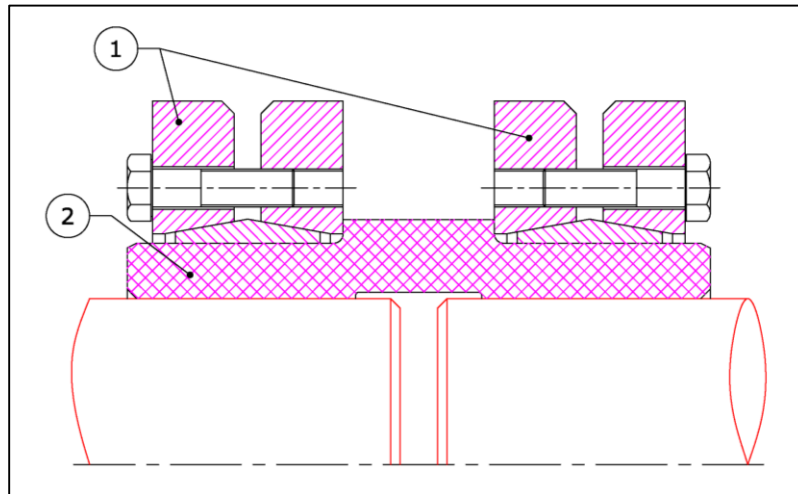


1.) About NC 4071 & NC 4091 Coupling & Function:

- NC 4071 Coupling is three part shrink disc N4071 with Sleeve & NC 4091 Coupling is three part shrink disc N4091 with Sleeve. NC 4071 / NC 4091 mount on two differential shaft for transmit the torque one shaft to another shaft by NC 4071 / NC 4091 shrink disc coupling.

2.) Nomenclature:



No.	Nomenclature
1	N4071 shrink disc assembly in NC4071, <u>or</u> N4091 shrink disc assembly in NC 4091.
2	Sleeve

Note: N5571 Model in Type A and B Fully Pair Coupling

3.) Technical Requirement or Safe Operation:

- A good surface finish by machine tool is sufficient. Maximum allowable surface finish: Ra max 3.2µm. Maximum permissible tolerances for Hollow Shaft h8. (Refer below Tolerance table)

d_w		ISO	Maximum Clearance S (mm)
Above	Upto		
10	18	H6/g6	0.014
15	30		0.017
30	50		0.032
50	80	H6/g6	0.048
80	120	H7/g6	0.069
120	180		0.079
180	250		0.090
250	315		0.101
315	400		0.111
400	500		0.123
500	630		0.136
630	800		0.154

Where d_w = Solid shaft diameter, S = Clearance between Solid shaft & Hollow shaft

4.) Installation:

- Before Installation be ensure that hollow shaft and shaft are properly clean (ro remove dust particles & free of grease and dry).
- Apply light coat oil onto hollow shaft (Hub), Shaft at where Shrink Disc is to be located.
- By hand slightly loose clamping screw of shrink disc and push the shrink disc onto supplied sleeve (As shown in Fig.1).
- Once the axial position of shrink disc is fixed then tighten all screw by hand untill screw head face touch to side face of Shrink disc. Start tighten all screws one by one in diametrically circular sequence by using torque wrench (As shown in Fig.01).
- At a time tighten screws by 1/4 revolution with help of torque Wrench for several passes (Set torque wrench for 1st pass : $\frac{1}{3} Ta$; 2nd pass : $\frac{2}{3} Ta$; 3rd pass : Full Ta).
Where Ta = Recommended Tightening torque, please refer Ta as per NMTG drawing or NMTG Shrink Disc Catalogue (as per Model & Size).
- By applying tightning torque to clamping screw, front nut and rear nut pulled together over inner ring. With the help of clamping force generated by clamping screw, friction connection between contact surface of hollow shaft and solid shaft generated.
- The tightening process is completed only when no one screw turn at specified tightening torque value
- Be sure that, during installation position of inner ring with respect to hollow shaft remain unchanged.
- Same as follow above steps for both shrink disc of NC4071 & NC 4091.

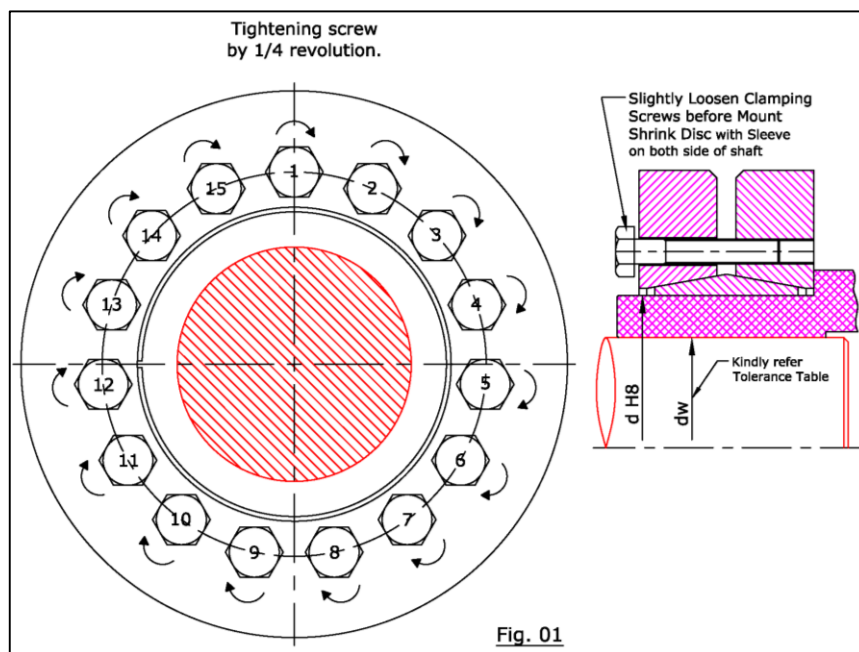


Fig. 01

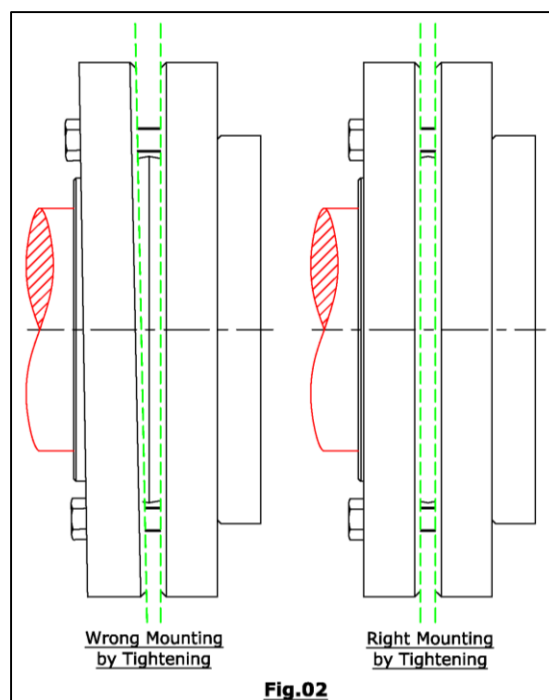


Fig.02

For Apply Tightening Torque by Torque Wrench:

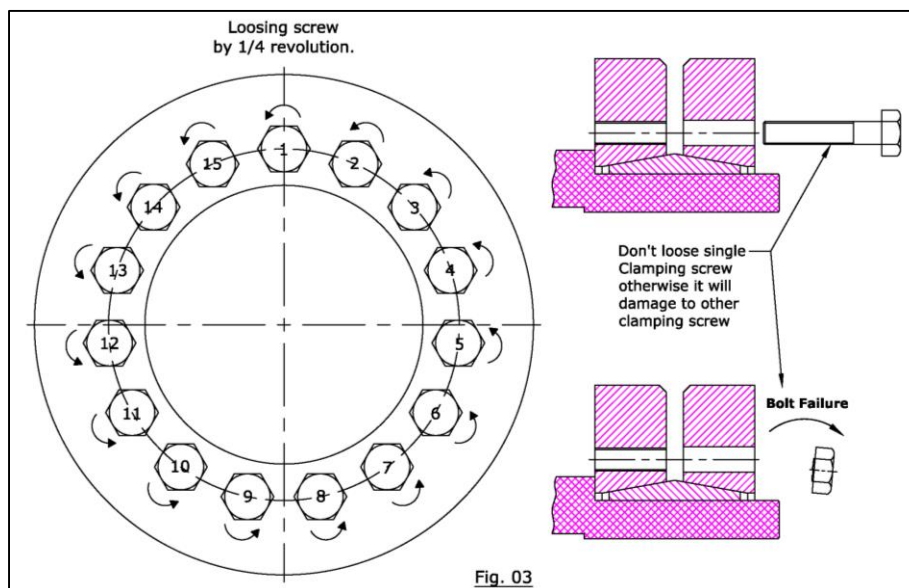
Torque wrench torque	Pass	1 st attempt	Tightening of screws
1/3 Ta	1, 2, 3, 4, ... n	1,2,3,4, ...	By 1/4 Revolution
2/3 Ta	1, 2, 3, 4, ... n	1,2,3,4, ...	By 1/4 Revolution
Ta or 5% more	1, 2, 3, 4, ... n	1,2,3,4, ...	By 1/4 Revolution

Tightening Torque for Shrink Disc part:

Size of Screws	Model	M5	M6	M8	M10	M12	M16	M20	M24	M27
Ta	NC 4071	4	12	30	59	100	250	490	840	1250
(Nm)	NC 4091	-	-	-	-	100	250	490	840	1250

- Above mention value of tightening torque is maximum. Please refer drawing for actual value of tightening torque as per your application.
- Replace missing or damaged clamping screw with screw of quality as per mentioned below
 - In NC 4071, NC 4091 : Hex Head Screws, DIN 913 – 10.9 Grade Only

5.) Removal:



- Loosen the clamping screws uniformly in multiple steps by 1/4 revolution for each step to Prevent misalignment of the clamping surfaces and breaking of screws.(As shown in Fig. 2)
- In similar manner loosen all screw one by one in diametrically circular sequence by 1/4 revolution with help of torque wrench because of completely loosen of single screw at a time tilt front nut & rear nut may lead to damage of shrink disc. Attached shrink disc model in NC 4071 & NC 4091 is self-releasing so after loosening all screws shrink disc should automatically release.
- Remove the customer shafts arrangement from NC 4071 / NC 4091 Coupling assembly.

6.) Reuse:

- Completely dismantle the shrink disc and clean, re-lubricate inner ring, outer ring, flanges and clamping screws. If any damage found in parts of shrink disc then replacement of whole shrink disc required. Before reuse of shrink disc's screws or flange's screws please check screws length because of during operating condition if they have been elongated so they cannot be used further so replace with same size and grade.

7.) Maintenance:

- Shrink Disc Coupling NC 4071 & NC 4091 are maintenance free. We therefore recommend to check tightening torque of the clamping screws each time maintenance is performed on the machine.
(All Figures shown in instructions are for easy understanding of installation and removal processes.)

8.) Storage Preservation and Instruction:

- NMTG Product is supplied with an oil film as Rust & Corrosion Protection as per below instruction for Short term storage.
- This protection is renewed at regular intervals which depends on Environmental condition at Storage site. (Temperature, Atmosphere, etc.)

Maximum Storage period is 6 Months for Short-term Storage.

Please follow Instruction for Preservation & Storage of NMTG Products:

- Once NMTG Product is used then clean all its parts with clean cloth.
- Lubricate all parts with rust preventive oil S-VCI 415 or equivalent & assemble as it was & packed in plastic bag.
- After wrapping in plastic bag, Material is packed by S-VCI 131 or equivalent rust preventive paper & store.
- Keep it in dry place and free from dust.
- Do not expose to open or corrosive environment.
- Keep away from direct Sunlight.
- Avoid Mechanical Shock & Vibration.
- Storage Temperature: -10 to +60°C.
- Relative Humidity: Maximum 95%, non-condensing.

For Long term Storage (1 Year):

Please follow Instruction for Preservation & Storage of NMTG Products:

- Once NMTG Product is used then clean all its parts with clean cloth.
- Lubricate all parts with rust preventive oil S-VCI 415 or equivalent & assemble as it was & packed in special Vacuum bag.

Doc. No.:
N-DD-IM-SD450-
451

Installation & Removal Instructions of Shrink Disc Coupling
(NC 4071 & NC 4091)



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Rev Date : -

Prepared by : KRP

Checked by : DBP

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- After wrapping in Vacuum bag, Material is packed & store.
- Keep it in dry place and free from dust.
- Do not expose to open or corrosive environment.
- Keep away from direct Sunlight.
- Avoid Mechanical Shock & Vibration.
- Storage Temperature: -10 to +60°C.
- Relative Humidity: Maximum 95%, non-condensing.