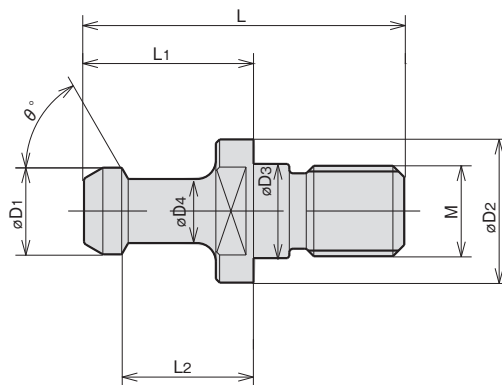


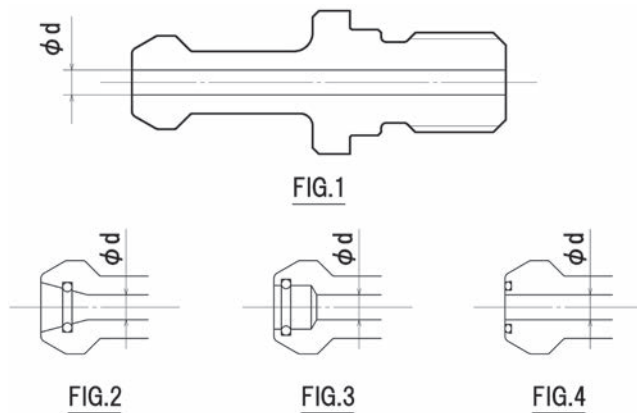
PULL STUD BOLT



Taper	CODE	$\Phi D1$	$\Phi D2$	$\Phi D3$	$\Phi D4$	L	L1	L2	M	θ°	Φd	FIG.	Standard Machine Builder
BT30 (BBT30)	P30T-MAS1 (SKD)	17000	11	16.5	12.5	7	43	23	18	M12	45	—	MAS- I
	P30T-MAS2 (SKD)	17001	11	16.5	12.5	7	43	23	18	M12	60	—	MAS- II
	P30T-JIS SKD	17308	12	16.5	12.5	8	43	23.4	18.4	M12	75	—	JIS
BT35	P35T-1 (MAS1)	17013	13	20	12.5	8.5	48	28	22.5	M12	45	—	MAS- I
BT40 (BBT40)	P40T-MAS1	17032	15	23	17	10	60	35	28	M16	45	—	MAS- I
	P40T-MAS2	17034	15	23	17	10	60	35	28	M16	60	—	MAS- II
	P40T-F2	17036	15	23	17	10	60	35	28	M16	90	—	BT40-90°
	P40T-1 SKD	17320	15	23	17	10	60	35	28	M16	45	—	MAS- I
	P40T-2 SKD	17322	15	23	17	10	60	35	28	M16	60	—	MAS- II
	P40T-F2 SKD	17324	15	23	17	10	60	35	28	M16	90	—	BT40-90°
	P40T-JIS	17430	19	23	17	14	54	29	23	M16	75	—	JIS
	P40T-JIS SKD	17338	19	23	17	14	54	29	23	M16	75	—	JIS
	P40T-V7.5N YAMAZAKI MAZAK	17422	18.8	22	17	12.45	44.1	19.11	14.03	M16	45	—	YAMAZAKI MAZAK
	P40T-V7.5N YAMAZAKI MAZAK SKD	17334	18.8	22	17	12.45	44.1	19.11	14.03	M16	45	—	YAMAZAKI MAZAK
	P40T-YAMAZAKI MAZAK (Old mold 90°)	17428	15	23	17	10	54.6	29.6	22.6	M16	90	—	YAMAZAKI MAZAK
P40T-M1 MITSUI	17418	15	23	17	10	50	25	18	M16	90	—	mitsui SEIKI	
BT50 (BBT50)	P50T-MAS1	17062	23	38	25	17	85	45	35	M24	45	—	MAS- I
	P50T-MAS2	17064	23	38	25	17	85	45	35	M24	60	—	MAS- II
	P50T-Y3	17070	23	38	25	17	85	45	35	M24	90	—	BT50-90°
	P50T-JIS	17495	28	38	25	21	74	34	25	M24	75	—	JIS
	P50T-V15N/V20 YAMAZAKI MAZAK	17492	28.96	37	25	20.83	65.2	25.2	17.58	M24	45	—	YAMAZAKI MAZAK
	P50T-1G	17446	23	38	25	17	85	45	35	M24	45	—	MAS- I
	P50T-2G	17448	23	38	25	17	85	45	35	M24	60	—	MAS- II
	P50T-M MITSUI	17488	24	36	25	18	71	31	23	M24	90	—	mitsui SEIKI
	P50T-4R Long type of MITSUBISHI	17498	23	38	25	17	110	70	60	M24	45	—	MITSUBISHI

- Note : 1. Please check operation manual of machines to select appropriate type of the pull stud.
2. SKD in Code means dies steel, metal of high-tensile strength.

PULL STUD BOLT WITH COOLANT HOLE



Taper	CODE		φD1	φD2	φD3	φD4	L	L1	L2	M	θ°	φd	FIG.	Standard Machine Builder
BT30 (BBT30)	P30T-1 (φ2.5) SKD	17300	11	16.5	12.5	7	43	23	18	M12	45	2.5	1	MAS- I
	P30T-2 (φ2.5) SKD	17302	11	16.5	12.5	7	43	23	18	M12	60	2.5	1	MAS- II
	P30T-1F (φ4&S10) D8/SKD	17312	11	16.5	12.5	8	43	23	18	M12	45	4	1	FANUC
	P30T-2B (φ2.5) D7.5/SKD	17314	11	16.5	12.5	8	43	23	18	M12	60	2.5	1	BROTHER
	P30T-JIS (φ4) /SKD	17310	12	16.5	12.5	8	43	23.4	18.4	M12	75	4	1	JIS
BT40 (BBT40)	P40T-1 (MAS1) φ4	17406	15	23	17	10	60	35	28	M16	45	4	1	MAS- I
	P40T-2 (MAS2) φ4	17408	15	23	17	10	60	35	28	M16	60	4	1	MAS- II
	P40T-1 (φ4&O15) SKD	17326	15	23	17	10	60	35	28	M16	45	4	1	MAS- I
	P40T-JIS (φ6&φ7)	17432	19	23	17	14	54	29	23	M16	75	7	1	JIS
	P40T-JIS (φ7) SKD	17340	19	23	17	14	54	29	23	M16	75	7	1	JIS
	P40T-JIS (φ7&O15)	17434	19	23	17	14	54	29	23	M16	75	7	1	MAKINO
	P40T-JIS (φ7&O15) SKD	17342	19	23	17	14	54	29	23	M16	75	7	1	MAKINO
	P40T-JIS (φ4&S15) OKUMA	17436	19	23	17	14	54	29	23	M16	75	4	1	OKUMA
	P40T-JIS (φ4&S15) OKUMA SKD	17344	19	23	17	14	54	29	23	M16	75	4	1	OKUMA
	P40T-JIS (φ7&With Side hole) YASUDA	17438	19	23	17	14	54	29	23	M16	75	7	1	YASUDA
	P40T-V7.5N YAMAZAKI MAZAK (φ7)	17424	18.8	22	17	12.45	44.1	19.11	14.03	M16	45	7	1	YAMAZAKI MAZAK
	P40T-YAMAZAKI MAZAK (φ7&O15) SKD	17336	18.8	22	17	12.45	44.1	19.11	14.03	M16	45	7	1	YAMAZAKI MAZAK
	P40T-MORI (φ7&P9 O15)	17411	19	23	17	14	54	29	23	M16	75	7	2	DMG MORI
	P40T-MORI (φ7&P9/O15) SKD	17332	19	23	17	14	54	29	23	M16	75	7	2	DMG MORI
	P40T-1 (φ3&P5/O15) OKUMA	17416	15	23	17	10	60	35	28	M16	45	3	2	OKUMA
P40T-1 (φ3&P6) JTEKT	17414	15	23	17	10	60	35	28	M16	45	3	3	JTEKT	
BT50 (BBT50)	P50T-1 (MAS1) φ6	17450	23	38	25	17	85	45	35	M24	45	6	1	MAS- I
	P50T-2 (MAS2) φ6	17452	23	38	25	17	85	45	35	M24	60	6	1	MAS- II
	P50T-Y3 (φ6)	17454	23	38	25	17	85	45	35	M24	90	6	1	BT50-90°
	P50T-1 (MAS1) φ6&P21	17456	23	38	25	17	85	45	35	M24	45	6	1	MAKINO
	P50T-2 (MAS2) φ6&P21	17458	23	38	25	17	85	45	35	M24	60	6	1	MAKINO
	P50T-JIS (φ10)	17496	28	38	25	21	74	34	25	M24	75	10	1	JIS
	P50T-JIS (φ6&P21)	17497	28	38	25	21	74	34	25	M24	75	6	1	MAKINO
	P50T-V15N/V20 YAMAZAKI MAZAK (φ10)	17494	28.96	37	25	20.83	65.2	25.2	17.58	M24	45	10	1	YAMAZAKI MAZAK
	P50T-1 (φ6&P21) OKUMA	17466	23	38	25	17	85	45	35	M24	45	6	1	OKUMA
	P50T-2 (φ6&P21) OKUMA	17468	23	38	25	17	85	45	35	M24	60	6	1	OKUMA
	P50T-1 (φ8&P9/P21) High pressure for DMG MORI	17478	23	38	25	17	85	45	35	M24	45	8	2	DMG MORI
	P50T-2 (φ8&P9/P21) High pressure for DMG MORI	17480	23	38	25	17	85	45	35	M24	60	8	2	DMG MORI
	P50T-1 (φ5.5&P9/P21) YASUDA	17470	23	38	25	17	85	45	35	M24	45	5.5	2	YASUDA · KOMATSU NTC
	P50T-2 (φ5.5&P9/P21) YASUDA	17472	23	38	25	17	85	45	35	M24	60	5.5	2	YASUDA
	P50T-1 (φ6&P9) JTEKT	17462	23	38	25	17	85	45	35	M24	45	6	3	JTEKT
	P50T-2 (φ6&P9) JTEKT	17464	23	38	25	17	85	45	35	M24	60	6	3	JTEKT
	P50T-1 (φ6&S9/P21) OKK	17482	23	38	25	17	85	45	35	M24	45	6	4	OKK
	P50T-2 (φ6&S9/P21) OKK	17484	23	38	25	17	85	45	35	M24	60	6	4	OKK
	P50T-1 (φ6&S9/P21) OKUMA	17474	23	38	25	17	85	45	35	M24	45	6	2	OKUMA
	P50T-2 (φ6&S9/P21) OKUMA	17476	23	38	25	17	85	45	35	M24	60	6	2	OKUMA
P50T-Y3 (φ6&S9/P21) OKK	17486	23	38	25	17	85	45	35	M24	90	6	4	OKK	
P50T-Y3 (φ8&P9 P21) High pressure for DMG MORI	17481	23	38	25	17	85	45	35	M24	90	8	2	DMG MORI	
P50T-M MITSUI (φ8)	17490	24	36	25	18	71	31	23	M24	90	8	1	MITSUI SEIKI	

Note : 1. Please check operation manual of machines to select appropriate type of the pull stud.
2. SKD in Code means dies steel, metal of high-tensile strength.

MACHINE MAKER

TYPE OF SPINDLE TAPER & PULL STUD BOLT CODE

Machine Builder	Machine Model	Shank	Standard	Code
IKEGAI	TV4 (HITOTSUBO KUN) , 4F, 4L	BT40	MAS- I	17032, (17320)
	TV-U4, 4L II H4 TH500 THU500	40	JIS	17430, (17338)
	TV5 (ANIKI) , U5 MX Series BX110P Series BX130P Series TH600 THU600 AH6, 8	50	MAS- I	17062
IWASHITA	IAM Series	BT40	MAS- II	17034, (17322)
	IAM Series	50	MAS- II	17064
ENSHU	S300 SS300 DT Center Series JE30S ES400	BT30	MAS- I	(17000)
	E-130 JE130 JE30S JE30G ES400 EV360, EV360T	30	MAS- II	(17001)
	Super400, 450FV VMC Series HMC Series	40	MAS- I	17032, (17320)
	JE S Series ES450, 450T EV450, 530S GE460H, 480H	40	MAS- II	17034, (17322)
	EV650, 600MV VMC Series HMC Series VE65E	50	MAS- I	17062
OKUMA	JE80, 80G EV530 EG580, 590H	50	MAS- II	17064
	MA, MB, MC, MD, MF, MU, MX-A Series VH-40 VR-40 MP-46V GENOSS Series	BT40	MAS- II	17034, (17322)
	Thru the coolant (JIS)	40	JIS	17434, (17344)
	MA, MB, MC, MD, MX-B MCV-A, B MCR, MU, MF Series MCM-B	50	MAS- II	17064
OKUMA	Thru the coolant	50	MAS- II	17468
	MILLAC V Series, H Series MAC TURNS Series MM-300 ML-300	BT40	MAS- I	17032, (17320)
	Thru the coolant	40	MAS- I	17416
	MILLAC V Series, H Series VTMS Series VMP-10, 16	50	MAS- II	17064
OKK	Thru the coolant	50	MAS- II	17476
	PM300, 350	BT30	JIS	(17308)
	PCV, TRC, VM, AMC, DGM, VP, GC, HM, HP, VC Series PG8 PM400 III DV5, V1 VB53 GR400	40	MAS- I	17032, (17320)
	MCV-350, 410/40 PCH-400, 500 HPV400 MPH-400	40	90°	17036, (17324)
	MCV, MCH, MHA, KCV, ACM, DCM, VM, HMS Series PCV-510, 620 VG5000 GC600 DV5	50	90°	17070
OHTORI	PCV50, 55, 60	50	MAS- I	17062
	OSH-54 OSV Series OSU-545 BMV II-85	BT40	MAS- I	17032, (17320)
	FTV-500, 500HV	40	JIS	17430, (17338)
	BMV-40NC (OP) , 400NC (OP) , 500LNC, 500ANC OSV-139 FTV-1200	50	MAS- I	17062
OM	OMC-40HS	BT40	MAS- I	17032, (17320)
	OMC-50V, 50HS	50	MAS- I	17062
	TDC Omega-M, VTLex-M, Neo α Series	50	MAS- II	17064
	Thru the coolant	BT50	MAS- II	17472
KITAMURA	HX-250G	BT30	JIS	(17308)
	Thru the coolant	30	JIS	(17310)
	Mycenter-3XG, 4XiF, 7X, HX400G, Supercell-400 Mytrunnion-5 JIGcenter-5	40	JIS	17430, (17338)
	Thru the coolant	40	JIS	17432
	Mycenter-4XiF, 7X, HX500i, 630i, 800iL, 1000i, 1250i, BridgeCenter-8F, 10	50	JIS	17495
	Thru the coolant	50	JIS	17496
KIRA	VMC, HMC, Arik, KN, VTC Series PC-30E 30F 30H 30W KPC30a, 30b HPC-30Vb PCV-30, 150	BT30	MAS- I	(17000)
	Thru the coolant	30	JIS	(17310)
	KV, Arik, VTC, KN Series PC40G	40	MAS- I	17032, (17320)
	Thru the coolant	40	JIS	17432
KURASHIKI	KV-500, 500H, 700	BT40	MAS- I	17032, (17320)
	KV Series KMV Series KBT Series KH Series CMN Series KHM-125 KBM11X	50	MAS- I	17062
KOMATSU NTC	N, Z Series	BT30	MAS- I	(17000)
	TMC, NH, NV, H, N, Z, ZV, ZH Series	40	MAS- I	17032, (17320)
	ZV5400 ZH4000, 5000 (Thru the coolant)	40	MAS- I	17416
	TMC, CNC, N, ZV Series	50	MAS- I	17062
	ZV5500 (Thru the coolant)	50	MAS- I	17470
SHIZUOKA	CM-210G, 350B CM300-A, 300-5A	BT30	MAS- I	(17000)
	B Series CM-350 SSR-550 HSR-7, 10	40	90°	17036, (17324)
	B Series SMV Series SG-600	50	90°	17070
SHINNIHON	CMV-50, 70T	BT40	MAS- II	17034, (17322)
	CMV, DC, ESP, FSP, HF, HPS, PS, RB, BFR Series PC-55V EXI-70K	50	MAS- II	17064
JTEKT	PV640J	BT30	MAS- I	(17000)
	FA, FV, FVN, FXN, JV, PV Series e500H4, UX570	40	MAS- I	17032, (17320)
	FV, FVN, FHN, FXN, PV, BN, FH, FA, RB, SB Series SV-65 e500H5	50	MAS- I	17062
SUGINO	DN-1V, 2V, 1H (Thru the coolant)	50	MAS- I	17462
	Self center V15, NSV15, VC15, H15, H15B	BT30	MAS- II	(17001)
TAKIZAWA	MAC-V1E, 430VP VP10	BT40	MAS- I	17032, (17320)
	MAC-V40, 40B Y520	40	JIS	17430, (17338)
	MAC-V40, 40B Y520 (Thru the coolant)	40	JIS	17432
TAKEDA	MV, TK-VS Series	BT40	MAS- I	17032, (17320)
	VS Series	50	MAS- II	17064
SUGAMI	VMA3- III VMC3- III VML3- III VA31H, 32H VA3	BT30	MAS- I	(17000)
	FMA3- III FMA5- III	40	MAS- II	17034, (17322)
	VMA4- III	40	MAS- I	17032, (17320)
	VMT4- III	40	JIS	17430, (17338)
TOSHIBA	JRV400, 450 NX76B	BT40	MAS- I	17032, (17320)
	BMC, BTD, BP, MPC, MPE, MPF, MPH, VMC, BF, BTU, NX, BTH, BSF, BTFx Series	50	MAS- I	17062

Note : 1. Please check operation manual of machines to select appropriate type of the pull stud.
2. Code in brace like (17320) means that its material is dies steel, metal of high-tensile strength.

Machine Builder	Machine Model	Shank	Standard	Code
NIIGATA	PN40, 40A SPN40 EF40H EN Series VN Series PN Series	BT40	MAS-II	17034, (17322)
	HN Series BHN Series SPN50, 63 ULTY501, 701, 901 MPN-80	50	MAS-II	17064
HAMAI	FZ-16, 16L, 16E, 26, 26L DZ-16, 16L, 16LA	BT30	MAS-I	(17000)
	MC-3VA, 3VS, 4VS EN-3, 4, 6 EN-40 HN-40	40	MAS-I	17032, (17320)
	MC-50V, 70V, 80V, 6V, 5VA, 6VA, 8VA T-80MH, 180MH	50	MAS-I	17062
FANUC	ROBO DRILL/DRILL/DRILL MATE Series α-T14iA α-T21iD α-T21E α-T21F α-D14iA α-D21iA	BT30	MAS-I	(17000)
	Thru the coolant	30	maker	(17312)
BROTHER	TC-221, 225, 227, 229, 229N, 22A, 311, 312N, 31A, 321, 323, 324, 324N, 325, 32A, 32B, S2A, S2B, S2C, R2A, 22B, S2D, 32BN, 31B, R2B, S500X1, S700X1	BT30	MAS-II	(17001)
	Thru the coolant	30	maker	(17314)
	TC-731, 731S	40	MAS-I	17032, (17320)
HORKOS	HFN, HTNC, ES Series NJ50 RS50H PM70H RM70 ES50H ES50V-I	BT30	MAS-I	(17000)
	HFN, HTNC, RM, DM, HFN Series NS70 MOH630 THMC410 TM70H TG70H MBE	40	MAS-I	17032, (17320)
	Thru the coolant	40	MAS-I	17406
	HFN, HTNC Series G50H C50H DM100H RM100H NM100 DM100H NM100	50	MAS-I	17062
HOWA	Thru the coolant	50	MAS-I	17450
	MMN, MDT, MBN, MSN, MEN, MJN, MZN, MKN Series	BT30	MAS-I	(17000)
	Thru the coolant	30	maker	(17312)
	MBN, MCN, MHN Series MCV-800	40	MAS-I	17032, (17320)
	Thru the coolant	40	MAS-I	17406
MAKINO	MBN-800 HS-500	50	MAS-I	17062
	Thru the coolant	50	MAS-I	17450
	a1, A, V Series J55, 88 D300, 500, 800Z BH50	BT40	JIS	17430, (17338)
	Thru the coolant	40	JIS	17434
	BNC, FNC, MC Series SF64 A55, 66, 88 FB127 Series	40	MAS-I	17032, (17320)
	a1, A, V, GF Series	50	JIS	17495
MAKINO	Thru the coolant	50	JIS	17497
	FDNC, FNC, GF, MC, MCC, MCD, MCF Series GN1712-A a71, 81 A77, 88, 99, 100 V77	50	MAS-I	17062
	MSA30, 40, 50 MS5A, 5B MSX30 PS1-W MSJ25 MSJX25 MSB58, 512, 516	BT30	MAS-I	(17000)
	MSA30, 40, 50 MS5A, 5B MSX30 MSB58, 512, 516, S5B	40	MAS-I	17032, (17320)
	Thru the coolant	40	MAS-I	17406
MATSUURA	μ MASTER, 400V-24, FX-1	BT30	MAS-II	(17001)
	VX-0, -1 FX-0, 1G, 2 LX-0, 160 LF-160 LV-500	30	JIS	(17308)
	MC, RA, MAM, FXM, FX, H.Max, V.Max, H.Plus, R.Plus, V.Plus Series Mold Plus800 MX-520 VX-1000	40	JIS	17430, (17338)
	Thru the coolant	40	JIS	17432
	MC-1000V, 1250V, 1500V, 2000V MC900H, 900HG H.Plus Series	50	MAS-II	17064
	RA-4G (#50) MC-1500VG (#50) MC-900HG LX-1500	50	JIS	17495
MITSUI	VS, HR, HT, HU Series VT3A VU50A	BT40	maker	17418
	Vertex Series	40	JIS	17430, (17338)
	Thru the coolant	40	—	—
	VU, VJ, VS, H, HU, HS, HR, HPT Series	50	maker	17488
	Thru the coolant	50	maker	17490
MITUBISHI	V-360 M-V4C, V5C M-H4B, H5B MPA Series M-V Series M-H Series	BT40	MAS-I	17032, (17320)
	V, M-V, M-H, M-VS, MPA, MAF, MVR, MHT, MKH, DHS Series	50	MAS-II	17064
	Thru the coolant	50	MAS-II	17452
DMGMORISEIKI	TV-300, 400 ACCUMILL4000 ULTIMILLH3000, V3000 MILLTAP700 MAX3000	BT30	MAS-I	(17000)
	Thru the coolant	30	—	—
	SV, SH, SLV, MV, MH, NV, NMV, NVD, NH, AFM, Dura Vertical, NVX, NHX, VS, NT Series SuperTILT500 SLV5000, 5250	40	90°	17036, (17324)
	Thru the coolant	40	JIS	17411, (17332)
(formerlyHITACHI)	SV, SH, MV, MH, MB, NV, NH, NVX, NHX, VS, NMH, NMV, NT Series	50	90°	17070
	VK Series VM-40, 50 VS-40, 50, 60 VKC Series VA Series HG-400 HSS Series HK-630 HA Series	BT40	MAS-I	17032, (17320)
	VK-45, 55, 65, 85 VA Series VG Series VF Series VS-50, 60 HSS Series HK-630 HG Series HC Series	50	90°	17070
MAZAK	IMPULSE30 Type A, B, C UN-600V, 600H	BT30	MAS-II	(17001)
	VTC, V, VQC, AJV, FJV, FH, FF, VARIAXIS, NEXUS, INTEGREGX, VCN, HCN, PFH, μ Series ANGULAX900	40	maker	17422, (17334)
	VTC, V, VQC, AJV, FJV, SV, H, FH, MTV, HV, INTEGREGX, VORIEX, VCN, HCN, VERSATECH, μ Series	50	maker	17492
	H-12, 12N, 15, 20, 25 V12, 15, 20 VQC-10/15, 20/50	50	—	—
YASUDA	YBM, YPC, VPC Series H30i H40	BT40	MAS-I	17032, (17320)
	YBMVi40	40	JIS	17430, (17338)
	Thru the coolant	40	JIS	17438
	YBM, YMC Series	50	MAS-I	17062
ROKUROKU	Thru the coolant	50	MAS-I	17470
	LIBERO RX Series	BT30	MAS-I	(17000)
	KX, MX, LX, GR-655N VERTIMAC Series RM Series GIGA	40	MAS-I	17032, (17320)

Note : 1. Please check operation manual of machines to select appropriate type of the pull stud.
 2. Code in brance like (17320) means that its material is dies steel, metal of high-tensile strength.

BT series
 HSK series
 ST series
 Versatile Tool
 Cutting Tool