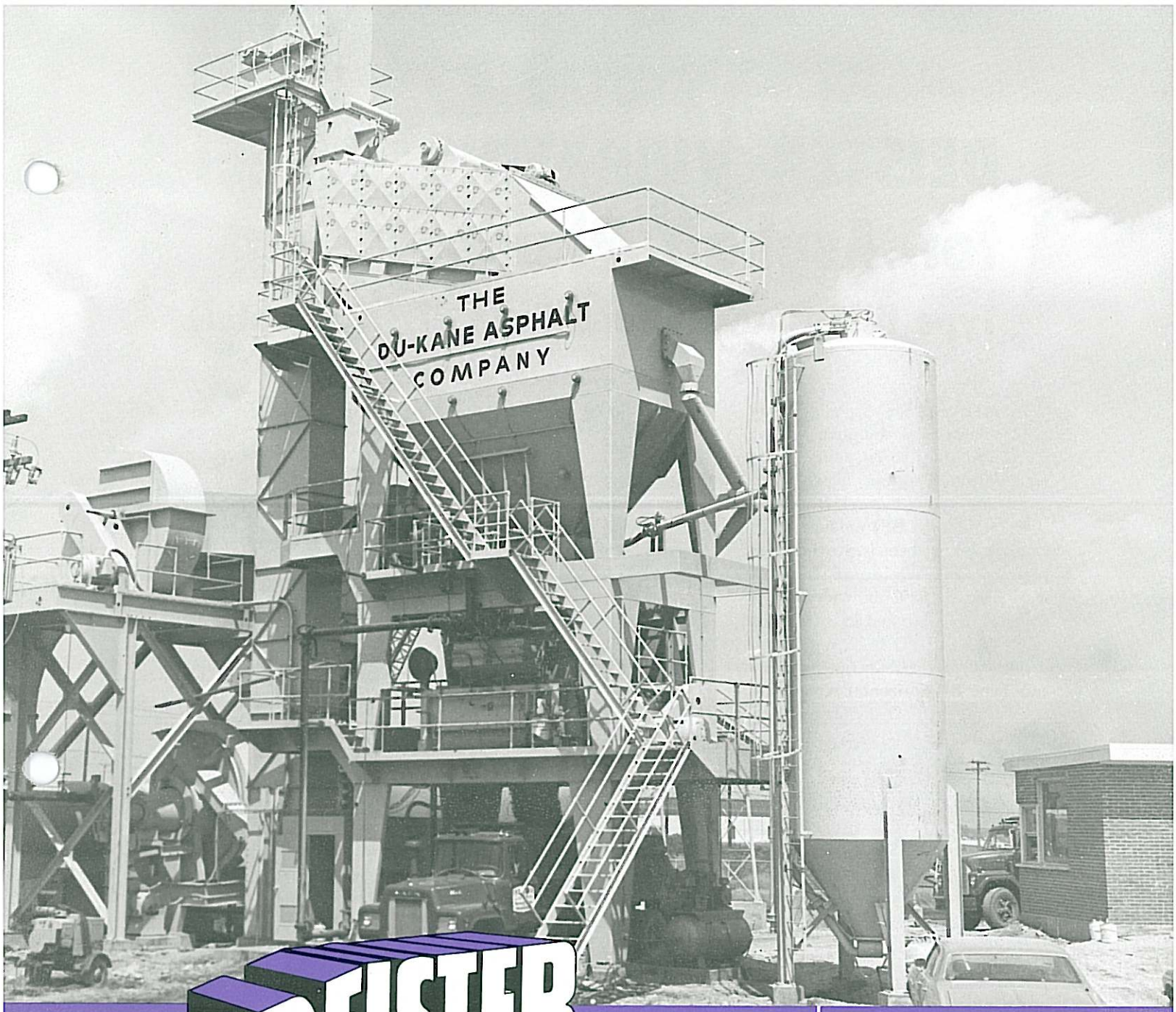


DEISTER®

Bulletin No. 280

Inclined and Horizontal Enclosed

VIBRATING SCREENS

for Asphalt Plants

DEISTER VIBRATING SCREENS
for Asphalt Plants
Type UHS (inclined) and Type BF (horizontal)

Deister Screens for Asphalt Plants are available in a complete line of types and sizes to fit every plant requirement. They are available in both inclined (Type UHS) and horizontal (Type BF) models. Every capacity requirement is provided for with a wide selection of standard sizes from 3′ to 6′ in width, from 8′ to 16′ in length and in 3, 3⅓, 3½ and 4, 4⅓ and 4½ deck models.

Both Type UHS inclined screens and Type BF horizontal screens are offered in Drop Deck models designated as Type UHS-D and Type BF-D. Both inclined and horizontal screens are also offered in Dual Sand Deck models designated as Type UHS-DDS and Type BF-DDS. All Deister Asphalt Screens are completely enclosed and are designed especially to produce the accurately sized aggregates demanded by today's rigid specifications and built to operate hour after hour, day after day, without constant attention or maintenance.

Outstanding features of Deister Asphalt Screens are detailed on this and following pages. They are summarized below:

PLANT VIBRATION ELIMINATION: Deister's exclusive "Enclosed Spring & Rubber Mounts" completely eliminate the transmission of vibration to the supporting structure.

AUTOMATIC SCREEN TENSION: Longer screen cloth life is provided with Deister's long-proved "automatic tension".

CAPACITY: Greater capacity, with faster, more accurate sizing is the result of Deister's powerful, positive "elliptical throw" action and through the provision of greatly increased screening area.

VIBRATING MECHANISM: The Deister Unitized "Life-Time" Vibrating Mechanism is mounted outside the dust enclosure.

QUICK SCREEN REPLACEMENT: Quick screen cloth changes have been made possible by advanced design of the stationary dust enclosure.

STANDARDIZATION: All screen cloth panels are identical in size.

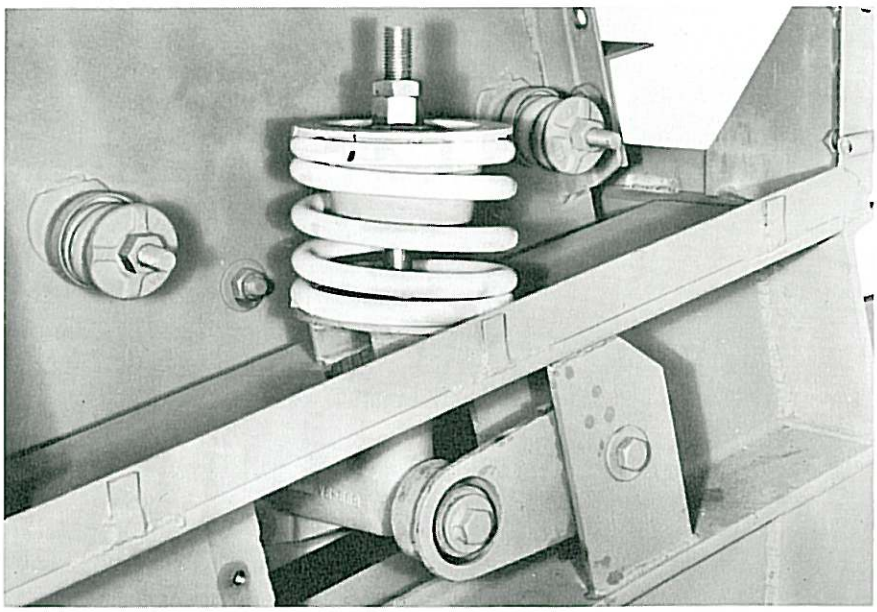
SCREEN SUPPORTING PANELS: Rugged screen cloth supporting panels, after years of dependable service, can be easily replaced.

EXTRA PROTECTION: Deister Screens are designed and ruggedly built for steady, dependable production without constant attention or maintenance.

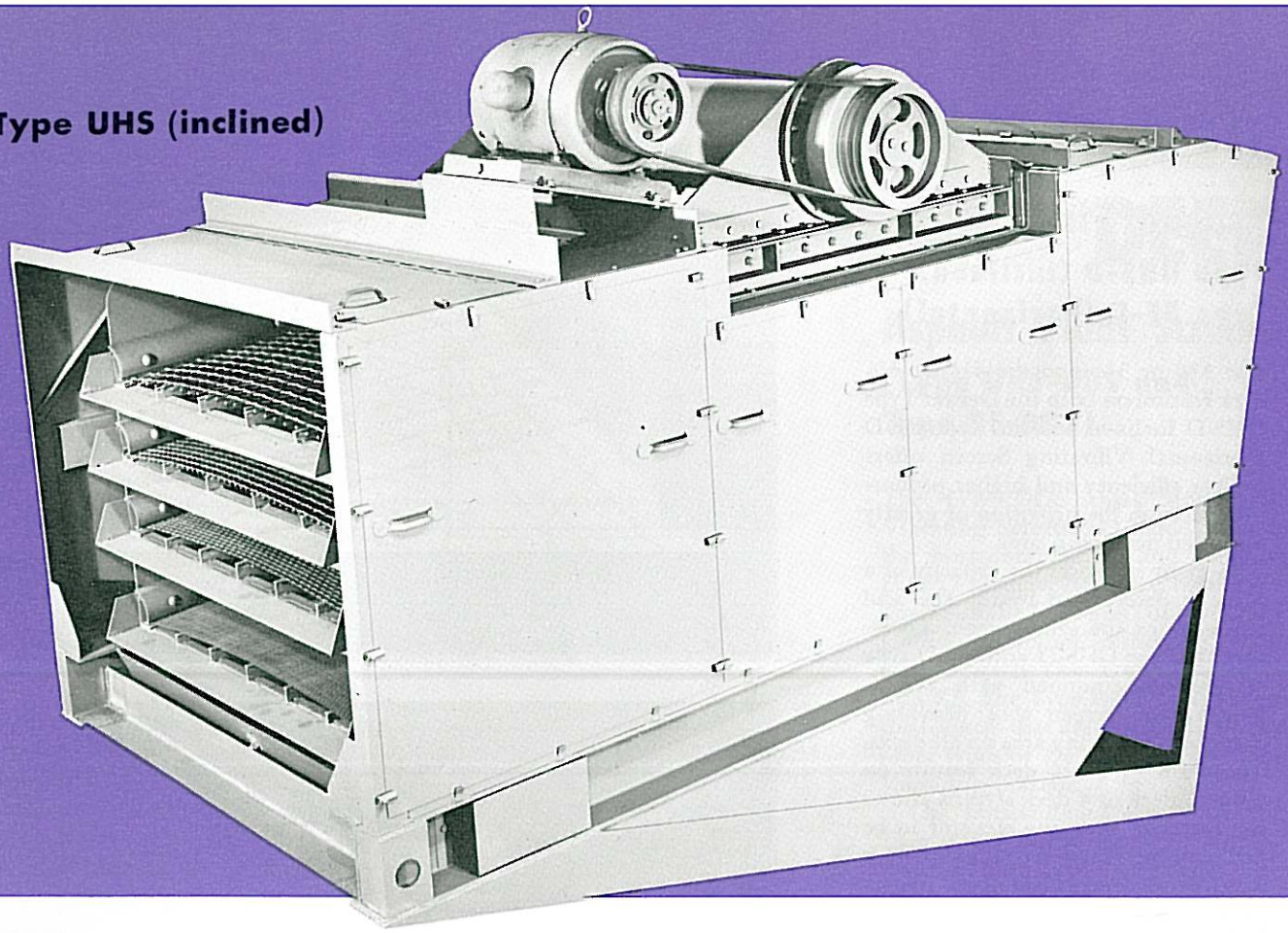
Plant Vibration Elimination

All Deister Asphalt Plant Screens feature Deister's exclusive suspension system for the "live" or vibrating frame. It consists of a heavy H-beam stationary base on which are mounted Enclosed Spring and Rubber Mounts to carry the "live" frame. The mounts are located outside the side plates and each consists of a heavy coil spring working in conjunction with a solid rubber isolator to eliminate completely the transmission of vibration to the supporting structure, providing greater accuracy in weighing and batching.

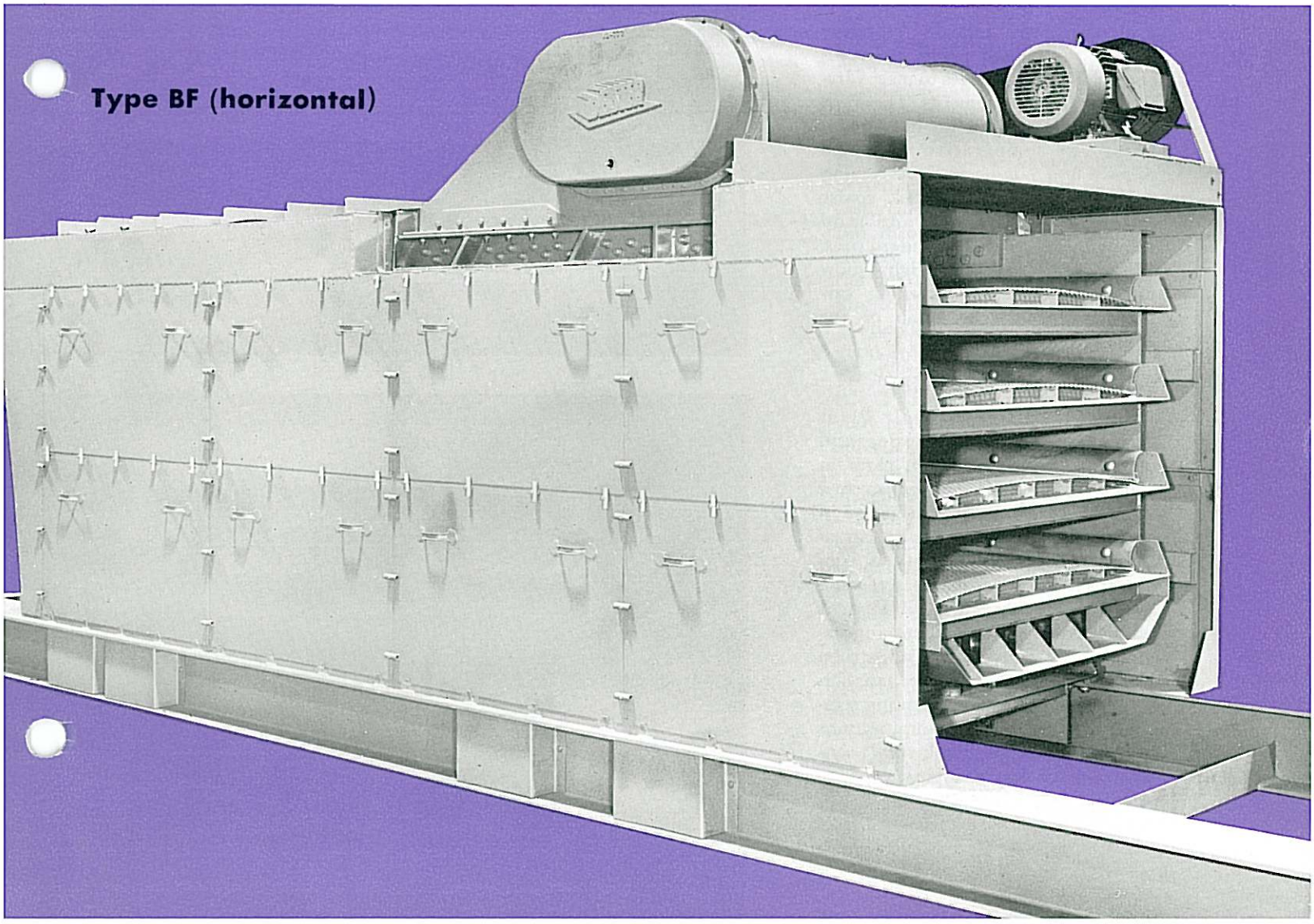
Each mount is protected from dust and grime by an easily removed cover. Spring adjustment or replacement, if ever necessary, becomes a simple "wrench" job that can be done in minutes.



Type UHS (inclined)



Type BF (horizontal)



DEISTER DROP DECK

Asphalt Plant Screens

Type UHS-D (inclined)
Type BF-D (horizontal)

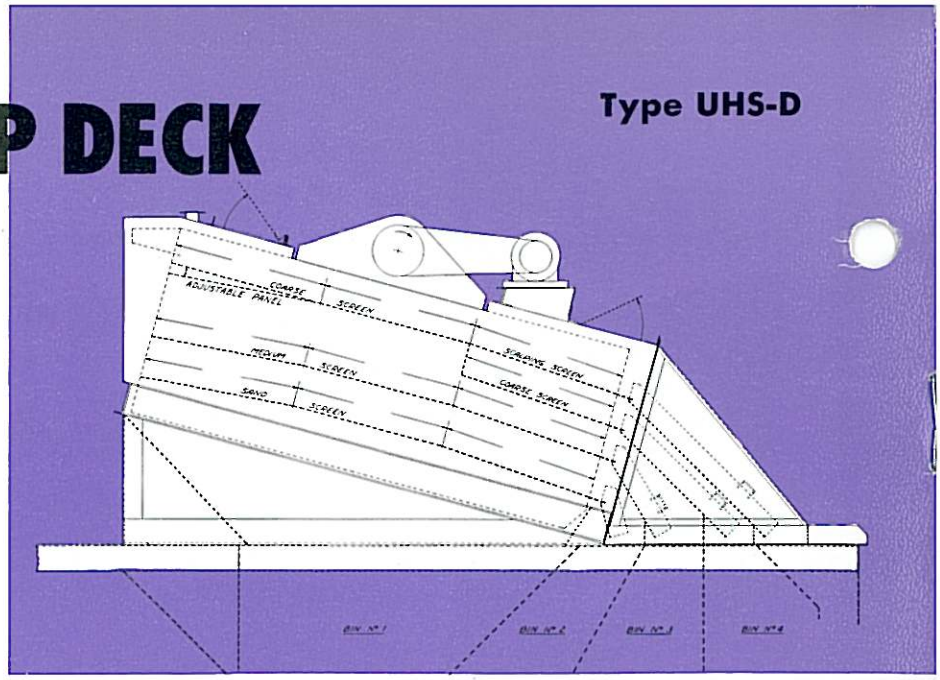
The 3⅓ or 3½ and the 4⅓ or 4½ deck feature on both the Deister Type UHS-D Inclined and the Type BF-D Horizontal Vibrating Screen offers greater efficiency and higher production through the provision of greatly increased screening area.

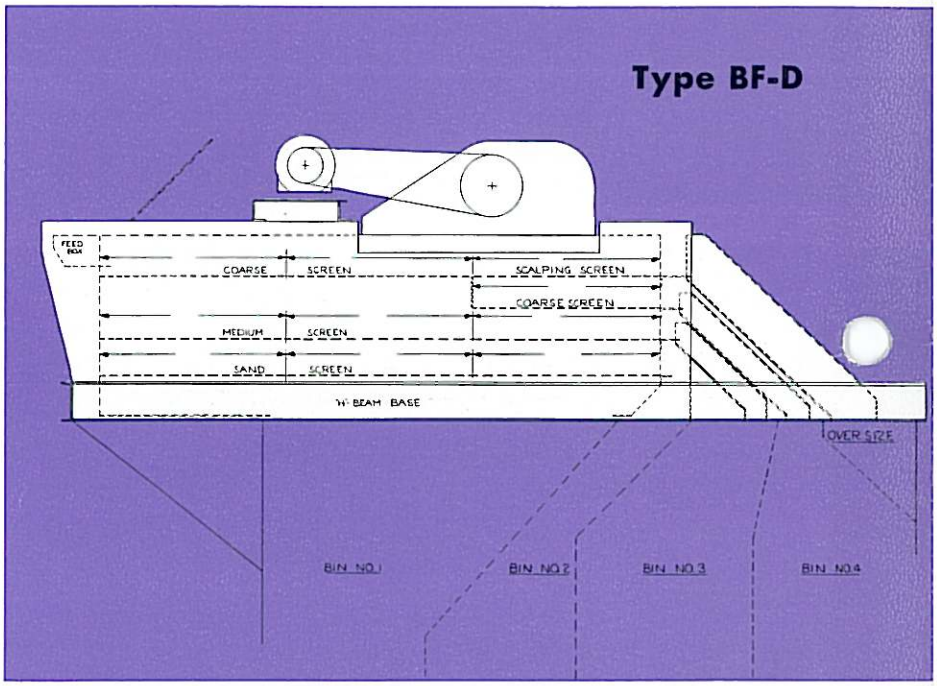
In many instances the capacity of a plant is determined by the size and efficiency of the sand screen. Therefore, Deister UHS-D and BF-D type screens are equipped with a full-length sand screen thus providing maximum screening area on all decks. The extra ⅓ or ½ deck feature on either 3 deck or 4 deck screens allows the material from the elevator to be fed onto the coarse screen cloth. This assures longer wear life of the screening medium and aids in closer separation.

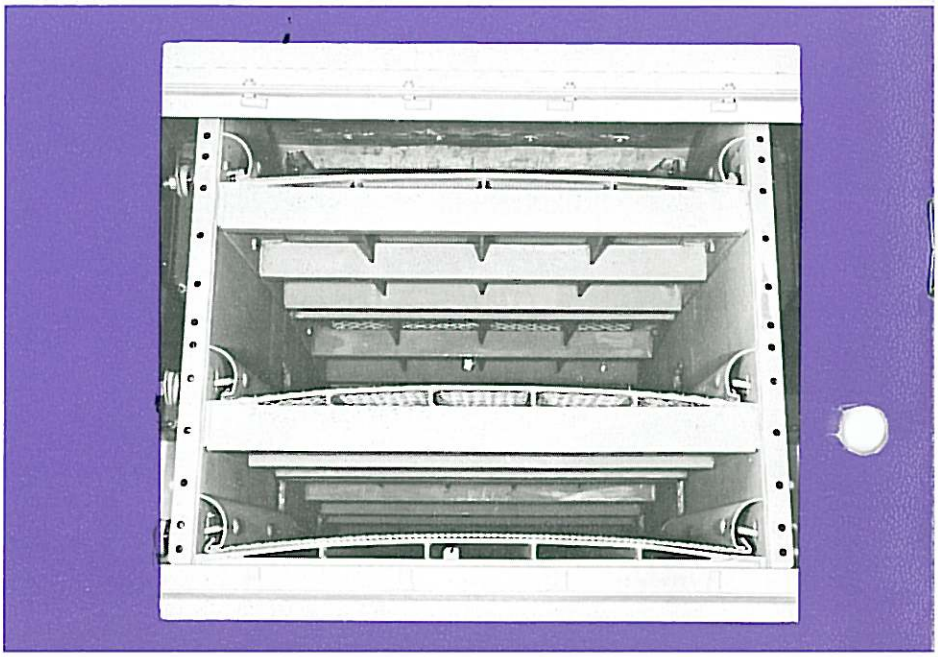
Deister Type UHS-D Vibrating Screens for asphalt plants are available in 18 standard sizes to meet varying tonnage requirements. The Type BF-D is also available in 18 standard sizes. The comparative tables on pages 6 and 7 indicate the screening area of the scalping screen, coarse screen, medium screen and sand screen of each of these standard sizes. The schematic diagrams (right) show the arrangement of screening surfaces, and the distribution of the aggregate.

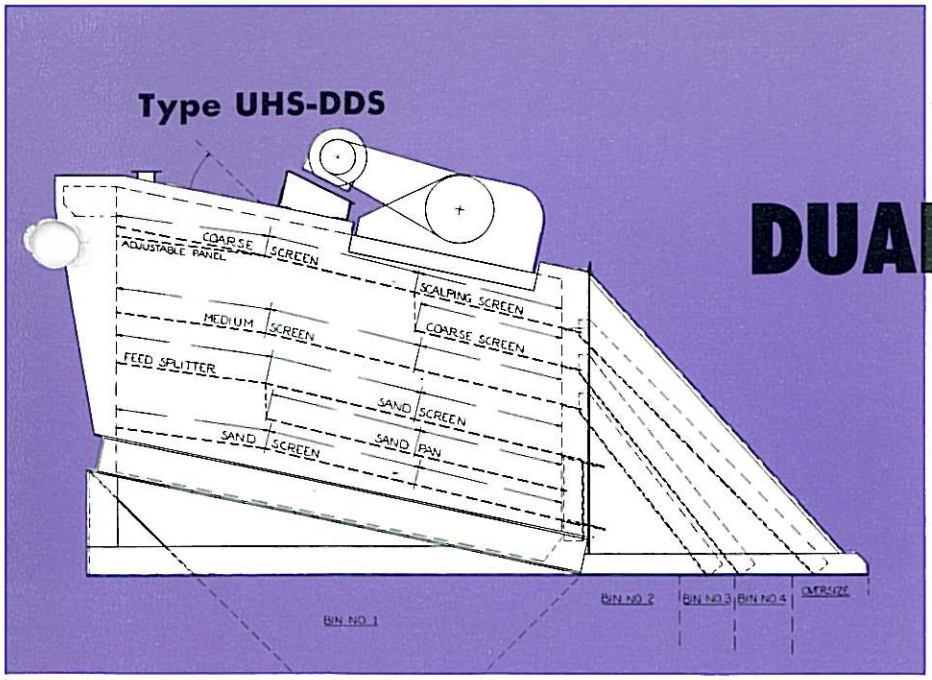
Longer Screen Cloth Life

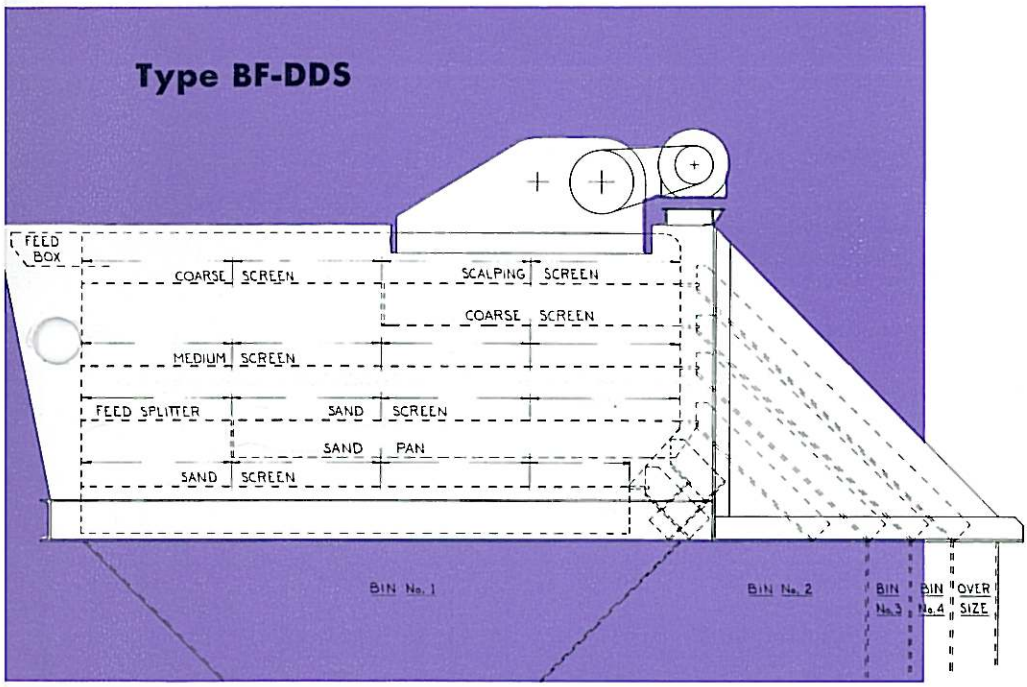
On all Deister Asphalt Plant Screens powerful tension springs and tension plates hold screen cloth in constant automatic tension over a series of cross-members arranged in an arc. Positive tension, plus curvature, prevents whipping—and consequent breaking—of the screening medium. These powerful Deister tension springs compensate for expansion or contraction on screen cloth wires, caused by the variation in operating and non-operating temperatures. All screen cloth sections have bent edge or "hook strip" construction for easy changing.

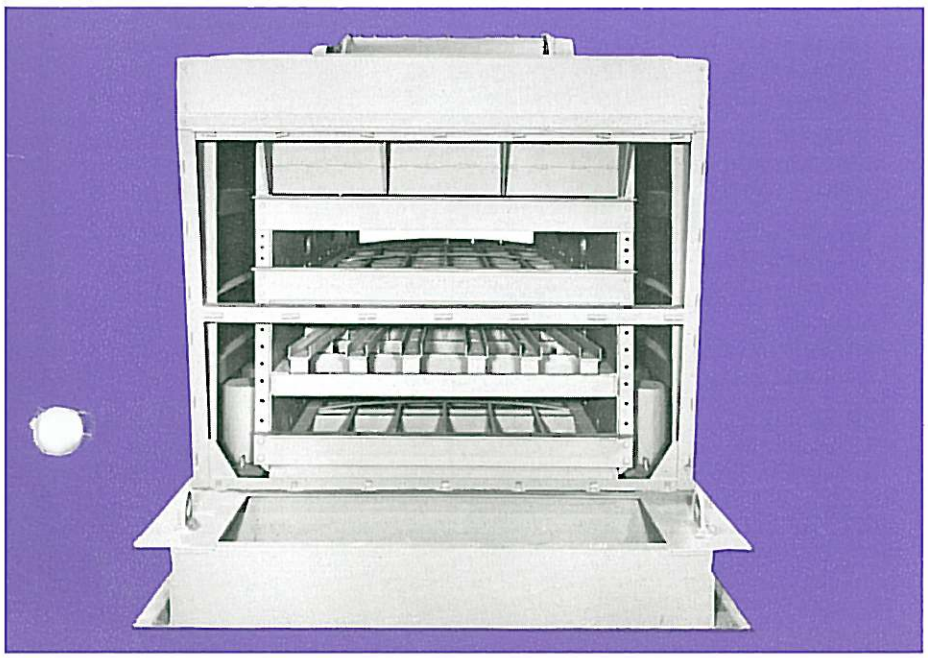












DEISTER DUAL SAND DECK

Asphalt Plant Screens

(Type UHS-DDS and Type BF-DDS)

The Type DDS Dual Sand Deck Vibrating Screens are made in both the horizontal (BF) and inclined (UHS) models. However, both use a double-shafted design of Deister's Unitized "Lifetime" Vibrating Mechanism with the DUAL SAND DECKS. The Type DDS embodies all the features that are designed into the other types of Deister Asphalt Plant Vibrating Screens.

The outstanding feature of the Type DDS is the great amount of screening area in the sand decks. The square feet of screen cloth on the sand deck is 67%—75% greater on the Dual Sand Deck type. This is illustrated (left) on the schematic drawings of a typical inclined and horizontal model.

This increased capacity on the sand deck is especially advantageous when the surface course requires a larger percentage of sand in the mix. This material is channeled into the No. 1 Bin through the bottom deck and chuted, by means of a special discharge chute from the deck above, into the No. 1 Bin.

The aggregate is fed to these two decks by means of a "feed splitter" panel. Note illustration at bottom left. This splits the feed proportionately between the two decks, and is adjustable to vary that proportion.

Deister Type UHS-DDS Vibrating Screens for asphalt plants are available in 8 standard sizes to meet varying tonnage requirements. The Type BF-DDS is also available in 8 standard sizes. The comparative tables on pages 6 and 7 indicate the screening area of the scalping screen, coarse screen, medium screen and the double sand screen of each of these sizes. The schematic diagrams at the left show the arrangement of screening surfaces, and the distribution of the aggregate.

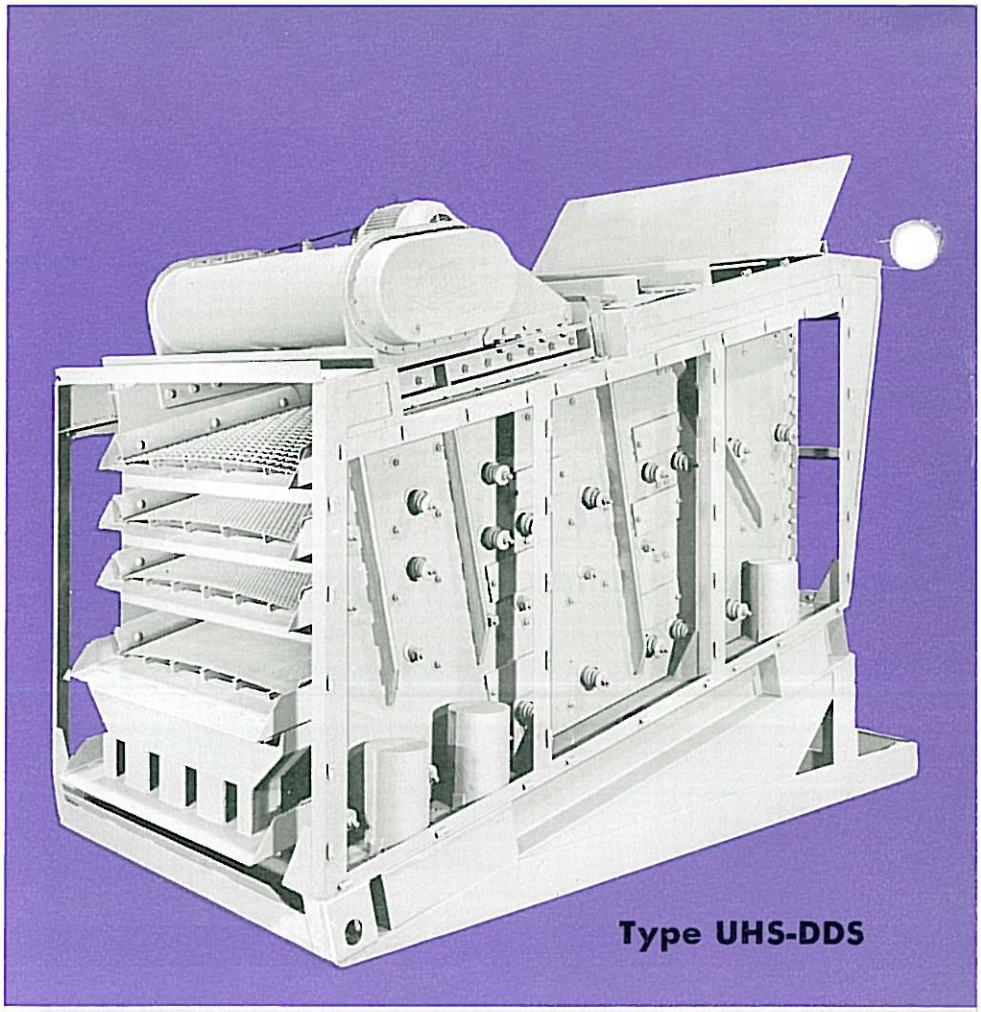
DEISTER
INCLINED
Vibrating Screens
Type UHS-D and UHS-DDS

The number of square feet of actual screening area of all Deister *Inclined* Screens is detailed in the comparative table below. This tabulation includes both "Drop Deck" and "Dual Sand Deck" models.

Opposed Elliptical Throw

The moment the feed to a Deister Screen comes in contact with the vibrating surface of the screen medium, it begins to stratify with the finest particles on the bottom, grading in size from these up to the coarsest pieces on top of the bed. Substantially 100% of the finer, "free-screening" undersize particles pass through the screen cloth within the first foot or two of travel. This thinning out of the bed of material gives the remaining undersize an opportunity to come in close contact with the surface of the cloth. The forward and then the backward conveying action of the screen, subjects these particles to practically a uniform speed throughout the length of the screen regardless of the slope.

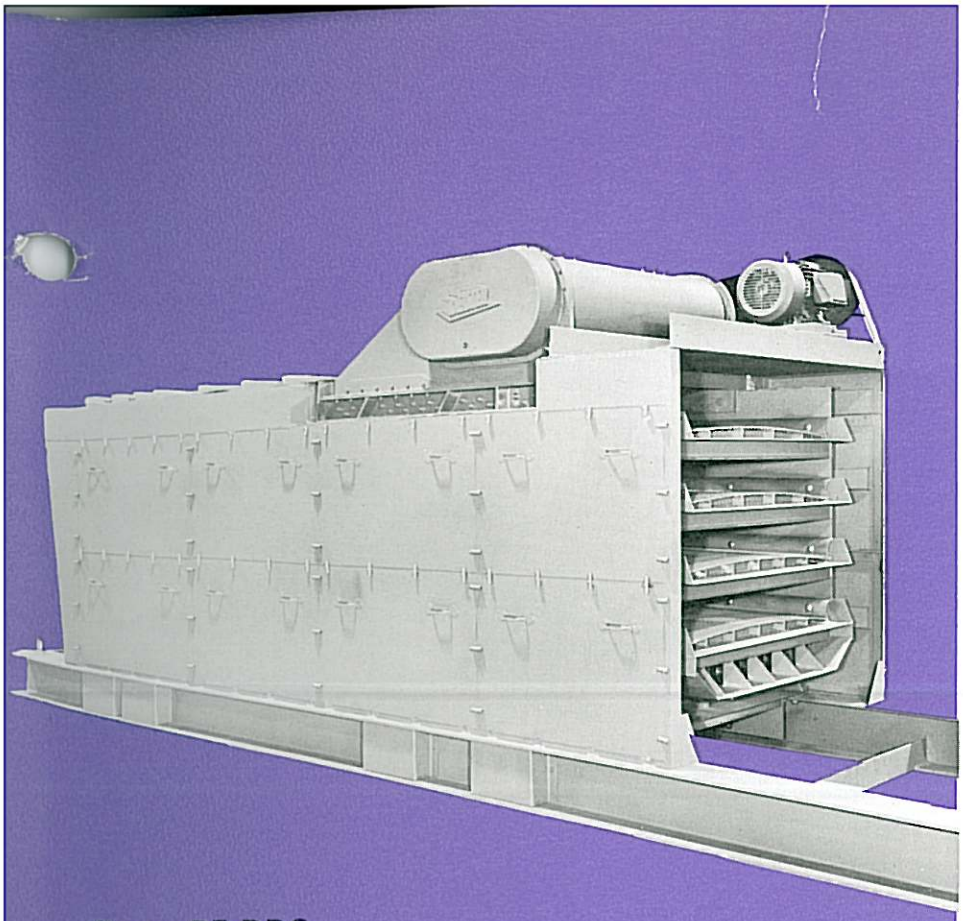
Greater capacity, with faster, more accurate sizing is the result. If necessary, amplitude of stroke can be adjusted by addition or subtraction of counterweights.



Type UHS-DDS

TYPE SCREEN	SQUARE FEET SCREENING AREA					
	Scalping Screen	Coarse Screen	Medium Screen	Sand Screen	Fine Sand Screen	TOTAL
UHS-338D	12	24	24	24		84
UHS-3310D	10	30	30	30		100
UHS-4310D	10	30	30	30	30	130
UHS-4310DDS	10	30	30	50		120
UHS-33½10D	11.7	35	35	35		116.7
UHS-43½10D	11.7	35	35	35	35	151.7
UHS-43½10DDS	11.7	35	35	58.4		140.1
UHS-3410D	13.3	40	40	40		133.3
UHS-4410D	13.3	40	40	40	40	173.3
UHS-4410DDS	13.3	40	40	66.6		159.9
UHS-3412D	16	48	48	48		160
UHS-4412D	16	48	48	48	48	208
UHS-4412DDS	16	48	48	80		192
UHS-3512D	20	60	60	60		200
UHS-4512D	20	60	60	60	60	260
UHS-4512DDS	20	60	60	100		240
UHS-3414D	28	56	56	56		196
UHS-4414D	28	56	56	56	56	252
UHS-4414DDS	28	56	56	98		238
UHS-3514D	35	70	70	70		245
UHS-4514D	35	70	70	70	70	315
UHS-4514DDS	35	70	70	122		297.5
UHS-3516D	40	80	80	80		280
UHS-4516D	40	80	80	80	80	360
UHS-4516DDS	40	80	80	140		340
UHS-3616D	48	96	96	96		336

Consult factory where job requirements indicate special sizes or number of decks.



Type BF-DDS

DEISTER HORIZONTAL

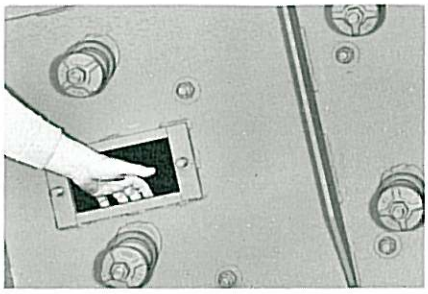
Vibrating Screens

Type BF-D and BF-DDS

The tabulation indicates the number of square feet of actual screening area of all Deister horizontal screens . . . both "Drop Deck" and "Dual Sand Deck" types.

TYPE SCREEN	SQUARE FEET SCREENING AREA					
	Scalping Screen	Coarse Screen	Medium Screen	Sand Screen	Fine Sand Screen	TOTAL
BF-338D	12	24	24	24		84
BF-3310D	10	30	30	30		100
BF-4310D	10	30	30	30	30	130
BF-4310DDS	10	30	30	50		120
BF-33½10D	11.7	35	35	35		116.7
BF-43½10D	11.7	35	35	35	35	151.7
BF-43½10DDS	11.7	35	35	58.4		140.1
BF-3410D	13.3	40	40	40		133.3
BF-4410D	13.3	40	40	40	40	173.3
BF-4410DDS	13.3	40	40	66.6		159.9
BF-3412D	16	48	48	48		160
BF-4412D	16	48	48	48	48	208
BF-4412DDS	16	48	48	80		192
BF-3512D	20	60	60	60		200
BF-4512D	20	60	60	60	60	260
BF-4512DDS	20	60	60	100		240
BF-3414D	18.7	56	56	56		186.7
BF-4414D	18.7	56	56	56	56	242.7
BF-4414DDS	18.7	56	56	88.6		219.3
BF-3514D	23.3	70	70	70		233.3
BF-4514D	23.3	70	70	70	70	303.3
BF-4514DDS	23.3	70	70	110.9		274.2
BF-3516D	40	80	80	80		280
BF-4516D	40	80	80	80	80	360
BF-4516DDS	40	80	80	125		325
BF-3616D	48	96	96	96		336

Consult factory where job requirements indicate special sizes or number of decks.



Quick Screen Cloth Changes

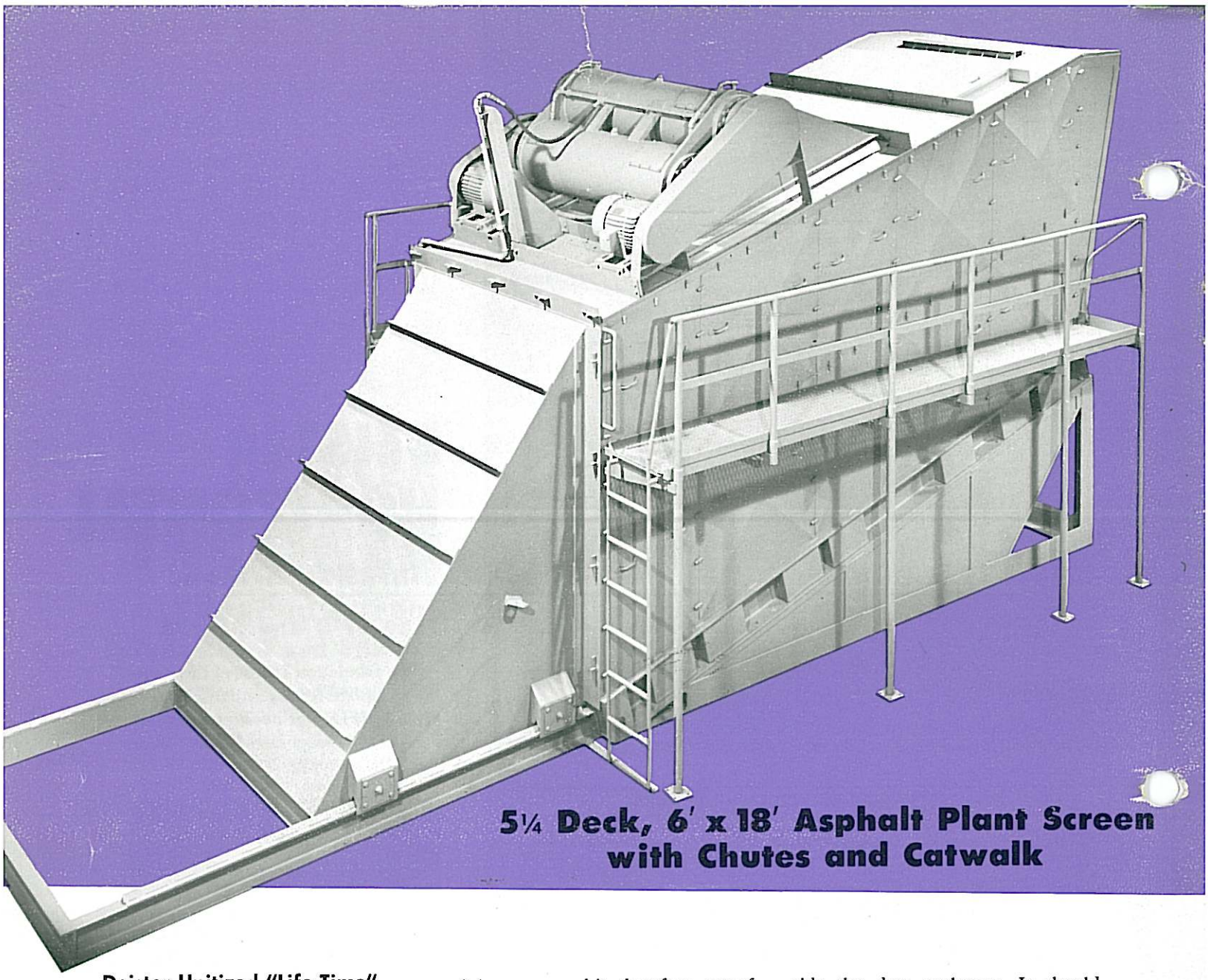
One of the oustanding features of every Deister Vibrating Screen regardless of type, model or size is the ready accessibility to all working parts of the screen, including the screen cloth sections. As can be seen in the illustration on page 6, hinged covers, removable access doors, and "hand-holes" in the vibrating frame itself permit rapid screen cloth changes. Removal of the access doors, through the use of swing bolts, can be accomplished in a matter of seconds. Screen cloth sections can be removed at the feed end, discharge end, or in the case of the top deck, through open hinged panels at the top of the enclosure.

ADDITIONAL MODELS UHS

TYPE SCREEN	SQUARE FEET SCREENING AREA						
	Scalping Screen	Course Screen	Medium Screen	Medium Screen	Sand Screen	Fine Sand Screen	TOTAL
UHS-5512D	20	60	60	60	60	60	320
UHS-5512DDS	20	60	60	60	100		300
UHS-3612D	24	72	72		72		240
UHS-4612D	24	72	72		72	72	312
UHS-4612DDS	24	72	72		120		288
UHS-5514D	35	70	70	70	70	70	385
UHS-5514DDS	35	70	70	70	122		367
UHS-3614D	42	84	84		84		294
UHS-4614D	42	84	84		84	84	378
UHS-4614DDS	42	84	84		147		357
UHS-5516D	40	80	80	80	80	80	440
UHS-5516DDS	40	80	80	80	140		420
UHS-4616D	48	96	96		96	96	432
UHS-4616DDS	48	96	96		168		408
UHS-5616D	48	96	96	96	96	96	528
UHS-5616DDS	48	96	96	96	168		504
UHS-3618D	27	108	108		108		351
UHS-4618D	27	108	108		108	108	459
UHS-4618DDS	27	108	108		189		432
UHS-5618D	27	108	108	108	108	108	567
UHS-5618DDS	27	108	108	108	189		540
UHS-3620D	30	120	120		120		390
UHS-4620D	30	120	120		120	120	510
UHS-4620DDS	30	120	120		210		480
UHS-5620D	30	120	120	120	120	120	630
UHS-5620DDS	30	120	120	120	210		600
UHS-3720D	35	140	140		140		455
UHS-4720D	35	140	140		140	140	595
UHS-4720DDS	35	140	140		245		560

ADDITIONAL MODELS BF

TYPE SCREEN	SQUARE FEET SCREENING AREA						
	Scalping Screen	Course Screen	Medium Screen	Medium Screen	Sand Screen	Fine Sand Screen	TOTAL
BF-5512D	20	60	60	60	60	60	320
BF-5512DDS	20	60	60	60	100		300
BF-3612D	24	72	72		72		240
BF-4612D	24	72	72		72	72	312
BF-4612DDS	24	72	72		120		288
BF-5514D	23.3	70	70	70	70	70	373.3
BF-5514DDS	23.3	70	70	70	111.6		344.9
BF-3614D	28	84	84		84		280
BF-4614D	28	84	84		84	84	364
BF-4614DDS	28	84	84		134		330
BF-5516D	40	80	80	80	80	80	440
BF-5516DDS	40	80	80	80	135		415
BF-4616D	48	96	96		96	96	432
BF-4616DDS	48	96	96		162		402
BF-5616D	48	96	96	96	96	96	528
BF-5616DDS	48	96	96	96	162		498
BF-3618D	27	108	108		108		351
BF-4618D	27	108	108		108	108	459
BF-4618DDS	27	108	108		183		426
BF-3620D	30	120	120		120		390



5¼ Deck, 6′ x 18′ Asphalt Plant Screen with Chutes and Catwalk

Deister Unitized "Life-Time" Vibrating Mechanism

Deister's exclusive oil bath lubricating system makes it possible for Deister screens to operate at higher speeds and at lower operating temperatures. The entire vibrating mechanism is a precision-constructed and jig-assembled unit. Renewable sleeves between the inner race and the shaft prevent wear on the shaft. Should wear occur, even after years of rugged service, the original close "factory tolerances" can be easily restored by the simple replacement of these renewable sleeves.

The mechanism is mounted on top of the screen and is, therefore, out of direct contact with the abrasive action or heat of the material being screened.

Virtually all maintenance problems have been eliminated by this advanced design. All moving parts run in a bath of oil with labyrinth seals to prevent lubricant loss and the entrance of dirt. The lower portion of the vibrating mechanism serves as the oil reservoir across its entire length. The oil is agitated by slingers on the eccentric shaft (shafts) and constantly envelops the spherical roller bearings and all moving parts. The heat is more rapidly dissipated as the entire vibrating mechanism is mounted outside the dust enclosure. It should never be necessary to add oil to the mechanism, with only one or two oil changes per year required.

Screen Supporting Panels

The screen panels, or trays, supporting the screen medium, are of especially rugged construction. They are made of heavy-duty angles, flats and tubular transverse members ruggedly braced and welded together. The side members of these panels are jig-drilled and are attached to the vibrating frame with body-bound bolts and special locknuts.

DEISTER MACHINE COMPANY, INC.

P. O. Box No. 5188 · Fort Wayne, Indiana 46895 · Phone No. (219) 426-7495

DEISTER

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