050120500050004	FP15PE	Straight-Cylindrical	5	5	12	50	0.5		4
7101225	HPEM06060130570050004	FP15PE	Straight-Cylindrical	6	6	13	57	0.5		4
7101234	HPEM08080190630050004	FP15PE	Straight-Cylindrical	8	8	19	63	0.5		4
7101243	HPEM10100220720050004	FP15PE	Straight-Cylindrical	10	10	22	72	0.5		4
7101252	HPEM12120300830050004	FP15PE	Straight-Cylindrical	12	12	30	83	0.5		4
7101261	HPEM14140300830050004	FP15PE	Straight-Cylindrical	14	14	30	83	0.5		4
7101270	HPEM16160400920050004	FP15PE	Straight-Cylindrical	16	16	40	92	0.5		4
7101279	HPEM18180400920050004	FP15PE	Straight-Cylindrical	18	18	40	92	0.5		4
7101288	HPEM20200381040050004	FP15PE	Straight-Cylindrical	20	20	38	104	0.5		4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7101297	HPEM03030080500100004	FP15PE	Straight-Cylindrical	3	3	8	50	1		4
7101306	HPEM04040100500100004	FP15PE	Straight-Cylindrical	4	4	10	50	1		4
7101315	HPEM05050120500100004	FP15PE	Straight-Cylindrical	5	5	12	50	1		4
7101324	HPEM06060130570100004	FP15PE	Straight-Cylindrical	6	6	13	57	1		4
7101333	HPEM08080190630100004	FP15PE	Straight-Cylindrical	8	8	19	63	1		4
7101342	HPEM10100220720100004	FP15PE	Straight-Cylindrical	10	10	22	72	1		4
7101351	HPEM12120300830100004	FP15PE	Straight-Cylindrical	12	12	30	83	1		4
7101360	HPEM14140300830100004	FP15PE	Straight-Cylindrical	14	14	30	83	1		4
7101369	HPEM16160400920100004	FP15PE	Straight-Cylindrical	16	16	40	92	1		4
7101378	HPEM18180400920100004	FP15PE	Straight-Cylindrical	18	18	40	92	1		4
7101387	HPEM20200381040100004	FP15PE	Straight-Cylindrical	20	20	38	104	1		4
7101396	HPEM03030080500150002	FP15PE	Straight-Cylindrical	3	3	8	50	1.5		2
7101405	HPEM04040100500200002	FP15PE	Straight-Cylindrical	4	4	10	50	2		2
7101414	HPEM05050120500250002	FP15PE	Straight-Cylindrical	5	5	12	50	2.5		2
7101423	HPEM06060130570300002	FP15PE	Straight-Cylindrical	6	6	13	57	3		2
7101432	HPEM08080190630400002	FP15PE	Straight-Cylindrical	8	8	19	63	4		2
7101441	HPEM10100220720500002	FP15PE	Straight-Cylindrical	10	10	22	72	5		2
7101450	HPEM12120300830600002	FP15PE	Straight-Cylindrical	12	12	30	83	6		2
7101459	HPEM14140300830700002	FP15PE	Straight-Cylindrical	14	14	30	83	7		2
7101468	HPEM16160400920800002	FP15PE	Straight-Cylindrical	16	16	40	92	8		2
7101477	HPEM18180400920900002	FP15PE	Straight-Cylindrical	18	18	40	92	9		2
7101486	HPEM20200381041000002	FP15PE	Straight-Cylindrical	20	20	38	104	10		2
7101495	HPEM03030080500150004	FP15PE	Straight-Cylindrical	3	3	8	50	1.5		4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7101504	HPEM04040100500200004	FP15PE	Straight-Cylindrical	4	4	10	50	2		4
7101513	HPEM05050120500250004	FP15PE	Straight-Cylindrical	5	5	12	50	2.5		4
7101522	HPEM06060130570300004	FP15PE	Straight-Cylindrical	6	6	13	57	3		4
7101531	HPEM08080190630400004	FP15PE	Straight-Cylindrical	8	8	19	63	4		4
7101540	HPEM10100220720500004	FP15PE	Straight-Cylindrical	10	10	22	72	5		4
7101549	HPEM12120300830600004	FP15PE	Straight-Cylindrical	12	12	30	83	6		4
7101558	HPEM14140300830700004	FP15PE	Straight-Cylindrical	14	14	30	83	7		4
7101567	HPEM16160400920800004	FP15PE	Straight-Cylindrical	16	16	40	92	8		4
7101576	HPEM18180400920900004	FP15PE	Straight-Cylindrical	18	18	40	92	9		4
7101585	HPEM20200381041000004	FP15PE	Straight-Cylindrical	20	20	38	104	10		4
7101810	HPEM03030151000000004	FP15PE	Straight-Cylindrical	3	3	15	100	0	0	4
7101819	HPEM04040201000000004	FP15PE	Straight-Cylindrical	4	4	20	100	0	0	4
7101828	HPEM05050251000000004	FP15PE	Straight-Cylindrical	5	5	25	100	0	0	4
7101837	HPEM06060301000000004	FP15PE	Straight-Cylindrical	6	6	30	100	0	0	4
7101846	HPEM08080401000000004	FP15PE	Straight-Cylindrical	8	8	40	100	0	0	4
7101855	HPEM10100451000000004	FP15PE	Straight-Cylindrical	10	10	45	100	0	0	4
7101864	HPEM12120451000000004	FP15PE	Straight-Cylindrical	12	12	45	100	0	0	4
7101873	HPEM14140601500000004	FP15PE	Straight-Cylindrical	14	14	60	150	0	0	4
7101882	HPEM16160701500000004	FP15PE	Straight-Cylindrical	16	16	70	150	0	0	4
7101891	HPEM18180701500000004	FP15PE	Straight-Cylindrical	18	18	70	150	0	0	4
7101900	HPEM20200701500000004	FP15PE	Straight-Cylindrical	20	20	70	150	0	0	4
7101909	HPEM03030151000100004	FP15PE	Straight-Cylindrical	3	3	15	100			4
7101918	HPEM04040201000100004	FP15PE	Straight-Cylindrical	4	4	20	100			4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7101927	HPEM05050251000100004	FP15PE	Straight-Cylindrical	5	5	25	100			4
7101936	HPEM06060251000100004	FP15PE	Straight-Cylindrical	6	6	30	100	0.25		4
7101945	HPEM08080401000100004	FP15PE	Straight-Cylindrical	8	8	40	100	0.3		4
7101954	HPEM10100401000100004	FP15PE	Straight-Cylindrical	10	10	45	100	0.35		4
7101963	HPEM12120451000100004	FP15PE	Straight-Cylindrical	12	12	45	100	0.4		4
7101972	HPEM14140451500100004	FP15PE	Straight-Cylindrical	14	14	60	150	0.45		4
7101981	HPEM16160701500100004	FP15PE	Straight-Cylindrical	16	16	70	150	0.5		4
7101990	HPEM18180701500100004	FP15PE	Straight-Cylindrical	18	18	70	150	0.6		4
7101999	HPEM20200701500100004	FP15PE	Straight-Cylindrical	20	20	70	150	0.6		4
7102008	HPEM03030151000050004	FP15PE	Straight-Cylindrical	3	3	15	100	0.5		4
7102017	HPEM04040201000050004	FP15PE	Straight-Cylindrical	4	4	20	100	0.5		4
7102026	HPEM05050251000050004	FP15PE	Straight-Cylindrical	5	5	25	100	0.5		4
7102035	HPEM06060301000050004	FP15PE	Straight-Cylindrical	6	6	30	100	0.5		4
7102044	HPEM08080401000050004	FP15PE	Straight-Cylindrical	8	8	40	100	0.5		4
7102053	HPEM10100451000050004	FP15PE	Straight-Cylindrical	10	10	45	100	0.5		4
7102062	HPEM12120451000050004	FP15PE	Straight-Cylindrical	12	12	45	100	0.5		4
7102071	HPEM14140601500050004	FP15PE	Straight-Cylindrical	14	14	60	150	0.5		4
7102080	HPEM16160701500050004	FP15PE	Straight-Cylindrical	16	16	70	150	0.5		4
7102089	HPEM18180701500050004	FP15PE	Straight-Cylindrical	18	18	70	150	0.5		4
7102098	HPEM20200701500050004	FP15PE	Straight-Cylindrical	20	20	70	150	0.5		4
7102107	HPEM03030151000100004	FP15PE	Straight-Cylindrical	3	3	15	100	1		4
7102116	HPEM04040201000100004	FP15PE	Straight-Cylindrical	4	4	20	100	1		4
7102125	HPEM05050251000100004	FP15PE	Straight-Cylindrical	5	5	25	100	1		4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7102134	HPEM06060301000100004	FP15PE	Straight-Cylindrical	6	6	30	100	1		4
7102143	HPEM08080401000100004	FP15PE	Straight-Cylindrical	8	8	40	100	1		4
7102152	HPEM10100451000100004	FP15PE	Straight-Cylindrical	10	10	45	100	1		4
7102161	HPEM12120451000100004	FP15PE	Straight-Cylindrical	12	12	45	100	1		4
7102170	HPEM14140601500100004	FP15PE	Straight-Cylindrical	14	14	60	150	1		4
7102179	HPEM16160701500100004	FP15PE	Straight-Cylindrical	16	16	70	150	1		4
7102188	HPEM18180701500100004	FP15PE	Straight-Cylindrical	18	18	70	150	1		4
7102197	HPEM20200701500100004	FP15PE	Straight-Cylindrical	20	20	70	150	1		4
7102206	HPEM03030151000150002	FP15PE	Straight-Cylindrical	3	3	15	100	1.5		2
7102215	HPEM04040201000200002	FP15PE	Straight-Cylindrical	4	4	20	100	2		2
7102224	HPEM05050251000250002	FP15PE	Straight-Cylindrical	5	5	25	100	2.5		2
7102233	HPEM06060301000300002	FP15PE	Straight-Cylindrical	6	6	30	100	3		2
7102242	HPEM08080401000400002	FP15PE	Straight-Cylindrical	8	8	40	100	4		2
7102251	HPEM10100451000500002	FP15PE	Straight-Cylindrical	10	10	45	100	5		2
7102260	HPEM12120451000600002	FP15PE	Straight-Cylindrical	12	12	45	100	6		2
7102269	HPEM14140701500700002	FP15PE	Straight-Cylindrical	14	14	60	150	7		2
7102278	HPEM16160701500800002	FP15PE	Straight-Cylindrical	16	16	70	150	8		2
7102287	HPEM18180701500900002	FP15PE	Straight-Cylindrical	18	18	70	150	9		2
7102296	HPEM20200701501000002	FP15PE	Straight-Cylindrical	20	20	70	150	10		2
7102305	HPEM03030151000150004	FP15PE	Straight-Cylindrical	3	3	15	100	1.5		4
7102314	HPEM04040201000200004	FP15PE	Straight-Cylindrical	4	4	20	100	2		4
7102323	HPEM05050251000250004	FP15PE	Straight-Cylindrical	5	5	25	100	2.5		4
7102332	HPEM06060301000300004	FP15PE	Straight-Cylindrical	6	6	30	100	3		4
7102341	HPEM08080401000400004	FP15PE	Straight-Cylindrical	8	8	40	100	4		4

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7102350	HPEM10100451000500004	FP15PE	Straight-Cylindrical	10	10	45	100	5		4
7102359	HPEM12120451000600004	FP15PE	Straight-Cylindrical	12	12	45	100	6		4
7102368	HPEM14140701500700004	FP15PE	Straight-Cylindrical	14	14	60	150	7		4
7102377	HPEM16160701500800004	FP15PE	Straight-Cylindrical	16	16	70	150	8		4
7102386	HPEM18180701500900004	FP15PE	Straight-Cylindrical	18	18	70	150	9		4
7102395	HPEM20200701501000004	FP15PE	Straight-Cylindrical	20	20	70	150	10		4
7102449	HPEM10100451000400004	FP15PE	Straight-Cylindrical	10	10	45	110	4		5
7102458	HPSM12120451100400005	FP15PE	Straight-Cylindrical	12	12	45	110	4		5
7102467	HPEM14140451100400004	FP15PE	Straight-Cylindrical	14	14	45	110	4		5
7102476	HPSM16160451100400005	FP15PE	Straight-Cylindrical	16	16	45	110	4		5
7102485	HPEM18180451100400004	FP15PE	Straight-Cylindrical	18	18	45	110	4		5
7102494	HPEM20200451100400004	FP15PE	Straight-Cylindrical	20	20	45	110	4		5
7102503	HPNM03030080500150002		Straight-Cylindrical	3	3	8	50	1.5		2
7102512	HPNM04040100500200002		Straight-Cylindrical	4	4	10	50	2		2
7102521	HPNM05050120500250002		Straight-Cylindrical	5	5	12	50	2.5		2
7102530	HPNM06060130570300002		Straight-Cylindrical	6	6	13	57	3		2
7102539	HPNM08080190630400002		Straight-Cylindrical	8	8	19	63	4		2
7102548	HPNM10100220720500002		Straight-Cylindrical	10	10	22	72	5		2
7102557	HPNM12120280830600002		Straight-Cylindrical	12	12	28	83	6		2
7102566	HPNM14140280830700002		Straight-Cylindrical	14	14	28	83	7		2
7102575	HPNM16160320920800002		Straight-Cylindrical	16	16	32	92	8		2
7102584	HPNM18180320920900002		Straight-Cylindrical	18	18	32	92	9		2
7102593	HPNM20200381041000002		Straight-Cylindrical	20	20	38	104	10		2
7102602	HPNM03030080500000002		Straight-Cylindrical	3	3	8	100	0		2

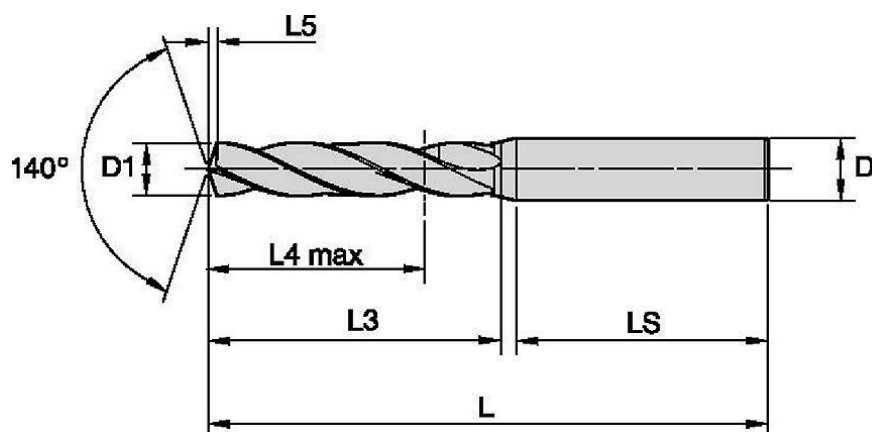


Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	D	Ap1 Max	L	Re	BCH	Z
7102611	HPNM04040100500000002		Straight-Cylindrical	4	4	10	100	0		2
7102620	HPNM05050120500000002		Straight-Cylindrical	5	5	12	100	0		2
7102629	HPNM06060130570000002		Straight-Cylindrical	6	6	13	100	0		2
7102638	HPNM08080190630000002		Straight-Cylindrical	8	8	19	100	0		2
7102647	HPNM10100220720000002		Straight-Cylindrical	10	10	22	100	0		2
7102656	HPNM12120280830000002		Straight-Cylindrical	12	12	28	100	0		2
7102665	HPNM14140280830000002		Straight-Cylindrical	14	14	28	150	0		2
7102674	HPNM16160320920000002		Straight-Cylindrical	16	16	32	150	0		2
7102683	HPNM18180320920000002		Straight-Cylindrical	18	18	32	150	0		2
7102692	HPNM20200381040000002		Straight-Cylindrical	20	20	38	150	0		2

## STANDART SOLIDCARBIDE DRILL



Workpiece Material



Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108030	HPD108A03000	FP20PD	Straight-Cylindrical	3	33	40	0.5	78	36	6
5108031	HPD108A03100	FP20PD	Straight-Cylindrical	3.1	33	40	0.5	78	36	6
5108032	HPD108A03200	FP20PD	Straight-Cylindrical	3.2	33	40	0.5	78	36	6
5108033	HPD108A03300	FP20PD	Straight-Cylindrical	3.3	33	40	0.5	78	36	6
5108034	HPD108A03400	FP20PD	Straight-Cylindrical	3.4	33	40	0.6	78	36	6
5108035	HPD108A03500	FP20PD	Straight-Cylindrical	3.5	33	49	0.6	78	36	6
5108036	HPD108A03600	FP20PD	Straight-Cylindrical	3.6	33	40	0.6	78	36	6
5108037	HPD108A03700	FP20PD	Straight-Cylindrical	3.7	33	40	0.6	78	36	6

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108038	HPD108A03800	FP20PD	Straight-Cylindrical	3.8	41	49	0.6	87	36	6
5108039	HPD108A03900	FP20PD	Straight-Cylindrical	3.9	41	40	0.6	87	36	6
5108040	HPD108A04000	FP20PD	Straight-Cylindrical	4	41	40	0.7	87	36	6
5108041	HPD108A04100	FP20PD	Straight-Cylindrical	4.1	41	49	0.7	87	36	6
5108042	HPD108A04200	FP20PD	Straight-Cylindrical	4.2	41	49	0.7	87	36	6
5108043	HPD108A04300	FP20PD	Straight-Cylindrical	4.3	41	49	0.7	87	36	6
5108044	HPD108A04400	FP20PD	Straight-Cylindrical	4.4	41	49	0.7	87	36	6
5108045	HPD108A04500	FP20PD	Straight-Cylindrical	4.5	41	49	0.7	87	36	6
5108046	HPD108A04600	FP20PD	Straight-Cylindrical	4.6	41	49	0.8	87	36	6
5108047	HPD108A04700	FP20PD	Straight-Cylindrical	4.7	41	56	0.8	87	36	6
5108048	HPD108A04800	FP20PD	Straight-Cylindrical	4.8	48	56	0.8	94	36	6
5108049	HPD108A04900	FP20PD	Straight-Cylindrical	4.9	48	56	0.8	94	36	6
5108050	HPD108A05000	FP20PD	Straight-Cylindrical	5	48	56	0.8	94	36	6
5108051	HPD108A05100	FP20PD	Straight-Cylindrical	5.1	48	56	0.8	94	36	6
5108052	HPD108A05200	FP20PD	Straight-Cylindrical	5.2	48	56	0.9	94	36	6
5108053	HPD108A05300	FP20PD	Straight-Cylindrical	5.3	48	56	0.9	94	36	6
5108054	HPD108A05400	FP20PD	Straight-Cylindrical	5.4	48	56	0.9	94	36	6
5108055	HPD108A05500	FP20PD	Straight-Cylindrical	5.5	48	56	0.9	94	36	6
5108056	HPD108A05600	FP20PD	Straight-Cylindrical	5.6	48	56	0.9	94	36	6
5108057	HPD108A05700	FP20PD	Straight-Cylindrical	5.7	48	56	1	94	36	6
5108058	HPD108A05800	FP20PD	Straight-Cylindrical	5.8	48	67	1	94	36	6
5108059	HPD108A05900	FP20PD	Straight-Cylindrical	5.9	48	67	1	94	36	6
5108060	HPD108A06000	FP20PD	Straight-Cylindrical	6	48	67	1	94	36	6

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108061	HPD108A06100	FP20PD	Straight-Cylindrical	6.1	57	67	1	105	36	8
5108062	HPD108A06200	FP20PD	Straight-Cylindrical	6.2	57	67	1	105	36	8
5108063	HPD108A06300	FP20PD	Straight-Cylindrical	6.3	57	56	1.1	105	36	8
5108064	HPD108A06400	FP20PD	Straight-Cylindrical	6.4	57	67	1.1	105	36	8
5108065	HPD108A06500	FP20PD	Straight-Cylindrical	6.5	57	67	1.1	105	36	8
5108066	HPD108A06600	FP20PD	Straight-Cylindrical	6.6	57	67	1.1	105	36	8
5108067	HPD108A06700	FP20PD	Straight-Cylindrical	6.7	57	67	1.1	105	36	8
5108068	HPD108A06800	FP20PD	Straight-Cylindrical	6.8	57	67	1.1	105	36	8
5108069	HPD108A06900	FP20PD	Straight-Cylindrical	6.9	57	67	1.2	105	36	8
5108070	HPD108A07000	FP20PD	Straight-Cylindrical	7	57	72	1.2	105	36	8
5108071	HPD108A07100	FP20PD	Straight-Cylindrical	7.1	61	72	1.2	110	36	8
5108072	HPD108A07200	FP20PD	Straight-Cylindrical	7.2	61	72	1.2	110	36	8
5108073	HPD108A07300	FP20PD	Straight-Cylindrical	7.3	61	72	1.2	110	36	8
5108074	HPD108A07400	FP20PD	Straight-Cylindrical	7.4	61	72	1.3	110	36	8
5108075	HPD108A07500	FP20PD	Straight-Cylindrical	7.5	61	72	1.3	110	36	8
5108076	HPD108A07600	FP20PD	Straight-Cylindrical	7.6	61	80	1.3	110	36	8
5108077	HPD108A07700	FP20PD	Straight-Cylindrical	7.7	61	80	1.3	110	36	8
5108078	HPD108A07800	FP20PD	Straight-Cylindrical	7.8	61	80	1.3	110	36	8
5108079	HPD108A07900	FP20PD	Straight-Cylindrical	7.9	61	80	1.3	110	36	8
5108080	HPD108A08000	FP20PD	Straight-Cylindrical	8	61	80	1.4	110	36	8
5108081	HPD108A08100	FP20PD	Straight-Cylindrical	8.1	68	80	1.4	122	40	10
5108082	HPD108A08200	FP20PD	Straight-Cylindrical	8.2	68	80	1.4	122	40	10
5108083	HPD108A08300	FP20PD	Straight-Cylindrical	8.3	68	80	1.4	122	40	10

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108084	HPD108A08400	FP20PD	Straight-Cylindrical	8.4	68	72	1.4	122	40	10
5108085	HPD108A08500	FP20PD	Straight-Cylindrical	8.5	68	80	1.4	122	40	10
5108086	HPD108A08600	FP20PD	Straight-Cylindrical	8.6	68	80	1.5	122	40	10
5108087	HPD108A08700	FP20PD	Straight-Cylindrical	8.7	68	72	1.5	122	40	10
5108088	HPD108A08800	FP20PD	Straight-Cylindrical	8.8	68	72	1.5	122	40	10
5108089	HPD108A08900	FP20PD	Straight-Cylindrical	8.9	68	72	1.5	122	40	10
5108090	HPD108A09000	FP20PD	Straight-Cylindrical	9	68	72	1.5	122	40	10
5108091	HPD108A09100	FP20PD	Straight-Cylindrical	9.1	68	80	1.5	122	40	10
5108092	HPD108A09200	FP20PD	Straight-Cylindrical	9.2	68	80	1.6	122	40	10
5108093	HPD108A09300	FP20PD	Straight-Cylindrical	9.3	68	80	1.6	122	40	10
5108094	HPD108A09400	FP20PD	Straight-Cylindrical	9.4	68	80	1.6	122	40	10
5108095	HPD108A09500	FP20PD	Straight-Cylindrical	9.5	68	80	1.6	122	40	10
5108096	HPD108A09600	FP20PD	Straight-Cylindrical	9.6	68	80	1.6	122	40	10
5108097	HPD108A09700	FP20PD	Straight-Cylindrical	9.7	68	80	1.7	122	40	10
5108098	HPD108A09800	FP20PD	Straight-Cylindrical	9.8	68	80	1.7	122	40	10
5108099	HPD108A09900	FP20PD	Straight-Cylindrical	9.9	68	80	1.7	122	40	10
5108100	HPD108A10000	FP20PD	Straight-Cylindrical	10	68	80	1.7	122	40	10
5108101	HPD108A10100	FP20PD	Straight-Cylindrical	10.1	79	94	1.7	141	45	12
5108102	HPD108A10200	FP20PD	Straight-Cylindrical	10.2	79	94	1.7	141	45	12
5108103	HPD108A10300	FP20PD	Straight-Cylindrical	10.3	79	94	1.8	141	45	12
5108104	HPD108A10400	FP20PD	Straight-Cylindrical	10.4	79	94	1.8	141	45	12
5108105	HPD108A10500	FP20PD	Straight-Cylindrical	10.5	79	94	1.8	141	45	12
5108106	HPD108A10600	FP20PD	Straight-Cylindrical	10.6	79	94	1.8	141	45	12

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108107	HPD108A10700	FP20PD	Straight-Cylindrical	10.7	79	94	1.8	141	45	12
5108108	HPD108A10800	FP20PD	Straight-Cylindrical	10.8	79	94	1.8	141	45	12
5108109	HPD108A10900	FP20PD	Straight-Cylindrical	10.9	79	94	1.9	141	45	12
5108110	HPD108A11000	FP20PD	Straight-Cylindrical	11	79	94	1.9	141	45	12
5108111	HPD108A11100	FP20PD	Straight-Cylindrical	11.1	79	94	1.9	141	45	12
5108112	HPD108A11200	FP20PD	Straight-Cylindrical	11.2	79	94	1.9	141	45	12
5108113	HPD108A11300	FP20PD	Straight-Cylindrical	11.3	79	94	1.9	141	45	12
5108114	HPD108A11400	FP20PD	Straight-Cylindrical	11.4	79	94	2	141	45	12
5108115	HPD108A11500	FP20PD	Straight-Cylindrical	11.5	79	94	2	141	45	12
5108116	HPD108A11600	FP20PD	Straight-Cylindrical	11.6	79	94	2	141	45	12
5108117	HPD108A11700	FP20PD	Straight-Cylindrical	11.7	79	94	2	141	45	12
5108118	HPD108A11800	FP20PD	Straight-Cylindrical	11.8	79	94	2	141	45	12
5108119	HPD108A11900	FP20PD	Straight-Cylindrical	11.9	79	94	2	141	45	12
5108120	HPD108A12000	FP20PD	Straight-Cylindrical	12	79	94	2.1	141	45	12
5108121	HPD108A12100	FP20PD	Straight-Cylindrical	12.1	91	108	2.1	155	45	14
5108122	HPD108A12200	FP20PD	Straight-Cylindrical	12.2	91	108	2.1	155	45	14
5108123	HPD108A12300	FP20PD	Straight-Cylindrical	12.3	91	108	2.1	155	45	14
5108124	HPD108A12400	FP20PD	Straight-Cylindrical	12.4	91	108	2.1	155	45	14
5108125	HPD108A12500	FP20PD	Straight-Cylindrical	12.5	91	108	2.1	155	45	14
5108126	HPD108A12600	FP20PD	Straight-Cylindrical	12.6	91	108	2.2	155	45	14
5108127	HPD108A12700	FP20PD	Straight-Cylindrical	12.7	91	108	2.2	155	45	14
5108128	HPD108A12800	FP20PD	Straight-Cylindrical	12.8	91	108	2.2	155	45	14
5108129	HPD108A12900	FP20PD	Straight-Cylindrical	12.9	91	108	2.2	155	45	14

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108130	HPD108A13000	FP20PD	Straight-Cylindrical	13	91	108	2.2	155	45	14
5108131	HPD108A13100	FP20PD	Straight-Cylindrical	13.1	91	108	2.3	155	45	14
5108132	HPD108A13200	FP20PD	Straight-Cylindrical	13.2	91	108	2.3	155	45	14
5108133	HPD108A13300	FP20PD	Straight-Cylindrical	13.3	91	108	2.3	155	45	14
5108134	HPD108A13400	FP20PD	Straight-Cylindrical	13.4	91	108	2.3	155	45	14
5108135	HPD108A13500	FP20PD	Straight-Cylindrical	13.5	91	108	2.3	155	45	14
5108136	HPD108A13600	FP20PD	Straight-Cylindrical	13.6	91	108	2.3	155	45	14
5108137	HPD108A13700	FP20PD	Straight-Cylindrical	13.7	91	108	2.4	155	45	14
5108138	HPD108A13800	FP20PD	Straight-Cylindrical	13.8	91	108	2.4	155	45	14
5108139	HPD108A13900	FP20PD	Straight-Cylindrical	13.9	91	108	2.4	155	45	14
5108140	HPD108A14000	FP20PD	Straight-Cylindrical	14	91	108	2.4	155	45	14
5108141	HPD108A14100	FP20PD	Straight-Cylindrical	14.1	101	121	2.4	171	48	16
5108142	HPD108A14200	FP20PD	Straight-Cylindrical	14.2	101	121	2.5	171	48	16
5108143	HPD108A14300	FP20PD	Straight-Cylindrical	14.3	101	121	2.5	171	48	16
5108144	HPD108A14400	FP20PD	Straight-Cylindrical	14.4	101	121	2.5	171	48	16
5108145	HPD108A14500	FP20PD	Straight-Cylindrical	14.5	101	121	2.5	171	48	16
5108146	HPD108A14600	FP20PD	Straight-Cylindrical	14.6	101	121	2.5	171	48	16
5108147	HPD108A14700	FP20PD	Straight-Cylindrical	14.7	101	121	2.5	171	48	16
5108148	HPD108A14800	FP20PD	Straight-Cylindrical	14.8	101	121	2.6	171	48	16
5108149	HPD108A14900	FP20PD	Straight-Cylindrical	14.9	101	121	2.6	171	48	16
5108150	HPD108A15000	FP20PD	Straight-Cylindrical	15	101	121	2.6	171	48	16
5108151	HPD108A15100	FP20PD	Straight-Cylindrical	15.1	101	121	2.6	171	48	16
5108152	HPD108A15200	FP20PD	Straight-Cylindrical	15.2	101	121	2.6	171	48	16

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108153	HPD108A15300	FP20PD	Straight-Cylindrical	15.3	101	121	2.6	171	48	16
5108154	HPD108A15400	FP20PD	Straight-Cylindrical	15.4	101	121	2.7	171	48	16
5108155	HPD108A15500	FP20PD	Straight-Cylindrical	15.5	101	121	2.7	171	48	16
5108156	HPD108A15600	FP20PD	Straight-Cylindrical	15.6	101	121	2.7	171	48	16
5108157	HPD108A15700	FP20PD	Straight-Cylindrical	15.7	101	121	2.7	171	48	16
5108158	HPD108A15800	FP20PD	Straight-Cylindrical	15.8	101	121	2.7	171	48	16
5108159	HPD108A15900	FP20PD	Straight-Cylindrical	15.9	101	121	2.8	171	48	16
5108160	HPD108A16000	FP20PD	Straight-Cylindrical	16	101	121	2.8	171	48	16
5108161	HPD108A16100	FP20PD	Straight-Cylindrical	16.1	113	135	2.8	185	48	18
5108162	HPD108A16200	FP20PD	Straight-Cylindrical	16.2	113	135	2.8	185	48	18
5108163	HPD108A16300	FP20PD	Straight-Cylindrical	16.3	113	135	2.8	185	48	18
5108164	HPD108A16400	FP20PD	Straight-Cylindrical	16.4	113	135	2.8	185	48	18
5108165	HPD108A16500	FP20PD	Straight-Cylindrical	16.5	113	135	2.9	185	48	18
5108166	HPD108A16600	FP20PD	Straight-Cylindrical	16.6	113	135	2.9	185	48	18
5108167	HPD108A16700	FP20PD	Straight-Cylindrical	16.7	113	135	2.9	185	48	18
5108168	HPD108A16800	FP20PD	Straight-Cylindrical	16.8	113	135	2.9	185	48	18
5108169	HPD108A16900	FP20PD	Straight-Cylindrical	16.9	113	135	2.9	185	48	18
5108170	HPD108A17000	FP20PD	Straight-Cylindrical	17	113	135	2.9	185	48	18
5108171	HPD108A17100	FP20PD	Straight-Cylindrical	17.1	113	135	3	185	48	18
5108172	HPD108A17200	FP20PD	Straight-Cylindrical	17.2	113	135	3	185	48	18
5108173	HPD108A17300	FP20PD	Straight-Cylindrical	17.3	113	135	3	185	48	18
5108174	HPD108A17400	FP20PD	Straight-Cylindrical	17.4	113	135	3	185	48	18
5108175	HPD108A17500	FP20PD	Straight-Cylindrical	17.5	113	135	3	185	48	18



Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108176	HPD108A17600	FP20PD	Straight-Cylindrical	17.6	113	135	3.1	185	48	18
5108177	HPD108A17700	FP20PD	Straight-Cylindrical	17.7	113	135	3.1	185	48	18
5108178	HPD108A17800	FP20PD	Straight-Cylindrical	17.8	113	135	3.1	185	48	18
5108179	HPD108A17900	FP20PD	Straight-Cylindrical	17.9	113	135	3.1	185	48	18
5108180	HPD108A18000	FP20PD	Straight-Cylindrical	18	113	135	3.1	185	48	18
5108181	HPD108A18100	FP20PD	Straight-Cylindrical	18.1	124	148	3.1	200	50	20
5108182	HPD108A18200	FP20PD	Straight-Cylindrical	18.2	124	148	3.2	200	50	20
5108183	HPD108A18300	FP20PD	Straight-Cylindrical	18.3	124	148	3.2	200	50	20
5108184	HPD108A18400	FP20PD	Straight-Cylindrical	18.4	124	148	3.2	200	50	20
5108185	HPD108A18500	FP20PD	Straight-Cylindrical	18.5	124	148	3.2	200	50	20
5108186	HPD108A18600	FP20PD	Straight-Cylindrical	18.6	124	148	3.2	200	50	20
5108187	HPD108A18700	FP20PD	Straight-Cylindrical	18.7	124	148	3.2	200	50	20
5108188	HPD108A18800	FP20PD	Straight-Cylindrical	18.8	124	148	3.3	200	50	20
5108189	HPD108A18900	FP20PD	Straight-Cylindrical	18.9	124	148	3.3	200	50	20
5108190	HPD108A19000	FP20PD	Straight-Cylindrical	19	124	148	3.3	200	50	20
5108191	HPD108A19100	FP20PD	Straight-Cylindrical	19.1	124	148	3.3	200	50	20
5108192	HPD108A19200	FP20PD	Straight-Cylindrical	19.2	124	148	3.3	200	50	20
5108193	HPD108A19300	FP20PD	Straight-Cylindrical	19.3	124	148	3.4	200	50	20
5108194	HPD108A19400	FP20PD	Straight-Cylindrical	19.4	124	148	3.4	200	50	20
5108195	HPD108A19500	FP20PD	Straight-Cylindrical	19.5	124	148	3.4	200	50	20
5108196	HPD108A19600	FP20PD	Straight-Cylindrical	19.6	124	148	3.4	200	50	20
5108197	HPD108A19700	FP20PD	Straight-Cylindrical	19.7	124	148	3.4	200	50	20
5108198	HPD108A19800	FP20PD	Straight-Cylindrical	19.8	124	148	3.4	200	50	20

Sap Number	Catalog Number	Grade	Adapter Style Machine Side	D1	L4 Max.	L3	L5	L	LS	D
5108199	HPD108A19900	FP20PD	Straight-Cylindrical	19.9	124	148	3.5	200	50	20
5108200	HPD108A20000	FP20PD	Straight-Cylindrical	20	124	148	3.5	200	50	20

