

# TANK RENSE MASKINE

TYPE: TCM-M20



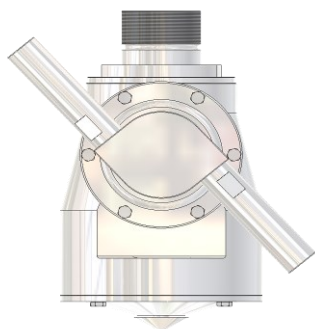
JA ENGINEERING A/S



# INDHOLDSFORTEGNELSE

TYPE	Antal Dyser	Dyse Diameter	Tryk	Flow m <sup>3</sup> /h	Materiale AISI	Tilslutning	Side
M20.2071FB	2	7	5	11	316	BSP 1½" F	5
M20.2071MB	2	7	5	11	316	BSP 1½" M	6
M20.2081FB	2	8	5	12	316	BSP 1½" F	7
M20.2081MB	2	8	5	12	316	BSP 1½" M	8
M20.2101FB	2	10	5	16	316	BSP 1½" F	9
M20.2101MB	2	10	5	16	316	BSP 1½" M	10
M20.2141FB	2	14	5	24	316	BSP 1½" F	11
M20.2141MB	2	14	5	24	316	BSP 1½" M	12
<b> </b>							
M20.4061FB	4	6	5	12	316	BSP 1½" F	13
M20.4061MB	4	6	5	12	316	BSP 1½" M	14
M20.4071FB	4	7	5	17	316	BSP 1½" F	15
M20.4071MB	4	7	5	17	316	BSP 1½" M	16
M20.4081FB	4	8	5	20	316	BSP 1½" F	17
M20.4081MB	4	8	5	20	316	BSP 1½" M	18
M20.4082MB	4	8	5	20	316	BSP 2" M	19
M20.4101FB	4	10	5	24	316	BSP 1½" F	20
M20.4101MB	4	10	5	24	316	BSP 1½" M	21
M20.4102MB	4	10	5	24	316	BSP 2" M	22
<b> </b>							
M20.6061FB	6	6	5	20	316	BSP 1½" F	23
M20.6061MU	6	6	5	20	316	BSP 1½" M	24
M20.6071FB	6	7	5	24	316	BSP 1½" F	25
M20.6071MU	6	7	5	24	316	BSP 1½" M	26
M20.6081FB	6	8	5	26	316	BSP 1½" F	27
M20.6081MU	6	8	5	26	316	BSP 1½" M	28

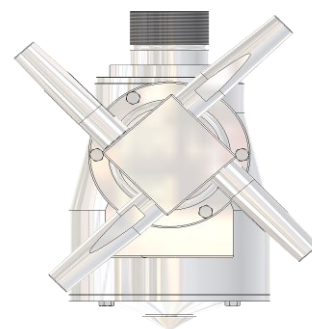
# TCM 20 TANK RENSE MASKINE VÆSKE STRØM OG OMDREJNING



**2 DYSER**



**6 DYSER**



**4 DYSER**

TCM-M20 er en højt ydende tank rens maskine. Den bruges til at sikre en effektiv rengøring af innersiden i tanke til sanitær og industriel standard.

TCM-M20 leveres med 2, 4 og 6 dyser. Dette giver muligheder for endnu flere dækningsgrader til forskellige industri rensopgaver. En 6 dyset maskine vil således give et 30% mere tættere sprøjtemønster i forhold til en 4 dyset maskine og dermed en bedre dækning af tankens innerside pr. arbejds cyklus.

Hvis en tankrensning ønskes på den kortest mulige tid kan en TCM-M20 med 6 dyser være løsningen.

En anden mulighed som er til rådighed, er en ændret gearing. Er behovet en hurtigere skyldning af tanken kan TCM-M20 forsynes med "Gearing II" som øger rotations hastigheden, både i det vertikale og horisontale plan, med 40% hvorved cyklostiden reduceres i forhold til standard cyklostiden ved samme driftryk og dysebestykning.

Den reducerede cyklostid er opnået uden øget hastighed af turbine og andre hurtig roterende dele, dvs. Ingen forøget slitage af maskinen pr. drifttime. En typisk cyklostid på 15min for standardgearing reduceres til 10min med "Gearing II". Alle dysebestykninger kan naturligvis kombineres med "Gearing II".

Vi har ligeledes udviklet et nyt og bedre vandstyr som giver et bedre "flow" i vore dyser. Alle TCM maskiner er nu forsynet med denne type dyse som giver kraftigere "Impact" på tankvæggene.

TCM-M20 er derfor endnu bedre rustet til at løse Deres tankrens opgaver.

JA ENGINEERING A/S er altid til rådighed med rådgivning for optimal løsning af Deres tankrensprojekter

TCM-M 20 er anvendelig som transportabel model. En speciel transportabel model er tilgængelig hvor TCM-M 20 er monteret omvendt på en lille vogn.



Når væske mediet passerer gennem maskinen (Pil ned), Turbinebladene (5) vil begynde at rotere. Dette vil få Turbineakslen til at rotere. Snekken I modsatte ende af Turbineakslen er i indgreb med SNEKKE HJULET (16P) monteret på AKSEL 2 (28S) der vil rotere. Snekken på AKSEL 2 er i indgreb med SNEKKE HJUL 2 (16S) der derved får DRIVAKSELN (14) til at rotere.

TANDHJUL (14) er i indgreb med det større GEARHJUL (12) som er monteret på STAMME (4) og INDLØBS STUDS (2). Dette tvinger HUS (27) til at rotere i det horisontale plan medens det koniske tandhjul på STAMMEN som er i indgreb med KONISK TANDHJUL (22) driver NAVET (24 ) og DYSER (23) rundt i det vertikale plan. Rensemediet sprøjtes ud af dyse munden med relativ høj hastighed og rammer tank væggen med en kraft der forårsager rensningseffekten.

Den langsomme og konstante rotation af HUS (omkring 3 til 5 omdrejninger / min) resulterer i et 8 tals mønster fordelt på inderside af tank eller beholder. Arbejds cyklus er afsluttet efter 44 omdrejninger af HUS. Når den 45 tyvende rotation påbegyndes vil maskinen begynde en repetition af førnævnte 8 tals mønster.

Afhængig af radius til overfladen der skal renses, kan dyse konfigurationen på TCM 20 leveres med 2-3-4 eller 6 DYSER for at opnå den optimale rensning.

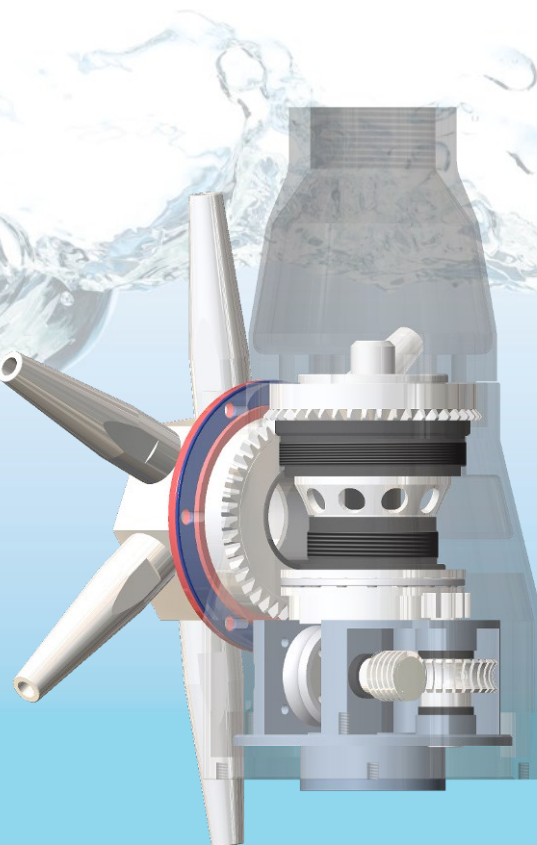
Tiden der medgår for at afslutte en hel arbejds gang er afhængig af væskemængden der strømmer igennem maskinen, antallet af dyser og arbejds trykket.

### **ANVENDELSES OMRÅDER:**

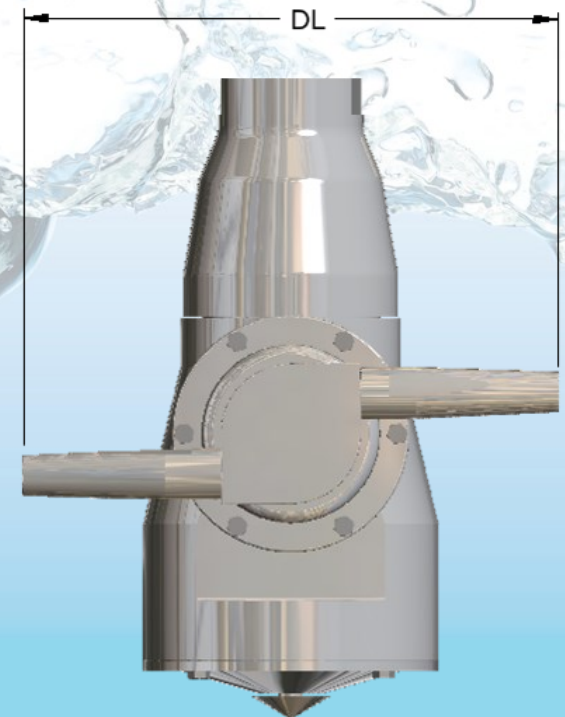
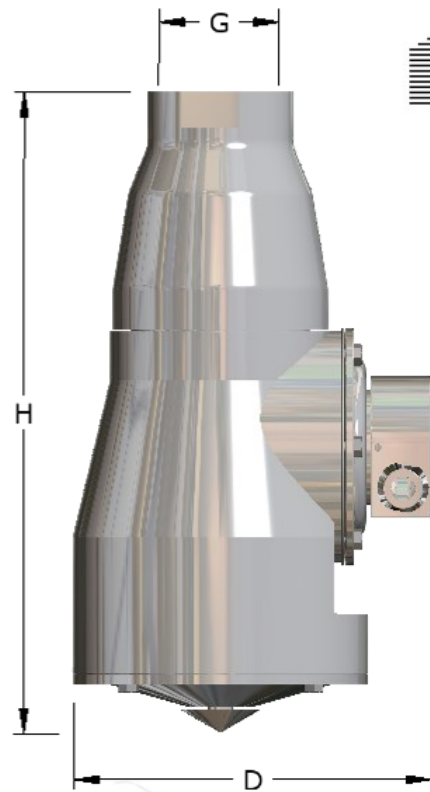
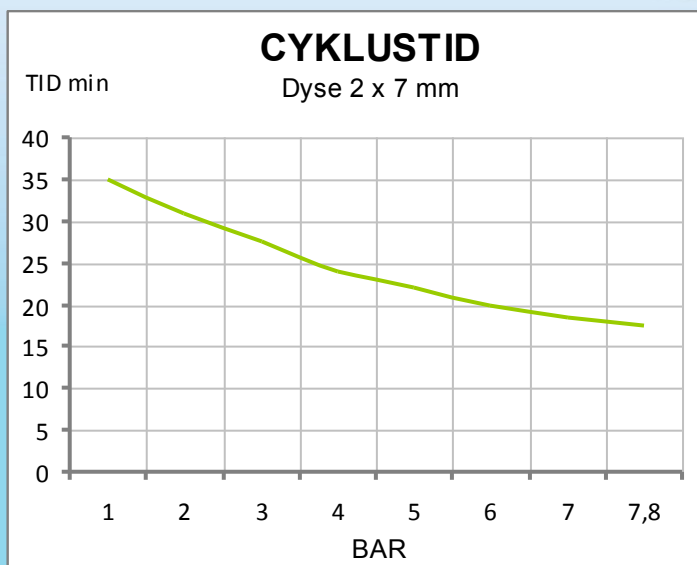
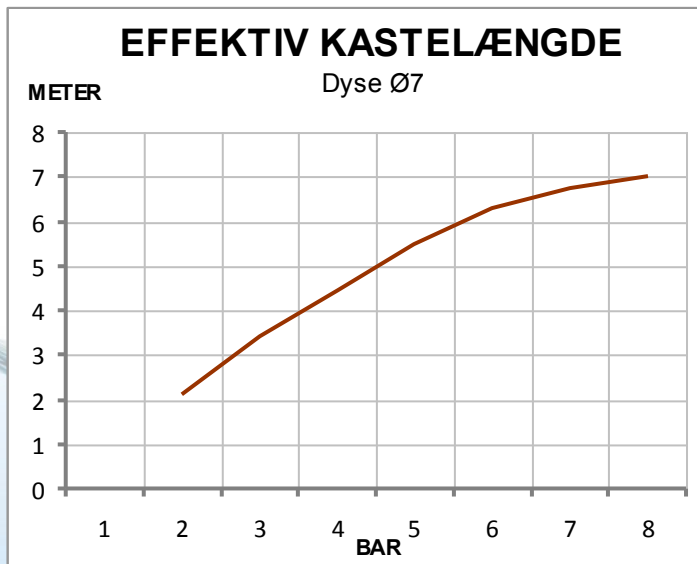
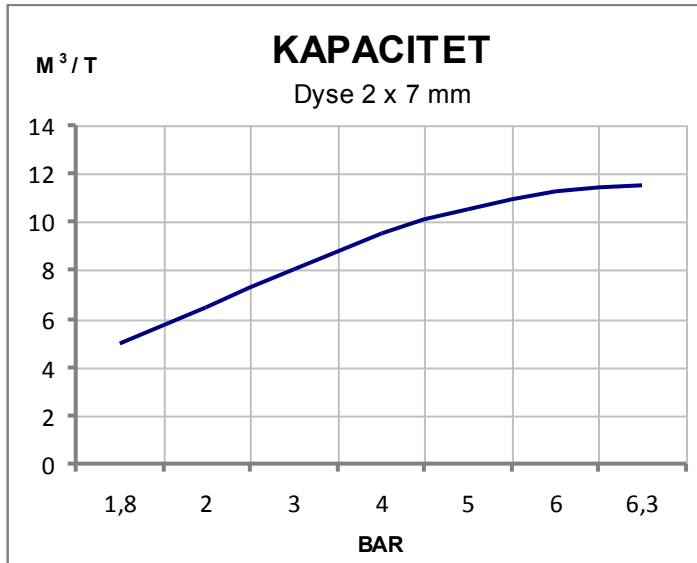
Bryggerier-Vingårde-Sprittfabrikker  
Bulkcarriers, Flydende & Tør  
Papir Industrien  
Spray Tørring  
Mejeri-Fødevarer & Læskedrikke  
Tankvogne  
Farve og Lakindustri  
For at nævne nogle stykker:

### **MODELTYPER:**

M20 med 2 –4 og 6 dyser  
F. (CIP Installation)  
M. (Transportabel)  
W. (Svejst tilslutning)  
MU. (Transportabel / Monteret omvendt)



# M20.2071FB

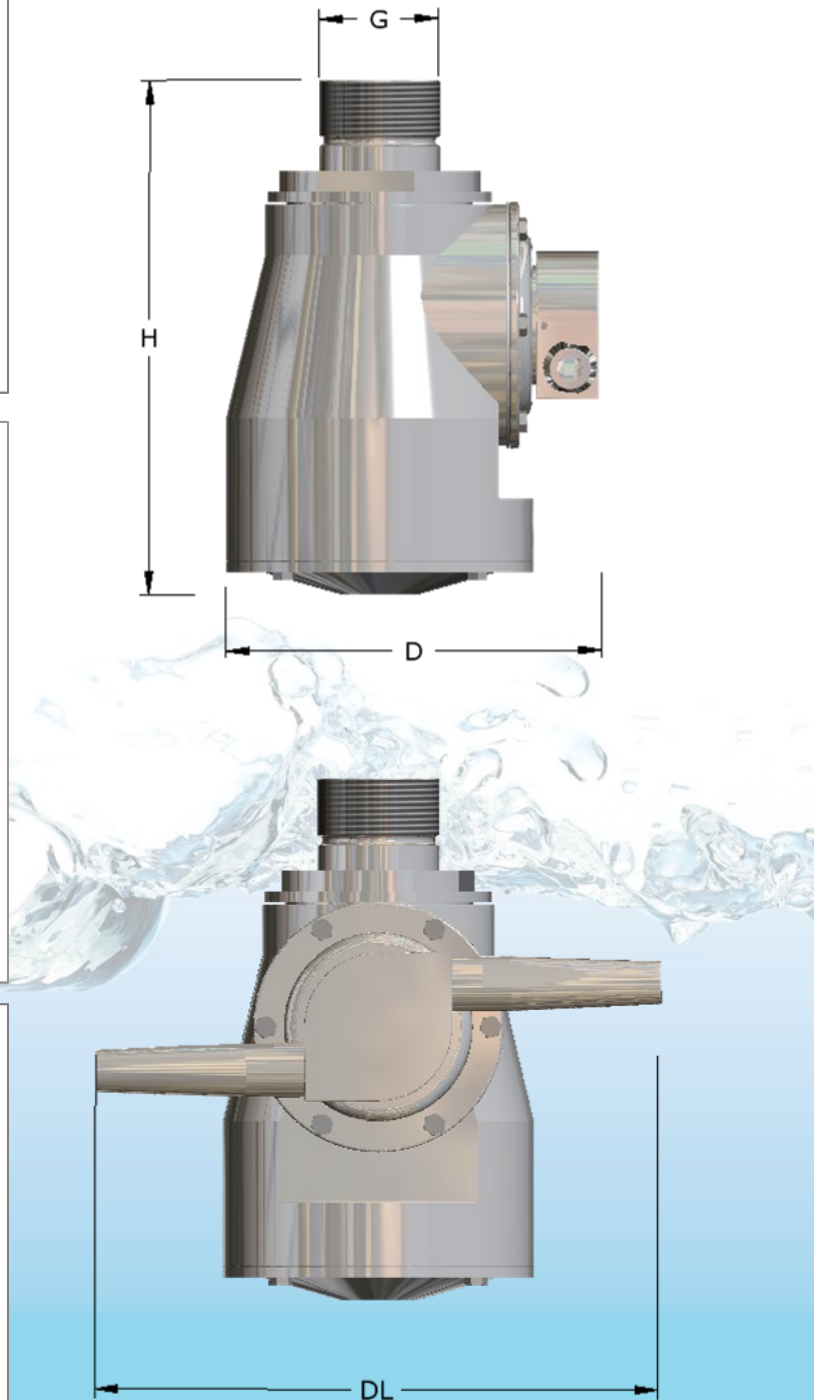
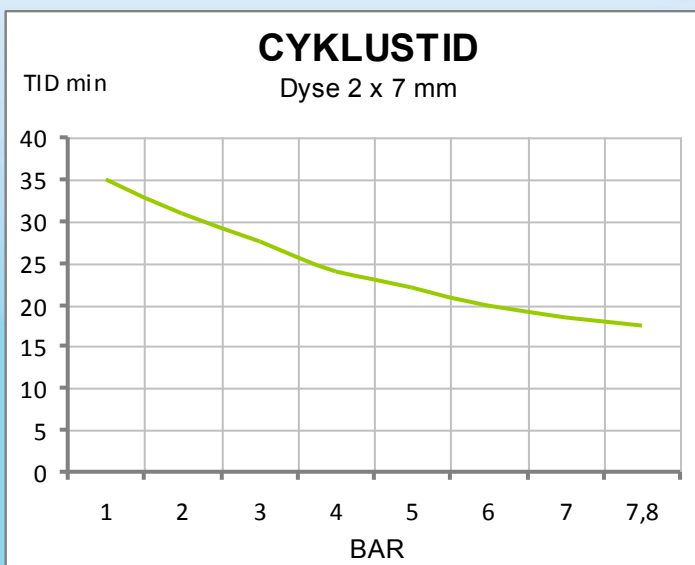
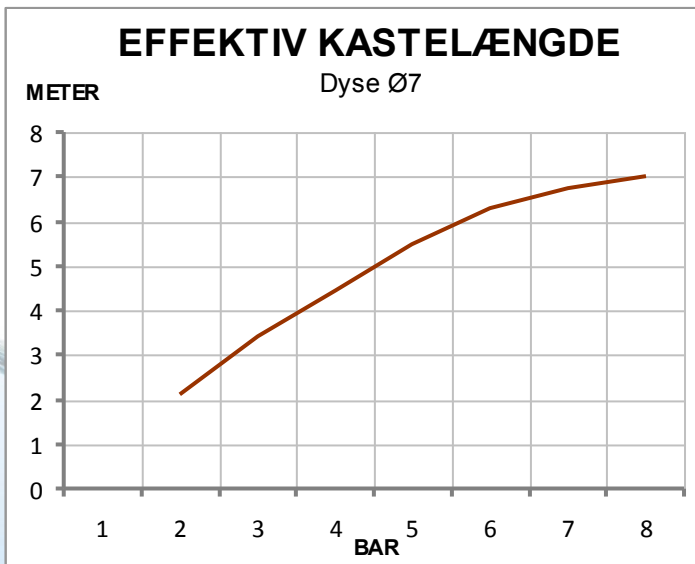
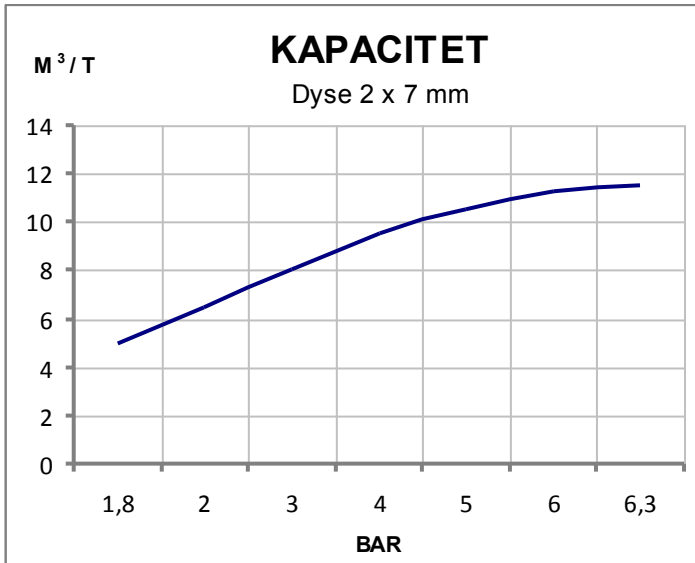


MODEL F	H	D	G	DL
2 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2071FB	2	7	304	316L	5-95°C	BSP 1½" F	Rensemediet



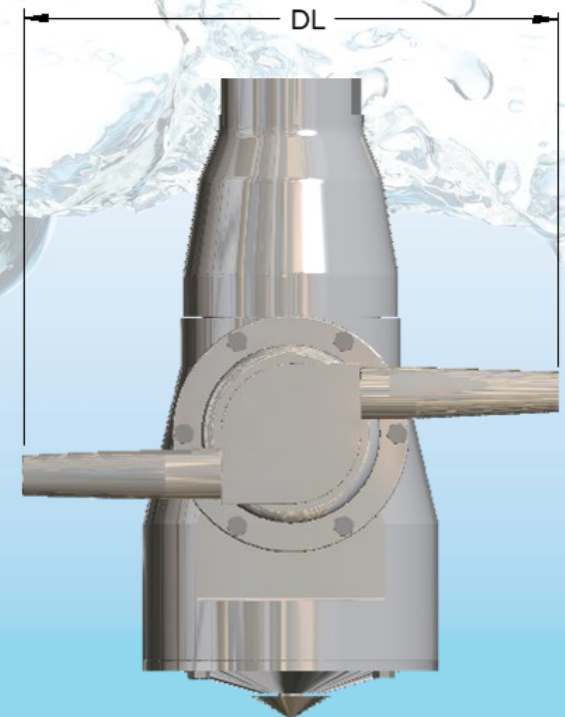
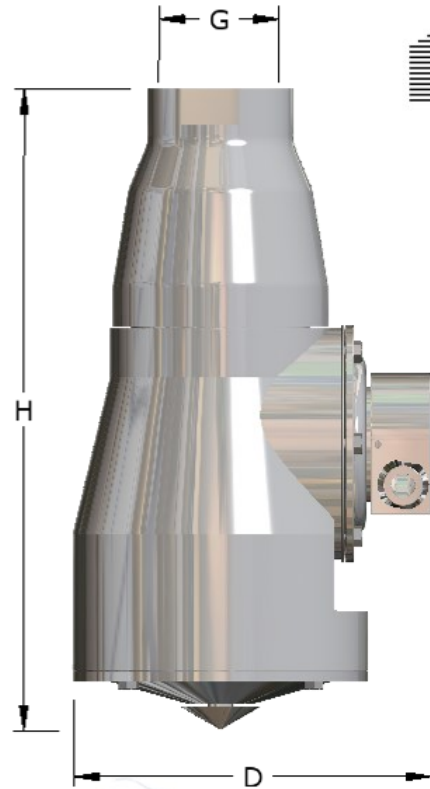
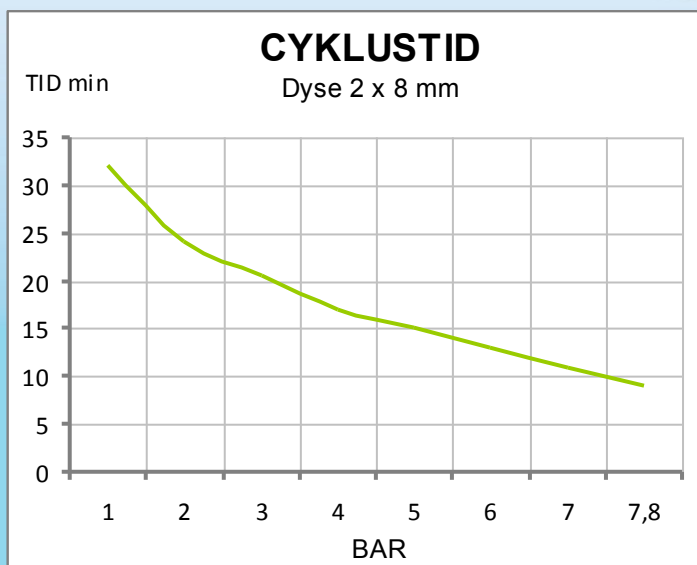
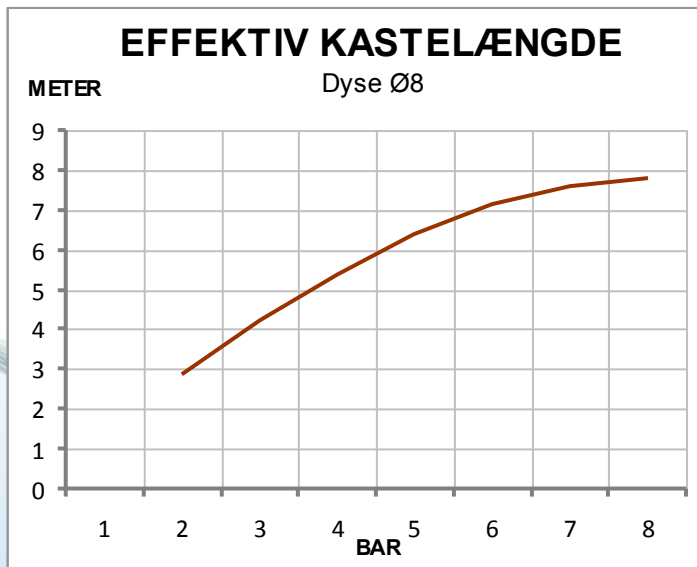
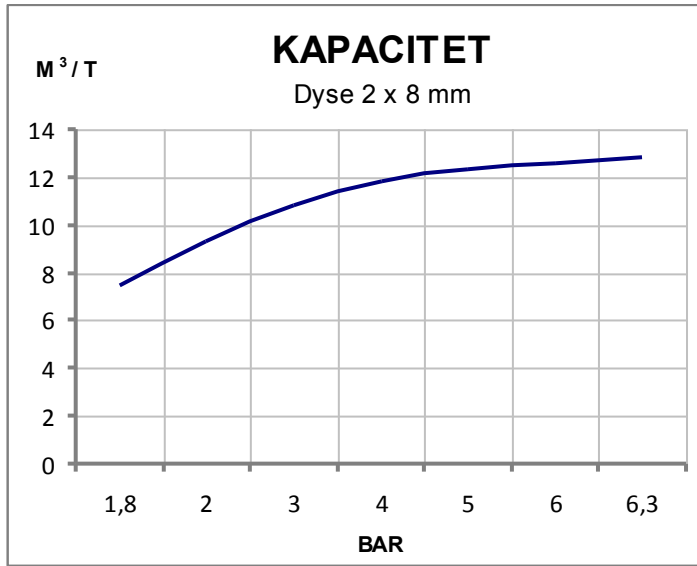
# M20.2071MB



MODEL M	H	D	G	DL
2 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2071MB	2	7	304	316L	5-95°C	BSP 1½" M	Rensemediet

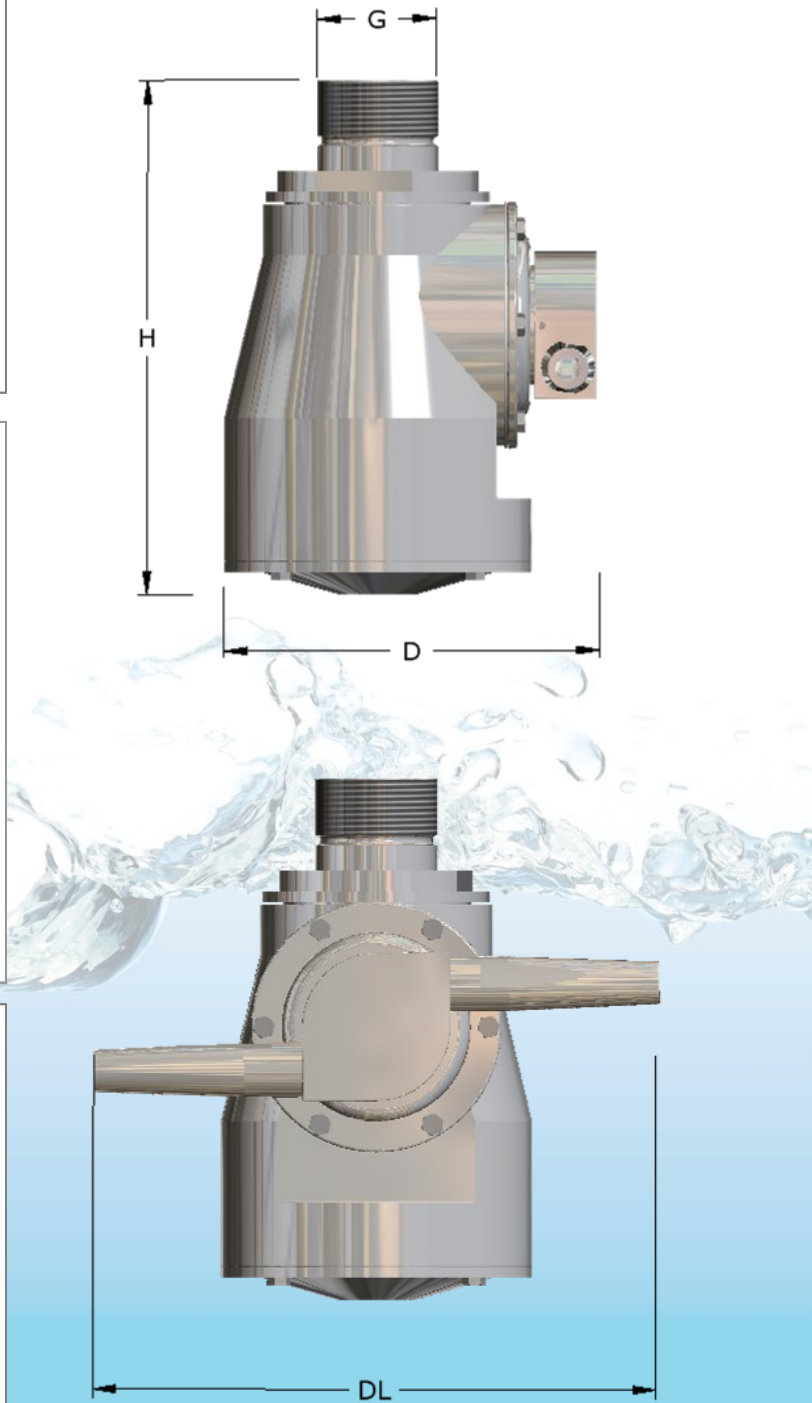
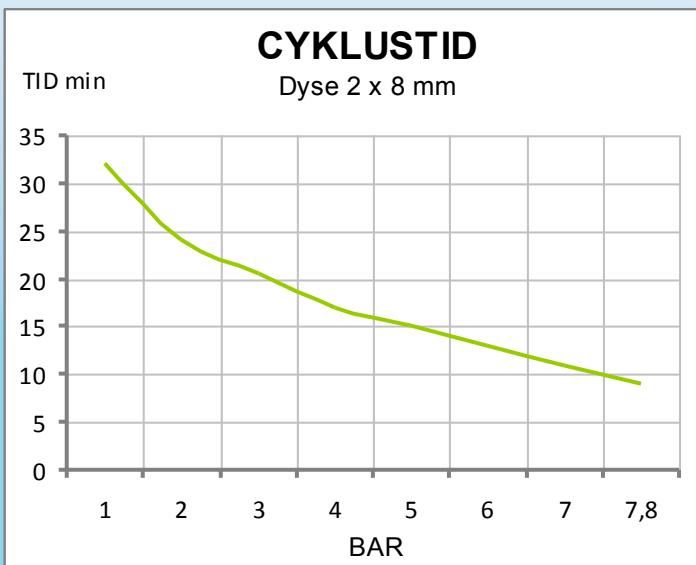
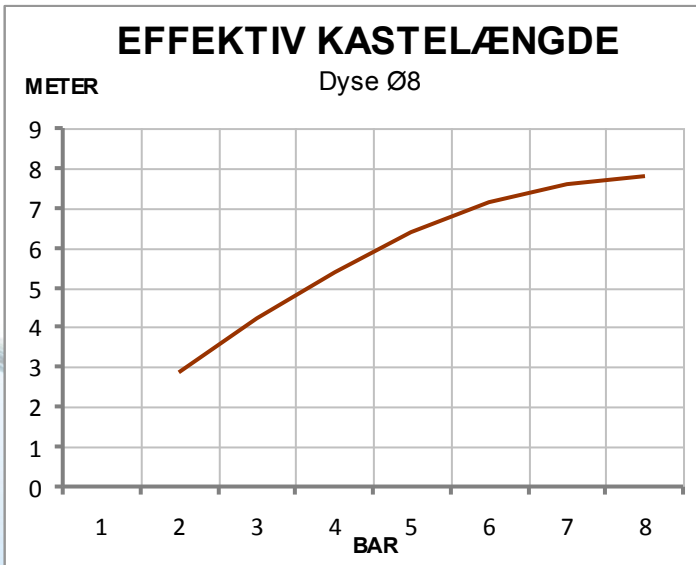
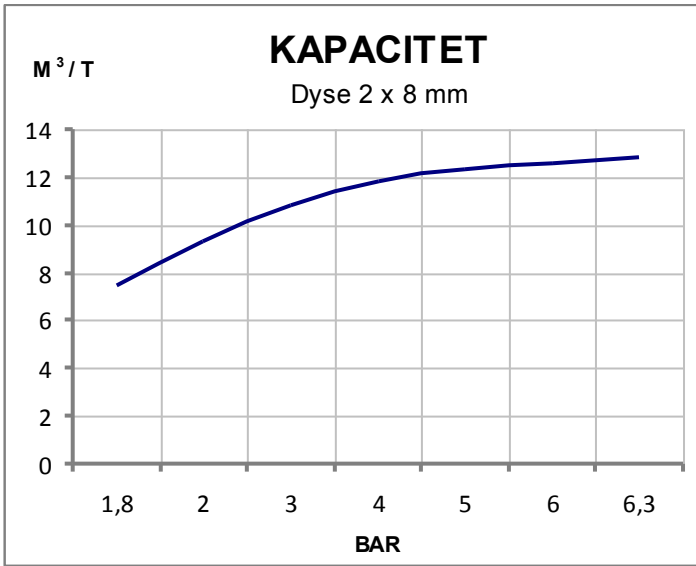
# M20.2081FB



MODEL F	H	D	G	DL
2 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2081FB	2	8	304	316L	5-95°C	BSP 1½" F	Rensemediet

# M20.2081MB

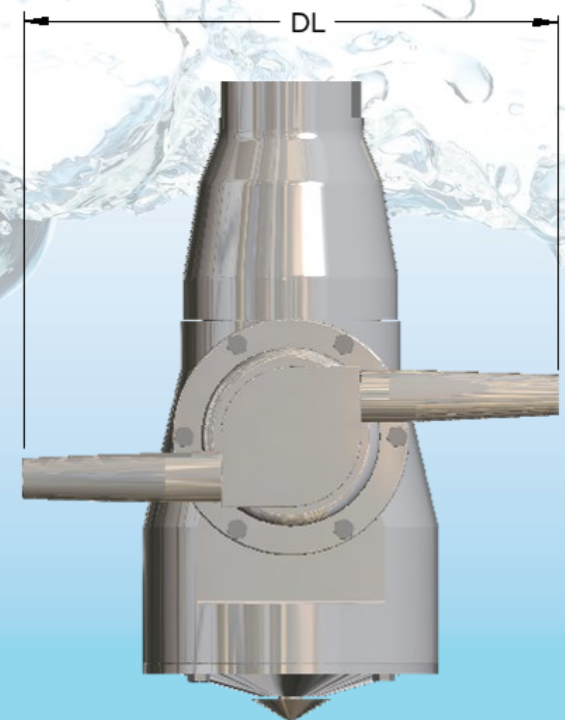
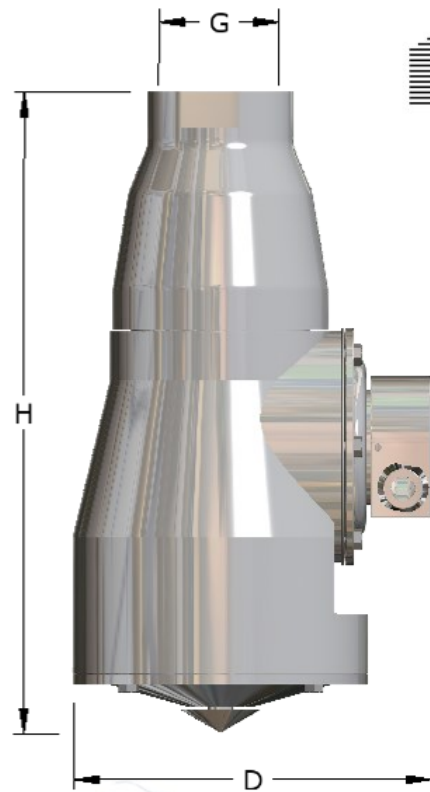
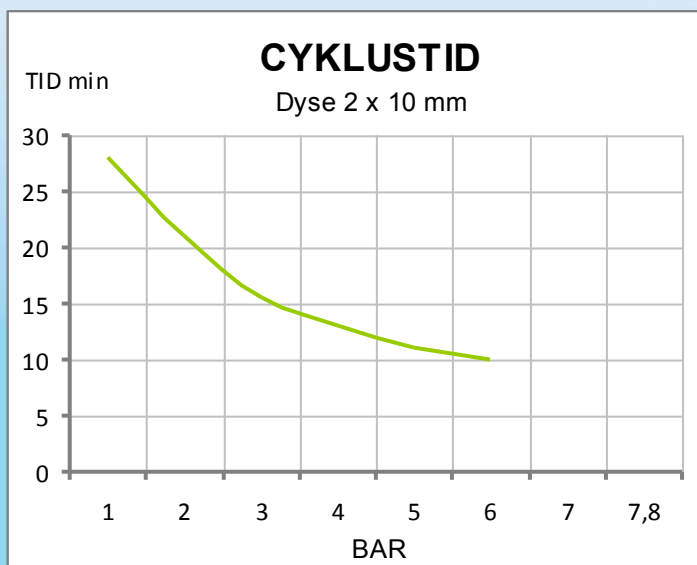
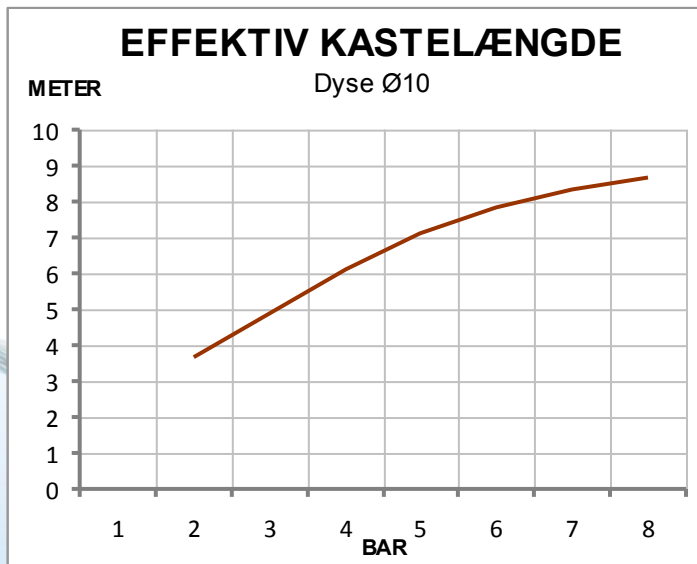
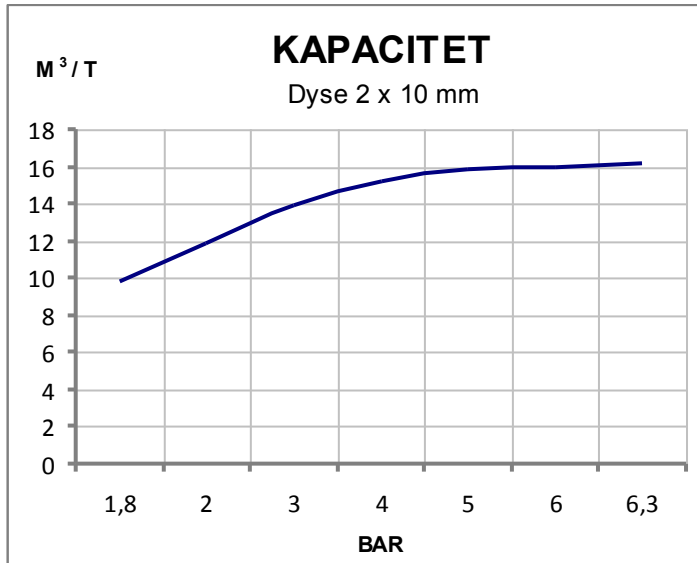


MODEL M	H	D	G	DL
2 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2081MB	2	8	304	316L	5-95°C	BSP 1½" M	Rensemediet



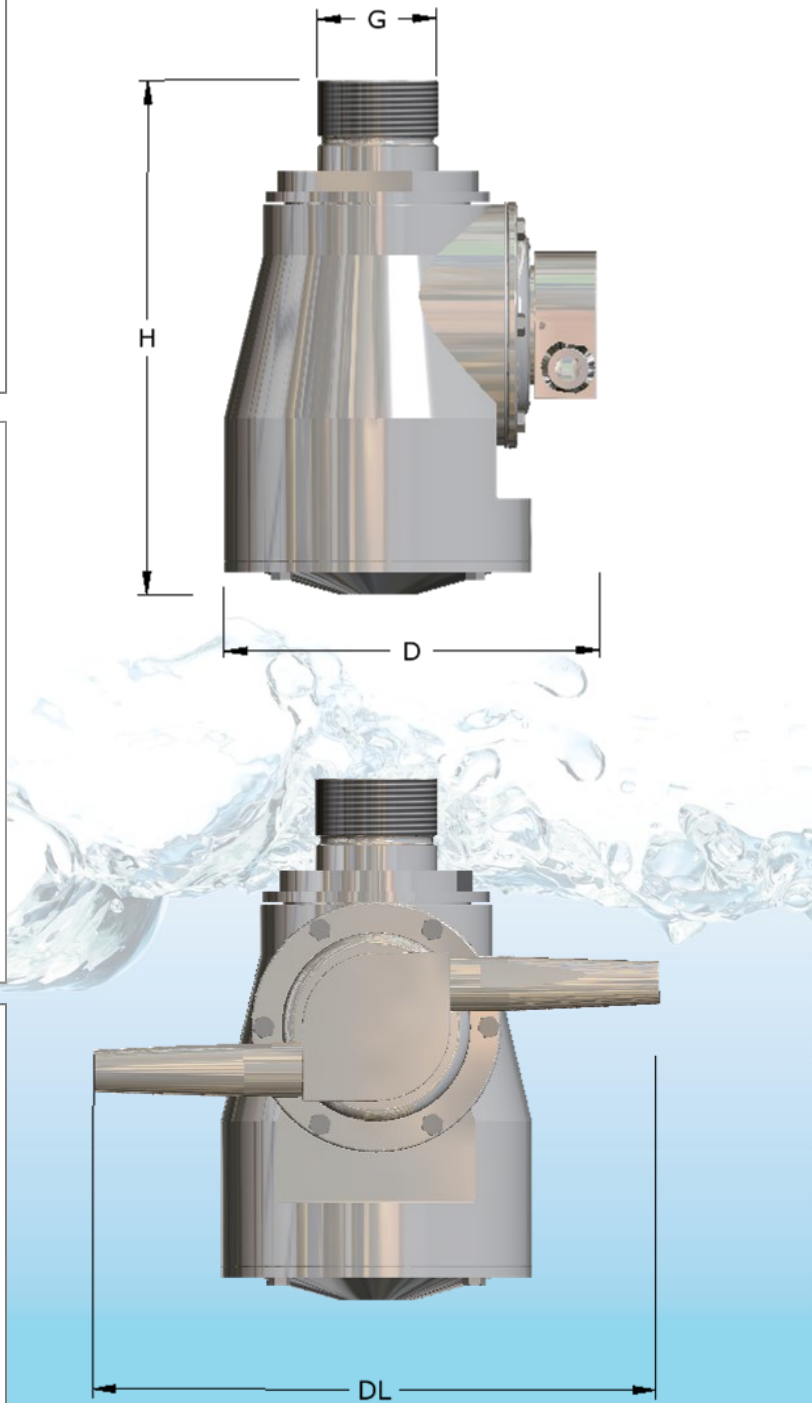
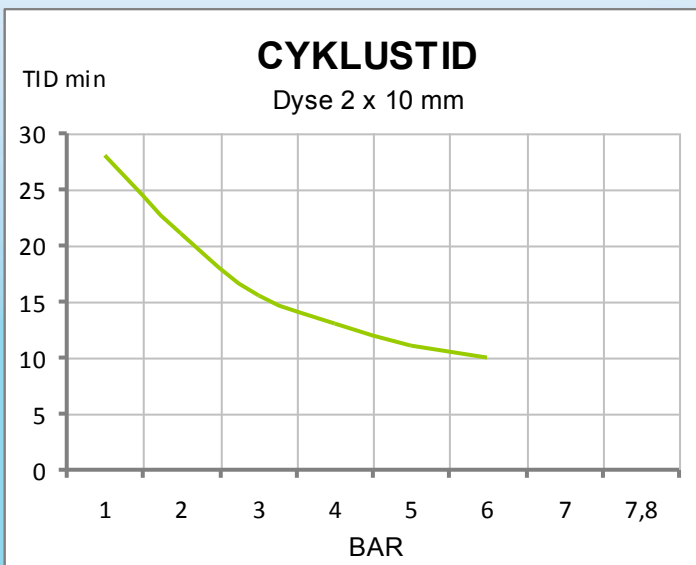
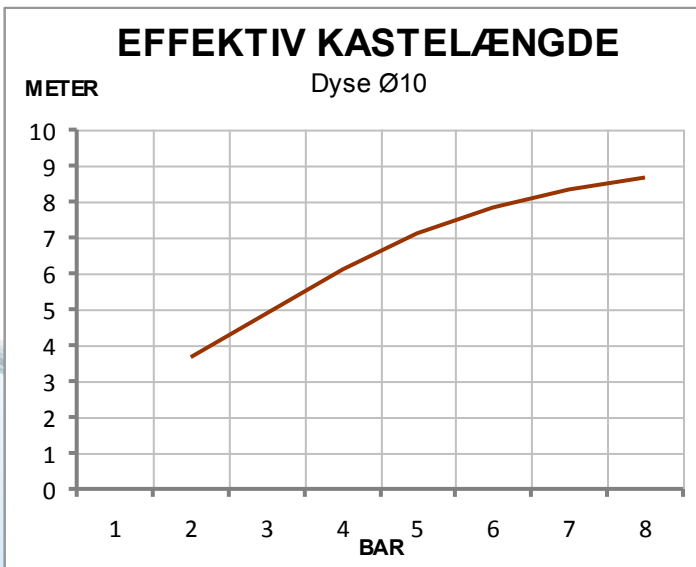
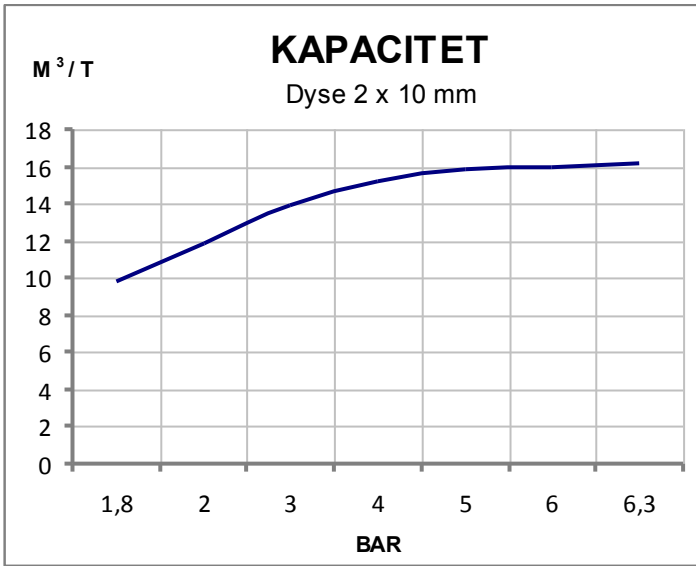
# M20.2101FB



MODEL F	H	D	G	DL
2 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2101FB	2	10	304	316L	5-95°C	BSP 1½" F	Rensemiediet

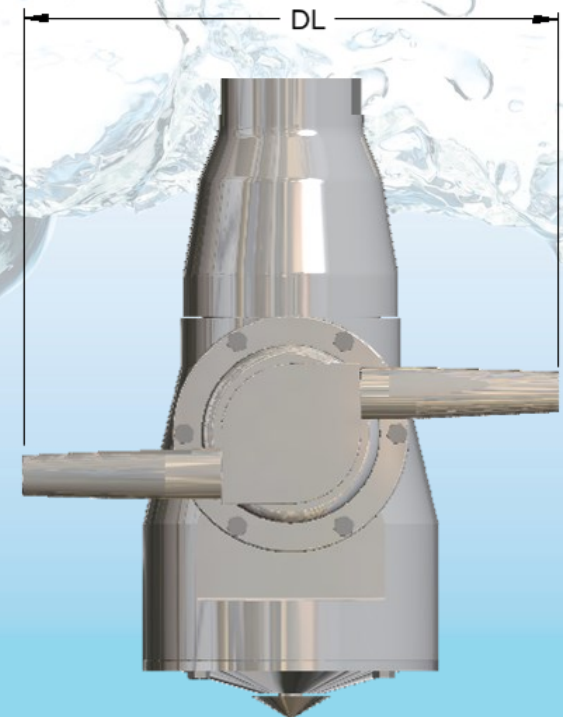
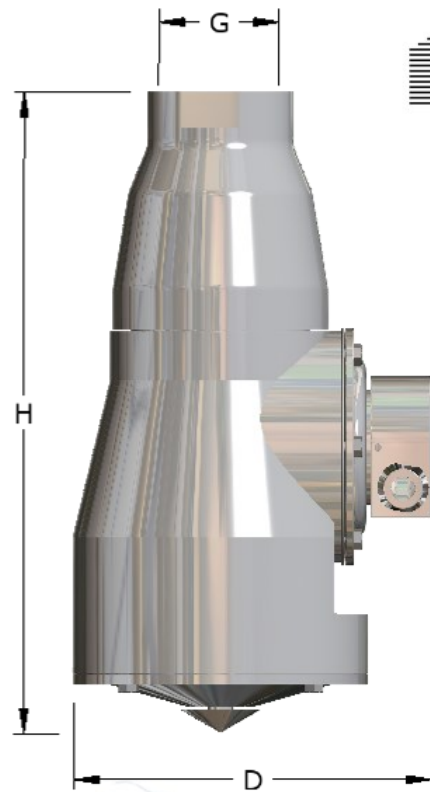
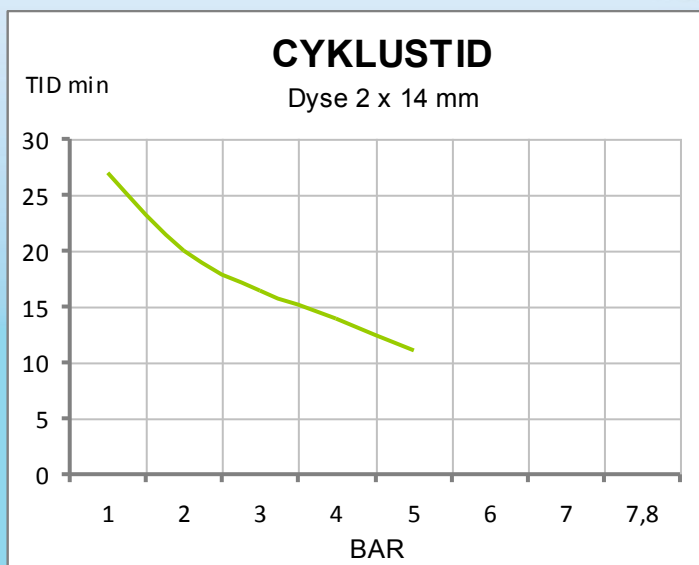
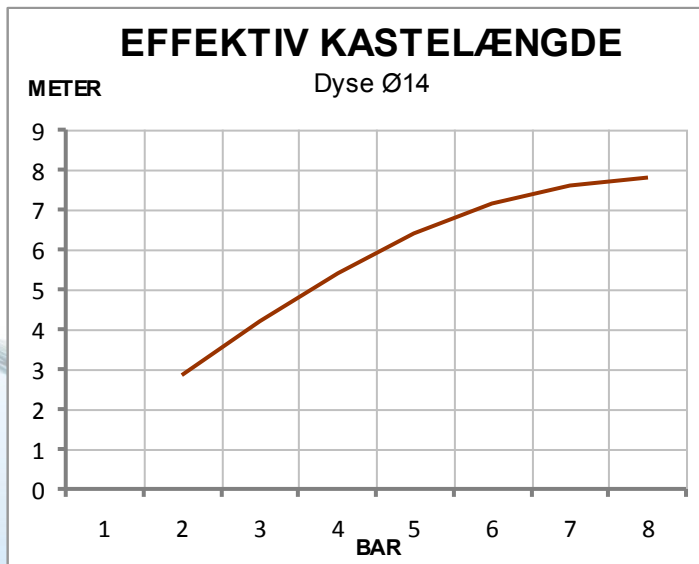
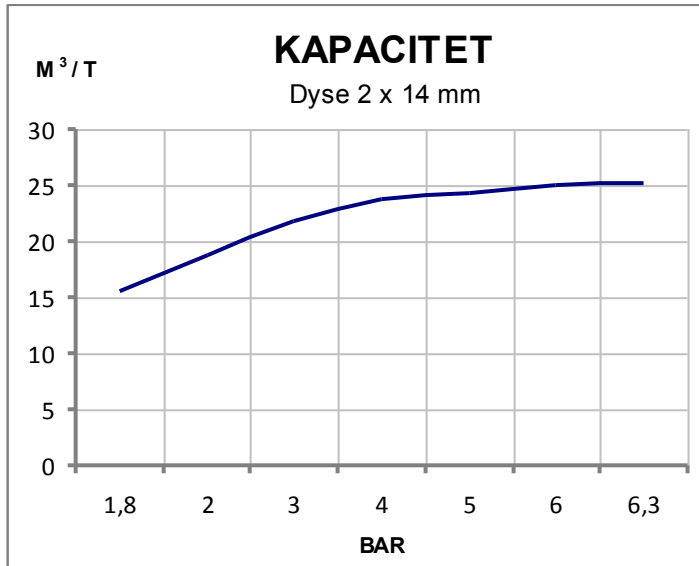
# M20.2101MB



MODEL M	H	D	G	DL
2 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2101MB	2	10	304	316L	5-95°C	BSP 1½" M	Rensemediet

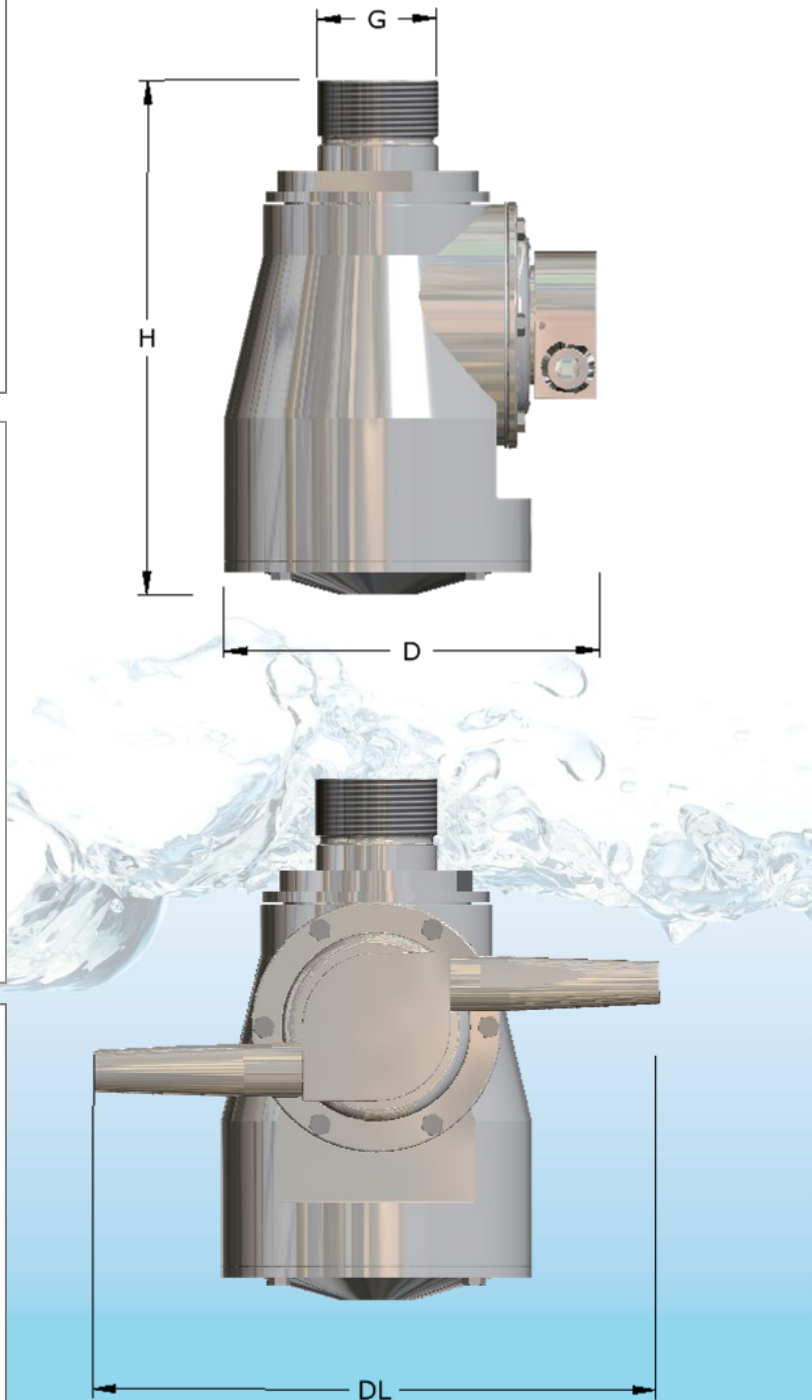
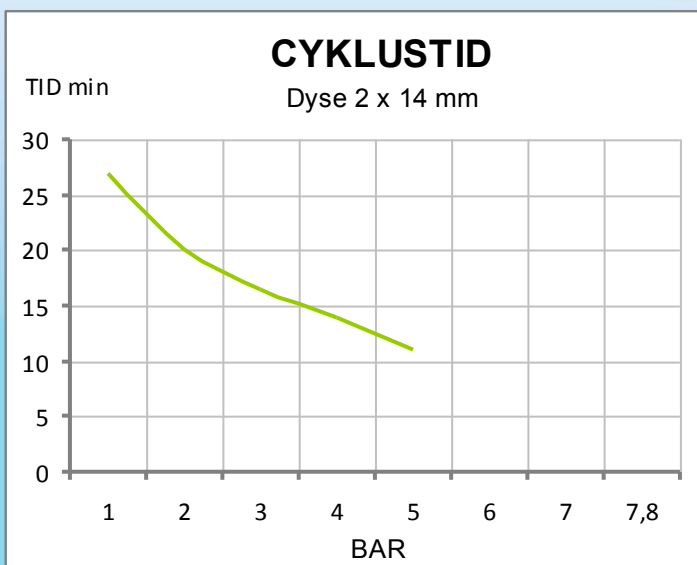
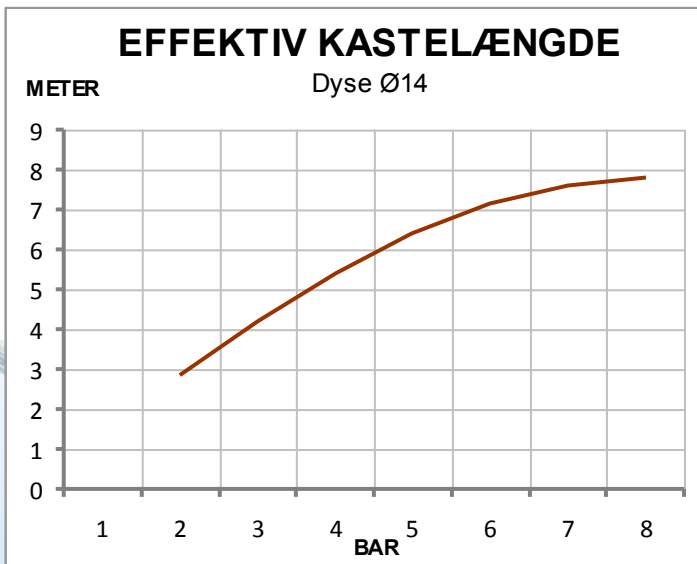
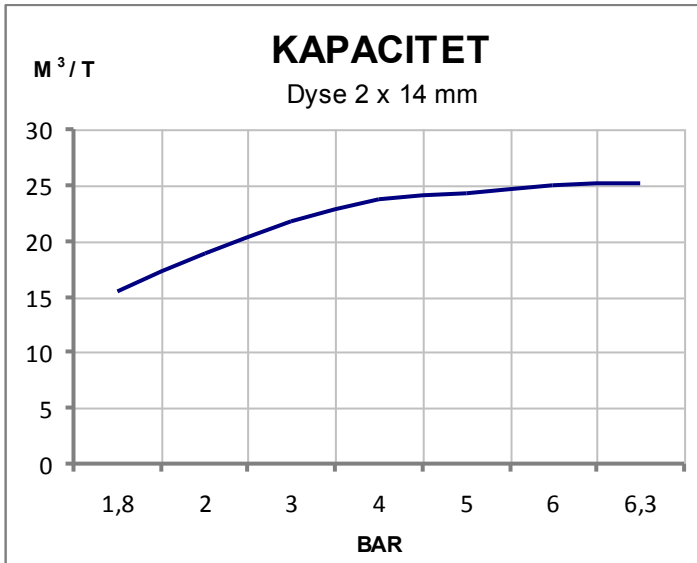
# M20.2141FB



MODEL F	H	D	G	DL
2 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2141FB	2	14	304	316L	5-95°C	BSP 1½" F	Rensemediet

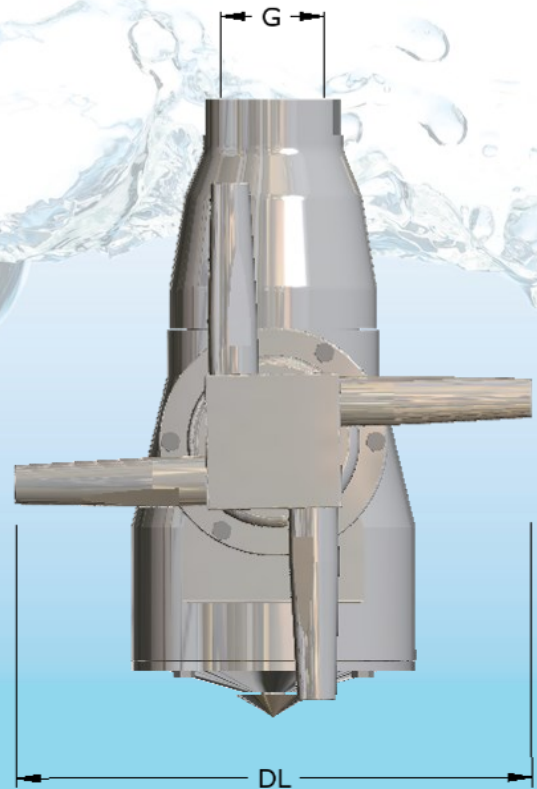
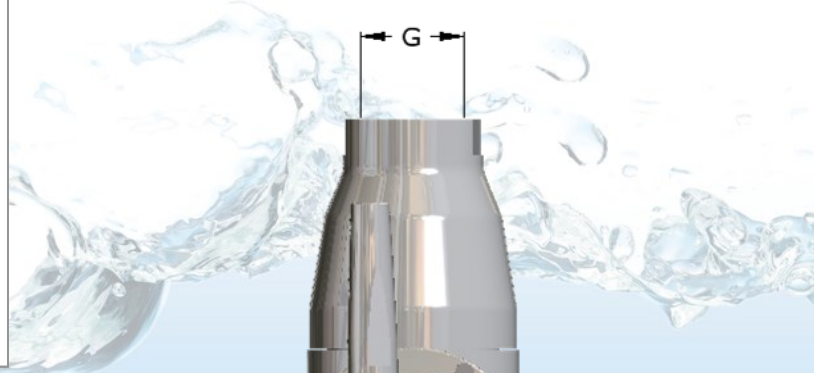
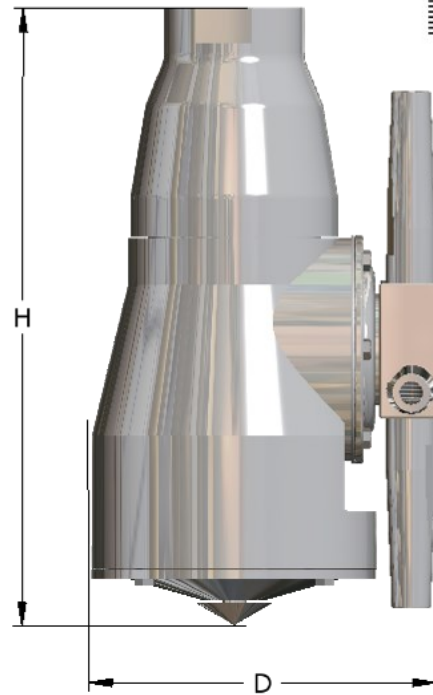
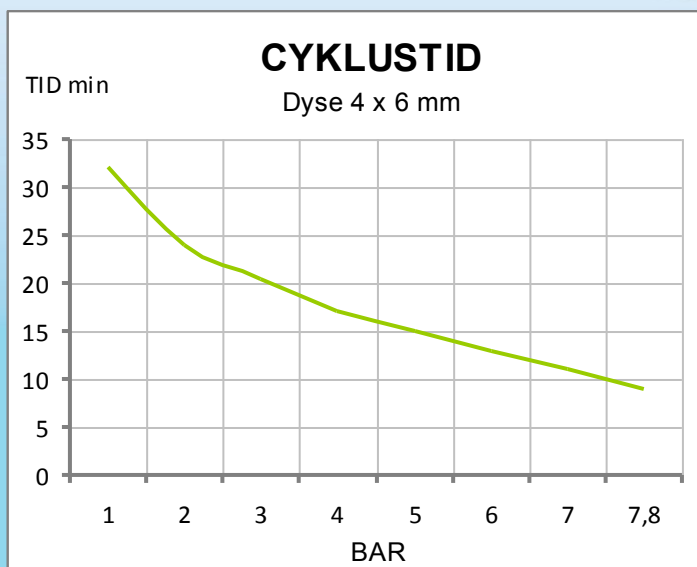
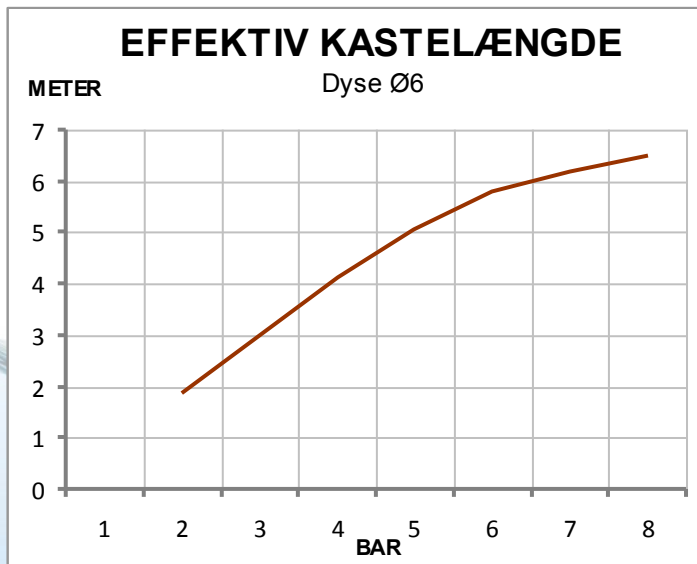
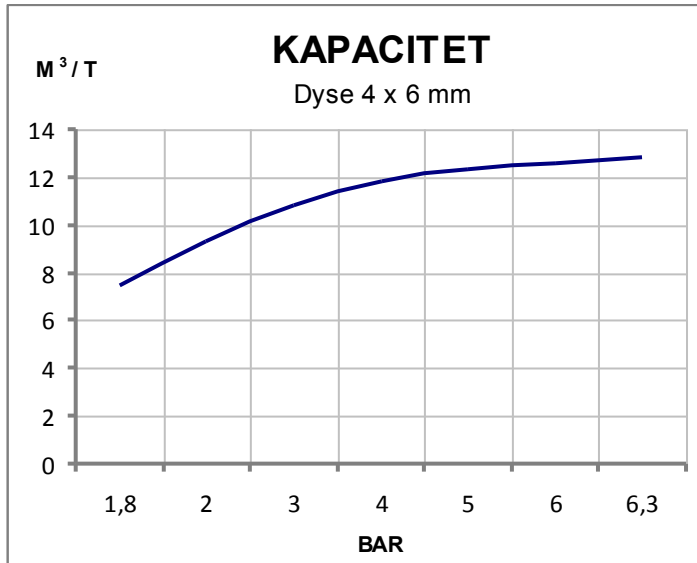
# M20.2141MB



MODEL M	H	D	G	DL
2 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.2141MB	2	14	304	316L	5-95°C	BSP 1½" M	Rensemediet

# M20.4061FB

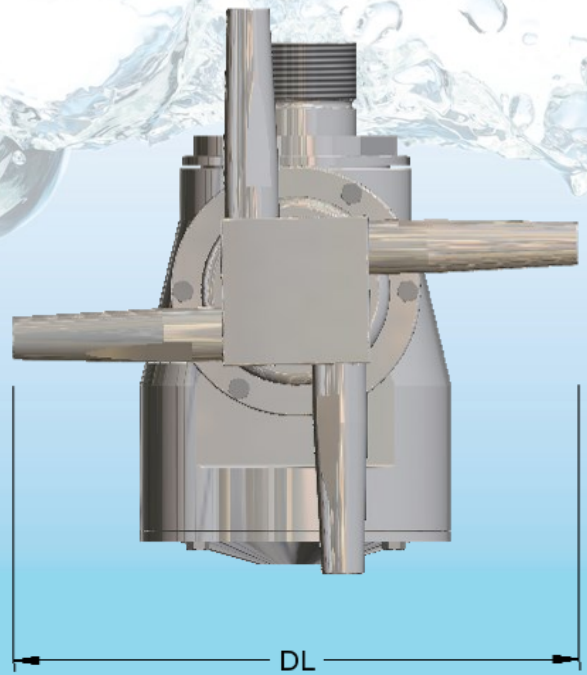
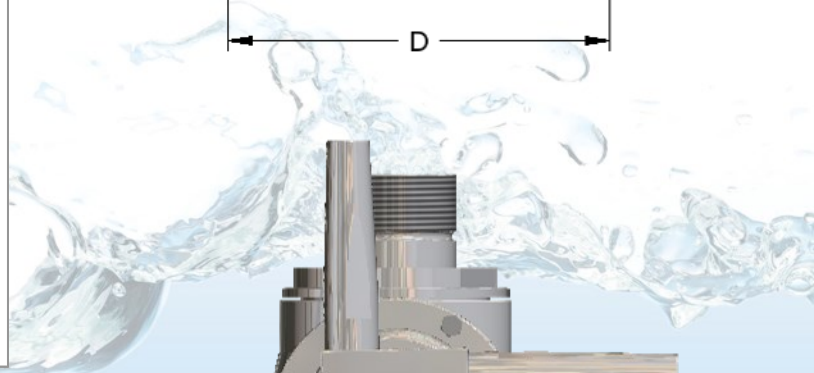
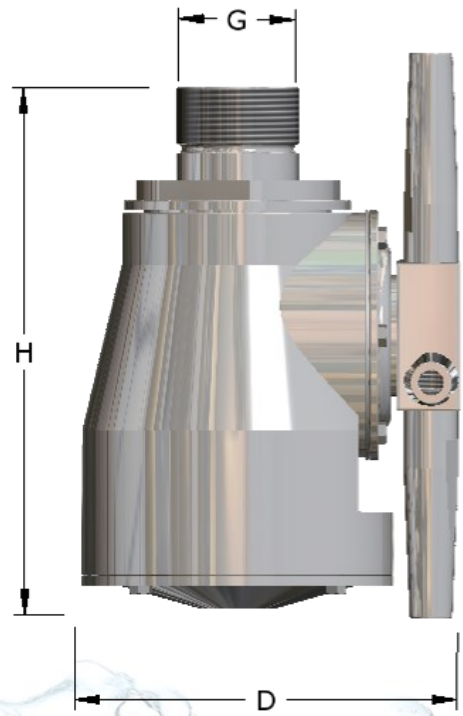
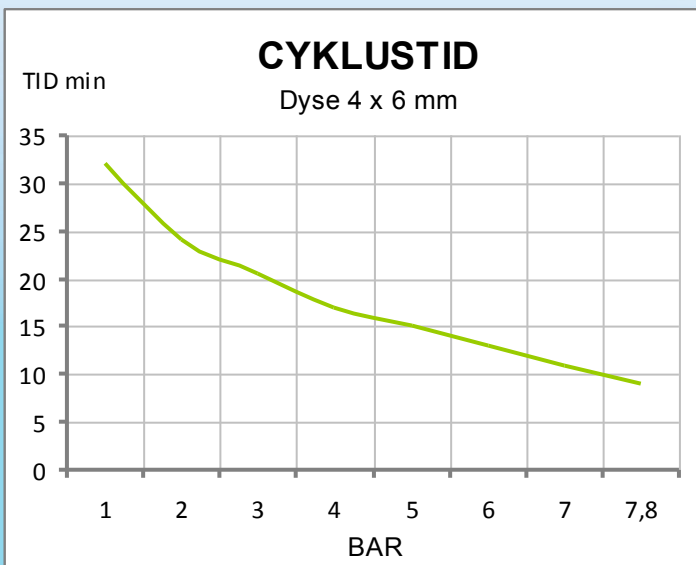
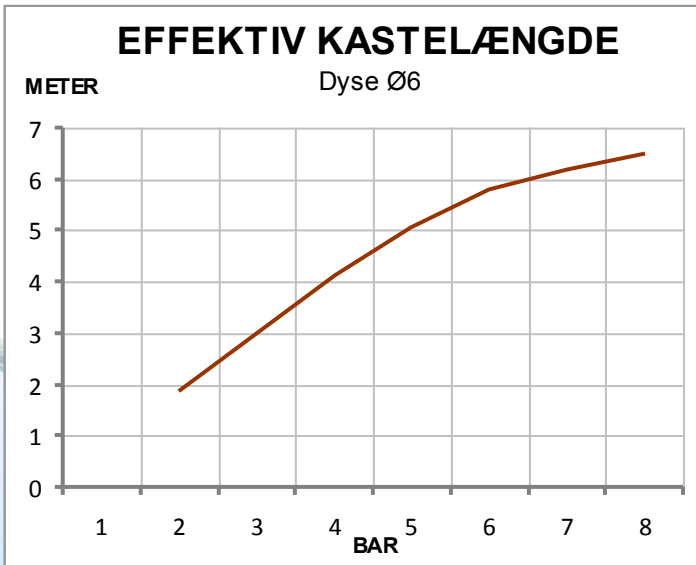
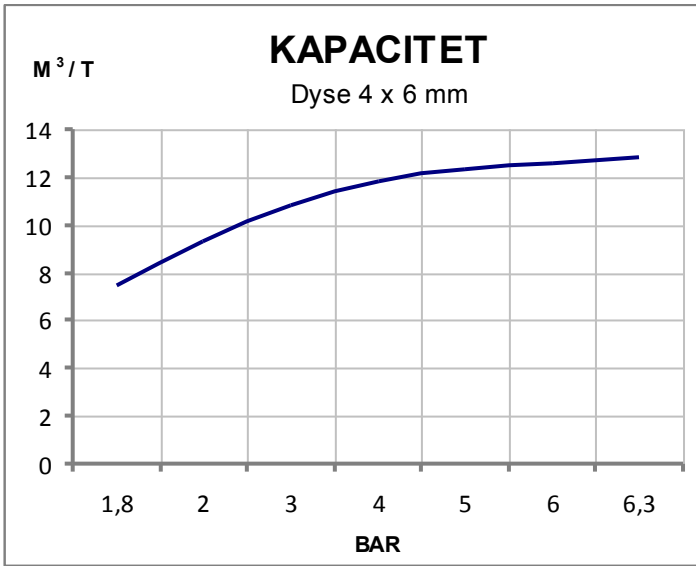


MODEL F	H	D	G	DL
4 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4061FB	4	6	304	316L	5-95°C	BSP 1½" F	Rensemediet



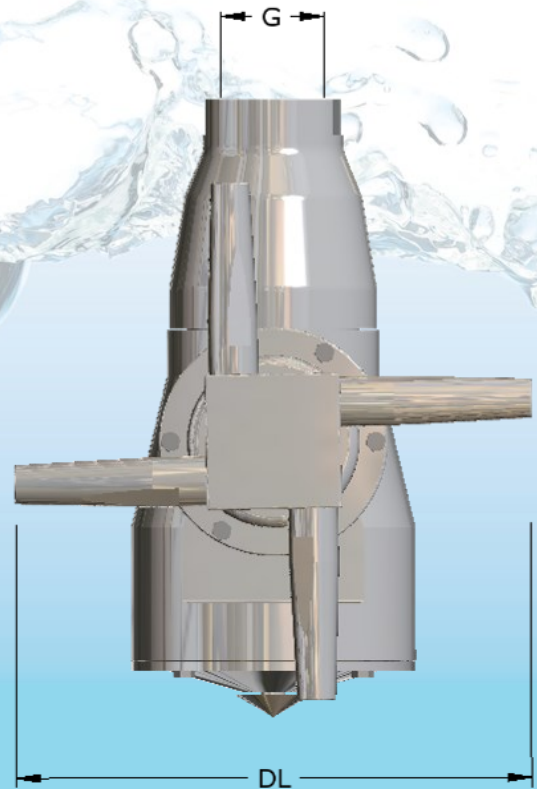
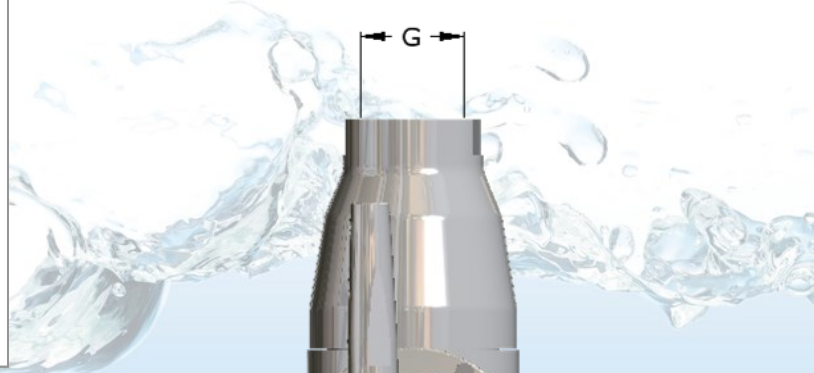
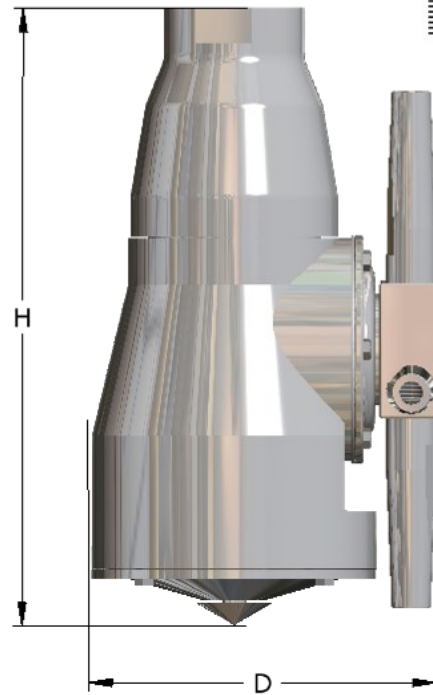
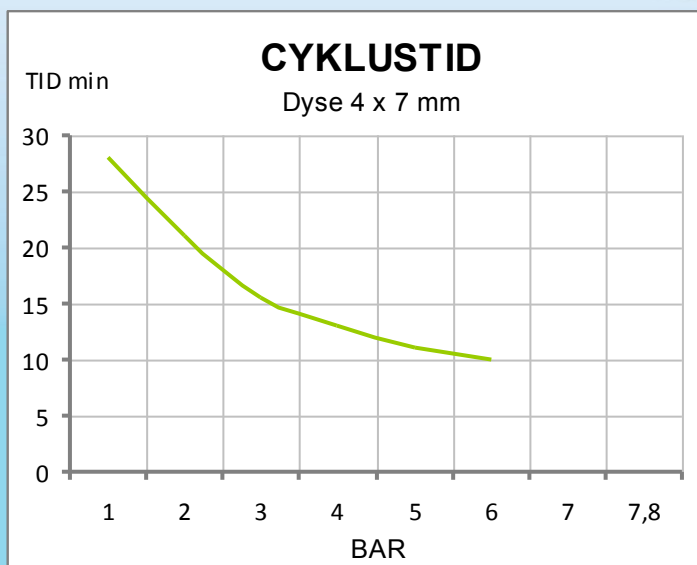
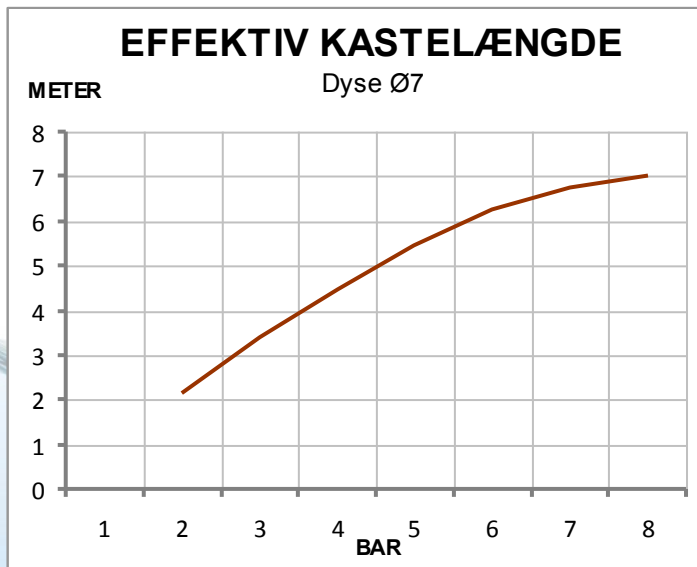
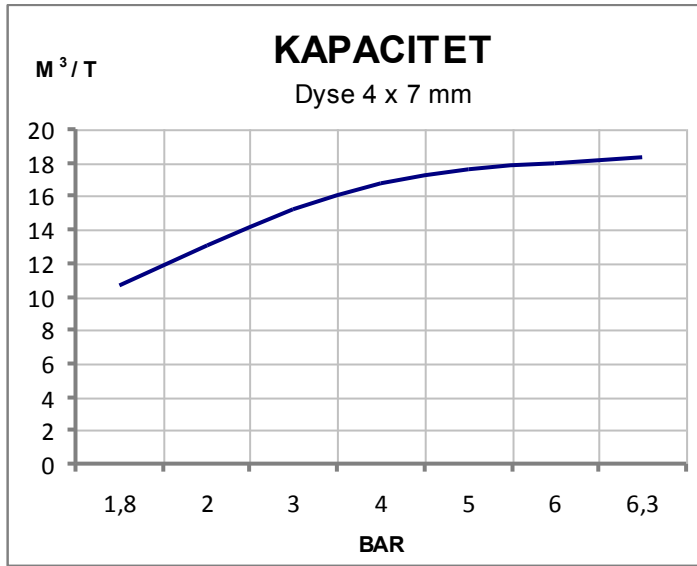
# M20.4061MB



MODEL M	H	D	G	DL
4 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4061MB	4	6	304	316L	5-95°C	BSP 1½" M	Rensemediet

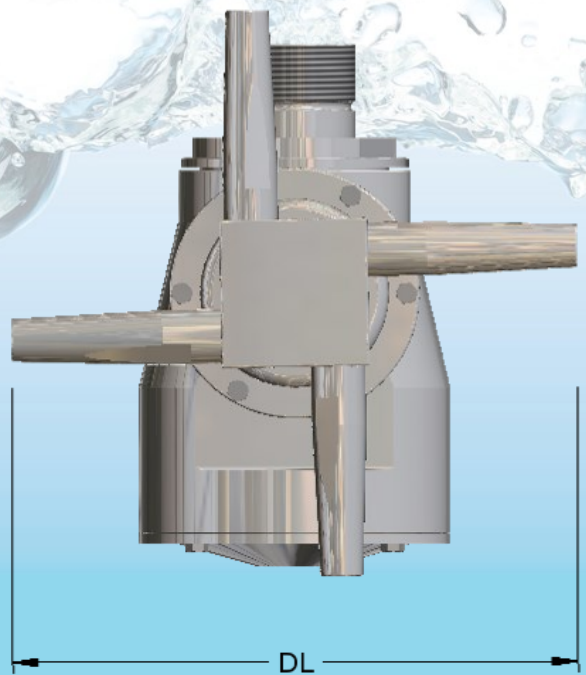
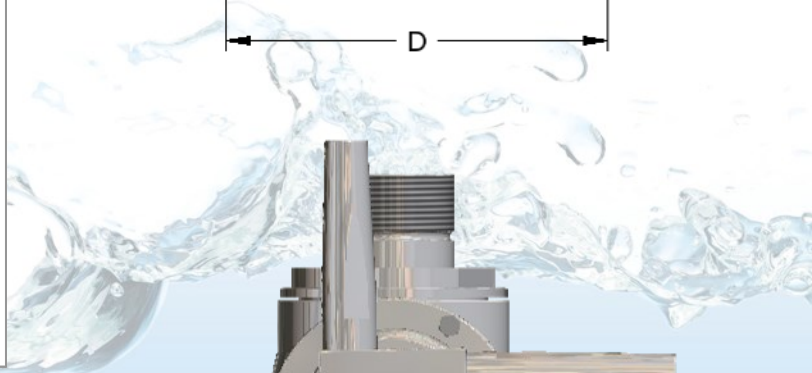
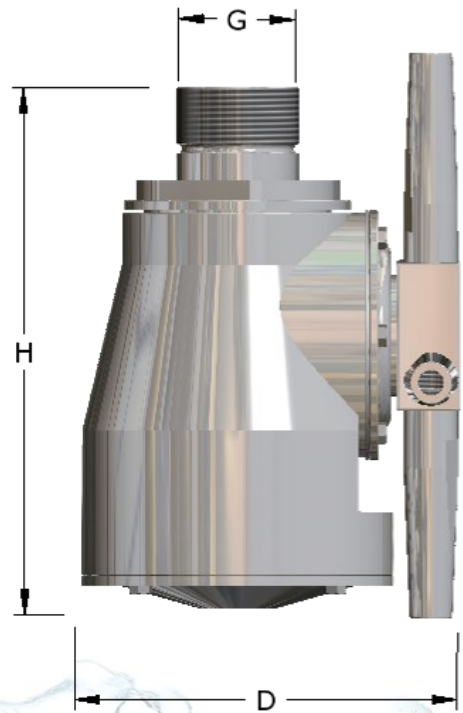
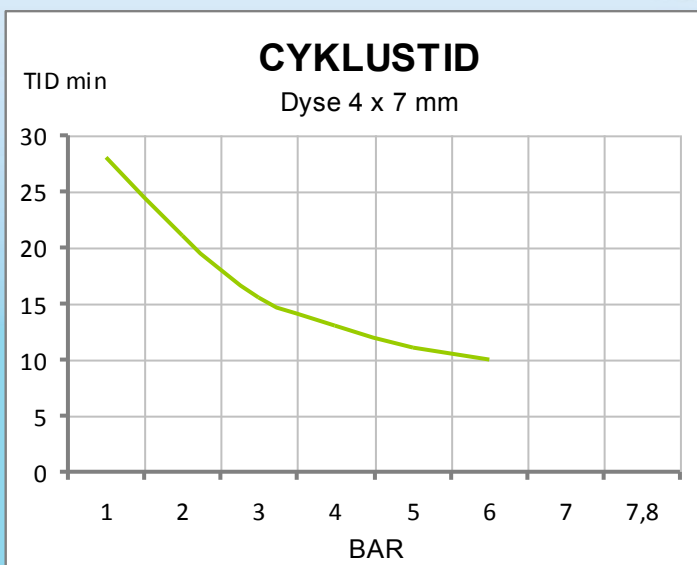
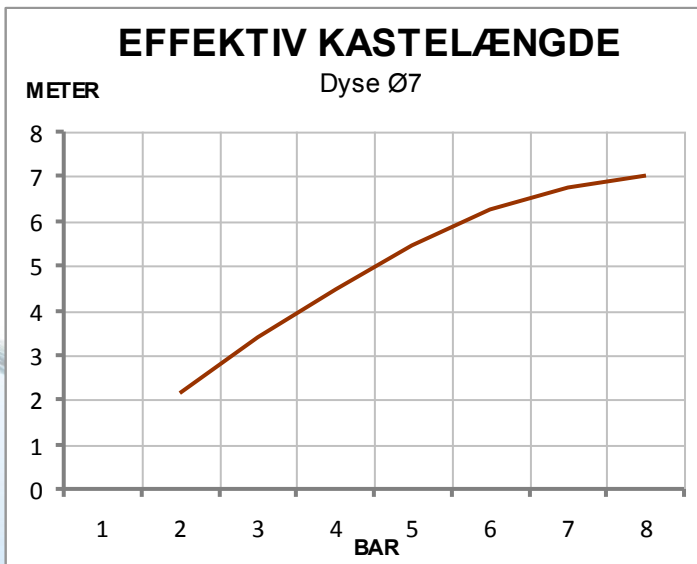
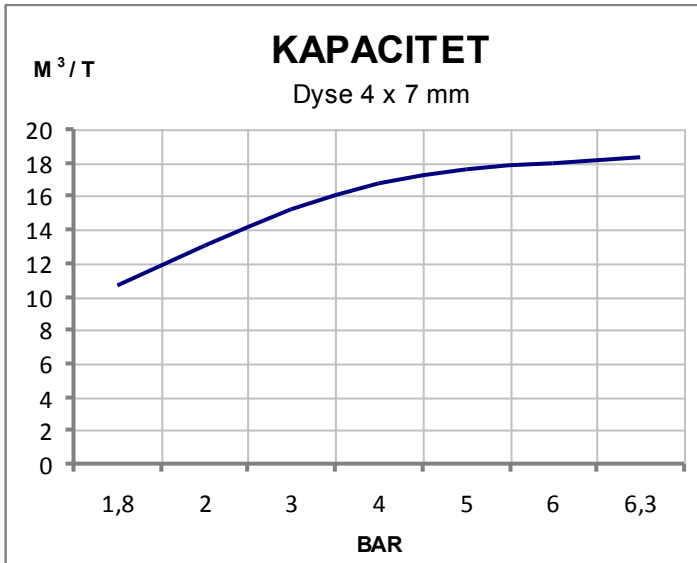
# M20.4071FB



MODEL F	H	D	G	DL
4 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4071FB	4	7	304	316L	5-95°C	BSP 1½" F	Rensemediet

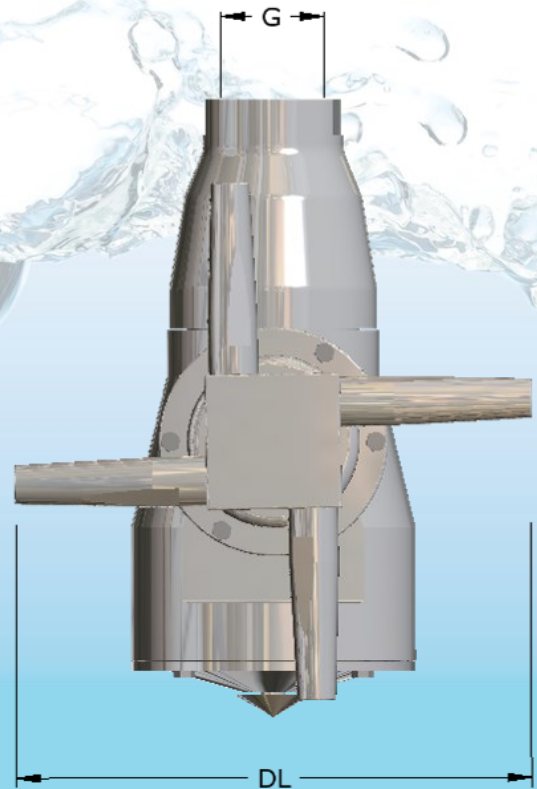
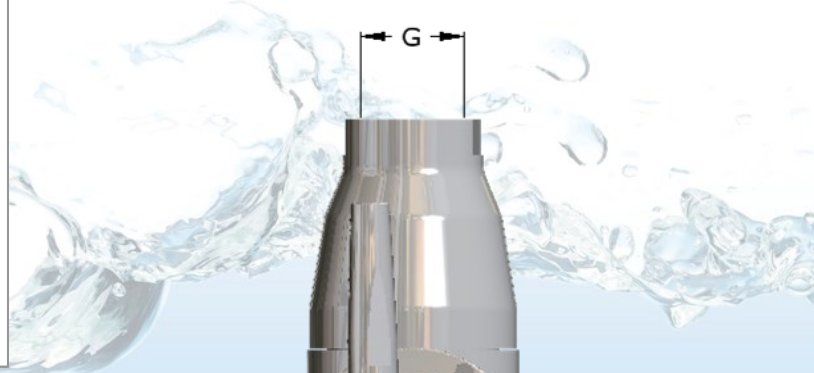
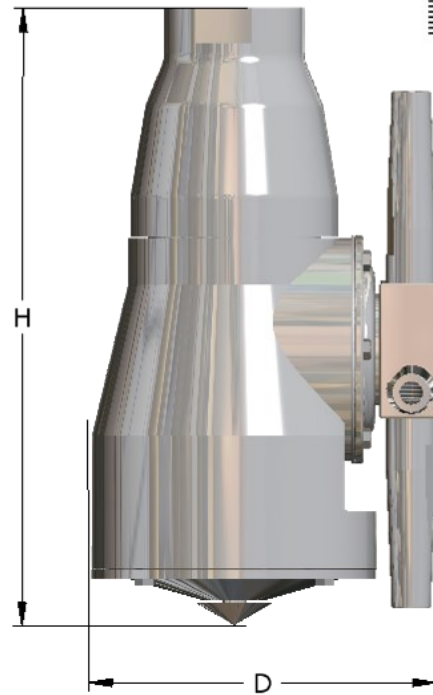
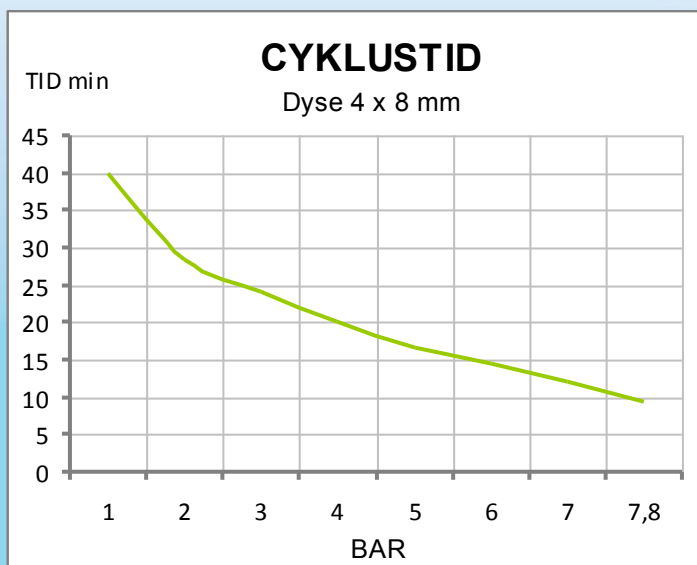
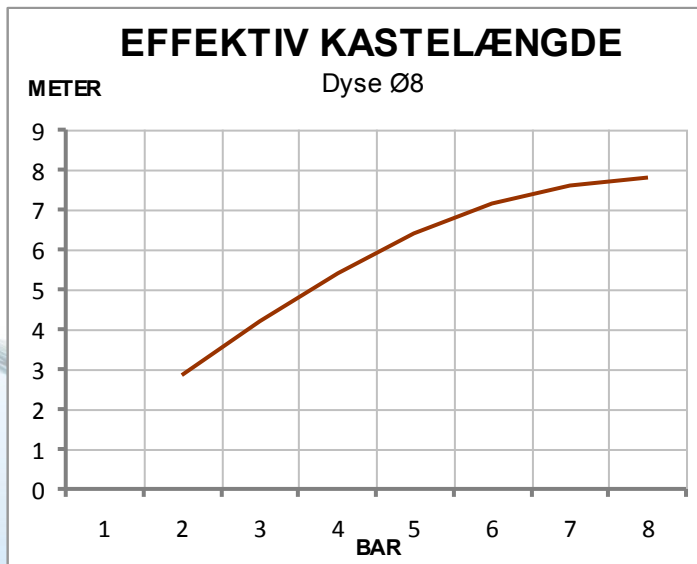
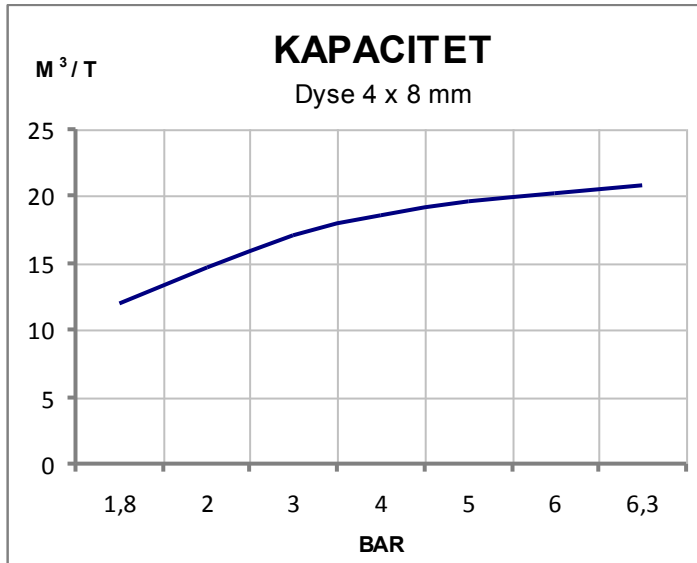
# M20.4071MB



MODEL M	H	D	G	DL
4 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4071MB	4	7	304	316L	5-95°C	BSP 1½" M	Rensemediet

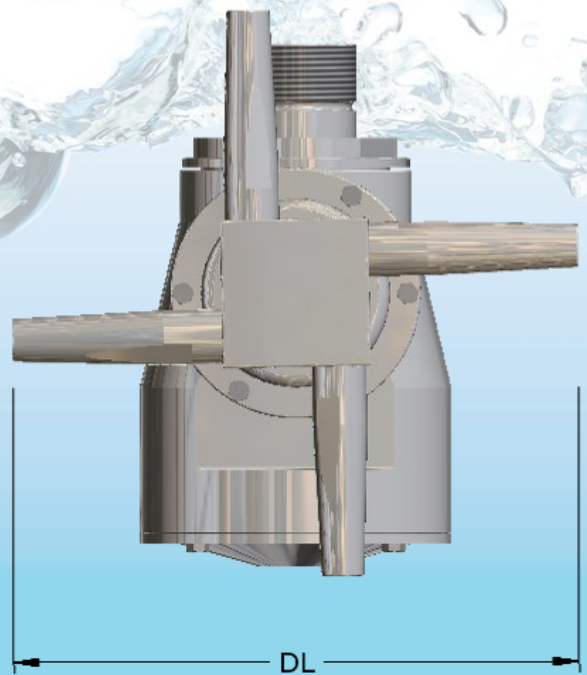
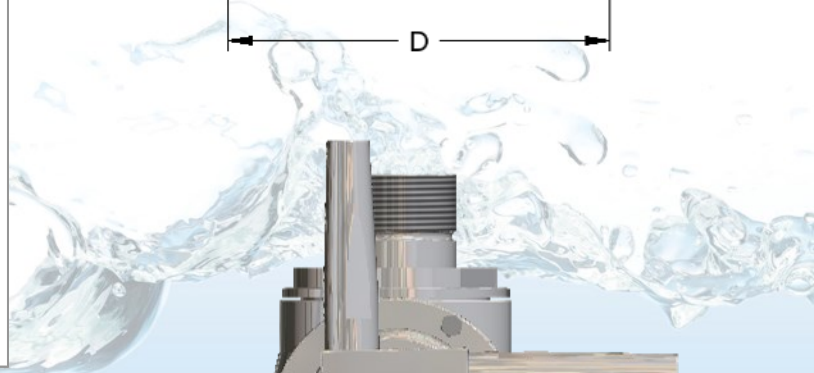
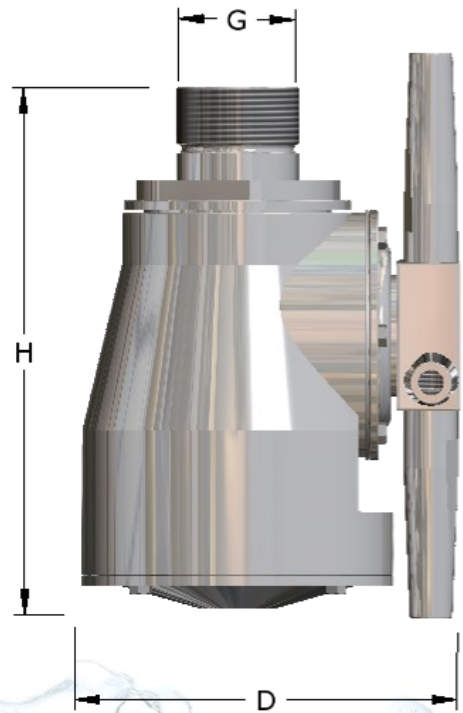
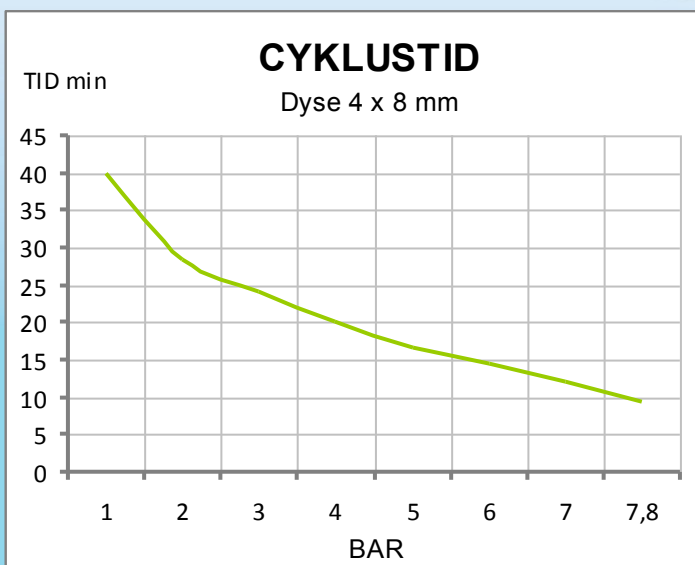
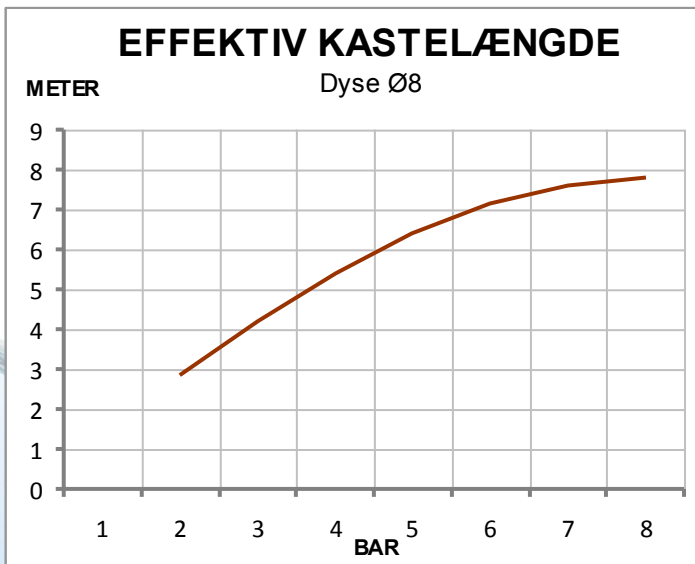
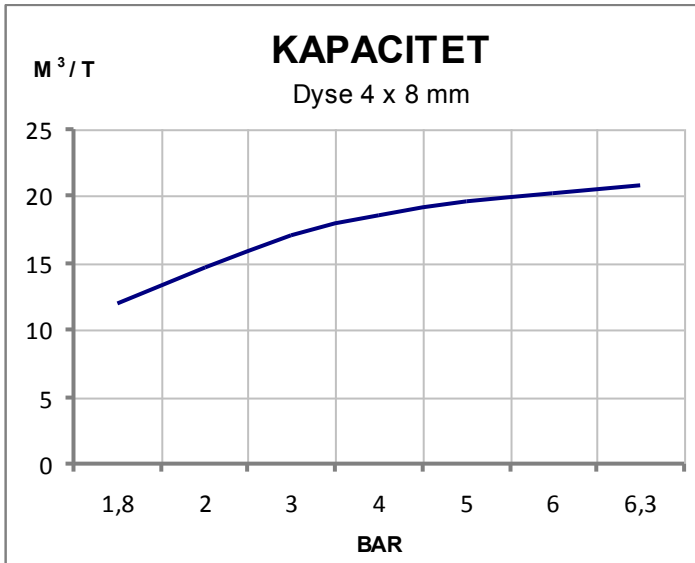
# M20.4081FB



MODEL F	H	D	G	DL
4 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4081FB	4	8	304	316L	5-95°C	BSP 1½" F	Rensemediet

# M20.4081MB

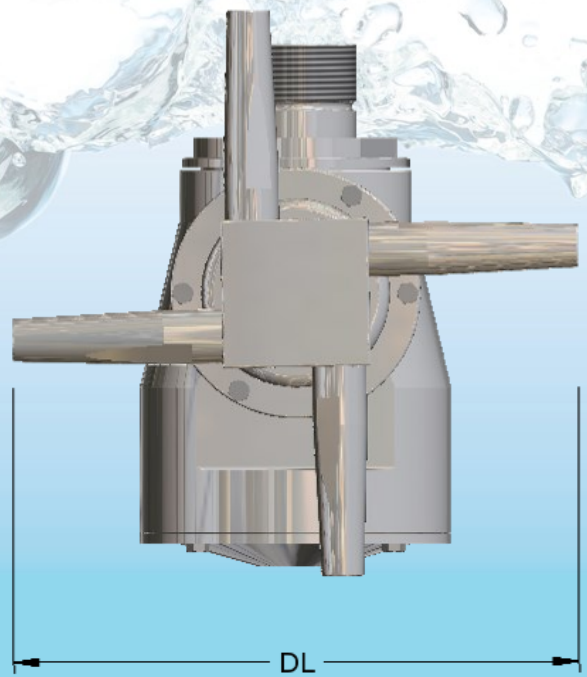
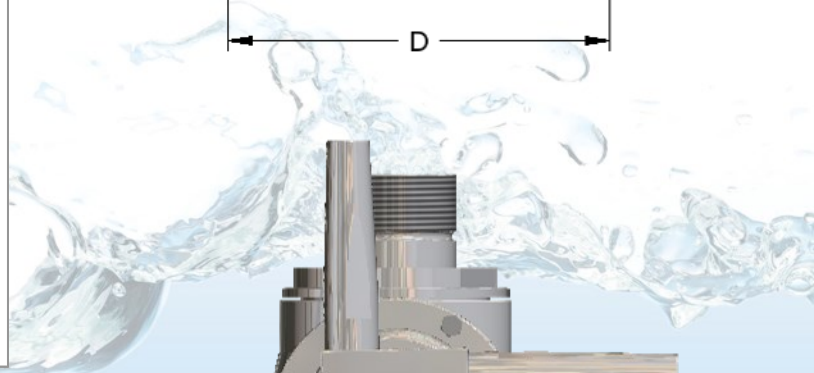
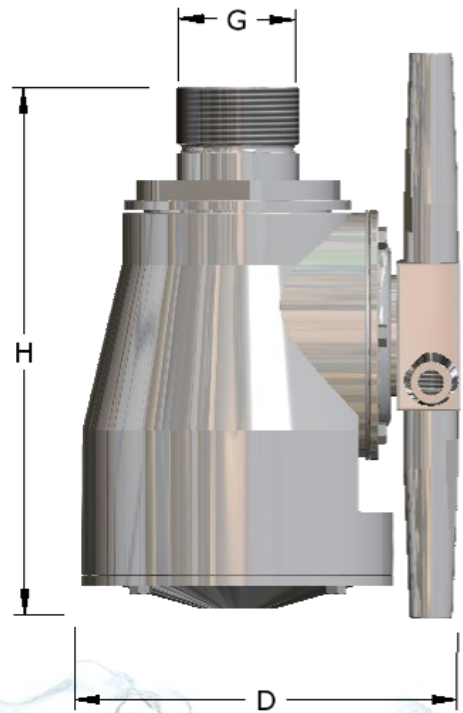
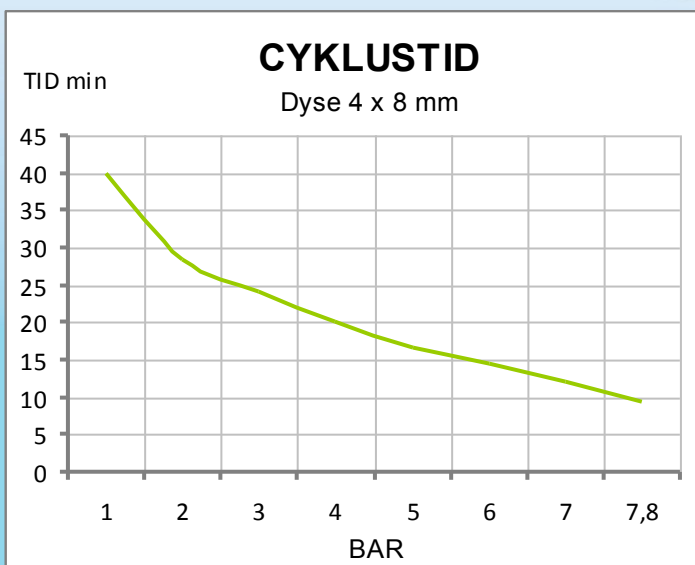
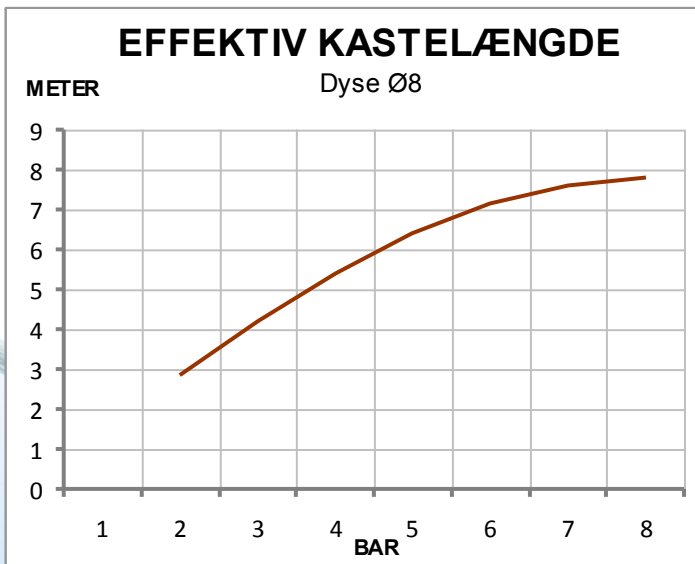
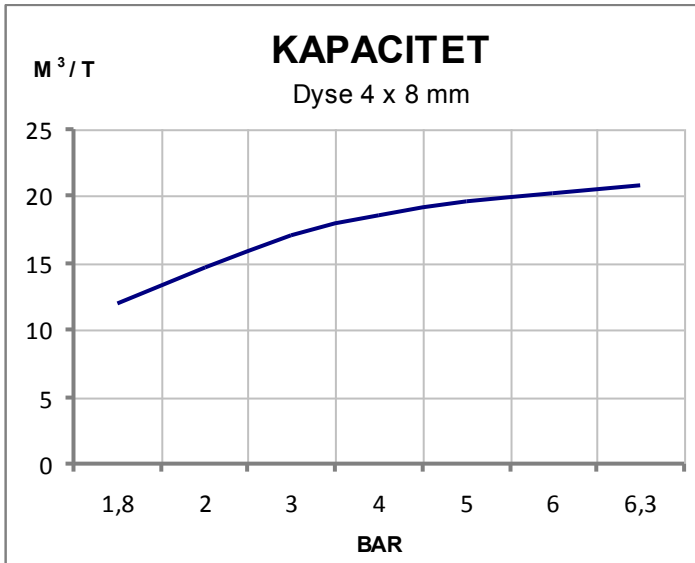


MODEL M	H	D	G	DL
4 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4081MB	4	8	304	316L	5-95°C	BSP 1½" M	Rensemediet



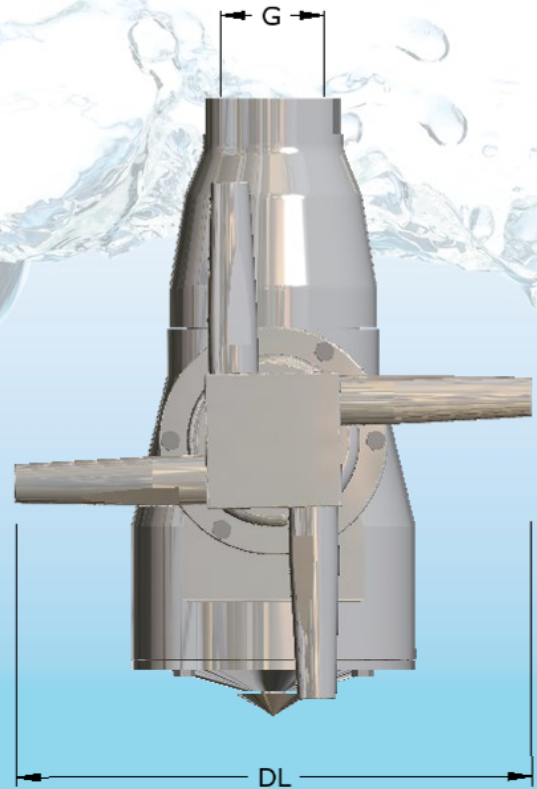
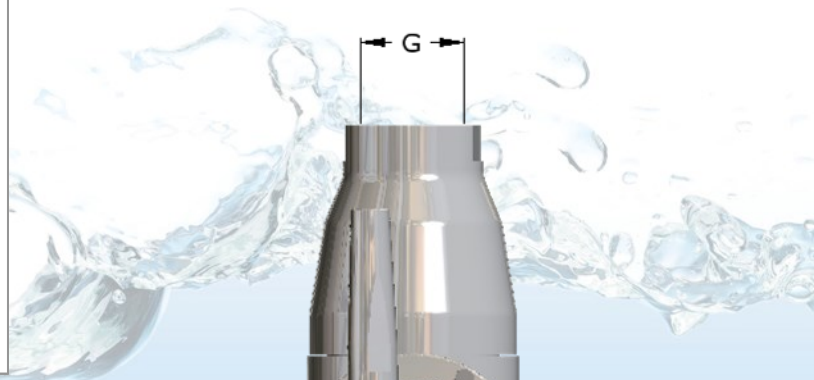
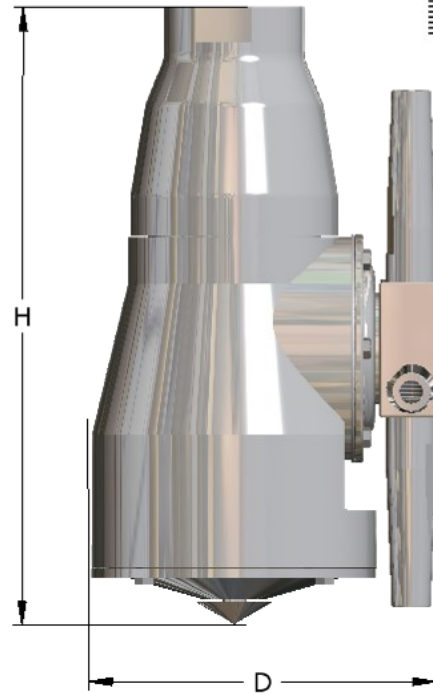
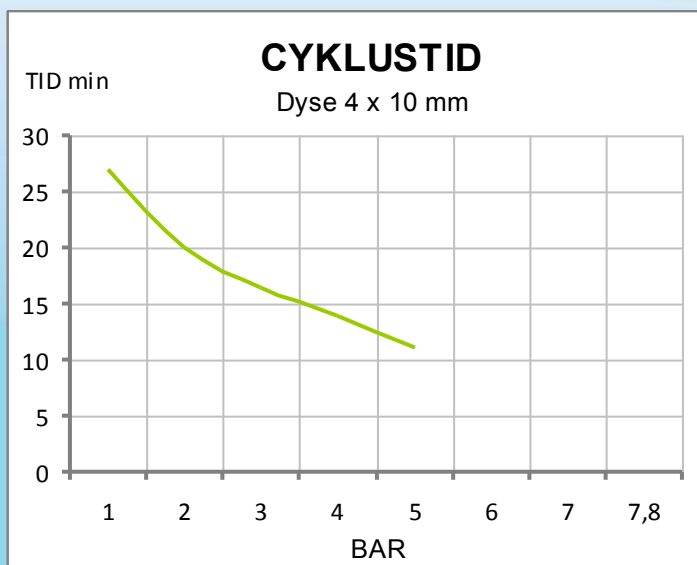
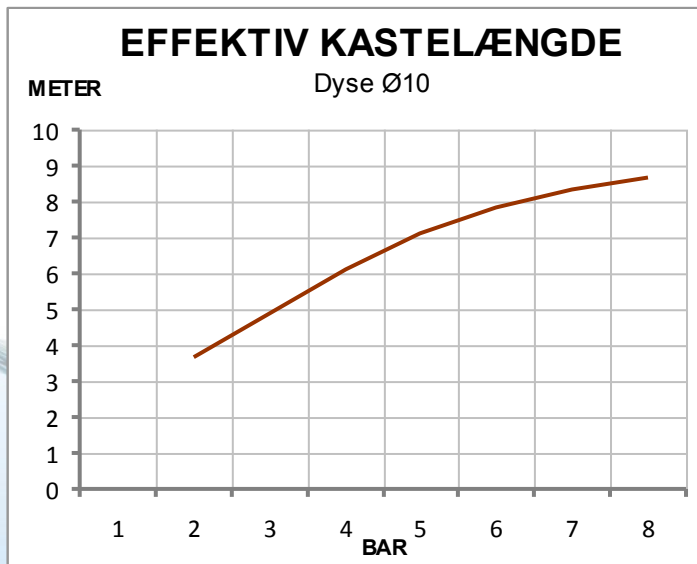
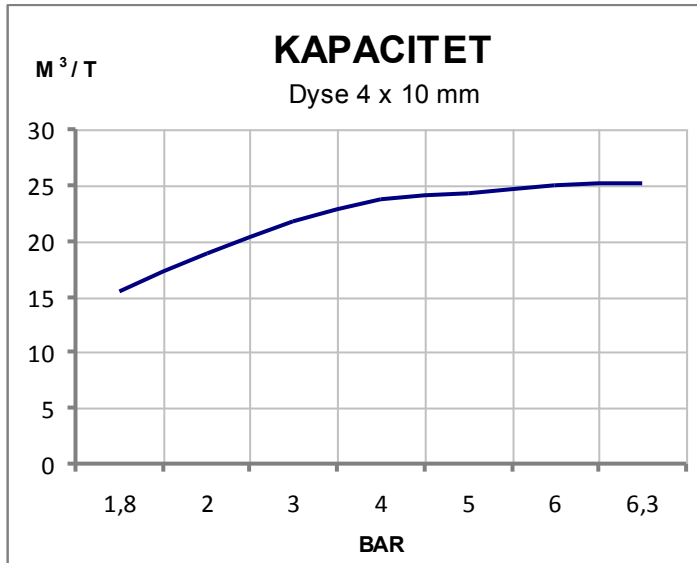
# M20.4082MB



MODEL M	H	D	G	DL
4 DYSER MB	205	123	2" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4082MB	4	8	304	316L	5-95°C	BSP 2" M	Rensemediet

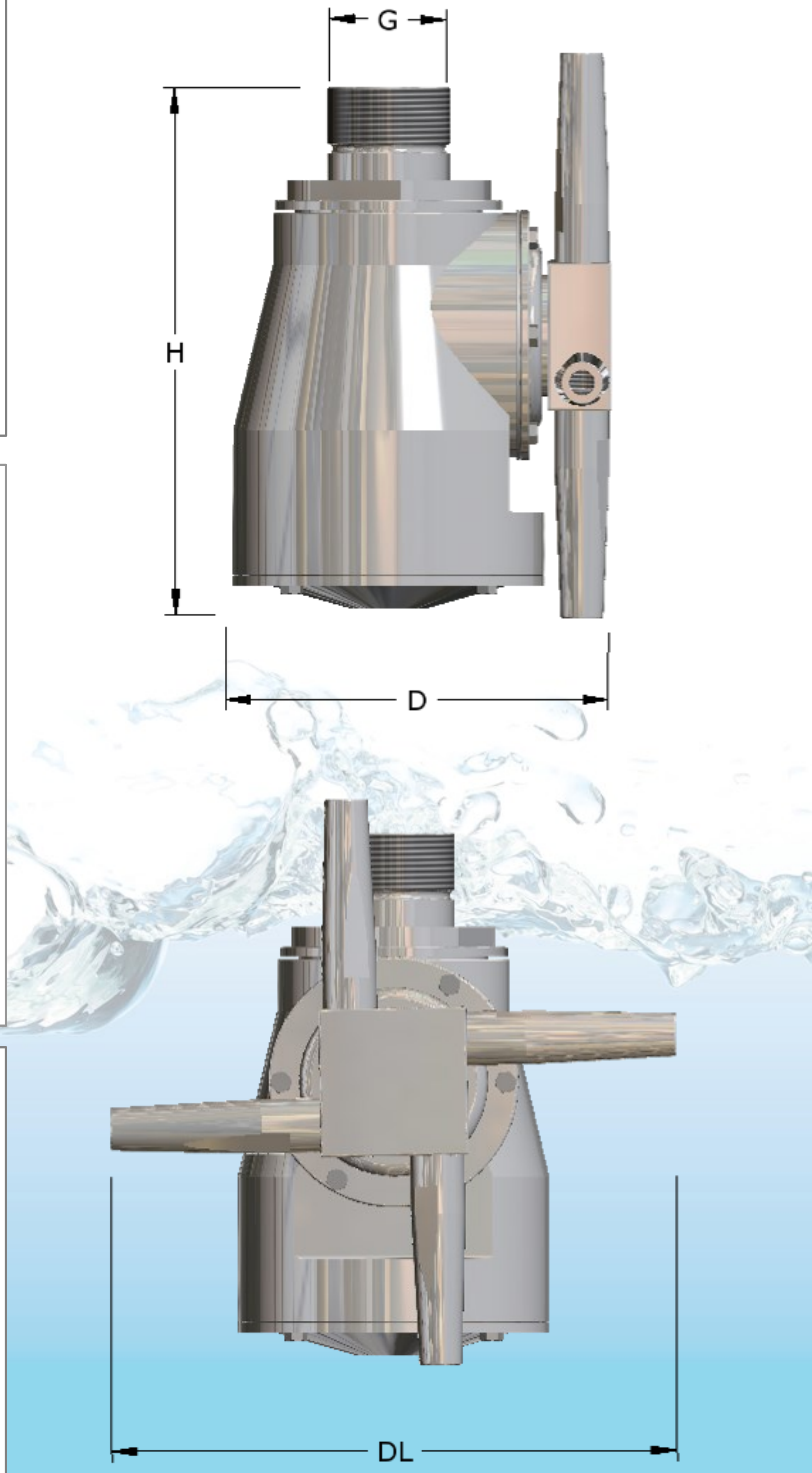
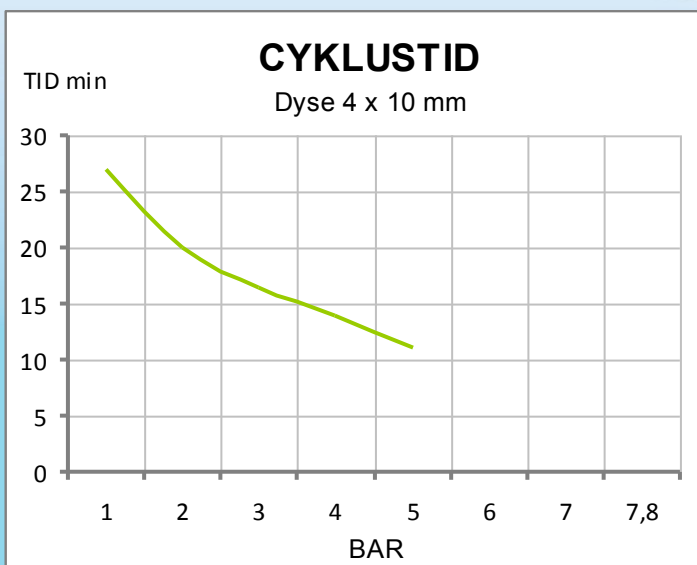
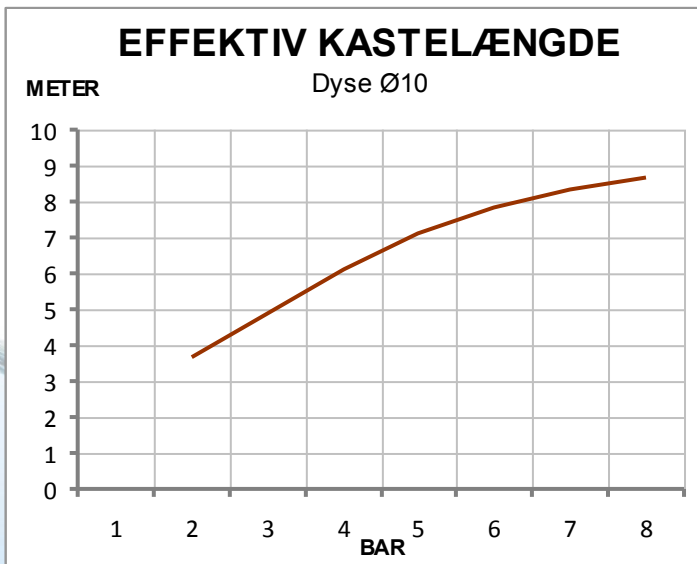
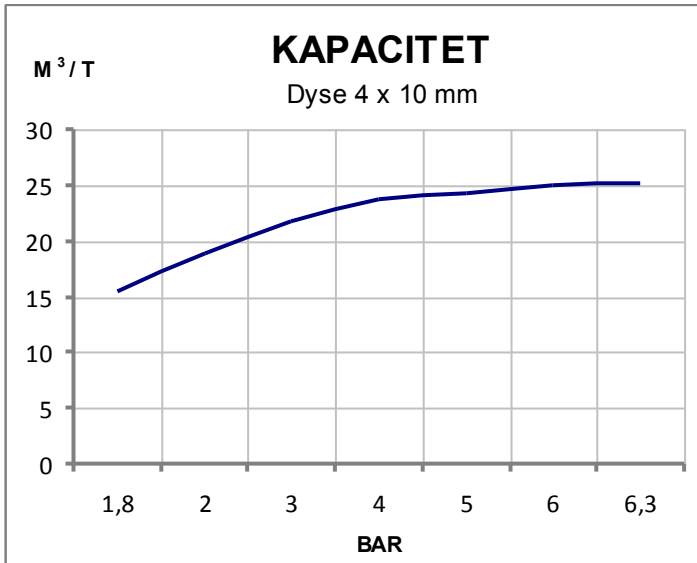
# M20.4101FB



MODEL F	H	D	G	DL
4 DYSER FB	270	150	1½" F	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4101FB	4	10	304	316L	5-95°C	BSP 1½" F	Rensemediet

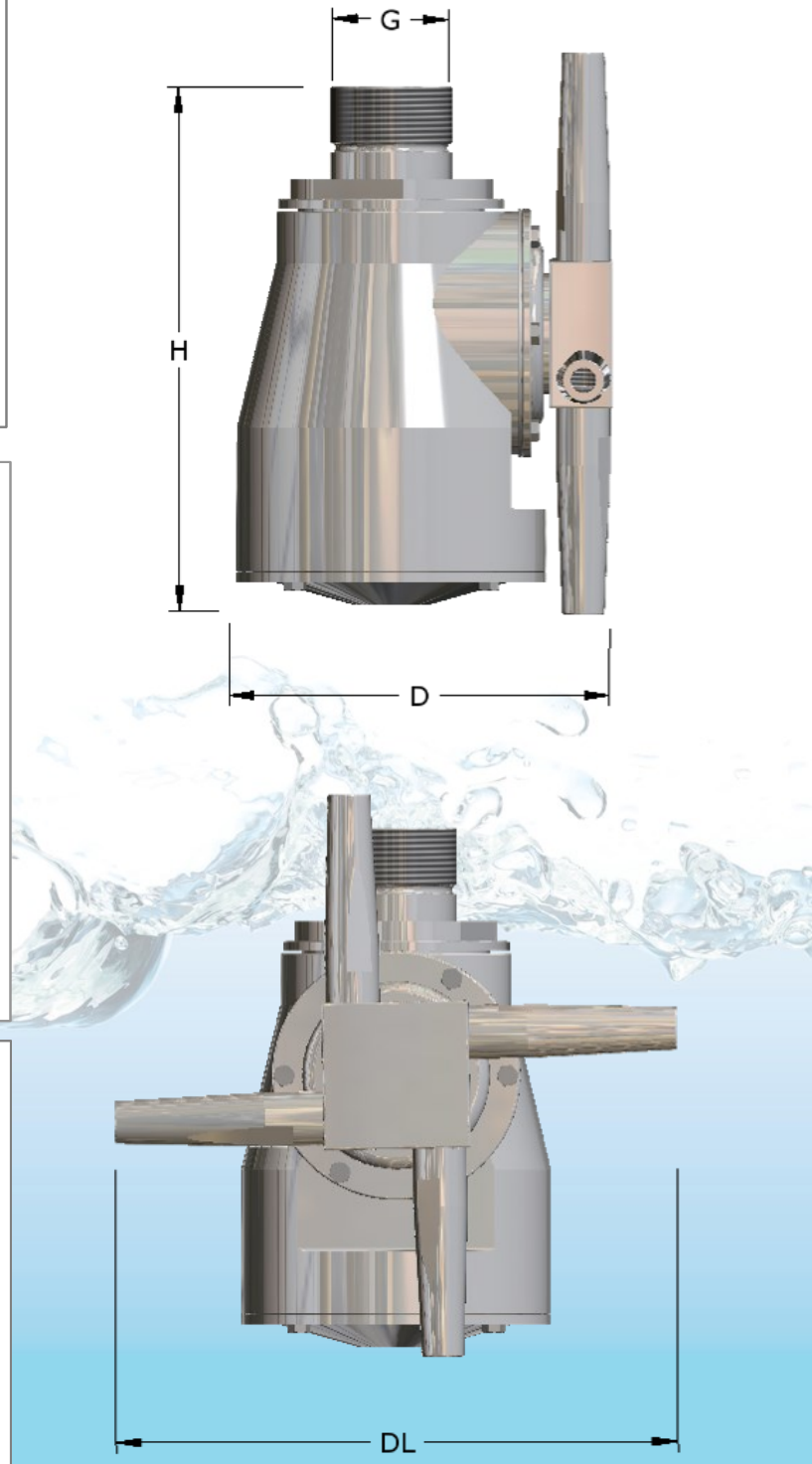
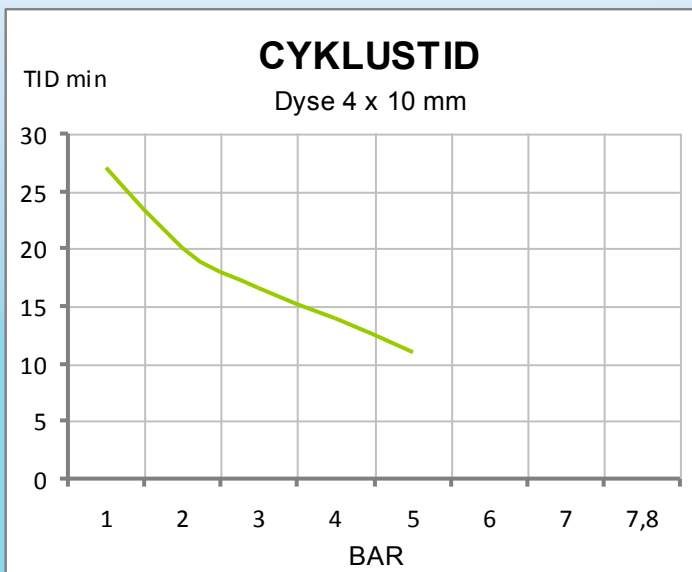
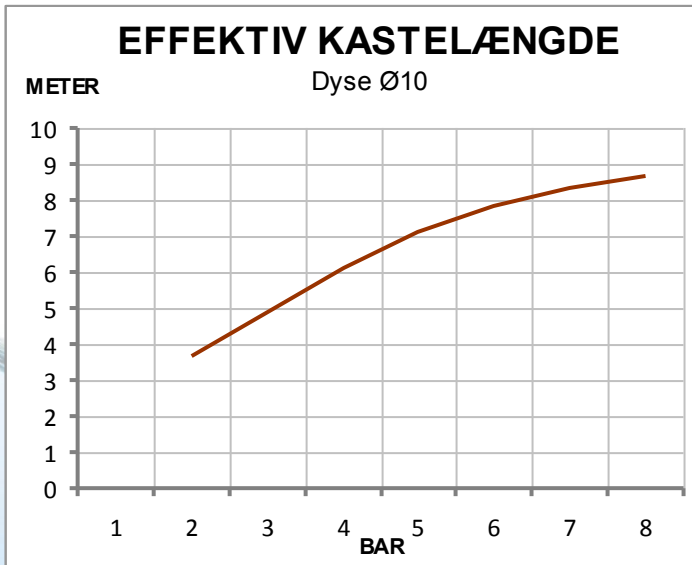
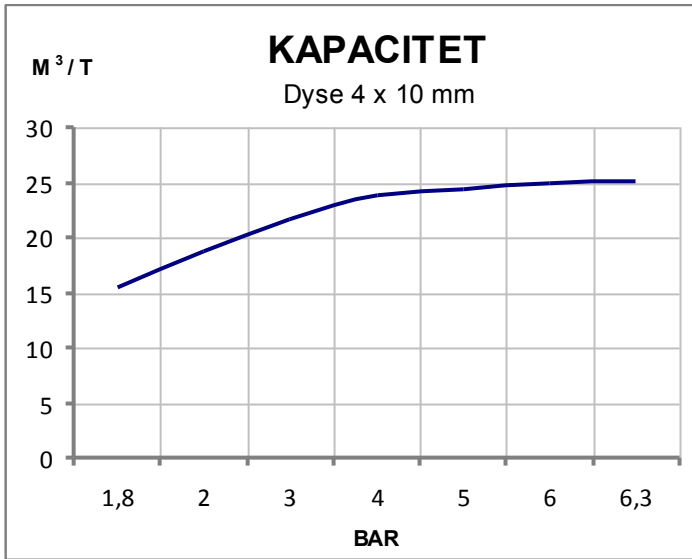
# M20.4101MB



MODEL M	H	D	G	DL
4 DYSER MB	205	123	1½" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4101MB	4	10	304	316L	5-95°C	BSP 1½" M	Rensemediet

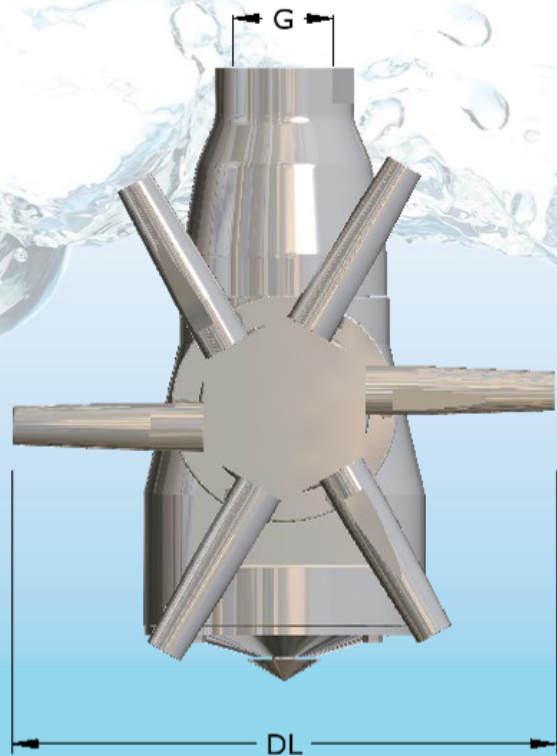
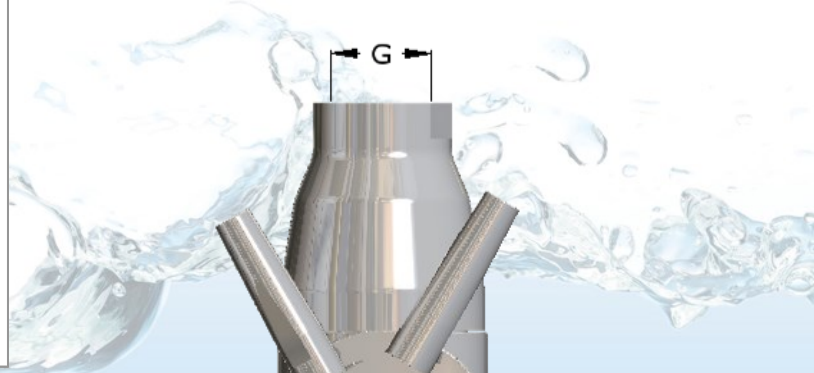
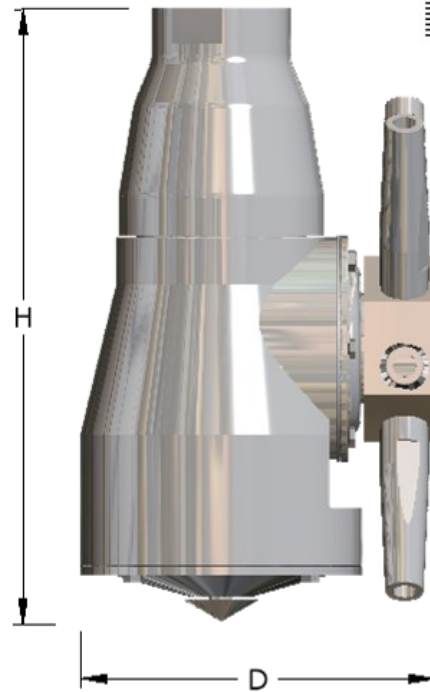
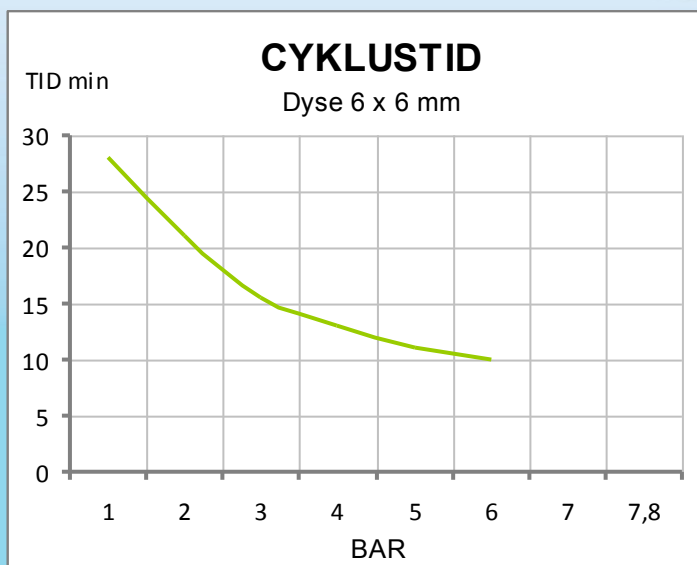
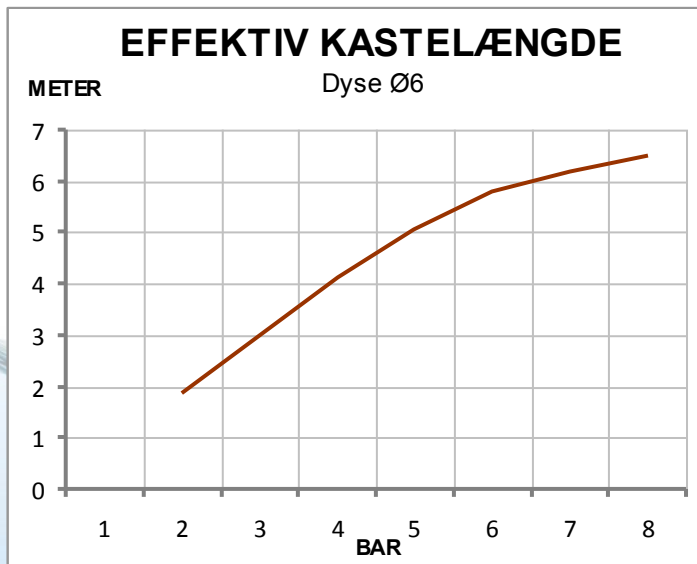
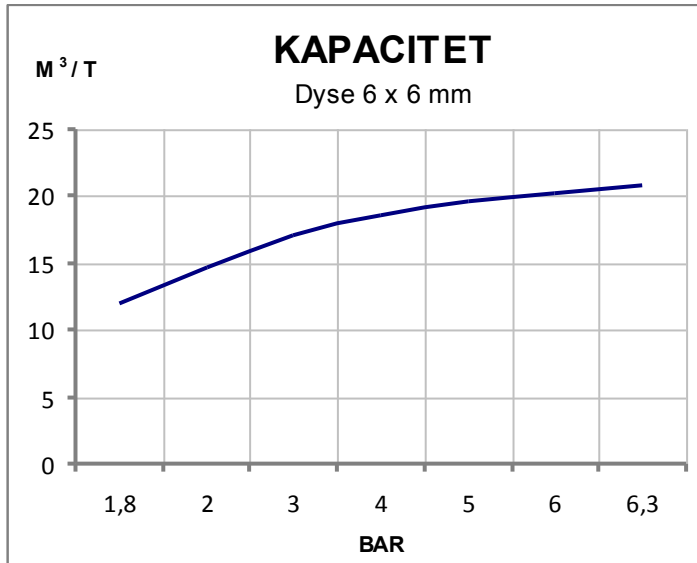
# M20.4102MB



MODEL M	H	D	G	DL
4 DYSER MB	205	123	2" M	225

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.4102MB	4	10	304	316L	5-95°C	BSP 2" M	Rensemediet

# M20.6061FB

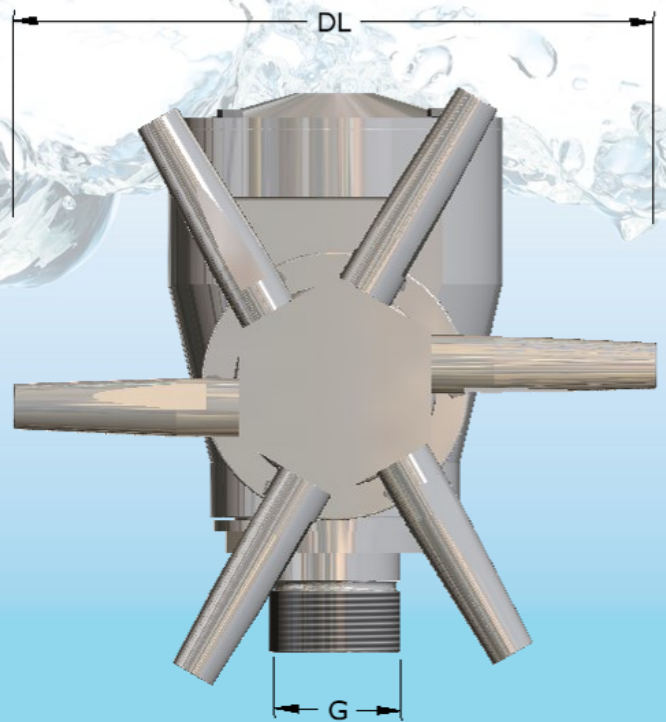
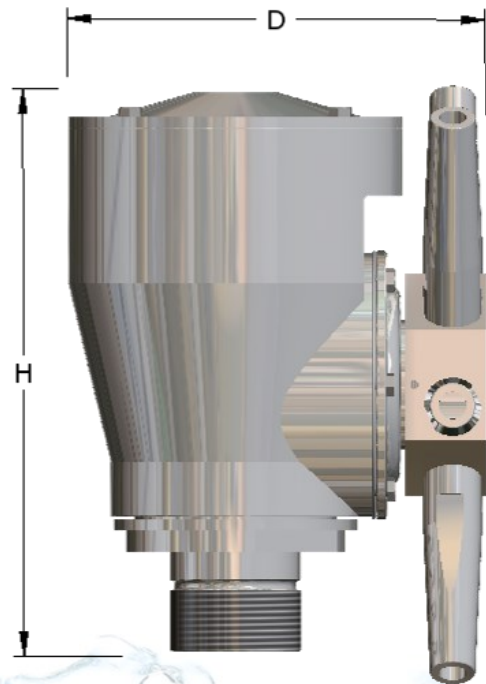
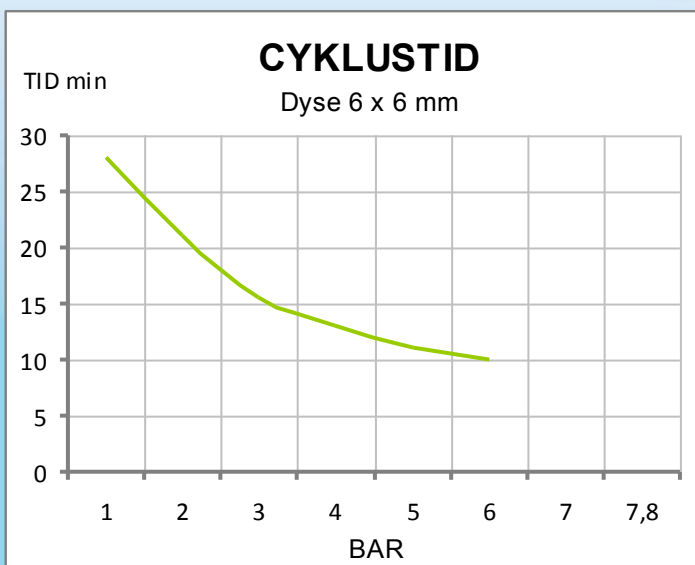
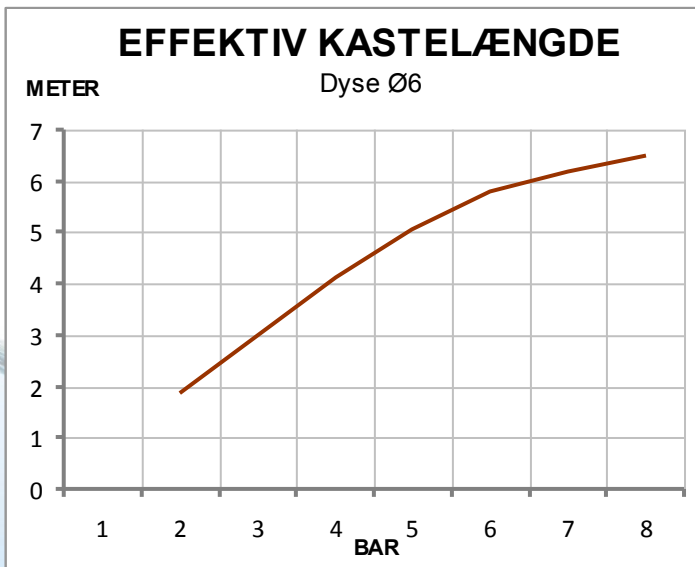
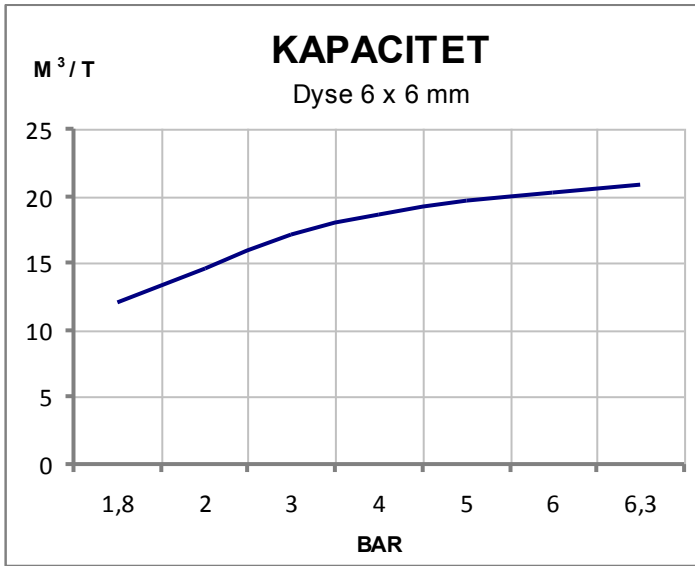


MODEL F	H	D	G	DL
6 DYSER FB	270	150	1½" F	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6061FB	6	6	304	316L	5-95°C	BSP 1½" F	Rensemediet



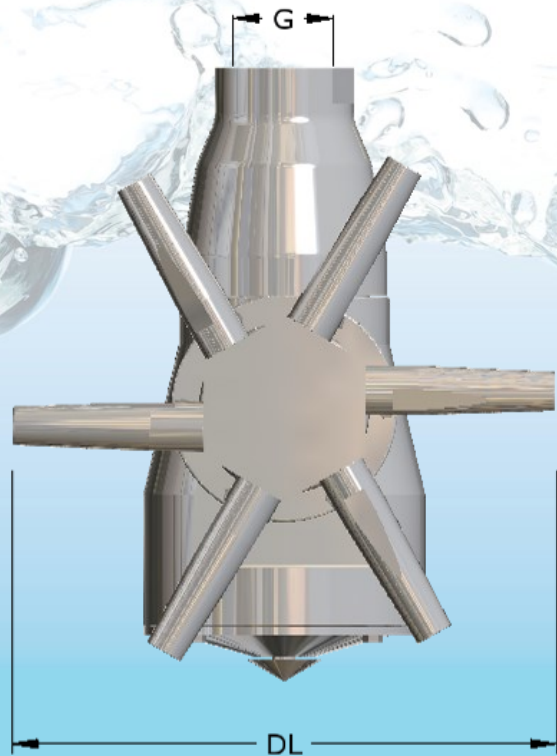
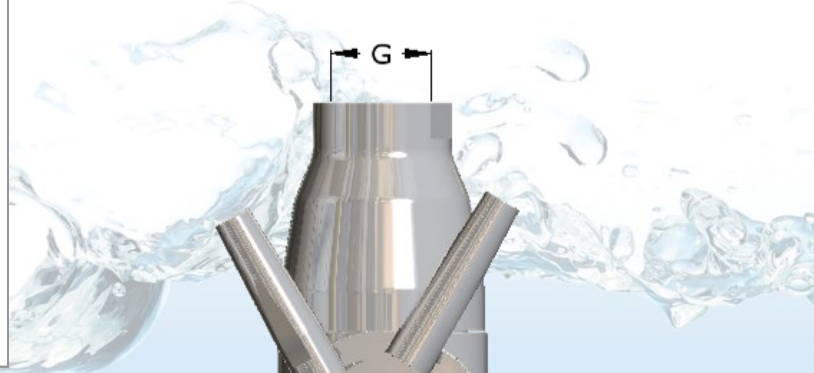
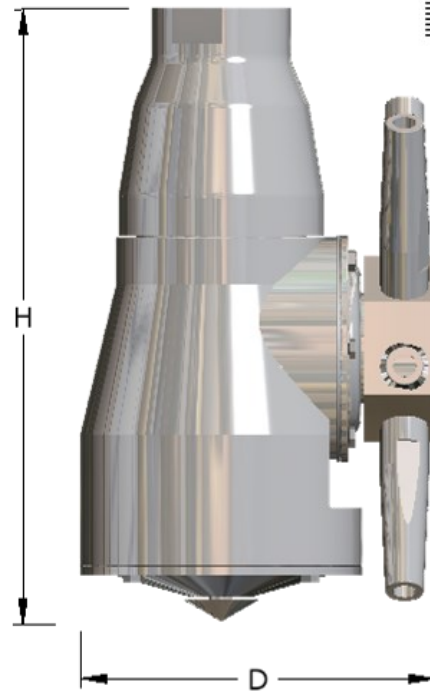
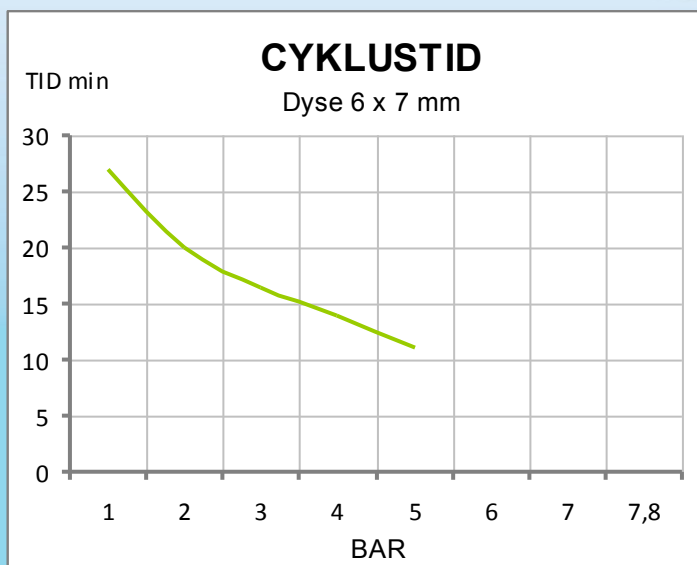
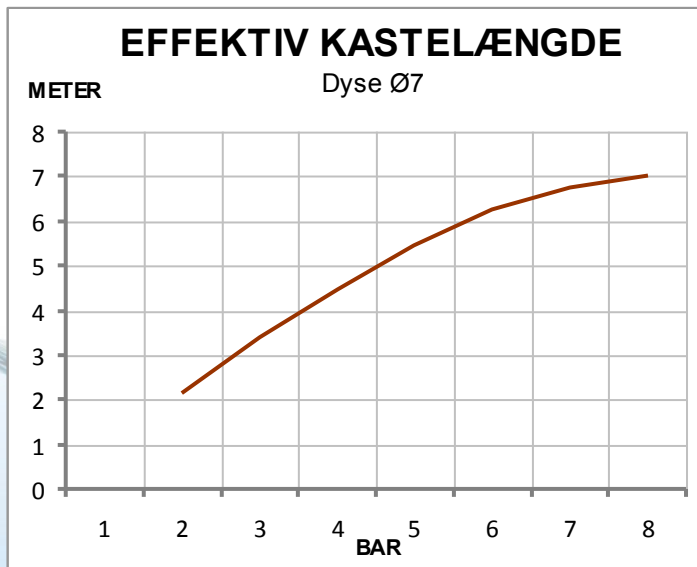
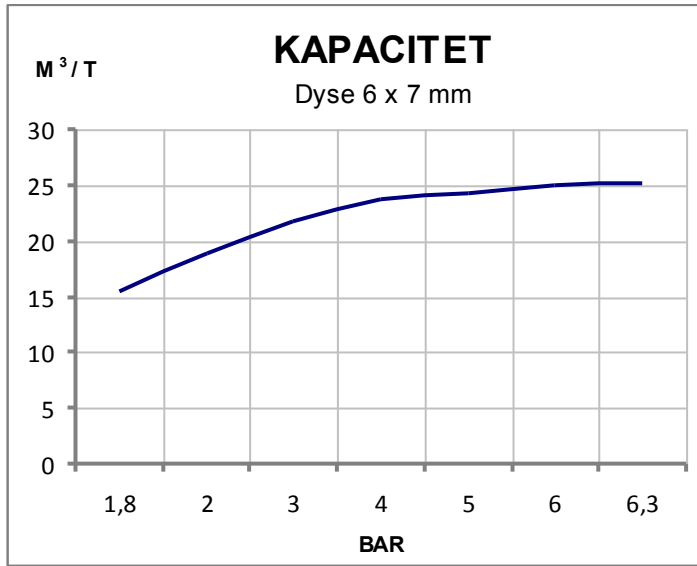
# M20.6061MU



MODEL M	H	D	G	DL
6 DYSER MU	205	123	1½" M	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6061MU	6	6	304	316L	5-95°C	BSP 1½" M	Rensemediet

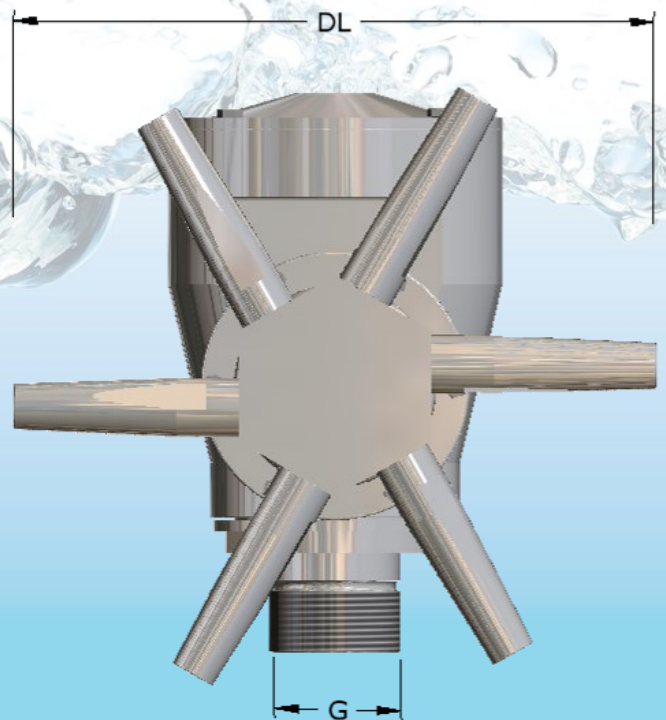
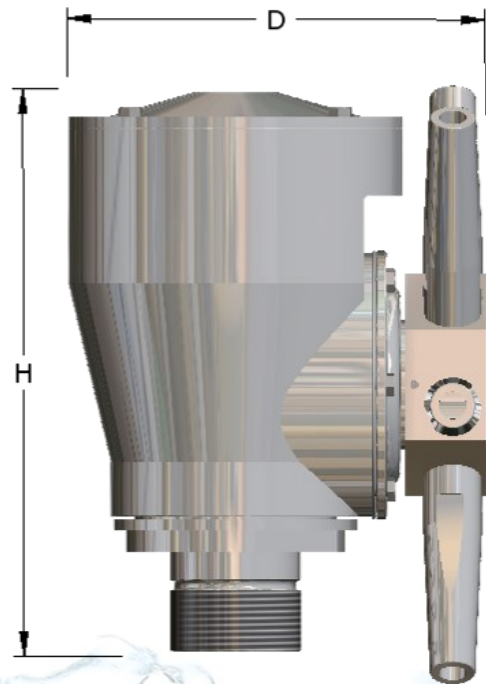
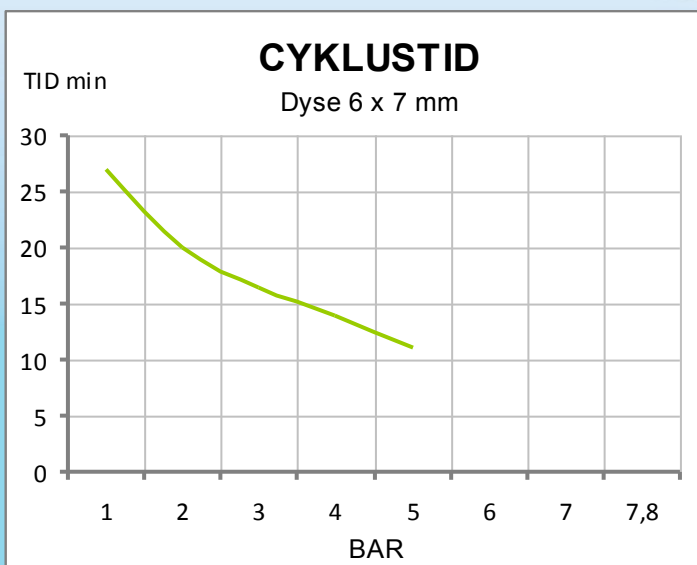
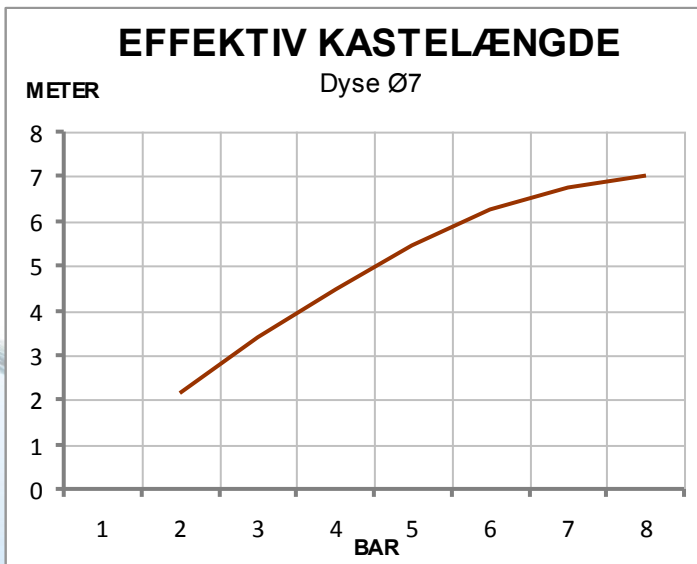
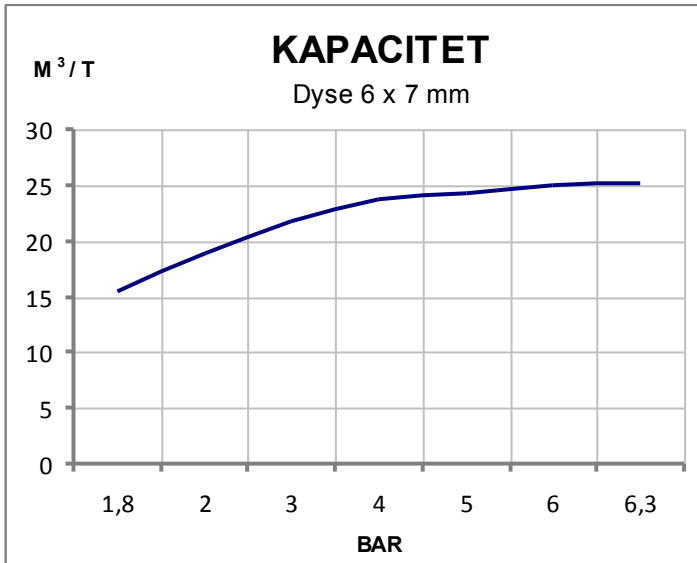
# M20.6071FB



MODEL F	H	D	G	DL
6 DYSER FB	270	150	1½" F	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6071FB	6	7	304	316L	5-95°C	BSP 1½" F	Rensemediet

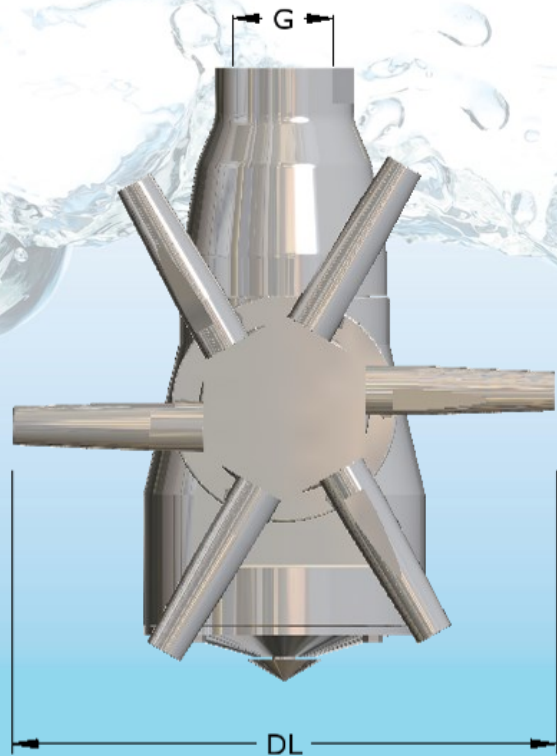
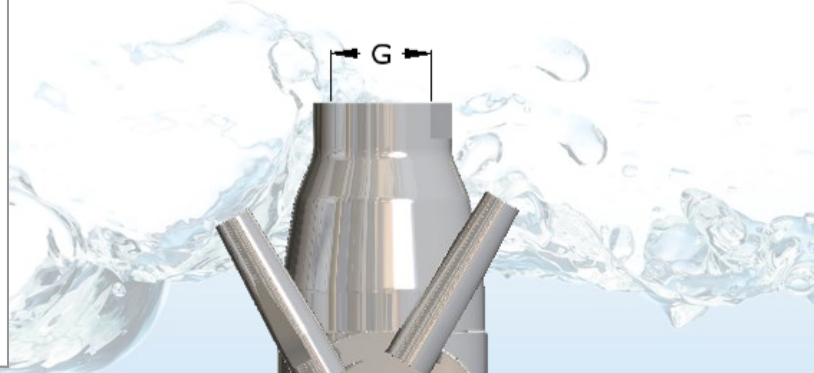
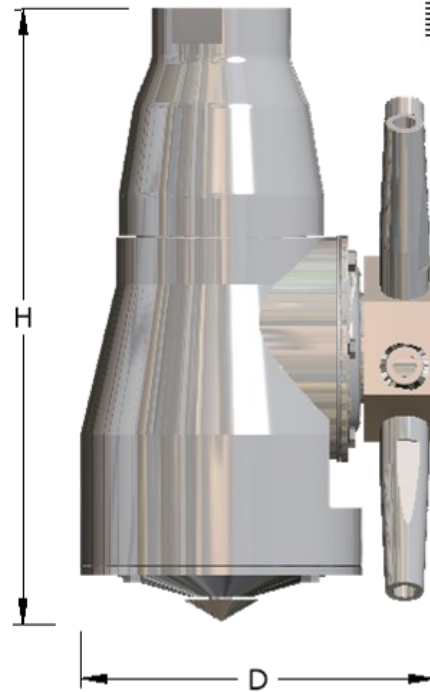
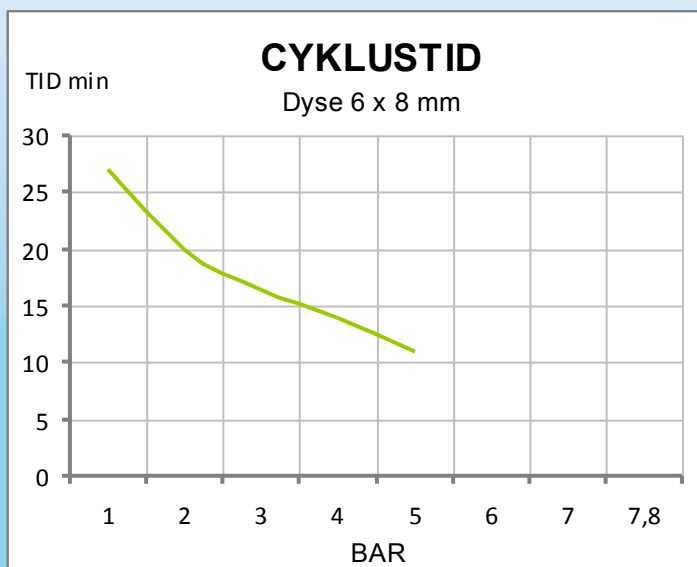
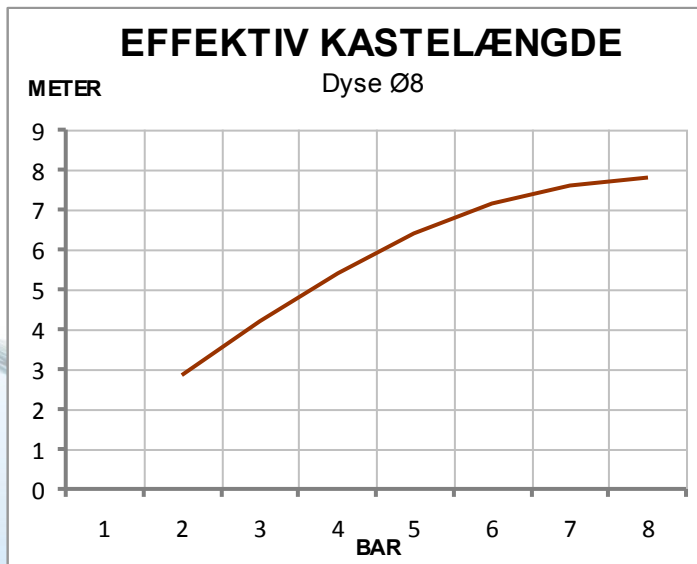
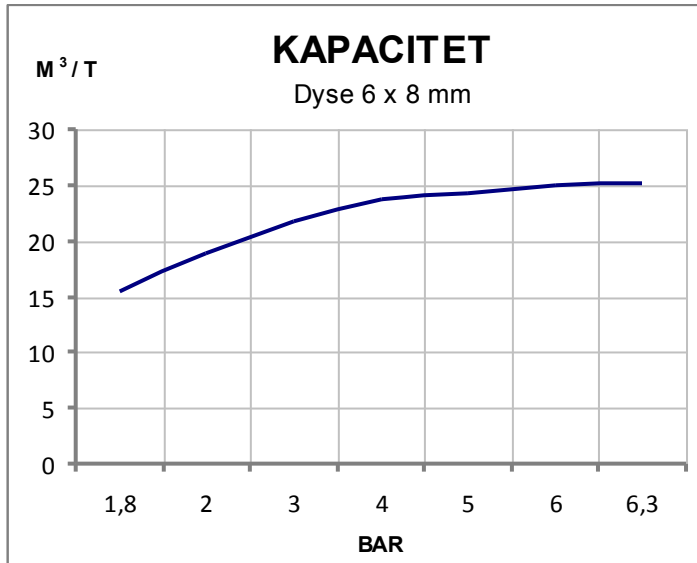
# M20.6071MU



MODEL M	H	D	G	DL
6 DYSER MU	205	123	1½" M	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6071MU	6	7	304	316L	5-95°C	BSP 1½" M	Rensemediet

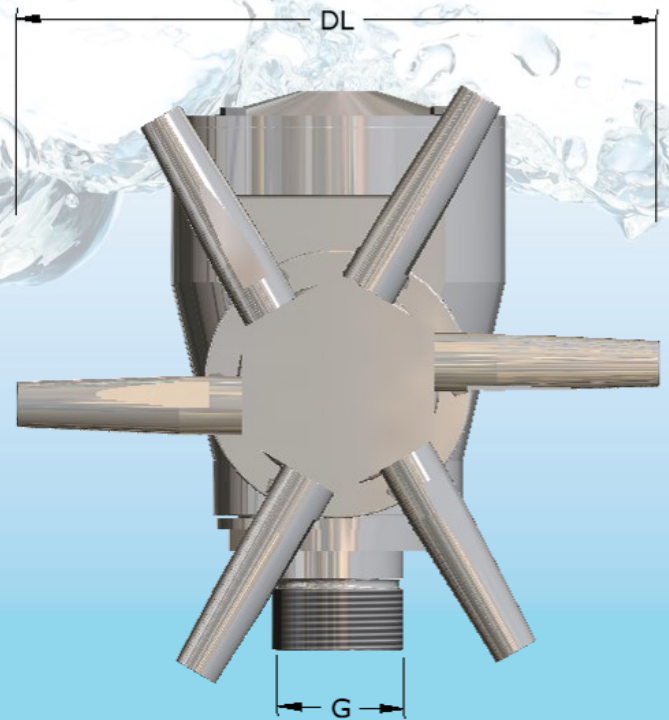
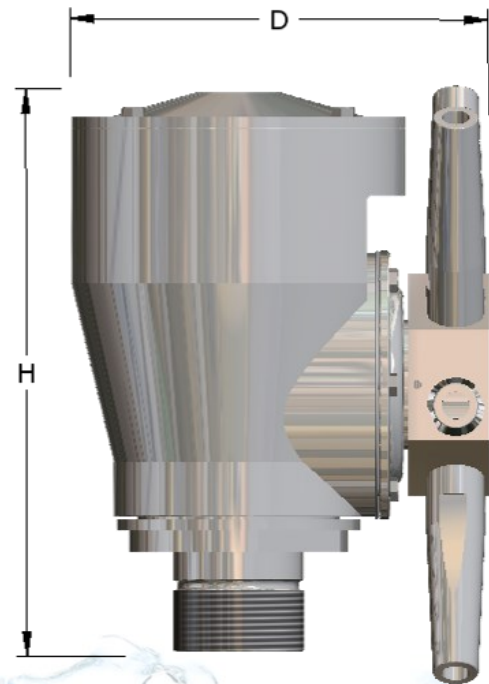
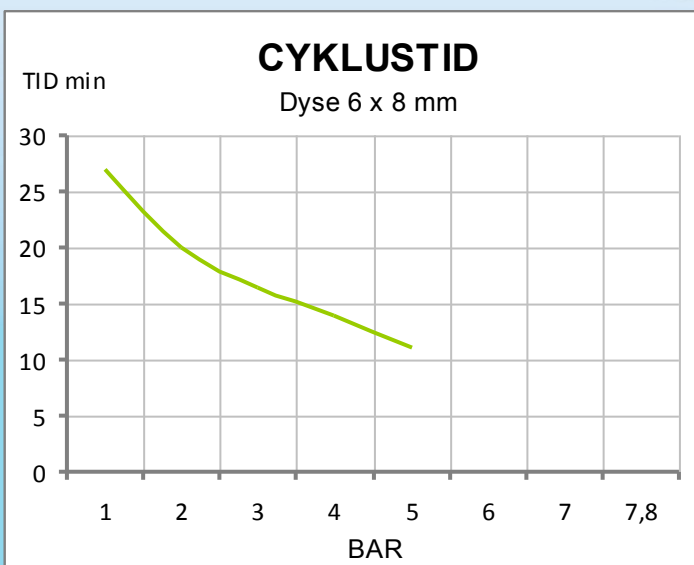
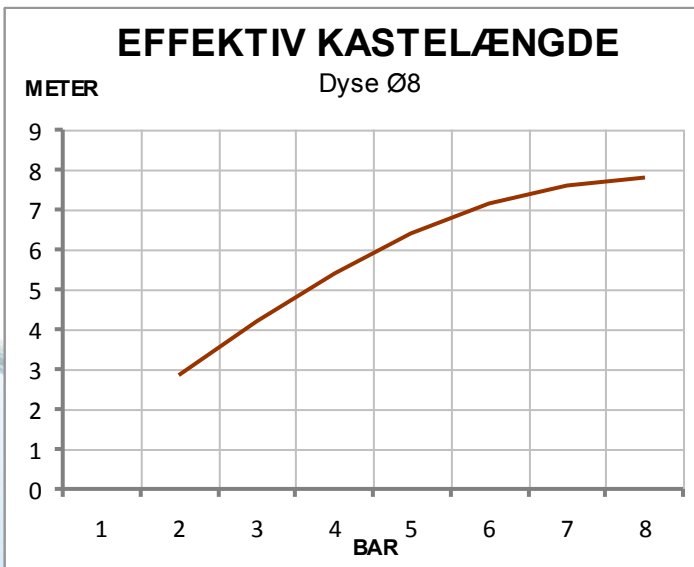
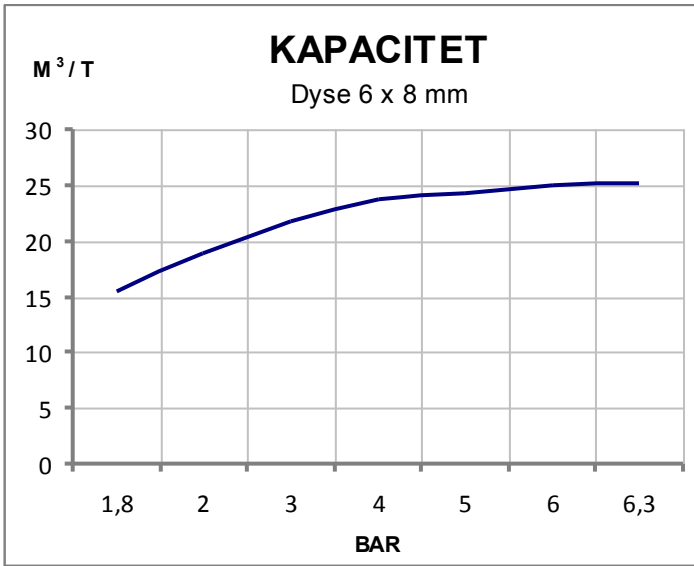
# M20.6081FB



MODEL F	H	D	G	DL
6 DYSER FB	270	150	1½" F	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6081FB	6	8	304	316L	5-95°C	BSP 1½" F	Rensemediet

# M20.6081MU



MODEL M	H	D	G	DL
6 DYSER MU	205	123	1½" M	235

TYPE	Antal Dyser	Dyse Diameter	Materiale lejekugler	Materiale	Temperatur område	Tilslutning	Smøring
M20.6081MU	6	8	304	316L	5-95°C	BSP 1½" M	Rensemediet





## **JA ENGINEERING A/S**

---

**PORTHUSVEJ 107A DK-5700 SVENDBORG  
Tlf. +45 47 38 29 39 Fax: +45 47 38 29 49  
DENMARK**