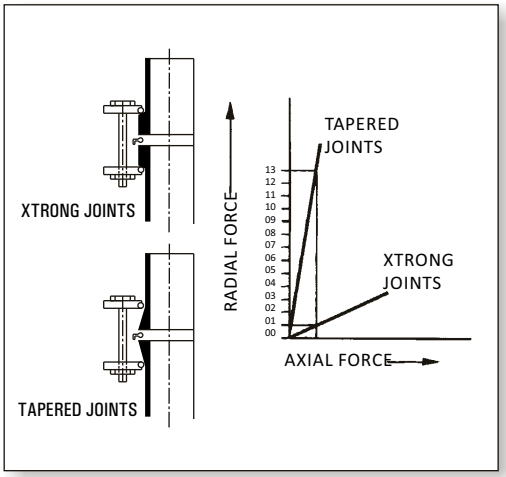
XTRONG

INTRODUCTION

Tapered glass joints are predominantly used in industrial glass equipments. This design has a high ratio of radial to axial force, which frequently leads to breakage while tightening the flange joints.



A cylinder can withstand a much higher axial force than radial force plus glass has a very high compressive strength. We at GOEL recognized these features and by our innovative design practices developed XTRONG joints. The XTRONG joints are so designed that the harmful radial stresses are dramatically reduced. For a given axial force the radial forces are 14 times lesser than that in tapered joints.

XTRONG joints are practically many times stronger than conventional tapered joints, As far as tightening of joints are concern, it is tested that a XTRONG joints does not break even at a torque of 20Nm, as against tapered joints, which starts breaking at 6-7 Nm torque. At times it may happen that because of over tightening, a metal backing flange breaks or the threads of nut-bolts give way but XTRONG glass joint remains intact.

Most of the old glass installations in general contain equipments with tapered glass joints. XTRONG joints are fully compatible with these tapered joints. i.e. an XTRONG equipment can replace another tapered equipment and vice versa in any existing unit. This interchangeability makes XTRONG design more adaptable in general conditions and change over cost is negligible.

XTRONG joints

XTRONG joints have been developed, to arrest the frequent breakage and leakage problems. The XTRONG joints are so designed that the harmful radial stresses are dramatically reduced. For a given axial force the radial forces are 14 times lesser than that in tapered joints.

In addition to reducing the stresses, the XTRONG joint has the following advantages

- The ovality of the glass flange, present due to manufacturing process, has virtually no effect because the backing flange isn't in direct contact with the periphery.
- Continuous re-tightening of the backing flange or insert, due to bolting force & temperature effects, hence dismantling is easy. Also much smaller length threaded bolts are needed compared to the tapered joints.
- The XTRONG joint is leak-tight at all design temperatures & pressure, even with temperature cycling and frequent plant start-up as it is possible to tighten the joints upto a tightening torque of 20 Nm as against 6-7 Nm tightening torque in tapered joints. In some cases the metal backing flange breaks but nothing happens to the glass components !

With so many benefits and particularly low breakage risk, we have adopted XTRONG design for all equipments manufactured by us. XTRONG is widely accepted and adopted by users as well as manufacturers of Glass Equipments in India.

DIMENSIONS OF XTRONG ENDS

DN	D2	D1	D	H1	H2	A	B
12(0.5)	25	13	19	8	2	65	0
15(0.7)	28	16	22	8	2	65	0
25(1)	41	26	33	13	8	65	0
40(1.5)	56	38	46	14	9	65	0
50(2)	69	50	59	16	11	65	0
80(3)	98	77	87	18	12	65	0
100(4)	132	105	115	20	17	65	0
150(6)	184	153	165	22	19	65	0
200(8)	233	200	215	22	26	65	0
225(9)	258	220	230	24	26	65	0
300(12)	340	300	315	24	26	65	0
400(16)	463	407	422	25	35	65	9
450(18)	525	457	470	25	50	65	9
600(24)	684	610	625	25	60	65	9
700(28)	784	710	735	28	70	65	9
800(32)	916	820	832	30	97	65	9
1000(40)	1088	1020	1037	30	150	65	9