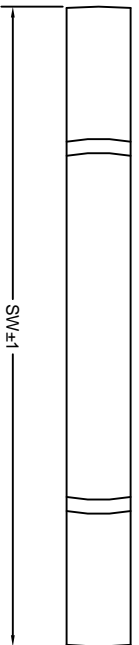


Option 1 (Flat surface)



Option 2 (Circular surface)



Notes:

- 1.- Engrave "TSH-GD.04.0005 Rev ... Pos ..."
- 2.- Engrave Thread and Shoulder. Words shall be 0.8mm deep.
- 3.- Material: Thyrodur 2990 Heat treatment:
- a) Stress Relief at 650°C X 2 hours, as an intermediate step between machining and grinding.
- b) Vacuum quenching since a temperature of austenitising 1070-1080 °C at room temperature
- c) Cooling: Subzero up to -80°C and then tempered twice at 520°C. Hardness requested 58-60 HRC
- 4.- Serial Number- (according to the supplier identification)
- 5.- Taper surfaces for thread and seal axes shall be perpendicular to the reference surface.
- 6.- Dimensions S, AS and Angle Y shall be certified.
- 7.- The Corrosion Protection and Packaging shall be according to TenarisConnections specification.
- 8.- The Certificate shall be according TenarisConnections specification.



MODIFICATIONS				OBJECT: TenarishDrill Blue Near Flush
Rev	Description	Draw. Chk	App. Date	
02	Added Pos 32 and increased shoulder length.	JPA	ELT	
03	New positions added.	JPA	BTL	
04	Changed angles tolerance at 90° and Y°	JPA	BTL	DETAIL: Box Small Thread and Shoulder Standard

lenarSHydril Blue					
Near Flush					
DETAIL:					
Box Small Thread and Shoulder					
Standard					
Rev	Description	Draw	Chk	App	Date
02	Added Pos. 32 and increased shoulder length	JPA	ELT	NCR	7-8-10
03	New positions added	JPA	BTL	NCR	10-03-10
04	Change angles tolerances at 90° and γ°	JPA	BTL	NCR	10-03-10

Drawn by: JPA	Checked by: ELT	Approved by: NCR
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01

02

03

04

05

Std Rev	Diameter	lb/ft	Wall Thickness	Position	Angle Y°	AT Ref	T or Diam T	S or Diam S	Dist A	Dist C	SL	SW	SR
01	5	18.00	0.362	31	91.432	86.200	113.402	116.380	60.172	78.2	171.2	219.4	60.0
0	5	20.30	0.408	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
0	5	20.80	0.422	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
0	5	21.40	0.437	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
0	5	23.20	0.478	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
01	5.5	23.00	0.415	1	91.432	86.400	124.274	127.300	60.257	78.4	171.4	230.3	60.0
0	5.5	26.00	0.476	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
0	6.625	28.00	0.417	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
0	6.625	32.00	0.475	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
02	7	26.00	0.362	32	91.432	97.000	164.467	167.220	71.072	89.0	182.0	270.5	60.0
01	7	29.00	0.408	2	91.790	92.400	162.896	166.560	66.544	84.4	177.4	268.9	60.0
01	7	32.00	0.453	3	91.790	105.000	161.692	164.850	72.867	97.0	190.0	267.7	60.0
01	7	35.00	0.498	4	92.434	94.000	159.373	162.760	66.542	86.0	179.0	265.4	60.0
01	7	38.00	0.54	5	92.434	106.800	158.095	161.720	72.866	98.8	191.8	264.1	60.0
03	7	41.00	0.59	33	92.434	103.600	156.782	160.470	72.866	95.6	188.6	262.8	60.0
03	7.625	29.70	0.375	34	91.432	92.400	180.348	183.120	66.031	84.4	177.4	286.3	60.0
01	7.625	33.70	0.43	6	91.790	99.400	177.545	180.860	72.867	91.4	184.4	283.5	60.0
01	7.625	39.00	0.5	7	92.434	100.400	174.960	178.380	72.866	92.4	185.4	281.0	60.0
01	7.625	42.80	0.562	8	92.434	113.000	173.287	177.200	79.241	105.0	198.0	279.3	60.0
03	7.625	45.30	0.595	35	92.434	113.000	172.522	176.330	79.241	105.0	198.0	278.5	60.0
03	7.625	47.10	0.625	96	92.434	113.000	171.388	175.400	79.241	105.0	198.0	277.4	60.0
01	7.75	46.10	0.595	9	92.434	103.600	176.436	179.650	72.867	95.6	188.6	282.4	60.0
03	7.75	48.60	0.64	37	92.434	119.400	174.232	178.150	85.566	111.4	204.4	280.2	60.0
03	8.625	36.00	0.4	38	91.432	97.800	204.406	207.010	71.072	89.8	192.8	331.4	70.0
03	8.625	40.00	0.45	39	91.790	99.200	202.864	206.230	72.866	91.2	194.2	329.9	70.0
03	8.625	44.00	0.5	40	92.434	103.400	200.467	204.030	72.866	95.4	198.4	327.5	70.0
03	8.625	49.00	0.557	41	92.434	103.400	198.874	202.540	72.866	95.4	198.4	325.9	70.0
0	8.625	52.00	0.595	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
03	9.625	40.00	0.395	42	91.432	92.200	230.272	233.160	66.032	84.2	187.2	357.3	70.0
01	9.625	43.50	0.435	10	91.790	92.600	228.968	232.680	66.541	84.6	187.6	356.0	70.0



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MODIFICATIONS					OBJECT: TenaRishydril Blue™ Near Flush
Rev	Description	Draw	Chk	App	
02	Added Pos 32 and increased shoulder length.	JPA	ELT	NCR 7/8-10	
03	New positions added.	JPA	BTL	NCR 10/08/09	
04	Changed angles tolerances at 90° and Y°	JPA	BTL	NCR 10/08/09	
DETAIL: Box Small Thread and Shoulder Standard					

Notes: - Tolerances S and T +/- 0.005 mm (+/- .0002") are for the manufacturing supplier and +/- 0.010 mm (+/- .0004") for the hubs.
- The standard will be verify once arrives to the hubs and the measurement will be loaded into the MTR.
- No compensation values will be allowed. If the hub find tolerances out of +/- 0.010 mm (+/- .0004") has to contact TenaRis Connection.




Scale: NOT
Date: 25/SEP/04
TSH-GD 04.0005

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Sld Rev	Diameter	lb/ft	Wall Thickness	Position	Angle Y°	AT Ref	T or Diam T	S or Diam S	Dist A	Dist C	SL	SW	SR
01	9.625	47.00	0.472	11	91.790	104.400	226.604	230.350	72.866	96.4	199.4	353.6	70.0
01	9.625	53.50	0.545	12	92.434	105.200	225.976	229.420	72.553	97.2	200.2	353.0	70.0
03	9.625	58.40	0.595	43	92.434	106.600	224.303	228.140	72.867	98.6	201.6	351.3	70.0
0	9.625	64.90	0.672	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
01	9.875	62.80	0.625	13	92.434	109.800	228.162	231.930	79.242	101.8	204.8	355.2	70.0
03	9.875	65.30	0.65	44	92.434	119.200	226.834	230.960	85.566	111.2	214.2	353.8	70.0
0	9.875	68.80	0.7	0	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
01	10	68.80	0.7	14	92.434	109.800	228.162	231.930	79.242	101.8	204.8	355.2	70.0
01	10.75	51.00	0.45	15	91.790	106.200	256.469	259.880	79.241	98.2	201.2	383.5	70.0
01	10.75	55.50	0.495	16	91.790	111.800	254.766	258.010	79.241	103.8	206.8	381.8	70.0
01	10.75	60.70	0.545	17	92.434	100.800	252.910	256.460	71.450	92.8	195.8	379.9	70.0
01	10.75	65.70	0.595	18	92.434	112.800	252.769	256.520	79.241	104.8	207.8	379.8	70.0
03	10.75	71.10	0.65	45	92.434	100.000	250.087	253.780	72.867	92.0	195.0	377.1	70.0
01	11.75	54.00	0.435	19	91.790	99.800	282.081	285.630	72.866	91.8	204.8	428.1	80.0
01	11.75	60.00	0.489	20	91.790	107.800	280.347	283.740	79.241	99.8	212.8	426.3	80.0
01	11.75	65.00	0.534	21	92.434	93.800	280.773	284.290	66.541	85.8	198.8	426.8	80.0
01	11.75	71.00	0.582	22	92.434	103.200	277.058	281.130	72.867	95.2	208.2	423.1	80.0
01	11.875	71.80	0.582	23	92.434	103.200	281.155	284.620	72.866	95.2	208.2	427.2	80.0
01	13.375	61.00	0.43	24	91.432	97.200	324.129	327.140	71.071	89.2	202.2	470.1	80.0
01	13.375	68.00	0.48	25	91.790	99.200	321.891	325.370	72.867	91.2	204.2	467.9	80.0
01	13.375	72.00	0.514	26	91.790	114.400	320.962	324.500	77.549	106.4	219.4	467.0	80.0
01	13.375	77.00	0.55	27	92.434	109.400	319.449	323.210	79.242	101.4	214.4	465.4	80.0
01	13.375	80.70	0.58	28	92.434	103.000	318.599	322.570	72.866	95.0	208.0	464.6	80.0
01	13.375	86.00	0.625	29	92.434	100.000	317.241	320.940	72.867	92.0	205.0	463.2	80.0
01	13.625	88.20	0.625	30	92.434	104.200	323.800	327.780	72.866	96.2	209.2	469.8	80.0

Notes: - Tolerances S and T +/- 0.005 mm (+/- .0002") are for the manufacturing supplier and +/- 0.010 mm (+/- .0004") for the hubs.
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MODIFICATIONS					OBJECT:	
Rev	Description	Draw	Chk	App	Tenarishydril Blue™ Near Flush	
02	Added Pos 32 and increased shoulder length.	JPA	ELT	NCR 7-8-10		
03	New positions added.	JPA	BTL	NCR 10-04-09		
04	Changed angles tolerances at 90° and y°	JPA	BTL	NCR 10-04-09		
DETAIL: Box Small Thread and Shoulder Standard						



Scale: NOT
Date: 25/Sep/04
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Drawn by: JPA
Checked by: ELT
Approved by: NCR